HEALTH
MARKET INQUIRY

PROVISIONAL FINDINGS AND RECOMMENDATIONS REPORT

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competition regulation for a growing and inclusive economy

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Executive Summary

FEATURES OF THE SOUTH AFRICAN PRIVATE HEALTHCARE SECTOR

1. The South African private healthcare sector comprises a complex set of interrelated stakeholders that interact in markets that are not transparent and so not easily understood. This report highlights key features that describe how the private healthcare sector operates. In some instances we identify features of the private healthcare sector that, alone or in combination, prevent, restrict or distort competition. Later in the report, we also provide recommendations to remedy these adverse effects on competition. Understanding our proposed package of remedies requires an appreciation of the complexity of the market.

2. The South African private healthcare sector is part of a two-tier national health system. The public health sector does not pose a significant competitive constraint to the private sector for patients or for service providers. The public sector is not a big purchaser of services from the private sector and so, unlike other countries, public sector tariffs do not influence what is charged in the private sector.

3. Overall, the market is characterised by high and rising costs of healthcare and medical scheme cover, highly concentrated funders' and facilities' markets, disempowered and uninformed consumers, a general absence of value-based purchasing, ineffective constraints on rising volumes of care, practitioners that are subject to little regulation and failures of accountability at many levels.

4. The market displays consistently rising medical scheme premiums accompanied by increasing out of pocket payments for the insured, almost stagnant growth in covered lives and a progressively decreasing range and depth of services covered by medical scheme options, which there are numerous, all of which are difficult to understand fully.

5. It is generally believed that the private healthcare sector provides better quality care when compared to the public sector. However, this is difficult to assess objectively as the SA private market does not have any standardised means of measuring and comparing quality of healthcare services or outcomes. There is no measure of cost-effectiveness in the private healthcare sector.

6. The initiation of this inquiry was motivated by high and increasing expenditure and costs of private healthcare in South Africa. Unaffordability of private health insurance is compounded by variable access to healthcare services based on geographic location and availability of health facilities and specialists, who are concentrated in urban areas.

7. The evolution of the market to its current form is a consequence of a changing regulation environment which saw periods of deregulation in the late 1980s and then partial re-regulation which has led to the status quo. The end result is that facilities are not regulated beyond the requirement of a licence to operate and practitioners are licensed to practise by the HPCSA but little more. The funder (demand) side of the market is characterised by significantly more regulation

including open enrolment, community rating and a prohibition of risk rating. However, the funders' regulatory regime is incomplete

8. The overall incomplete regulatory regime can largely be attributed to a failure in implementation on the part of regulators and inadequate stewardship by the Department of Health over the years. Many of the recommendations we have considered are already provided for in current legislation but have not been implemented.

Practitioners

9. Practitioners are usually the point of entry into the health care market. Due to their superior health care knowledge, they act as agents for consumers. Practitioners are able to influence healthcare expenditure in two ways: through their own activities, such as diagnoses and treatment, and through the services and treatments they recommend, which include referral for further investigation, treatment, and hospitalization. Overall, medical practitioners drive much of the health care expenditure in the sector.

10. Doctors organise themselves in a number of ways. General practitioners frequently form Independent Practice Associations (IPAs) that in general aim to promote members' inclusion in preferred provider networks. The GP networks often include some form of quality assessment but none of this information is made public. While these quality assessments are supposedly based on peer review methods, we found no evidence of consequences for practitioners who do not meet satisfactory levels of quality, however it is measured.

11. Specialists form specialist associations or societies which aim to ensure that specialists are well remunerated in addition to other activities. There are elements of the way that specialists' associations cooperate that is anticompetitive despite earlier competition rulings that doctors may not negotiate collectively. This is more evident among some specialist groupings than others. We found that specialists sometimes operate collectively to resist joining preferred provider networks and to introduce or adapt codes that push up prices without commensurate improvement in quality of care or value.

12. Another characteristic of the South African health market is the preservation of solo practices with little or no integrated care. There is a failure in most instances to explore multidisciplinary models of care. Fee-for-service billing is the standard with little appetite to move away from this model.

13. Fee-for-Service (FFS) models of remuneration are known to stimulate oversupply which results in wasteful expenditure and incentivises practitioners to provide more services than needed. This incentive is intensified by the current unregulated pricing environment.

14. The ethical rules of the Health Professions Council of South Africa (HPCSA) are cited as the reason for lack of innovation in models of care and development of alternative reimbursement models. It is our view that the HPCSA is not sensitive to the benefits of competition in creating incentives for affordable and quality care.

15. Where new models of care have been attempted, funders have been slow to embrace such models.

16. A weakness of the private sector is the lack of accountability on the part of practitioners. Globally accepted teaching and continuing professional development interventions such as case review, peer review, and morbidity and mortality meetings are absent in the private sector. Private practitioners are not obliged to subject themselves to review by their peers as a means of quality assurance, nor do they report any outcomes. Public sector practitioners who work in the private sector in terms of the policy on "Remunerative Work Outside Public Service (RWOPS)" abandon these tried and tested traditions that are present in the public sector, when they do private work. Academics have also shown little leadership in driving evidence-based best practice in the private sector.

17. Intrinsic and extrinsic incentives in the market have promoted over-servicing by medical practitioners which include increased admissions to hospitals, increased length of stay, higher levels of care, greater intensity of care or use of more expensive modalities of care than can be explained by the disease burden of the population.

18. We have found evidence of supply induced demand. Absolute age-adjusted hospital admission rates increased significantly from 2010-2014 (the period for which we had data) and were higher than all but two of 17 OECD countries compared against. Specific discretionary surgical procedures were compared against comparable countries and utilisation rates in the private sector were higher than the average for 6 of the seven procedures studied, and the highest of all countries for 4 out of seven.

19. Age-standardised Intensive Care Unit (ICU) admission rates in South Africa were higher than all the eight countries with comparable published data. If the ICU admission rate per person were reduced to half of its current level (i.e. to between levels found in Belgium and the US); and half of the costs associated with these avoided ICU admissions were reinvested in better ward-based care, approximately R2.7 billion would still be saved annually – just over 2% of private healthcare spending overall for the period studied.

20. After adjusting for factors likely to influence admissions we found that, for nine out of eleven specialties examined, there was a significant positive correlation between risk of admission and number of doctors or hospital beds in that geography. The same relationship was shown for ICU admission and numbers of ICU beds.

21. Stakeholders confirmed that facility groups compete to attract practitioners, specialists in particular. There is little need for explicit or formal collusive agreements; there is alignment of interests between facility and practitioner where both stand to benefit from higher treatment volumes and intensity. The uninformed patient assumes that these arrangements are always to his/her advantage and is not concerned with the longer term financial impact on medical scheme cover.

22. There are 2.12 medical practitioners per 1000 population in the private sector (0.92 GPs per 1000 and 0.83 specialists per 1000) compared to 0.3 medical practitioners per 1000 population in the public sector[1]. As there are no accepted norms about how many medical specialists are required, it is only possible to draw conclusions about over or under supply of medical practitioners once their behaviour in the market is revealed. The evidence of supply induced demand we have presented implies that there is time for doctors to over-service. This is particularly the case for specialists. This indicates that there is not an absolute undersupply of specialists but points rather to an inefficient use of their time.

Funders

23. While significant marketing takes places in the schemes market, consumers are not able to compare what schemes offer. With approximately 270 plans on offer, consumers cannot compare these nor can they choose scheme and plan options on the basis of value-for-money.

24. We disagree with administrators of open medical schemes and self-administered medical schemes' that this complexity primarily reflects innovation. Rather, the deliberate manner in which these offerings are bundled, packaged and priced allows medical schemes to weaken, even avoid, outright price competition.

25. Multiple options are also a result of the incomplete regulatory environment and have influenced the form of competition in the funders market. To mitigate for the effects of the absence of a risk adjustment mechanism, funders have adapted in a range of ways, including: preferentially attracting the young and healthy to join their schemes; and effectively enforcing risk rating through a proliferation of options that require a joiner to self-select into a scheme option that they can afford. Thus, they compete at a cosmetic level predominantly on choice of products available to consumers rather than on value for money.

26. Other strategies funders employ to make products appear more affordable include the consistent reduction in the range of benefits covered over time. There has also been an

1. For the private sector the denominator is the insured population and for the for public sector is the non-insured population

"actuarial solution" to the high cost of care in the form of the "more affordable hospital plans". These products have had the predictable consequence of more care being shifted to hospitals, ultimately raising costs and eventually contribution levels, ironically making the cost of cover less affordable. Hospital plans create the impression that all treatment must occur in hospital. However, these plans cover, by law, all PMBs and the stipulated chronic conditions, many of which can be managed outside of hospital.

27. All these factors leave consumers confused and disempowered, compounding their inability to use choice as a pressure on schemes.

28. Schemes demand almost no accountability from administrators to ensure that administrators manage supply-induced demand and procure services based on value from the supply-side of the market. We expect medical schemes to be aware of supply-induced demand and moral hazard and to ensure that their administrators actively manage these to protect scheme members' health and financial interests. An ability to effectively manage these (and clearly demonstrate it) should be a competitive advantage for any administrator. Regulatory constraints notwithstanding, a widespread inability to manage moral hazard and supply-induced demand would suggest a lack of effective competition in the market for administration.

29. Our competitive analysis indicates that this absence of competitive pressure is primarily due to disempowered and uninformed consumers. There is no method for consumers to assess the value of the services that schemes procure on their behalf. Without understanding this, consumers cannot hold trustees and Principal Officers to account. Consequently, trustees and Principal Officers experience no pressure to hold administrators and managed care organisations to account.

30. Schemes and administrators are not sufficiently effective in using buying power to negotiate contracts that would decisively benefit consumers by improving quality of care and achieve savings in premiums and reduced out of pocket expenditure. Ready examples include:

    30.1. Inadequate proactive management of PMB payments likely to reduce scheme exposure to mandatory PMB costs;

    30.2. Instances of payment from savings accounts instead of risk pools;

    30.3. Acknowledgment by funders that databases of their members' physical addresses are not as accurate as they should be, raising questions about the accuracy and value of their DSP networks;

    30.4. Alternative Reimbursement Models (ARMs) being driven by hospital groups who also often determine carve outs and thresholds at which ARM charges revert to FFS; and

    30.5. Absence of evidence that supply induced demand is being effectively monitored and managed.

31. The tentative and ineffective use of ARMs, including the large carve outs that are a feature of many of the existing arrangements between funders and hospitals, suggests that purchasers either do not have or do not exercise strategic purchasing power. The concentration of the hospital market (discussed below) may account for this.

32. Slightly more effective network arrangements are beginning to appear. A GEMS Efficiency Discount Option resulted in a number of efficiency savings[2] and consumer benefits.[3]

33. A common refrain is that some schemes are deemed to be "too large to change administrators". Bonitas claims it is too large to

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2. A 10% reduction in doctor hopping, a 22% reduction in specialist consultations, and a 16% reduction in hospitalisations is reported. Combined, these stipulations resulted in 12% lower costs despite the option having a worse risk profile.

3. A 10% discount on monthly contributions, for the same level of benefits is reported to have been passed on to member of this option.

switch from Medscheme, but it is actually not much larger than Polmed which has recently changed administrators. DHMS is also considered to be too big to move. In addition, DHMS also indicates it is unlikely to change administrators due to the vested outsourcing model it has with DH which, according to DH, requires it to manage only one open scheme at a time. This poses serious competition concerns as neither size nor the nature of the relationship with an administrator should determine who a scheme contracts with. Rather, trustees should be looking for value for scheme members.

Funder Concentration

34. Although there are 22 open medical schemes, this market is concentrated as two medical schemes constitute approximately 70% of total open scheme market as measured by number of beneficiaries. There is, however, one dominant open medical scheme, Discovery Health Medical Scheme (DHMS), that comprises 55% of the open scheme market, and it continues to grow organically and through a series of amalgamations with smaller restricted schemes. The Government Employees Medical Scheme (GEMS) is the largest restricted scheme and is second only to DHMS as measured by number of beneficiaries.

35. There are 16 medical scheme administrators in the market. Discovery Health and Medscheme account for 76% of the market based on gross contribution income (GCI), which makes the administrator market highly concentrated as well.

36. We have observed no meaningful entry in the funders market over at least a decade.

37. There is some evidence of competition between funders, particularly amongst administrators. Examples include previous litigation brought by Afrocentric in relation to Discovery Health's method of tariff negotiation on behalf of all its schemes with service providers, which Afrocentric have claimed is anti-competitive. The recent switching of large medical schemes, Bankmed and Polmed, from Metropolitan Health to Discovery Health and Medscheme respectively, has also been cited as an example. However, competition could be much more improved if transparency, accountability, supplier-induced oversupply of care and value-driven healthcare were priorities of scheme trustees and administrators.

38. We have not noted any existing players seriously challenging the dominant players. We have also not seen any innovative (disruptive) competition.

39. The corporate identities of some of the administrators, e.g. Discovery Health and MMI administrators (Momentum and Metropolitan), are linked to those of related corporate groups with broad interests in insurance, asset management, property and other sectors. Of interest to the HMI is that some of the broker arrangements within these groups have the effect of blurring the lines between medical scheme and other insurance products and services.

40. We have previously referred to common ownership arrangements between DH, MMI and Mediclinic. Though MMI and DH have provided some examples of competition between them, we believe that common ownership between two of the largest administrators and of the large hospital groups might influence strategic direction and can have a chilling effect on competition over the long term. For example, we wonder whether large administrators would consider investing in or owing their own facilities absent the financial links between them.

Funder Profitability

41. Sustained levels of profitability have been found across the funder market. Discovery Health has, over a sustained period of time, earned profits that are a multiple of those of its main competitors, with no sign of effective challenge from incumbent or new firms.

42. We acknowledge that much of DH's success is partly due to a highly competent management team, but we do not think this alone explains the significant gap in profitability when compared to its direct competitors. Higher than necessary service fees given economies of scale, a "locked-in" DHMS that does not source services from any other industry stakeholder, risk selection and broker management contribute to its profitability.

43. Under normal competitive conditions, DH's profitability would attract new competitors and stimulate competition from incumbents.

There is no sign of this. On the contrary, we see DH growing and becoming more successful over time. This is an indication of market failure and there are no signals that the market will self-correct.

44. The top three administrators (Discovery Health, Medscheme and MMI) should have countervailing power to the three big hospital groups. Our observation is that Discovery Health does apply this power better than its two large competitors, as shown by its ability to negotiate consistently better tariffs. GEMS, a large player based on number of beneficiaries negotiating on its own behalf, has in recent years been able to negotiate lower hospital tariffs. Excluding network and low cost options, and comparing weighted tariff basket of the top 10 expenditure codes, we find GEMS and DH to consistently achieve the lowest average hospital tariffs across the 2012-2014 period, the period for which we have tariff data.

Facilities

45. Three hospital groups, Netcare, Mediclinic and Life have a combined market share of 83% of the national South African private facilities market in terms of number of beds and 90% in terms of total number of admissions[4]. With national Herfindahl-Hirschman (HHI) values of above 2 500, these national markets must be characterized as 'highly concentrated' by all internationally accepted criteria.

46. At the local level, 58% of the 195 local markets that the HMI has distinguished are also 'highly concentrated' as measured by the HHI and the Logit Competition Index (LOCI), which are both internationally accepted methods to assess market concentration at the local level.

47. The public hospital system does not provide a competitive constraint to private facilities and individual independent facilities are at a disadvantage when it comes to tariff negotiations, DSPs and ARMs. As independents, they also do not provide significant competitive constraints. A review of the impact of the exemption granted to NHN suggests that the smaller hospitals have benefited from the exemption.

48. One of the most important consequences of the dominance of the three large hospital groups is that no funder can afford not to contract with any one of the three big facility groups, or to totally exclude one of these groups from any provider networks. If the market were less concentrated, for example with 6 (still large) providers instead of the current 3 large groups, a funder would likely have the option not to contract with one of the groups, creating a completely different bargaining dynamic, to the benefit of beneficiaries.

49. Provider networks and/or DSPs are a promising tool to introduce competition among hospital groups, but are neutralised by dominance of hospital groups at a local level i.e. Life in the Eastern Cape, Mediclinic in Limpopo and Western Cape, Netcare in Gauteng, etc.

50. The high concentration ratio in the facilities' market at the national (as well concentration at the local level) and the large market shares of each of the three large hospital groups is therefore a major competitive concern.

51. A second competition concern is that symmetrical, highly concentrated supply market structures are generally conducive to overt and covert collusive conduct, for instance a low tendency to upset the status quo by introducing or embracing disruptive forms of new modes of delivery of hospital care.

52. A consequence is that the market is characterized by an absence of effective direct competition between the three big hospital groups. Except for limited pressure from DHMS (and DH) and lately GEMS, we have not seen evidence that other schemes and administrators exert sufficient buyer power on the hospital groups. The three big hospitals groups can continue in the knowledge that significant challenge is unlikely and this is probably the main reason the industry is not seeing innovation throughout the sector.

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4. Admissions are defined as any hospital consultation that incurred a facility fee payable to a hospital or hospital group.

53. Profitability analyses of the three large hospital groups (Life, Mediclinic and Netcare) over the period under review shows that their profits have been consistent and sustained.

54. The facility licensing process has been found to be inconsistently applied by provinces, with bad consequences for all affected stakeholders. Inadequate use of hospital licensing legislation means the opportunity to collect useful data is missed daily.

55. A feature of the private hospital market is the number of beds available. In 2016, the national average ratio of beds/1000 population was 4.2 in the private healthcare sector (compared to 2.7 in the public sector). From 2010, the growth in registered beds in the private sector outstripped the growth in beneficiaries, implying an overall excess bed capacity within the private facilities market. There is no public data on bed occupancy rates in the private sector and various stakeholders use different (so non-comparable) methods to compute occupancy rates.

56. Within this context new licences are still approved. In spite of the high number of licences in issue, there hasn't been meaningful disruptive entry. Entry that currently occurs, facilitated by a will to ensure industry transformation and Black Economic Empowerment, has been to allow for new beds in an already oversupplied market by emerging players who often either get taken over by one of the big three groups, or are forced by finance institutions to join with one of the big groups to ensure that they get the financing they require to build new hospital facilities. The rest of the potential new entrants have no capacity to establish facilities and operationalize their licences.

Information asymmetry

57. As discussed above, inadequate information in the healthcare sector renders consumers exposed. They cannot easily choose between scheme options, nor between service providers. Consumers are subject to agents who operate in a market replete with perverse incentives. Information on health outcomes is essential to promote value based decision making.

58. There is no public data available regarding the cost-effectiveness of technologies and no guidance on what technologies may benefit health outcomes. One consequence is that this allows hospitals to purchase any and all technology and promote its use by making it available to practitioners, which inappropriately drives up costs where such technology does not provide value for money. Currently, there is no way to judge if technologies being used and promoted offer such value, but they have to be used to derive return on investment. Another consequence is that practitioners can make decisions that are not evidence informed.

59. A key problem underlying high and rising costs of care and medical scheme contributions is not primarily prices as such (although quasi-fixed at a non-competitive level), but overcapacity and over-investment in technology, higher treatment volumes and complex, intensive and expensive treatment methods than evidence may suggest is needed to benefit patients. Certainly, the absence of any health outcomes data makes any claims about the benefit of the level of intervention provided in the private market hollow. The conclusion that we have no evidence that this level of supply is necessarily beneficial is reinforced by the level of supply induced demand demonstrated in this healthcare sector compared to other healthcare sectors where good health outcomes are demonstrated. The direct and indirect costs of these are ultimately borne by the patient and beneficiary.

Recommendations

60. The complexity of this market requires several interrelated interventions, which are discussed in detail in the recommendations chapter (Chapter 10). The interventions we have proposed must be seen as a package and market failures may persist if a partial approach to the implementation of the recommendations is adopted.

61. Our recommendations aim at improving transparency, accountability and the alignment of interests of consumers and funders. We also aim to address the absence of measures of value, in particular healthcare outcomes, failures in pooling of funds, improved management of supply induced demand and methods to address concentration in the market. Our recommendations

are aligned with the national policy trajectory towards Universal Health Coverage.

62. Part of our recommendations will be aimed at regulators who, we have concluded, are not as sensitive to core competition concepts as they should be.

63. Overall we recommend

    63.1.1. changes to the way scheme options are structured to increase comparability between schemes and increase competition in that market

    63.1.2. a system to increase transparency on health outcomes to allow for value purchasing

    63.1.3. a set of interventions to improve competition in the market through a supply side regulator

Chapter 1
Legal Framework for the conduct of the HMI

THE HEALTH MARKET INQUIRY AND ITS STATUTORY TASK

1. On 29 November 2013 the Competition Commission (Commission) took a decision to initiate a Market Inquiry into the state of competition in the private healthcare sector (HMI). Following this decision, the Commission published the Terms of Reference as required by the Competition Act, 98 of 1998 (the Act)[1]. The terms of reference for the market inquiry are provided in **Appendix 1**. The Commission has appointed a Panel of experts to independently conduct the HMI on its behalf.

2. This document sets out the Panel's provisional findings and recommendations from this inquiry based on the evidence it has reviewed and analysis it has carried out to date.

3. Section 43B(1)(i) of the Act requires the Panel to decide whether "any feature or combination of features of a market for any goods or services prevents, distorts or restricts competition within that market". The Panel construes this provision to require it to investigate whether there is any feature or combination of features of markets in the private health care sector which harm competition or has an adverse effect on competition within that market.

4. The Panel construes a "feature" of the market to refer to any notable characteristics of a market, in particular, its interconnections with other markets, and the conduct of participants within the market. A feature may be intrinsic to the structure of the market or may arise from the conduct of market participants.

5. In terms of section 43B(1)(ii) of the Act the Panel is required to identify measures that will achieve the purposes of the Act. Section 2(b) of the Act, sets out as one of the purposes of the Act "to provide consumers with competitive prices and product choices." This purpose is informed by the objectives of the Act which, as the Preamble to the Act states, include "to provide for markets in which consumers have access to, and can freely select, the quality and variety of goods and services they desire."

6. Based on this objective of the Act, the terms of reference require the Panel "to establish a factual basis for recommendations that support the achievement of accessible, affordable, high quality and innovative private healthcare sector in South Africa."

7. Accordingly, the Panel is also required to investigate what measures should be adopted in order to promote competition in the private healthcare sector so as to achieve the goal of accessible, affordable, innovative and good quality healthcare services.

8. The rest of this chapter sets out the background to the HMI; the requirements

1. The terms of Reference are contained Government Notice No. 1166 of 2013 published in Government Gazette No 37062 dated 29 November 2013.

of procedural fairness in the conduct of the HMI; the process of inquiry; and the structure of the provisional findings.

BACKGROUND TO THE HEALTHE MARKET INQUIRY

9. In 2009 the Act was amended by the addition of Chapter 4A which empowers the Commission to conduct a market inquiry, which is a formal inquiry in respect of the general state of competition in a market for particular goods and services. Market inquiries are additional tools that are at the disposal of the Commission to address competition concerns.

10. The Commission initiated the HMI after observing sustained increases in prices and expenditure in the private healthcare sector which were above headline inflation[2]. These increases in prices had reached a level that "only a minority of South Africans [could] afford as evidenced by the (small) share of the population with access to private healthcare."[3] This raised various concerns about the functioning of the private healthcare markets in South Africa and gave rise to a suspicion that there might be factors that undermine competition in the private healthcare sector.

11. In order to assess the way competition is working in the private healthcare sector, the HMI identified potential sources of harm to competition, which include market power, barriers to entry and expansion into a market, imperfect information, and the regulatory framework. Based on these potential sources of harm, the HMI formulated seven theories of harm to competition that it proposed to test in the course of the inquiry. These theories of harm provided the Panel with the framework for competitive assessment.

12. But while the analysis to be conducted is fundamentally economic in nature, this analysis must nevertheless be conducted within the legal framework contemplated in the Act. In conducting the inquiry, the Panel had to observe the requirements of procedural fairness.

THE REQUIREMENTS OF PROCEDURAL FAIRNESS

13. The Constitution and, in particular, the constitutional right of access to healthcare services[4] and the constitutional right to procedurally fair administrative action[5], provides the context within which the HMI must be conducted. The constitutional right of access to healthcare is given effect in the National Health Act, 2003 (NHA) while the constitutional right to procedurally fair administrative action is given effect by the Promotion of Administrative Justice Act, 2000 (PAJA). PAJA requires a public body, such as the Commission, that is empowered to make a decision that may adversely affect the rights of any person to act fairly.

14. The Competition Act recognises the supremacy of the Constitution for it requires that its provisions must be interpreted in a manner that is consistent with the Constitution.[6] This means that the provisions of the Act which govern the conduct of the inquiry must be understood in the light of the relevant provisions of the Constitution and the statutes that have been enacted to give effect to those provisions, such as PAJA.

15. While the investigation conducted in a market inquiry is fundamentally investigative and inquisitorial in nature, its investigative nature should not minimise its impact. What matters are the powers conferred by the Act on the Commission in relation to a market inquiry and the consequences it is likely to have for some stakeholders.

16. The Commission is given a wide range of powers to eliminate features that have an adverse or detrimental effect on competition in the context of a market inquiry. It may find that some stakeholders are engaging in anticompetitive conduct and its report may lead to enforcement proceedings. Indeed, apart from making recommendations, the Commission may; based on the information obtained in the course of a market inquiry, initiate and refer a complaint against firms directly to the Competition Tribunal without

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2. Section 3 of the Terms of Reference at p 80.
3. Id.
4. Section 27 of the Constitution.
5. Section 33 of the Constitution.
6. Section 1(2)(a) of the Act.

further investigation.[7] It is therefore apparent that the outcome of the HMI may result in a decision that may adversely affect the rights of some stakeholders.

17. This being the case, the Panel had a constitutional duty to act fairly. "Fairness will very often require that a person who may be adversely affected by the decision will have an opportunity to make representations on his own behalf either before the decision is taken with a view to producing a favourable result, or after it is taken, with a view to procuring its modification, or both."[8]

18. It is these principles which informed the process of inquiry that the Panel followed.

THE INQUIRY PROCESS

19. Broadly speaking the inquiry process involves six phases, namely, Establishment phase; Evidence gathering; Information and data analysis; Public hearings; Reporting on provisional findings and recommendations; and Final report.

PHASE 1: SETTING UP THE INQUIRY PLATFORM AND STRATEGIC FRAMING

20. This phase involved setting up the platform for the inquiry process and initial engagements with stakeholders including the publication of key documents for the conduct of the inquiry process, namely, the Statement of Issues, Theories of Harm, Guidelines for the Conduct of the Inquiry, Guidelines for Submission of Technical Data and Analysis, the Administrative Timetable and the Call for Written Submissions. Except for the Call for Written Submissions, stakeholders were given the opportunity to comment on these foundational documents before they were finalised. These documents were finalised by and published on 1 August 2014.

21. In addition to the above documents, the HMI invited and received comments from stakeholders on further supplementary guidelines such as the Supplementary Guideline I, which dealt with conditions under which access to confidential material would be granted. This Guideline was published on 30 June 2015.

PHASES 2: EVIDENCE GATHERING

Written submissions

22. This phase commenced on 1 August 2014 with a call for written submissions. The deadline for the submissions was 31 October 2014, which was extended, in respect of some stakeholders, to 17 November 2014. The HMI received a total of 68 submissions totaling over 15000 pages from hospital groups; healthcare practitioners and their associations; healthcare funders and administrators; Non-Governmental organizations; trade unions; Government; and individuals.

Review of submissions

23. The process of registering and classifying submissions commenced at the beginning of November 2014. The technical team and Panel members conducted the first review of the submissions as from mid-November 2014 until January 2015. The submissions raised a number of wide-ranging issues, some of which go beyond the scope of this inquiry.

24. As was to be expected, the submissions not only raised a number of further questions but also necessitated requests for data and consultations to verify the statements made in the submission.

Verification of claims of confidentiality

25. Alongside the evaluation of submissions other important work was also underway; the legal team was evaluating the various claims to confidentiality. This in itself was an involved process requiring an assessment of the soundness of each claim. Addressing these claims involved lengthy engagements with the stakeholders concerned. Eventually,

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7. Section 43C(3)(c) of the Act.
8. *R v Home Secretary, ex parte Doody* [1994]1 AC 531 at 560. This decision has been cited with approval by the Supreme Court of Appeal in cases such as *Du Preez and Another v Truth and Reconciliation Commission*, 1997 (3) SA 204 AD at 231H-232E; and *Chairman, Board on Tariffs and Trade v Brenco Inc. and Others*, 2001 (4) SA 511 (SCA) at para 13.

the majority of confidentiality claims were resolved.

26. In order to regulate access to submissions with claims to confidentiality, the HMI developed guidelines setting out conditions under which access to such submissions will be granted. On 5 February 2015, the submissions were published on the HMI website.

Data and information requests

27. The preparation and distribution of information/data requests to stakeholders was an essential step in getting data and information that would be analysed to assess competition. This process was not without its complexity, in particular, in relation to the format of the data, its availability, and the methodology to be applied in analysing it. Some stakeholders raised numerous follow up questions, in particular, in relation to the grouper methodology to be applied in analysing claims data. This required lengthy engagement with the stakeholders concerned including conducting a workshop in an attempt to resolve issues raised and formulate revised data requests.

28. It is important here to emphasise the importance of data in the investigation. The Terms of Reference, for instance, require the HMI to inquire into factors that drive the observed increases in private healthcare expenditure and prices, to evaluate various explanations for such increases and to identify competitive dynamics at play. Access to the correct data is essential in determining trends in expenditure, costs, and profitability as well as the explanations for the observed increases and whether these increases may be due to the exercise of market power.

29. Requests for data and information were sent to more than 175 stakeholders. The total amount of data collected is over 545GB. This data is stored securely by data processing and management firm, Willis Towers Watson (WTW) and access to it is controlled through a secure FTP site. The data sets collected to date by the HMI represent the largest ever gathered on private healthcare markets in South Africa.

30. But the identification of data sources, data collection and the processing of information and data presented the HMI with the greatest challenge that the HMI faced in the course of its investigation.

31. Firstly, there is no central and uniform data and information storage system pertaining to private healthcare in South Africa. The only sources of data are medical schemes, practitioners, hospital groups and public data sources (including regulatory bodies).

32. Secondly, the provision of data by stakeholders as well as processing data has presented challenges for the HMI.

33. The HMI has experienced significantly long and sometimes cynical delays in the submission of data by stakeholders. This prolonged the process of data collection and included a number of engagements with lawyers of various stakeholders. These engagements were conducted primarily to promote voluntary submission of data and avoid resorting to the legal process, to emphasise the transparency of the process and more importantly, to ensure that the HMI gets the data required. In some instances, some stakeholders denied being in possession of required data and information even in circumstances where such data and information were in the public domain. When this was drawn to their attention, they readily produced the data in question.

34. While this approach to obtaining data may have been time-consuming, the HMI considers this approach to have been cost-effective as issuing summons in every case would have been both time-consuming and expensive. In some cases, of course, the HMI had to resort to the legal process by issuing summons against the stakeholder concerned.

35. A substantial portion of data from key stakeholders were receive during the second half of 2016 with a significant amount received in September 2016 from one of the leading hospital groups. Once the HMI was in possession of sufficient data and information to proceed with the various analyses, it did so.

36. Thirdly; processing, collating, and storage of data presented its own challenges. Apart from delays experienced in the provision of data, WTW had to satisfy itself of the integrity

and quality of data. In some cases, data had to be sent back to the submitting stakeholder in order to correct data sets or present data in the correct format. The integrity of data is, of course, crucial to the accuracy of any analysis.

37. Fourthly, one of the issues of concern pertaining to data was the need to preserve confidentiality in respect of the data collected. The data contained personal patient information which could not be disclosed. This required the HMI to develop a procedure to ensure that personal particulars of individual patients are not identifiable as required by legislation an in accordance with international standards. To meet this requirement, the HMI had to develop a De-Identification tool that would ensure the removal of personal identifiers in all data sets in the possession of the HMI. This would allow stakeholders to submit data such as patient information and addresses to the HMI in such a format that individuals' personal identities and residential addresses will not be identifiable while keeping each individual patients' records distinct for analytical purposes.

38. The De-Identification tool was tested with the stakeholders prior to its implementation. In addition, the HMI also provided a web-based tool to allow stakeholders to check the correctness of data. This process was essential to reassure stakeholders that the requisite levels of De-Identification of data have been achieved by the HMI.

39. In anticipation of requests for access to the HMI's analysis and underlying data, the HMI published Supplementary Guideline No.2 which regulates access to confidential information submitted to the HMI. It deals with the establishment of a data room from which data submitted to the HMI can be accessed as well as the conditions under which access will be granted.

40. The process of collecting, collating and storing data took more time than was anticipated. This must be understood in the context of delays in the submission of data, the complexity of processing data into a format that can be used for analysis, and the sheer volume of data that had to be processed. As pointed out earlier, this process involved data being compiled in a uniform format from very diverse systems. Making data compatible and then organising it into data sets and warehousing these data sets has been an enormous task. Precisely how long it would take and how complex it would be, could not be anticipated. The HMI had to receive the data first to see what format it was in before it could plan for how to organise and manage it. The process has been lengthy and tedious, but this now provides a robust and unique data set to analyse which will be the cornerstone to some of the findings of the HMI.

41. All this underscores the need to develop a comprehensive national health information system which will require stakeholders to provide information relating to health financing, the pricing of health services, business practices involving hospitals and health care providers, and the publication of various types of information in the public interest and for the purpose of improving access to and the effective and efficient utilisation of health services, as envisaged by the National Health Act.[9]

PHASE 3 – INFORMATION AND DATA ANALYSIS

42. Various models and base analytical processes were run to determine, among other things, expenditure and costs trends, profitability and market power. The results from all the analytical work, including the input of the technical team and panel members, formed part of comprehensive reports on each set of service providers. These reports included the Descriptive Statistics Report; Attribution Analysis Report; PMB Analysis Report; Facility Analysis Report; Practitioner Analysis Report; Funder Analysis Report; Associated Projects and Various Case Studies.[10] With a few exceptions, these reports; which reflected the HMI's preliminary conclusions on its assessment of competitive dynamics

9. Section 74(1) read with section 90(1)(t) and (u).
10. These, and other reports, are available on the Commission's website. For convenience, a list of published reports is included as Appendix X.

in relation to each set of service providers, were published for comment. Following comments by the stakeholders, extensive engagement processes with the relevant stakeholders took place as part of focused public hearings. Final reports which took into account the comments of stakeholders, form part of the provisional findings and recommendations and are being simultaneously published as **Appendices X - X.**

43. However, it must be pointed out at the outset that there were fundamental differences of opinion between the HMI technical team and stakeholders on some of the issues covered by the reports such as profitability and conclusions of the analytical work. These differences are reflected in this provisional report. The stakeholders will have the opportunity to see how their comments have been dealt with in the provisional report and, if their concerns still persist, these will be dealt with during the comment stage on the provisional report which allows further opportunity for engagement on these differences.

PHASE 4 – PUBLIC HEARINGS

44. Public hearings were divided into two sets. The first set of public hearings was general in nature with a focus on how stakeholders interact with one another. It provided the stakeholders with the opportunity to educate the HMI on their role in the private healthcare sector and to present their views on what they perceive as harming competition in the private healthcare sector. This set of public hearings was held in February, March and May 2016.

45. The second set of hearings focused on competitive dynamics within each group of stakeholders. They took the form of engagement with specific stakeholders on the contested parts of the reports. The conclusion of this second set of public hearings marked the culmination of the gathering of evidence for the purposes of compiling the provisional report. These engagements were lengthy and time-consuming. For example, the Technical team had no less than 12 engagement sessions with one stakeholder on profitability assessment. But the process was necessary to ensure that the HMI understood the point of view of stakeholders so that it could adequately deal with concerns raised.

46. The provisional findings and recommendation set out in this report are a product of this process.

THE STRUCTURE OF THE PROVISIONAL FINDINGS

47. This provisional report, together with its appendices, constitute our provisional findings and recommendations. Where appropriate, the report refers other published materials on the Commission website.

48. Following responses to this report, the Panel will publish the Final Report.

49. The remainder of this provisional report is structured as follows:

    49.1 Chapter 2 sets out the Regulatory Framework for assessing competition

    49.2 Chapter 3 outlines the Healthcare Overview of the Industry

    49.3 Chapter 4 outlines the HMI's Framework for the Assessment of Competition in various markets

    49.4 Chapter 5 provides a competition analysis for Funders

    49.5 Chapter 6 provides a competition analysis for Facilities

    49.6 Chapter 7 provides a competition analysis for Practitioners

    49.7 Chapter 8 deals with Excessive utilization and Supplier-Induced Demand

    49.8 Chapter 9 deals with assessment of Quality and Outcomes

    49.9 Chapter 10 sets out the recommendations of the HMI

50. Appendices that are referred to in each chapter are numbered consecutively and are set out in the Table of Contents.

Chapter 2
The regulatory framework

THE FRAMEWORK FOR ASSESSING THE IMPACT OF THE REGULATORY FRAMEWORK ON COMPETITION

INTRODUCTION

1. In the statement of issues (SOI), the HMI observed that: Globally, regulatory intervention is used to ensure safety and effectiveness of healthcare services and products. Understandably, a regulatory framework governs the healthcare sector in South Africa. Possible deficiencies and unintended consequences in the regulatory framework may distort competition, raise barriers to entry and expansion, and maintain and/or create positions of market power.

2. The HMI takes the view that the regulatory framework that regulates the provision of, and access to health care goods and services constitutes a feature of the market for the purposes of a market inquiry. As a market feature, a regulatory framework can cause market failure in at least three ways: firstly, necessary legislation may not have been adopted; secondly, necessary legislation may have been adopted but may either have been improperly implemented or not implemented at all; and thirdly, the existing regulatory framework may have unintended consequences, one of which is to undermine competition.

3. Accordingly, in the SOI, the inquiry identified the regulatory framework for healthcare as a possible feature that may cause harm to competition and invited comments from stakeholders on the impact of statutes, regulations, or rules on competition; in particular, on how the current regulatory framework is implemented and enforced, and how it affects competitive outcomes.

4. Broadly speaking, the concerns raised by stakeholders fall into three main categories. Firstly, there were concerns about the inadequacy of the regulatory framework. For example, some stakeholders submitted that the introduction of social solidarity policies such as open enrolment and community rating without a risk equalisation fund has created the risk of cross subsidy between high risk and low risk beneficiaries and an incentive for adverse selection. In this instance, the present regulatory framework is believed to be inadequate and more is required of it. Secondly, other stakeholders submitted that a lack of regulation or adequate enforcement of the applicable regulations exists due to ineffective oversight by the regulatory bodies charged with the administration of the various laws dealing with the provision of healthcare services. Thirdly, other stakeholders expressed concern about overregulation in certain aspects of the private health care sector. They submitted that certain rules of the Health Professions Council of South Africa — in particular, the rules limiting the

1. Bestmed Submission; Board of Healthcare Funders Submission; Brian Watson Submission; Discovery Health Submission; Life Health Care Submission; Medi-Clinic Submission; Medscheme Submission; Netcare Submission; Profmed Submission.

employment of doctors by hospitals — are overly restrictive, and result in unnecessary duplication of operating costs and reduction of innovation.[1]

5. The inquiry's observation is that aspects of the regulatory framework appear to burden those affected by it with no clear relevance to enhancing competition. In other respects, the framework appears to leave noticeable gaps that need to be filled. In addition, the manner in which some aspects of the framework are being implemented is inefficient. In some areas the framework is simply not being enforced. In addition, the multiplicity of regulatory bodies with overlapping functions has a potential to make the implementation of the regulatory framework inefficient.

6. The HMI is particularly concerned about the failure to implement some of the key provisions of the National Health Act, 2003 (NHA) which was enacted in 2003. The declared purpose of the NHA is to give effect to the constitutional right of access to healthcare services. The provisions dealing with the issuing of certificates of need to operate healthcare facilities, the determination of fees payable, and collection of information on the quality of services, are yet to be implemented. As a result, no uniformity in the granting of hospital licences exists. Each province has its own requirements as the process is regulated at provincial level through outdated regulations which do not specify any criteria for the granting of hospital licences. There is no national system of collecting data on healthcare issues which consumers can use to make decisions concerning the treatment they require, and no process of monitoring the quality of healthcare services that are offered to the public.

7. This chapter provides the framework for the assessment of the impact of the regulatory framework on competition as well as access to and affordability of private healthcare services. The purpose is to identify possible deficiencies in the regulatory framework as well as its unintended consequences that harm competition. The impact of the regulatory framework on competition in different markets in the private healthcare sector is considered in detail in the chapters dealing with financing of healthcare services, healthcare facilities and practitioners.

8. To start with, the background to the regulatory framework and the context within which it will be examined is provided.

BACKGROUND

9. The private health sector is subject to a myriad of statutes, regulations and bye-laws which together constitute the regulatory framework for the provision of healthcare services in South Africa. There are about 107 statutes that are administered by the national Department of Health (DoH).[2] The focus of this chapter is the regulatory framework and how it affects competition outcomes, access and affordability of healthcare services.

10. The regulatory framework regulates the provision of healthcare services by healthcare facilities (hospitals) and medical doctors as well as other health professionals, the funding of healthcare services by medical schemes and administrators of medical schemes which administer the services of the medical schemes, and the sale and distribution of medicines and drugs by manufacturers, distributors, pharmacies and doctors permitted to dispense medication.

11. While the national DoH bears primary responsibility for enacting framework legislation, all three different spheres of government — national, provincial and local — are, subject to the Constitution's scheme for the regulation of healthcare services, responsible for administration of these legislative measures. In administering this regulatory framework, the state is assisted by a number of regulatory bodies, which are responsible for the enforcement of this framework.

12. The starting point in considering the impact of the regulatory framework on competition is the Constitution.

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2. South African Law Reform Commission Consultation Paper, *Statutory Law Revision: Legislation Administered by the Department of Health*, Project 25, December 2015, p 14.

12.1 Section 27(1)(a) and (2) of the Constitution guarantees the right of access to healthcare services and imposes obligations on the state to give effect to this right;

12.2 Section 32 of the Constitution guarantees the right of access to information held by others, including access to information on healthcare services; and

12.3 The Constitution creates institutions of government such as the national, provincial and local departments of health, defines and allocates powers and impose obligations on each.

13. The Constitution therefore provides the context within which the impact of the regulatory framework on competition must be considered and understood.

14. The constitutional right of access to healthcare services imposes an obligation on the state to enacting laws and other measures that facilitate the realisation of this right. The framework for regulating the provision of healthcare services constitutes, in part, the fulfilment of this obligation. This obligation must be understood in the context of the constitutional scheme for the allocation of legislative powers over healthcare matters among the three spheres of government — national, provincial and local government.

15. The Constitution does not set out in detail the nature and scope of the obligation imposed on the state in relation to the right of access to healthcare services. To fully understand the nature and extent of this obligation, it is necessary to refer to international law, in particular, the International Covenant on Economic, Social and Cultural Rights (the ICESCR) as well as the commentary on the ICESCR by the United Nations Committee on Economic, Social and Cultural rights. The reasons for doing so are:

15.1 Firstly, on 15 January 2015 South Africa ratified ICESCR and became a state party to the ICESCR.[3] South Africa is therefore both subject to the ICESCR, and to the authoritative interpretation of it given from time to time by the UN Committee on Economic, Social and Cultural Rights.[4]

15.2 Secondly, section 39 (1)(b) of the Constitution provides that when interpreting rights in the Bill of Rights, which includes the right of access to healthcare services, "a court, tribunal or forum… must consider international law."[5]

15.3 Thirdly, the Competition Act, 1998 also provides that its provisions "must be interpreted… in a manner that is consistent with the Constitution and… in compliance with the international law obligations of the Republic".[6]

16. The HMI stresses that the ultimate purpose of its investigation is not to test the constitutionality of the regulatory framework but to assess its impact on competition in the private healthcare sector. In the next section, the inquiry considers the nature and scope of the obligation imposed by the constitutional right of access to healthcare services in the light of international law.

THE NATURE AND SCOPE OF THE OBLIGATION IMPOSED BY SECTION 27(2)

17. As pointed out above, section 27(1)(a) of the Constitution guarantees everyone the right of access to healthcare services. While this right, in relation to adults, is subject to the availability of resources, in so far as children

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3. The right to health care in international law was first recognised in the Universal Declaration Human Rights (UDHR), which was adopted by the General Assembly of the United Nations on 10 December 1948. The UDHR proclaimed certain principles "as a common standard of achievement for all peoples and all nations". These principles included article 25 which declared that "[e]veryone has the right to a standard of living adequate for the health and well-being of himself and of his family… and medical care". The principles contained in the UDHR were given effect in the ICCPR, which embodies civil and political rights and the ICESCR which embodies economic, social and cultural rights.
4. S v Makwanyane and Another 1995 (3) SA 391 (CC) at para 35
5. Section 39(1)(b)
6. Section 1(2) of the Competition Act.

are concerned, it is not qualified.[7] In respect of adults, the obligation imposed on the state is set out in section 27(2) which calls on the state to "take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of 'the right of access to healthcare services'."

18. The Constitutional Court has not considered the precise contours of the obligation imposed by the constitutional right of access to healthcare services. The Court has, however, considered a similar obligation in the context of the constitutional right of access to adequate housing in section 26.[8] In Minister of Health and Others v Treatment Action Campaign and Others (No 2) the Court noted that that the obligation imposed by section 27(2) and the obligation imposed by the constitutional right of access to adequate housing in section 26(2) are framed in similar language.[9] The Court's articulation of the nature and the scope of the obligation pertaining to the right of access to adequate housing therefore provides a useful guide to understanding the obligation imposed in respect of the right of access to healthcare services.

19. In the Grootboom case, the Court, in the context of the right of access to adequate housing, said:

    19.1 [41] The measures must establish a coherent public housing programme directed towards the progressive realisation of the right of access to adequate housing within the state's available means. The programme must be capable of facilitating the realisation of the right. The precise contours and content of the measures to be adopted are primarily a matter for the legislature and the executive. They must, however, ensure that the measures they adopt are reasonable.

    19.2 [42] The state is required to take reasonable legislative and other measures. Legislative measures by themselves are not likely to constitute constitutional compliance. Mere legislation is not enough. The state is obliged to act to achieve the intended result, and the legislative measures will invariably have to be supported by appropriate, well-directed policies and programmes implemented by the executive. These policies and programmes must be reasonable both in their conception and their implementation. The formulation of a programme is only the first stage in meeting the state's obligations. The programme must also be reasonably implemented. An otherwise reasonable programme that is not implemented reasonably will not constitute compliance with the state's obligations.

    19.3 [43] In determining whether a set of measures is reasonable, it will be necessary to consider housing problems in their social, economic and historical context and to consider the capacity of institutions responsible for implementing the programme. The programme must be balanced and flexible and make appropriate provision for attention to housing crises and to short, medium and long term needs. A programme that excludes a significant segment of society cannot be said to be reasonable. Conditions do not remain static and therefore the programme will require continuous review.[10]

20. While these statements were made in the context of the right of access to adequate housing, they provide the insight into the nature and scope of the obligation imposed

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7. Section28(1)(c) guarantees to every child the right to "basic health care services".
8. Government of the Republic of South Africa and Others v Grootboom and Others (CCT11/00) [2000] ZACC 19; 2001 (1) SA 46; 2000 (11) BCLR 1169 (4 October 2000).
9. Minister of Health and Others v Treatment Action Campaign and Others (No 2) (CCT8/02) [2002] ZACC 15; 2002 (5) SA 721; 2002 (10) BCLR 1033 (5 July 2002) at para 30, 35 and 39. In Soobramoney v Minister of Health, KwaZulu-Natal, 1998 (1) SA 765 (CC) at para 11, the Court treated sections 26 and 27 as conferring rights and obligations that are similar in nature.
10. Government of the Republic of South Africa and Others v Grootboom and Others (CCT11/00) [2000] ZACC 19; 2001 (1) SA 46; 2000 (11) BCLR 1169 (4 October 2000)

by section 27(2). This obligation must further be understood in the light of the ICESCR which provides another useful guide on the nature and the scope of the right to healthcare services as well as the obligation imposed by this right.

21. The nature and scope of the obligations imposed on state parties by the right to health care services has been considered by the United Nations Committee on Economic, Social and Cultural Rights (CESCR), the UN body that is responsible for monitoring the implementation of the ICESCR. The CESCR has issued commentary on the meaning of the ICESCR.[11] The key commentaries are the general comments No. 3 and 14, which considered in detail the scope and the nature of the obligation of the state parties under articles 2 and 12 respectively.[12] While article 12 of the ICESCR which guarantees to everyone the right "to the enjoyment of the highest attainable standard of physical and mental health"[13], is framed differently from section 27(1)(a) of the Constitution, the commentary of the CESCR on the nature and scope of the obligation imposed on state parties to the ICESCR is nevertheless instructive. The CESCR has identified four essential elements of the right to healthcare which simultaneously define the obligations imposed by the right to health under international law. For present purposes, it is sufficient to refer to these essential elements which are availability; accessibility; acceptability; and quality.[14]

22. These essential elements emphasise a number of aspect obligations:

    22.1 Firstly, the availability of sufficient functioning public health and healthcare facilities, goods, services and programmes.[15] The state need not provide all these services itself, it can achieve its obligation by permitting the private sector to provide healthcare facilities and services under its regulation. This is a recognition of the role of the private sector in the provision of healthcare services.[16] However, the states must "ensure that the privatisation of the health sector does not constitute a threat to the availability, accessibility, acceptability and quality of health facilities, goods and services." This emphasises the need for the regulation of private healthcare services.

    22.2 Secondly, the accessibility of health facilities, goods and services which has four dimensions, namely, non-discrimination, physical accessibility, affordability and accessible

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11. The ICESCR is the only United Nations human rights treaty, which did not establish a Committee to oversee and monitor the implementation of the Covenant. United Nations Economic and Social Council (ECOSOC) to carry out the provision of the Covenant instead established the Committee on Economic, Social and Cultural Rights. International Covenant on Economic, Social and Cultural Rights), E/C.12/2002/11, 20 January 2003. ECOSOC Resolution 1985/17 of 28 May 1985.
12. General Comment 3, The Nature of States Parties Obligations, UN Doc. E/1991 23, 14 December 1990, para. 10, see also e.g. General Comment 14, supra, paras. 43 and 47. General Comment 14, The Right to the Highest Attainable Standard of Health, UN Doc. E/C.12/2000/4, 11 August 2000. It is available in English on: www.unhchr.ch/tbs/doc.nsf/(Symbol)
13. Article 12
    1. The States Parties to the present Covenant recognise the right of everyone to the enjoyment of the highest attainable standard of physical and mental health.
    2. The steps to be taken by the States Parties to the present Covenant to achieve the full realisation of this right shall include those necessary for:
    a) The provision for the reduction of the stillbirth-rate and of infant mortality and for the healthy development of the child;
    b) The improvement of all aspects of environmental and industrial hygiene;
    c) The prevention, treatment and control of epidemic, endemic, occupational and other diseases;
    d) The creation of conditions, which would assure to all medical service and medical attention in the event of sickness.
14. See generally para 12 General Comment No 14.
15. Ibid at para 12(a)
16. Ibid at para 35

information on healthcare services.[17] Healthcare services and goods must not only be physically accessible but must also be affordable to all, in particular, the most vulnerable groups such as the elderly, disadvantaged groups and physically challenged.[18] Affordability, means that "payment for healthcare services, must be based on the principle of equity [to ensure] that these services, whether privately or publicly provided, are affordable for all, including socially disadvantaged."[19] Accessibility also requires consumers to have access to information concerning health issues and healthcare services and goods so that they can make informed decisions concerning the appropriate treatment required and where to get treatment.[20] The state must ensure that third parties do not limit people's access to health-related information and services."[21]

22.3 Thirdly, all health facilities, services and goods must be sensitive to culture and must meet acceptable ethical standard and healthcare providers must possess the required skills.[22]

22.4 Finally, the need to provide good quality health care services and goods.[23]

23. In Minister of Health and Others v Treatment Action Campaign and Others (No 2) the Court stated that the right of access to healthcare services imposes obligations to respect, protect, promote and fulfil.[24] The CESCR has elaborated on these obligations. The obligation to "respect" requires states to refrain from interfering directly or indirectly with the enjoyment of the right to health. The obligation to "protect" requires states to take measures that prevent third parties from interfering with article 12 guarantees. Finally, the obligation to "fulfil" requires states to adopt appropriate legislative, administrative, budgetary, judicial, promotional and other measures towards the full realisation of the right to health.

24. The UN Committee has stated that the obligation to fulfil requires state parties to give sufficient recognition to the right to health in the national political and legal systems, preferably by way of legislative implementation, and to adopt a national health policy with a detailed plan for realising the right to health. States have to ensure the appropriate training of doctors and other medical personnel, the provision of a sufficient number of hospitals, clinics and other health-related facilities, and the promotion and support of the establishment of institutions providing counselling and mental health services, with due regard to equitable distribution throughout the country.[25] What is apparent from the ICESCR as interpreted by the CESCR is that state parties are required to adopt legislative measures, including a framework legislation for the implementation of the right of access to health[26]; they must ensure that healthcare facilities, goods and services are available and accessible to all without discrimination, and are of good quality. Accessibility is not only limited to physical accessibility, but includes affordability of healthcare facilities, goods and services whether they are privately or publicly provided, and consumers must have access to information that will enable them to make informed choices concerning their health and treatment they require. In addition, the CESCR emphasises access to information concerning health care issues as one of the essential elements of the right to health care.

25. The obligation imposed by the constitutional right of access to healthcare therefore emphasises the need to:

25.1 empower the private healthcare sector to provide healthcare services and goods to enhance access to healthcare services;

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17. Para 12 (b)
18. Ibid
19. Ibid
20. Ibid
21. Ibid para 35
22. Ibid at para 12 (c)
23. Ibid at para 12(d)
24. At para 39.
25. Ibid at para 36
26. At para 33

25.2 regulate private healthcare services;

25.3 ensure that consumers have access to quality healthcare services;

25.4 ensure that consumers have access to information concerning healthcare matters so as to make informed choices on the treatment they require.

26. What is implicit, if not explicit in the obligations imposed by section 27(2), is the need for the regulatory framework to facilitate access to private healthcare services by promoting competition in the private sector to ensure that consumers have access to competitive services and prices from which to select.

27. The obligation imposed by section 27(2) is echoed in the Competition Act which declares as one of its objects "to provide for markets in which consumers have access to and can freely select, the quality of goods and services they desire"[27] and sets out as one of its purposes "to provide consumers with competitive prices and product choices."[28] It is in this sense that the constitutional right of access to healthcare services and competition law and policy converge. Understanding this convergence is important in assessing the impact of the regulatory framework on competition.

28. The regulatory framework for the provision of healthcare services is intended to fulfil the constitutional obligations set out above. However, in giving effect to this obligation, the regulatory framework may have unintended consequences which undermine competition. The focus of the investigation is therefore to consider the impact of this framework on competition.

29. While the responsibility to adopt and administer the laws that give effect to the constitutional right of access to healthcare services falls in the domain of the national government, other spheres of government —provincial and local departments of health — also have a role to play. [29]

THE ALLOCATION OF LEGISLATIVE POWERS OVER HEALTHCARE

30. The Constitution, which is a blueprint for governance, allocates legislative powers among national, provincial and local governments.[30] Healthcare services is a functional area over which both the national government and the provincial government have concurrent legislative powers.[31] However, the national and the provincial governments may assign certain powers which "necessarily relate to local government" if the matter "would most effectively be administered locally"[32] and where "the local government has the capacity to administer it"[33]. The three spheres of government are required to "cooperate with one another"[34] by, among other things, "assisting and supporting one another"[35]; "informing one another of, and consulting one another on matters of common interest"[36] and "coordinating their actions and legislation with one another".[37]

31. In Grootboom the Constitutional Court said this concerning the responsibility of the three spheres of government in fulfilling their obligation imposed by the right of access to adequate housing:

31.1 [39] What constitutes reasonable legislative and other measures must be determined in the light of the fact that the Constitution creates different spheres of government: national government, provincial government and local government. The last of these may, as it does in this case, comprise two tiers. The Constitution allocates powers and functions amongst these different spheres emphasising their obligation to co-operate with one another in carrying

27. See Preamble to the Competition Act.
28. Section 2(b) of the Competition Act.
29. Schedule 4, Part A and Part B, read with Section 44(1)(a)(ii), Section 104(1)(b)(i) and Section 156(1)(a)
30. Section 40(1)
31. Schedule 4 Part A and Part B read with Section 44 (1)(a)(ii) and section 104(1)(b)(i).
32. Section 156(4)(a)
33. Section 156(4)(b)
34. Section 41(1)(h)
35. Section 41(1)(h) (ii)
36. Section 41(1)(h)(iii)
37. Section 41(1)(h) (iv)

out their constitutional tasks. In the case of housing, it is a function shared by both national and provincial government. Local governments have an important obligation to ensure that services are provided in a sustainable manner to the communities they govern. A reasonable programme therefore must clearly allocate responsibilities and tasks to the different spheres of government and ensure that the appropriate financial and human resources are available.

31.2 [40] Thus, a coordinated state housing programme must be a comprehensive one determined by all three spheres of government in consultation with each other as contemplated by Chapter 3 of the Constitution. It may also require framework legislation at national level, a matter we need not consider further in this case as there is national framework legislation in place. Each sphere of government must accept responsibility for the implementation of particular parts of the programme but the national sphere of government must assume responsibility for ensuring that laws, policies, programmes and strategies are adequate to meet the state's section 26 obligations. In particular, the national framework, if there is one, must be designed so that these obligations can be met. It should be emphasised that national government bears an important responsibility in relation to the allocation of national revenue to the provinces and local government on an equitable basis. Furthermore, national and provincial government must ensure that executive obligations imposed by the housing legislation are met.

32. While these passages were made in the context of section 26, they apply equally to section 27. What is apparent from these passages is that:

32.1 the national government must enact framework legislation which includes laws, policies, programmes and strategies that are adequate to regulate the provision of healthcare services;

32.2 framework legislation must allocate responsibilities and tasks to different spheres of government;

32.3 the national government must develop a national programme for provision of healthcare services in consultation with other spheres of government; and

32.4 each sphere of government must take responsibility for the implementation of the particular parts of the programme. This obligation emphasises cooperation among the spheres of government in carrying out the constitutional obligation to provide access to healthcare services.

33. The National Health Act gives effect to this scheme for the allocation of legislative powers over healthcare services. It is the framework legislation which, together with other legislation including policies such as the National Development Plan (NDP) and the National Health Insurance (NHI) pertaining to healthcare services, constitute the regulatory framework for the provision of healthcare services.

34. These legislative and other measures pertaining to healthcare services are administered by the three spheres of government and in administering the regulatory framework, the government is assisted by a number of regulatory bodies which are set out below.

THE REGULATORY BODIES

35. The regulators have a significant role to play in the implementation of the regulatory framework as they may influence national health policy. Some advise the Minister and influence healthcare policy. It is important to understand the role and mandate of these regulators, and to assess their effectiveness so that the inquiry may determine appropriate recommendations, if any, that can be made with respect to such regulators. The key regulators include:

35.1 The Council for Medical Schemes (CMS);

35.2 Health Professions Council of South Africa (HPCSA);

35.3 South African Nursing Council (SANC);

35.4 South African Pharmacy Council (SAPC);

35.5 Dental Technician's Council;

35.6 Allied Health Professions Council of South Africa (AHPCSA);

35.7 Office of Health Standards Compliance (OHSC);

35.8 National Health Research Ethics Council;

35.9 Pharmacy Council; and

35.10 The Health Ombud.

In the next section an overview of the key statutes comprising the regulatory framework is provided.

OVERVIEW OF THE REGULATORY FRAMEWORK

36. Broadly speaking, the regulatory framework regulates the provision of healthcare services by hospitals, medical practitioners and other health practitioners including the financing of healthcare services; the provision of goods and medicines; and the health professional. To fulfil its obligation in relation to the constitutional right of access to healthcare services, the state has enacted framework legislation, the National Health Act, 2003 (Act No. 61 of 2003) (NHA), whose purpose is "to provide a framework for structured uniform health system within the Republic, taking into account the obligations imposed by the Constitution and other laws on the national, provincial and local governments with regard health services…" In addition, the state has enacted the Medical Schemes Act, 1998 (Act No. 131 of 1998) (MSA) which regulates the funding of healthcare services.

37. Apart from these post-apartheid healthcare legislation, the state has adopted the Medicines and Related Substances Act, 1965 (Act No. 101 of 1965), which regulates the provision and supply of medicines and drugs.

38. Health professionals are regulated by various legislation. These include the Health Professions Act, 1974 (Act No. 56 of 1974) which regulates medical practitioners, the Dental Technician Act, 1979 (Act No. 19 of 1979) which regulates dental technicians and technologists, the Pharmacy Act, 2000 (Act No. 1 of 2000) which regulates the provision of pharmaceutical services, the Nursing Act, 2005 (Act No. 33 of 2005) which regulates the nursing profession, and the Allied Health Professions Act, 1982 (Act No. 63 of 1982), which regulates healthcare professionals who provide allied health care services. These statutes, together with regulations framed under them, constitute the framework that regulates the provision of healthcare facilities, services and goods in South Africa. In the next sections the main provisions of the key aspects of this regulatory framework are highlighted and the main concerns raised in relation to it are considered.

THE NATIONAL HEALTH ACT

39. The NHA is the first post-apartheid statute to comprehensively regulate the provision of healthcare services in South Africa. It was enacted to give effect to the constitutional right of access to healthcare services, medical treatment in the case of emergency, provision of basic health care services to a child, and a healthy environment[38]. It is the primary legislation that regulates the provision of healthcare services in South Africa and provides "a framework for a structured uniform health system within the Republic, taking into account the Constitutional obligations and other laws on national, provincial and local government with regard to health services." [39]

40. One of the objects of the NHA is to "regulate national health and to provide uniformity in respect of health services across the nation by among other things, protecting, respecting, promoting and fulfilling the rights of the people of South Africa to the progressive realisation of the constitutional

38. Preamble to the NHA
39. Preamble to the NHA

right of access to health care services."[40] To this extent, it establishes the national health system comprising the public and private healthcare services providers.[41]

41. Broadly speaking, the Act covers areas such as:

    41.1 responsibility for healthcare services;

    41.2 access to health care services;

    41.3 the rights and duties of consumers, healthcare personnel;

    41.4 gathering of information on healthcare services, including creation of comprehensive national health information system;

    41.5 keeping and protection of health records;

    41.6 the establishment of health establishment which includes hospitals;

    41.7 the determination of non-mandatory reference price list for services rendered and consumables utilised;

    41.8 the determination of norms and standards for provision of health services; and

    41.9 the establishment of statutory bodies that are responsible for monitoring and enforcing compliance with norms and standards.

42. While the responsibility for healthcare services is the primary responsibility[42] of the national DoH, the provincial and local health departments share this responsibility. The role of the national department is to develop national health policy[43] as well as the norms and standard on health matters[44] and evaluate health services.[45] The Minister of Health is advised by the National Council on matters such as responsibility for health by the public and private sectors.[46] Provincial health departments are responsible for the implementation of national health policy norms and standards in their respective provinces[47], planning and managing health information system[48], monitoring and evaluating health services[49], and control of the quality of health services.[50] The activities of the various provincial bodies and the national health body are coordinated by the National Consultative Health Forum. Members of the Executive Council for health in each province may assign health functions to a municipality. It not clear what those services are and the criteria for such assignment.

43. Chapter 6 deals with the establishment of "health establishments" which are defined as public or private institutions which provide inpatient or outpatient healthcare services[51]. These are hospitals. The NHA introduces the Certificate of Need (CON) which is issued by the Director-General for health as a requirement to operate a hospital.[52] The CON replaces hospital licences. A CON is valid for a period which may not exceed 20 years and is subject to renewal[53]. The Minister is empowered to make regulations pertaining to the granting of the CON. It is an offence to operate a hospital without a CON[54]. Private hospitals are required to maintain an insurance cover sufficient to indemnify them against a claim for damages suffered as a consequence of a wrongful conduct by its employees. In addition, hospitals must comply with quality requirements and standards of health services prescribed by the Minister.[55]

44. Chapter 9 makes provision for the creation of a comprehensive national health information system.[56] In this regard, it empowers the national DoH in terms of section 74(1) to "facilitate and co-ordinate the establishment, implementation

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40. Section 2(c)(i)
41. Section 2(a)(i)
42. Section 3(2)
43. Section 21(1)(a)
44. Section 21(1)(b)
45. Section 21 (1)(h)
46. Section 23 (1)(a)(i)
47. Section 25
48. Section 25(2)(b)
49. Section 25(2)(f)
50. Section 25(2)(n)
51. Section 1
52. Section36(1)
53. Section 37 read with Section 39(1)(a)
54. Section 40(1)
55. Section 39(2)(h)
56. Section 74(1)

and maintenance by provincial departments, district health councils, municipalities, and the private sector of health information systems". The information to be collected includes information on health financing and the pricing of healthcare services. In addition, the NHA makes provision for the publication of this information "in the public interest and for the purposes of improving access to and effective and efficient utilisation of healthcare services."[57]

45. The Minister is given extensive powers to make regulations regarding the norms and standards for national health systems[58], national health information system and gathering of national health information system data[59], obtaining information on health financing, pricing of healthcare services, and publication of such information[60], determination and publication of reference price lists for services rendered, procedures performed and consumables used by hospitals for use "by medical scheme[s] as a reference to determine [their] benefits"[61] and "by health establishment, health care providers or health workers in the private healthcare sector as a reference to determine their own fees, but which are not mandatory."[62]

46. What is apparent from the NHA is that the Minister has extensive powers to promote access to healthcare services by, among other things, creating a comprehensive national information system concerning healthcare services, publication of non-mandatory reference price lists for healthcare services in determining their own benefit and by hospitals and healthcare providers in the private healthcare sector to determine their fees, and prescribing norms and standards to measure the quality of healthcare services and monitor such quality. The availability of this information ensures that consumers have access to information which provides them with competitive prices and product choices and puts them in a position where they "have access to, and [can] freely select, the quality and variety of goods and services they desire."[63] This ultimately ensures that consumers are able to make informed choices about the treatment they require. This is in line with the objectives of the Competition Act.

47. Against this background, the inquiry highlights the key concerns raised by stakeholders with respect to the NHA.

KEY CONCERNS RAISED IN RELATION TO THE NHA

48. The areas of the NHA that have been raised by the stakeholders relate to:

    48.1 The CON provisions contained in section 36, 37, 39 and 40 of the amended NHA;

    48.2 The Norms and Standards Regulations made in terms of section 90(1) (c) read with section 79(1)(a) which introduced the Office of Health Standards Compliance to monitor and enforce norms and standards as well as the control of critical risks to the health and safety in health establishments;[64]

    48.3 Section 90(1)(u) which deals with "the processes and procedures to be implemented by the Director-General in order to obtain prescribed information from stakeholders relating to health financing, the pricing of health services, business practices within or involving health establishments, health agencies, health workers and health care providers, and the formats and extent of publication of various types of information in the public interest and for the purpose of improving access to and the effective and efficient utilisation of health services"; and

    48.4 Section 90(1)(v) which deals with "the processes of determination and publication by the Director-General of one or more reference price lists for services rendered, procedures performed and consumable and

57. Section 90(1)(u)
58. Section 90(1)(c)
59. Section 90(1)(t)
60. Section 90(1)(u)
61. Section90(1)(v)(i)
62. Section 90 (1)(v)(ii)
63. See Preamble to the Competition Act
64. Section 79(1).

disposable items utilised by categories of health establishments, health care providers or health workers in the private health sector which may be used (i) by a medical scheme as a reference to determine its own benefits; and (ii) by health establishments, health care providers or health workers in the private health sector as a reference to determine their own fees, but which are not mandatory".

49. These concerns are considered later in this report.

THE MEDICAL SCHEMES ACT

50. The Medical Schemes Act, 1998 (Act No. 131 of 1998) (MSA) consolidates all laws relating to the medical schemes industry. It was enacted to establish the Council for Medical Schemes (CMS) as the regulatory body for medical schemes, medical scheme administrators and managed care organisations, provide for the appointment of a Registrar of medical schemes, make provision for the registration and control of certain activities of medical schemes, and to protect the interests of medical scheme members.[65]

51. Chapter 5 of the MSA deals with the rules of a medical scheme. These rules are particularly pertinent to the assessment of competition in the private healthcare sector as they prescribe the services schemes must provide and the manner in which schemes must operate. Of particular importance are the following:

    51.1 Section 29 (n), which specifies that a scheme cannot vary its contributions on the basis of any factor other than income and the number of dependants, effectively protecting potential members from discrimination on the basis of age, sex, past or present state of health, and the frequency of utilisation of healthcare services. Thus, schemes must be open to all (colloquially referred to as "open enrolment") and cannot vary contributions on the basis of individual risk factors, but must set contributions on the basis of global risk (referred to as "community rating").

    51.2 Section 29 (o), which specifies that each benefit option offered by a scheme should provide for certain minimum benefits. These prescribed minimum benefits (PMBs) are set out in more detail in Regulation 8, made in terms of section 67 of the MSA. Regulation 8 specifies that PMBs must be paid in full without deductibles or co-payments, but permits schemes to specify that treatment for a PMB be sought from a designated service provider. Should the scheme member choose not to make use of a designated service provider, the scheme may impose a deductible or co-payment on that member.

52. Stakeholders raised broadly similar issues regarding community rating and PMBs. A key concern is that the implementation of community rating, PMBs and open enrolment without a corresponding risk equalisation mechanism contributes to the problem of adverse selection or anti-selection in the healthcare sector. It allows low-risk individuals to opt out of the insurance pool until they need care, leaving proportionally more high-risk individuals in the scheme's pool. As a result, medical schemes raise contributions of their entire membership base in order to cover expected losses. Many countries mitigate the problems of adverse selection that arise from community rating and open enrolment through some form of mandatory cover. These challenges are discussed in more detail in Chapter 5, on Funders.

53. The central concern with respect to PMBs is that they drive up healthcare costs. In particular, the requirement that PMBs be paid in full limits schemes' power to bargain effectively for lower tariffs for the treatment of PMB conditions. This creates an unsustainable financial burden for schemes and makes it difficult to create low cost medical plans that, for example, provide cover for a subset of PMBs. The effect of PMBs on bargaining, expenditure and other aspects of competition is discussed in more detail in Chapter 5, on Funders.

65. Preamble to the MSA

Chapter 3
Health Sector Overview

INTRODUCTION

1. This chapter provides a broad overview of the South African health system, including the position of the private health system within the overall healthcare system as well as important trends and key developments over time. The chapter relies primarily on publicly available data which is supplemented with information from submissions, where relevant. In cases wherein the analysis relies on claims data collected during the course of the inquiry (which was collected for the period 2010 to 2014) the analysis ends at 2014.

2. This chapter covers five areas:

   2.1. A high-level overview of the organisation of the health system within the context of universal health coverage (UHC),

   2.2. A description of the structure of ownership in the private health sector and case studies of cross-ownership and cross-directorships and their effect on competition,

   2.3. A review of the reimbursement mechanisms used in private healthcare, and

   2.4. Major trends, including demographic changes in the medical scheme population, high-level analysis of claims and cost data, and an overview of consolidation in various parts of the industry.

OVERVIEW OF THE HEALTH SYSTEM

SOUTH AFRICA'S SYSTEM OF UNIVERSAL HEALTH COVERAGE

3. Universal health coverage (UHC) means that all people and communities can use the health services they need, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship.[1] The National Department of Health (NDOH) sets out its roadmap towards universal health coverage in the White Paper on 'National Health Insurance for South Africa' originally published on 10 December 2015 and amended on 30 June 2017.[2]

4. South Africa already provides near-universal access to healthcare to its citizens through a combination of publicly available services and in regulated private markets. However, it is generally accepted that publicly available services are not always of sufficient quality to be effective.

   4.1. *The public health system* is tax-funded. Access to free public healthcare is subject to a means-test. The public health system covered approximately

1. World Health Organisation. *What is universal health coverage?* Available here. Last Accessed 23 November 2017.
2. The 2015 White Paper is available here. The amended White Paper, published in the Government Gazette on 30 June 2017 is available here. Both documents were last accessed on 22 May 2018.

44.9 million people in 2015 (84% of the population)[3] and incurred expenditure equivalent to 4.2% of gross domestic product (GDP).[4] Approximately 5 million of the 44.9 million people who used the public sector in 2015 earned income in excess of the means test and where not eligible for free public hospital care but had to pay for healthcare services rendered. Consequently, they may have had inadequate financial risk protection.[5]

4.2. *Public social insurance schemes* such as the Compensation Fund and the Road Accident Fund respectively offer mandatory coverage for occupational injuries and diseases for employees in the formal sector and partial (third-party) coverage for road accidents. In both instances, coverage is limited. Treatment is usually provided in the private healthcare sector.

4.3. *Private social insurance schemes are provided through medical schemes*. Medical schemes covered approximately 8.8 million people (16% of the population) in 2015. Although membership is voluntary, medical schemes must comply with statutory access and benefit requirements that have a social purpose and distinguish this system from markets for conventional actuarial insurance. Contributions to medical schemes attract tax credits.

4.4. Voluntary *actuarial health insurance* is also available on a non-indemnity basis to supplement other forms of coverage.[6] In this report, actuarial health insurance includes any form of health insurance that can discriminate on the basis of health status.

4.5. In addition to public and private insurance markets, people pay 'out of pocket' (OOP) for services rendered in both the public and private healthcare sector. Out of pocket expenditure is not systematically studied but estimates suggest that out of pocket payments amounted to about 0.6% of GDP in 2015.[7]

DESCRIPTION OF MAIN PARTS OF THE PRIVATE HEALTH SECTOR

5. This section provides an overview of the various components of the health sector and the interactions between them. Figure 3.2 provides a structural overview of the sector.

HEALTHCARE SERVICE PROVIDERS

6. Providers of healthcare services include healthcare practitioners, healthcare facilities, pharmacies, and emergency medical response services (EMRS).

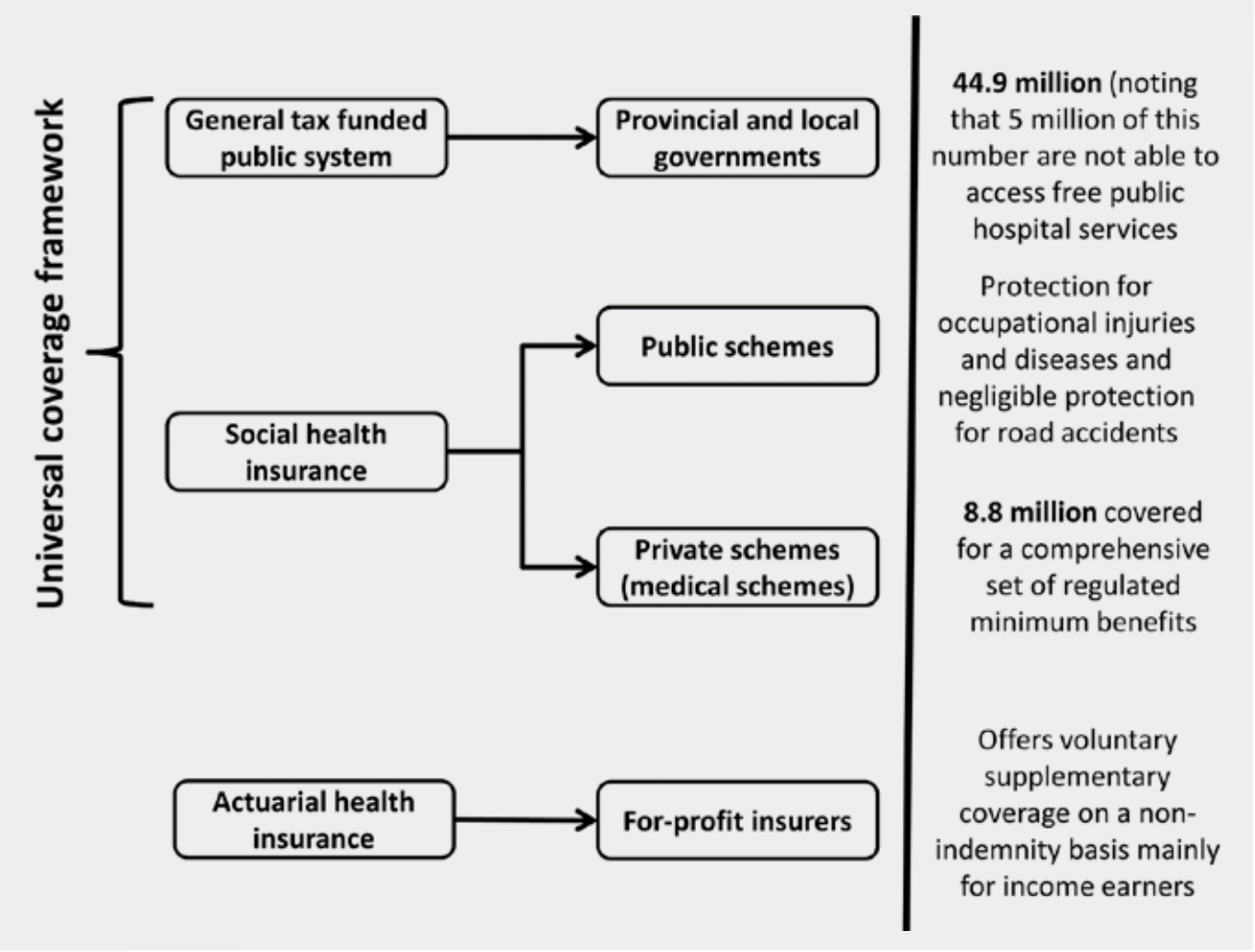
Healthcare practitioners

7. Healthcare practitioners comprise a wide range of professionals ranging from specialists to general practitioners (GPs) nurses and pharmacists.

8. Regulatory bodies such as the Health Professions Council of South Africa (HPCSA), the South African Nursing Council (SANC), the Allied Health Professions Council (AHPCSA), the South African Pharmacy Council (SAPC) and the South African Dental Technicians Council (SADTC)

3. HMI calculations using data from the Council for Medical Schemes and the South African Reserve Bank.
4. Health Systems Trust. Health Indicators. Available here. Last accessed 22 May 2018.
5. The figure of around 5 million is quantified using the numbers provided in the Ministerial Task Team Report on Social Health Insurance Reform entitled *Social Health Insurance options: financial and fiscal impact assessment*. June 2005, pg. 9-10.
6. Non-indemnity coverage refers to insurance benefits that are not tailored to meet the actual health expenses arising from a health event. The pay-out takes the form of an assured lump-sum payment, which can be used to meet any needs arising from the adverse health event. Medical schemes, by way of contrast, pay the actual healthcare expenses incurred, and pay-outs may not be used for any other purpose.
7. Estimates derived from World Health Organisation Global Health Observatory Data Repository (accessed on 15 August 2016), the General Household Surveys and the Income and Expenditure Surveys produced by Statistics South Africa. Data on out of pocket expenditure is not systematically collected and this may be an underestimate of total out of pocket expenditure.

FIGURE 3.1: FINANCIAL RISK PROTECTION FRAMEWORK FOR HEALTH CARE IN SOUTH AFRICA



Source: Compiled by HMI

create the regulatory framework within which these practitioners function. These bodies address matters such as registration, education and training, professional conduct and ethical behaviour, continuing professional development and promoting compliance with healthcare standards.[8]

Healthcare facilities

9. Healthcare facilities include hospitals, clinics and other treatment facilities that provide a mix of acute, sub-acute, general and, in some instances, specialised services.

Pharmacies

10. Pharmacies provide self-medication or prescription medication in retail stores and sell (or dispense) these products to consumers. Pharmacists are regulated by the South African Pharmacy Council. The various types of pharmacies include community, public institutional, manufacturing, wholesale, private institutional, courier and consultant pharmacies.

11. Community pharmacies can be either corporate pharmacies owned by large public or private companies (such as Clicks and Dis-Chem) or smaller independent pharmacies.

12. Corporate pharmacies can also own wholesale and distribution companies, and many are acquiring courier pharmacies.

8. Health Professions Council of South Africa, "About: HPCSA," [Online]. Available here. Last accessed 22 May 2018.

Smaller independent community pharmacies are typically owned by pharmacists.[9]

Emergency medical response services (EMRS)

13. EMRS refer primarily to ambulance services, typically involving paramedics and other emergency practitioners. Healthcare facilities may also provide casualty or emergency services staffed by practitioners and nursing staff.

HEALTHCARE PRODUCTS

Medical devices

14. Medical devices include orthotics and prosthetics, dental products, patient aids, diagnostic imaging products, consumables and more.[10] Previously, medical devices were not regulated but this changed with the establishment of the South African Health Products Regulatory Authority (SAHPRA) which replaced the Medicines Control Council (MCC) on 1 June 2017.

Medicines

15. Medicines include prescription (originator and generic) medicine, biologics (for example vaccines or antibodies), nutraceuticals (dietary supplements and complementary medicines), and over-the-counter (OTC) drugs that do not require a prescription. Medicines are regulated by the Medicines and Related Substances Act no. 101 of 1965 and Single Exit Price (SEP) legislation.

South African Health Products Regulatory Authority (SAHPRA)

16. SAHPRA is a regulatory body established in terms of the Medicines and Related Substances Act. SAHPRA has replaced the Medicines Control Council and is responsible for monitoring, evaluation, regulation, investigation, inspection, registration and control of medicines, scheduled substances, clinical trials, medical devices, in-vitro diagnostic medical devices (IVDs), complementary medicines, cosmetics and foodstuffs. SAHPRA will have final authority over the approval of new products.

HEALTHCARE FUNDERS

17. For the purposes of this report, healthcare funders in the private sector comprise medical schemes, medical scheme administrators, MCOs, brokers and health insurers. Government agencies that fund the provision of healthcare services under certain conditions, such as the Road Accident Fund (RAF) and the Compensation Fund, are also considered as part of the funding landscape.

Council for Medical Schemes (CMS)

18. The Council for Medical Schemes is a statutory body established in terms of the Medical Schemes Act to regulates schemes, administrators and MCOs in South Africa. The statutory duties of the CMS include protecting the interests of medical scheme members, overseeing and co-ordinating the running of medical schemes in a way that is aligned with the national health policy, monitoring the solvency and financial soundness of medical schemes, investigating complaints and resolving disagreements about the affairs of medical schemes and making recommendations to the Minister of Health on criteria for the measurement of quality and outcomes of health services.

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9. K. Ward, D. Sanders, H. Leng and A. Pollock, Assessing equity in the geographical distribution of community pharmacies in South Africa in preparation for a national health insurance scheme. Bulletin of the World Health Organization 2014;92:482-489. doi: http://dx.doi.org/10.2471/BLT.13.130005 . Last accessed 22 May 2018
10. Section 1 of the Medicines and Related Substances Act No. 101 of 1965, as amended, defines a medical device as any instrument, appliance, material, machine, apparatus, implant or diagnostic reagent:
    (a) used or purporting to be suitable for use of manufactured or sold for use in –
        • The diagnosis, treatment, mitigation, modification, monitoring or prevention of disease, abnormal physical or mental states or the symptoms thereof; or
        • Restoring, correcting or modifying any somatic or psychic or organic function; or
        • The diagnosis or prevention of pregnancy,

        and which does not achieve its purpose through chemical, pharmacological, immunological or metabolic means in or on the human body but which may be assisted in its function by such means; or
    (b) declared by the Minister by notice in the Gazette to be a medical device, and includes any part or an accessory of a medical device.

Medical schemes

19. Medical schemes offer the most common form of healthcare financing in the private healthcare sector. Members pay monthly contributions to their scheme and schemes are responsible for financing their members' healthcare expenses as part of their benefit package.

20. There are two types of medical schemes: open and restricted. Open medical schemes are legally required to accept anyone who wants to become a member. Restricted medical schemes are attached to a defined group such as an employer, industry, or union and are open only to the members of the associated group.[11]

21. Government's role in relation to medical schemes involves policy development, regulation and the allocation of tax expenditure subsidies. Tax expenditure subsidies presently take the form of a tax credit fixed at a rand value per person which replaced the historical tax rebate. While the original rebate favoured higher income earners the tax credit favours lower-income tax payers as the value of the subsidy no longer increases with income.[12] When the tax expenditure subsidy was introduced, the average per capita value of the tax expenditure subsidy was reduced relative to the original rebate and is now at a discount to average per-capita expenditure in the public sector. The switch in values occurs from 2007/8 (Table 3.1).

Medical scheme administrators

22. Medical scheme administrators are third-party administrators that contract with medical schemes to deliver administration services for schemes. These services include managing member records, contributions, claims, financial reports as well as information and data control. Administrators are regulated and accredited by the CMS. Some medical schemes conduct all their own administration services and are known as self-administered medical schemes.

TABLE 3.1: TAX EXPENDITURE SUBSIDIES FOR MEDICAL SCHEME MEMBERS, PER BENEFICIARY PER ANNUM, COMPARED TO THE PER CAPITA ALLOCATIONS OF THE PUBLIC SECTOR – 2005/6 TO 2013/4 (2014 PRICES IN RANDS) [13]

Sector	2005/6	2006/7	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13	2013/14
Private	2 321	2 000	1 872	2 117	2 239	2 342	2 385	2 694	2 517
Public	2 013	1 904	2 217	2 426	2 719	2 832	2 981	3 057	3 052

11. In terms of the MSA, "restricted membership scheme" means a medical scheme, the rules of which restrict the eligibility for membership by reference to -
    (a) employment or former employment or both employment or former employment in a profession, trade, industry or calling;
    (b) employment or former employment or both employment or former employment by a particular employer, or by an employer included in a particular class of employers;
    (c) membership or former membership or both membership or former membership of a particular profession, professional association or union; or
    (d) any other prescribed matter.
12. Ministerial Task Team on Social Health Insurance Reform. Social Health Insurance options: financial and fiscal impact assessment. June 2005.
13. HMI calculations using data from the National Treasury and the Council for Medical Schemes.

Managed care organisations (MCOs)

23. MCOs are healthcare providers or groups that offer managed care health plans or services. Essentially, a MCO contracts with medical schemes to deliver health care using a specific provider networks and specific services and products. Manged care thus includes the clinical and financial risk assessment and management of healthcare through the establishment of clinical management and rules-based programmes.[14] Medical schemes have the option of contracting with MCOs or performing these activities in-house. MCOs are regulated and accredited by the CMS.

Brokers

24. Brokers advise and guide consumers and employers in selecting private health insurance cover. They provide consumers and/or employers with information on benefits and services offered by medical scheme and/ or health insurers. There are independent brokers that provide services for multiple schemes or tied brokers that are contracted to a particular scheme. Brokers must be accredited by the CMS and licensed by the Financial Services Board (FSB).

Health insurers

25. Health insurers provide gap cover products, hospital cash plans and primary health plans (e.g. plans that cover GP visits, basic dentistry, optometry etc.). These insurer are regulated by the FSB through the Long Term Insurance Act No. 52 of 1998 (LTIA) and Short Term Insurance Act No. 53 of 1998 (STIA).

Road Accident Fund (RAF) and the Compensation Fund

26. The RAF covers medical costs and compensation for the rehabilitation of motor vehicle accident victims within the borders of the Republic of South Africa. The RAF also provides funds to families of people who die as a result of motor vehicle accidents.

27. The Compensation Fund pays for medical care to workers who suffer occupation-related illnesses or sustain injuries in the course of their work. The Compensation Fund also provides funds to families of workers who die as a result of occupational injuries or diseases.

OTHER SUPPORTING INDUSTRY PLAYERS

28. Supporting industry players include:

    28.1. *Medical switching companies* who transmit claims between healthcare providers and funders electronically in real time;

    28.2. *Practice management service providers* who offer services such as medical billing and practice management solutions;

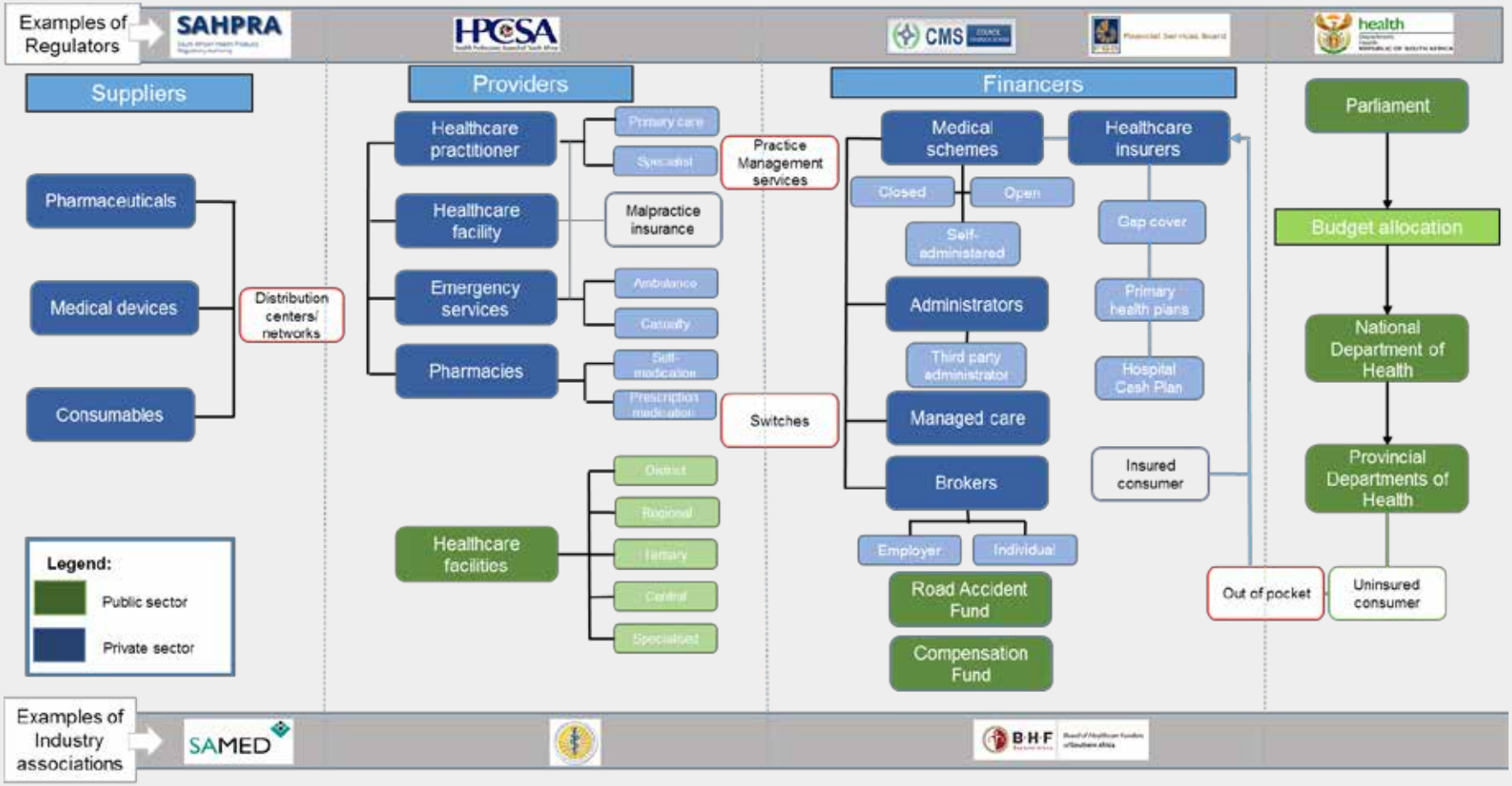
    28.3. *Software vendors* who provide software to the medical switches and healthcare providers that enable electronic claims submissions from the provider to the switch and the switch to the scheme, administrator or MCO;

    28.4. *Clinical coding companies* who offer coding, auditing and training services to healthcare providers; and

    28.5. *Medical malpractice insurance companies* who provide healthcare providers with insurance protection.

14. H. McLeod and S. Ramjee, 20067. “Medical Schemes”. Ch4, South African Health Review published by Health Systems Trust. Availablehere. Last accessed 22 May 2018.

FIGURE.3.2: OVERVIEW OF THE SOUTH AFRICAN HEALTHCARE SECTOR



Source: Compiled by HMI

HISTORICAL CONTEXT TO THE DEVELOPMENT OF THE PRIVATE HEALTHCARE SECTOR

History of Medical schemes[15]

29. The origins of the medical scheme industry can be traced back to the late 1800s. At the time, various arrangements developed around large employers to reimburse the privately incurred medical expenses of their employees. The arrangements included schemes that reimbursed medical expenses incurred by members (called 'medical aid societies' or 'friendly societies') and schemes established by groups of doctors who received monthly pre-payments for medical services to be rendered (called 'medical benefit schemes'). The first medical aid society, De Beers Consolidated Mines Limited Benefit Society, was established in 1888 and still exists as a medical scheme today.

30. By 1940 around 48 medical aid arrangements existed without a coherent regulatory framework. A single regulatory framework started to emerge with the establishment of the Advisory Council for Medical Aid Societies in 1950.

31. By 1960 the number of schemes had grown to 169 and covered 368,890 members and a further 588,997 dependents. Policy debates at the time reflected strong calls for the implementation of mandatory coverage but such steps were not taken.

32. The introduction of the Medical Schemes Act of 1967 brought the various scheme types under a single legal framework. The new framework also began to deal with healthcare costs and tariff determination, making provision for the regulation of a collective bargaining process to determine tariffs.

33. By 1980 the total number of schemes had grown to 289, covering 4,329,256 beneficiaries (17.3% of the population at the time). Over the next ten years to 1990 the total number of schemes declined to 250, but beneficiaries increased to 6,187,974 (17.1% of the population in 1990).[16]

34. During the 1970s and 1980s medical schemes began to outsource the administration of membership and claims management to administration companies. Administrators developed all the operational capabilities of an insurer without carrying any insurance risk (medical schemes were the carrier of risk and the owner of any accumulated assets).

35. Administrators could not (and still cannot) own the assets, profit from any surplus, or carry the risk of schemes' liabilities. Profits could be (and are) earned from the administration fees charged to the scheme. Administrators could, however, sponsor entry by new schemes but faced a possibility that the scheme could subsequently discontinue or require changes to the administration agreement, thus placing any start-up capital at risk. During the 1980s and 1990s administrators reduced this risk by appointing their own employees onto scheme boards - a practice permitted in law at the time. Although the employees of administrators can no longer be trustees of medical schemes, the close relationship between some administrators and their schemes has continued to date.

Regulatory developments shaping the medical schemes market

36. From 1980, there are at least four distinct periods in the history of healthcare regulation in the private sector:

    36.1. Period 1: Over the period 1980 to 1989, the regulatory framework principally supported the needs of employer and industry-based schemes and there were no open schemes competing with employer and industry-based schemes. Schemes were required to community rate their contributions and to comprehensively cover minimum benefits. Schemes were permitted to differentiate contributions only on the grounds of income and the number of beneficiaries.

15. The information contained in this section is based on a report released by the Department of Health entitled "Inquiry into various aspects of the South African Health system", 2002, pg.17-32.
16. Population estaimtes obtained from Statistics SA, as reported by the South African Reserve Bank. Data on medical schemes and beneficiaries were obtained from the Council for Medical Schemes.

36.2. Period 2: Over the period 1989 to 1993, all medical schemes were permitted to differentiate contributions making the schemes environment akin to actuarial insurance and removing their social protection function. Schemes were able to differentiate on the basis of health status, age, gender, claim patterns, geography, and income.

36.3. Period 3: From January 1994 until 2000 the requirement that medical schemes offer minimum benefits was removed.

36.3.1 This policy shift facilitated the entry and growth of multi-employer and open schemes. Medical schemes were consequently permitted to discriminate against poor health risks by adjusting the contribution structure (i.e. making sick people pay more), the application of wide exclusions, and changing the benefits offered (i.e. excluding benefits for certain conditions).

36.3.2 There was a substantial movement of beneficiaries from restricted (employer and industry) schemes to open (multiple-employer and individual) schemes during this period, and beyond. Open schemes grew in relation to restricted schemes while the total medical scheme population remained stable, suggesting that open schemes gained market share at the expense of restricted schemes. This coincided with the period when medical schemes were permitted to risk-rate and risk-select.

36.4. Period 4: From 2000 onward, the Medical Schemes Act was revised to remove discrimination on the basis of health status and a system of mandatory minimum benefits was re-implemented.

Private hospitals

37. The private hospital industry is a relatively recent development in South Africa. Before 1985 private hospital care was uncommon and most medical scheme members used (and paid for, via their schemes) public hospital services. Public hospital services were free for lower income groups. Higher income groups with incomes in excess of a means test were required to pay.

38. Private hospital services started to grow significantly from the mid-1980s. In 1986 there were a total of 6,125 private hospital beds. By 1998 there were 20,908 beds in 162 private hospitals (an increase in beds of more than 240%). By 2010, a further 10,000 private beds and 54 hospitals had been added (Table 3.2).

39. Over the same period, the number of public hospital beds declined from 117,842 in 1986 to 88,920 by 2010 (a decline in beds of 25%) (Table 3.2).

40. The number of private beds largely offset the decline in public beds. As a result, the bed to population ratio in the public sector declined precipitously and in the private sector, the bed to population ratio has increased. This will be discussed in more detail in later sections of the report.

41. Between 2010 and 2016, the private hospital beds increased from 31 067 to 43 711 (an increase of 40.7%), whilst public hospital beds increased from 88 920 in 2010 to 89 071 in 2016 (an increase of 0.2%). Overall, the total beds (including both private and public) rose from 119 987 in 2010 to 132 782 in 2016 but this masks the discrepancy in the bed to population ration in the public and private healthcare sectors.

42. The total number of private facilities increased from 216 in 2010 to 409 in 2016 (an increase of 89.4%), whilst the total public facilities declined from 410 in 2010 to 405 in 2016 (a decrease of 1.2%). As a whole, the total number of facilities (both private and public) rose from 626 in 2010 to 814 in 2016.

Medical practitioners

43. There is very little publicly available data on the number of health professionals in both the public and private sectors as the number and distribution of health professionals is not routinely tracked by government. The numbers reported here are thus estimates based on HPCSA reports and information collected by the HMI.

44. Table 3.3 sets out the estimated number of practitioners by sector. The distribution is uneven across categories. In 2015,

TABLE 3.2: PRIVATE AND PUBLIC BED ESTIMATES (1976 - 2016)[17 18]

Year	Private*		Public		Total	
	Hosp	Beds	Hosp	Beds	Hosp	Beds
1976	25	2 346				
1986	65	6 125		117 842		123 967
1989	101	10 936				
1998	162	20 908	343	107 634	505	128 542
2010	216	31 067	410	88 920	626	119 987
2016	409	43 711	405	89 071	814	132 782

**Includes Acute, Non-Acute, Day Beds/Clinics, Psychiatric and Sub-Acute Facilities and Beds.*

approximately 56.3% of all general practitioners and 73.3% of all nurses worked in the public sector. However, only 35.8% of medical specialists and fewer than 30% of dentists worked in the public sector (Table 3.3).

TABLE 3.3: ESTIMATED PUBLIC AND PRIVATE SECTOR DISTRIBUTION OF KEY HEALTH PROFESSIONALS (2015) [19]

Health Professional	Estimate			% of total			Per 10,000 population		
	Pub	Priv	Total	Pub	Priv	Total	Pub	Priv	Total
General practitioners	11 299	8 768	**20 067**	56.3%	43.7%	**100.0%**	2.4	10.0	**3.7**
Medical specialists	4 233	7 595	**11 827**	35.8%	64.2%	**100.0%**	0.9	8.7	**2.2**
Dental practitioners	1 047	2 523	**3 571**	29.3%	70.7%	**100.0%**	0.2	2.9	**0.6**
Dental specialists	88	310	**398**	22.2%	77.8%	**100.0%**	0.0	0.4	**0.1**
Nurses	109 477	39 904	**149 381**	73.3%	26.7%	**100.0%**	23.7	45.5	**27.2**

17. Van den Heever AM. The role of insurance in the achievement of universal coverage within a developing country context: South Africa as a case study. BMC Public Health. 2012;12 Suppl 1:S5. doi: 10.1186/1471-2458-12-S1-S5. Epub 2012 Jun 22.
18. Health Market Inquiry Data compiled from various sources.
19. Compiled from data received from the HPCSA and collected by the Health Market Inquiry.

45. The HMI notes, however, that these estimates may not be an accurate reflection of the situation in either the public or private sector as they do not reflect the substantial numbers of public sector practitioners (including medical specialists and nurses) who also work in the private sector, whether or not authorised to do so.

46. Table 3.4 shows the number of practitioners registered under each professional board of the HPCSA. The total number of healthcare practitioners registered with the HPCSA in 2014 was approximately 221,508. This includes healthcare practitioners, assistant practitioners, counsellors, scientists and interns who are either fully qualified or undertaking studies. However, we note that these figures are likely to be overstated as HPCSA data includes all registered practitioners and not necessarily only those who are in active practice. Practitioners who are no longer delivering clinical care, those who are retired, and those living and working outside South Africa can still maintain their HPCSA registration and will thus be included in these numbers.

TABLE 3.4: HPCSA REGISTERED PRACTITIONERS REFLECT BY PROFESSIONAL BOARD (2014) [20]

Professional board	Estimated number of professionals registered
Medical and dental (and medical science[21])	52 307 - 65 234
Radiography and clinical technology	8 447 - 10 745
Dental therapy and oral hygiene	4 789 - 6 881
Dietetics and nutrition	3 145 - 4 595
Emergency care	69 143 - 69 696
Medical technology	9 157 - 16 125
Physiotherapy, podiatry and bio kinetics	8 845 - 11 660
Psychology	12 605 - 13 853
Speech language and hearing professions	2 907 - 4 141

THE HISTORY OF TARIFF DETERMINATION IN THE PRIVATE HEALTHCARE SECTOR[22]

47. Throughout the various regulatory periods discussed above, government and private actors made numerous attempts to establish an effective means to set tariffs in the private sector.

48. A consistent feature in the history of medical schemes is that tariffs were always determined on a fee-for-service basis (i.e. determining a price per procedure or price per product without reference to the volume and quality of services rendered).

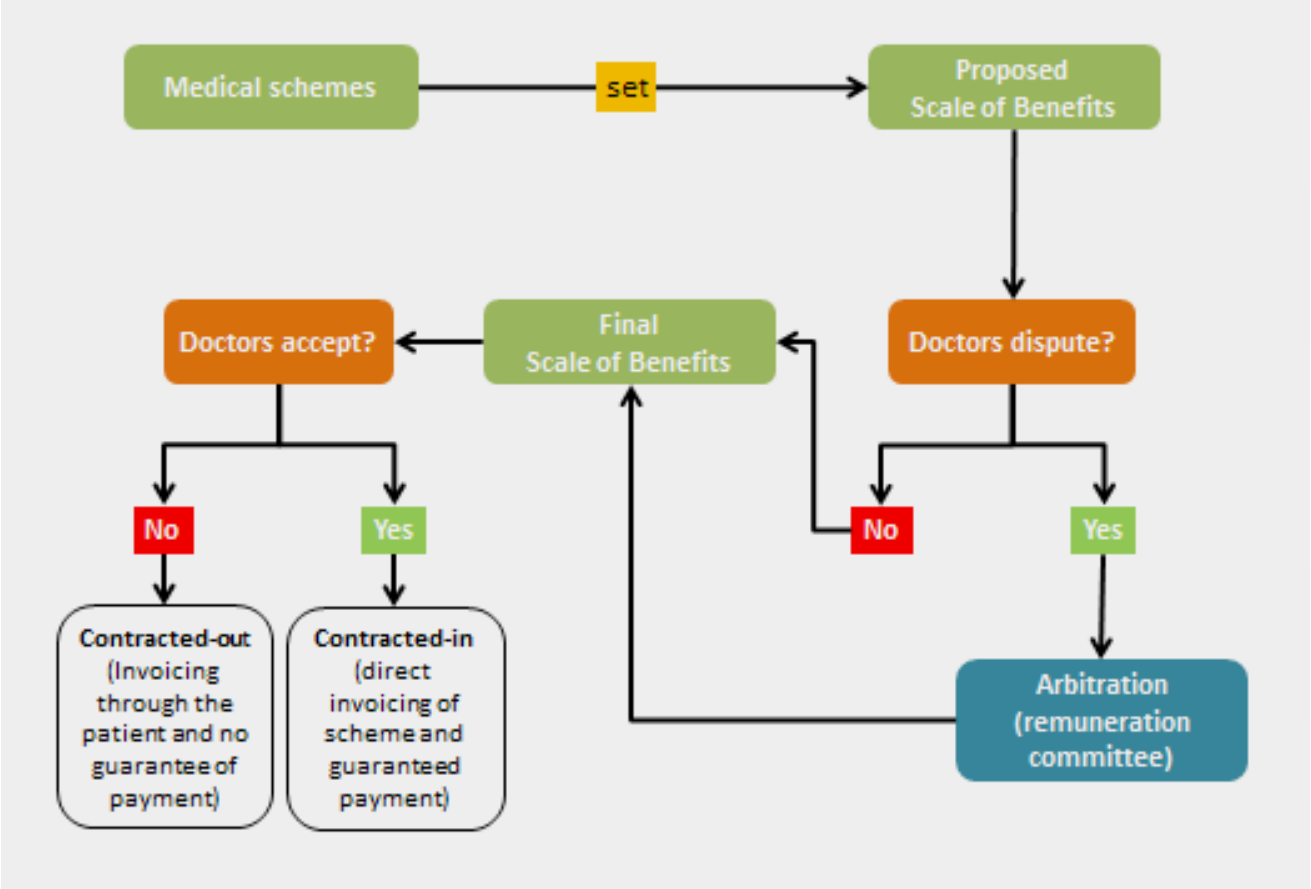
20. HPCSA, 2014 and the Health Market Inquiry Research.
21. Medical scientists include genetic counsellors, physicists, biological scientists, biomedical engineers and clinical biochemists, which are not classified as practitioners or healthcare providers and may inflate the numbers reflected in Table 3.3.
22. Council for Medical Schemes Evaluation of medical schemes' cost increases, findings and recommendations. Research Brief number 1 of 2008. and Notice of intention to publish undesirable business practice declaration in terms of section 61 of the Medical Schemes Act No.131 of 1998 as amended. Circular 59 of 2016.

49. During the 1960s, medical scheme[23] benefits were paid in full in accordance with a tariff of fees set jointly by providers, medical schemes and associations. The tariff of fees effectively amounted to the benefit schedule of a scheme as schemes traditionally reimbursed 100% of the set fees. At this point, medical expenditure was relatively low and medical schemes merely reimbursed medical expenses incurred and did not get involved in managing costs other than through the annual fee-setting process.

50. During this period, doctors who accepted the tariff of fees determined collectively by medical schemes, were regarded as "contracted-in" and were entitled to full reimbursement. They were also not permitted to balance-bill patients. Doctors who did not accept the tariff of fees would be regarded as "contracted-out" and were able to balance-bill patients for the portion not reimbursed by the schemes (Figure 3.3). "Contracted-in" doctors were reimbursed directly by schemes at the predetermined rate, while those "contracted-out" had more discretion on their rates but were not reimbursed directly by schemes but had to invoice the patient. This meant that doctors who were contracted out faced a larger administrative burden and had greater uncertainty un reimbursement. Doctors felt that this placed undue pressure on them to "contract in" and accept the tariff of fees.

51. A remuneration committee was established in 1969 to review the tariff of fees every two years. The objective was to achieve an improved arbitration mechanism in cases where a dispute existed between medical schemes and doctors.

FIGURE 3.3: FRAMEWORK FOR SETTING MEDICAL PRACTITIONER FEES CIRCA 1978[24]



23. Although the various forms of health insurance were not as yet settled in law, the term medical scheme is used here for the sake of convenience.
24. Developed by the Health Market Inquiry.

52. After a number of years the remuneration committee came to be regarded by medical practitioners as favourable to medical schemes.[25] By 1978 both the Medical and Dental Associations withdrew their support for the remuneration committee. Increasingly, doctors started to opt out of the contracting framework thus rejecting the tariff of fees as the basis for remuneration.

53. To counter the increased contracting-out by doctors, legislative consideration was given to removing the free right of doctors to opt out. However, doctors continued to opt out and the legislation was subsequently withdrawn.

54. In 1978, government abolished the remuneration committee and made legal provision to replace it with a Medical and Dental Council (a forerunner of the HPCSA) to determine fees. This was done on condition that further contracting-out be avoided, failing which the Minister of Health would step in to regulate against doctors contracting-out.

55. Legislation introduced in 1984 removed the framework that allowed for contracting in or out. From that period on, healthcare practitioners determined their own fees through their statutory control bodies (equivalent to the HPCSA today).

56. The Representative Association of Medical Schemes (RAMS), the private association for medical schemes, was however legally empowered to determine a tariff of fees (including for hospital services) on behalf of all medical schemes after consultation with service providers. Payment to the health service provider was guaranteed only if they charged less than or equal to the tariff of fees. In effect this was merely another version of the contracted-in/out framework.

57. The statutory powers allocated to the RAMS were withdrawn in 1993. RAMS nevertheless continued to publish the reference tariffs resulting from collective negotiations with hospitals and medical practitioners (through private associations). Medical schemes were free to use these reference prices or to negotiate separately.

58. In effect medical schemes typically adopted the RAMS reference prices, offering guaranteed payment and direct invoicing as an inducement to providers to accept the tariffs. Medical practitioners who refused to accept the reference prices were paid directly by the patient/member. The member would only be reimbursed by the scheme on proof that they had paid the initial account.

59. In response to this, the Medical Association of South Africa (MASA, the precursor to the present South African Medical Association or SAMA) set its own reference prices, typically at a surcharge to the RAMS tariff. Medical practitioners were free to make their own choice about which fees to charge but would not be able to charge in excess of the MASA schedule. Again, barring minor details, this framework was merely a version of the contracted-in/out structure in place from the 1960s.

60. This framework remained in place until 2004 when the Competition Commission intervened to stop collective tariff negotiations that amounted to anti-competitive conduct.[26] The various private associations involved on both the purchaser and provider sides were fined for collusive price-setting. The idea of central fee schedules fell away on the assumption that each scheme would negotiate a price schedule with each provider.

61. Technically, it was difficult to establish prices strictly consistent with the Competition Commission's determination, particularly between funders and the large and dispersed population of practitioners. The transaction costs of conducting bilateral negotiations, particularly between schemes and pracitioners, would be very high and the multitude of engagements overly burdensome.

62. After consultation with the NDOH and the Competition Commission, the CMS undertook to publish a reference price schedule,

25. Department of Health. 2002. Inquiry into various aspects of the South African Health system
26. By this time the RAMS was replaced by a new private association called the Board of Health Funders (BHF). This body took over all the functions of RAMS.

the *National Health Reference Price List* (NHRPL), using general powers allocated to it in terms of the MSA thereby falling outside the jurisdiction of the Competition Act . The hospital groups, however, refused to participate in the NHRPL process, preferring instead to negotiate centrally with medical schemes or their administrators.[27]

63. After the publication of the first NHRPL applicable to the 2005 benefit year, the HPCSA published their own reference fee schedule. Whereas in previous years MASA (now SAMA) only ever set reference prices at a few percentage points above the NHRPL, the HPCSA published rates based on a flat 300% of the NHRPL rate, resulting in a substantial once-off escalation of professional fees. No analytical work or societal consultation preceded the publication of the HPCSA fees.[28]

64. Medical schemes responded to the escalation by restricting medical practitioner reimbursements to the NHRPL, with any balance-billing arising from the gap between the NHRPL and the HPCSA tariffs for the account of the medical scheme member.

65. A NHRPL price schedule was published in 2005 and 2006. Thereafter the process was shifted from the CMS to the NDOH which adopted the same approach as the CMS, except now referring to the Reference Price List (RPL).

66. The reference prices were supposed to be based on actual costing studies on the assumption that these would offer an objective measure of the appropriate prices. Unlike with the NHRPL, the hospital groups actively participated in the process although they continued to negotiate at a central level directly with schemes and/or their administrators on their tariffs.

67. Management companies developed methodologies to support various medical practitioner associations to determine prices as input into the Reference Price List process. This information was made available to the NDOH. Aggregate information from the costing studies and related coding structures were freely shared amongst the various doctor associations, a practice that continues to the present day. [29]

68. The NDOH process however failed to result in the publication of a RPL subsequent to the 2006 NHRPL. This can largely be attributed to the reluctance of the NDOH to accommodate the substantial fee increases implied by the costing studies carried out by the management companies supporting the specialist associations. Court action ensued which, in 2010, concluded with the striking down of the regulations relied upon by the NDOH to publish a RPL, and furthermore prohibited the publication of any RPL that was merely an extrapolation of the NHRPL.[30]

69. Therefore, since 2006 no new NHRPL or RPL has been published. Practitioners set their own prices and schemes and administrators set their own reimbursement fees. The practice of penalising medical practitioners for charging in excess of the reimbursement tariffs has largely fallen away, with most administrators paying claims up to the reimbursement tariff/scheme tariff. Any shortfall in payment has resulted in balance-billing where scheme members are responsible for the balance, subject to it being disclosed in full to patients prior to care. [31]

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27. Council for Medical Schemes. Evaluation of medical schemes' cost increases, findings and recommendations. Research Brief number 1 of 2008. 2008, pg. 18.
28. Council for Medical Schemes. Evaluation of medical schemes' cost increases, findings and recommendations. Research Brief number 1 of 2008. 2008, pg. 19.
29. Medical practitioners share a considerable amount of information on their tariffs via various associations which operate both nationally and regionally. For instance, Healthman provides technical support to multiple medical practitioner associations and publishes detailed comparative tariff schedules on their website. See http://www.healthman.co.za/Tariffs . Comparative schedules are provided from 2011 to 2018..
30. Department of Health. 2002. Inquiry into various aspects of the South African Health system.
31. This is required in terms of section 6(1)c of the National Health Act, number 61 of 2003.

OWNERSHIP AND CONTROL IN THE PRIVATE HEALTH SECTOR

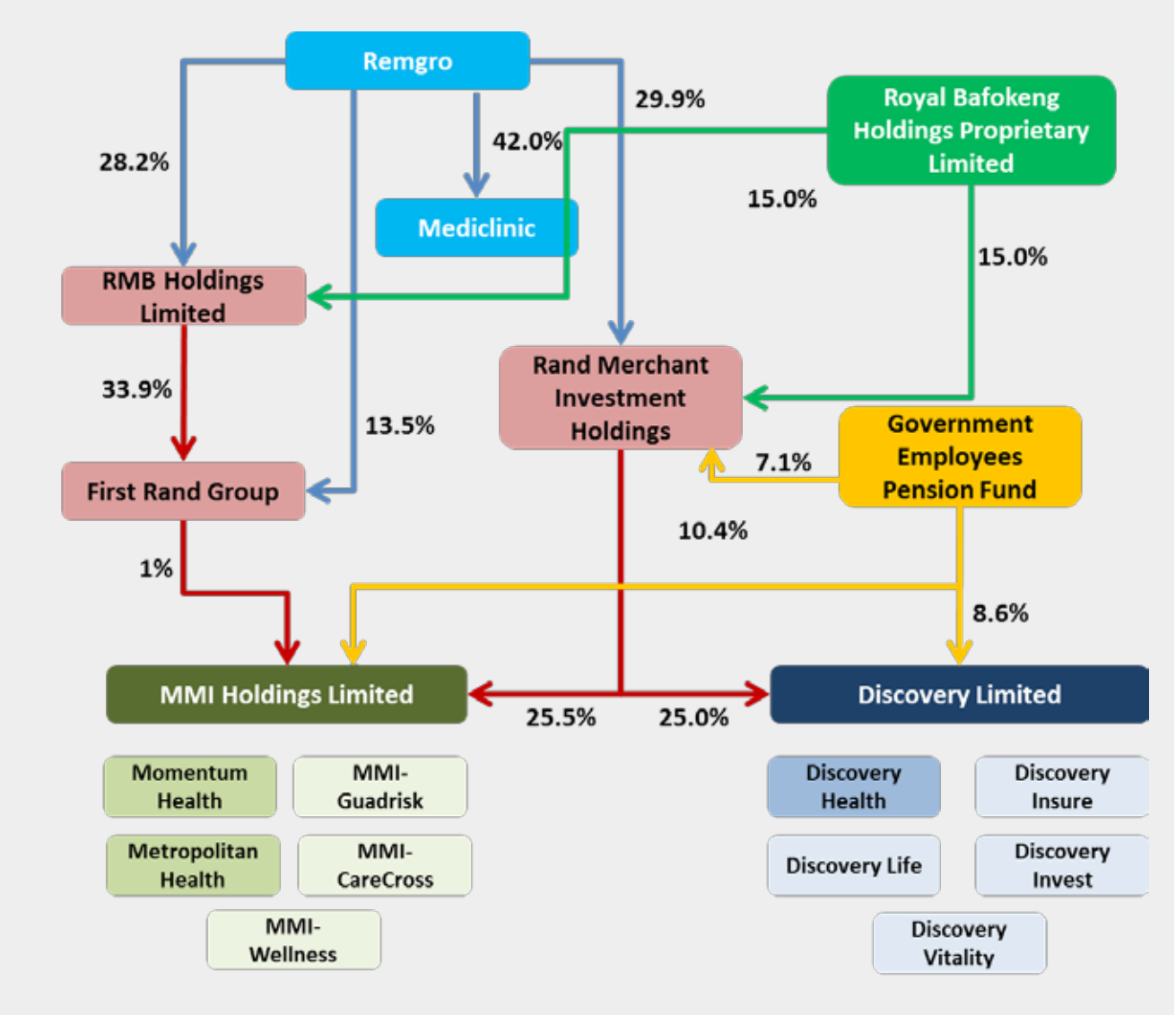
70. 7The private health system does not fit neatly into functional categories (insurer, hospital group, administrator, etc.) due to complex ownership relationships across all parts of the system. This complexity is best demonstrated by examples that show the crossover between categories. We discuss two examples, Remgro and Afrocentric, below.

Remgro

71. Remgro is an investment holding company that holds assets in a wide range of industries, including financial services and healthcare. It holds healthcare assets, both directly and indirectly, in two large administrators (who provide administration services to three large open schemes), a large hospital group, managed care services, a primary provider network, pharmaceutical manufacture, (competing) medical insurance organisations and a provider of mobile health services.

72. Remgro owns 28.2% of RMB Holdings

FIGURE 3.4: REMGRO SHAREHOLDING[34]



32. Submission from RMI Holdings Limited and RMB Holdings Limited, dated 30 June 2017.
33. Submission from RMI Holdings Limited and RMB Holdings Limited, dated 30 June 2017.

Limited (RMBH) and 29.9% of Rand Merchant Investment Holdings Limited (RMIH). RMIH in turn has a 25,5% and 25% share ownership in MMI and DL respectively (Figure 3.4). This implies that Remgro has an indirect share ownership of 7,7% and 7,5% in MMI and DL respectively.[32] Remgro directly owns 42.0% of Mediclinic, one of the three largest hospital groups in South Africa.

73. There is also notable overlap in board positions between the healthcare firms in the Remgro group. Until the 14th of January 2016, the Chief Executive of Remgro sat on the board of Discovery Limited.[33] He now sits on the boards of Mediclinic and the FirstRand Group (FRG). Both RMIH and RMBH share the same directors. The board of RMIH includes directors from both MMI (which includes Metropolitan and Momentum Health) and Discovery Limited. RMIH is the largest shareholder of both MMI Holdings and Discovery Limited.

74. This shows that there is a significant commercial relationship between the largest and/or the most influential owners of Discovery Limited, MMI and Mediclinic. The group also has organised relationships with broker markets (both through ownership and contract).

TABLE 3.5: RAND MERCHANT BANK INVESTMENT HOLDINGS DIRECTORS HOLDING CROSS DIRECTORSHIPS WITHIN THE REMGRO HEALTH GROUP OF COMPANIES (BASED ON FY 2016).[35]

Directors of RMIH	Discovery (Ltd)	MMI Holdings (Ltd)	Mediclinic International (Ltd)	FirstRand Group	Remgro (Ltd)	RMB Holdings (Ltd)	Royal Bafokeng Holdings
Director 1						1	CE
Director 2						1	
Director 3					**1**	Ch	
Director 4	1					CE	
Director 5	1[36]		1	1	**CE**	1	
Director 6						1	
Director 7		**1**		CE		1	
Director 8		**1**				1	
Director 9				Ch		1	
Director 10					**1**	1	
Director 11						1	
Director 12				1		1	
Director 13				1	**1**	1	
Director 14						1	
Director 15	*			1		1	
Director 16	1					1	
Total	**3**	**2**	**1**	**6**	**5**	**16**	**1**

1 Indicates that a cross directorship exists, CE indicates that the cross directorship is held by the chief executive, CH indicates that the cross directorship is held by the chairperson

34. Compiled from REMGRO website and Annual Reports.
35. Based on respective Annual Reports for FY 2016.
36. Resigned from MMI board in November 2016.

AfroCentric

75. The administrator Medscheme forms part of a complex group structure falling under the umbrella of AfroCentric (Figure 3.5).

76. AfroCentric's business includes healthcare administration, managed care services; pharmaceutical manufacturing, wholesaling and dispensing, short- and long-term insurance, brokering, and HIV and AIDS disease management (managed care).

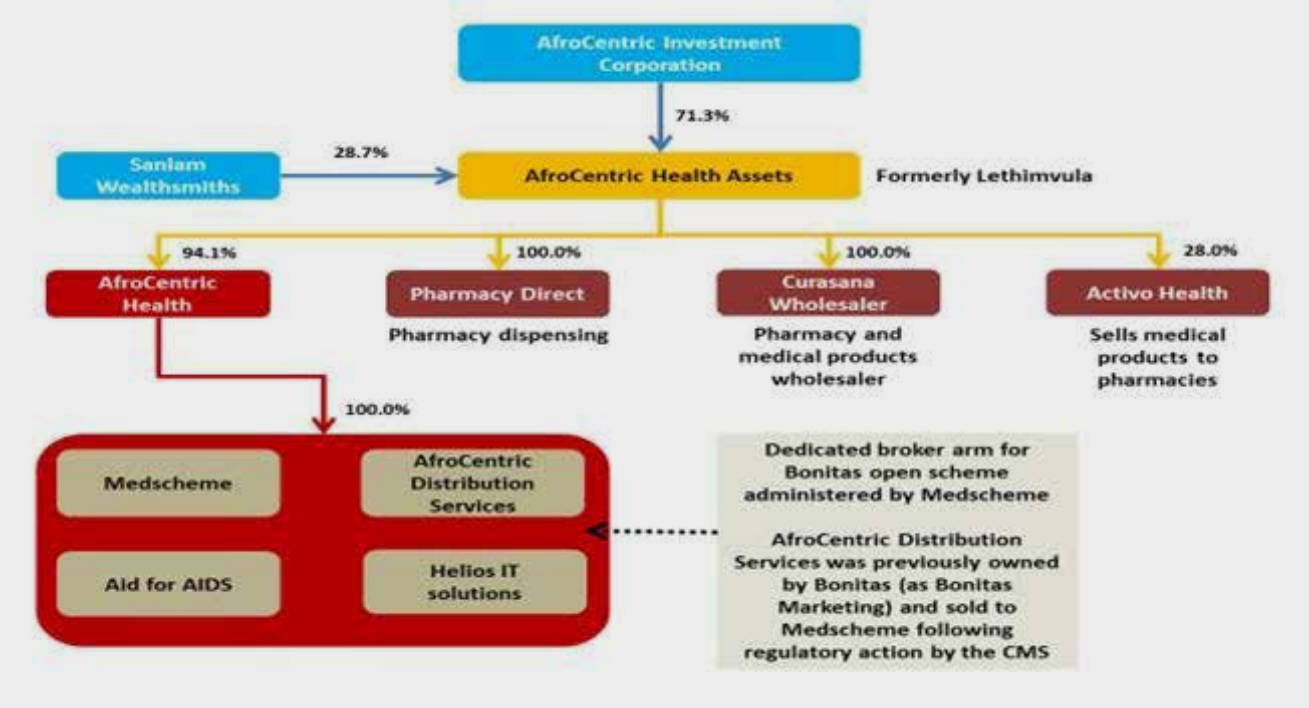
77. AfroCentric was formerly known as Lethimvula (and before that as Netpartner), an investment vehicle established by a consortium of doctor associations together with Netcare and Community Investment Holdings Proprietary Limited (CIH). Netcare had a 46.3% shareholding in Afrocentric (Netpartner) and CIH owned various hospitals jointly with Netcare. CIH sold its interest in a number of hospitals which it jointly owned with Netcare to become investors in Afrocentric (Netpartner)[37].

78. In 2006, Netpartner (Lethimvula/AfroCentric) bought the businesses of Medscheme and the administrator Rowan Angel (which includes Spectramed medical scheme) in two intermediate mergers conditionally approved by the Competition Commission.

79. Subsequently, Netcare filed a large merger with Netpartner (as a precursor to an intended purchase of Medscheme Holdings). Later, Netcare agreed to withdraw from Netpartner and to purchase the hospitals it held together with CIH. CIH and Community Health Holdings own 11,05% and 11,15% ordinary shares in Afrocentric[38].

80. CIH is a diversified investment holding company with interests in healthcare, ICT, energy, logistics, mining and infrastructure development. CIH's healthcare interests

FIGURE 3.5: AFROCENTRIC OWNERSHIP STRUCTURE[39] [40]



37. Afrocentric's submission to the Health Market Inquiry dated 14 July 2017.
38. AfroCentric Group. Shareholders' analysis. Available at: http://www.afrocentric.za.com/inv-analysis.php. Accessed 30 November 2017.
39. The structure is a high-level overview reflecting the main components of relevance to the HMI. Excluded are companies focused on foreign countries or smaller entities.
40. Company Annual Reports.

cover a range of areas including hospital products, pharmaceuticals, medical product distributors, and medical equipment.[41] CIH shares some directorships with Afrocentric. The executive chairperson of CIH is also the chairperson of AfroCentric and the chief executive of CIH is also a director of AfroCentric.

81. AfroCentric, in turn, also shares common directorships with Adcock Ingram, one of South Africa's largest suppliers of generic pharmaceuticals. The chairperson and a director of AfroCentric are also directors of Adcock Ingram[42].

COMPETITION CONCERNS ABOUT COMMON OWNERSHIP AND CROSS-DIRECTORSHIP

82. The HMI has found that, in total, 56.9% of the total medical scheme beneficiaries under administration are administered by entities (administrators) in which the Remgro corporate group has a stake and 22.6% of the total medical scheme beneficiaries under administration are administered by entities in which the Afrocentric corporate group has a stake.

83. The Remgro corporate group has interests in four medical scheme administrators, six MCOs and four brokerages. AfroCentric controls one administrator, one brokerage and two MCOs. Further, Sanlam which has a 23.7% share in AfroCentric Health Investments, has a stake in a further two administrators, one MCO and one brokerage.

84. The ownership structures of both Remgro and Afrocentric indicate complex interrelationships between firms. Common shareholding and cross-directorships may distort or prevent vigorous competition as firms seek not to disadvantage returns to companies with multiple shareholding. The HMI is concerned about the chilling effect that cross-derectorships may have on competition.

REIMBURSEMENT MODELS

Overview of Alternative Reimbursement Models

85. Alternative reimbursement models (ARMs) are a move away from the fee-for-service (FFS) model which is most common in the South African healthcare market. ARMs can take a number of forms, each associated with a different degree of risk-transfer from the funder to the service provider (Figure 3.6). The risk-transfer helps to align the incentives of the two negotiating parties, facilitating positive outcomes for both parties. For example, funders receive a degree of certainty in costs and facilities are remunerated for accepting risk.

86. These models generate positive patient outcomes when incentives are properly aligned but may also lead to undesirable outcomes when models are poorly implemented or have inherent limitations. ARMs differ by the degree of risk-transfer that occurs between a funder and provider. Several of the main ARMs are discussed in more detail below, highlighting the nature of risk-transfer and associated changes in incentives.[43]

41. Company Annual Reports.
42. Company Annual Reports.
43. Compass Lexecon – Evidence on bargaining between medical schemes and Netcare in South Africa, para. 3.44.

FIGURE 3.6: DIFFERENT REIMBURSEMENT MODELS AND THE LEVEL OF RISK TRANSFERRED

Source: Medscheme Holdings – Response to data and information request

Fee-For-Service (FFS)

87. FFS is currently the predominant payment mechanisms in South Africa.[44] Under FFS, the risk of cost increases remain with the funder as each additional cost (e.g. volume, utilisation, length of stay, technology used, consumables, etc.) is billed to the funder. This results in misaligned incentives as funders attempt to limit exposure by refusing or requiring pre-authorisation for new or expensive treatments while providers are incentivised to over-invest in generously remunerated services and under-invest in poorly remunerated services, including those that may have a high-impact on patient outcomes early on in the care-cycle.[45]

Bundled Payments

Per Diem, Case Rate / Fixed Fee, Diagnosis Related Groups / Cost-Per-Event (CPE)

88. *Bundled payments* refer to a model of reimbursement in which a funder combines several individual costs which would normally be charged separately under a FFS model into one payment. These payments are fixed for the costs specified, thereby incentivising providers to increase efficiency for the serices covered by the bundled payment. This also removes the incentives for supplier induced demand, unless the provider is able to benefit by directing the patient towards procedures/treatment/services not covered by the bundled payment. There exist a wide range of these models and the degree to which they transfer risk is dependent on the extent of the costs which are covered by the bundle.

89. For instance, *Per Diems* combine a number of items and services of in-patient care into a fixed daily rate. Any costs or savings from claims being above or below the agreed rate accrue to the provider. Therefore the risk of escalating costs are partially transferred away from the funder. However, funders are still at risk for any additional costs such as

44. In terms of practitioner payment, see Econex Health Reform Note 6, September 2010, page 4 and DH/DHMS submission on Tariff Determination, Oct 2017, page 8. For Hospitals, the evidence suggests there has been a greater uptake in ARMs.
45. Porter, Michael E., and Robert S. Kaplan. "How to Pay for Health Care." Harvard Business Review 94, nos. 7-8 (July–August 2016): 88–100.

length of stay, volume of admission, and procedure mix.

90. *Case Rates* or *Fixed Fee* models extend the Per Diem arrangement to cover the entirety of a patient case rather than a per-day charge. By doing so, the risks associated with the level of individual patient's care and length of stay can be transferred from the funder to the provider.

91. DRG or Cost-per-event models extend the bundled payments to cover the entirety of a patients' care cycle for a particular event. However, as with all the models described above, the funder is still liable for the costs associated with an increased volume of patients needing care as well as the risk related to a funder's acuity mix.[46]

Capitation[47]

92. Under capitation funders pay providers a fixed fee per beneficiary for a number of beneficiaries enrolled in the plan, in advance. The fixed fee covers a particular set of services provided for a specified duration and covers a specified number of beneficiaries whether or not they seek care during the period of the capitation agreement. The provider is then responsible for all the contracted medical needs of each beneficiary. This differs from bundled payments as the capitation fee is set for an anticipated volume, regardless of actual patient visits. Under capitation the risk associated with a higher than expected number of patients requiring care is transferred to the provider.

93. As reimbursement is independent of the quantity and type of treatments, all risk associated with the specified costs are transferred to providers. Providers are therefore motivated to be more efficient, cost-effective, and more likely to invest in preventative care.

94. However, without measurable or quantifiable patient outcomes, providers may be incentivised to restrict access to expensive treatments or ration care for services which may have long-run beneficial outcomes.

Global Provider Budgets[48]

95. This mechanism is a more expansive form of capitation under which funders allocate a fixed budget to each providing organisation (e.g. a combination of hospitals and specialists), taking into consideration anticipated volumes and acuity mix. Providers determine how the budget is allocated but must treat all beneficiaries seeking care, irrespective of volume or case mix. While such a model provides certainty to funders in terms of costs and simplifies administration, the providers' revenues may become disconnected from the volumes, services, and complexity of treatments performed.

96. With a fixed income, providers are incentivised to restrict or delay the volume of patients that are seen. Where demand is below supply they also have no incentive to increase utilisation.

97. Further, any innovation or investment in skills or technology has to be absorbed by the provider who isn't rewarded even if such activities may lead to beneficial patient outcomes.

Pay-for-performance

98. Pay-for-performance remunerates providers to the extent they are able to meet certain predetermined metrics for quality and efficiency. This mechanism can be incorporated into many of the models identified above.

99. Linking provider remuneration to patient outcomes can deliver value to patients.

---

46. Acuity mix risk refers to a scheme's members requiring above or below the average number of high- or low- cost services.
47. CMS: Capitation fee / risk transfer basis: - The managed care services are reimbursed on a fixed fee per member or per beneficiary per month, either for the entire medical scheme / option population, or only for those members/beneficiaries enrolled on a particular programme. The risk relating to a particular healthcare service is transferred partially or in full to the managed healthcare organisation; i.e. the managed healthcare organisation is responsible for the processing and payment of relating claims, and therefore will earn any associated "profits" and absorb any associated "losses".
48. See FTI Consulting: Reimbursement models: Lessons from the UK and the case for change, slide 6. http://www.bhfglobal.com/downloads/conferences/presentations/2017/Monday/victoria-barr-presentation.pdf

However, defining and measuring appropriate benchmarks can be difficult, costly, and requires provider coordination. There is also a risk that inappropriately defined or measured benchmarks may reduce benefits and lead to negative outcomes.[49]

THE CURRENT STATE OF ALTERNATIVE REIMBURSEMENT MODELS IN SOUTH AFRICA

100. The South African healthcare market has generally been exhibiting a trend towards a greater acceptance and implementation of ARMs though the efficacy thereof has been questioned, as discussed further in the chapter that assesses facilities.

Funder / Hospital group ARM arrangements

101. Hospital group submissions have indicated that ARM contracting is a developing area, with quality metrics and value-based contracting increasingly forming a greater part of negotiations. Several hospital groups claim that a substantial proportion of their revenues are classified as ARMs.

Funder / Practitioner ARM arrangements

102. Both funders and practitioners have indicated their willingness to adopt new reimbursement models, however there have been legal restrictions to doing so given the HPCSA's interpretation of the ethical rules on sharing of fees (ethical rule 7), business models (ethical rule 8) and sub-contracting (ethical rule 18). Regardless, it seems some ARMs have nevertheless been implemented, although there remain some concerns regarding the potential for adverse outcomes. Discovery Health has indicated that the uptake of ARM contracts is increasing but the reimbursement of GPs and specialists remains predominately FFS.[50] ARMs are discussed further in Chapter 7 of the Provisional Findings Report under the Bargaining and Tariff Determination section.

NETWORKS IN THE HEALTHCARE SECTOR

103. Networks take various forms:

103.1. Provider-initiated networks serve one or a combination of the following purposes: provision of a platform for tariff negotiations, discussions on coding, maintenance of a gatekeeper role, encouragement of preventative care among scheme beneficiaries, management of utilisation, information dissemination and member welfare protection.

103.2. Funders contract with providers or product suppliers who provide healthcare services to members of their medical schemes. For Designated Service Provider (DSP) contracts, there is often an agreement between the specific funder and a provider or product supplier to channel patients to the network of providers, whilst for Preferred Provider Networks (PPNs), funders would have a list of preferred providers to whom they channel their members without formal payment arrangements in place. Funders enter into network arrangements to agree on prices up front, to ensure compliance with formularies and to reap the benefits of cost savings such as managing PMB costs. The network may also have direct advantaged for members who have a guarantee that they would not be liable for any co-payments when using the services of a provider on a specific network.

103.3. Third party entities such as managed care organisations establish networks arrangements to ensure reduced administrative costs, care standardisation and that patients a particular care pathway is followed.

104. The HMI notes that there is some fluidity in the way networks operate and that even though the HMI has tried to classify these

49. Submission by Medscheme to the HMI (August 2015) indicates increasing adoption of ARMs in South Africa. The efficacy of ARMs in reducing expenditure is critically assessed in the report entitled "Report on Analysis of Medical Schems Claims Data – a focus on Facilities" published by the HMI in December 2017. Available here. Last accessed 31 May 2018.
50. See DH/DHMS submission on Tariff Determination, page 8.

networks and give examples, it is still difficult to accurately categorise them.

Funder initiated networks

105. Funder initiated networks are either created by medical schemes themselves or through their administrators or Managed Care Organisations (MCOs). These network arrangements would be established with GPs, hospitals, specialists, specialist technicians and/or product suppliers.

106. Examples of funder initiated networks with hospital groups and GPs are the formal Designated Service Provider (DSP) networks such as the Discovery KeyCare, Momentum Ingwe and Impact Hospital networks as well as the CAMAF, Bonitas and Bankmed[51] GP networks.[52 53]

107. Some medical schemes also offer Efficiency Discount Options (EDOs), which provide members a choice between network and non-network coverage. Members who join an EDO opt in to have their choices restricted to the medical scheme's network, and in return receive discounts on their premiums based on the savings generated from the network negotiations.

108. An example of a medical scheme initiated network with specialist technicians is the GEMS renal dialysis network and an example of a MCO established network with specialists is the Independent Clinical Oncology Network (ICON), which is also a provider-led network. ICON contracts with private practice oncologists and radiation oncologists.

109. The BestMed/Profmed pharmacy network is an example of a medical scheme initiated networks with product suppliers. In terms of this network arrangemtn, members can get access to their medicines at network pharmacies.[54 55]

Provider initiated networks

110. Provider initiated networks can take various forms, ranging from those created by General Practitioners and specialists to those initiated by hospitals. IPAF is an example of a GP initiated network that consists mainly of members from three national GP organisations[56]. The IPAF performs several functions for its members, including network management.[57]

111. A typical hospital initiated network is the National Hospital Network (NHN), which is open to independent facilities and facility groups that are not part of the three large hospital groups[58]. The primary purpose of the NHN network is to collectively negotiate with funders on behalf of its members.

112. The South African Society of Anaesthesiologists (SASA) is an example of a specialist initiated network. SASA is a volunteer-based association[59] that provides coding guidelines to its members.[60]

Third party initiated networks

113. In third party initiated networks an independent entity operates as a middle man as opposed to funders or providers contracting directly with each other. The independent entity is responsible for creating a network by contracting separately with funders on the one hand and product suppliers and providers on the other. Examples of third party initiated networks are Preferred Provider Negotiators (PPNe),

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51. For example, GP network for the Essential Plan and the Core Saver Plan.
52. Bankmed. Accessed from: https://www.bankmed.co.za/portal/individual/designated-service-providers .
53. An overview of the Discovery Health Keycare Plan is available here. Last Accessed 22 May 2018.
54. BestMed. Accessed from: http://www.bestmed.co.za/docs/Plans/Membership-Guide-Eng.pdf . Last accessed 22 May 2018.
55. Profmed. Accessed from: https://www.profmed.co.za/dspn/ . Last Accessed 22 May 2018.
56. Alliance of South African Independent Practitioners Associations ("ASAIPA"), the South African Medical and Dental Practitioners Provider Network Management Services ("SP-Net") and the South African Managed Care Cooperative ("SAMCC").
57. Independent Practitioners Association Foundation. Letter dated 11 July 2016 in response to the HMI information request.
58. Life Healthcare, Mediclinic and Netcare.
59. South African Society of Anaesthesiologists. Public Hearing Transcript, 24 February 2016, pg. 125-126.
60. South African Society of Anaesthesiologists, Letter to the HMI dated 29 July 2016, pg. 4-5.

Iso Leso and Improved Clinical Pathway Services (ICPS).

114. PPNe is an independent network manager that contracts indepdently with funders and optometrists.

115. Iso Leso is a public company, owned by an optometrist group that negotiates managed care and related services' contracts with funders. They also contract with independent optometrists.[61]

116. ICPS is a health management company managed by a group of doctors . The ICPS network contracts with medical schemes to offer services to their members and with surgeons who conduct knee and hip replacement surgeries. ICPS also contracts with healthcare facilities where knee and hip surgeries are done, as well as with product suppliers that provide prosthesis for the surgeries.

BROAD TRENDS IN THE PRIVATE HEALTHCARE SECTOR

117. This section provides a brief introduction to key demographic and expenditure trends in the private healthcare sector. The trends are discussed in more detail in the substantive chapters that follow. We starts with an overview of demographic changes to the medical scheme population and move to a general review of expenditure trends thereafter. Given that expenditure trends are usually compared to inflation (as measured by the Consumer Price Index (CPI)), the practice of using CPI as a comparator is also discussed.

DEMOGRAPHIC CHANGES TO THE MEDICAL SCHEME POPULATION IN THE PRIVATE SECTOR

118. Demographic changes over time can influence the structure of healthcare needs which, in turn, affects expenditure. Logically, we would expect expenditure to increase if the population served were becoming sicker over time. This could be driven by various factors, including age.

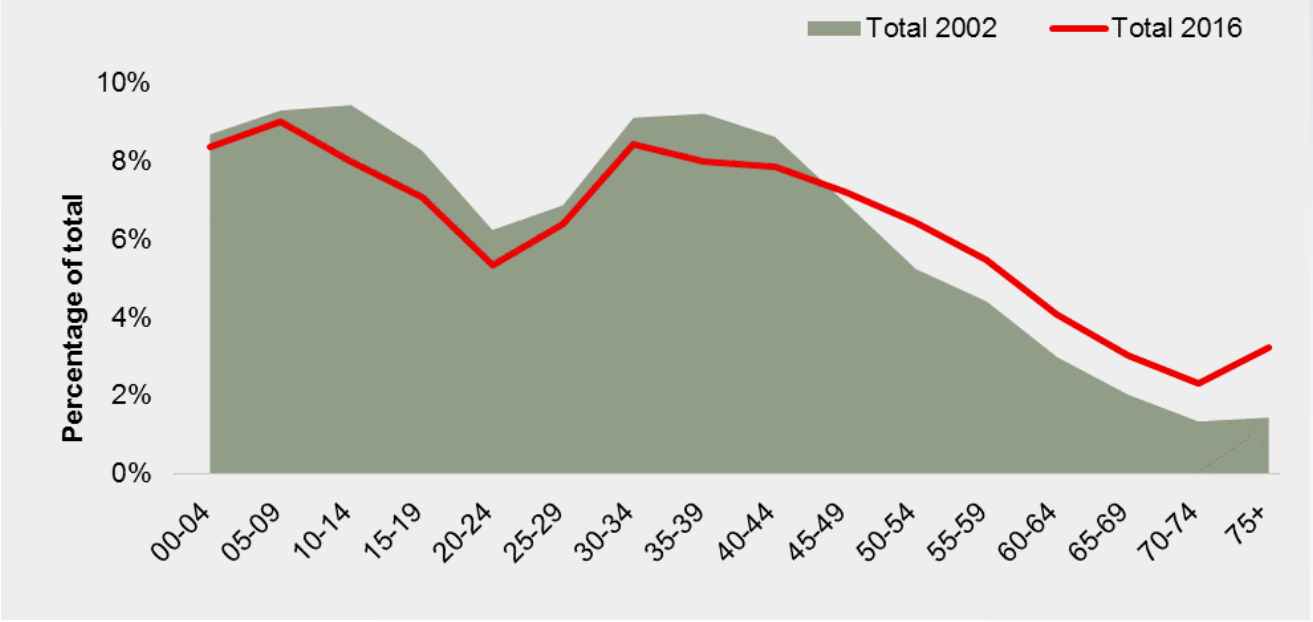
119. The CMS data for South Africa's medical scheme beneficiaries demonstrate minimal change in the average age of beneficiaries over the period 2005 to 2016 (Table 3.6).[63] This is supported by data from the General Household Survey (GHS) that also show only a slight change in the demographic profile of private sector schemes (Figure 3.8). [64]

TABLE 3.6: AVERAGE AGE OF MEDICAL SCHEME BENEFICIARIES BY SCHEME TYPE FROM 2005 TO 2016 [65]

Scheme type	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Open	31.5	31.4	31.8	32.6	32.9	33.1	33.3	33.8	33.5	33.6	33.8	34.0
Restricted	32.2	31.8	30.4	29.8	29.7	29.4	29.5	29.9	30.0	30.2	30.5	30.5
Industry	31.7	31.6	31.4	31.5	31.6	31.5	31.6	32.1	31.9	32.1	32.3	32.5

61. Iso leso. Accessed from: https://www.isoleso.co.za/About.
62. Improved Clinical Pathway Services. Accessed from: http://www.icpservices.co.za/
63. The average age of medical schemes beneficiaries between 2005 and 20016 per scheme is included as Appendix C. Although there is variation between schemes, changes in the average age are fairly small.
64. We note that the effects on individual medical schemes may vary.
65. Compiled from data obtained from the CMS.

FIGURE 3.8: AGGREGATE CHANGE IN THE DEMOGRAPHIC STRUCTURE OF MEDICAL SCHEMES FROM 2002 TO 2016 [66]



EXPENDITURE TRENDS

Using CPI as a comparator to assess health inflation

120. The HMI received several submissions on trends in healthcare expenditure in the private healthcare sector in South Africa and there is a broad consensus that expenditure has been increasing at a rate above CPI. Stakeholders have, however, raised concerns about the appropriateness of CPI as a comparator for evaluating increases in medical scheme premiums, hospital costs and changes in health inflation more broadly.

121. Some stakeholders argue that it is incorrect to compare increases in medical scheme contributions with CPI as the two are vastly different metrics. The CPI basket is representative of general household expenditure, consisting of general household goods such as food, school fees, transport, housing, entertainment etc. whereas medical schemes represent a dynamic and ever-changing basket of healthcare goods and services. The components of medical scheme premiums are influenced by factors that are very different to those in the CPI basket, including regulations, burden of disease, beneficiaries' propensity to claim and scheme benefit design.

122. Other stakeholders acknowledge the value of using CPI as a comparator when assessing affordability.[67]

How the CPI is calculated and the share of health in the CPI basket

123. The CPI measures the general change in the price of a fixed basket of goods and services. It is calculated as a weighted sum of prices of goods and services. The choice of goods included in the basket is based on general household spending patterns. The idea is to capture products that represent a significant share of household expenditure. The weight attached to each good or service reflects the proportion of consumption expenditure by households in a specific period. The impact that a change in the price of a good or service has on the overall index depends on the weight attached to it. Prices of basket items are updated on a

66. Database compiled from Statistics South Africa Annual Household Surveys from 2002 to 2014.
67. National Department of Health, Submission to the Private Healthcare Market Inquiry, dated 17 November 2014, pg.10.

monthly, quarterly or annual basis, whereas weights are updated every 5 years.[68]

124. The South African basket comprises twelve groups of goods and services. The share of health in the entire basket is 1.4%, which is the smallest share, and includes expenditure on medical products and medical services. It is therefore evident that inflationary adjustments in health services account for an insignificant proportion of the total CPI. The basket does not include all medical products; it includes prescription medicines, some of the over the counter pharmaceutical products[69], hospital services and out-patient services particularly medical services and dental services.

125. Stats SA also collects information on medical scheme premiums to measure medical insurance inflation. This is based on a sample of the three most 'significant' open schemes. For each scheme at most five benefit options are selected based on the number of members linked to each option. Medical scheme premiums are not included in the health component of the CPI basket. Instead, they are captured in the insurance category under miscellaneous goods and services. The rationale is that medical scheme contributions are affected by a variety of determinants other than pure price changes of medical services. The share of medical scheme premiums in the entire basket is 7.2%.

Arguments for and against the use of CPI as comparator

126. The main reason advanced against the use of CPI as a comparator for health inflation is that the two measures are structurally different. The CPI basket is made up of goods and services whose cost drivers are not the same as those of healthcare. In addition, the CPI basket is fixed whilst the components of a health basket are not.

The HMI's view

127. The argument that CPI inflation and health inflation are structurally different is fair. However, the HMI is of the view that it does not necessarily follow that meaningful conclusions or inferences cannot be drawn from comparing the two variables. Our main observation is that healthcare inflation has been consistently higher than CPI. No stakeholder has argued that this observation is invalid, in fact stakeholders accept this observation and have sought to explain the reasons behind it.

128. The key question is instead what meaningful inferences can be drawn from this comparison and what the comparison means for consumers of healthcare services. Given that wages and other income-contracts are based on CPI, any health inflation consistently above CPI inflation means that access to healthcare is becoming less affordable. The affordability issue was similarly raised by the CMS when it said "contribution increases in excess of the CPI have an adverse effect on the long-term sustainability of medical schemes"[70].

129. The CPI is an up-to-date social and economic indicator used to measure changes in the general level of prices of goods and services that households acquire, use, or pay for over time. Although the rate of change of different consumer goods and services differ for all goods in the basket, the CPI provides signals of the general path of affordability of consumer goods. Where prices of certain goods and services consistently increase above CPI, it can be a signal of increasing unaffordability. Notwithstanding the shortfalls of using CPI as a general comparator, it thus remains an importance device for signalling consumer affordability.

Trends in medical schemes expenditure

130. Medical schemes' claims expenditure is tracked by the CMS. Trends over time

68. Statistics South Africa. The South African CPI Sources and Methods Manual Release, 15 March 2017.
69. Pharmaceutical products included are painkillers, cough syrup, vitamins, cold and flu, heartburn and anti-acids, lozenges, laxatives, and eyedrops.
70. Council for Medical Schemes, 2014. Circular 13 of 2014: Managed care accreditation - Final managed health care services document". Pretoria.

provide an indication of how costs and benefits change. However, these trends exclude OOPs, meaning that only a partial picture is possible. These trends are evaluated in more detail in Chapters 6 and only a brief overview of expenditure trends is provided below.

131. There has been an increase in healthcare expenditure over time (Figure 3.9). Annual real claims expenditure per beneficiary per annum (pbpa) by medical schemes increased by 590.8% between 1980 (the earliest year with data on medical schemes claims expenditure) and 2016. The bulk of this increase can be attributed to expenditure on private hospitals and medical specialists:

    131.1. Expenditure on private hospitals and medical specialists increased from 67.6% of all claims between 1990 and 1999 to 70.4% of all claims between 2000 to 2016.

    131.2. By 2016 private hospitals and medical specialists account for 107% of all changes in claims costs. The other categories decreased by 17%.

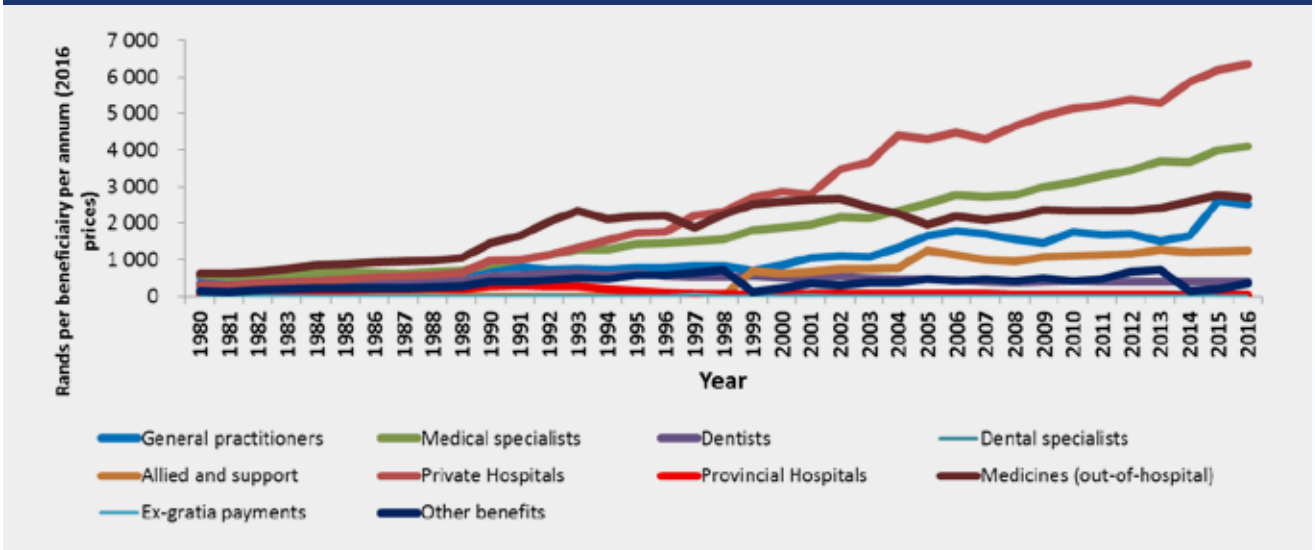
    131.3. In contrast, expenditure on public provincial hospitals reduced by 67.6% pbpa from 1980 to 2016 (though most of the decline occurred from 1990).

132. The cost of medicines has also declined, in particular the cost of out-of-hospital medicines. Here the reduced expenditure coincides with two regulatory interventions which took effect in 2004 (Figure 3.9):

    132.1. The National Department of Health (NDOH) implemented a single-exit price (SEP) and generic substitution framework for medicines sold in the private sector.[71] This took effect from August 2004.

    132.2. A chronic disease list (CDL) was implemented in January 2004 to provide for out-of-hospital claims. In response, many schemes (or their administrators) introduced formularies to manage the resulting liability.

FIGURE 3.9: CLAIMS EXPENDITURE, PER BENEFICIARY PER ANNUM FROM 1980 TO 2016 (2016 PRICES) [72] [73]



71. Although generic substitution was also given legislative support over this period, it is not clear whether this had a significant impact on costs.
72. Product rebates were removed for medicines in 2004 by all hospitals. Mediclinic also removed rebates for other medical products at this time. All other hospitals removed medical products rebates in 2008. The CMS report of 2008 indicates that lost revenue from the removal of the rebates were compensated for by increasing facility fees. [Council for Medical Schemes. Evaluation of medical schemes' cost increases, findings and recommendations. Research Brief number 1 of 2008. 2008.] The price increases were substitutive in nature and do not therefore reflect in the claims cost trends illustrated in this graph.
73. Compiled from data obtained from the Council for Medical Schemes. 2016.

Non-health medical scheme costs

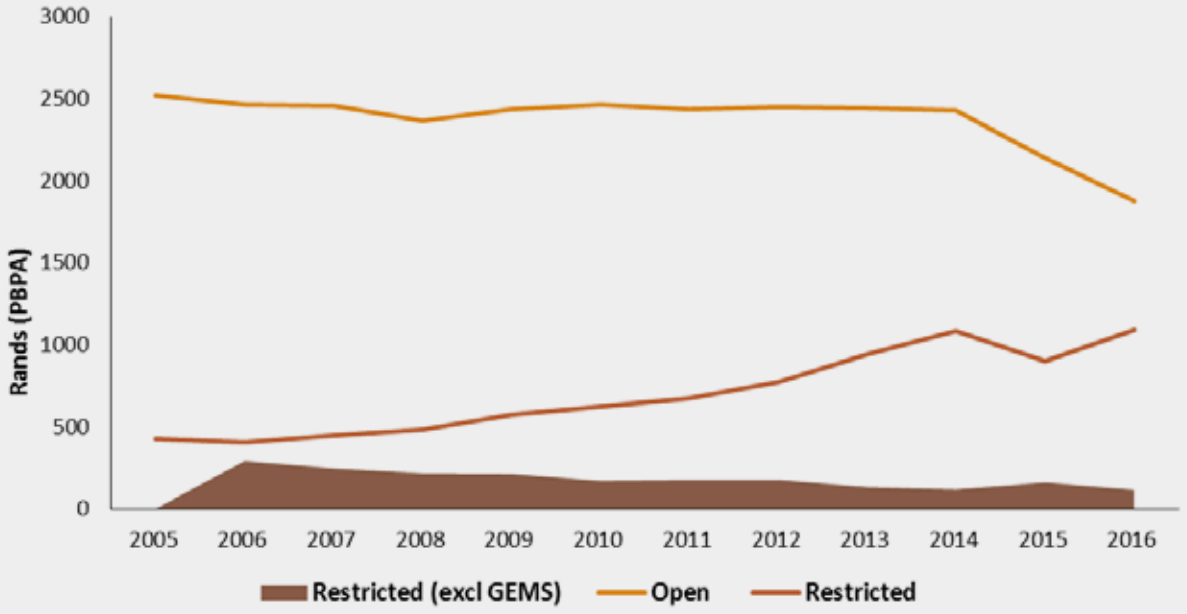
133. Non-health medical scheme costs refer to expenses incurred in running a medical scheme and are principally made up of administrative expenditure on administrators, MCOs, and brokers.[74]

134. The data on non-health costs reveal the following trends (Figure 3.10):

    134.1. Open schemes have higher non-health costs than restricted schemes. Open scheme non-health cost remain fairly stable until 2014 and experience a significant decline in the years 2015 and 2016.

    134.2. non-health expenditure for restricted schemes has increased over time though this is largely due to the entry of GEMS. If GEMS is removed from the data, non-health expenditure for restricted schemes shows a slight decline.

FIGURE 3.10: NON-HEALTHCARE EXPENDITURE PBPA FROM 2005 TO 2016 (2016 PRICES) [75]



Trends in the use and remuneration of Brokers

135. Brokers advise individuals and employers about the various healthcare products they support including assisting them in choosing between schemes and benefit options.

136. In the case of brokers serving individuals,[76] product sales are commission-driven. Product providers (insurers, etc.) set the commissions that brokers receive for advising on and selling products. Brokers may only receive a capped amount per policy. This is set as a percentage of the policy cost unless it reaches a certain maximum at which point they may receive a Gazetted rand value per person per month (R85 plus VAT from January 2017). Brokers also earn additional income through the sale of related insurance and wellness products.

74. Other items, such as debt write-offs and marketing costs, are minor.
75. Compiled from data obtained from the Council for Medical Schemes. 2016.
76. Brokers that advise on products to individuals.

137. Table 3.7 shows that although total expenditure on brokers amounts to a relatively small part of total medical schemes' non-health costs (ranging between 2.4% and 2.9% of schemes' gross contribution income), there has been a steady rise in broker fees pbpa between 2005 and 2016 (Table 3.7). The role of brokers in reducing information asymmetries and in influencing the decisions of consumers is discussed in detail in chapter 6.

TABLE 3.7: EXPENDITURE ON BROKER FEES FROM 2005 TO 2016 (2016 PRICES)[77]

Year	Rands	% of GCI	% of non-Health	pbpa
2005	1 786 724 661	2,4%	14,8%	364
2006	2 221 048 276	2,9%	17,8%	440
2007	2 200 241 729	2,8%	18,1%	444
2008	2 198 138 121	2,9%	19,0%	450
2009	2 144 898 316	2,7%	18,3%	445
2010	2 176 035 344	2,6%	18,4%	453
2011	2 164 059 590	2,6%	18,7%	455
2012	2 159 099 238	2,5%	18,5%	454
2013	2 212 351 614	2,5%	18,6%	456
2014	2 233 734 879	2,4%	18,8%	456
2015	2 556 094 422	2,7%	25,8%	520
2 016	2 581 009 000	2,7%	26,1%	521

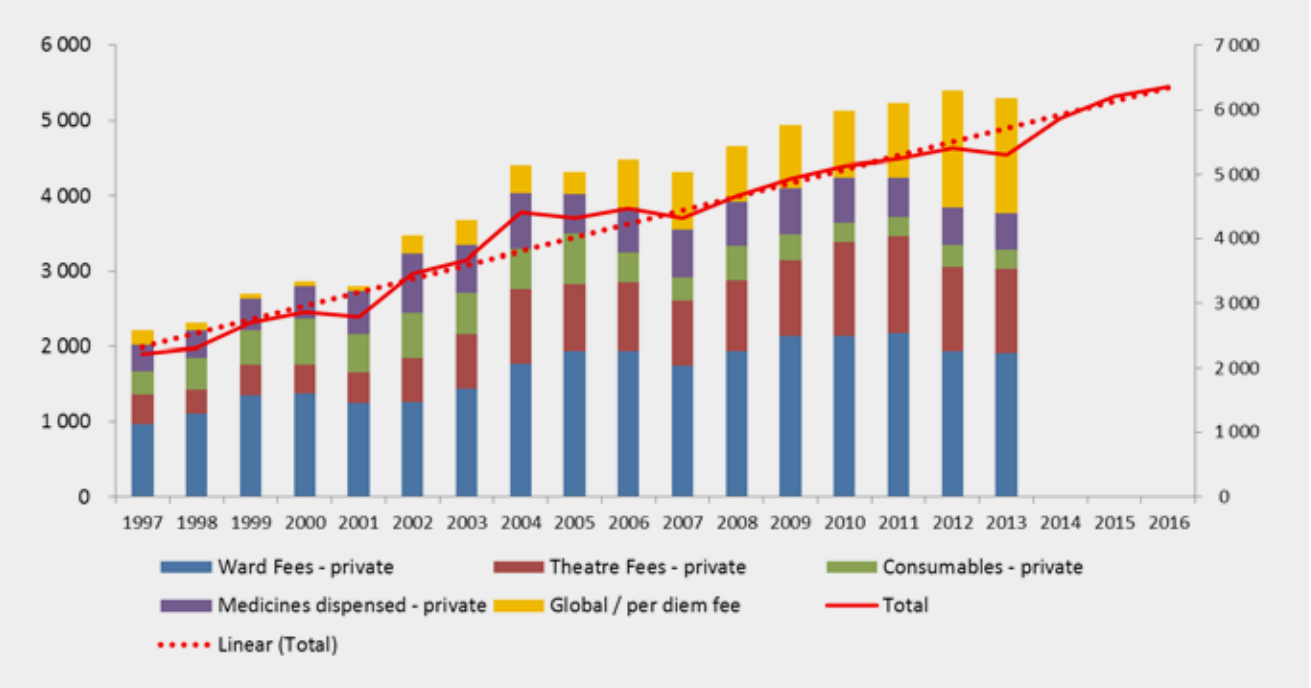
77. Compiled from data obtained from the Council for Medical Schemes. 2016.

Trends in expenditure in private hospitals

138. A breakdown of hospital claims over time reveals that the largest increases are in *ward and theatre fees*. However, from 2004 what are referred to as global fees obscure the trends.[78] Over time claims have shifted increasingly to global fees, representing roughly a quarter of all hospital claims by 2013 (Figure 3.11).

139. *Consumables and medicine* claims appear to have reduced as a proportion of total costs over time, overtaken by theatre fees, which; until around 2006, was smaller than both these categories together. It is however possible that some of the medicine and consumable fees have now been subsumed into the global fee payments.

FIGURE 3.11: PRIVATE HOSPITAL CLAIMS EXPENDITURE, PER BENEFICIARY PER ANNUM FROM 1980 TO 2013 (2014 PRICES) [79]



78. This term is used by the CMS in their annual statistical reports. It refers to a range of possible agreements. Mostly these are alternative reimbursement arrangements (alternatives to fee for service, that is) and principally involve payment according to diagnostic related groupers (DRGs). In many cases these occur in conjunction with the fee for service arrangements with some agreement about differences between the DRG and fee for service payments. Compiled from data obtained from the Council for Medical Schemes. 2016.
79. Compiled from data obtained from the Council for Medical Schemes. 2016.

Trends in expenditure on medical practitioners (specialists)

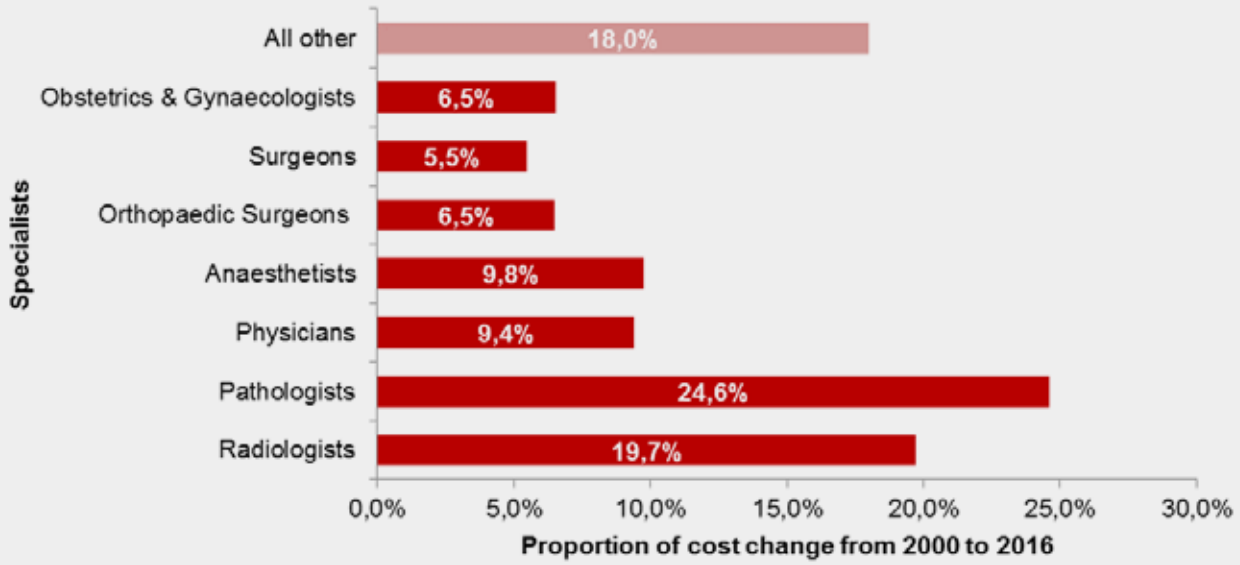
140. Medical specialists' costs pbpa have increased in real terms by 117.3% over the period 2000 to 2016 (Figure 3.12).[80]

141. Not all medical specialists contribute equally to increases in claims. Over the period 2000 to 2016 pathologists accounted for the largest increase, constituting 24.6% of the overall increase in claims related to specialists. Radiologists are second, accounting for 19.7% of the overall increase. Physicians and anaesthesiologists account for 9.4% and 9.8% respectively.

142. Overall, four major categories of specialists; pathologists, radiologists, physicians and anaesthesiologists, account for 63.5% of total specialist claims increases from 2000 to 2016. (Figure 3.12)

143. Medical specialists also determine the demand for hospital services through admissions, treatment, and confinement choices. Their own claims costs thus do not provide a complete picture of their role in both driving and managing healthcare costs.

FIGURE 3.12: CONTRIBUTION TO THE OVERALL CHANGE IN SPECIALISTS' CLAIMS EXPENDITURE FROM 2000 TO 2016 (2016 PRICES) [81]



80. This excludes OOPs which are not known.
81. Compiled from data obtained from the Council for Medical Schemes. 2016.

TRENDS IN MARKET CONSOLIDATION – PRIVATE HOSPITALS

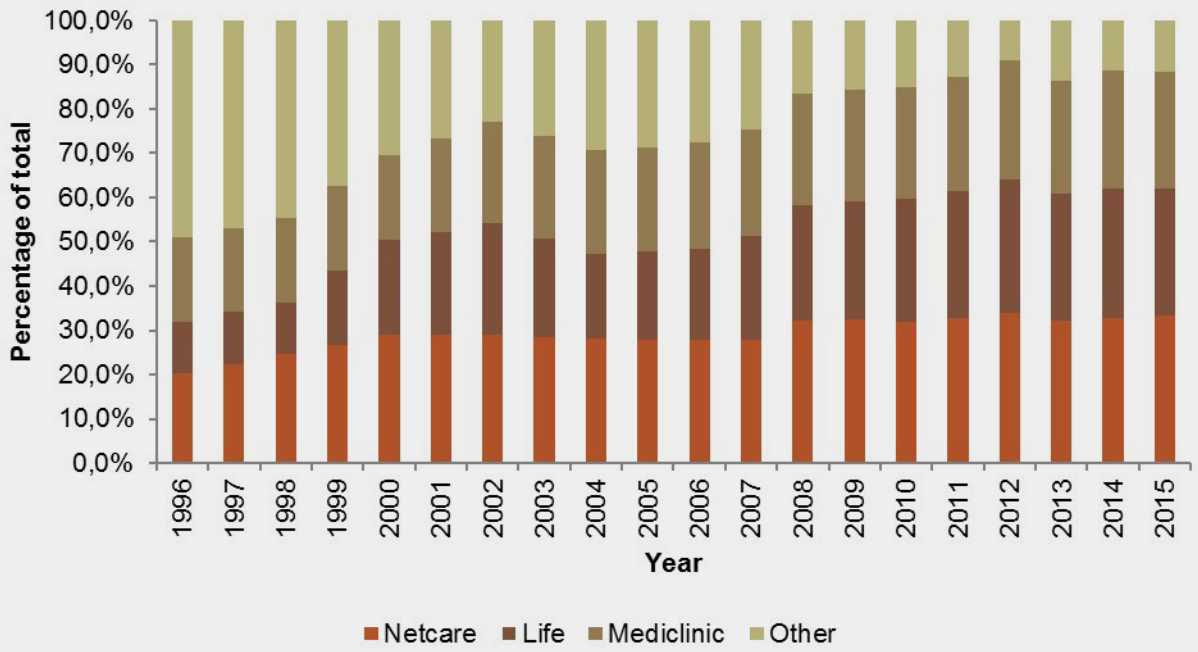
Private hospitals

144. Three hospital groups; Netcare, Life and Mediclinic, account for 88.4% of acute in-patient beds nationally. Netcare accounts for 33.3% of all acute in-patient beds, Life Healthcare for 28.8% and Mediclinic for 26.3% on a national basis in 2015 (Figure 3.13).

145. The trend of total hospital beds and beds by type for the period 2000 to 2016 are displayed in Figure 3.14 and Figure 3.15 respectively. Figure 3.14 demonstrates an upward trend in the total hospital beds over time; private hospital beds increased from 26 792 in 2000 to 43 711 in 2016. There is also evidence of a fair increase in the total beds by type during 2000 to 2016 as reflected in Figure 3.15.

146. Figure 3.16 displays the growth rate in the total hospital beds by year. It is clear from this chart that there has been a positive trend in the total number of beds from 2001 to 2016, although at different growth rates. The year-on-year growth rate was 1.5% between 2000 and 2001. Between 2015 and 2016, the year-on-year growth rate as 3.5%. The highest year-on-year growth rates were recoded in 2007 and 2010, when annual bed growth exceeded 5%.

FIGURE 3.13: HOSPITAL BEDS BY HOSPITAL GROUP (2000 – 2015) [82]



82. Health Market Inquiry data compiled from various souces.

FIGURE 3.14: TOTAL HOSPITAL BEDS (2000 – 2016) [83]

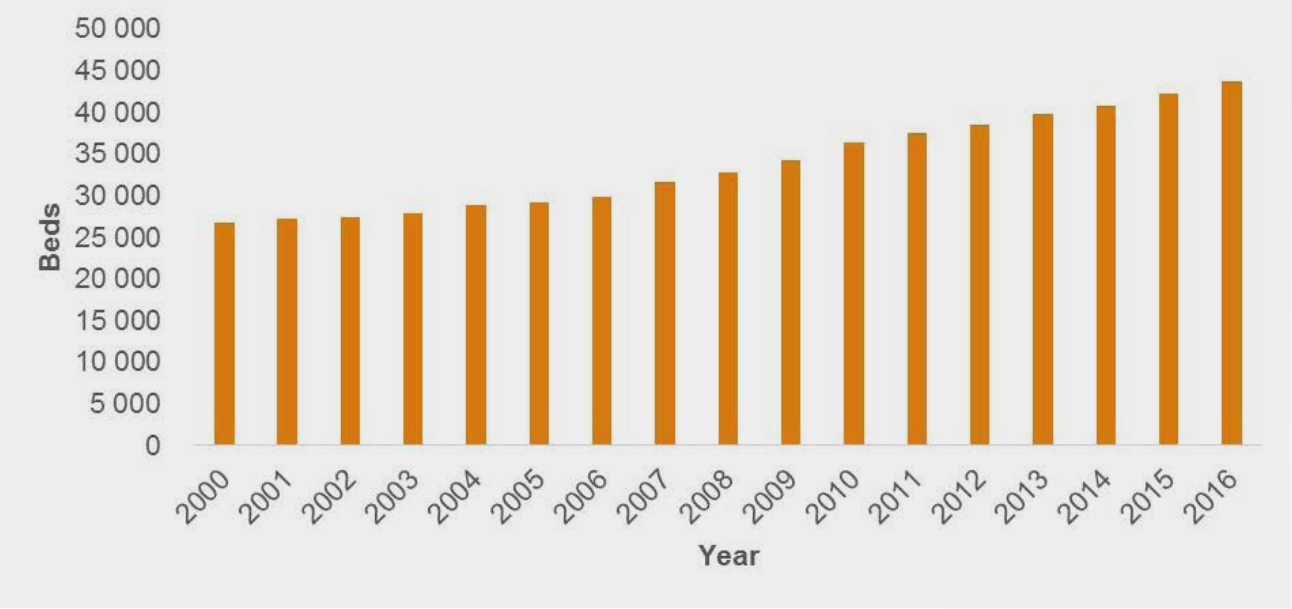
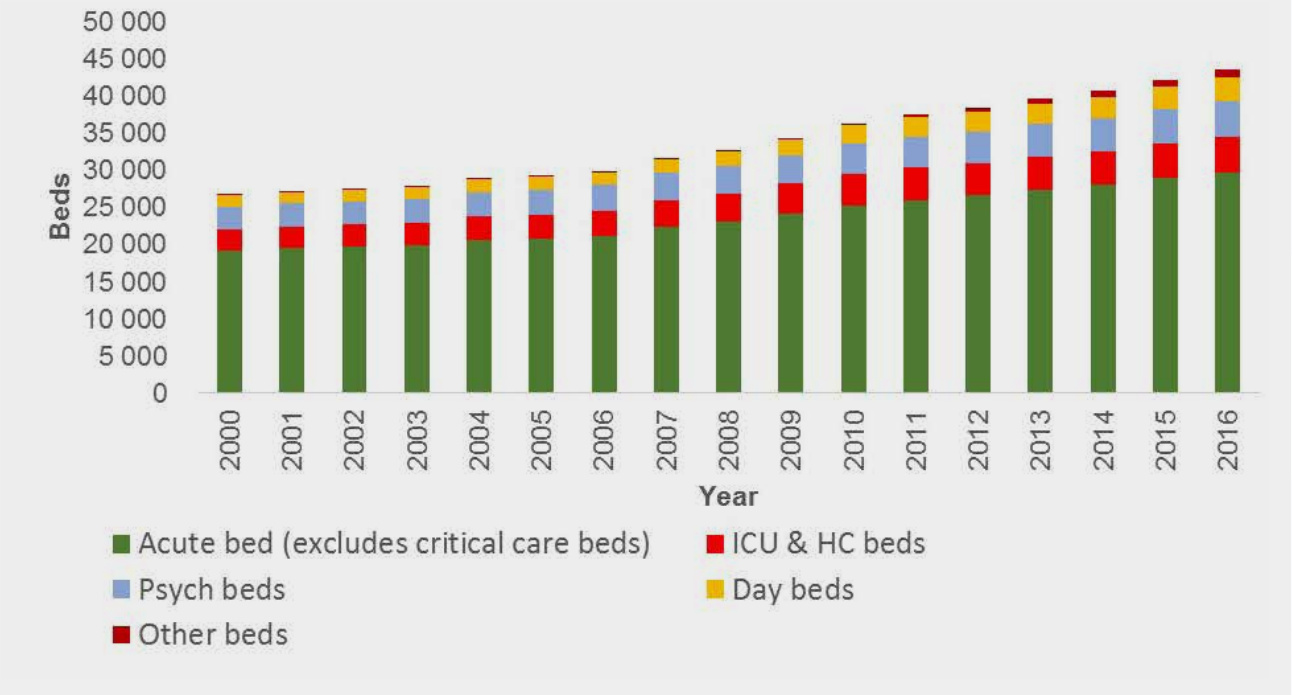
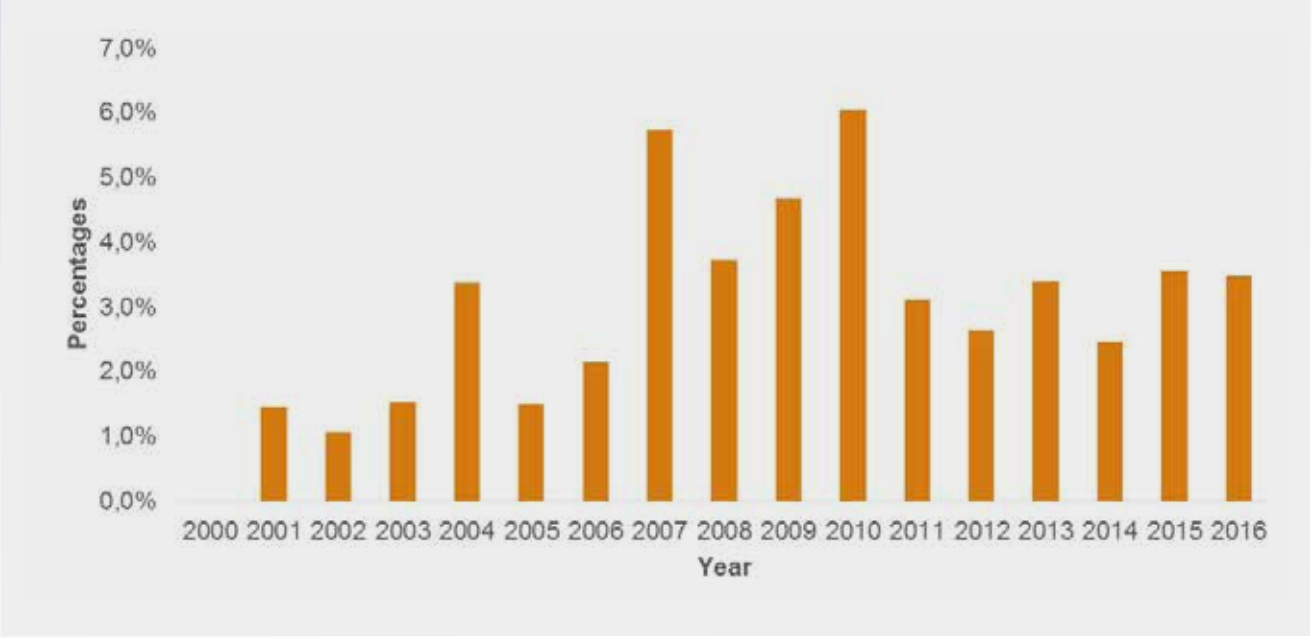


FIGURE 3.15: ALL HOSPITAL BEDS BY TYPE (2000 – 2016) [84]



83. Health Market Inquiry data compiled from various souces.
84. Health Market Inquiry data compiled from various souces.

FIGURE 3.16: TOTAL HOSPITAL BEDS GROWTH RATES (2000 – 2016) [85]



CONCLUSION

147. Expenditure in private healthcare is high and is increasing above inflation, making medical scheme premiums less affordable. The bulk of this increase in claim expenditure can be attributed to expenditure on private hospitals and medical specialists. The expenditure increases do not seem to be due to aging population/disease burden.

148. Non-health expenditure remained fairly stable for most of the period 2005 – 2016 but we do note that open schemes have higher non-health costs than restricted schemes. Though expenditure on brokers equates to a relatively small part of total medical schemes non-health costs, we note that there has been a steady rise in broker fees pbpa between 2005 and 2016.

149. There seems to be an increasing uptake of ARMs in the South African healthcare market. The uptake is particularly high among hospitals but limited when it comes to GPs and specialists and reimbursement of GPs and specialists remains predominately FFS. Evidence on the efficacy of ARMs in constraining expenditure is unclear.

150. The HMI also notes that there are complex and interrelated ownership structures between firms in healthcare or related markets. Common shareholding and cross-directorships may distort or prevent vigorous competition as firms try not to disadvantage returns to companies with multiple shareholding. The HMI is concerned about the chilling effect that cross-directorshops may have on competition.

85. Health Market Inquiry data compiled from various souces.

Chapter 4
Competitive Assessment Framework

FEATURES OF THE MARKET THAT MAY HARM COMPETITION

1. In the Terms of Reference for the Health Market Inquiry (HMI) published by the Competition Commission (Commission) on 29 November 2013, the Commission stated that the Panel is required to:

   "conduct an analysis of the interrelationships of various markets in the private healthcare sector, including examining the contractual relationships and interactions between and within the healthcare service providers, the contribution of these dynamics to total private expenditure on healthcare, the nature of competition within and between these markets, and ways in which competition can be promoted".

2. This includes the position of consumers as patients, members of medical schemes, health insurance policyholders, and beneficiaries, in each of these markets.

3. The Commission's rationale for the HMI was that it has reason to believe that there are features of the private healthcare sector that prevent, distort or restrict competition and that the conduct of this Inquiry will assist the Commission in achieving the purposes of the Competition Act 89 of 1998, as amended (the Act).

4. A market feature may be intrinsic to the structure of the market or may arise from the conduct of any market participants. "*Prevent, distort or restrict competition*" covers any effect adverse to the realisation of more competitive outcomes for consumers, also referred to as *"harm to competition".*

5. In its Statement of Issues of 1 August 2014, the HMI identified market power, including coordinated conduct and vertical relations, barriers to entry and expansion, imperfect and asymmetric information and the regulatory framework as possible features that prevent, distort or restrict competition and therefore as potential sources of harm to competition. These features may reinforce one another and therefore need to be evaluated in combination.

THEORIES OF HARM

6. Based on the above sources of harm to competition, the HMI has proposed theories of harm. A theory of harm is a hypothesis about how harm to competition might arise. These theories sought to assist the HMI to focus its work as it developed its understanding of the markets under investigation. An updated set of theories were subsequently reflected as the Revised Statement of Issues (RSOI) published on 11 February 2016.

7. The theories of harm must be understood to apply to competitive harm only. They may not necessarily address all factors that have an impact on access and affordability.

8. The HMI identified six theories of harm, which may be overlapping in their effect on competition.

THEORY OF HARM 1: MARKET POWER AND DISTORTIONS IN HEALTHCARE FINANCING

9. The potential occurrence of market power and distortions in financing are:

9.1. Market power of medical schemes and other health insurance providers over members or policy holders;

9.2. Market power of medical scheme administrators over medical schemes, or vice versa;

9.3. Market power of medical schemes and administrators over providers of healthcare facilities;

9.4. Market power of medical schemes and administrators over healthcare practitioners;

9.5. The relationship between not-for-profit medical schemes and for-profit administrators; and

9.6. The relationship between brokers, medical schemes and consumers.

THEORY OF HARM 2: MARKET POWER AND DISTORTIONS IN RELATION TO HEALTHCARE FACILITIES

10. The HMI identified the following areas of potential harm to competition in relation to facilities:

10.1. Market power of facilities during negotiations with medical schemes and/or administrators. National and local market dynamics will be considered;

10.2. Market power of facilities over the relationship of funders and the providers of medicines and medical devices;

10.3. Market power in local markets that may have an adverse effect on patients in those local markets;

10.4. The relationships between practitioners and healthcare facilities; and

10.5. The relationships between healthcare facilities and suppliers of medicines and medical devices.

THEORY OF HARM 3: MARKET POWER AND DISTORTIONS IN RELATION TO HEALTHCARE PRACTITIONERS

11. The evaluation of market power and distortions in relation to healthcare practitioners includes:

11.1. The effectiveness with which healthcare practitioners direct patients along the healthcare pathway;

11.2. The scarcity of skills and absence of local rivalry;

11.3. Possible coordinated conduct among healthcare practitioners;

11.4. Market power of practitioners during negotiations with medical schemes and administrators, including the role of practitioner groupings and networks; and

11.5. The relationships between healthcare practitioners and suppliers of medicines and medical devices.

THEORY OF HARM 4: BARRIERS TO ENTRY, EXPANSION AND INNOVATION

12. Entry and the threat of entry play an important role in defining competition in any sector. This theory of harm hypothesises that a number of structural and behavioural barriers to entry, expansion and innovation relating to healthcare providers, funders and practitioners, are harmful to competition:

12.1. *Barriers applicable to financing*, including economies of scale and large financing requirements, regulatory requirements and constraints (such as reserve requirements and contractual arrangements between existing medical schemes or administrators and providers);

12.2. *Barriers applicable to healthcare facilities* including substantial investments and sunk costs, licensing and other regulatory requirements and contractual or informal relationships between existing healthcare facilities and practitioners; and

12.3. *Barriers applicable to practitioners* including rules and regulations promulgated by the Health Professions Council of South Africa and the National Department of Health, contractual arrangements between medical schemes or their administrators and practitioners and agreements and arrangements between facilities and practitioners.

THEORY OF HARM 5: IMPERFECT INFORMATION

13. The absence of appropriate market transparency may harm competition and distort outcomes of healthcare markets:

    13.1. Patients may not be able to choose the most appropriate provider and treatment;

    13.2. Members' choices of medical schemes may be compromised by an inability to make value-for-money decisions;

    13.3. Healthcare funders may be unable to compare costs and quality of providers;

    13.4. Patients may lack information available to facilities and / or funders on whether certain treatments and technologies represent value-for-money ; and

    13.5. Imperfect and asymmetric information, in the context of a third payer (insured healthcare) system may distort the incentives of consumers and providers, and give rise to anti-selective behaviour.

THEORY OF HARM 6: REGULATORY FRAMEWORK

14. Possible deficiencies, distortions and unintended consequences of otherwise beneficial regulation may affect competition, raise barriers to entry and expansion and maintain, create or reinforce positions of market power. This also applies to the manner in which the laws, including competition law, has been implemented and enforced.

FRAMEWORK FOR THE COMPETITIVE ASSESSMENT OF THE INQUIRY

15. Effective competition comes from firms already operating in the market, from firms that could readily enter the market and from buyers that exercise effective disciplinary pressure on suppliers.

16. Conversely, competitive harm may come from unilateral market power of an existing firm or firms in a market, collective market power exercised through coordinated conduct, vertical relations between existing firms; high barriers to entry, expansion and innovation, and from buyers not disciplining suppliers through their response. Market regulation may influence all five these factors positively or negatively.

UNILATERAL MARKET POWER

17. An important indicator of a single firm's market power can be its market share in terms of sales or production. Usually sales or production are expressed in physical (e.g. tonnes, beds, etc.) or monetary units. Monetary units are used when production or sales are heterogeneous and cannot be easily compared across the industry.

18. A large market share is an indirect indicator of possible market power, because it tells us something of the extent to which the firm's market power or dominance is limited by existing competitors and it tells us of the "outside options" buyers or consumers have should an attempt to abuse market power occur. Proxy indicators of market power include measures such as a firm's loci index[1] or various concentration ratios.

19. Although concentration ratios (e.g. the market share of the top four firms in a market or "C4" index) and the Herfindahl-Hirschmann index are not generally used to assess unilateral market power of a firm, the information contained in these indices may tell us something about the context in which the assessment of single firm dominance takes place. A market share of 30% with competitors each producing or selling less than 1% of the market is significantly different to a market in which three competitors each command 30% of the market, for example.

20. Market concentration, market share and the exercise of market power are not necessarily linked to the position of a single firm in a market. In an oligopolistic market, a market with a small number of competitors, and a fortiori when that is protected by high entry barriers, all firms may possess and exercise unilateral market power. There is a range of possible outcomes in oligopolistic markets.

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1. Loci indicators will be dealt with in the chapter on Facilities.

Depending on the type of competition, an oligopolistic market may result in high prices and low quantities with no coordination between firms. In a differentiated products market, firms may avoid competition head-on by differentiating their products. In addition, if there is a high level of transparency in the market, firms can maintain coordinated conduct without any kind of explicit agreement. These firms may be collectively aware of each other's business interests, and they may all independently acknowledge the fact that "rocking the boat" of competition in the market may not be in their interest, and act accordingly. And, of course, firms may choose to explicitly collude.

21. Market share, as an indirect indicator of market power, should always be considered in the context of other, complementary evidence. This includes evidence about the ease of entry, expansion and innovation of competitors. A large market share may not guarantee market power if an attempt to raise prices would immediately attract new and efficient competitors, or would be offset by actual competitors that immediately react by expanding the volume of production and sales in the market.

22. Direct indicators of market power should also be sought, such as the way the firm engages with its customers, its suppliers and its direct competitors. If a firm does not respond to the needs of its buyers, and can get away with this behaviour without substantially losing turnover to competitors or attracting new entry and innovation, that may provide a powerful direct indication of market power. For this to be the case, barriers to entry need to exist.

23. Current market shares are therefore informative, as are trends over time, including data on successful entry or a history of forced exit. These indicators will deepen any understanding of the competitive conditions in the market. Significant and frequent shifts in market shares may also be indicative of healthy competition. Conversely, if a firm has consistently maintained or increased its market share, this may reinforce an interpretation that high market shares reflect market power.

24. It is however imperative to be very cautious about interpreting consistently high and growing market shares. While these may be related to market power, they can also be the result of superior management of the company and of its ability to stay ahead of its rivals in terms of innovations and development of products and services.

BARRIERS TO ENTRY, EXPANSION AND INNOVATION

Why is entry, expansion and innovation important?

25. Entry by new firms into an industry and expansion of existing firms in an industry may take several forms. A firm may enter an industry *de novo*, and may build new and additional capacity or a firm may take over an existing firm or capacity in the industry. Incumbent firms may also expand their existing capacity by building new plants or capacity. Firms can also invest in new products and production capacity in adjacent markets or in upstream or downstream markets.

26. The credible threat of entry, expansion and innovation – without entry or expansion actually taking place – may have the same or similar effects on existing firms and on competitive conditions than actual entry and expansion.

27. Entry, or the threat of entry, may have several effects:

    27.1. Entry distorts and upsets existing patterns of market conduct, and can make it more difficult for possible dominant or collusive firms to exercise their market power;

    27.2. Entry stirs up competition and forces incumbent firms to improve in terms of efficiency, price, quality and service to consumers;

    27.3. Entry may introduce new forms of production, distribution, design, and service (innovation) into an industry, and

    27.4. Entry may force older, less efficient firms to leave the market

28. Entry or the potential of entry therefore is generally seen as a positive contribution

to greater, more effective competition in a market and to better products and service at better prices for the consumer.

29. Conversely, the lack of successful entry over a prolonged period of time in an industry may signal high structural or regulatory barriers or strategic conduct by incumbents that discourage entry.

What are barriers to entry?

30. The HMI defines barriers to entry as any features of the market that gives incumbent suppliers an advantage over efficient potential entrants or rival incumbent firms.

31. Although barriers to entry, expansion and innovation are generally seen as impeding competition, some are unavoidable and intrinsic to an industry. For example, in any mode of production that requires large scale and significant sunk costs, scale and sunk costs would be considered a natural barrier to entry.

Types of barriers to entry

32. There are three broad classes of barriers to entry:

    32.1. *Natural or intrinsic barriers* to entry. Sometimes also referred to as structural barriers. Examples may be scale economies and sunk costs.

    32.2. *Behavioural or strategic barriers*. These are conduct-related barriers. An example is comprehensive and exclusive distribution or supplier networks of incumbent firms which newcomers may find hard to replicate. Sometimes these barriers are raised by incumbents explicitly to discourage entry.

    32.3. *Regulatory barriers,* which include licensing requirements to operate in a particular industry for example.

33. The concept of barriers to entry is closely related to the concept of '*barriers to exit'*. The latter, the costs of exit from the market, enriches the analysis of barriers to entry. An entry barrier may be created where a firm cannot exit the market without losing a substantial part of its investment. Conversely, if entry can take place almost overnight, and after that the entrant may leave the industry without significant costs (i.e., "hit-and-run-entry"), then elements like large scale of production may lose significance as a barrier. An example may be the shipping liner industry in which a shipping company may decide to divert a part of its fleet of container vessels from one type of trade to another overnight and to reverse this decision just as quickly.

Natural or intrinsic barriers to entry

34. The most important natural barrier to entry in any given industry is *the minimum efficient scale of production* relative to the size of the market. If production technology is such that only a few companies can produce at minimum efficient scale, then this in itself presents a barrier to entry. The barrier is heightened if large economies of scale are combined with upfront investment largely consisting of *sunk costs.* In this case the combination of scale requirements, large investments, and sunk costs may both serve as a powerful barrier to exit for incumbent firms and (therefore) as a barrier to entry for new firms.

35. Any assessment of barriers to entry must therefore include an assessment of scale and capital requirements and of sunk costs.

36. Sunk costs may be connected to the physical production or distribution capacity of a firm, but also to intangible elements like irrecoverable investments in research and development, advertising and reputation.

37. Natural barriers may also stem from dynamic factors such as *the effect of learning* in a given industry. An example is the assembly of a new production line of aircraft. The longer the production runs of a particular type in a given assembly line, the lower the production costs. Or, in healthcare, the more interventions of a particular type a team of specialists or a hospital does, the more experienced, expert and faster they become, often resulting in better quality and lower average costs. This may serve as a natural barrier to entry for newcomers at any given point in time.

38. Other natural barriers may be *first-mover advantages,* the advantage the first companies in an industry enjoys in terms of brand and customer loyalty, combined with *switching costs.* Consumers, once used to a product or producer, may show a (natural) reluctance to change. A lack of *transparency* on product comparability and *imperfect and asymmetric information*, all features that are generally acknowledged to exist in healthcare, may reinforce these factors and serve as a barrier to entry for new entrants.

Behavioural or strategic barriers

39. Whilst structural or natural barriers to entry are largely intrinsic to a given industry, behavioural or strategic barriers mostly stem from business practices and investments that explicitly aim at or have as an effect the protection of the business by incumbent producers against successful entry of (potential) newcomers to the industry. An example of the former could be exclusive dealerships for high end consumer electronics and of the latter, designated networks of doctors in healthcare. Designated networks of doctors can have the effect that new hospitals entering a particular local area are confronted with a shortage of available medical practitioners.

40. Generally, investments by incumbent firms have pro-competitive effects. However, investments may also aim to make life harder for existing competitors and for newcomers to the industry and thus constitute *strategic barriers to entry*. These strategic barriers may be grouped as investments that:

    40.1. lower incumbent's costs;

    40.2. change the cost structure for competitors; and

    40.3. alter demand in favour of incumbents.

41. Investments that purposely lower the average production costs of incumbents relative to new or potential entrants, for example by investing in increased capacity, is closely related to economies of scale. However, an incumbent firm may invest beyond the minimum efficient scale of production, even to an extent that they purposely invest in *over-capacity.*

42. Investing in over-capacity may seem irrational from a narrowly defined costs perspective, but may nevertheless be rational if viewed from a strategic perspective. By making strategic investments in additional capacity, the incumbent firm *signals* to the competitor that it will aggressively protect *its market* and that it is able to do so by rapidly expanding production.

43. Investments in vertical relationships with critical distributors or vital suppliers, particularly if these contracts are exclusionary, may serve as a powerful barrier to entry for potential newcomers. Control over distribution channels is known to be critical in the highly volatile consumer electronics industry. Industry-wide national networks of designated healthcare, although triggered by the need to control expanding costs of treatment, have as a by-product that newcomers and smaller local providers are excluded and cannot compete effectively. Another example may be investment in broker contracts and in exclusive relationships with broker companies by medical schemes, their administrators and related corporate groups.

44. A firm may also invest in advertising its brand(s) and create the idea in the eyes of consumers that its products are hip, trendy, a "must-have" or somehow superior. These investments may be seen as investments in increasing the *perceived switching costs* of consumers, which may contribute to barriers to entry, expansion and innovation, especially if the product and its quality is not transparent to the consumer and meaningful and comparative information is scarce. For example, investments in *wellness programs* may increase switching costs to members of medical schemes[2].

Regulatory barriers to entry

45. The regulatory framework of an industry may impact on the ease of entry and expansion of firms in an industry and may even have as

2. Wellness programs in healthcare generally contain fidelity elements akin to deferred (fidelity) rebate systems in other industries. Consumers that wish to switch between schemes, lose credit points and are thereby disincentivised from switching.

its objective to regulate entry into an industry, for good reasons. Examples are solvency requirements for medical schemes, spatial planning requirements, quality standards and certificates of needs.

46. The regulation of competitive structures or competitive behaviour may be required for a variety of reasons. Competition principles may compete with other socio-economic imperatives, for example national and international financial systems must be robust and the entry and expansion of institutions in this industry are highly regulated worldwide. Similarly, healthcare systems worldwide are known to be highly regulated due to the unique products and services they provide, in combination with serious problems related to imperfect and asymmetric information.

47. Quality, health and safety, and training requirements are examples of regulations that may affect both incumbents and (potential) entrants alike. Licenses, spatial regulation and solvency requirements for schemes may however impact potential newcomers more than existing firms. It is therefore necessary to make a distinction between the general impact of rules and regulations on businesses and the impact of the regulatory framework of an industry on barriers to new entry, expansion and innovation.

Effects of barriers to entry

48. The mere existence of barriers to entry in an industry is not enough to conclude there is a competitive problem.

49. Barriers to entry may have different impacts on the position of incumbent firms and on the decision to invest in a new firm or new capacity, depending on the circumstances in an industry. It is important to identify the level of sunk costs involved. Also it is important to identify whether demand in an industry is likely to be stagnant over a prolonged period of time or if it is expected to be growing considerably.

50. Both these factors largely define the likely competitive reaction of incumbents to entry: the more pronounced sunk costs elements are, and in cases of stagnant or decreasing demand the reaction of incumbents to entry is likely to be aggressive and the post-entry price and profit levels are likely to deteriorate. On the other hand, in an industry with growing demand and rapidly changing production technology, entry barriers may prove to be less important and effective.

51. There is no single element of *proof* of the competitive impact of barriers to entry and expansion. Persistent levels of profits above the competitive level may signal competitive problems and barriers to entry, but are neither necessary nor sufficient proof of such. Industries with high barriers to entry may show persistent levels of production inefficiencies and stagnant and even problematic profitability levels. The HMI's impact analysis will therefore, in addition to analysing profitability levels, also look at the history of entry, exit and market share growth over time.

COORDINATED CONDUCT, INCLUDING VERTICAL RELATIONS BETWEEN FIRMS

52. The HMI is interested in any form of horizontal or vertical coordination in the market, whether forbidden by competition law or not if it reduces strategic uncertainty of market participants and affects competition and access. The task of the HMI is to investigate the effects of coordination or cooperation, and it is not primarily interested in whether certain conduct is unlawful.

Horizontal coordination

53. Horizontal coordination of conduct of participants in the same market – also called cooperation - may affect all aspects of competition, including prices, markets, outputs, quality, investment, innovation and service.

54. Although forms of coordination between competitors in the same market may be beneficial to competition (e.g. information sharing on patients' conditions, medical coding, and standardisation of quality standards), the negative impact of horizontal coordination on consumers and consumer choice can be severe, particularly if it involves price setting, market sharing, allocation of customers and collusive tendering. Even the reduction of the normal commercial uncertainty that a firm faces and the sharing of information around these parameters of competition can dampen competition

and have serious consequences for the consumer.

55. A necessary condition for successful horizontal coordination of competitive conduct is that participants must be able to understand and monitor the terms of coordination. The more homogeneous products and services are in terms of quality and specifications, the easier it is to understand and monitor the behaviour of competitors. If the market is transparent in this respect to all, the firms may not need to enter into a formal agreement in order to effectively coordinate. The sharing of strategic information may facilitate the monitoring of cooperation. Of particular interest in this respect may be the role of business or trade associations and the sharing of information for the benefit of its members or of consulting companies' publications of strategic information in their websites.

56. A further important condition for successful horizontal cooperation is that the coordination needs to be sustainable among the coordinating group. Horizontal cooperation, for example on prices, tends to be highly unstable over time, because insiders have an incentive to cheat in order to increase their sales. Outsiders may also make higher profits under the protective umbrella of the cooperation agreement, if they can remain free to increase sales, which the participants to the agreement cannot. A successful horizontal agreement therefore needs an explicit incentive structure to maintain cooperation, or, conversely an explicit disincentive to compete. This may come from the understanding that cheating can and will be punished by the others.

57. Firms that are relatively symmetric may be more successful in sustained horizontal coordination. In practice horizontal coordination is seldom perfect or completely stable over time. Nevertheless the negative consequences for competition and the consumer may be severe.

58. Lastly, as with unilateral market power, the effectiveness and stability of horizontal coordination depends on how effective the cooperating group can resist reactions from buyers/consumers, or can prevent buyers/consumers from turning to alternative sources, including new firms that may enter the industry. Therefore for horizontal coordination to be sustainable, the group's market share amongst existing participants in the industry must be significant and barriers to entry for newcomers must be relatively high.

59. Firms with cross-shareholdings, or with common ownership connections may be more successful, sustainable and effective in attempts the dampen competition or in reaching an understanding to coordinate commercial conduct.

Vertical coordination

60. Vertical coordination includes *vertical integration,* i.e. upstream and downstream activities brought under common ownership and control, and *vertical agreements*, which can take a wide variety of forms varying – including resale price agreements, exclusive distributorships and sales contracts.

61. Generally, vertical agreements are contracts between trading parties at different levels of the supply chain which are meant to align the interest of parties. The vast majority of vertical agreements and vertical integration are competition neutral or pro-competitive and have beneficial effects for the economy and the consumer. They may reduce market failures, improve coordination between parties and reduce transaction costs. However in the case where one of the parties possesses *market power* at one or more stages of the vertical supply chain the vertical arrangement may, on balance, be anti-competitive. The most common form of harm to competition from vertical relations is foreclosure by the vertically integrated firm which restricts (or removes) rivals' access to key inputs or customers.

62. Foreclosure can only happen successfully when the contracting firm has the market power to contract input suppliers or distributers while forcing these suppliers or distributors to not supply / distribute, or supply / distribute under less favourable terms to competitors of the integrated firm thereby guaranteeing its own competitive advantage. Putting it differently, the advantage thus arrived at is not achieved by superior performance, but by leveraging market power at one stage

of the production chain to the upstream or downstream market.[3] This practice therefore damages competition and harms the position of consumers.

63. Some of the commercial practices in vertical arrangements that may cause competitive harm are *tying and bundling, exclusive supply* and *exclusive purchasing*.

64. *Tying and bundling* are common commercial practices in which the firms make the sale of a product conditional upon the purchase of another distinct product, and bundling refers to the situation in which tying takes place in fixed proportions. These practices may lead to significant cost savings in production and distribution, but may also lead to reduced competition in the tied market and to raising entry barriers for firms that produce or distribute one, but not the other product.

65. *Exclusive supply* contracts may force a supplier to exclusively supply its products to a dominant downstream firm, which may then be used to foreclose competitors of the downstream firm from essential supplies. For example a dominant hospital in a local market may require exclusivity from their admitting doctors, which might make it more difficult for a new hospital to enter the market or for existing smaller hospitals to compete successfully in that market for patients. The exclusivity effect need not be in the form of an explicit obligation to only supply the dominant incumbent. Financial incentives may be used to reach the same effect.

66. *Exclusive purchasing* is the opposite of exclusive supply in that a downstream company is obliged by contract to buy exclusively from an upstream firm. There may be good reasons for the requirement, but if the upstream supplier possesses market power the result may be that other suppliers of the same good or service cannot compete effectively or even survive in that upstream market and that new entrants are obstructed. The result may be reduced competition in both markets and higher barriers to entry.

67. Even if market power at one or more stages of the supply chain does not present itself, but vertical agreements and/or vertical integration is wide-spread, the result may still be a dampening effect on competition and a general disincentive to enter the markets affected by newcomers and on expansion for existing suppliers.

CONSUMERS' RESPONSIVENESS AND BUYER POWER

68. For competition to be effective, consumers need have both the incentive to react to better quality, prices or service; and the ability to do so, for example by having access to relevant information on prices and quality. If incentives are weak, for example as in the case of healthcare services that are largely covered and paid for directly by medical insurance schemes, then the responsiveness of consumers to price or quality differentials may be low. If the consumer is not able to react, for example because there are no *outside options* so the buyer cannot shift demand, or because no timely, relevant and reliable information is available with respect to products or services, then again this may reduce choice, responsiveness and competition.

69. Consumers' responsiveness to relative changes in prices and quality acts as a *competitive constraint* to suppliers with market power that attempt to raise prices or reduce quality and service. A market inquiry therefore needs to investigate how consumers can and will react and to what degree it may represent *countervailing power* in cases of a possible attempt to abuse market power by a supplier or group of suppliers. Also, in the case of healthcare, the role of agents such as brokers and GPs to support consumer's choice must be understood, including possible agency problems that might distort competition.

70. The availability of *outside options* and how that determines the outcomes of bargaining processes between suppliers and buyers in a market may be influenced by the structure

3. It is important to note here that where a firm has market power in one market, it is not straightforward that it will have an incentive to leverage this power into adjacent, upstream or downstream markets – and this combined with the fact that vertical arrangements are much more likely to have efficiency benefits than horizontal arrangements, account for their different treatment under competition law and economics.

of the market, i.e. by market concentration and barriers to entry. In a situation of largely atomistic supply and demand, outside options of both suppliers and buyers are abundant. And therefore the exercise of market power is unlikely. In a bilateral oligopolistic situation, with few sellers and a few large buyers, the market outcomes are largely undetermined. Much then depends on the circumstances in which bargaining takes place.

71. Information availability and the incentives to act upon it, are vital in any market. The HMI has formulated a separate theory of harm on imperfect and asymmetric information. Generally when access to information is problematic, either because information on price and quality parameters is not available, is insufficient, or because there is a significant gap between the information available on one side of the market compared to the other, there is danger of the market not providing competitive outcomes but rather providing outcomes that, on balance, benefit the supplier.

72. *Buyer power* may be beneficial or may be harmful, depending on the structure of the market. In the case of buying power that counteracts or forms countervailing power to seller power, the result may be beneficial to the competitive process and outcomes. However buyer power can also have a negative effect, in the case of large buyers and a host of small suppliers with insufficient countervailing power. For example large retail chains are reported to dictate terms and conditions to small scale suppliers of vegetables and fruits. Another example is general practitioners that are individually contracted by much larger schemes and administrators and don't individually generate enough turnover to influence the terms and conditions of the contracts.

PROFITABILITY ANALYSIS IN THE CONTEXT OF A MARKET INQUIRY

73. The HMI performed profitability analysis to evaluate trends and level of profits earned over time and what this, along with other data available to the HMI, tells us about competitive conditions in the market. If any firm is able to earn very high profits over a long period of time, the HMI is interested in understanding the possible causes or sources of this: is it related to superior efficiency or innovation or are there constraints to competition that may protect the position of profitable incumbents against entry and competition?

74. The HMI considers profitability in the context of its overall assessment of the market. For several reasons, profitability analyses on its own, cannot provide conclusive evidence of the abuse of market power of a firm or a group of firms. Firms may be very innovative and thus profitable for a limited period of time, in which case high profits may be compatible with effective competition.

75. Conversely, lower profits do not necessarily indicate effective competition. Lower profits may in fact be concealing ineffective competition, for example caused by:

    75.1. Inefficient markets in which customers cannot compare competitive propositions on the merits for lack of comparable information which then allows operators to have higher costs and higher prices without necessarily showing consistently higher profits.

    75.2. Structural or strategic barriers to entry and growth that effectively protect incumbents from competitive challenges which may cause incumbents to become 'lazy' and inefficient, and operate with higher costs than under competitive constraints.

76. The HMI acknowledges that price comparisons in health care, both at a national and international level, are difficult to perform and interpret given the diversity of the products and services involved, the complexities of correcting for the influence of different methods of cost allocation over these products, and; for international comparisons, the influence of purchasing power comparators and the differences in legal, societal and fiscal settings.

77. Volumes, both in terms of the number of admissions and in terms of the intensity and methods of treatments, can be more meaningfully measured and compared nationally and internationally, and do contain valuable indications of the effectiveness of the competitive process and possible (in) efficiency and market power in the delivery of

healthcare when considered in combination with profitability indicators.

78. It is important that profitability be analysed over a long enough period of time to negate the bias that may arise from random factors (including economic upswings or downswings) influencing profitability results. Though a longer period may be useful, there are challenges with the availability of sufficiently consistent data when conducting analysis over a longer period. In determining an appropriate time period for analyses we need to balance the potential benefits of examining a longer time period with the practical difficulties of doing so. The HMI believes that a ten year period (2006-2015) will be sufficient for a robust profitability analysis in the context of a market inquiry.

79. In summary, profitability analyses in the context of a market inquiry is inquisitional and not accusatory. The HMI is interested in whether there are firms (or a firm) that earn extraordinary or even excessive profits over and above the long term costs of capital over a prolonged period of time. If excessive profits are found, the HMI will be interested in what the possible causes of these profits are (including whether it is market power or innovativeness) and why competing firms or efficient entrants are not able to bring these profits more in line with what is expected in competitive markets.

Chapter 5
Funders

Part 1:

Medical schemes in the private healthcare market

INTRODUCTION

1. Healthcare financing is a fundamental element of a well-functioning healthcare system which in turn, is instrumental to the economic wellbeing of individuals and socio-economic development. According to the World Health Organisation (2007): "A good health financing system raises adequate funds for health, in ways that ensure people can use needed services, and are protected from financial catastrophe or impoverishment associated with having to pay. It provides an incentive for providers and users to be efficient."[1]

2. For decades, governments have attempted to find a balance between affordability and efficiency goals. This has resulted in mixes of different sources of healthcare financing emerging across countries combining out-of-pocket spending, supplementary health insurance, and collective funding (tax-based financing or social health insurance).

3. South Africa is no different. It provides near universal access to healthcare to its citizens through a combination of publicly available services and regulated private markets, as described in the Industry Overview chapter. In this chapter we focus on the funding of private healthcare which includes medical schemes, administrators and Managed Care Organisations (MCOs).

4. Medical schemes cover approximately 8.88 million people (15.9% of the total population).[2] The Medical Schemes Act of 1998 (MSA) provides for two types of medical scheme membership, namely open and restricted medical scheme membership. Open medical schemes are required to accept every person who wishes to join as a member or dependent. By contrast, restricted medical schemes only accept a select group of individuals as members.

5. This chapter focuses on the factors that restrict, and distort competition within the medical scheme, administrator and MCO markets. The HMI in its revised statement of issues identified four factors that required examination in relation to funders, namely:

    5.1. The adequacy of the regulatory framework in addressing risk pooling.

    5.2. Information weaknesses that reduced the ability of consumers to make informed decisions and how this affects competition.

    5.3. The accumulation and exercise of market power, arising from market concentration of funders.

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1. WHO, Strengthening health systems to improve health outcomes, 2007, p 21 Accessed from: http://www.who.int/healthsystems/strategy/everybodys_business.pdf.
2. Council for Medical Schemes Annual Report 2016/2017 and Statistics South Africa mid-year population estimates for 2016.

5.4. The reasons for the increases in the price of medical aid plans and the effect on affordability over the long-term.

6. We deal with the funding of private healthcare in two parts. Part 1 of this chapter focuses on medical schemes while part 2 is on administrators and managed care organisations. We begin by setting out our key observation on competition in the funders' market.

7. The HMI's analysis of the medical schemes market proceeds as follows:

   7.1. In order to assess the level of competition within the medical scheme market, the HMI defines the market for medical schemes, describes the structure of the medical scheme market, and assesses the level of concentration and how it has changed over time.

   7.2. As part of the competitive assessment the HMI also assessed if there are any significant barriers to entry and expansion.

   7.3. The HMI assessed how the regulatory environment affects competition between medical schemes.

   7.4. The HMI assessed the governance of medical schemes, and sought to understand how the board of trustees and the principal officer serve the members of medical schemes.

   7.5. The HMI sought to understand the role of brokers in driving competition between medical schemes, and how they aid the consumer to select appropriate healthcare cover.

MARKET DEFINITION

PRODUCT MARKET

8. 8. There are two types of medical schemes, open and restricted. In the sections that follow, the HMI assesses whether open and restricted medical schemes constitute two separate markets. First, we review the relevant legal provisions that define open and restricted medical schemes. Thereafter we review evidence of competition collected by the HMI.

Key provisions in the Medical Scheme Act

9. The MSA clearly differentiates between open and restricted medical scheme membership through eligibility requirements. Section 23(9)(a) of the MSA states that open medical schemes must accept every person who wishes to join as a member or dependant. In contrast, restricted medical schemes only accept a select group of individuals as members. This includes employers of certain industries, organisations, associations or unions that establish these restricted medical schemes for their employees and dependents. The MSA sets out the criteria for restricted membership and the employer determines the provisions for members within the restricted medical scheme.

Competition between open and restricted medical schemes

10. There are some instances where open and restricted medical schemes compete for the same members.

   10.1. An employer with a restricted medical scheme may make it compulsory for employees to join the employer's restricted scheme. However, some employers provide employees with the option to join open medical schemes in addition to the employee scheme though, in many cases, employees forgo their subsidy if they choose to join an alternative medical scheme. Employees may also opt not to join their employer's restricted medical scheme but instead join their spouses' medical scheme, which may be an open medical scheme.

   10.2. There are two relatively small restricted medical schemes that compete to some extent with open medical schemes for prospective members. Chartered Accountants (SA) Medical Aid Fund (CAMAF) and Profmed are restricted medical schemes, but their eligibility criteria are based on educational and professional qualifications rather than on specific employer.

   10.3. An open or restricted medical scheme can enter the market if it meets

the criteria set out in the MSA. If employers are of the view that open medical schemes are too expensive or offer little value, they could establish their own restricted medical scheme. In essence, these newly formed employer based medical schemes would compete directly with the open medical schemes, as the open medical schemes would lose members to the newly formed restricted schemes.

11. The HMI heard from stakeholders that while there are some instances where open and restricted medical schemes compete, for the most part these medical schemes do not compete directly with each other.

Conclusion on product market

12. The HMI finds that open and restricted medical schemes primarily compete in separate product markets. It acknowledges, however, that some competition for the same consumers may occasionally take place. Therefore the HMI will consider, where relevant, the extent to which open and restricted medical schemes compete for the same medical scheme beneficiaries in the longer term, and where relevant, but in general will treat this as two separate markets.

GEOGRAPHIC MARKET

13. Open medical schemes, by their nature of being open, compete for members on a national basis. However, some open medical schemes have the majority of their members concentrated in one region. For example, a large number of Cape Medical Plan's members reside in the Western Cape, but it still has members located throughout the country.

14. There are also some restricted medical schemes that only provide membership to individuals working for companies that are located in specific regions. For example, Witbank Coalfields Medical Aid Scheme provides membership to employees that work in Witbank coal mines and to employees working in other coal mines located outside the Witbank area, provided their employer is a member of the scheme. Similarly, members of SAMWUMed are predominantly in the Western Cape.

Conclusion on the geographic market

15. For purposes of the inquiry, the HMI defines the geographical dimension of the market for medical scheme products to be national, with the recognition that in some instances there may be predominantly a regional presence.

THE SIZE OF THE MEDICAL SCHEME MARKET

16. The number of medical scheme beneficiaries as a percentage of the total population has remained consistent over the last two decades. In 1997, 16.9% of the total population belonged to a medical scheme[3]. This number dropped to 15.3% in 2002 and then increased to 15.9% by 2016. The number of medical scheme beneficiaries has grown at less than 1% per year between 2014 and 2016 years, and contracted in 2015.

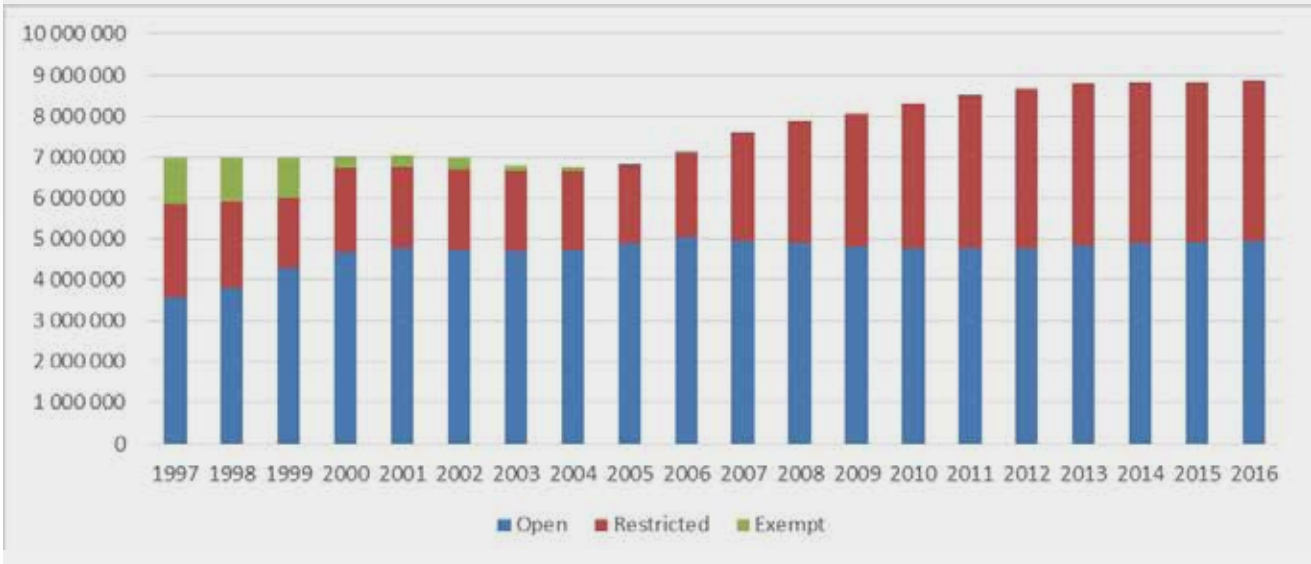
17. Figure 5.1: Beneficiaries over time shows the number of beneficiaries belonging to open and restricted medical schemes. It illustrates that the open medical scheme market grew as a percentage of total membership from 54% of all medical scheme members in 1997 to 68% in 2002[4] before returning to 56% in 2016.

18. Significant changes occurred within the broader medical scheme market during the period which explains the movement between the open and restricted medical scheme markets. One of the changes that occurred is that in the late 1990s previously restricted government medical schemes, Medihelp, Bonitas Medical Fund (Bonitas) and ProSano Medical Scheme (ProSano), became open medical schemes. Government employees could then choose whether to take up medical scheme cover and which open medical scheme to join.

19. The open medical scheme market has grown

3. Statistics South Africa Mid-year population estimates for 1997 and the Council for Medical Schemes Annual Report for 1997
4. Council for Medical Schemes Annual Report 1997 and 2002.

FIGURE 5.1: BENEFICIARIES OVER TIME



slowly from 4 666 077 in 2000 to 4 953 180 in 2016.[5] There has, however, been significant movement between medical schemes. A number of open medical schemes have grown substantially while others have had negligible growth or experienced declines in membership. Discovery Health Medical Scheme (DHMS) grew from 355 073 in 1998 to 2 735 191 beneficiaries in 2016 (a growth rate of 670% over the period).[6] Similarly, Fedsure Health experienced significant growth from the late 1990s as it grew from 297 561 in 1998 to 393 993 members in 2000[7]. However, this growth was not sustainable as it decreased to 146 327 beneficiaries in 2016 (as Fedhealth Medical Scheme (Fedhealth)).[8] Other medical schemes also experienced significant growth in beneficiaries during the late 1990s and early 2000s where their membership more than doubled, but this growth was off a very low base.

20. The previously restricted government medical schemes (Bonitas, Pro Sano and Medihelp) found themselves in an unfamiliar environment when they were converted to open schemes. While they previously had captive members, they now had to compete with other open medical schemes to attract and retain members. Bonitas, which was significantly larger than DHMS in 1998, grew at a much slower pace of 29% from 1998 to 2016. Medihelp and Pro Sano experienced a decrease in membership during this time. Pro Sano has since exited the market.

21. The restricted medical scheme market grew by 101% from 2000 to 2016 with much of this growth attributed to the registration of Government Employees Medical Scheme (GEMS) in 2006[9]. When GEMS entered the market, many government employees who belonged to open medical schemes at the time switched to GEMS. GEMS's growth has steadied and it is now the largest restricted medical scheme with just over 1.8 million beneficiaries in 2016. GEMS was attractive because government subsidises membership fees.

5. Council for Medical Schemes Annual Reports 2000 p 19 and 2016.
6. Council for Medical Schemes Annual Reports from 1997 to 2002 Total beneficiaries as on 31 December for the respective years.
7. Council for Medical Schemes Annual reports 1998 and 2000 (Total Beneficiaries as on 31 December for the respective years.
8. Council for Medical Schemes Annual Report 2016/2017 as on 31 December. Fedsure Health changed its name to Fedhealth in 2002 (Council for Medical Schemes Annual Report 2002/2003).
9. GEMS registered with the Council for Medical Schemes in 2005

MEDICAL SCHEME MARKET SHARES AND CONCENTRATION

22. There has been consolidation in the medical scheme market since 2000 when the MSA came into effect. The total number of medical schemes decreased from 163 in 2000 (consisting of 47 open, 97 restricted and 19 exempted medical schemes) to 82 (consisting of 22 open and 60 restricted) in 2016[10]. There have also been very few new medical scheme entrants that are still in existence today (discussed in the barriers to entry section).

23. As a starting point to assessing competition, the HMI calculated the market shares of open schemes. To account for the assertion that CAMAF and Profmed compete directly with open medical schemes, we calculated two sets of market shares – one that excludes CAMAF and Profmed and one that includes them. The difference is marginal. Table 5.1 shows the market shares based on the number of beneficiaries for the 10 largest open medical schemes in 2016.

24. Table 5.1 shows that there is one dominant medical scheme, DHMS with 55% of the

TABLE 5.1: EXPENDITURE ON BROKER FEES FROM 2005 TO 2016 (2016 PRICES)[77]

Open Medical scheme	Number of beneficiaries	Market share	Market share including CAMAF and Profmed
DHMS	2 735 191	55%	54%
Bonitas[11]	753 514	15%	15%
Momentum Health	266 206	5%	5%
Bestmed Medical Scheme (Bestmed)	200 512	4%	4%
Medihelp	195 924	4%	4%
Medshield Medical Scheme (Medshield)	151 420	3%;	3%
Fedhealth	146 327	3%	3%
Sizwe Medical Fund (Sizwe)	122 938	2%	2%
Keyhealth	75 038	2%	2%
Hosmed Medical Aid Scheme (Hosmed)	69 749	1%	1%
Profmed	69 037		1%
Remaining schemes excluding CAMAF	223 252	5%[12]	
Remaining Schemes including CAMAF	269 625		5% [13]

Source: Council for Medical Schemes Annual Report Annexures 2016/2017.

10. Council for Medical Schemes Annual Reports for 2000 p. 19 and 2016/2017 p129. The total number of medical schemes reported in the table on p 19 of the Annual Report for 2000 is 165, however, adding the totals for restricted, open and exempted gives a total of 163
11. Bonitas Medical Fund's figures include LMS Medical Fund figures to reflect the merger.
12. The 11 remaining schemes excluding CAMAF and Profmed as well as LMS Medical Fund as it merged with Bonitas during 2017.
13. The 12 remaining schemes (including CAMAF) and excluding LMS Medical Fund.

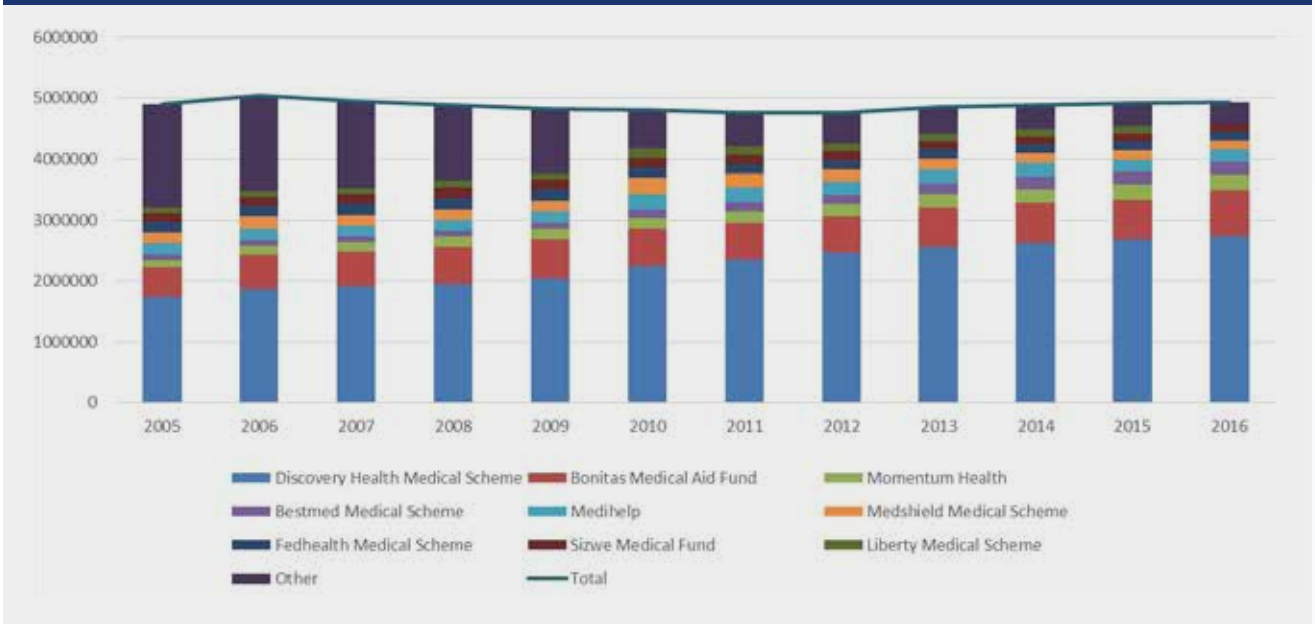
market. The nearest rival is Bonitas with 15% of the market. The remaining 19 medical schemes[14] each have less than 6% share of the market each.

25. Figure 5.8 illustrates the consolidation within the open medical scheme market by number of beneficiaries between 2005 and 2016. DHMS has consistently maintained the position as the largest open medical scheme and has experienced market share gains over other players. Bonitas has remained the second largest open medical scheme and its share of the market has remained relatively consistent. Momentum Health is the third largest with a market share of 5%. Momentum Health has grown 42% in the five years between 2011 and 2016 compared to DHMS's 16% and Bonitas's 24%, though off a much lower base.

26. In a competitive market, medical schemes should compete to attract new members into the market as well as from other schemes. If medical schemes actively compete to grow their membership base, the inquiry would have expected some variance in market share as medical schemes gain or lose members. A consistently high market share indicates a lack of effective competition and is concerning to the HMI. However, DHMS is of the view that its size does not create a monopolistic type benefit because medical schemes are non-profit entities and hence are not incentivised by profit motive.[15]

27. While medical schemes may be not-for-profit, for-profit administrators provide administration services to them. In some instances, the size of the medical schemes linked to the administrators matter since we found no clear separation of commercial interests between medical schemes and their for-profit administrators. The HMI is of the view these closely aligned medical schemes are, in effect, quasi profit maximising schemes, and their growth has been driven by their for-profit administrators.

FIGURE 5.2: OPEN MEDICAL SCHEME CONSOLIDATION BY BENEFICIARY



Source: CMS Annual Reports Annexures from 2005 to 2016

14. The remaining 20 medical schemes refers only to the open medical schemes and excludes LMS Medical Fund as it has since merged with Bonitas.
15. DHMS Competition Commission Market Inquiry into the Private Heatlhcare Sector Submission, 17 November 2014, p 56.

TABLE 5.2: RESTRICTED MEDICAL SCHEME MARKET SHARES

Restricted Medical scheme	Number of beneficiaries	Market share
GEMS	1 833 137	47%
South African Police Service Medical Scheme (POLMED)	498 152	13%
Bankmed	214 246	6%
LA- Health Medical Scheme (LA Health)	150 036	4%
Platinum Health	96 405	3%
SAMWUMed	83202	2%
Sasolmed	76 901	2%
Profmed	69 037	2%
Umvuzo Health Medical Scheme (Umvuzo Health)	55 051	1%
Transmed Medical Fund	53 813	1%
Remaining 50 schemes	794 921	20%

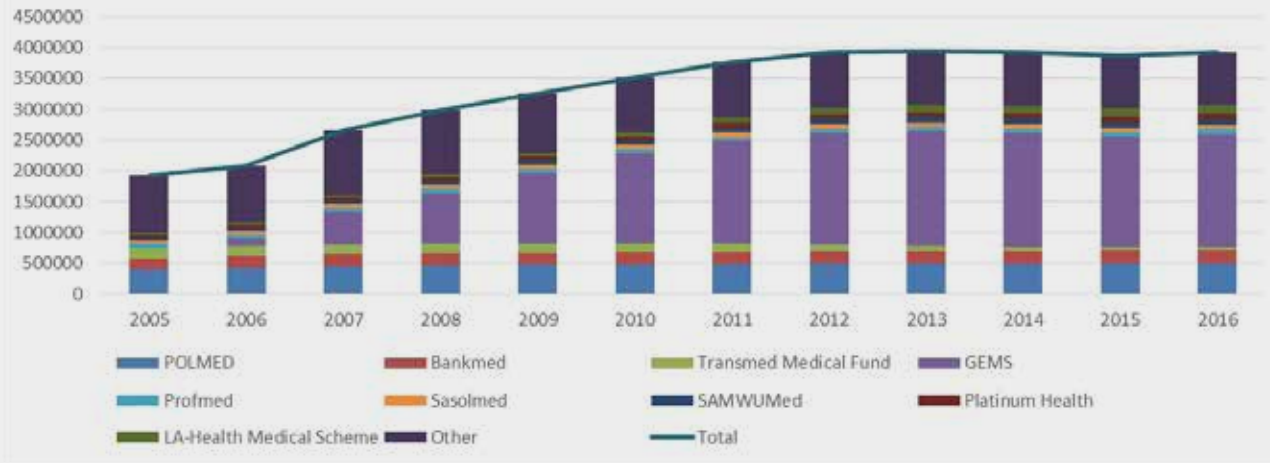
Source: Council for Medical Schemes Annual Report Annexures 2016/2017.[16]

28. Next the HMI looks at the market shares for restricted medical schemes. Table 5.2 shows the market shares for the ten largest restricted medical schemes.

29. The restricted medical scheme market structure is similar to the open medical scheme market, although it has many more medical schemes. GEMS is dominant with a market share of 47%. POLMED is the next largest with 13%. The remaining 58 medical schemes have market share below 6% each. These market shares include CAMAF and Profmed, but the change is marginal if they are excluded.

30. Figure 5.3 illustrates the level of consolidation by beneficiary for restricted medical schemes.

FIGURE 5.3: CLOSED MEDICAL SCHEME CONSOLIDATION BY BENEFICIARY



Source: CMS Annual Report Annexures from 2005 to 2016.

16. Numbers may not add to 100 due to rounding

31. Figure 5.3 demonstrates the impact that GEMS has had on the growth of the restricted medical scheme market since it entered. GEMS's growth rate has stabilised. The size of the other medical schemes has remained relatively constant. For the most part, restricted medical schemes do not compete for members and will only experience growth if the employer group or industry in which they operate grows.

TRENDS IN MARKET CONCENTRATION

32. Another important indicator of competition is concentration. High concentration levels may yield undesirable market outcomes. The Herfindahl-Hirschman Index (HHI) is a tool that assesses the level of concentration in a particular market.[17] Given the HMI's conclusion that open and restricted medical schemes are separate markets, the HMI calculated the respective markets' HHI from 2005 to 2016 to illustrate the change in concentration levels in the medical scheme market over time (see Table 5.3).

TABLE 5.3: HHI INDEX FOR OPEN AND RESTRICTED MEDICAL SCHEMES

	Open medical schemes	Restricted medical scheme
2005	1510	710
2006	1629	687
2007	1752	860
2008	1876	1137
2009	2095	1559
2010	2483	1991
2011	2725	2193
2012	2953	2365
2013	3079	2453
2014	3181	2439
2015	3265	2361
2016	3391	2422

Source: HMI's own calculation

33. Table 5.3 shows that the HHI has increased steadily for both open and restricted medical schemes for the period 2005 to 2016. In 2016 the top two medical schemes, DHMS and Bonitas constituted 70% of the total market. Based on these calculations, the open medical scheme market has been highly concentrated (recording an HHI >2500) for the last six years.

BARRIERS TO ENTRY AND EXPANSION FOR MEDICAL SCHEMES

34. Given the consistently high market shares for some players and high concentration levels for both open and restricted medical schemes, the HMI is concerned with whether there are barriers to entry and expansion. Barriers to entry, by creating and reinforcing the market power of large firms, tend to lead to high prices, lower levels of

17. Horizontal Merger Guidelines, The US Department of Justice and Federal Trade Commission 2010. The US Department of Justice divides the market concentration spectrum as measured by the HHI into three broad regions: HHI below 1000 is un-concentrated, HHI between 1000-1800 is concentrated and HHI above2500 is highly concentrated.

quality, innovation and a less competitive market. Therefore barriers to entry may prevent medical schemes from competing and expanding in a way that will improve the overall value of the product offering to the consumer.

35. There has not been any entry into the market of medical schemes that are still operating today since the restricted medical scheme, Motohealth, entered in 2007. GEMS, which is the largest of the newer medical schemes, entered in 2006. There are 10 restricted medical schemes that entered the market after 2000 that are still in existence today. There are only two open medical schemes that entered the market since the introduction of the MSA in 1998 that are still operational today. Resolution Health and Thebe Med entered the market in 1998 and 2002 respectively. More than half of all registered open medical schemes operating today started in the 1970s and earlier.

36. The slow growth in the number of beneficiaries entering the market and joining open medical schemes limits the ability of these schemes to expand by attracting previously uninsured members. Rather open medical schemes have expanded by acquiring other medical schemes, or by attracting existing members from other medical schemes. DHMS, for example, grew rapidly between 2000 and 2016. During this time it amalgamated with nine restricted medical schemes.[18] These amalgamations contributed 4% towards its total growth during this time. Bestmed also experienced significant growth as it grew by 357% between 2000 and 2016, but its growth came off a much lower base. During this time, Bestmed amalgamated with four medical schemes. Momentum Health showed strong growth in the five years between 2011 and 2016, but did not amalgamate with any other medical schemes during this period.

37. Furthermore, the HMI has not seen any innovative entry or expansion. Innovative entry could be a new medical scheme from a specific geographic area concentrated around a specific facility or group of providers that was able to recruit a sufficient number of members. Alternatively, an innovative entrant could be a medical scheme linked to the academic sector for both students and employees that leverages the medical schools. In both examples, medical schemes can offer benefit options based on alternative reimbursement contracts with providers such as global fees or capitation models as opposed to fee-for-service.

38. In order to assess barriers to entry and expansion, the inquiry first identified the main regulations governing entry and expansion into the market. It then looked at the barriers stakeholders identified in their submissions and engagements with the HMI. In the HMI's analysis, three types of barriers were considered, as identified in Chapter 4 titled "Competitive Assessment Framework." These are regulatory requirements, natural or intrinsic barriers, and behavioural or strategic barriers.

REGULATIONS GOVERNING ENTRY AND EXPANSION IN THE MEDICAL SCHEME MARKET

39. The MSA stipulates the requirements for a new medical scheme to enter the market in Section 24 (registration of a medical scheme) and Section 20 (business of a medical scheme). A new medical scheme must have 6 000 members within three months (Regulation 2(3)) and R5 million in guarantees. Once registered, the medical scheme has five years to increase its reserve ratio to the regulated 25% of gross premiums (Regulation 29).

40. The regulations stipulate how medical schemes may access capital. Prior to the enactment of the MSA, administrators could fund the start-up capital for a medical scheme, and could thus sponsor the entry of a new client. The current regulatory environment prevents this type of sponsorship. Furthermore, the MSA prohibits medical schemes from borrowing money.

18. The totals were counted using the total number of beneficiaries as of the 31st of December of the year before they amalgamated with DHMS, and includes Wits Medical Scheme that has since amalgamated with DHMS.

Summary of stakeholder submissions

41. Stakeholders told the HMI that a new entrant, particularly in the open medical scheme market, is unlikely to get the required 6 000 unrelated people together to start an open medical scheme. In addition, new entrants struggle to access the required funds as administrators cannot sponsor entry and medical schemes cannot borrow money.

42. Medical schemes argued that the regulatory requirement to build a solvency ratio of 25% is a barrier to entry and expansion. When a new medical scheme builds its reserve ratio, it has to set a portion of members' monthly premiums aside for this. These medical schemes need to build an amount for their reserves into their membership fees. This additional amount could potentially make their monthly contributions higher than those of existing schemes.

43. As a medical scheme grows, so does its solvency requirements. Similarly to a new entrant, a growing medical scheme will require an increase in their contributions to fund the additional solvency, and this limits the scheme's ability to offer competitive or lower monthly contributions.

44. It is worth noting that the Council for Medical Schemes (CMS) has published a circular titled "The review of Solvency Framework" [19] in which it states that it is investigating the necessity to review the current solvency framework with a view of possibly moving towards a risk based approach. It acknowledges that the risk based approach has an advantage of measuring the risk of individual schemes and setting the capital requirement at an appropriate level.

45. Stakeholders have also argued that a new entrant faces risks associated with small risk pools. A new and small medical scheme needs to protect itself from a small number of large claims, in particular prescribed minimum benefits (PMBs) that could exhaust all the pooled funds. Thus, medical schemes have proposed that new entrants require reinsurance to cover expenses exceeding claims in the early years. The MSA allows for reinsurance in the private healthcare market but the CMS has not allowed reinsurance for over a decade.[20]

46. Open medical schemes identified behavioural barriers related to building a brand and marketing and distribution on their own in a mature, monopolistic market where one large firm (Discovery Ltd) has a dominant brand. Medical schemes are also of the view that those with links to insurance and wellness companies have an advantage as the bundle of products they offer increases the switching costs for members.

47. Finally medical schemes explained that their market is broker driven, and if the medical scheme does not have strong relationships with brokers, it will not grow. Medical schemes with corporate links have the ability to better incentivise brokers to sell a bundle of products for higher commission beyond the legislated amount for medical schemes only.

HMI ASSESSMENT OF ENTRY AND EXPANSION

48. The main barrier to entry, particularly for open medical schemes, is the lack of incentives for new entrants in a saturated market. Of the 82 medical schemes currently in existence, only 22 are open schemes.[21] Significant effort and risk are required to successfully establish an open medical scheme. But given the not-for-profit nature of medical schemes, there are no financial rewards for this risk. An administrator that seeks to profit from a new medical scheme's administration fees could have incentives to sponsor a medical scheme's entry. However, administrators are prohibited from providing capital to fund a start-up.

49. Quite apart from this there are various regulatory, natural (intrinsic) and strategic (behavioural) barriers. However, with the right incentives for a potential new entrant, these barriers are not insurmountable.

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19. CMS, Circular 68 of 2015: The review of the solvency framework, 25 November 2015.
20. Medscheme Holdings Competition Commission Market Inquiry into the Private Heatlhcare Sector Submission, October 2014, p 65.
21. There are currently only 21 open medical schemes in existence because LMS Medical Fund merged with Bonitas

Regulatory requirements

50. The minimum number of members, capital, and solvency requirements provide a safeguard for medical scheme members by ensuring that the medical scheme is sustainable. The inquiry recognises that it might be challenging for a smaller company or potential open medical scheme to meet the minimum number of members, capital and solvency requirements in the current environment.

51. The HMI agrees that there is inherent risk from small risk pools. However, the alternative of increasing the number of members a new entrant requires will only further increase the barriers. Rather, the HMI is of the view that the introduction of a risk equalisation fund (REF) and effective reinsurance, could provide sufficient protection against exposure from small risk pools. This is dealt with in more detail in the section below entitled “Partial regulatory framework for medical schemes”.

Natural or intrinsic barriers

52. The HMI observed economies of scope in the medical scheme market. As explained in the section below titled “Administrators as purchasers of healthcare (upstream market)” size has an influence on the outcomes of tariff negotiations. Discovery Health, for example, is able to obtain better tariff outcomes on behalf of all the medical schemes it negotiates for, particularly with respect to hospital tariffs, compared to all other administrators and medical schemes. GEMS is also able to achieve good outcomes compared to other medical schemes. Tariff outcomes are important for medical schemes as the prices they secure directly influence the premiums they can charge and therefore their ability to attract members.[22] While a new restricted medical scheme could contract with Discovery Health and let the administrator conduct the tariff negotiations, this is not an option for open medical schemes. Discovery Health’s strategic decision is to only contract with one open medical scheme.[23]

Behavioural or strategic barriers

53. New entrants have a branding and marketing disadvantage compared to incumbents. Large incumbents have, over the years, invested significantly into developing strong brands through various marketing tools such as wellness and loyalty programmes. They have long standing relationships with independent brokers and have established their own tied broker networks. They have also benefited from advertising by the group as a whole. DHMS and Momentum Health, for example, benefit from brand recognition and advertising from the Discovery and MMI groups respectively. New entrants, particularly those not linked to a group of companies, will have to come up with unique ways to promote and advertise their product. Technology and social media may be able to assist them with reaching out to potential clients, but even so, they will be at a disadvantage. The role and impact of wellness programmes and brokers are discussed in more detail in the sections titled, "The Role of brokers", and "Loyalty and wellness programmes".

54. The HMI also found that new entrants and medical schemes wanting to expand may struggle to attract members away from the existing ones. While the underwriting that a medical scheme can impose on a member switching between medical schemes is limited, members seemed reluctant to switch. Members were asked on several occasions, when the HMI spoke to members who had complained about their medical scheme, why they did not change schemes. The response was firstly that they did not want to lose their benefits (both health and wellness). Secondly they had been with their current medical scheme for many years and were of the opinion that they would not necessarily get better service from another medical scheme. Finally, the complexity

22. This benefit only accrues if medical schemes also manage to control utilisation, if not the benefit from decreased tariffs is offset by increased utilisation. Quality too has to be on the agenda in addition to tariffs to benefit consumers.
23. Discovery Health Submission to the Competition Commission Market Inquiry into the Private Health Sector, 17 November 2014 p. 202.

of the market means that consumers have considerable apathy and put off any serious thoughts of switching to other medical schemes.

CONCLUSIONS ON BARRIER TO ENTRY AND EXPANSION IN THE MEDICAL SCHEME MARKET

55. The lack of any meaningful entry since 2002 and 2007 for both open and restricted medical schemes points to the presence of barriers to entry into this market. One of the main reasons for the absence of new entrants is the lack of incentive for firms to enter into the not-for-profit market, particularly one with so many other barriers. This requires urgent attention. A solution is provided in the recommendations

56. The HMI recognises the importance of protecting medical scheme members through the prerequisite number of beneficiaries, solvency requirements, and capital requirements. It therefore supports the existence of these measures. There is a clear need to protect small (often start-up) medical schemes from claims variation risk. However, the introduction of a REF and reinsurance will provide some protection to small and new entrants. In addition, the HMI supports the process of reviewing the solvency requirements. These are discussed in more detail in the "Recommendations Chapter".

PARTIAL REGULATORY FRAMEWORK FOR MEDICAL SCHEMES

57. Healthcare markets everywhere suffer from failures on both the demand and supply side. These failures can drive up healthcare costs beyond what would prevail in a well functioning and competitive market and can limit access. As a consequence healthcare markets are universally (structurally) regulated in one form or another. Residual market failures persist where regulation is incomplete or compliance with regulation is inadequately enforced. The South African private healthcare sector has also experienced several new waves of health policy over the past half century, with different ideologies, goals, and tools.

58. The South African private healthcare market is operating in a less than optimal regulatory environment particularly in relation to the regulation of healthcare financing. The MSA introduced PMBs, along with community rating and open enrolment. These social solidarity policies sought to provide protection for older and sicker members. Overall, the MSA contains measures that are aimed at protecting access to medical schemes as well as ensuring that medical schemes are not, as a consequence, rendered unsustainable.[24] It was envisaged that these policies would be accompanied by further social solidarity principles including mandatory membership, a risk equalisation mechanism, reviews of PMBs every two years, solvency measures for medical schemes that would make better use of the reserve capital of schemes, and the introduction of low cost medical schemes.[25] Even though these policies were never implemented, in some instances, alternative policy measures were implemented or preparatory work started, which then stalled. The policy interventions or preparatory work is summarised below.

59. Notwithstanding the absence of mandatory membership, which is one way to mitigate against adverse selection (the latter meaning people stay out of the system until they need access to expensive care and then "opt in"), medical schemes can implement underwriting through imposing waiting periods and late joiner penalties.

60. The current regulatory environment does not include a risk equalisation mechanism. Substantial work has been done since 2003 on the design of the risk equalisation formula.[26] [27] By 2007 the CMS had developed a shadow REF process that allowed the CMS

24. Van den Heever, AM. (2014). Evaluation of the draft Demarcation regulations applicable to the short - and long-term insurance acts. Written submission to the National Treasury, p11.
25. Ministerial Task Team on SHI, July 2005.
26. Van den Heever, AM. (2014). Evaluation of the draft Demarcation regulations applicable to the short - and long-term insurance acts. Written submission to the National Treasury, p11.
27. Ministerial Task Team on SHI, July 2005.

to test how this Fund would work in practice. This work stalled when the country's focus shifted towards universal health coverage and National Health Insurance (NHI).

61. The PMB package list was introduced in January 2000 and contains 270 diagnosis - treatment pairs (DTPs) which are primarily offered in hospital. According to the MSA, all medical schemes' options must, at a minimum, provide cover for PMBs and pay all claims related to the treatment of PMBs in full. There have been a number of developments including:

    61.1. defining all emergency medical conditions included in the definition of PMBs (January 2003);

    61.2. the introduction of diagnosis, treatment and medicine according to therapeutic algorithms for the 25 defined chronic conditions on the Chronic Disease List (CDL) (January 2004);

    61.3. Publication of a PMB code of conduct in response to compliance issues described in CMS circular 45 of 2010; and

    61.4. a PMB definition project as described in the CMS circular 45 of 2010.

62. Notwithstanding these important developments, the PMB structure has not been meaningfully reviewed since its introduction, even though the National Depeartment of Health (NDOH) is legally obliged to do so every two years[28]. Recently, the national DoH proposed draft amendments to the MSA to address the loopholes that require that PMBs be paid in full at invoice value, which effectively meant they are open to abuse. These amendments have, however, not yet been signed into law, and they have already faced contention in some quarters. For instance, the non government organisation (NGO), Section 27, argues that the proposed amendment shifts the risk to patients without addressing the cost of fees for healthcare services which is detrimental to patients' rights, and potentially unconstitutional. The South African Private Practitioners Forum (SAPPF) also contends that the amendment offers protection to medical schemes at the expense of the consumer by allowing medical schemes to limit their reimbursement obligation according to reimbursement rates set in 2006.

63. Several stakeholders raised concerns about the piecemeal implementation of the social solidarity framework and have argued that the incomplete regulatory framework is one of the explanatory factors for rising healthcare costs.

64. Below is a discussion of the effects of this partial regulation of medical schemes on competition and consumers.

PRESCRIBED MINIMUM BENEFIT PACKAGE

65. Each medical scheme in South Africa is required to provide minimum healthcare benefits in meeting the requirements of PMBs. By law, the source of payment must be derived from the medical schemes' risk pool as opposed to members' medical savings accounts. The list of minimum benefits covers 270 acute conditions such as certain types of cancer and meningitis as well as 25 chronic conditions such as diabetes and asthma. Regulation 8 of the MSA[29] requires medical schemes to pay in full for any services/treatment associated with acute or chronic condition on the PMB list, as long as services are procured is in line with the treatment protocols and is from a designated service provider (DSP).[30] The potential market power of providers was perhaps not anticipated by the provisions in the MSA. The assumption must have been that funders would be able to ensure that all providers joined the DSPs and thus manage costs, but this has turned out not to be the case.

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28. Chapter 9 of the Medical Schemes Act No 131 of 1998, Annexure A, Explanatory note to Regulation 8.
29. The Minister of Health gazetted on 26 June 2015, the intention to amend the Medical Scheme Regulations. Included are proposed amendments directly affecting Regulation 8 regarding PMBs. This may affect the requirement to pay PMBs in full.
30. Regulation 8(2)(a) of the MSA.

Stakeholder veiws on the PMB package

66. Consumers are concerned that they are not receiving compliant PMB cover as funds are being drawn from savings accounts, or they are having to pay out of pocket for treatment which should be covered from risk.

67. Stakeholders argue strongly that mandating medical schemes to offer certain specified benefits, and then requiring them to pay for the related claims in full, has driven up healthcare expenditure. They argue that the focus in PMB provisions on catastrophic coverage to the exclusion of primary healthcare promotes hospicentric care and increases the cost of the package. This has an impact on the affordability of medical scheme products and therefore access to private healthcare as a whole.

68. Some have argued that the scope and price of PMBs create a minimum price for which medical scheme cover can be offered. Thus, PMBs play a central role in determining the extent to which health insurance can include low income earners in South Africa. The CMS estimated that expenditure on PMBs per beneficiary for 2016 to be R680 per month or R8160 per year for 2016. [31]

69. Additionally, due to the lack of an effective risk equalisation mechanism in South Africa, some medical schemes face a substantially higher cost of PMBs per beneficiary per month than others, as illustrated by Figure 5.4 below that was reproduced from the CMS's 2016/2017 annual report. Expenditure on PMBs varied between medical schemes with 10 medical schemes reporting PMB expenditure below R250 per beneficiary per month (pbpm) and 10 medical schemes reporting PMB expenditure above R1 000pbpm.[32]

FIGURE 5.4: PMB EXPENDITURE BY MEDICAL SCHEME FOR 2016

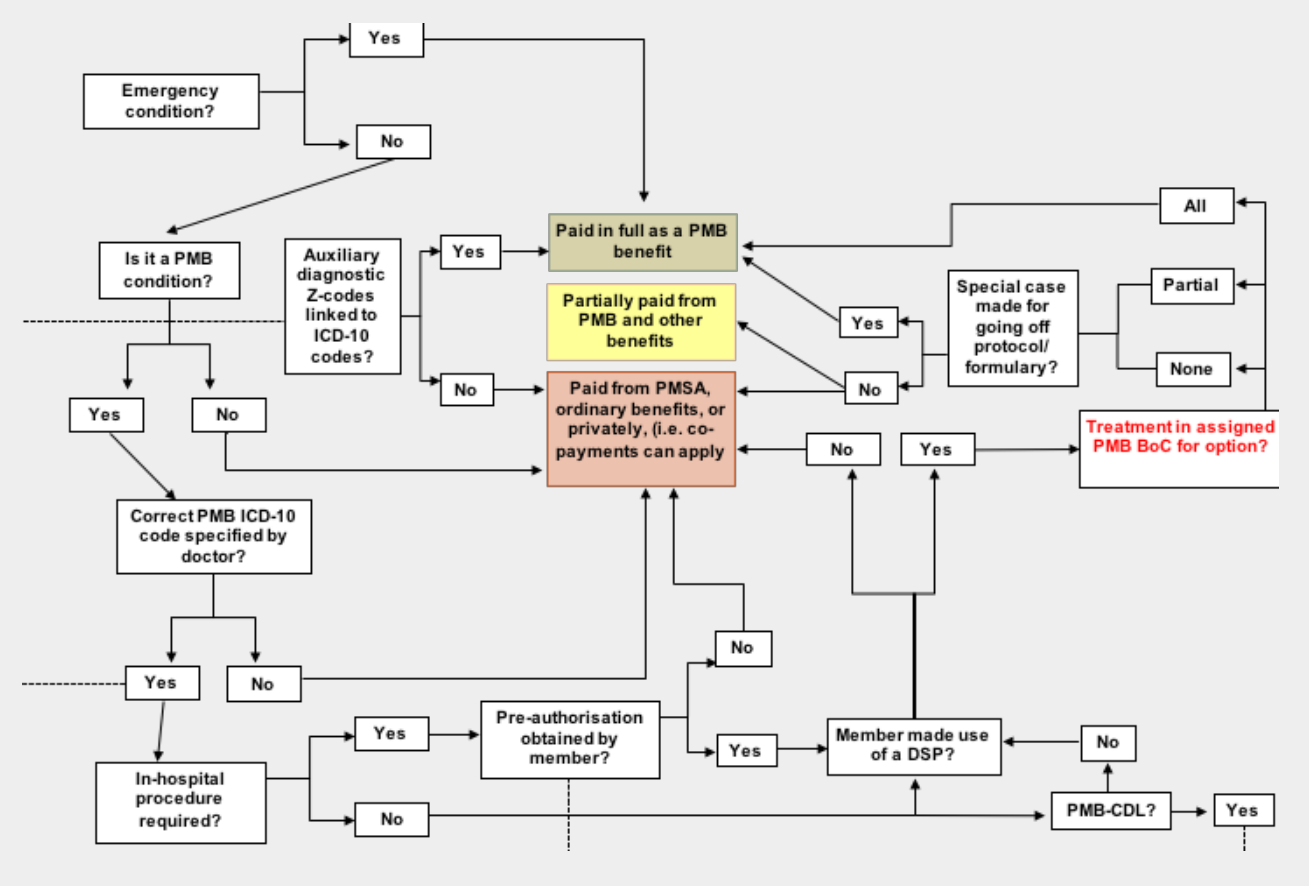
Source: Council for Medical Schemes, Annual Report 2016/2017 p 139.

31. Council for Medical Schemes, Annual Report 2016/2017, page 139.
32. Council for Medical Schemes, Annual Report 2016//2017, page 139

HMI's findings on PMBs

70. The subject of PMBs and in particular their complexity, management, implementation, and the resultant adverse effects of these factors on competition are discussed in depth in Annexe 5.1 titled "Prescribed Minimum Benefits". In summary Annexe 5.1 finds that the process of claiming for a PMB has multiple steps and involves a large number of players. The complexity of the system is well demonstrated in Figure 5.5. Failure at any point of the claim chain will result in the liability being passed onto the member and not being paid from risk. The complexity of the PMB system creates a non-tivial enforcement problem.

FIGURE 5.5: PMB FLOW DIAGRAM



71. To assess consumers' perceptions about not receiving compliant PMB cover, the inquiry used PMB diagnosis (PMBD) treatment claims,[33] to analyse PMB expenditure patterns. The HMI found that, in 2014, 57.59% of in-hospital claims were for a PMB diagnosis. Of these claims, 96.34% were paid from risk, only 0.37% from savings and 3.29% unpaid.[34] The HMI found high compliance levels amongst the funders in paying for in-hospital PMB cover. This was not surprising given that medical schemes typically cover in-hospital events in full irrespective of PMBD status.

72. In contrast, there was less complaince for out-of-hospital conditions. The proportion of out-of-hospital claims for PMBDs increased from 21% in 2010 to 25.28% in 2014. In 2014, 85.82% of these claims were paid from risk, 9.12% from savings, and 5.06%

33. This may include some mis-classified data, given potential mistakes at the diagnosis level.
34. Health Market Inquiry (2017). Report on analysis of medical schemes claims data - a focus on prescribed minimum benefits, p7, Table 2.

remained unpaid.[35] The HMI observed that payments from risk are increasing over time and payment rates from savings and rates of unpaid claims are decreasing. This evidence of increasing payments from risk benefits suggests either increased compliance with Regulation 8 by medical schemes or increased awareness by members of their PMB entitlements over time. The HMI found that the level of compliance varied between medical schemes/ administrators. It should be noted that if a medical scheme member used an out-of-network provider there would be legitimate co-payments.

73. The HMI was unable to find support for the assertion that PMBs are a primary driver of cost escalation in private healthcare. Our analysis of medical scheme expenditure (claims data) from 2010 to 2014 did not show that PMBs are a primary driver of cost escalation in healthcare. The findings showed that the increase in cost per admission on average from 2010 to 2014 has been 8.79%, with CPI contributing 5.6%, all other explanatory factors[36] contributing 1.20%, and unexplained factors 1.99%. Increasing proportions of PMB diagnoses contributed 0.11%[37].The HMI notes that the period for which this analysis was done (2010 to 2014) may not fully reflect the impact of PMBs on expenditure as the PMBs had been in existancefor 10 years prior to our data analysis period. Thus, they may already be priced into the market.

74. Even though PMBs are not a primary driver of expenditure escalation, they are an increasing component of medical scheme expenditure over the analysed period. The HMI also observed a shift in diagnosis patterns from non-PMB to PMB diagnoses by all medical service providers, but particularly by medical specialists. The HMI is concerned that this may reflect practitioners abuse of coding. The HMI notes that supply induced demand is driven by gaming of non-PMB conditions as described in the chapter titled “Supply Induced Demand” .

75. There is no coherent, universally agreed coding system in the South African private healthcare system at present, which means that diagnosis of disease is open to manipulation. In particular, the HMI found that some PMB conditions are more susceptible to code manipulation than others. The HMI acknowledges that gaming may persist in spite of the universally agreed coding system. However, a universal coding system would make gaming harder. This is the case particularly where diagnosis of condition severity can be ambiguous or where the PMB definitions are not particularly clear. The ambiguity and lack of clarity of definitions allow a higher degree of discretion on the part of the practitioner. The HMI is of the view that the provider is faced with the following incentives in this fee for service environment:

    75.1. Access to PMB benefits increases a patient's purchasing power. Providers may prescribe more (or more expensive) services if the patient can access PMB benefits (which may or may not be clinically appropriate).

    75.2. Regulation 8 (1) means that medical schemes have little or no bargaining power on price once a condition has been classified as a PMB.

76. The HMI considers that PMBs are an essential component of universal health coverage and the most successful mechanism to prevent catastrophic expenditure. However, in South Africa, the system operates under a number of conditions that distort competition in the private healthcare market and are not conducive to an effective PMB environment, namely:

    76.1. The requirement to pay PMBs in full in the absence of standardised coding and bargaining, or tariff setting regulation for health practitioners, where bilateral negotiations are not feasible (between funders and health practitioners).

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35. Health Market Inquiry.(2017). Report on analysis of medical schemes claims data - a focus on prescribed minimum benefit, p7, Table 1.
36. Other explanatory factors included, age, gender, disease profile, and case mix.
37. Health Market Inquiry (2017). Report on analysis of medical schemes claims data - initial cost attribution analysis, p32, Table 25.

76.2. The prevalence of fee for service reimbursement model.

76.3. The absence of supporting regulations, in particular a risk equalisation mechanism.

76.4. The ineffectiveness of DSPs. While medical schemes can (and do) set up DSP arrangements with providers, they often struggle to get specialists treating PMB conditions to sign up to DSPs. Medical schemes also tend to focus on price and not outcomes based contracts with providers on the networks.

76.5. The lack of clarity for members on the type of cover that they are entitled to once they are diagnosed with a PMB condition. Members also lack clarity on the treatment protocols that the providers should follow to ensure that the medical scheme pays the PMBs in full.

76.6. There is no mechanism to review medical schemes' compliance on paying for PMBs from the risk pool and not from the medical scheme members' savings accounts or members paying out of pocket.

76.7. There has been a failure to meaningfully review the PMB structure, developed about 15 years ago.

RISK POOLING ACROSS SCHEMES AND RISK EQUALISATION

77. Medical schemes pool their members' contributions and then pay for members healthcare expenses from the risk pool. Larger risk pools have more stable results over time. In addition, in a typical scenario, younger and healthy members will be net payers into the system and older or sicker members will be net receivers of the system. The younger, larger, and healthier a medical scheme's risk pool is, the more financially stable it is. This should serve as an incentive to medical schemes to grow their risk pools, particularly with younger and healthier members, in order to ensure financial stability.

78. However, medical schemes in South Africa operate within a regulatory landscape that includes open enrolment, community rating and PMBs, without a risk equalisation mechanism. Other countries with risk equalisation mechanism in a competitive market include Germany, Switzerland, Belgium, Netherlands, Israel, Australia, and the United States of America.

79. Risk equalisation is used to remove health risk status as a basis for competition between medical schemes. In the absence of a risk equalisation mechanism, medical schemes with older members or sicker risk pools will have higher PMB expenses. Consequently, as shown in Figure 5.4 medical schemes with older members or sicker risk pools will have higher costs necessitating higher contributions, making them less competitive, regardless of how efficient they are. Thus, in the absence of a risk equalisation mechanism, medical schemes have a strong incentive to compete on demographic risk.

80. The effect of risk equalisation is to ensure that everyone across all medical schemes pays a similar community rate for the same package of benefits.[38] When there is a risk equalisation mechanism, the community rate will no longer be influenced by age and disease, but only by the efficiency of the medical scheme in purchasing and delivering care to its members.

81. Thus, a REF creates a mechanism for cross-subsidisation, such that high risk medical schemes (where risk arises, not from operational inefficiencies or mismanagement, but due to the community profile of the scheme membership) are funded partially by low risk schemes. This compensates for the fact that the costs of the PMB package has a strong relation to age. With a REF, medical schemes can compete on the basis of their efficiency and the attractiveness of the benefits offered, regardless of member age profile. Without a REF, open schemes in particular will instead concentrate on attracting younger, healthier

38. PMBs in the South African context, or any mandatory basic cover.

members, which then allows them to manage costs. A REF also allows medical schemes with older/riskier members to provide the same minimum benefits as low risk schemes in a sustainable way.

82. Van den Heever (2012)[39] describes the impact that the partial regulatiory framework without a REF has had on some medical schemes as creating a "price-related death spiral," which has effectively been in place since 2001. Community rating and PMBs without risk equalisation forced schemes with high risk profiles to price above medical schemes with low risk profiles, eventually leading to scheme failure and consolidation. As they are prevented from explicitly risk-rating contributions, medical schemes have focused their energies on using benefit option design to encourage members to self select options that match their anticipated risk (and based on what they can afford). PMB implementation without the REF alters the competitive landscape, as cost structures between medical schemes can become significantly different, indirectly raising barriers for those schemes that end up with riskier pools.

83. Kaplan and Ranchod (2015)[40] argue that medical schemes have a strong incentive to use benefit design to cherry pick. Using South African private sector data from 2014 they observed a correlation between the size of the medical scheme and the number of benefit options. They conclude that the ability of medical schemes to offer a large number of options allows them to appeal to a wide range of target markets, and hence increases their ability to create more homogeneous risk pools (ie proxy risk rating).

84. The MSA requires that each benefit option must be self-sustaining such that gross contribution income generated from each option should be sufficient to cover members' claims in that benefit option. More specifically Section 33 of the MSA states that:

    (b) "each benefit option needs to be self-supporting in terms of membership and financial performance"; and

    (c) is financially sound; and

    (d) will not jeopardise the financial soundness of any existing benefit option within the medical scheme.

85. However, in practice, this does not occur as risk pooling occurs at a medical scheme level. In many cases, medical schemes create both risk and income cross-subsidies. Furthermore, the CMS has been unable to enforce risk pooling at an option level.

STAKEHOLDER VIEWS ON RISK POOLING FAILURES AND THE ABSENCE OF A RISK EQUALISATION MECHANISM

86. Stakeholders agree with the statement above that medical schemes proxy risk rate.

87. Furthermore, stakeholders told the HMI that medical schemes do not embark on innovative measures to assist high risk individuals through the health system as this will attract additional high risk members to the scheme.[41]

88. Other stakeholders dispute this, arguing that medical schemes are unable to prevent higher risk members from joining their medical schemes due to open enrolment and community rating. They therefore implement managed care initiatives to manage treatment costs for these members.[42]

89. The HMI heard evidence that medical schemes cross subsidise their benefit options to ensure the sustainability of their medical scheme as a whole. Medical schemes create risk subsidies as well as

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39. Van den Heever, A. M. (2012). The role of insurance in the achievement of universal coverage within a developing country context: South Africa as a case study. BMC Public Health, 12, (Suppl 1): S5.
40. Kaplan J and Ranchod S. 2015. An actuarial perspective on medical scheme benefit deign. Presented at the Actuarial Society of South Africa's 2015 Convention17–18 November 2015, Sandton Convention Centre: Johannesburg.
41. MMI comments on the Revised Statement of Issues published by the Health Market Inquiry team on 11 February 2016, p 5.
42. DH and DHMS response to HMI request for input on the need for and impact of selected interventions to address regulatory gaps within healthcare financing, with the aim of strengthening competition, p 22.

income cross subsidies. Risk subsidies are created through a cross-subsidy from the middle to lower contribution bands to higher contribution bands (comprehensive plans) that typically have sick, elderly as well as risk averse people. If these comprehensive plans had to be self-sufficient, then they would become more expensive. This would incentivise members to buy down to cheaper, less benefit-rich options. This would result in a decrease in gross contribution income for the medical scheme without an equal decrease in claims which could make the medical scheme unsustainable. Ultimately, it could contribute to what the industry terms the actuarial death spiral.

90. Stakeholders told the HMI that the current PMB regulation makes it impossible for medical schemes to offer affordable products to the low income market that will be self-sustainable.[43] It also appears that some medical schemes subsidise their low cost benefit options, in what is essentially an income based cross-subsidy.

91. The CMS indicated that it is concerned over benefit options with fewer than 2 500 members at a benefit option level. This is because just one catastrophic medical event, such as Gaucher's disease, may be enough to cripple the financial position of the benefit option. There are currently 29 open[44] and 30 restricted medical scheme benefit options that have fewer than the 2500 members.

92. The CMS may de-register a benefit option if it continuously does not meet the requirements of Section 33(b) (membership and financial performance), and enforce risk pooling at an option level. However, the CMS explained that closing a comprehensive option, for instance, may increase costs of the other options. This, in turn, could create affordability challenges for members, beneficiary movement between options, and pricing uncertainty for the medical scheme as a whole and destabilise the medical scheme. Thus, de-registration of benefit options is the last resort. They first require the loss making option to submit its strategy to turn the option around. The CMS's approach is to strike a balance between the overall stability and financial soundness of the medical scheme with the requirement for options to be self-sufficient.[45]

93. There is consensus among stakeholders that there are fragmented risk pools, and as a consequence there are residual risk pooling failures. However, there are mixed views on how these fragmented risk pools and residual risk pooling failures should be addressed. Some medical schemes, administrators, and hospital groups are in favour of an REF. Stakeholders in favour of a mechanism to equalise for risk, particularly for PMBs, explain that medical schemes' individual risk pools are small. Smaller risk pools have less predictable healthcare costs and lack the ability to withstand sudden large, unpredictable claims. The lack of a mechanism to standardise for risk limits the ability to achieve the equity goals envisaged under the SHI and prevents competition based on the efficient delivery of service. They also argued risk selection failures results in a consolidation of medical schemes with weaker risk pools, which may have nothing to do with their efficiency or product offering.

94. Stakeholders like the Congress of South African Trade Unions (Cosatu), however, are not in favour of the development and introduction of risk equalisation mechanisms,[46] but not necessarily on material grounds. Rather, they argue that the focus of Government should be on the development and implementation of the NHI and not on the REF. Some stakeholders have also cautioned that there will be net payers into, and net receivers in the system.

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43. Medscheme Submission to the HMI on Healthcare Financing Regulatory Framework and the impact it has on Competition in the South African Private Healthcare Sector, 19 January 2018, p 6.
44. Council for Medical Schemes Annual Report 2016/2017- this includes benefit options from LMS that have merged with Bonitas and are recorded under Bonitas.
45. Council for Medical Schemes Submission to the HMI on Healthcare Financing Regulatory Framework, 2018, p 11.
46. National Education, Health and Allied Workers' Union on behalf of COSATU presentation at the Public Hearings 1 Day 3 p 159

Some of the net payers are medical schemes that may target lower income earners or are restricted medical schemes with younger members. The medical schemes that become net payers into the system may have to increase their contributions in the short-term which could harm these lower income earners.

HMI VIEWS ON RISK EQUALISATION

95. The HMI agrees that there is proxy risk rating and cherry picking in the open medical scheme market. The absence of an REF creates a clear incentive for medical schemes to use benefit design to force members to risk-select. Medical schemes have introduced the wide range of benefit options as a way to induce clients to self select, based on their own perceived risk, which is often termed innovation.

96. This has resulted in a fragmentation and dilution of risk pools as medical schemes are, in theory, supposed to manage each benefit option as a separate risk pool.

97. The HMI considers the absence of a risk equalisation mechanism in private healthcare to be a structural flaw and regulatory failure that weakens competition based on efficiency between medical schemes. Furthermore, it undermines the pooling of risk and equity goals envisioned in the MSA and in particular the protection of sicker and older members.

98. The resultant adverse effect on competition is that consumers are unable to make effective choices by comparing price and value.

99. The inquiry's claims data analysis revealed that two very large medical schemes, as well as smaller restricted medical schemes, are able to control the unexplained factors that drive expenditure more than medical schemes in the middle of the size range. These problems are compounded for the smaller open medical schemes by increases in age and disease burden which make this group subject to the highest inflationary pressure. Smaller risk pools reduce predictability of healthcare costs. They also limit the population over which the same medical scheme can spread its risks and hence increase contribution rates and make affordability more difficult.[47] Cherry picking could result in vulnerable members on medical schemes with relatively higher risk profiles facing increasingly unaffordable contribution levels relative to other schemes.

100. Achieving universal coverage through a SHI model was not widely supported and thus the implementation of the supporting proposals, which included REF, stalled. However, the introduction of an industry wide risk pool is an essential step to creating a unified healthcare system and a national risk pool. The proposal of the introduction of an REF is discussed in detail in the recommendations chapter.

COMPETITION ON BENEFIT OPTIONS

101. Consumers wishing to purchase medical cover face a daunting task of selecting from 22 open medical schemes and 185 benefit options[48] that are neither standardized nor comparable.[49] PMBs are the only common feature in benefit options. But beyond PMBs, option cover varies significantly between medical schemes.

102. The CMS has classified the options into three broad categories: traditional[50], new generation[51] and hospital plans[52]. Within each of these broad categories, the benefit

47. Health Market Inquiry. (2017). Report on analysis of medical schemes claims data - initial cost attribution analysis, p40 - 67.
48. Council for Medical Schemes Annual Report p 27 2016/2017. This figure includes Efficiency Discount Options.
49. If consumers join medical schemes through their employers, this is reduced as the benefit options are limited to the employer selected medical scheme options.
50. The traditional plans cover almost all medical expenses and include benefits for in-hospital, day-to-day expenses and chronic medication, subject to the rules of the scheme.
51. The new generation plans have a savings component and cover almost all medical expenses and include benefits for in-hospital, day-to-day expenses and chronic medication, subject to the rules of the scheme.
52. The hospital plans cover healthcare expenses only for in-hospital treatment. Members are responsible for their own day-to-day medical expenses. It is important to note that although these plans are categorised as hospital plans they are required to pay for all PMBs regardless if the treatment occurs in or out of hospital.

options are delineated into narrower groupings. Some medical schemes may offer their members combinations of traditional and new generation plans.

103. Added to this, medical schemes have introduced efficiency discount options (EDOs) as a means to control costs, particularly for the treatment of PMBs. A member pays a discounted contribution to join a benefit option (that could fall within any of the three broad categories) that requires the member to utilise provider networks. There is no clear list of which benefit options fit in which group, and there is no uniformity across medical schemes' benefit options, even within the broad types of categories. Furthermore, some benefit options shift between the broad categories as medical schemes change the composition of their benefit options over time.

104. Individuals face a trade-off between price and richness of cover as they tend to narrow their selection to options based on their health status and that fall within their affordability band. Lower income earners, or the young and healthy, for example, will select between the various hospital plans. Higher income earners, or the sick and/or elderly, will select between more comprehensive plans.

105. As the medical scheme market consolidated, so too did the total number of benefit options as the number of benefit options declined from 391 in 2006 to 331 in 2017.[53] However, the average number of benefit options per open medical scheme increased from 5.4 in 2006 to 6.5 in 2016. The restricted medical scheme market has fewer benefit options, on average, than open medical schemes. The average number of options increased slightly from 2.1 in 2006 to 2.3 in 2016.[54]

106. Employer groups without their own medical scheme select one or a handful of preferred open medical scheme(s) that their employees must join as a condition of employment. Open schemes compete for these employer groups.[55] About 50% to 70% of open medical scheme members join through their employer group.[56] Where employers offer only one medical scheme, their employees have no choice in medical scheme membership, but can only select their preferred benefit option.[57] Brokers explained that employers are increasingly allowing employees to select between more than one medical scheme in what is known as split risk.

STAKEHOLDERS' VIEWS ON BENEFIT OPTIONS

107. Stakeholders stated that consumers are attracted to a particular scheme based on the contribution (affordability relative to income levels), level of co-payments and benefit design which includes richness of cover and whether or not the consumer must use a network.[58] Medical schemes have to balance the affordability with the richness of cover to ensure that the medical scheme

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53. Council for Medical Schemes Annual Report 2006/2007 p 72, Council for Medical Schemes Annual Report 2016/2017 p 27.
54. Council for Medical Schemes Annual Report p 129.
55. BHF submission to the Inquiry, 29 September 2014, Discovery Health Submission to the Competition Commission Market Inquiry into the Private Health Sector, 17 November 2014 p xvii, Submission of Profmed Medical Scheme to the Panel of the Inquiry into the Private Health Sector p 31.
56. Discovery Health Submission to the Competition Commission Market Inquiry into the Private Health Sector, 17 November 2014, p 168. Telecon with Afrocentric Distribution Services on 21 February 2018.
57. Submission of Profmed Medical Scheme to the Panel of the Inquiry into the Private Health Sector, p 31.
58. Health Market Inquiry 'Summary of Results from the Healthcare Consumer Survey, 18 November 2016' p 7 & 8. Fedhealth Medical Scheme First Submission to the Market Inquiry into the Private Healthcare Sector, 31 October 2014, p 18- 20, DHMS Competition Commission Submission: Private Healthcare Market Inquiry, 17 November 2017 p 48, Discovery Health Submission to the Competition Commission Market Inquiry into the Private Health Sector, 17 November 2014,p 56-57, Discovery Health and DHMS response to HMI request for input on the need for and impact of selected interventions to address regulatory gaps within healthcare financing, with the aim of strengthening competition, 2018 p 3, Submission of Bestmed in Accordance with the Guidelines for Participation in the market inquiry into the private healthcare sector issued on 1 August, submitted on 31 October 2014, p 63.

stays financially sustainable. Profmed is concerned that selection of medical scheme and/ or benefit option based on price only may result in sick members selecting a cheaper benefit option with insufficient cover.[59]

108. Consumers agree that the process of selecting a benefit option and the information available from medical schemes are complicated.[60] This complication arises from the substantial amount of information members receive and the terminology medical schemes use to describe the benefits. Some medical schemes state that members want easy-to-understand benefits.[61]

109. Stakeholders state that the number of benefit options also makes it more complex for members to understand what they can claim for and from where their claims will be paid. Medical savings accounts increase this complexity as consumers do not always know whether the administrator paid their claims from their savings or the risk pool. Rubicon Performance Consulting Solutions stated that there is a need for clarity on savings plans, including investment of contributions. They found that members pay their contributions, plus savings components, and then still have out of pocket expenses for mandatory cover items such as drugs.[62]

    Discovery Health recognises the complexity consumers face in relation to reimbursement of claims as it states: "It's important that when we design our benefit, that we also have in mind the administration issues regarding the benefits, so when an insured network benefit is designed, we don't expect a member to fully understand continuously where they are in their journey in terms of the administration process. So we will tell you in terms of a claims statement where we have paid certain benefits from which specific benefit categories."[63] [own emphasis]

110. Furthermore, members need education on preserving their savings in their medical savings accounts to prevent out of pocket expenditure when health needs arise. Medical savings accounts are, according to Discovery Health, "more appropriate for financially sophisticated members who are able to monitor and manage expenditure."[64]

111. Providers also find that the medical scheme benefit option environment is complicated. Mediclinic[65] states that providers find that the high degree of variation in the design of medical scheme benefit options creates complexities for healthcare providers. Benefit options have a variety of features such as co-payments, deductibles, exclusions, formularies and networks. These impact provider reimbursement and impact how they 'deliver care to patients, for example the choice of pharmaceuticals used and the type of facility in which a clinical service is provided.

112. Stakeholders also identified concerns related specifically to medical savings accounts. Some stated that moral hazard applies to both members and providers for medical savings accounts. Providers should not know what members' medical savings balances are as they may adjust their treatment accordingly.[66]

113. Medscheme raised the concern that medical savings accounts limit the medical scheme's ability to influence how patients

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59. Submission of Profmed Medical Scheme to the Panel of the Inquiry into the Private Health Sector p 31.
60. Health Market Inquiry 'Summary of Results from the Healthcare Consumer Survey 18 November 2016' .
61. Fedhealth Medical Scheme First Submission to the Market Inquiry into the Private Healthcare Sector 31 October 201418-22. Cape Medical Plan Submission for the Public Hearings 2016 p 13.
62. Rubicon Performance Consulting Submission to the Healthcare Financing Seminar,2018, p 10.
63. Testimony by Mr Streak at the public hearings to the Health Market Inquiry, 3 March 2016 (transcript p 95).
64. Discovery Health Submission to the Competition Commission Market Inquiry into the Private Health Sector, 17 November 2014, p 32.
65. HMI's Healthcare Regulatory Framework Document Of 1 December 2017 / Mediclinic's Submissions, 9 January 2018.
66. Discovery Health Submission to the Competition Commission Market Inquiry into the Private Health Sector, 17 November 2014, p 32.

get treated through using provider networks and co-payments. A medical scheme cannot enforce health resource initiatives such as specialist care through a primary care giver, formularies, protocols and networks since savings can be used as the members desire (to pay health related expenditure).[67] Similarly medical schemes design benefit options to include co-payments to influence member behaviour, but the effect of the co-payment is weaker with medical savings accounts. Day-to-day benefits paid from risk, together with managed care efficiency rules, better achieve the ideals and aims of day-to-day pre-funded cover, even if there is some moral hazard. Efficiency gained from coordinated care (and therefore reduced hospitalisation) outweigh the cost of moral hazard.[68]

114. In addition, medical schemes face a risk stemming from the fact that members can access their full medical savings balance at the beginning of the year. Cash strapped patients who need access to funds to pay for their care at the beginning of the year pose a potential bad risk for medical schemes if the member terminates his or her membership early.[69]

115. As explained in the section titled "Partial regulatory framework for medical schemes" medical schemes have an incentive to risk select through their benefit options. Medical schemes appeal to the younger and healthier members through their benefit design (among other things). In general, younger people tend to earn less and this would make them more likely to be price sensitive. They often are unable to afford expensive medical scheme packages, and may not need comprehensive benefits. McLeod and Grobler provide examples of how medical schemes structure their benefits to 'differentiate between the young and healthy and older and chronic patients:

    107.1 Differentiated benefits for oncology, organ transplants and dialysis;

    107.2. Differentiated benefits for internal prosthesis as older patients are more likely to require this benefit;

    107.3. Differentiated benefits for chronic medication with some benefit options providing just the PMBs, while others cover many more chronic diseases as well as richer formularies; and

    107.4. Older and chronic patients typically require more comprehensive out-of-hospital benefits'[70]

THE HMI'S ANALYSIS ON BENEFIT OPTIONS

116. From a consumer welfare perspective there are advantages and disadvantages arising from product differentiation. On the one hand it allows suppliers to serve a variety of consumer needs through differentiated offerings. On the other hand, however, a large selection of diferentiated products could render consumers powerless and not able to perform their indispensable role of selective choice, which is essential for a healthy competitive environment. A large number of differentiated benefit options makes it difficult for consumers to compare the price and richness of cover of different benefit options. They are also not able to compare the quality of the providers the medical schemes contract with as there is little to no information on quality available.

117. The lack of a uniform way of classifying benefit options across the industry creates confusion for members. The CMS, health actuaries, brokers and medical scheme administrators all have varied ways of classifying benefit options. Consequently, members only really become aware of the details of the products that they purchased (ie the particular medical scheme and benefit option) when they try to claim and usually when the cover is partially paid or not paid at all.

118. Product differentiation is a response by medical schemes to the absence of a risk equalisation mechanism. It is also a characteristic of an oligopolistic market strategy to avoid direct price competition. The inability of individuals to compare

67. Medscheme submission to HMI on Healthcare Financing Regulatory Framework, 19 January 2018 p.11
68. Medscheme submission to HMI on Healthcare Financing Regulatory Framework, 19 January 2018 p.11
69. Medscheme submission to HMI on Healthcare Financing Regulatory Framework, 19 January 2018 p.11
70. Mcleod H, and Grobler P, "The role of risk equalisation in moving from voluntary private health insurance to mandatory coverage: experience in South Africa (p 167).

options effectively provides medical schemes with limited incentives to contract effectively or innovatively with providers. The lack of transparency on what providers charge reduces the ability of scheme members to monitor prices and quality.

119. All these options are therefore not actually helpful to consumers in having more clarity and understanding. Fewer options may be more beneficial.

Benefit design

120. As already stated, medical schemes must cover PMBs, but beyond this, benefit options vary based on their design. The HMI's analysis of the claims data revealed that there is uniformity over the benefit design in respect of in-hospital claims.[71] For in-hospital claims, we found that 95.25% of the claimed amount was paid from risk. This did not vary significantly between medical schemes.[72] The difference in benefit design is more obvious in the out-of-hospital payment sources. For example, many more of DHMS's benefit options have a savings component compared to Bonitas, which has more traditional options that do not include savings components. Therefore a larger percentage of out-of-hospital claims were paid from savings for DHMS (at 47,34% for 2014) compared to 7.62% for Bonitas. In fact DHMS had the highest out-of-hospital payments from savings.[73]

121. When looking at the percentage of out-of-hospital claims that were unpaid, we found that GEMS, Bonitas and South African Police Services Medical Scheme (POLMED) showed the lowest rates, which are also decreasing over time[74].

122. When looking at the different categories of benefit options, the inquiry found that savings benefit options are growing faster than other benefit options[75]. Comprehensive options provide the richest benefits, but also cost the most. The analysis revealed a decline in the proportion of beneficiaries belonging to comprehensive options, which supports the hypothesis of beneficiaries moving to cheaper options (or buying down) over time[76]. However, it is also worth pointing out that the cheaper benefit options, which are the network and hospital plans, did not increase as much as the savings, and to a lesser extent traditional options.

123. The HMI shares the stakeholder views that the phenomenon of members buying down to cheaper benefit options is problematic as it could potentially worsen both benefit option risk pools. When members buy-down to cheaper benefit options they are still entitled to full cover for PMBs. However, the medical scheme is worse off as the medical scheme collects lower contributions for that member on the lower/ cheaper benefit option.

Benefit options with medical savings accounts

124. Medical savings accounts are a significant feature of South African medical scheme market. According to the CMS 2016/17 annual report, in the year to 31 December 2016 medical scheme members made approximately R16.2 billion in contributions to medical savings accounts. In other words 9.9% of total gross contributions made by medical scheme members went to medical savings accounts[77].

125. Medical savings accounts are more common in the open medical scheme environment with 66% of open scheme beneficiaries on plans that offered some form of savings, compared to just 20% of restricted scheme beneficiaries in 2016.[78] Open scheme

71. Report on Analysis of Medical Schemes Claims Data; A Focus on Funders: 15 December 2018 Table 1 p 6.
72. Report on Analysis of Medical Schemes Claims Data: A Focus on Funders: 15 December 2018 Table 4 p 8.
73. Report on Analysis of Medical Schemes Claims Data: A Focus on Funders: 15 December 2018 Table 9 p 12.
74. Report on Analysis of Medical Schemes Claims Data: A Focus on Funders: 15 December 2018 Table 10 p 13.
75. Report on Analysis of Medical Schemes Claims Data: A Focus on Funders: 15 December 2018 Table 27 p 29.
76. Report on Analysis of Medical Schemes Claims Data: A Focus on Funders: 15 December 2018 Table 27 p 29.
77. Council for Medical Schemes, Annual Report 2016/2017, p 175
78. McLeod & McIntyre (2008, 7) state that in 2005, 87.5% of open and 49.0% of restricted scheme beneficiaries were covered by medical savings accounts. It is not clear exactly what is meant by "covered by medical savings accounts". If the definition is the same as we have used in 2016/17, then substantial decreases have occurred in medical savings accounts availability over the period.

members contributed a larger portion of their gross contribution income to savings accounts at 13.9% compared to 6.2% for restricted scheme members. In 2006, the respective numbers reported by the CMS were 16.2% and 14.4%,[79] suggesting that some decrease in medical savings account contributions has occurred over time, and that this has been particularly marked in restricted schemes.

126. The size of medical savings accounts vary per medical scheme and benefit options. Members made some contributions to savings accounts in 128 of the 323[80] benefit options in 2016, but in only 25 of those plans did savings contributions attain the statutory maximum of 25%.[81] It is also worth noting that some benefit options with medical savings accounts feature high deductibles. In these instances, members first use their savings and then have to pay a certain amount out of pocket for payment of non-PMBs before they reach what has been termed an above threshold benefit. Once the member reaches the specified level of co-payment then the medical scheme pays providers from the risk pool.

127. The CMS data also includes information on claims against savings and risk. This is shown in Table 5.4. As shown, on average the proportion of savings paid out is slightly higher than the proportion of risk contributions paid out.

TABLE 5.4: CONTRIBUTIONS TO AND CLAIMS AGAINST RISK AND SAVINGS, 2016 PRICES

	Risk contribution	Risk claims	Risk claims as % of risk contributions	Savings contribution	Savings claims	Savings claims as a % of savings contributions
	pabpm (R)	pabpm (R)	%	pasbpm (R)	pasbpm (R)	pasbpm (R)
2000	841,10	750,70	89,3%	123,4	110,1	89,2%
2001	952,4	792,40	83,2%	127,8	113,9	89,1%
2002	1014,2	832,00	82,0%	131,9	113,6	86,1%
2003	1085,9	859,60	79,2%	150,6	125,4	83,3%
2004	1145,2	899,70	78,6%	162	136,2	84,1%
2005	1137,1	956,30	84,1%	176	148,9	84,6%
2006	1127,6	992,00	88,0%	183,5	175,2	95,5%
2007	1136,5	983,70	86,6%	161,8	151,2	93,4%
2008	1116,7	970,00	86,9%	155,2	146,1	94,1%
2009	1166,8	1042,20	89,3%	152,3	146	95,9%
2010	1226,9	1071,50	87,3%	153,3	145,2	94,7%
2011	1274,0	1102,30	86,5%	153,2	143,8	93,9%
2012	1289,4	1130,60	87,7%	154,2	143,6	93,1%
2013	1322,4	1143,50	86,5%	162	150,2	92,7%
2014	1338,0	1215,30	90,8%	167,1	155,9	93,3%
2015	1380,4	1261,30	91,4%	175,6	164,8	93,8%
2016	1391,1	1280,70	92,1%	177,3	166,5	93,9%
Average			86,4%			91,2%

Source: Council for Medical Schemes Annual Report 2016/17, HMI Calculations p. 181

79. Council for Medical Schemes, 2016/2017, p 180
80. Council for Medical Schemes Annual Report 2016/2017. This is the total number of benefit options as of March 2016. The HMI uses the March 2016 number as we looked at the contributions made to benefit options for the year ended 31 December 2016 as reported in the Council for Medical Schemes Annual report 2016/2017
81. This includes EDOs

MEDICAL SAVINGS ACCOUNTS AS A WAY TO ADDRESS MORAL HAZARD

128. Medical savings accounts seek to increase the incentive for members to take into account the cost effect of their discretionary healthcare consumption and to pay for non-PMB cover, such as GP visits.

129. It is not clear to the HMI that members regard medical savings accounts as their own money. In practice, consumers likely regard medical savings account funds as a sunk cost, with reimbursements out of medical savings accounts as essentially "free" expenditures. Because it is difficult to access this free money any other way, healthy consumers may have incentives to overspend on unnecessary items and embark on fraudulent purchases (of non-healthcare items) to access the funds. In addition, while members can transfer funds between schemes or withdraw them (after paying tax), members cannot transfer these funds into retirement savings accounts, for example. The June 2017 Constitutional Court ruling that medical savings accounts are part of medical schemes' assets, removes the obligation on schemes to pay interest on these funds. This may further weaken any sense of ownership of this money that scheme members have.

130. It is difficult to illustrate that savings accounts have influenced how members spend on health care as it is likely that healthier people select savings accounts. Medical savings accounts are more prevalent in the open medical schemes environment compared to restricted schemes. The HMI did not receive evidence showing that restricted medical scheme members are more cautious over their healthcare expenditure than open medical schemes.

131. There is implicit cross-subsidisation between the healthy and the sick in a medical scheme's risk pool. A key source of the distributional effects of medical savings accounts is the extent to which they reduce payments into the risk pool. These medical accounts allow individual scheme members to carve out a portion of their contributions from the shared risk pool, and reserve it for their own use, which reduces this cross-subsidisation function, and thus is to the disadvantage of the unhealthy [82]. Instead, only inter-temporal cross subsidisation occurs, and only if the individual successfully saves funds over long periods – savings when young and healthy can then be used by the individual when/if their health deteriorates. This is because healthier people can retain their tax subsidised medical savings accounts until the need arises, or they can use this money to pay for services that their medical schemes may not necessarily cover.

132. Funders also state that medical savings accounts reduce adverse selection in healthcare insurance. Because medical savings funds are taken out of the risk pool, they reduce the amount of cross-subsidisation of high risk individuals by low risk individuals. This may increase the uptake of health insurance by low risk individuals. The HMI is of the view open medical schemes have a commercial rationale for introducing medical savings accounts as these savings could be one of the tools medical schemes have introduced to attract younger and healthier members. The data supports this.

133. The further fragmentation of the risk pool runs contrary to the concern about this issue expressed in the 2017 NHI White Paper and will erode the objective of achieving social solidarity in the funding of healthcare systems.

134. Furthermore, the HMI notes that, in practice health care expenses are unequally distributed across populations. Healthy individuals may have health expenses so low that they do not need most of their medical savings, let alone access to the risk pool; while those with the greatest expenses will find their medical savings covering only a trivial portion of these costs, which are often in any case not discretionary, and thus not subject to a moral hazard in expenditure decisions.

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82. Deber, R.B., Forget, E.L, & Roos, L.L. (2004) Medical savings accounts in a universal system: wishful thinking meets evidence. Health Policy 70, p 52

135. As Table 5.4 shows, on aggregate members spend an even higher proportion of their savings contributions than they do of risk contributions. Medical saving funds are distributed much more equally across scheme beneficiaries than total healthcare costs. If medical savings accounts are mostly being depleted, then this would be consistent with most healthy people spending most of their medical savings, possibly unnecessarily. Claim payments out of risk, however, are probably more concentrated among fewer, sicker people. This initial data is consistent with the hypothesis that medical savings accounts encourage more unnecessary expenditures by the healthy, while removing funds from the risk pool that would otherwise cross-subsidise the unwell.

MEDICAL SAVINGS ACCOUNTS AND MEDICAL SCHEME AND PROVIDER INCENTIVES

136. Medical savings accounts may change the incentive structure medical schemes face. Claim refunds paid out of the risk pool (which are typically for PMBs or for in-hospital claims) go directly to the sustainability of the insurer, and thus the medical scheme has an incentive to manage the value of these claims. The incentive to manage expenditure may not be sufficiently strong as medical schemes are able to pass increasing healthcare costs on to members through increased contributions. Claims paid out of savings do not affect scheme sustainability, and the scheme has little incentive to manage these costs.

137. Medical savings accounts may influence provider incentives as well. If providers know that the patients belong to a benefit option with a medical savings account, they may assume that extra expenditures will have no cash flow impact on the consumer, and thus that the consumer will be fairly price insensitive.

138. Given these issues with supplier behaviour, and that expenditure paid for from savings accounts is the member's money, medical schemes appear to spend a disproportionate amount of time managing consumer moral hazard through medical savings account design, rather than trying to address supplier moral hazard. Medical schemes should look for ways to address total healthcare expenditure members face by looking at innovative methods of service delivery. Effective contracting with providers would offer medical schemes with an alternative way of dealing with member moral hazard.

ANTI-SELECTION IN RELATION TO MEDICAL SCHEME MEMBERSHIP AND ITS PROPOSED SOLUTION – MANDATORY MEMBERSHIP

139. Anti-selection refers to the possibility that beneficiaries join medical schemes when they anticipate a need of care or a greater chance to incur healthcare costs. Anti-selection is a challenge for private healthcare markets in general.

140. In addition to the absence of the REF, the other two issues on the unfinished agenda toward implementing the SHI include the introduction of income cross-subsidies, and the creation of a mandatory environment.

141. The income cross-subsidies entailed the removal of the tax subsidy on medical scheme contributions and replacing it with a direct subsidy per person. A key problem with the tax subsidy was that it was ineaquitable; it had no impact on the people earning below the tax threshold and had the biggest impact for the highest income groups. The income cross-subsidy would replace the tax subsidy and would be the same amount per person, equivalent to the amount spent per person in the public sector. It was envisaged this would provide substantial relief to the lower income groups and make contributions more affordable for these households. The direct subsidy per person would be sourced from tax revenue and paid from government to the REF. The REF would in turn make monthly risk adjusted payments of this amount to medical schemes.

142. The creation of a mandatory environment entailed raising an income related contribution for the difference between the price of the minimum benefit package and the public sector subsidy (discribed in the previous paragraph). This amount would be paid to the REF together with the direct subsidy per person, enabling the REF to make monthly risk adjusted payments to

medical schemes in respect of the total minimum benefit package. This income related contribution would be mandatory for all people earning over a certain amount. None of these reforms was implemented.

143. Mandatory health insurance membership eliminates perverse selection incentives. Since membership of Medical Schemes is not mandatory in South Africa, medical schemes can implement late joiner penalties and waiting periods. In addition, many employers require employees to join a medical schemes as a condition of employment, even if the employer does not have its own restricted scheme, and these interventions mitigate against anti-selection to some extent.

STAKEHOLDER VIEWS ON ANTI-SELECTION IN RELATION TO MEDICAL SCHEME MEMBERSHIP AND ITS PROPOSED SOLUTION – MANDATORY MEMBERSHIP

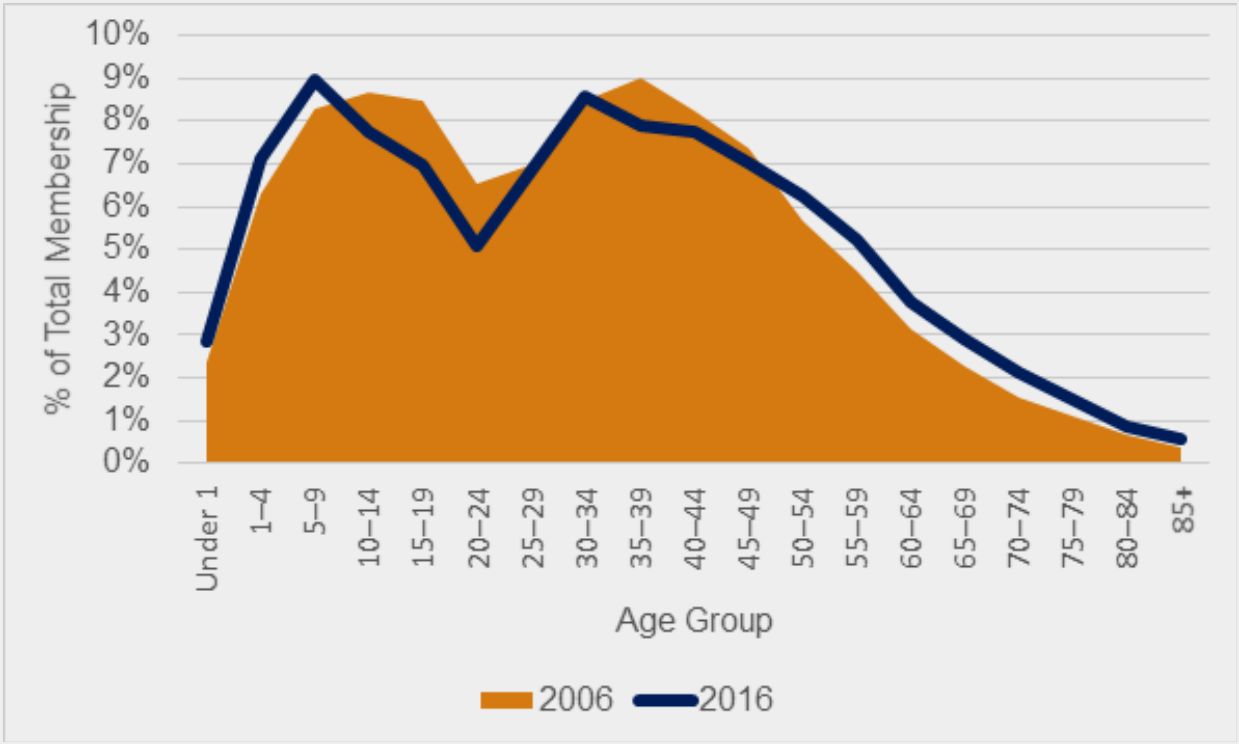
144. Some stakeholders are of the view that there is systemic anti-selection against medical schemes where beneficiaries join or change medical schemes when they are in need of care. They argue that this poses an immediate risk to medical schemes and that it is one of the factors contributing to increases in healthcare expenditure through higher utilisation.

145. Stakeholder categorisation of factors driving anti-selection includes age, gender, disease burden, type of benefit, affordability, population group differences, value and quality of services offered to members, broker behaviour and health insurance market.

146. Stakeholders explained that systemic anti-selection is evident from Figure 5.6 which illustrates that individuals leave medical schemes in their teens and twenties when their need for healthcare coverage is low, and join again when they are either of child bearing age or when they anticipate greater healthcare needs.

147. Figure 5.6 also illustrates that there is an increase in membership as a percentage of

FIGURE 5.6: DEMOGRAPHIC STRUCTURE OF MEDICAL SCHEMES FOR 2006 AND 2016



Source: CMS Annual Report 2016/2017.

total membership of those under the age of nine and those over the age of 54. There is a clear dip in membership for the 20 to 24 year old category.

148. Insight Actuaries explain that anti-selection is evident as there are a number of people between the age of 20 and 34 who are above the tax threshold but who do not join medical schemes.[83] Their calculations show that changes in the age distribution of medical scheme beneficiaries increase healthcare costs by 1.3% per annum. Allowing for changes in chronic disease prevalence adds a further 0.6% per annum to healthcare costs.

149. Stakeholders point to the average age of open versus restricted medical schemes to illustrate anti-selection. The average age of restricted medical schemes is lower at 30.6 for 2016 compared to the average age for open medical schemes at 34.[84] Usually membership of a restricted medical scheme is a condition of employment which prevents anti-selection. In 2006, just before the establishment of GEMS, the difference in age between open and restricted medical schemes was minimal, with the average age of open medical schemes slightly lower at 31.5 compared to restricted medical schemes at 31.8.[85] It may also be that the decreasing age of restricted medical schemes and the increase in age of the open schemes is due to the introduction of GEMS as many of the younger government employees may have moved from open medical schemes to this restricted medical scheme.

150. Regardless of this, stakeholders state that in addition to the higher average age of open medical schemes, voluntary members of these schemes (ie not part of an employer group) have higher chronic disease prevalence, and claimed more than members of restricted medical schemes, or compared over time.[86] These examples include multiple sclerosis, musculoskeletal conditions, breast cancer, pregnancy and chronic renal failure.[87] There has been a decrease in the number of members who do not claim during a particular year over the last eight years. This signals a worse risk profile for open medical schemes than restricted medical schemes and is a result of anti-selection in the open medical scheme environment.

151. Other stakeholders say that the current demographic structure is less a result of anti-selection but more a feature of demographic changes brought about from an increase in membership of those who, historically, were uninsured as shown in Figure 5.7. This figure also shows that the double hump is most pronounced for the black population. This could be a result of black families joining medical schemes, whereas previously, their parents were not members. The initial drop off in this category is likely to be income related. The other population groups experience a milder dip, suggesting limited anti-selection. In this scenario, in time, the bigger dip for the black population will gradually level out as the income related patterns normalise.

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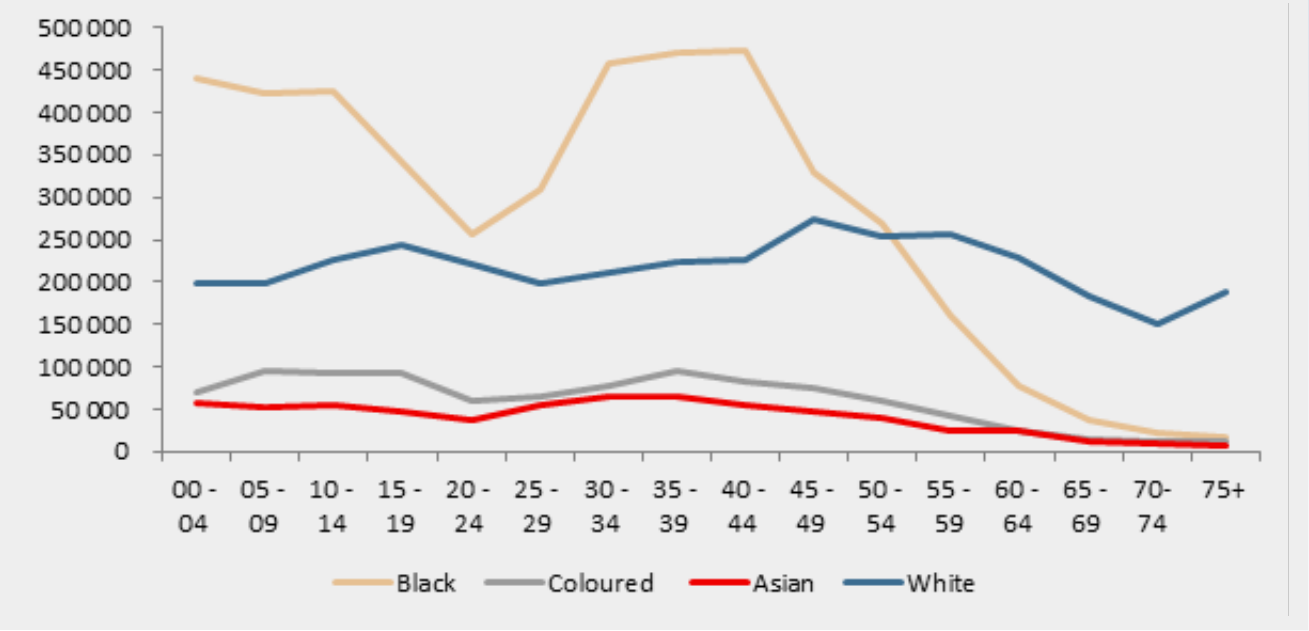
83. Insight Actuaries and Consultants, Expert Report of Barry Childs; Prepared for Netcare Limited in relation to the Competition Commission Healthcare Market Inquiry. 2015, p 56.
84. The average age of medical scheme beneficiaries increased from 31.6 in 2011 to 32.5 in 2016. Council for Medical Schemes Annual report 2016/2017.
85. Council for Medical Schemes Annual report 2006/2007.
86. Medscheme submission to the HMI on Healthcare Financing Regulatory Framework 2018, p 2; DH and DHMS response to HMI request for input on the need for and impact of selected interventions to address regulatory gaps within healthcare financing, with the aim of strengthening competition, p 8.
87. Council for Medical Schemes submission to the HMI Discussion Document on Healthcare Financing Regulatory Framework, 22 January 2018 p, Discovery Health and DHMS response to HMI request for input on the need for and impact of selected interventions to address regulatory gaps within healthcare financing, with the aim of strengthening competition, p 16.

FIGURE 5.7: AGE BY POPULATION GROUP FOR BENEFICIARIES OF MEDICAL



Source: Alex Van Den Heever: Age and population group (submission the HMI) 2016

152. The HMI also heard that the unaffordability[88] of medical schemes incentivises a level of anti-selection, as potential members delay joining a medical scheme until they can afford it, which is typically when they are older. People can join up to the age of 35 without being penalised.

153. Some stakeholders argue that real growth in the medical scheme environment is constrained by the high level of unemployment (at 26.7%)[89] and informal employment (with irregular income) in South Africa. The initial dip in Figure 5.6 above illustrates the inability of young adults to afford medical scheme membership after no longer belonging to their parents' medical schemes. Employment prospects for the youth or young adults is limited with unemployment between at 33% for 25 to 34 year olds.[90] Members join medical schemes at a later age when they can afford it.

154. GEMS provided an example of how affordability affects its membership numbers. The medical scheme experienced negative membership growth in the first two quarters of 2015 following its membership fee increase. The number of principal members increased in August that year after the implementation of an increase in the employer subsidy (with the previous subsidy increase being in 2011). [91]

155. While membership is not mandatory, medical schemes can, and do, implement underwriting through applying late joiner penalties and waiting periods. However, some argue that the current level of underwriting is not sufficient to deter anti-selectors. Stakeholders argue that mandatory membership is required to address anti-selection. Proponents of mandatory membership argue that if medical scheme cover was made mandatory for those above the tax threshold, the average cost of membership would come down by approximately 10%. [92]

88. Medscheme Submission to the HMI on Healthcare Regulatory Framework 2018, p 3, Discovery Health and DHMS submission to the HMI on Healthcare on Financing Regulatory Framework, 2018 p 7.
89. Statistics South Africa 'Quarterly Labour Force Survey' Quarter 1: 2018, 15 May 2018.It is worth noting that the expanded unemployment rate is even higher at 36.7%.
90. Statistics South Africa 'Quarterly Labour Force Survey' Quarter 1: 2018' 15 May 2018
91. GEMS written submission to the Public Hearings, 1 March 2016, p 29.

HMI FINDINGS ON ANTI-SELECTION IN RELATION TO MEDICAL SCHEME MEMBERSHIP AND ITS PROPOSED SOLUTION – MANDATORY MEMBERSHIP

156. Anti-selection is present and entrenched in the South African system. Various factors contribute towards anti-selection within the private healthcare market, but affordability is perhaps the most pronounced.

157. Growth in medical schemes is constrained by both the level of unemployment and cost of medical schemes. South Africa has a very high level of unemployment and informal employment with irregular income. Employment prospects for the youth or young adults is limited with unemployment at 33% for 25 to 34 year olds. Furthermore, above inflationary increases in medical scheme contribution rates have forced many households to make difficult decisions regarding their private healthcare cover.

158. Many people have the perception that the public health sector provides poor quality healthcare. This results in their demand for private healthcare to be inelastic. Individuals will be more likely to anti-select against medical schemes in a market where the public sector provides a competitive constraint on the private sector. Both the HMI and the Competition Commission, through merger and exemption applications, have heard that the public sector does not compete with the private sector. Many people will thus join a medical scheme as soon as they can afford it, or risk treatment in the public sector.

159. Furthermore, the HMI found that many people (estimated at around 50%) join medical schemes through their employer groups as a condition of employment. Those most likely to anti-select are members who join individually.

160. The HMI acknowledges that there are some people who refrain from joining a medical scheme even if they can afford it. However, medical schemes may implement underwriting to disincentivise this behaviour. The level of underwriting may thus need to be reconsidered and increased, if necessary.

161. The HMI's analysis of the claims data revealed stagnant growth in covered lives. There are fewer new members joining medical schemes in the five year period between 2010 and 2014. This observation was the same for both open and restricted medical schemes. The average age of new joiners has declined by 1.5 years[93]. Given that there are fewer people joining medical schemes, the industry as a whole will age as those belonging to the medical scheme get older. It is worth bearing in mind that the South African population is also ageing slightly.

162. The HMI found evidence of anti-selection when analysing the claims data. However, to the extent that anti-selection occurs, it does not contribute to annual claims increases. It is more likely the slowdown in new joiners that has accelerated claims inflation because more beneficiaries are falling into the higher cost, longer term membership bands over time (older patients). This, combined with a reducing proportion of new joiners, suggests that systemic anti-selection is unlikely to be a cause of the high claims increases experienced by schemes.

163. This does not mean that selection effects have no impact on individual medical scheme's expenditure. The HMI is concerned about the progressively decreasing range and depth of covered services. The average member is choosing less cover as time progresses as more beneficiaries are on cheaper options offering lower levels of cover.

164. The HMI does not agree with stakeholders calls to implement mandatory membership. Any regulation that requires individuals to join a medical scheme, in the current environment with high unemployment, takes away the decision of how best that individual spends his or her income. As potentially the sole bread winner, the individual may wish to spend the money on

92. Discovery Health at the HMI Seminar on Regulatory Gaps in Healthcare Financing, 1 February 2018.
93. Health Market Inquiry. (2017). Report on analysis of medical schemes claims data - a focus on funders, p 16-17.

the household's more immediate needs of food, clothing and education.

165. Furthermore, while introducing mandatory membership will bring the average contribution down for everyone, it will not fix the bigger problems within the system. While there may be an initial decrease in the age, and a decrease in expenditure, the year on year expenditure patterns will not change significantly for medical schemes. In the current oligopolistic market, with only a few schemes really competing, medical schemes will continue to pass on increases in healthcare expenditure to members, who are no longer in a position to refuse membership.

166. While medical schemes and administrators seem to advocate for increasing the size of the medical scheme market through their calls for mandatory membership, they fail to look for other ways of contracting with providers to improve the affordability of medical scheme products.

CONCLUSION ON PARTIAL REGULATORY FRAMEWORK

167. The HMI finds that there has been a lack of attention to the regulatory framework of the private healthcare sector. Stewardship of the private healthcare sector should be exercised by the NDOH. Failure to do this in the past and not taking urgent action on it now will in fact undermine the realisation of NHI policy ambitions.

168. The HMI has found that in the partially regulated medical scheme environment, medical schemes have an incentive to risk select. They do so using benefit option design instead of competing on efficiency and value for money. There is an urgent need to remedy this. A REF linked to a core package across all medical schemes will remove the incentive for medical schemes to compete on risk. The introduction of risk equalisation will not only address risk pooling failures but will also serve as an incremental step towards a single risk pool for the country, as envisaged in the NHI.

169. There is an urgent need to address the ineffective PMB environment by addressing the following issues:

170.1 The absence of standardised coding and bargaining or tariff setting regulation for health practitioners where bilateral negotiations are not feasible (for example between funders and health practitioners).

170.2 The prevalence of fee for service reimbursement model.

170.3 Lack of clarity for members on treatment protocols that the providers should follow to ensure that PMBs are paid in full, as well as the type of cover that they are entitled to once they are diagnosed with a PMB condition.

170.4 No mechanism to review the compliance by medical schemes on paying for PMBs from the risk pool and not from the scheme members savings account.

170.5 Meaningfully review the PMB structure.

These remedies are discussed in the recommendations chapter.

GOVERNANCE OF MEDICAL SCHEMES

170. The MSA provides the legal framework for the governance of medical schemes. It states that the board of trustees and principal officers are the representatives of the medical scheme members and are legally responsible for its administration on behalf of its members.[94]

171. According to the requirements of the MSA, trustees and principal officers have to maintain a level of independence in order to ensure that they act as agents for the members of the medical scheme in the purchasing of healthcare services, rather than their own personal gain. Trustees and principal officers are in a position to influence the activities of a medical

94. Medical Schemes Act no 131 of 1998

scheme, for instance, in the way the medical scheme purchases services and contracts with service providers. In this regard, the trustees and principal officer have the ability to influence the performance, sustainability and efficiency of the medical scheme. Through this, they influence competition in the medical scheme, administrator and managed care markets.

172. The proposed amendments to the Medical Schemes Amendment Bill, 2008[95] sought to fill some of the gaps in the overall regulatory framework to bring about a stronger, more clearly defined, and substantive governance framework for medical schemes.The Medical Schemes Amendment Bill included provisions on strengthening corporate governance,[96] active member participation,[97] management of conflict of interest and inappropriate incentives. However, these provisions have not yet come into effect.

173. The Amendment Bill does not adequately address deterrence of conflicted relationships, negligent conduct and fraudulant conduct of trustees and principal officer. The provisions on the penalties and removal from office in the MSA may not serve as a sufficient deterrence. Rather a more stringent and effective penalty system may be required. This could include, for example, that individual trustees may be held personally liable for losses resulting from negligent conduct or fraudulent activity. Other issues that require attention include performance measures of trustees at the board and individual level as well as trustee and principal officer remuneration.

174. The HMI examined how the board of trustees and principal officers promote medical scheme members' interests. In particular we are interested in whether trustees and principal officers have sufficient incentives to drive competition in the administrator and medical scheme market.

THE RELEVANT LEGAL FRAMEWORK

175. The trustees and principal officer have to manage the business contemplated by the medical scheme in accordance with the MSA and the medical scheme's rules.[98] Many factors influence the construct of the medical scheme's rules such as the size of its membership, whether it is restricted or open, the financial muscle it enjoys, and whether it is self-administered or not. The rules need to be consistent with the operation of the MSA and CMS directives. The CMS approves all medial schemes' rules

176. Section 29 of the MSA sets out certain minimum requirements that medical schemes must have in their rules. These requirements seek to protect the interests of members through providing a framework for good governance. For example, rules are required to include provisions relating to the appointment, removal from office, powers and remuneration of officers[99] of a medical scheme. This section also includes provisions related to the process of appointing or electing of a board of trustees that consists of members who are fit and proper, to manage the affairs of the medical scheme, on behalf of the members.[100] The MSA does not prescribe exactly how many trustees the medical scheme should appoint. The number of trustees as well as the schemes rules are left to the discretion of the board of trustees.

177. The MSA also provides duties that trustees must fulfil. For example, Section 37(1) of the MSA requires trustees to prepare annual financial statements in respect of every financial year. Trustees must provide a copy of the financial statements together with a report of the board to the CMS annually. The trustees' report is required to deal with every matter which is material to members of the medical scheme. This report must contain relevant information

95. It is not clear whether the intention is to still promulgate some of the proposed amendments made in the Bill.
96. Chapter 12 of the Amendment Bill; section 57E(2).
97. Section 57E of the Amendment Bill.
98. Section 57(1) of the MSA.
99. "officer" means any member of a board of trustees, any manager, principal officer, treasurer, clerk or other employee of the medical scheme, but does not include the auditor of the medical scheme.
100. Section 29(1)(a) of the MSA.

indicating whether or not the resources of the medical scheme have been applied economically, efficiently and effectively. In this way, the CMS is able to monitor the medical scheme's financial affairs and to report on this in its annual report.

178. Section 57 of the MSA provides a list of the specific duties of the board of trustees. [101] These include: appointing a principal officer to manage the day-to-day affairs of the medical scheme; accountability for operations of the scheme and resolutions passed by the board; ensuring that proper control systems are in place; communicating to members on rights, benefits, contributions, and duties in terms of rules of the scheme; ensuring timeous payment of contributions to the scheme; procuring professional indemnity insurance and fidelity guarantee insurance; obtaining expert advice on legal, accounting, and business matters as required; ensuring compliance with the Act; and protecting the confidentiality of member information.

179. In addition, the trustees must disclose annually, in writing, to the Registrar any payment made to trustees and the principal officer in that particular year by the medical scheme.[102] The provision is aimed at ensuring that such consideration does not amount to a conflict of interest that comes at the expense of the medical scheme member. However, apart from the requirement to disclose any remuneration, the MSA currently does not prescribe a trustee and principal officer remuneration framework.

180. Given that the trustees have a fiduciary responsibility over financial affairs of others, at common law, they are expected to adhere to certain requirements and acts as fiduciaries on behalf of beneficiaries. [103] In order to avoid conflict of interest, the MSA stipulates that a person may not be a trustee of a medical scheme if that person is an employee, director, officer, consultant or contractor of the administrator of the medical scheme concerned, or of the holding company, subsidiary, joint venture or associate of that administrator or a broker.[104]

181. Over and above the provisions of the MSA, the King III Code clarifies the role and functions of boards and directors generally, as well as legal compliance and standards of governance that should be adhered to. These provisions would similarly be applicable to boards of trustees and principal officers of medical schemes. [105] The Supreme Court of Appeal ("SCA") has affirmed that there is no reason why a trustee of a medical scheme should owe a lesser fiduciary duty than a director would owe to a company. [106]

182. Where there is a clear breach of fiduciary duties by a trustee, the trustee may be removed from the board[107], however, it is equally important to ensure that the medical scheme is not left unable to manage its affairs to the detriment of beneficiaries.

STAKEHOLDERS VIEWS ON THE ROLE OF TRUSTEES

183. Medical schemes told the HMI that it is challenging for trustees to ensure that the medical scheme can provide affordable and optimal medical cover that enables the medical scheme to grow. They also face the challenge of appointing the best service providers at affordable rates whilst keeping healthcare and non-healthcare costs including administration fees as low as possible.

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101. Section 57(4) of the MSA.
102. Section 57(8) of the MSA.
103. Bristol and West BS v Mothew1996 [4 All ER 698 711j]; and Randfontein Estates Gold Mining Co, Ltd v Robinson 1921 AD 168, at 177-178. These cases clarify what is expected of someone who holds a fiduciary duty.
104. Section 57(3) of the MSA.
105. King Report on Governance for South Africa 2009 (King III); Chapter 2 Boards and Directors.
106. Afrisure v Watson (522/07) [2008] ZASCA 89 at 27.
107. Section 46 of the MSA provides that Council may remove a Board member from office if there is sufficient reason to believe that such member is not fit and proper to hold office. The scheme rules may also make provision for the removal of Board members in appropriate circumstances.

184. Trustee interaction between medical schemes and members is crucial. Medical schemes indicated that the most common forum for interaction between members and trustees is at their annual general meetings (AGM). Some medical schemes stated that members could interact directly with trustees. Others were of the view that members should rather interact with the medical scheme administrator particularly on issues pertaining to complaints procedure.

185. Some stakeholders criticized AGMs as ineffective as attendance and participation are usually low. The CMS has suggested that medical schemes should actively mobilise members to attend AGMs, through among other things, negotiating with employers to release employees for purposes of attendance and requiring brokers as part of their ongoing service obligations to notify, remind and encourage members to participate in AGMs.

186. The interaction of trustees and medical scheme members is different for employer-based restricted schemes compared to open medical schemes. Trustees in employer based restricted medical schemes are usually known within the company and are therefore accessible to members.

187. During the public hearings, the panel heard from various members regarding their experiences with schemes' complaints' processes.[108] Many members of medical schemes are not aware that there is a difference between the scheme and its administrators, and usually associate both entities as one and the same when lodging complaints or making enquiries.

188. Apart from the complaints process, medical schemes embark on various ways to communicate with members. This includes through emails with brochures, cell phone messaging, road shows, post etc. This communication includes, among other things, information on latest developments related to the medical schemes and details on benefit options, including access to chronic care.

189. Stakeholders raised the concern that rolling out communication strategies are expensive and members may not even engage with the material they distribute. However, ineffective communication between medical schemes and their members affects the ability of members to hold trustees accountable for the manner in which they run the medical scheme.

HMI'S VIEW ON THE ROLE OF TRUSTEES

190. The HMI has learnt that members are not aware that they can engage directly with trustees regarding scheme-related queries.[109] Even if members did want to contact trustees directly, they would battle. Although medical schemes publish the names of the trustees on their websites, contact details are omitted. The HMI found that obtaining direct access to the trustees' contact details such as telephone numbers and email addresses proved challenging, even for the HMI. In some cases, the HMI had to undertake a number of follow up telephone calls and emails to the principal officers to get trustees contact details. For members to gain access to trustees' contact details they would have to approach the principal officers. The CMS publishes the names of the principal officers on their website. It is important for members to receive direct access to trustees to ensure that trustees hear members' voices and that they can make decisions that are in the best interests of members.

191. While the HMI does recognise that, depending on the nature, severity and volume of complaints, it may be efficient for such matters to be outsourced to an administrator. However, trustees should also actively ensure that beneficiary interests are protected. Although trustees receive reports from administrators on how they handle complaints,[110] these reports

108. For example, Health Market Inquiry Public Hearing 1 Day 1: Angela Drescher p 95-96 of the transcript; Health Market Inquiry Hearing 4 Day 2: Jessica Narunsky p 37-38 of the transcript

109. This was the narrative of a number of scheme members at the public hearing who were discussing the problems they encountered with complaints against medical schemes. Health Market Inquiry Public Hearing 4 Day 2; Jessica Narunsky Presentation p. 36.

may not be sufficient to ensure that trustees do not become complacent about their duty to act in the interest of members.

192. The inquiry found that information members receive is not necessarily sufficient to assess the quality of the services they receive from their medical scheme. The HMI found that some medical schemes provide some useful information to members with PMBs and chronic conditions. However, more could be done to ensure that members are well enough informed to navigate the system without facing unnecessary co-payments and to help members understand why the medical scheme did not pay a particular claim. Members should also receive information in relation to the providers the schemes contract with, in the form of outcomes measures (see Chapter titled "Outcomes Measurement and Reporting" and how the medical scheme selected the providers on their networks.

193. The type of information and the method of communication are both important in empowering members and reducing member apathy. If members are able to discern the value of the services they are obtaining from their scheme, they are more likely to keep their trustees accountable and make informed purchasing decisions when choosing a scheme.

ELECTIONS OF TRUSTEES

194. Elections are one of the more direct ways in which members can participate in the medical scheme. Given the important role trustees play in the governance and performance of medical schemes, it is crucial that their apponitment is fair, credible and transparent. Stakeholders are concerned that the process of electing trustees in some instances is not always fair and transparent as there are features of administrator capture, manipulation and undue influence. The CMS investigated cases where managing directors of administrators allegedly solicited votes with brokers. The CMS stated that medical schemes often do not provide members with timely and adequate information on the election process to enable them to make informed decisions.

195. While the MSA requires the appointment or election of a board of trustees, it does not prescribe the manner or form that the election or voting process should take.[111] Many medical schemes use their AGMs to hold elections for trustees. However, some medical schemes use different voting methods as a way to increase member participation. These methods include distributing voting stations to members place of employment (particularly for restricted medical schemes), and allowing voting via the postal service and telecommunication services (SMS/ Email).

196. The CMS encourages separating the election process from AGMs and thought that a single date could be selected for the election of trustees across all medical scheme as is done, for example, in Belgium. [112] The election date and venues for elections would be widely publicised both in medical scheme communications to members and by the CMS. It is proposed that this would ensure greater standardization and transparency of the election process. In this way, elections for trustees would not be dependent on members' ability to attend AGMs. It would also decrease the susceptibility of manipulation that could occur at AGMs through, for example, the abuse of proxies. Some stakeholders proposed that, if elections are to be held at AGMs, then the number of proxies which may be held by one person should be limited.

197. The HMI believes that the process of electing trustees may need to be revisited and that the CMS should provide better regulation of this process as it is susceptible to abuse.

SKILLS, COMPETENCE AND TRAINING

198. Trustees are expected to understand the healthcare market and have the necessary skills and expertise to run the

110. The reports relate specifically to how the administrators meet their particular targets as set out in the service level agreements such as the number of calls dropped and the number of disputes resolved.
111. Section 29(a) of the MSA.
112. Findings and Recommendations of Governance Theme Project by CMS, published (May 2006) page 14.

business of a medical scheme.[113] The MSA does not prescribe the qualifications trustees should have. Therefore the skills and competencies vary widely between schemes. Medical schemes tended to identify the following skills, experience and background as being important: legal; finance and auditing; clinical; marketing; and trade union (particularly for restricted medical schemes).

199. Many medical schemes boards of trustees comprise of 50% elected trustees and 50% appointed trustees.[114] In order to ensure that trustees with the relevant background are elected, some medical schemes have a nomination committee that assess the potential trustees skills, conflicts of interest, criminal records, debt default, and social media activity. The nomination committee usually outsources the vetting process to an auditing firm. Medical schemes will then appoint trustees with particular skill requirements that the elected trustees do not necessarily have.

200. The CMS offers a training course for trustees which covers legislation, medical scheme rules, ethics, sustainability of medical schemes, among other related topics. The CMS trained 73 out of a total of 1 038 trustees (or 7% of active trustees) who sat on boards in 2014. In the same year, a further 239 (23%) received "other training" whilst a majority 726 (70 %) received no training at all. The CMS assumes that the medical schemes themselves are also training trustees.[115] Some medical schemes indicated that the CMS training is too basic. This was particularly the case for those medical shames where the trustees have a strong legal, governance or medical background.

201. Medical schemes tend to offer formal induction training for all new trustees. Many medical schemes also have a formal training policy in place. They assess the qualifications of their trustees and identify possible gaps. They then find and fund relevant formal training for the trustees to attend.

HMI'S VIEWS ON SKILLS, COMPETENCE AND TRAINING

202. The HMI found that the skills and competence of trustees varies widely across the medical schemes, and that there are no clear standard criteria for appointing candidates for trusteeship. A board of trustees that is lacking in skills and competence may rely heavily on third-party administrators, and consequently not provide adequate oversight or review of their services.

203. The HMI is of the view that the CMS's training is an important way to ensure that trustees have a sufficient understanding of their roles and responsibilities. However, the number of trustees that receive training is concerning.

REMUNERATION

204. The trustee and principal officer remuneration is left up to the discretion of the medical scheme. There are in essence two methods for remunerating trustees, either they receive a monthly fee, or they receive payment for their time spent preparing and attending meetings which includes a stipend for travelling, accommodation etc. Some medical schemes benchmark their pay by trying to compensate trustees based on the foregone income that the trustee would earn from their current employer.

205. Stakeholders have raised concerns regarding the level of the remuneration medical schemes pay trustees and principal officers. In 2016, the three highest earning principal officers were: Polmed at R9 417 000, LMS Medical Fund at R9 733 000 and DHMS at R5 706 000.[116]

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113. The skills mix required may vary widely including areas of expertise such as medical, legal, financial, accounting, economic, actuarial, strategy, human resources, etc. In this regard, a set of minimum core competencies required needs to be clearly set out.
114. In terms of section 57(2) of MSA, at least 50% of the members must be elected from among the scheme members. Some medical schemes, particularly restricted medical schemes, allow the entire board to be elected from their membership base.
115. Public Hearing 4 Day 6; Presentation by the Council for Medical Schemes (9 March 2016) pg. 109.

206. Some stakeholders state that often principal officer and trustees' salaries and stipends are excessive due to lack of regulation or salary caps. The concern is that the trustees and principal officers may be incentivised to maintain the status quo, particularly the relationship with their administrator, or risk losing these substantial benefits.

207. The CMS is of the opinion that the MSA should be amended to allow it to develop a trustee remuneration framework with remuneration caps/guidelines.

208. The HMI found that trustees and principal officers earned the stipulated remuneration regardless of the performance of the medical scheme. There is therefore little incentive for the trustees or principal officer to ensure that the medical scheme grows, or that healthcare and non-healthcare costs are retained as they will receive their remuneration, regardless.

209. The proposed CMS framework seems plausible to ensure that the remuneration for trustees and principal officers is proportionate with their work and performance. In this regard, the HMI supports the proposal that the remuneration of trustees and POs should be capped.

MEDICAL SCHEME ROLE IN RELATION TO ADMINISTRATORS AND OTHER THIRD PARTIES

210. Self-administered medical schemes conduct administrative functions such as the negotiation of payment arrangements with healthcare providers, the processing and payment of claims from members, maintaining the call centre and the marketing and promotion of the schemes services in-house. Other medical schemes outsource some of these functions to third party administrators. In certain circumstances virtually all of the administrative functions are outsourced to the third party administrator. Other functions, such as managed care and brokerage activities, can also be outsourced to third party entities such as MCOs and brokerage firms.

211. Stakeholders point out that there are instances where medical schemes and administrators are so closely aligned that it is difficult to distinguish between them. In these circumstances, there is no real separation between the medical scheme and the administrator, and often members find it hard to draw this distinction, especially where the name of the scheme and administrator are similar.

212. The activities of these third party entities are overseen by the medical scheme's executive and managed in terms of a service level agreement (SLA). When a third party contracts with a medical scheme the role of the board of trustees is to ensure that the interests of the members are taken care of, and that the medical scheme receives value for money for the services it receives. Trustees thus have a duty to hold administrators and other third party service providers to account in terms of the SLA. In this regard, any governance failure or abdication responsibilities may be detrimental to members' interests and competition.

213. It is important to note that by outsourcing administrative services, a medical scheme does not relinquish its management responsibilities to the administrator. The administrators perform specific operational activities for which they are contracted. Management, oversight and decision making rests with the scheme and must be performed in the best interest of its membership. It is therefore not desirable for the administrator to dominate the medical scheme by the way in which the affairs of the scheme are run, or to go beyond its contractual mandate and role in administering it. Through the board of trustees, the medical scheme should be able to monitor and hold the administrator accountable for the services it provides. Where the administrator is not adding any value to the scheme or is failing to perform, the scheme should terminate services or not renew the contract.

214. The HMI has considered the extent to which trustees are invested in the business of the medical scheme and to what extent members of a medical scheme are protected by the trustees when they interact with third parties. Stakeholders have raised the concern that trustees abdicate most of their responsibilities to administrators or other third parties while they continue to earn sizable salaries. Another concern raised by stakeholders is that administrators provide incentives to trustees, thus compromising the trustees' ability to act in the interest of the scheme member.

215. The HMI's concerns are heightened by instances where it appears that schemes have abdicated their duties to the administrator and have no control over important aspects of their business. For instance, a lot can be gleaned from the circumstance surrounding the CMS's investigation into PMB compliance by schemes, where it was found that certain medical schemes were paying PMB benefits out of member's medical savings account in clear breach of the medical scheme's fiduciary duty to look after members' interests. Many medical schemes relied on their administrator to provide responses to the CMS and were not able to do so themselves.

216. With regard to specific functions such as tariff negotiations, some medical schemes administered by third parties outsource this entirely to administrators. The board of trustees gives a mandate to the administrator to negotiate on the scheme's behalf and the involvement of the board is limited. However, the HMI notes here, that it remains a duty on the board o review the outcome of such negotiations and ensure that value for money is given.

217. When discussing their role in relation to administrators some trustees expressed the view that even though running a scheme requires innovation it was not their job to design ideas but only to review initiatives that it receives from its administrator. This affirms the point that the value of administrators lies in their ability to be innovative and creative in providing their services. Furthermore, an administrator that is able to promote itself as being highly innovative is likely to acquire more business from schemes.

218. Regulation 18(d) of the MSA requires administration contracts to allow for termination at the instance of either party after a period of not more than 12 months. Medical schemes monitor their service providers performance based on the SLA. These SLAs, include that, call centres must be able to communicate with the members in the official languages, specified turnaround times to respond to calls, as well as resolving complaints. The administrator reports these statistics to the scheme which reviews them monthly. There are penalties for not meeting requirements set out in the SLA.

219. Medical schemes advised the HMI that, while the principal officers engaged monthly with service providers on performance, thetrustees assess service providers annually. Trustees advised the HMI that they reviewed turnaround time on claims processing, circulars to members, and the risk analysis of different aspects, so that the level of service could be determined. According to trustees, medical schemes can decide to change administrators at any time.

220. During the stakeholder engagements, it was stated that the decision to change an administrator can occur as a result of a number of factors, including:

220.1 a contract coming to an end;

220.2 where members indicate that they are unhappy with costs and the benefits that the scheme offers, since the administrator influences the premiums and benefits offered;

220.3 where switching provides for a larger provider group to enable the scheme to gain better access to practitioners and specialists; and

220.4 increased complaints due to service/ performance failure.

221. Having noted the role provided for third party administrators and other entities to act on behalf of the schemes, it is clear that the ultimate responsibility remains that of the trustees and the principal officerss.

It is their responsibility to ensure that the interests of members are protected by the providers with whom they contract.

CONCLUSION ON MEDICAL SCHEMES GOVERNANCE

222. Ultimately, good scheme governance that can drive competition in the market for private healthcare funding requires:

222.1 implementation of effective regulatory mechanisms and checks and balances to mitigate against risks of medical scheme capture;

222.2 a regulatory environment in which trustee independence can be maintained to ensure that member interests are prioritised and protected;

222.3 implementation of transparency measures in the schemes' processes to ensure that trustee appointments are transparent and without favour; as well as transparency in the way in which administrators are contracted and retained by the scheme;

222.4 effective oversight by the board of trustees over administrators (reporting and evaluation of performance); and

222.5 effective regulatory enforcement and oversight by the CMS.

223. The HMI provides interventions to promote governance in the in the chapter titled "Recommendations"

THE ROLE OF BROKERS

224. As discussed in the partial regulation section, consumers wishing to join a medical scheme face a daunting task of choosing between 22 open medical schemes and 185 benefit options[117] that are neither standardised nor comparable. Brokers, in return for a monthly commission, provide advice to their clients at the time they wish to join a medical scheme or health insurer and for on-going advice and assistance after their clients have purchased health cover. Corporate brokers may also provide employer groups with additional services, such as actuarial and marketing services, for extra fees.

225. Through advising clients on their medical scheme selection, brokers channel demand and therefore influence competition amongst healthcare funders. The inquiry is therefore interested in the role brokers play in influencing how medical schemes compete for members. The inquiry has heard evidence that medical schemes and administrators need a close relationship with brokers in order to expand. Some medical schemes developed strong relationships with brokers during the time when regulations pertaining to brokers were not onerous. At the time, some medical schemes and administrators recognised the important role brokers play in channelling demand and invested in this relationship. These medical schemes continue to have good relationships with brokers today. The inquiry is therefore interested in whether the incentives of brokers align with the medical scheme/ administrator or with the interests of the consumers'.[118] In this regard, several allegations related to how brokers may negatively influence competition between medical schemes have been made.

226. This section will look at the emergence of brokers into the market as well as the role of the different types of brokers. We look at the regulations surrounding brokers, including their commission. We then look at the various allegations pertaining to brokers.

OVERVIEW OF THE CURRENT BROKER REGULATION AND ENVIRONMENT

227. When the Medical Schemes Act, 1998 (Act No. 1331 of 1998) (MSA) came into full effect in 2000, it legalised brokers and introduced requirements to accredit brokers who were servicing medical scheme members. It also made brokers' commission structure transparent and capped monthly commission from medical schemes.

117. Council for Medical Schemes Annual Report 2016/2017. This number includes LMS Medical Fund that has since merged with Bonitas
118. Health Market Inquiry Statement of Issues, 2014 paragraph 35 p 11.

228. Other changes in the financial services industry meant that brokers could no longer earn large upfront commission for health insurance products. All licensed brokers must also comply with the Financial Service Board's (FSB) Financial Advisory and Intermediary Services (FAIS) General Code of Conduct (Board Notice 80 of 2003) and medical scheme brokers must be accredited in terms of the MSA. These brokers are thus regulated by both the FSB and the CMS.

229. Brokers who lose accreditation in terms of the MSA automatically lose their licence in terms of the FAIS Act and vice versa. The inquiry heard that some medical schemes and their administrators are more vigilant than others in verifying the validity of brokers' licences. These medical schemes halt any commission payment to brokers who lose their licences. Some medical schemes, on the other hand, do not verify brokers' licences regularly and pay the brokers' commission regardless of the status of the licences.

Stakeholder submissions on the role of brokers

230. Stakeholders submit that brokers[119] potentially play an important role in reducing search costs and the complexity of products on offer and, in doing so, improve consumer welfare, grow medical schemes,[120] and strengthen competition.[121]

231. Some stakeholders are of the view that brokers can influence individual members as well as employer groups to move to a particular medical scheme.[122] Not all open medical schemes use brokers. For instance, Cape Medical Plan does not contract with brokers because broker fees increase non-healthcare expenditure. Cape Medical Plan believes that this decision resulted in a decline in its membership from close to 30 000 members in the 1990s to under 6 000 members in 2014.[123]

HMI Analysis on the role of brokers

The size of the market brokers can access and the number of brokers

232. Brokers operate mainly in the open medical schemes market. Most restricted schemes do not contract directly with brokers, since employees join medical schemes as a condition of their employment. As explained in the section titled "Market Definition" there are a handful of restricted medical schemes that do compete with open medical schemes for members and these medical schemes may also use broker services. In 2016, nine of the 60 restricted medical schemes reported some payments towards broker and distribution fees[124].

233. There were 2 251 broker organisations and 8 552 individual brokers as if 31 March 2017.[125] Some of the larger brokerages selling medical scheme products include Alexander Forbes Health Pty (Ltd) (Alexander Forbes), PSG Konsult (Ltd), NMG Group (NMG) and AON South Africa (Pty) Ltd (AON). Data submitted to the inquiry indicates that Alexander Forbes, AON, PSG and NMG collectively had just under 12% of the open medical scheme market in 2014.[126] Given this, the inquiry does not view the broker market as concentrated.

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119. Discovery Health response to the Revised Statement of Issues of the Competition Commission Market Inquiry into the Private Health Sector, 22 March 2016.
120. Submission of Profmed Medical Scheme to the Panel of the Inquiry into the Private Health Care Sector October 2014 p 26.
121. Discovery Health response to the Revised Statement of Issues of the Competition Commission Market Inquiry into the Private Health Sector, 22 March 2016. Merger between Santam Ltd and Guardian National Insurance Company Ltd (Case no: 14/LM/Feb00) p 5.
122. Cape Medical Plan Submission, 31 October 2014 p 21.
123. Cape Medical Plan submission, 31 October 2014, p 10.
124. CMS Annual Report Annexures 2016/2017. Annexure O Broker fees include other distribution costs paid and not only the fees paid to brokers
125. CMS Annual Report 2016/2017 p 35.

Types of brokers

234. Brokers vary based on who they service. Some brokers focus specifically on individual members. Corporate brokers advise large employer groups as well as their employees. Some brokers advise both employer groups and individuals.

235. In addition to who they service, there are three types of brokers: independent, tied and multi-tied. Independent brokers provide advice on a range of medical schemes. Tied brokers sell only one medical scheme product. Administrators or their subsidiaries often employ tied brokers directly.

236. Tied brokers have a vertical relationship with administrators and medical schemes. Because tied brokers deal exclusively with one medical scheme product, they may bring efficiencies as they may better advise the consumer on that scheme's benefit options. They may also have better access to the medical scheme so may be able to deal with consumer queries more effectively than independent brokers. However, due to their close vertical relationship, they will only advise their clients on products in the corporate group and not of other, potentially better, products.

237. Multi-tied agents focus on selling a limited number of medical scheme products. These brokers may bring efficiencies to their clients by providing a deeper understanding of their products than brokers trying to sell a wide range of products. However, as with tied brokers, they will only advise members on the products in their stable, which may exclude a medical scheme that is more appropriate to a particular client.

238. Open medical schemes in South Africa often rely on all three types of brokers. Some medical schemes, through their administrators or corporate group, employ tied brokers or have brokerages as subsidiaries within the broader group of companies. The inquiry investigated the relationships between the three largest open medical schemes —DHMS, Bonitas and Momentum Health — and found the following:

Discovery Health Medical Scheme:

239. Discovery Ltd has a large tied sales force which markets and sells DHMS products. Discovery's tied agency force (a similar term for tied brokerages) consists of various channels whereby Discovery Life either employs or contracts individuals. The Discovery Connect Distribution Services call centre employs approximately 70 agents (brokers) to advise prospective members on DHMS policies and Vitality policies. There are also approximately 1 000 tied agents who provide financial and product advice to existing and prospective clients on all Discovery products.[127] Brokers selling healthcare products earn only the legislated brokerage fees. According to Discovery Health, the proportion of members joining through tied agents fluctuates year to year and was 8% in 2017. [128]

240. Given that a majority of DHMS's membership base consists of employer groups, corporate brokers servicing these groups are the largest source of new business for DHMS. These corporate brokers contributed over 50% of total new business between 2012 and 2014. Smaller independent brokers account for 46% of DHMS's new business.[129]

241. The size of DHMS's tied brokers is substantial, but it does not appear that they bring in significant new business if they only account for 8% of new members.

Bonitas

242. Afrocentric Distribution Services (ADS), a subsidiary in the Afrocentric Group, has 22

126. This estimate was calculated by taking the number of members on brokers' books as a percentage of total open medical scheme members (excluding restricted medical schemes that may require broker services). We do not have complete figures for 2015 or later. We also do not have figures for other large brokers such as Absa Consultants and Actuaries (Pty) Ltd. We counted each individual member, and not the number of employer groups.
127. Discovery Health Response to information request on brokers dated 28 April 2018.
128. Discovery Health response to the information request on brokers in February 2018.
129. Discovery Health Submission to the Competition Commission Market Inquiry into the Private Health Sector, 17 November 2014 p 173.

consultants that provide advice, marketing information and training to independent brokers that sell Bonitas products.[130] Bonitas pays ADS a fee per member per month for this service. Even though ADS is a private company, its contribution is not directly to Afrocentric's overall profits, but is indirect through increasing the administrator's revenue from the administration fees from Bonitas members.

243. ADS has shares in Tendahealth (Pty) Ltd. Tendahealth is a tied brokerage for Bonitas that has its own FSB licence. Tendahealth signs up approximately 270 members to Bonitas per month[131]. Within Tendahealth, a few brokers sell other short-term products from a range of insurers.

244. Alternatively, consumers interacting on the website may select to join the medical scheme directly, in which case they complete the required steps and Bonitas retains the broker fee component. Approximately 15% of Bonitas' members join the medical scheme directly. ADS believes that young individuals are increasingly opting to search for information on-line and join directly. Approximately 70% of Bonitas members are part of an employer group[132].

Momentum Health

245. Momentum Health, the third largest open medical scheme, also uses tied brokers. Within the MMI group, Momentum Financial Planning and Momentum Healthcare Distribution sell Momentum Health products as well as other MMI products to individuals and employee groups. Momentum Financial Planning consists of independent brokers, franchisees and employees of the MMI group. There are 700 brokers in Momentum Financial Planning, of which 230 have accreditation to sell medical scheme products[133]. Another tied force within the MMI group is Momentum Healthcare Distribution which focuses on different market segments to that of the Momentum Financial Planning brokers.

246. Approximately 46% of all members joining Momentum Health in 2017 joined through tied brokers, 49% joined via independent brokers and 5% joined Momentum Health Medical Scheme directly.[134]

BROKER COMMISSION AND INCENTIVES

247. Medical schemes pay brokers a stipulated commission on behalf of the members that the brokers have signed up to a particular scheme. For a medical scheme to pay commission to a broker, the broker must have a contract with that medical scheme. The medical scheme will remunerate the broker the lower amount of either 3% plus value added tax (VAT) of the member's contribution amount, or R90 plus VAT per main member (family) per month.[135] The aim of standardising commission across medical schemes is to remove adverse incentives since brokers earn the same commission structure regardless of which medical scheme they direct members to.

248. The current MSA regulations provide consumers with the right to appoint any broker.[136] No contribution or premium discounts apply if a consumer goes directly to the product supplier. Broker payments count towards the medical scheme's non-healthcare expenditure. Where a member joins a medical scheme directly and not through a broker, the medical scheme retains the amount that they would have paid had the member used a broker. Therefore, the more members that join the medical scheme directly, the lower the broker fees' contribution to the medical scheme's overall non-healthcare expenses. Broker fees, inclusive of distribution fees, was approximately 14,1% of total non-

130. Teleconference with Afrocentric Distribution Services on 21 February 2018
131. Teleconference with Afrocentric Distribution Services on 21 February 2018
132. Teleconference with Afrocentric Distribution Services on 21 February 2018
133. Email correspondence with MMI Health 16 March 2016
134. Email correspondence with MMI Health 30 May 2018
135. Section 28 of the Regulations in terms of the Medical Schemes Act, 1998, Circular 69 of 2017: Adjustment to fees payable to brokers with effect from 1 January 2018.
136. Council for Medical Schemes Circular 20 of 2010.

healthcare expenses for open medical schemes for 2016. [137]

249. While medical scheme brokers' commission is standardised, they may supplement their income by earning the regulated commission from the sale of a variety of other insurance non-financial products provided they have all the necessary licences. In addition, as mentioned above, brokers may earn income for consulting services they provide to employer groups or medical schemes. This advice could include actuarial services on the types of benefit options the restricted medical scheme should offer and around financial input required to keep the medical scheme stable. This advice could also contribute towards amalgamations between restricted medical schemes and open medical schemes.

STAKEHOLDER SUBMISSIONS ON BROKER REMUNERATION AND INCENTIVES

250. The Competition Tribunal's view is that legislation governing broker remuneration supports the pro-competitive role of brokers. The Tribunal found that consumers are encouraged to use brokers as they do not pay brokers directly. The legislation prohibits insurers from paying brokers an incentive bonus, which prevents brokers form developing 'comfortable' relationships with insurers and protects the broker's client base.[138]

251. While brokers should regard consumers as their main clients/principals, the current remuneration structure, in which the medical scheme contracts with and pays the broker, blurs this relationship. Some stakeholders stated that consumers do not know that their monthly contribution includes a broker fee, whether they use a broker or not. In some instances, consumers incorrectly believe that broker services are free.

252. Some stakeholders are concerned that medical schemes think of the 3% member's contribution as their own contribution to the broker, rather than that of the members'. Thus, they believe that large medical schemes could influence broker behaviour since a broker could lose revenue if a medical scheme decided to cancel its contract with a broker. Consequently, brokers may have difficulty advising members to leave a scheme that does not suit their needs, if that scheme makes up a large proportion of the brokerage's income. Not all brokers share this view. Some brokers and administrators are of the view that the corporate broker environment is very competitive and brokers risk losing employer groups as clients if they do not act in the client's best interest.[139] FAIS tries to address this by insisting that the broker always act in consumers' interest.

253. Stakeholders stated that the current remuneration structure incentivises brokers to favour high cost medical schemes and more expensive benefit options to maximise their commission.[140] Other stakeholders [141] did not support this view as they explained that the range in commission is too small to influence their advice. They prefer to build a long-term relationship with their clients. Providing poor advice to employers in an employer group to gain a relatively small percentage increase in revenue is even riskier as they could lose significant revenue from losing the contract with the entire group. They argued that businesses operate in a competitive corporate environment and corporates contracting brokers evaluate all the services they receive. Switching costs are low, so if they do not think the service they receive from the broker adds value, they will start the tender process for a new brokerage.

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137. Council for Medical Schemes Annual Report 2016-2017 p194.
138. Merger between Santam Ltd and Guardian National Insurance Company Ltd (Case no: 14/LM/Feb00) p 5.
139. Discovery Health response to the Revised Statement of Issues of the Competition Commission Market Inquiry into the Private Health Sector, 22 March 2016 p 39, Meetings with brokers.
140. Brian Watson's submission to the Healthcare Inquiry, dated 24 October 2014. Brian is the Executive Manager of Genesis Medical Scheme; BHF submission: Submission on the Inquiry into the Private Healthcare Board of Healthcare Funders of Southern Africa (BHF), 29 September 2014 p 51.
141. DHMS Response to the Revised Statement of Issues of the Competition Commission Market Inquiry into the Private Health Sector 22 March 2016 HMI p 17.

254. The CMS was concerned that brokers encourage members to 'buy-down'. Brokers market health insurance products to healthier members of medical schemes, who are encouraged to buy down to cheaper plan options and cover the differences in benefits by purchasing gap cover products at cheaper rates[142].

255. The Board of Healthcare Funders of Southern Africa (BHF) and ADS argue that the current remuneration regulation is inadequate. The current accounting measures do not track the flow of finances between medical schemes, brokers and administrators.[143] Medical schemes do not report broker remuneration independently or uniformly. Rather they combine broker remuneration other non-healthcare expenditure including marketing and distribution costs which are not restricted and regulated to the same extent as broker remuneration. The lack of uniform reporting makes comparison across medical schemes challenging[144].

HMI ANALYSIS ON THE ROLE OF BROKER REMUNERATION AND INCENTIVES

256. Approximately 97% of DHMS, 75% of Bonitas, and 95% of Momentum Health Medical Scheme[145] members joined their respective scheme via brokers. These figures are in contrast to what the inquiry gathered from its customer survey, which revealed that only 25% of respondents who have medical aid selected a medical scheme via a broker. 63% of respondents said they did not have a broker, while 12% were unsure.[146] This could partly be due to employees joining through their employer, and these employees not being aware that their membership falls under the auspices of their employer's broker.

257. With regard to the role of individual brokers, the inquiry found that individuals are not always aware of the role that brokers can and should play. Consumers may consult with brokers to select a medical scheme, but many do not know that the broker can assist them with claims and other engagements with the medical scheme. In the consumer survey, 56% of respondents who said they used brokers rarely communicated with them, and 16% had not communicated with their brokers at all during the last 12 months.[147]

BROKER FEES AND MEDICAL SCHEME GROWTH

258. The inquiry agrees with stakeholders that the practice of reporting broker fees inclusive of distribution fees does not allow meaningful comparisons between medical schemes.[148] Nonetheless, the inquiry looked at CMS reported broker fees for open medical schemes[149] (inclusive of marketing, advertising and distribution fees), and found that Fedhealth spent the most at R113.70 per average member per month (pampm) in 2016 (for growth in beneficiaries of 2.4% from 2015) followed by Momentum Health at R103.70 pampm (for growth of 7.3% from 2015) and Bonitas at R103.30 pampm (for growth of 15.1% from 2015). DHMS spent significantly less at R90.60 pampm (for a growth of 1.6% from 2015)[150]. Because of DHMS's size, its marketing fees are spread over significantly more members. The inquiry expects there

142. Council for Medical Schemes submission to the HMI discussion document on healthcare financing regulatory framework and its impact on competition within the South African Private Healthcare sector 22 January 2018 p 18.
143. Board of Healthcare Funders presentation at the Public Hearings Week 3 day 1 p 101
144. Teleconference with Afrocentric Distribution Services on 21 February 2018
145. Discovery Health Submission to the Competition Commission Market Inquiry into the Private Health Sector, 17 November 2014, 172, Telecon with Afrocentric Distribution Services on 21 February 2018, Email correspondence with MMI on 30 May 2018.
146. Health Market Inquiry 'Summary of Results from the Healthcare Consumer Survey, 18 November 2016' p 15
147. Health Market Inquiry Summary of Results from the Healthcare Consumer survey 18 November 2015 p 15.
148. Distribution fees are the costs the medical scheme incurs for obtaining a new member to join the scheme.
149. The HMI focused on open medical schemes as they use brokers more than restricted medical schemes. 34 of the restricted medical schemes made some payments towards broker costs, marketing and advertising. Of the restricted medical schemes, Umvuzo Health Medical Scheme spent the most at R98.5 pampm followed by Profmed at R74.5 pampm and then LA Health Medical Scheme at R71.4 pampm

to be economies of scale for large medical schemes as the marketing fees could be spread over significantly more members.

259. On the other end of the spectrum, Cape Medical Plan does not incur any broker, marketing and distribution fees. Medimed Medical Scheme and Genesis Medical Scheme have minimal broker spend at R0.1 and R25.1 pampm respectively[151]. Even with these low amounts, Medimed Medical Scheme grew by 4.2% over the year and Genesis Medical Scheme by 2.3%. Cape Medical Plan's number of beneficiaries decreased by 5.3% from 2015. It is unlikely that this decrease is solely to Cape Medical Plan's approach to brokers. However, the inquiry is of the view that one factor contributing to this decline is Cape Medical Plan's decision to not use brokers, or spend any money on marketing.

260. The inquiry looked at the regulated broker remuneration from medical scheme products.[152] The broker fees were capped at R80 in 2016 which means that anyone that paid about R2 665 in premiums would have paid the maximum cap.[153] The CMS annual report figures for 2016 show that there are several benefit options with monthly contributions that were less than R2 665. Brokers could therefore have an incentive to advise members to take more comprehensive cover than necessary to increase their commission. However, the inquiry is of the view that many consumers are limited to the amount of cover they can afford. This, rather than the broker, dictates the benefit option range from which the member can select. The inquiry also agrees with stakeholders' comments that brokers are unlikely to sacrifice a long-term source of income for marginally higher income in the short-term.

261. The inquiry did not find any specific evidence of brokers advising members to buy down to cheaper medical scheme products and then take gap cover for the additional cover. In certain circumstances, this type of advice may be rational for particular individuals. The implications of this on the broader medical scheme market is a result of the current regulatory environment governing medical schemes and health insurers and is not necessarily due to sinister behaviour by brokers. This is discussed in more detail in the section above on demarcation.

OTHER INCENTIVES AND SELLING A BASKET OF PRODUCTS

262. Administrators are particularly interested in the growth of the medical schemes under their administration because they receive a per member per month fee. It is therefore in the administrator's interest to incentivise brokers to channel consumers to the medical schemes they administer. As discussed in the chapter titled "Industry Overview" the large administrators are subsidiaries of large corporations that sell a variety of financial and non-financial products.

263. Brokers may sell more than one type of financial product as long as they have the relevant licenses for each product from the FSB (and CMS in the case of medical scheme products). The payment of co-branded products (such as wellness and loyalty programmes, and health insurance products) have different commission structures which fall outside of the MSA and therefore the CMS's oversight

Stakeholder submissions on other incentives

264. The HMI heard that medical schemes and administrators circumvent the regulation whereby brokers sell additional products or provide additional remuneration to brokers by paying for marketing activities or surveys. Profmed states that:

150. Council for Medical Schemes Annual Report Annexure V, total number of beneficiaries 31/12/2016
151. Council for Medical Schemes Annual Report Annexure V, total number of beneficiaries 31/12/2016. These amounts are because the medical scheme spent a small amount of money on broker costs, marketing and advertising and this amount was spread over the entire medical scheme membership
152. The remuneration is capped at 3% or up to a maximum of R90 (excluding VAT) which means that any member paying more than R3000 will pay the maximum of R90 cap per month.
153. The Inquiry used the 2016 broker fee cap as the latest figures available in the Council for Medical Schemes Annual Report are for 2016.

"Innovative reimbursement schemes for brokers have been developed. Schemes and administrators often resort to other mechanisms to enhance brokers' remuneration. These mechanisms might entail the selling of additional products, such as gap cover, insurance and loyalty programs…. (T)he interests of consumers are often secondary to those of brokers when products are sold" [154]

265. In his submission, Brian Watson says: "Marketing fees are a ploy used by some administration companies and medical schemes to remunerate brokers beyond the limits prescribed by law. Typically, brokers are tasked with collecting information about the market (whatever they mean) and they are paid fees by the administrator or medical scheme. As this service is not 'broker services' as defined in the MSA, the commission cap of 3% is effectively avoided and the broker receives more money than he is legally entitled to." [155]

266. Bestmed states: "Creative products have been developed in respect of loyalty programmes, training services etc to ensure membership growth through broker services but the remuneration does not fall under S65 since the products fall outside the regulatory net of Medical the Medical Schemes Act." [156]

267. In its submission to the HMI, Medscheme says:[157] "In private healthcare, brokers earn commission limited to 3% of gross contribution, subject to a maximum Rand value currently set at R71.07 plus VAT[158]. This level is much lower than other insurance products in the South African market, which is typically nearer 20% of premium."

268. Medical schemes and administrators also told the inquiry that incentives from medical schemes to brokers originate from the sale of a bundle of other products from inside the administrator's corporate structure and outside of the medical scheme environment. Brokers who sell medical scheme products together with insurance products have an advantage over those selling medical scheme products only as they earn higher commission from one individual and qualify for rewards from the group of companies. Smaller medical schemes and administrators that are not linked to large corporates and do not have a basket of products to sell could be at a disadvantage as brokers would prefer to sell a basket of products[159].

269. Brokers told the inquiry that the commission from the sale of medical scheme products is only sufficient on its own if they have a very large client base. This is particularly the case for brokers servicing individuals as they must do a significant amount of work to capture each individual client. Smaller, independent broker businesses are sustainable when they offer other services beyond medical scheme products only, which may come from a number of different companies. One brokerage started as purely health care consultants but has diversified into wellness and retirement consulting over the last five years.

270. In relation to these allegations, both brokers and Discovery Health emphasise that regulation prevents financial institutions from offering any additional incentives regardless of whether the broker sells other products such as short-term insurance or life insurance from a financial institution.[160] Discovery Health, in response to the Revised Statement of Issues, said that brokers may sell other Discovery products such as Discovery Life, Discovery Vitality or Discovery Invest products but that no entities in the Discovery Group can pay a combined preferential commission to encourage a broker to sell more of the

154. Submission of Profmed Medical Scheme to the Panel of the Inquiry into the Private Health Sector, p 27.
155. Brian Watson's submission to the Healthcare Inquiry, dated 24 October 2014.
156. Submission of Bestmed in Accordance with the Guidelines for Participation in the market inquiry into the private healthcare sector issued on 1 August, submitted on 31 October 2014, p 93.
157. Submission from Medscheme Holdings (Pty.) Ltd., October 2014.
158. Medscheme is referring to the broker commission that was allowed at the time of their submission in 2014. This amount has subsequently increased.
159. Telecon with Afrocentric Distribution Services 21 February 2018.
160. DHMS Response to the Revised Statement of Issues of the Competition Commission Market Inquiry into the Private Health Sector 2016 p 17.

group's products.[161] Each product is subject to its own maximum commission. Discovery Health disagreed with the allegation that Discovery Ltd launched Vitality as a way to pay higher commission to brokers. Rather, brokers receive commission in line with the work involved in selling the products. Discovery Health emphasises that Vitality exists to encourage members to improve their own health by living a healthier lifestyle.[162]

271. ADS says that the Afrocentric group does not have other financial products such as life insurance in the group that they can combine with medical scheme products. Its subsidiary, Tendahealth, the telemarketing tied agents, sell only Bonitas products and earn the regulated commission. However, some brokers in Tendahealth sell other insurance products from a variety of companies outside of the Afrocentric group.[163]

HMI findings on incentives from selling other products

272. The inquiry found that the regulators have an important role in monitoring broker behaviour and incentives. The FSB and the CMS can remove brokers' licences and accreditation. The FSB can also impose financial penalties if brokers are in contravention of FAIS. FAIS defines allowable income for brokers to prevent remuneration over and above the regulated commissions. Neither the CMS nor FSB collect data on the total remuneration brokers receive. As already explained, the broker fees reported in the CMS annual report include marketing and distribution costs. This consolidated reporting makes it difficult for the CMS to monitor medical scheme expenditure on brokers alone to verify that the payments were within the stipulated regulations.

273. Several brokers sell a range of products from a particular group. In order to assess whether the ability to sell a basket of financial conglomerate products interfered with brokers ability to provide independent advice, we considered the revenue that they received from other products. The data provided to the inquiry by the large healthcare brokers showed that much of their income stems from medical scheme commission with less than 10% coming from other insurance products and less than 3% of their total revenue from wellness/ loyalty programmes.

274. Brokers are likely to advise clients to take a combination of products from one corporation rather than medical scheme and wellness products from one provider and life insurance from another, for example. To some extent, this is so that members can maximise their rewards from the loyalty/ wellness programs. In addition to this, the inquiry found that in some instances, brokers earned recognition through remuneration linked to the company's share price and other incentives such as gaining access to conferences and events. This recognition is distributed to tied brokers based on complex formulas including components of medical scheme products sold combined with other products in the group. Other companies in the group pay for these forms of recognition, so payment does not come from the medical scheme directly, or indirectly from the administrator. However, the combined total of sales, including health products count, will be sufficient to incentivise brokers to sell that group's products rather than combining a medical scheme product with another company's life product. This is one way that medical schemes and administrators circumvent broker payments as it places the emphasis on the group of products at the expense of individual medical scheme products. It also places the medical schemes that are not part of a corporate group at a disadvantage as they are unable to benefit from similar arrangements.

275. The inquiry also found that brokerages can and do receive additional income from consulting services which are not

161. DHMS Response to the Revised Statement of Issues of the Competition Commission Market Inquiry into the Private Health Sector 24 March p 41.
162. Discovery Health submission to the Health Market Inquiry: Broker Relations 6July 2016 p 12
163. Afrocentric Distribution Services telecon on 21 February and 24 April 2018.

necessarily included in marketing and distribution costs. In the one instance, this additional revenue was up to 30% of the brokerage's total income. Brokers earn income from advising employers/ corporates, particularly where employers have their own restricted medical scheme.

276. There are historical examples where medical schemes have circumvented the regulated payments. In 2008, allegations surfaced that Medshield paid brokers between R400 and R850 per member for new members under the age of 42 years who completed a questionnaire. The Registrar deemed these payments for research fees to the value of R28 million unlawful and wasteful expenditure and in contravention of Section 65(2) of the MSA.

277. The inquiry found that the brokers had significant exposure to DHMS. Submissions from brokerages revealed that their revenue from DHMS ranged from about 50% to over 70% of their total revenue. Brokers' exposure to Discovery as a group is even more significant if other Discovery products are included. The inquiry noted that the large percentage of revenue from one medical scheme reflects the large market share of that scheme. However, it is likely that where a broker receives a large portion of income from one medical scheme, that broker would want to maintain good relationships with that medical scheme.

278. Administrators are able to influence the brokers' advice through the extent of training and quality of service they provide. DHMS and Discovery Health spend significantly more time engaging with brokers, and this improved the brokers' understanding of their product and encouraged them to sell it.

STAKEHOLDER VIEWS ON SPLIT RISK

279. Corporate brokers told the inquiry that, in recent years, employers are increasingly allowing for split risk, meaning that they allow their employees to select between two or more medical schemes. Brokers play a critical role in recommending the alternative or competing medical scheme. Brokers explained that they recommend additional schemes that offer a greater range of options when combined with the incumbent. Bonitas and DHMS, for example, have different product offerings and, when combined, provide a wide selection between traditional plans and savings accounts. DHMS and Momentum Health's products, on the other hand, are very similar in nature. Bonitas has traditional benefit options, whereas Momentum Health and DHMS both offer a range of new generation plans, with savings accounts.

280. Splitting risk increases competition for the incumbent medical scheme as employees can select between the medical schemes. Brokers told the inquiry that incumbent medical schemes are apprehensive about splitting risk and will try to discourage it. To do so, the medical scheme, which may initially not underwrite[164] new employees to the firm, may threaten to institute underwriting if the employer allows a new medical scheme to enter. Brokers told the inquiry that the extent to which the medical scheme implements underwriting depends on which medical scheme is selected and whether the new scheme provides similar products.

281. In response, Discovery Health says that DHMS does not apply different underwriting policies based on whether one or another scheme is offered as an alternative: "When an employer group has historically had all of its employees with DHMS decides to offer choice of one or more alternative schemes, DHMS makes every effort to accommodate this choice and to maintain the applicable underwriting concessions. In a limited number of cases where the risk is determined to be very high, the underwriting status is changed and underwriting concession is withdrawn[165]" When probed further on this, Discovery Health explained that it only withdrew the underwriting concession in one instance, where the risk pool was going to be substantially worse following the splitting of risk.

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164. Medical schemes may underwrite members by applying a late joiner penalty and waiting periods.
165. Discovery Health response to Broker Queries on 17 April 2018 p 4.

282. ADS told the HMI that the incumbent medical scheme may implement underwriting if they are of the view that the new entrant will attract all the good risk and leave the incumbent with the bad risk. Medical schemes also consider whether to implement underwriting or not when employers wish to add them to the selection for employees. There is a concern that, depending on the incumbent scheme, the new medical scheme may only attract the bad risk (ie the sick and the elderly). Medical schemes may agree to be added to the employee selection, but they will want to underwrite future employees to mitigate against this.[166]

283. MMI Health explained that brokers have told them anecdotally that incumbent medical schemes may threaten to implement underwriting if the employer selects Momentum Health as the new medical scheme. Momentum Health does not apply underwriting to a new employee if the employee chooses to join Momentum Health at appointment stage. However, if the employee decides, after some time, to switch (possibly because of anti-selective reasons, then the medical scheme will impose underwriting.[167]

HMI'S FINDINGS ON SPLIT RISK

284. The inquiry is of the view that brokers play an important role in advising employer groups given the number of employees that join medical schemes through their employers. Employers allowing employees a choice of more than one medical scheme is good for competition and benefits the employee. The inquiry heard conflicting stories relating to whether or not medical schemes implement or threaten to implement underwriting when an employer group splits risk, and therefore cannot make a finding on whether and the extent to which it occurs. There may be legitimate reasons for incumbent medical schemes to implement underwriting where the employer introduces an alternative medical scheme. This is particularly where the entrant attracts all the good risk harming the overall stability of the incumbent medical scheme's risk pool. However, if large open medical schemes threaten to implement underwriting, even if they do not follow through with their threat, this behaviour constitutes a strategic barrier to entry that protects their position in the open medical scheme environment.

STAKEHOLDER SUBMISSIONS ON ORPHAN MEMBERS AND THEIR ALLOCATION TO BROKERS

285. In some instances, members join medical schemes without the assistance of a broker. The inquiry heard speculation that when members join directly, medical schemes assign brokers to these members without their knowledge. Because there is no discount for members joining a medical scheme directly, the member would not know if the medical scheme allocated a broker to them unless they asked the medical scheme. It is alleged that the assignment of these orphan members is one way that medical schemes can influence broker behaviour by increasing their commission.

286. The brokers interviewed were aware that medical schemes used to allocate members to brokers, but doubted that the practice continued. The CMS expressed a similar view. This practice would go against FAIS as FAIS requires that each person must undergo a needs assessment, which would not take place if medical schemes merely assigned members to brokers.

287. If the CMS suspects a medical scheme of doing this, they will follow up with the broker and medical scheme and will require information such as the broker appointment letter, broker book, etc. Brokers confirmed that the CMS can audit the medical scheme and broker and request to see the appointment letter before the medical scheme can pay commission.

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166. Telecon with Afrocentric Distribution services on 21 February 2018.
167. Email correspondence with MMI Health on 1 May 2018

THE HMI VIEW ON ORPHAN MEMBERS

288. The HMI is of the view that allocation of orphan members is more likely to be a concern where individual members join a medical scheme directly rather than through an employer group (who will also most likely have gone through a broker). No evidence has been received to suggest that the practise of allocating orphan members continues, after FAIS stopped it.

CONCLUSIONS ON BROKERS

289. There is a clear need for brokers to provide independent and valuable advice to members, and that members know what services brokers can provide to them. In many cases, members are unaware that they pay a broker indirectly through their monthly medical scheme contribution, and that they do not pay lower fees by not going through a broker. They also do not know all the ongoing services the broker may provide.

290. This lack of transparency and complexity means that there are many different ways in which brokers' incentives may be skewed. Their advice may favour medical schemes and administrators over the members.

291. The current environment lacks transparency surrounding broker remuneration and may influence broker incentives. There is a need for greater transparency for the consumer on all the rewards, both financial and other that brokers receive from selling a combination of products. Furthermore, there is a need for greater oversight from both the CMS and FSB on the reporting and monitoring on broker remuneration from all the products they sell.

292. It is difficult, even for brokers, to know and understand all the scheme and benefit options. Brokers are thus more likely to favour products from medical schemes which invest in educating brokers on their products.

293. The inquiry found that the dominant open medical scheme, DHMS, is important to brokers as a large part of their income is dependent on a contract with this scheme.

DEMARCATION REGULATIONS

294. One of the decisions individuals have to make is whether to take out health insurance instead of, or in addition to, a medical scheme product. In some instances, consumers are not aware of whether they are purchasing health insurance or medical scheme products and what the implication of their purchase is. This was particularly the case before the finalisation of the demarcation regulations.

295. The inquiry is interested in the demarcation regulations in so far as they may directly or indirectly affect the competitiveness and sustainability of medical schemes, as well as the impact these insurance products have on consumers.[168]

THE OBJECTIVES OF THE REGULATIONS

296. The objective of the demarcation regulations is to clearly demarcate the responsibility of regulatory supervision of the medical schemes from that of health insurance products. Another objective is to ensure that health insurance products that fall within the definition of a "medical scheme" are subject to the same underlying principles as medical scheme products.

297. The demarcation regulations came into effect on 1 April 2017 together with the amendment to the definition of a "business of a medical scheme." The definition of a "business of a medical scheme" has been broadened such that an entity should at least be involved in one of the activities mentioned in the definition to be subject to the MSA.[169]

298. Any insurer providing indemnity products such as primary healthcare plans and hospital indemnity cover is thus regarded as conducting "the business of a medical scheme" as defined in the MSA. Only insurers that successfully apply for exemption from the CMS can sell these types of cover[170].

168. Health Market Inquiry Revised Statement of Issues p 9.
169. Section 1 of the Medical Schemes Act, 131 of 1998 for the definition.
170. Section 8(h) of the Medical Schemes Act.

299. The demarcation regulations allow the Minister of Finance to categorise certain contracts as health policies despite such contracts meeting the definition of a "business of a medical scheme".[171] Such health policies are subject to the Long Term and Short Term (LTIA and STIA) Insurance Acts and not the MSA.

300. The regulations allow insurers to continue to provide gap cover and hospital cash plans subject to strict underwriting and marketing conditions.[172] The demarcation regulations contain important provisions relating to risk-rating, risk adjustment based on claims experience, waiting periods and open enrolment. The intention was to embed a requirement similar to the open enrolment principle contained in the MSA.[173] For example, the relevant product lines must be underwritten on a group basis (ie no individual risk rating) and policyholders may not be discriminated against.[174]

301. To ensure that consumers understand the differences between purchasing health insurance products and medical scheme products, the demarcation regulations introduced provisions that limit the marketing of health insurance products. These provisions seek to that health insurers do not market their products in a way that gives the impression that a health policy is in any way an equivalent to joining a medical scheme.[175]

HMI OBSERVATIONS

302. The relevant health insurance products for the inquiry's analysis of the demarcation regulations are medical expense shortfall policies (gap cover), hospital cash plans and primary healthcare plans. The ways in which demarcation regulations address concerns raised about these products are discussed below. Issues that the demarcation regulations do not adequately address are also raised.

Gap cover

303. For non-PMBs and a limited number of PMB claims,[176] medical schemes pay providers the medical schemes' rates. Where a provider charges more than these rates, the consumer covers the shortfall. Specialists can charge three times the medical schemes' rates which may leave patients with substantial co-payments. Gap cover refers to short-term insurance products designed to provide a benefit to cover gaps or shortfall in medical schemes' payments. Consumers therefore purchase gap cover in addition to their medical scheme product to protect themselves from out of pocket medical expenses.[177] The National Treasury is of the view that gap cover is, in the absence of an agreed tariff set between providers and medicals schemes, an alternative way to protect consumers from substantial out of pocket payments.[178]

304. The demarcation regulations[179] require that health insurers may only underwrite

171. Section 70(2A) of the STIA and Section 72(2A) of the LTIA.
172. Regulation 7.3(3) of the STIA and LTIA.
173. Regulation 7.3(2) to the LTIA and STIA
174. Regulation 7.3 (2)-(4) in the STIA and LTIA.
175. Regulation 7.5 in the LTIA and STIA.
176. Medical schemes have to pay PMB claims in full unless the medical scheme beneficiary did not follow the rules of the scheme by using the required designated service provider, treatment guidelines or formularies.
177. Gap cover products are a fairly new class of short-term insurance product that was launched in the late 90's (see Review of the South African Market for Hospital Cash Plan Insurance by FinMark Trust page 17 (September 2012)).
178. National Treasury "Response to key issues raised in Public Submission on Regulations which give effect to the Demarcation Between Health Insurance Policies and Medical Schemes" p 6.
179. Regulation 7.3 (2)-(4) to the LTIA and STIA.

gap cover products on a group basis.[180] [181] This means that health insurers cannot discriminate between individual policyholders on the basis of race, age, gender, marital status, disability or state of health.[182] These new underwriting restrictions take away risk rating which some stakeholders have claimed has been the catalyst for young and healthy members buying cheaper medical scheme benefit options and supplementing them with gap cover to replicate more comprehensive options. This is because part of the price advantage related to gap cover came from insurers' ability to risk rate and adjust individual premiums based on claim experience and change in health status.[183]

305. The demarcation regulations do not specify what type of risk an insurer should cover. This may result in gap cover insurers paying the shortfalls for PMBs that the medical schemes should cover. This may encourage medical schemes to not fulfil their obligations in respect of PMBs as members will claim the shortfall from the health insurer.[184]

306. The lack of clarity might also mean that an insurer may cover incidences where medical schemes have applied demand management incentives like co-payments and deductibles to steer beneficiaries away from inefficient providers. Gap cover could for example, pay for a shortfall when a member has not used a DSP. This affects the medical scheme's ability to influence their members' behaviour and to negotiate lower tariffs on the basis that they would channel members to specified providers. It may also incentivise providers to over service and/or increase their fees because payment of their fees is guaranteed beyond that of the medical scheme rate.

Hospital cash plans

307. Hospital cash plans are policies that pay a stated benefit on hospitalisation. The insurer will pay the patient a pre-specified amount per day spent in hospital after the patient has spent a stipulated number of days in hospital, for instance two or three days. Anyone can purchase a hospital cash plan regardless of whether or not you belong to a medical scheme. The level of cover is unrelated to the cost of treatment and the insurer pays the claims to the policy holder rather than the provider. The demarcation regulations deliberately describe the policy as non-medical expense cover to clarify that the insurer may not pay benefits to the provider of the health service directly.

308. Another area that the demarcation regulations do not adequately address is a concern that hospital cash plans may increase the prevalence of fraud. This can occur when patients collude with doctors to stay in hospital longer so that the patient can claim from the insurer.

309. The inquiry is of the view that product and marketing disclosure requirements should require insurers selling hospital cash plans to disclose that hospital cash plans are for non-medical expenses, and that the consumer or their medical scheme is liable for the medical expense. In addition, greater collaboration between insurers and medical schemes is necessary to detect and combat fraud.

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180. The definition of underwriting on a group basis refers to risks under a policy forming part of a product line and how such risks must be rated based on a group of people and not individuals. An insurer could use a different underwriting basis for, as an example, different employer groups. This approach would be consistent with closed schemes that currently operate in the medical scheme environment. See https://www.fsb.co.za/Departments/insurance/Documents/2017%2005%2018%20DEMARCATION%20REGULATIONS%20FAQ%20v2.pdf accessed on 22 March 2018.
181. Financial Services Board, Frequently asked questions located https://www.fsb.co.za/Departments/insurance/Documents/2017%2005%2018%20DEMARCATION%20REGULATIONS%20FAQ%20v2.pdf accessed on 22 March 2018.
182. Ethnic or social origins, sexual orientation, pregnancy, disability and state of health or on any similar grounds.
183. Discovery Health submission to the Health Market Inquiry, dated 17 November 2016, p 281.
184. The HMI has heard that some insurers exclude payments for PMBs in their gap cover products.

Primary health plans

310. Primary health plans provide limited medical service benefits (often to employee groups or bargaining councils) including general practitioner visits, acute and chronic medication, some emergency medical care, dentistry and optometry. They are not required to cover PMBs. These policies target low income earners who cannot afford medical scheme products.

311. The demarcation regulations exclude primary health plans, which means that they meet the definition of business of a medical scheme. The Minister of Health requested that the CMS grant a two year exemption from the MSA for primary health plans, subject to certain conditions, while the national DoH leads further research into the development of a low cost benefit option (LCBO) guideline. The national DoH envisages that the existing primary healthcare plans will transition into the LCBO framework once finalised. They will then fall under the scrutiny of the CMS.

312. In March 2017, the CMS issued a framework for the exemption of providers of indemnity products from the provisions of the MSA. Insurers are be able to sell primary healthcare plans for two years with effect from April 2017. After April 2019, whether a LCBO exists or not, primary health plans will no longer be sold, unless the CMS grants a further exemption. The LCBOs work is also linked to the work on the National Health Insurance (NHI).

313. The inquiry found that there is a lack of clarity amongst consumers over the difference between medical scheme products and primary health plans. Consumers may purchase primary health plans with the expectation that these policies provide similar benefits to a medical scheme product, for a cheaper price.

CONCLUSION ON DEMARCATION REGULATIONS

314. Even though the inquiry recognises the concerns with health insurance products such as gap cover and hospital cash plans, as highlighted above, it is of the view that addressing the larger structural problems in the market may lessen the need for health insurance products in their current state.

Part 2:

Medical scheme administrators and managed care organisations (MCOs)

INTRODUCTION

315. Administrators compete for medical scheme business in two markets. Firstly administrators compete to provide administration services to medical schemes. Secondly, where the administrator has the relevant accreditation, they compete with independent MCOs to provide managed care services to medical schemes. This part of the chapter will start with a review of the administration market followed by a review of managed care. Where relevant, an assessment of the interaction between both of these markets is included. In this part of the chapter, the inquiry investigates whether competition in the administrators/ MCOs market works satisfactorily to the benefit of the medical scheme member.

316. Medical schemes, either directly or through their administrators, buy healthcare products and services on behalf of their members. They therefore interact with providers - facilities and practitioners and their representatives. Thus, we assess competition between funders when buying healthcare products and services (the upstream market). We also assess whether funders pass on the benefits accrued from the upstream market to the consumer. Unlike medical schemes, medical schemes administrators/MCOs are for-profit entities. Administrators will therefore not only serve consumers, the medical schemes, but will also pass on the benefits of their efficiency to their shareholders.

HMI APPROACH TO THE ANALYSIS OF MEDICAL SCHEMES ADMINISTRATORS/MCOS

317. The HMI's analysis of the medical schemes administrator market proceeds as follows:

318. In order to assess market power, the inquiry defined the market for administrators, assessed the level of concentration and changes over time, calculated profitability levels of the three largest administrators, assessed the degree to which innovative

entry and or expansion is a feature, and considered the impact of cross ownership and directorship.

319. How administrators compete was then assessed by looking at the level and extent to which medical schemes switch between administrators. When deciding on which administrator to use, medical schemes consider the cost implications for their members. This includes the non-healthcare costs (administration fees) as well as the healthcare costs. In this regard, we look at the extent to which there are economies of scale in the market and the role administrators play in determining tariffs.

MARKET DEFINITION FOR MEDICAL SCHEME ADMINISTRATORS

PRODUCT MARKET

320. Medical schemes, whether open or restricted, may elect to conduct all their administration functions in-house and are therefore known as not-for-profit, self-administered medical schemes. Alternatively, medical schemes may choose to contract with a third-party administrator to perform a set of administrative functions for a stipulated fee. These third-party administrators are for-profit companies.

321. The key question to address in the assessment of the medical scheme administrator product market is whether third party administrators and self-administered medical schemes compete, and therefore constitute a broad single market, or whether they form two separate markets. The inquiry also considered the services third party administrators provide to their open and restricted medical scheme clients.

KEY PROVISIONS OF THE MEDICAL SCHEMES ACT

322. Third-party administrators and self-administered medical schemes perform a set of administrative duties to ensure the functioning of the medical scheme.

323. In the MSA, the definition of "administrator" includes self-administered medical schemes. Part B of Section 17 of the MSA sets out the accreditation criteria for third party administrators of medical schemes. The purpose of accrediting administrators is to ensure that applicants have the necessary infrastructure and are financially sound. Self-administered medical schemes must maintain the same standard of administration as third-party administrators.

CHARACTERISTICS OF THE PRODUCT

324. Irrespective of being third-party administered or self-administered, administrators perform the same duties for both open and restricted schemes such as:

    324.1. maintaining membership records;

    324.2. contribution management;

    324.3. claims management;

    324.4. financial management reporting;

    324.5. information management; and

    324.6. data control and customer service.

325. In addition, they may provide, mainly to open medical schemes, marketing and distribution services to attract members to the medical scheme(s) under their administration.

326. Third-party administrators may perform either a full basket of administration services or a selection of services to the medical scheme, regardless of whether the medical scheme is open or restricted. DHMS is an example of a medical scheme that contracts with Discovery Health for the full range of administration services.[185] Alternatively, a medical scheme might decide to perform some administration functions in-house and/or to contract with more than one administrator. For example, GEMS has administration contracts with Medscheme and Metropolitan and, in addition, conducts its own tariff negotiations with healthcare providers.[186]

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185. Discovery Health Submission to the Competition Commission Market Inquiry into the Private Health Sector, 17 November 2014, p 180.
186. Transcript from Public Hearing held at Cape Town International Convention Centre Cape Town, 01 March 2016, Government Employees Medical Scheme, p 230.

REVIEW OF PREVIOUS TRIBUNAL CASES ON MARKET DEFINITION COMPETITION BETWEEN ADMINISTRATORS

327. The HMI considered previous Competition Commission and Competition Tribunal cases.

328. In the Momentum/African Life Health merger, the Tribunal noted that administrators compete for beneficiaries of the medical schemes they administer. The quality of an administrator's services make it attractive or not to a medical scheme. The Tribunal also found switching from self-administration to outsourced administration, and vice versa, was possible. In the Momentum/ Metropolitan merger, the Tribunal noted that medical schemes switched from being third party administered to being self-administered. The Tribunal therefore defined the administrator market broadly, inclusive of both third party and self-administered medical schemes.[187]

VIEWS EXPRESSED IN STAKEHOLDERS' SUBMISSIONS

329. Stakeholders are of the view that medical schemes can switch between third-party administration and self-administration.[188]

330. Discovery Health's submission states that third party administrators compete to provide administration services for both open and restricted medical schemes. Discovery Health identified three differences in administration between open and restricted medical schemes. Firstly, most restricted medical schemes require limited marketing and distribution services. Secondly, payroll administration is often simpler for restricted medical schemes compared to open medical schemes. Thirdly, open medical schemes typically have greater challenges related to claims and fraud risk management than restricted schemes.[189]

331. The CMS stated that the main difference in the services administrators provide to open and restricted schemes is likely to be in relation to schemes benefit designs and whether the scheme contracts with brokers or not. [190]

CONCLUSION ON PRODUCT MARKET

332. There are important similarities between the functions which self-administered medical schemes and third party administrators perform. While there are some differences in the services that administrators provide to their open and restricted medical scheme clients, there are clear overlaps. Therefore, the inquiry defines the product market for medical scheme administration to be inclusive of third party and self-administration.

GEOGRAPHIC MARKET

333. The administration business is typically a service business which relies on a sophisticated IT platform to process claims, record and maintain membership records, member benefit limitations and conditions, and manage the contribution billing function (such as allocation of contributions).[191] In addition, a customer service call centre is vital to the administration business. Given the nature of the business, administrators are not limited geographically to providing services to their medical scheme clients.

334. In the Momentum and Bonheur 94 General Trading merger, the Tribunal found that the market for medical scheme administration services is national.[192] The Tribunal adopted this definition in the Momentum and African

187. Momentum Group Limited/ African Life Health (Pty) Ltd (2005) Case No 87/LM/Sep05
188. Fedhealth Medical Scheme First Submission to the Market Inquiry into the Private Healthcare Sector, 31 October 2014, p 7.
189. Discovery Health Submission to the Competition Commission Market Inquiry into the Private Health Sector, 17 November 2014, p 180-181.
190. Council for Medical Schemes. Comment to the HMI: Market definition for financing of healthcare and medical schemes claims data-descriptive statistics publication, 12 December 2016.
191. Council for Medical Schemes. Comment to the HMI: Market definition for financing of healthcare and medical schemes claims data-descriptive statistics publication, 12 December 2016.
192. Momentum Group Limited/ Bonheur 94 General Trading (Pty) Ltd [2004] (Case No 84/LM/Oct04), para 12, p 3.

Life[193] and Momentum and Metropolitan mergers respectively.[194]

335. aking the above into account, the inquiry defines the geographic market for administration services as national.

ADMINISTRATOR MARKET SHARES AND CONCENTRATION

336. The first step in assessing the impact of consolidation on competition and whether any firms have market power is to analyse market share. Within the broader administration market, there are 16 administrators and 14 self-administered medical schemes[195]. Discovery Health is the largest administrator and administers one open (DHMS) and 16 restricted medical schemes[196]. Medscheme Holdings (Medscheme) administers two open (Bonitas and Fedhealth) and 11 restricted medical schemes[197]. There are four registered administrators in MMI Group Ltd - Methealth,(Pty) Ltd (Methealth), Metropolitan Health Corporate (Pty) Ltd (Metropolitan Health), MMI Health (Pty) Ltd (MMI Health and Providence Healthcare Risk Managers (Pty) Ltd (Providence Healthcare). These four administrators provide services to 20 medical schemes of which three are open.[198] The remaining ten third party administrators are relatively small in size and cater for the rest of the medical scheme market that are not self-administered.

337. In order to calculate market share, the inquiry considered the fact that most medical schemes contract with one administrator for all their administration services. However, GEMS has had a joint administrator contract in place since 2012. Medscheme is responsible for its contribution and debt management as well as correspondence services, and Metropolitan Health is responsible for members and claims management services as well as the provision of financial and operational information.

338. Table 5.5 provides the market shares for the administrator market. The CMS uses the number of beneficiaries belonging to medical schemes under administration in its calculation of market share. The first column of Table 5.5 provides the CMS's figures. The CMS includes the GEMS membership for both Medscheme and Metropolitan which means essentially that they count GEMs beneficiaries twice. Counting GEMS beneficiaries twice could lead to confusion and the HMI thus does not agree with this method. As a solution, Medscheme recommends that GEMS is removed from both administrators and is reflected as a standalone entity, or self-administered scheme[199]. The inquiry is of the view that in most cases, this method also does not reflect the true market dynamics. However, the HMI separate GEMS out when looking at tariff negotiations. This is because GEMS conducts its own tariff negotiations and therefore GEMS cannot be fairly allocated to either Medscheme or Metropolitan Health.

339. The second column in Table 5.5 provides the HMI's market shares that are based on gross contribution income (GCI). The HMI assumes that the fees that GEMS pays to Metropolitan Health and Medscheme are representative of the extent of services it receives from both, and as such, allows a way of calculating a representative

193. Momentum Group Limited/ African Life Health (Pty) Ltd [2005] (Case No 87/LM/Sep05), para 10, p 3.
194. Metropolitan Holdings Limited/Momentum Group Limited [2010] (Case No. 41/LM/Jul10), para 21, p 7.
195. Council for Medical Schemes Annual Report 2016/2017 Annexure U.
196. Council for Medical Schemes Annual Report 2016/2017 Annexure U. This includes the University of the Witwatersrand, Johannesburg Staff Medical Aid Fund. However, this medical scheme has since merged with DHMS.
197. Council for Medical Schemes Annual Report 2016/2017 Annexure U. This does not include LMS Medical Scheme that has since merged with Bonitas. It also does not include Glencore Medical Scheme as it changed administrators to Discovery Health.
198. Council for Medical Schemes Annual Report 2016/2017. Providence administers two of the three open medical schemes, Medimed Medical Scheme and Suremed Health.
199. Medscheme Submission to the Competition Commission Market Inquiry into the Private Healthcare sector, p 63.

market share. Table 5.5 also distinguishes between Metropolitan Health/Methealth, MMI Health and then provides the market shares for the MMI Group which includes Metropolitan Health, Methealth, MMI Health and Providence Healthcare.

TABLE 5.5: MARKET SHARES FOR MEDICAL SCHEME ADMINISTRATORS

	CMS market shares[200]	GCI
Discovery Health	30.9%	39,4%
Medscheme	32.6%	36.7%
Metropolitan Health and Methealth	18.4%	1.7%
MMI Health	3.1%	3.0%
MMI Group (Metropolitan Health, Methealth, MMI Health and Providence Healthcare)		5.1%
Self-administered medical schemes	8.4%	9.8%
Remaining administrators	6.6%	9% [201]

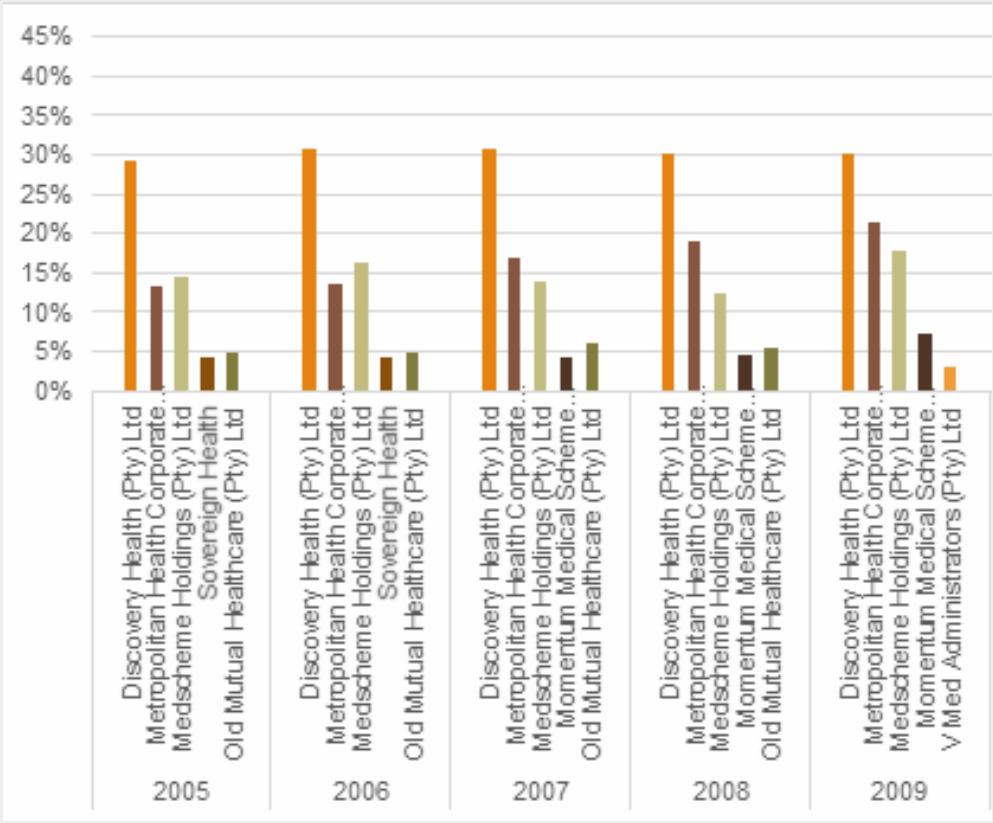
Source: Annexures to the Annual Report of the Council of Medical Schemes 2016/2017.

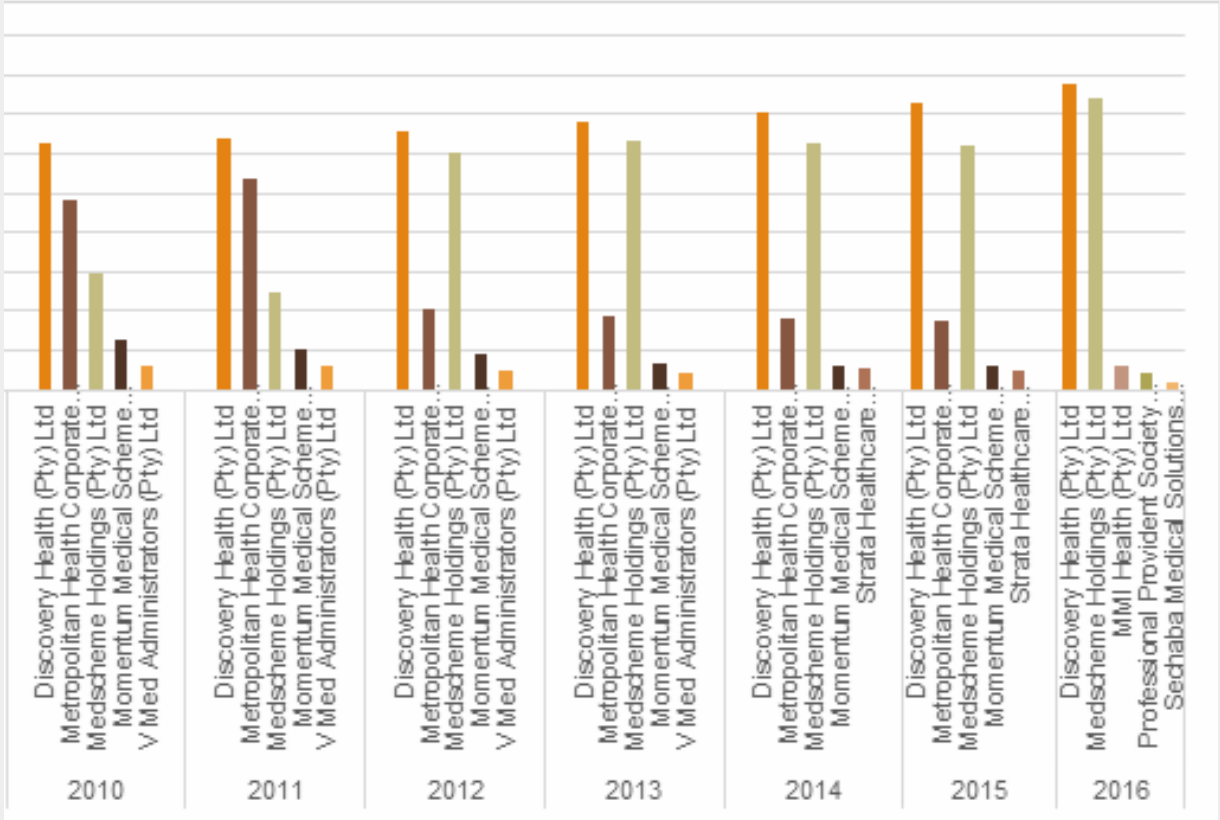
340. Table 5.5 illustrates that the administrator market is highly concentrated with two administrators, Discovery Health and Medscheme, accounting for 76.1% of the market (based on GCI). The MMI Group is the third largest, but far behind at 5.1%. The 14 self-administered medical schemes account for 9.8% of the market based on GCI. None of the market shares are not above the stipulated 45% required to show outright dominance. However, based on the GCI method, both Discovery Health and Medscheme are above the 35% threshold and may thus be dominant.

341. Figure 5.8 denotes the market shares of the top five administrators in the administrator market calculated using GCI.[202] GEMS has, over the years, changed the services that its administrators, Medscheme and Metropolitan Health's, offer. This could explain the decrease in Metropolitan Health's market share from 27,0% in 2011 to 1.2% in 2016 and the increase in Medscheme's market share from 12,5% to 36.7% in the same period[203]. The decline in Metropolitan Health's market shares is also due to two large medical schemes, Polmed and Bankmed, switching their administration businesses to Medscheme and Discovery Health respectively.

200. Council for Medical Schemes Annual report 2016/2017 p 223
201. Remaining administrators for GCI calculation excludes Providence Healthcare as this is included in the MMI Group figure.
202. In this figure, Metropolitan, Methealth, MMI and Providence Health are represented separately.
203. Council for Medical Schemes Annual Report Annexures for 2011/2012 and 2016/2017

FIGURE.5.8: MARKET SHARES FOR ADMINISTRATORS (GCI) FOR THE PERIOD 2005-2016





Source: Annexures to the Annual Report of the Council of Medical Schemes 2010-2011 to 2016-2017.

342. When looking at a longer time period, the medical scheme administration services sector has seen significant and rapid consolidation between 2005 and 2016 – a trend that is inter-related with consolidation of the market for medical schemes. Over the period 2005 to 2016, the top four administrators went from 57% of the total market (by beneficiary) to 81% (Table 5.6)

TABLE 5.6: MEDICAL SCHEME ADMINISTRATOR CONSOLIDATION FROM 2005 TO 2016

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Discovery Health (Pty) Ltd	29,1%	30,7%	30,7%	30,1%	30,1%	31,0%	31,8%	32,8%	34,1%	35,3%	36,5%	39,0%
Medscheme Holdings (Pty) Ltd	14,6%	16,2%	13,9%	12,3%	17,7%	14,7%	12,5%	30,2%	31,6%	31,3%	31,0%	37,0%
Metropolitan Health Corporate (Pty) Ltd	13,3%	13,6%	16,9%	19,0%	21,5%	24,3%	27,0%	10,3%	9,4%	9,0%	8,9%	1,2%
MMI Health (Pty) Ltd			4,2%	4,5%	7,2%	6,4%	5,3%	4,4%	3,5%	3,0%	3,0%	
Providence Healthcare Risk Managers (Pty) Ltd	0,2%	0,7%	0,6%	0,6%	0,6%	0,7%	0,6%	0,6%	0,6%	0,5%	0,4%	0,0%
METHEALTH (Pty) Ltd				0,0%	0,0%	0,0%	0,5%	0,4%	0,6%	0,6%	0,6%	0,5%
MMI Group						31,3%	33,4%	15,7%	14,0%	13,1%	12,9%	5,0%
Sub-total	57,2%	61,2%	66,3%	66,5%	77,1%	77,0%	77,7%	78,8%	79,8%	79,7%	80,3%	81,0%
All other administrators	42,8%	38,8%	33,7%	33,5%	22,9%	23,0%	22,3%	21,2%	20,2%	20,3%	19,7%	19,0%
Total	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

* From 2010 the figures for Metropolitan Health, MMI Health, Providence Healthcare Risk Managers and Methealth were combined to obtain a total for MMI Group. The sub-total includes Discovery Health (Pty) Ltd, Medscheme Holdings (Pty) Ltd and MMI Group,

*MMI Health changed names from Momentum Medical Scheme Administrators (Pty) Ltd in 2016.

Source: Annexures to the Annual Report of the Council of Medical Schemes 2005-2016.

343. Given that three administrators have a significantly large part of the market, the HMI conducted an HHI to assess the level of concentration and how this has changed over time. Table 5.7 provides the HHI for the administration market using GCI.

TABLE 5.7: HHI FOR MEDICAL SCHEME ADMINISTRATORS (BASED ON GCI)

2005	1460,65
2006	1594,86
2007	1615,01
2008	1842,77
2009	1842,77
2010	1941,74
2011	2045,65
2012	2232,34
2013	2375,49
2014	2396,50
2015	2454,15
2016	3019,03

CMS figures and HMI calculations[204]

BARRIERS TO ENTRY AND EXPANSION

344. By creating and reinforcing the market power of large firms, barriers to entry tend to lead to higher prices, lower levels of innovation and a less competitive market. They may thus prevent a medical scheme administrator from competing and expanding in a way that will improve the overall value of the product offering to its contracted medical scheme and consumer. As with the medical schemes market, the HMI has observed high market shares for some administrators and high concentration levels for the medical schemes administrator market.

345. There has not been any sustainable and significant entry into the medical scheme administrator market in over a decade. Strata Healthcare Management (Pty) Ltd (Strata) entered the market in 2013 as a spin off from the self-administered medical scheme, Medihelp. It started providing administration services to Medihelp in 2014 and lost CMS accreditation in 2015. It has since exited the market with Medihelp returning to self-administration. Similarly, V-Med Administrators (Pty) Ltd (V-med) entered the market in 2008 but lost its largest medical scheme client, Liberty Medical Scheme, to Medscheme in 2016.[205] V-med continues to provide administration services to a small restricted medical scheme, Libcare Medical Scheme

REGULATIONS GOVERNING ENTRY AND EXPANSION IN THE MEDICAL SCHEMES MARKET

346. All administrators require accreditation from the CMS as set out in the MSA.

347. Sections 15J and 18(2)d of the MSA state that a medical scheme can terminate its

204. The HMI calculated the HHI figures using market shares based on GCI for all administrators
205. Following the move, Liberty Medical Scheme changed its name to LMS and has since merged with Bonitas

administration contract by giving three months' notice.

SUMMARY OF STAKEHOLDERS' SUBMISSIONS

348. Several administrators testified that accreditation is difficult, and creates a barrier for new entrants. To be accredited, administrators need to have proven systems and processes in place. A new entrant which does not have an affiliation to a pre-existing medical scheme cannot prove that it has systems and processes in place. Even once an administrator has accreditation, the MSA requirements are onerous for the administrators.

349. In addition, stakeholders believe that the three months' notice period to terminate the contract creates uncertainty surrounding the long-term commitment from medical schemes. Uncertainty of income deters investors who are reluctant to invest in new administrators, or those wishing to expand if there is no firm commitment of a sustainable source of income from a medical scheme.

350. Administrators stated that a new entrant requires significant capital to purchase the relevant technology and systems such as an IT platform to process claims, and a highly skilled and expensive workforce including IT, clinical, actuarial, financial, and legal personnel and management.

351. Furthermore new entrants or small administrators which are not affiliated to insurers and large corporate groups may not be able to offer a cluster of services to their medical schemes, including managed care services, technological support, other insurance products, as well as wellness and loyalty programmes. They will thus be unable to challenge incumbent administrators. These initiatives also require capital investment, volume and industry knowledge in order to be able to negotiate a competitive deal.

352. Another barrier to entry is that large administrators can capture their medical schemes members by cross-selling other insurance products, often through their relationships with brokers. Medical schemes that do not belong to large conglomerates battle to attract broker clients to the medical schemes under their administration.[206] Linked to this, members with a bundle of products from one group perceive the switching costs for their medical scheme products to be high. Medical schemes and administrators stated that administrators use wellness programmes to attract and retain members on a particular scheme. [207]

353. Administrators argued that the stagnant growth observed in the medical schemes market as well as its consolidation through mergers limit their expansion. Administrators attributed the stagnant growth of medical scheme market to affordability of medical scheme products, in particular the absence of low cost medical cover, as well as the absence of a risk equalisation fund and mandatory membership.

354. Some administrators state that large administrators are in a position to offer their administration services at lower rates, and thus benefit from economies of scale. Large administrators are also able to bargain for lower tariffs. Smaller administrators are unable to achieve lower tariffs and battle to win the business of medical schemes when they are competing for tenders. There is also uncertainty about whether the administrator can negotiate collectively on behalf of non-competing medical schemes.

355. Administrators may set up networks for their medical scheme clients. However, smaller, less sophisticated administrators

206. Submission of Profmed Medical Scheme to the Panel of the Inquiry into the Private Health Sector, p 27 and Medscheme Submission to the Competition Commission Market Inquiry into the Private Healthcare sector, p 69.
207. Medscheme Submission to the Competition Commission Market Inquiry into the Private Healthcare sector, p 65, Fedhealth Medical Scheme First Submission to the Market Inquiry into the Private Healthcare Sector, 31 October 2014, p 93.
208. Submission of Profmed Medical Scheme to the Panel of the Inquiry into the Private Health Sector, p 6. Bestmed in Accordance with the Guidelines for Participation in the market inquiry into the private healthcare sector issued on 1 August, submitted on 31 October 2014, p 80.

or self-administered medical schemes may be less successful at establishing these networks.[208]

356. Administrators stated that the medical schemes tender process is often not transparent and this hampers their ability to compete which in turn makes expansion difficult.

HMI ASSESSMENT OF ENTRY AND EXPANSION

Regulatory requirements

357. The regulatory requirements for accreditation of medical schemes administrators may make it challenging for potential new entrants to enter the market. They are, however, necessary to protect the medical schemes and ultimately medical scheme members. The regulations do not prevent expansion in the market, although medical schemes' ability to switch administrators may make administrators cautious about long-term investments.

Natural or intrinsic barriers

358. The HMI agrees with stakeholders that the administration business requires significant start-up capital. As discussed in the section on profitability analysis, administrators' main capital employed are intangibles such as IT systems, and investments in the workforce, brand name and reputation, and intellectual property. This means that there are significant sunk costs that go into establishing and running an administration business. In addition, the large incumbents have an element of first mover advantage where they enjoy brand and customer loyalty that they have invested in and developed over many years. Both the large sunk costs and the incumbents' first mover advantage may deter potential new entrants.

359. Low switching costs are on the whole good for competition as they allow new entrants to attract clients away from the incumbent. The HMI found that switching costs are relatively low as many medical schemes (and particularly restricted medical schemes) can and do change administrators. (The switching of administrators is discussed further in this chapter). New and smaller incumbent medical scheme administrators may be able to attract medical scheme clients if they are competitive. However, medical schemes cannot assess their past performance. Therefore it is unlikely that a medical scheme would switch to a start-up firm, unless there was already a connection to the start-up (as in the case of Medihelp, Strata, and Liberty, and V-med, although neither of these have really been successful).

360. Any new entrant into the market would need to demonstrate to potential medical scheme clients that they have the specific knowledge of the industry, skilled actuaries and bargaining power and capabilities. The HMI agrees with stakeholders that there are economies of scale in the administrator market, even if these benefits do not always translate into lower administration fees in the administrator market. This is particularly evident in negotiations between funders and providers. Discovery Health, which negotiates collectively on behalf of all of its schemes, is able to achieve better tariff outcomes. The direct impact of favourable tariff outcomes on medical schemes healthcare expenditure could be a major disincentive for a medical scheme to contract with a new or smaller administrator which lacks these specialised skills and capabilities.

361. Third party administrators also have managed care accreditation. These firms sell both the managed care and administration services to medical schemes as a bundle.

Behavioural or strategic barriers

362. Behavioural or strategic barriers stem from business practices that protect the business of the incumbent against potential entry and expansion in the market.

363. It is beneficial for competition for administrators to invest in improving the service they provide their consumers, the medical schemes and their members. Branding can play an important role in influencing consumer behaviour. Branding can be pro-competitive as it allows consumers to associate a particular product or service with an established standard. On the other hand, where the quality of the particular product or service is not transparent to the consumer and

comparative information is scarce, branding may hamper competition.

364. The large administrators have been in business since the late 1990s. As discussed in the Chapter titled "Industry Overview", these administrators form part of groups offering related products and/ or financial services. These companies and groups sell a cluster of products with well-known brands. Significant investments are made to promote the various products and brand names. Unless a potential new entrant or small administrator is linked to a large corporate, it will have to overcome the barrier that its product has no (positive) connotation to existing products or brand names.

365. The HMI agrees with stakeholders' assertions that large administrators benefit from their relationships with both tied and independent brokers. In addition, large administrators (for instance Discovery Health and MMI Health) also benefit from belonging to corporations that also have wellness programmes in the group of companies. These administrators use wellness programmes strategically as a way to attract medical schemes as well as members to the schemes they administer. In some cases the administrators, as well as other financial services companies in the group, pay money to the wellness programs, subsidise these programmes. They may allow medical schemes and administrators to attract young and healthy members and prevent members from switching to other open medical schemes.

LOYALTY AND WELLNESS PROGRAMMES

366. Loyalty and wellness programmes are distinct programmes offering specific benefits to members. Wellness programmes offer members and/or beneficiaries a direct medical benefit such as free medical screening, HIV programmes and counselling. Loyalty programmes, on the other hand, reward members for frequent store purchases or provide discounts on purchases at major retailers, movie tickets and car rentals.

367. For some medical schemes the wellness component may form part of the benefit package offered to members who do not pay a separate contribution fee to obtain these benefits. The wellness programme may also be combined with the loyalty programme. In such instances these programmes are voluntary and members can join the programme by paying a membership fee separate to their monthly medical scheme contribution. The separation between the medical scheme and wellness/ loyalty products are necessary as the MSA precludes medical schemes from incurring any expenditure that is not healthcare-related. Section 26(5) provides that no payment in whatever form shall be made by a medical scheme directly or indirectly to any person as a dividend, rebate or bonus of any kind whatsoever.

368. The HMI considered these programmes in so far as they affect competition amongst medical schemes and medical schemes administrators, and inn particular, whether medical schemes and their administrators use loyalty and wellness programmes as a strategy to risk select. Detailed analysis is provided in Annexure 5.5 titled "Loyalty and wellness programmes", where a brief description of relevant wellness and loyalty programmes is provided, as well as a synopsis of the stakeholders' and HMI's findings on the impact of wellness and loyalty programmes on medical schemes and medical schemes administrators. HMI's key findings on loyalty and wellness programmes are summarised below.

HMI'S KEY FINDINGS ON WELLNESS AND LOYALTY PROGRAMMES

369. Overall, open medical schemes with a loyalty and wellness programme have experienced an increase in membership growth, but not a younger age profile. However, experiences of individual wellness programmes differ and some programmes may be more successful at attracting younger, healthier members than others.

370. Administrators and other companies in the group pay additional funds (either as fees or in the form of intercompany transfers) to loyalty and wellness programmes. The lack of transparency surrounding the funding of these programmes may allow medical schemes and their administrators to circumvent regulations through increasing

the commission brokers receive. This may provide them with an unfair competitive advantage in the market.

PROFITABILITY ANALYSIS

371. A profitability analysis provides a preliminary indication of the competitive process and whether or not medical scheme administrators earn profits that differ from a normal return on capital that we would expect in a competitive market. Medical scheme administrators with a substantial market share that persistently earn excess economic profits over a prolonged period of time, without the realistic threat of competitive entry, may have a degree of market power and be able to charge prices above the competitive level.

372. The HMI conducted a profitability analysis on the three largest private medical scheme administrators in South Africa, namely Discovery Health, Medscheme and Metropolitan Health.[209] These three largest administrators in South Africa account for approximately 80% of the administrator market.[210] For purposes of this section, these three largest administrators will be referred to as the "the relevant firms."

373. Given that the relevant firms account for control the bulk of the market, they may potentially leverage their ability to control prices, volume and quality of the services provided by hospitals and doctors. However, they may also use their market power, if any, to maximise their administration and managed care fees as well as other fees they charge the schemes and its beneficiaries under their administration to maximise their income and profits.

374. A time period of analysis from 2006 to 2015 was deemed appropriate. The HMI notes that in 2016 Metropolitan Health lost two large restricted medical schemes, Polmed and Bankmed, to Medscheme and Discovery Health respectively. The loss of these two schemes decreased its market share significantly, while increasing the size of the other two's share. The HMI is aware that the relevant firms have different financial year ends and is of the view that this will not undermine the interpretive value of the analysis.

HMI's approach

375. In September 2015, the HMI published a paper detailing the proposed approach to our profitability analysis (methodology paper).[211] This paper set out the proposed methodology for assessing profitability, namely the return on capital employed (ROCE) and the truncated internal rate of return (TIRR). It also set out the proposed methodology for estimating an appropriate cost of capital for entities providing healthcare services in South Africa, the weighted average cost of capital (WACC).

376. On the HMI's request, all relevant firms submitted profitability analyses following the methodological principles presented in the HMI's methodology paper. Based on submissions received and meetings held with the relevant firms, there was no consistent preferred methodology between the ROCE and the TIRR. However, all of the relevant firms preferred an analysis based on operating income or margins earned rather than on returns earned on capital employed and, as such, recommended that the HMI conducts a return on sales (ROS) analysis. The HMI agreed to this.

377. During the process of conducting the ROCE analysis, the HMI started with the submissions of profitability analysis by the relevant firms. The HMI then made adjustments based on principles and criteria

209. The 'Health Market Inquiry's Profitability Analysis for Administrators' report will be published in due course as a standalone report. Since much of the information contained in the profitability analysis is subject to confidentiality claims, the Inquiry is currently engaging with the relevant firms on the non-confidential versions of the detailed profitability analysis to allow for meaningful engagement on the results with the public before publication of the final recommendations.
210. Market shares calculated on GCI calculations. Metropolitan had significantly higher share of the market based on the GCI when the HMI started the profitability analysis compared to what it has now.
211. Commission Methodology Paper titled Market Inquiry into the Private Healthcare Sector Profitability Analysis, September 2015.

set out in the HMI methodology paper. As such, the HMI adjusted the accounting information utilised, i.e. to the values of capital employed to reflect economic rather than accounting costs. The HMI also made adjustments to ensure consistency across relevant firms.

378. The ROCEs of the individual relevant firms were compared to the relevant firms' WACC. WACC is a combination of the cost of equity and the cost of debt considering that a firm's assets are financed by either debt or equity or a combination of both. WACC is obtained by adding the cost of equity and the cost of debt, i.e. the after-tax average interest for all of the firm's debt. The HMI used the capital asset pricing model (CAPM) to calculate the cost of equity which entails determining the fair value of an investment based on the time value of money and the risk incurred.

379. The concept of ROCE as a profitability measure is relatively undisputed when dealing with firms whose capital base is mostly tangible. However, ROCE has certain shortcomings in the context of an intangible asset intensive industry. Intangible assets are assets that the firm has acquired or developed with the expectation that these assets will generate economic benefits for the firm over time. With companies like administrators, the main category of capital employed are intangibles such as brand name and reputation, IT systems, intellectual property and investments in the workforce. They do not have physical assets as such.

380. In order to provide clarity over intangible assets, the methodology paper sets out the criteria to assess whether the intangible assets should be included in ROCE and TIRR calculations. The criteria states that the valuation of qualifying intangible assets must be based on the costs incurred to develop or acquire the intangible asset. However, these costs are not always easy to identify

381. Where possible, the inquiry has made every effort to incorporate intangible assets into the capital employed base in a consistent manner across the relevant firms. After discussions with the them and after careful consideration, the HMI accepted computer software and development costs as well as work force in place (WFIP) to be intangible assets for purposes of this inquiry. Some intangible assets are difficult, if not impossible, to positively identify and fairly value. This is complicated further as in some cases the firms did not explicitly and separately account for these in their respective accounting costs. Where this was the case, we excluded these assets. We also excluded intangible assets if their valuation methodology relied on the income earned from the intangible assets. These incomes do potentially capture possible excess profits and therefore would introduce a circularity which is not appropriate for the purposes of this profitability analysis.

382. The inquiry notes that leaving some intangible assets out does potentially raise the profitability results. However, the HMI followed the same methodology for all three of the relevant firms, so any possible overstatement will be consistent across the results. The inquiry therefore viewed the absolute values of the results of the profitability analyses of all three administrators with a degree of tolerance, to cater for these shortcomings. Furthermore, the inquiry placed greater evidentiary value on the relative rather than the absolute values between the relevant firms.

383. The HMI noted that the competition authorities in the UK have also acknowledged the potential difficulties of reliably measuring return on capital in the context of a market investigation of an industry with a large intangible asset base. In the case of the Statutory Audit Service Market Investigation of 2014 this resulted in the abandonment of a ROCE analysis in favour of a margin analysis. In the more recent Energy Market Investigation of 2016, in particular the investigation of the intangible assets based energy retail supply market, the UK competition authorities declined all

212. see Appendix 9.9 and 9.10 of the final report of the Energy Market investigation of 9 February, 2016.

submissions claiming the ROCE approach to be inappropriate and relied on a ROCE and a complementary margin analysis in this case[212].

384. Given the potential shortcomings related to intangible assets identified above, and considering the suggestions by the relevant firms in this respect, the inquiry has also conducted a ROS analysis despite the fact that the ROS test does not provide for an objective touchstone or criterion to measure the results. The main reason for applying a ROS analysis was to test whether relative results obtained from the ROCE/ TIRR are consistent with the relevant firms preferred method, the ROS.

385. The main emphasis of the HMI's profitability analysis for administrators therefore has been on the comparison of the findings arrived at using a consistent approach across the relevant firms. A consistent comparison amongst the relevant firms allows us to gain a robust view of the financial results of the relevant firms, both over time and relative to one another. It gave us a valuable indication of whether and how well competition in and between administrators works, in combination with and in the context of the broader competitive analyses of the markets concerned.

386. The summary of results of the profitability analyses are outlined and discussed below, and conclusions on the firms' profitability provided.

TABLE 5.8: RETURN ON SALES (%)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Avg.
Discovery Health	26.2	28.9	32.2	33.4	36.2	34.6	36.1	36.1	33.8	32.4	33.0
Medscheme	-12.2	7.1	8.6	11.2	10.3	12.4	14.4	12.5	12.5	12.3	8.9
Metropolitan	18.2	15.9	18.2	17.2	15.0	20.5	17.7	11.6	7.6	12.1	15.4

TABLE 5.9: RETURN ON CAPITAL EMPLOYED (%)

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Avg.
Discovery Haalth	Discovery's calculation	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂
	HMI's calculation	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂
	HMI- WFIP scenario	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂
	HMI- Cash and cash equivalent scenario	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Avg.
Discovery Haalth	Medscheme's calculation	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂
	*(avg. '07-'15)	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂
	HMI's Calculation (Smoothed, avg. '06- '15)	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂
	HMI's calculation (unsmoothed avg. '07-'15)	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂
	HMI-WFIP scenario (avg. '07-'15)	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂
Discovery Haalth	HMI- cash and cash equivalent scenario (avg. '07-'15)	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂
	Metropolitan's calculations	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂
	HMI's calculations	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂
	HMI-WFIP scenario	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂
	HMI- cash and cash equivalent scenario	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂	✂

Findings of the profitability analyses

387. In this section, the inquiry sets out the comparison of the ROCE and TIRR for the relevant firms, with the related cost of capital, WACC. The results of the ROS analyses are also presented.

388. The results of the profitability analysis show that the relevant firms achieved average ROCEs over the relevant period of ✂ for Discovery Health, ✂ for Medscheme and ✂ for Metropolitan Health. The HMI compared these figures to the benchmark of an average WACC of 20.9% for the same period. Even looking with a degree of tolerance, Discovery Health's result is very high, and is a multiple of its next best competitors.

389. The average TIRRs for the relevant firms were ✂ for Discovery Health, ✂ for Medscheme and ✂ for Metropolitan Health. This amounts to the TIRR again being significantly above the WACC for Discovery Health, while being moderately, that is ✂ % and ✂ % over the WACC for Medscheme and Metropolitan Health respectively. Bear in mind that the TIRR places more weighting on the earlier years of the relevant period while the ROCE places equal weighting on each of the years of the relevant period. The ROCE and TIRR offer the same sequence in terms of profitability across the relevant firms and the same order of magnitude of returns over and above WACC.

390. The HMI performed sensitivity analyses on two of the contested areas of its profitability analyses. The relevant firms stated that net working capital should include cash and cash equivalents. In line with the methodology paper, cash and cash equivalents and the related return on capital were excluded from the calculation of both capital employed and operating profit. This is because cash is primarily financing in nature. Nevertheless, the HMI has included a sensitivity analysis whereby the average monthly cash and cash equivalents in each period are included in capital employed as part of working capital and the related return, being interest income, is included in the operating profits. The results bring Discovery Health's average ROCE down from ✂% to ✂%, Medscheme from ✂% to ✂% and Metropolitan Health from ✂% to ✂%. This has a significant effect on ROCE results, but still leaves the general picture unaffected with Discovery Health's profitability being a multiple of the next largest administrators.

391. Following contestation by the relevant firms, the HMI conducted a sensitivity analyses on the WFIP, an important category of the intangible asset base of administrators. Theoretically, it must be assumed that the entire workforce of an entity has been lost and needs to be instantaneously replaced. WFIP is valued by calculating the replacement costs avoided by having a pre-existing, trained and fully efficient WFIP rather than incurring the costs to assemble and train an equivalent workforce. The replacement costs were determined per staff level and consisted of recruitment costs, training costs and avoided loss of productivity. The average replacement costs ratio (replacement costs divided by employee costs) used by relevant firms differed. Discovery Health used ✂%, Medscheme ✂% and Metropolitan Health ✂%. The HMI used the relevant firms' estimations of WFIP in our ROCE calculation. We used the full WFIP of Medscheme of ✂% of employee costs. In addition, we did a sensibility analysis using a WFIP ratio of ✂%. In the sensitivity analysis, Discovery Health's ROCE increased from ✂% to ✂%, Medscheme's decreased slightly from ✂% to ✂% and Metropolitan Health results also decreased slightly from ✂% to ✂%.

392. While the results of the sensibility analyses change, they do not throw a significantly different light on the relevant relative values of the analyses.

393. When looking at the ROS, the average ROS for Discovery Health was 33% over the relevant period of June 2006 to June 2015, while Medscheme's ROS was 8.9% and Metropolitan Health was 15.4 % over the same period. Again, ROS analyses results offer the same sequence in terms of margins on sales across the relevant firms, where Discovery Health's average ROSs was significantly higher than the other two. The inquiry did not compare these results to those of listed international comparable companies as the business models of these companies were not considered sufficiently comparable to that of the relevant firms.

394. Over time, there has been a clear upward trend in Discovery Health's ROS results from 26.2 in 2006 to 36.1 in 2013, with 2014 and 2015 showing slightly lower results of around the 10 year average of 33%. Medscheme started off with negative results in 2006, but gradually and consistently improves its ROS to average 8.9% for the 10 year period (11.3% if 2006 is left out of the average). Metropolitan Health realised an average ROS of 15.4 but showed significant lower results over the last three years. Roughly the same pattern can be observed when comparing these results to those of the ROCE across the relevant firms over the years.

395. Discovery Health disagreed with the HMI's methodology for ROS. The inquiry's calculation of ROS that uses only administration revenue in the denominator creates the misleading impression that administrator profit accounts for 33% of total premiums. Furthermore, Discovery

213. Letter from Discovery Health to Justice Sandile Ngcobo on 8 February 2018 p 4

Health argues that that the HMI's approach is incorrect because it ignores the artificial split between the administration business and medical scheme clients[213]. The business operations of administrators are fundamentally linked to the nature of the medical schemes which they administer. [214] Medical schemes that have simple benefits and/or relatively low premiums per member require less intensive and sophisticated administration, while the converse applies to schemes with more operations and richer benefits (and hence higher premiums).

396. Thus, Discovery Health proposes that an accurate measure of ROS for administrators is to divide the administrator profit by the sum of administrator revenue plus scheme premiums. Applying this method Discovery Health calculated a combined ROS estimate of 7.1% for Discovery Health and DHMS for years 2010 to 2014. The HMI notes that Discovery Health only included DHMS in its ROS and not the other medical schemes under its administration Discovery Health compared this to the average ROS of 6,4% for 13 international health insurers over the same period.[215] Discovery Health is of the opinion that the gap in profitability measured by ROS between DH and its competitors is likely to be significantly narrower than the gap measured by the HMI approach.

397. The HMI does not agree with Discovery Health's methodology for the following reasons:

    397.1. DHMS and Discovery Health are separate legal entities where one is for profit and the other is not for profit motive.

    397.2. DHMS carries the liability because the medical scheme, and not the administrator, is responsible for members' healthcare claims.

    397.3. DHMS is responsible for holding Discovery Health to account based on the requirements set out in their contract. Medical scheme trustees' responsibilities include negotiating administration fees (which is the main source of profit for the administrator). Including the medical schemes premiums in the administrator profitability analysis will blur these clear and important lines of separation which have a direct impact on the administrator's profit levels.

    397.4. Finally, the HMI did not compare South African administrators' profits to international companies because the administrator business models differ widely.

Conclusion on profitability analysis

398. As mentioned in Chapter 4, generally speaking, the results of profitability analyses provide a useful indication of possible exertion of market power by firms. Persistent returns above those considered normal for that activity could indicate that competition is not operating effectively and may be indicative of possible exertion of market power. However, as explained earlier, persistent excessive profits are not evidence of market power per se. Persistent high profits may be related to factors other than market power such as exclusive access to efficient resources, and superior innovativeness under protection of property rights. Conversely, low profitability may not necessarily signal lack of market power. An inefficient firm may exert market power but high costs arising from inefficiencies may depress the profitability of the firm.[216]

399. The inquiry notes that the relevant firms achieved average ROSs over the relevant period of between 8.9% and 33.0% with the ROS of Discovery Health significantly above the other relevant firms.

400. The inquiry also notes that the ROCEs calculated by the HMI of ✂% and ✂% for Medscheme and Metropolitan Health respectively are in line with the WACC of 20.9%. Discovery Health is a significant outlier at ✂%. Despite the shortcomings

214. Letter from Discovery Health titled "Profitability Analysis: Discovery Health, Provisional Report" 11 June 2018 p 3.
215. Letter from Discovery Health to Justice Sandile Ngcobo on 8 February 2018 p 5
216. OECD (2011), OECD Best Practice Roundtables in Competition Policy: Excessive Prices, p 63-64.

of the ROCE methodology and the degree of tolerance with which these figures are interpreted, the differences between Discovery Health's results and those of its main South African competitors are significant. This is a similar finding to that observed under the ROS methodology.

401. The degree to which the ROS, ROCE and TIRR of Discovery Health exceeds that of the other relevant firms is considered to be persistent and significant. Discovery Health has highlighted that its greater profitability compared to its competitors is due to a more innovative business model with superior innovation and management. Be that as it may, the HMI is of the view that the observed level of profits for Discovery Health point to a degree of market power on the downstream market. The important question is why market forces aren't correcting the observed profitability levels of Discovery Health down to more competitive levels closer to the costs of capital. Why aren't competitors catching up in terms of performance, thereby forcing Discovery Health to pass on more of the fruits of its alleged superiority to consumers, instead of to shareholders?

CONGLOMERATES AND OWNERSHIP STRUCTURES IN THE ADMINISTRATOR MARKET

402. The HMI assessed the structural relationships between various players in the private healthcare market and how these relationships influence the competitive dynamics and market outcomes. For purposes of this analysis, the HMI looked specifically at Remgro Ltd (Remgro) and Afrocentric Investment Corporation Ltd (Afrocentric). The inquiry selected these two groups because of the scale and scope of their investments in the private healthcare sector. These two firms may allow the groups to influence the commercial and strategic decisions taken by the management of the firms in the conglomerate.

403. Remgro forms part of a complex group of companies that have ownership of both MMI Holdings Ltd (MMI Holdings) and Discovery Ltd. These two companies have shareholdings in medical scheme administrators: Discovery Health (in the Discovery Group) and Metropolitan Health, Methealth, MMI Health and Providence Healthcare within the MMI Group.[217] They are also active in the managed care and broker markets. The Remgro conglomerate also has shareholdings in the facility group, Mediclinic.

404. The Afrocentric group owns the administrator, Medscheme, as well as several managed care companies, pharmaceutical manufacturers, other medical product manufacturers, distributors of medical products and retail pharmacy outlets[218].

405. The HMI published a research note titled "Cross-ownership and Cross-directorship in the South African Private Health Sector" [219] and invited comments on it. This note identified possible competition problems related to cross ownership whereby firms may use their ownership structures to act anti-competitively. In particular the note identified that cross ownership and cross directorship could result in unilateral and coordinated effects amongst competitors. It could also influence the strategic decisions individual firms make so that they do not commercially harm other firms in the conglomerate.

406. The HMI reviewed the stakeholders' responses to the research note.[220] The stakeholders views and the HMI's response to them are contained in the annexure titled "Conglomerate and ownership structures within the administrator market".

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217. Where we refer to MMI Group, we refer to all four administrators.
218. Research Note published on the HMI website titled 'Cross-ownership and Cross-directorship in the South African Private Health Sector', May 2017, p 7.
219. Research Note published on the HMI website titled 'Cross-ownership and Cross-directorship in the South African Private Health Sector', May 2017.
220. The HMI received responses to its research note published on this topic from Afrocentric, ENS Africa on behalf of Discovery Health, Helen Suzman Foundation, MMI Health, RMI and the SA Pharmacy Council.

407. The HMI did not find any concrete anticompetitive conduct stemming from the ownership structures. However the structure of cross holdings carries some risks for the long-term development of a healthy competitive environment. This is particularly a concern where MMI Health and Discovery Health may lack incentives to pursue innovative long-term strategies in their purchasing of healthcare due to the existence of Mediclinic in the broader group.

COMPETITION AMONGST MEDICAL SCHEME ADMINISTRATORS

408. In theory, not-for-profit medical schemes that maximise value for money for their beneficiaries should enforce competition on price and quality among for-profit administrators. If the administrator does not provide efficient and value for money service, then the medical scheme can switch administrators by giving three months' notice. However, if the system is not working as it should, medical schemes could lack the buyer power necessary to hold the administrator to account or if governance structures fail, schemes could lack the incentive to do so.

409. The administrator market is concentrated and Discovery Health is significantly more profitable than its two closest rivals. Administrators' main source of revenue is the administration fees that they charge their medical schemes which they base on the number of medical scheme members. Administrators can increase their revenue in several ways. They can increase the "per member per month" administration fee they charge their existing medical schemes. Alternatively they earn more revenue when the number of medical scheme members under their administration increases. This could be through administering more medical schemes (which typically requires them to win tenders), or through the growth of the open medical scheme(s) under their administration.

410. Medical schemes typically go to tender when they wish to change administrators. Medical schemes may implement an open tender, in which any administrator may participate, or a closed tender where the medical scheme pre-selects the list of administrators from which it will accept bids. Medical schemes consider a number of factors when selecting an administrator. They must, for example, decide whether to purchase administration and managed care services from the same provider. They must also decide on other services they desire, such as tariff negotiations, fraud detection and marketing. Based on the list of services, the scheme needs to consider the costs involved.

411. There are, in essence, two overarching types of expenditure that medical schemes will consider when selecting an administrator. The first, and increasingly more important component is the impact the administrator will have on the medical scheme's healthcare expenditure of about 90%. Healthcare expenditure makes up a significantly large component of members' monthly contribution. This component includes the administrator's ability to achieve good outcomes in the tariff negotiations, their ability to set up effective networks and other managed care initiatives that seek to curb healthcare expenditure, and their efficiency from processing claims.

412. The second is the non-healthcare expenditure, which includes administration fees. The administration fee is a small percentage of around 10% of a member's monthly contribution. On the upstream market, the HMI is interested in the extent to which administrators have buying power and the relevant incentives in their negotiations with providers to ensure the best possible value for the medical scheme members.

413. Administrators, on the other hand, will also consider certain factors when deciding which medical schemes to pursue as clients. Some of these factors include the medical scheme's size, sustainability and membership growth. Some administrators, such as Discovery Health, will consider whether the medical scheme that has gone to tender competes in any way with any of its schemes currently under administration.

414. This section focuses on competition amongst administrators for medical scheme business. It will provide the regulation governing the contractual relationship

between medical schemes and their administrators. It will then consider the extent of switching between administrators. A high level review of the different types of relationships between medical schemes and administrators will be made. Medical schemes contributions can be split into non-healthcare and healthcare components. The inquiry considered the role of both of these through looking at the existence of economies of scale as well as how tariff negotiations take place. It also considered the role that MCOs play in attracting medical schemes to a particular administrator.

REGULATION GOVERNING MEDICAL SCHEMES RELATIONSHIPS WITH ADMINISTRATORS

415. Where medical schemes use the services of third party administers, there is a contract in place that governs this relationship. The MSA requires formal agreements between medical schemes and administrators.[221] Regulatory requirements stipulate that these agreements must contain specific information, for example, the scope and duties of the administrator,[222] the basis on which the administrator will be remunerated,[223] termination of the agreement at the instance of either party after the notice in writing of not less than three calendar months and not more than 12 calendar months,[224] duration of the agreement.[225]

416. There are also SLA that administrators agree to with their medical scheme clients. The SLA contains details of the services to be provided, the agreed upon service level, the performance measure, and relating penalties or remedies available to the parties in the case of non-performance.[226]

417. Ultimately, the medical scheme trustees are responsible for holding the administrator to account and to ensure that the medical scheme members receive high quality service for a low fee. The role of trustees is discussed in the section titled "Governance of Medical Schemes".

SWITCHING BETWEEN ADMINISTRATORS AND TYPES OF ADMINISTRATOR MODELS

Switching between administrators

418. The HMI found that medical schemes are actively switching administrators, with 27 schemes switching administrators from 2010 to 2016. 17[227] restricted medical schemes and 10[228] open medical schemes switched administrators.

    418.1. In the restricted medical scheme market, the second and third largest medical schemes, Polmed (with 498 152 beneficiaries) and Bankmed (with 214 246 beneficiaries), changed administrators in 2016 to Medscheme and Discovery Health.

    418.2. Of the open medical schemes that switched, the largest were Bestmed and Medihelp (fourth and fifth largest with around 200 000 beneficiaries each) who switched from being third party administered to being self-administered. Medihelp was self-administered until 2013 when it sold off its administration component in January 2014 to Strata to provide

221. Regulation 18 of MSA (1998).
222. Section 18(2)(a) and Standard 1.1.2.3 of Accreditation Standards for Third Party Administrators of Medical Schemes Standard and Measurement Criteria Version 5 Council for Medical Schemes.
223. Section 18(2)(c) of the MSA.
224. Section 18(3)(b) of the MSA.
225. Accreditation Standards for Third Party Administrators of Medical Schemes Standard and Measurement Criteria Version 5 CMS Standard 1.1.2.5.
226. Accreditation Standards for Third Party Administrators of Medical Schemes Standard and Measurement Criteria Version 5 CMS stanard1.1.2.7. The CMS has also included an example of detailed service level agreement.
227. This total counts Melcor Medical Scheme twice as it changed to Eternity Private Health Fund Administrators and then to Discovery Health.
228. The 11 counts Spectramed twice as they changed to VMed Administrators and then to Agility Global Health Solutions Africa. It also counts Medihelp twice as it changed from self administration to Strata Healthcare Management and then back to self administration. It also counts Pro Sano Medical Scheme.

administration services. However, Strata Healthcare Management lost its accreditation with the CMS and Medihelp and has once again reverted to being self-administered.

418.3. In addition to Bestmed and Medihelp, two other medical schemes switched from third party administration to self-administration, Pro Sano and Selfmed. Pro Sano has since exited the market.

418.4. In addition to Medihelp, two other medical schemes switched from self-administration to third party administration, Impala Medical Plan and Naspers Medical Fund.

418.5. If the HMI regards large administrators as Discovery Health, Medscheme and MMI Group[229] and the rest as small then:

418.6. Three medical schemes switched their administration contacts from a small to a large administrator. Naspers switched from being a self-administered scheme to Discovery Health, Malcor Medical Scheme switched from Eternity Private Health Fund Administrators (Pty) Ltd to Discovery Health.

418.7. Six medical schemes switched their administration contracts from a large administrator to a small administrator. Spectramed switched from Medscheme to Vmed and Massmart switched from Medscheme to Universal, Keyhealth switched from MMI Health to Professional Providence Health, Alliance-Midmed Medical Schemes switched from MMI Health to Private Health Administrators, Netcare Medical Scheme switched from MMI Health to Prime Med Administrators), Topmed Medical scheme switch from MMI Health to Private Health Administrators.

418.8. The other medical schemes have remained with either a large or small administrator.

418.9. Discovery Health has not lost a client, but rather gained eight medical scheme administration contracts, more than any other administrator.

418.10. Only two of the medical schemes have amalgamated with other medical schemes following the change in administrator.

419. The HMI found that in one instance, a medical scheme; Liberty Medical Scheme, changed its administration business from V Med , to Medscheme a wholly owned subsidiary within the Liberty Group. Even though there was close alignment (similar to that of the DHMS and Discovery Health relationship), the medical scheme switched administrators. However, during this process Liberty Medical Scheme changed its name to LMS and it has since merged with another open medical scheme under Medscheme's administration, Bonitas.

420. The HMI found that, following the merger between Metropolitan Holdings and Momentum Group in 2010[230], Momentum Health lost five medical scheme clients, two of which — Keyhealth and Topmed — were open medical schemes. These medical schemes told the HMI that they changed to administrators that they felt were more closely aligned to their scheme strategy or that the relationship with the administrator was not mutually beneficial.

Stakeholder submission on switching and types of administrator models

421. Stakeholders stated that there were several different types of administrator models in existence namely: independent scheme/ administrator model, multiple administrator model and self-administered scheme model.

422. Stakeholders presented mixed views on the ability of medical schemes to hold administrators to account. Some stakeholders explained that administrators

229. MMI Group refers to MMI Health, Metropolitan Health, Methealth and Providence Health
230. Merger between Metropolitan Holdings and Momentum Group (41/LM/Jul10).

have an arm's length relationship with their medical schemes (the independent scheme model). Their medical schemes have independent boards of trustees and medical scheme management structures. Some argued that the governance of medical schemes is sufficient to hold administrators to account. Therefore medical schemes on the independent model cannot be contractually beholden, they can switch administrators. Proponents of the independent scheme model argued that the CMS ensures that any vested interests do not harm members.

423. Consistent with the independent scheme model, Afrocentric explained that medical schemes devise their own strategy and Medscheme merely helps them implement their individual strategies.

424. On the other end of the spectrum, the administrator effectively controls and manages the medical scheme in the administrator model. Mediclinic argued that the board of trustees may not be able to hold the administrator to account. They explained that the distinction between not-for-profit medical schemes and for-profit administrators is blurry. There is information asymmetry between medical schemes' trustees and administrators, often leading to real control of the scheme resting in the hands of the administrator[231]. In their view, the funding sector's intellectual property and contracting acumen lies with the administrator. As a result the board of trustees have become entirely dependent on the skills and expertise of the administrator[232].

425. Profmed explained that they experienced poor administration and the principal officer and trustees were ineffective when they followed an administrator model.[233] According to Profmed there is a conflict of interest between the administrator's interests and those of medical scheme members and consequently it is unclear if the decisions taken are in the best interest of the members. Profmed states that the administrator model could be attributed to "ineffective scheme management (which management often only comprise a principal officer with no, or very little support staff) and trustees who are not suitably skilled and experienced and who fulfil their duties on a part time basis."[234]

426. Discovery Health submitted it has a very close and long-term relationship with its open medical scheme in what it terms a vested outsourcing model. This model allows an alignment of the scheme and administrator interests. The long-term commitment gives Discovery Health the security to make substantial, long-term investments in the development of human capital, IT systems and other assets to the benefit of the medical scheme.[235] Deloitte undertook a review of the impact and value of the administrator and managed care services Discovery Health provided to DHMS. This review found that Discovery Health provides DHMS with significant value-for-money.[236] Discovery Health argues that these long-term relationships are not unique to DHMS as Bonitas and Momentum have been with their administrators since the 1990s.[237]

427. Discovery Health also explains that it provides a fully integrated outsourcing model to all its medical schemes as these schemes outsource all operational aspects of administration, managed care, marketing and distribution support functions to Discovery Health.[238]

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231. Mediclinic's submission to the HMI, 31 October 2014, p 95.
232. Mediclinic's submission to the HMI, 31 October 2014, p 90.
233. Submission of Profmed Medical Scheme to the Panel of the Inquiry into the Private Health Sector, p 16.
234. Submission of Profmed Medical Scheme to the Panel of the Inquiry into the Private Health Sector, p 16.
235. Discovery Health Submission to the Competition Commission Market Inquiry into the Private Health Sector, 17 November 2014, p 201.
236. Discovery Health Submission to the Competition Commission Market Inquiry into the Private Health Sector, 17 November 2014, p 214.
237. Discovery Health Submission to the Competition Commission Market Inquiry into the Private Health Sector, 17 November 2014, p 201.
238. Discovery Health Submission to the Competition Commission Market Inquiry into the Private Health Sector, 17 November 2014, p 198.

HMI analysis on medical scheme models and the medical scheme's ability to switch

428. The HMI agrees with the administrator and medical scheme models of relationships that stakeholders identified. The different models influence how administrators compete. The HMI finds that restricted medical schemes are likely to have more buyer power and could more realistically switch administrators than the large open medical schemes.

429. In a context in which medical schemes are strong, they can stimulate competition among administrators by threatening to switch suppliers or by becoming self-administered. Medical schemes with buying power are those which have an arm's length relationship with their administrators and which have a credible alternative administrator to switch to. These medical schemes pose a legitimate threat to switch or become self-administered if they are not satisfied with the service they receive from their current administrator. Ideally, medical schemes should have a strong buying power and good governance to be able to hold their administrator to account. This would ensure that there is a clear separation between the commercial interests of stakeholders and the social interests of medical scheme members. Consequently, administrators would need to compete on providing value to the medical schemes and their members or risk losing their contract with the medical scheme.

430. In some instances, medical schemes have very weak buying power. This may either be due to the fact that they have a strong vertical relationship with their administrator, or that there are no other administrators that the scheme can realistically switch to. Discovery Health and DHMS's relationship has existed for many years and although theoretically possible, in reality there is no threat of DHMS switching to another administrator. This implies that the largest open medical scheme lacks buyer power vis-à-vis its administrator. In addition, Discovery Health will not administer another open medical scheme, or a restricted medical scheme that may compete against DHMS or the other restricted schemes it administers. Discovery Health is also closely aligned to its restricted medical schemes as these medical schemes delegate significant areas of responsibility to Discovery Health[239].

431. The HMI is of the view that the relationship between MMI Health and Momentum Health is similar to that of the Discovery Health model in some regards. (However, the relationship between MMI Health and its restricted medical schemes appears to be at arm's length). It is also unlikely that Momentum Health will switch from MMI Health, meaning that this scheme also has very little buyer power. In the MMI Group, Providence administers two open medical schemes. However, MMI told the inquiry that Providence is run separately and there is very little coordination between it and the rest of the group. Between the other three administrators within the MMI Group, there is only one open medical scheme. It does not seem likely that the MMI Group, other than Providence, will take on another open medical scheme.

432. Of the large administrators, this leaves Medscheme, which provides administration services to more than one open medical scheme. If either of these open medical schemes wished to switch, they may battle to find another administrator, given that they would not be able to move to Discovery Health or MMI. The other administrators, who could administer more than one open medical scheme, are small in comparison.[240] This reduces Bonitas and Fedhealth's buyer power.

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239. This was evident during the collection of information phase of the HMI. Many Discovery Health administered medical schemes told us initially to contact Discovery Health for the information. In addition, the concerns the Discovery Health administered medical schemes raised in relation to the collection of the claims data were nearly identical which suggests that medical schemes had engaged on this.
240. Of the remaining administrators Universal Healthcare Administrators (Pty) Ltd, Thebe Ya Bophelo Healthcare Administrators (Pty)Ltd and Agility Health (Pty) Ltd contract with 2 open medical schemes.

433. GEMS, a restricted medical scheme, has buyer power as it operates independently from its administrators. This is evident from the fact that it has, over time, has shifted some of its administration function from Metropolitan Health to Medscheme.

434. Given the weak buyer power of open medical schemes, there is little incentive for administrators to really compete to attract open medical schemes to their stable. In fact, Medscheme only needs to provide a service that its open medical schemes perceive to be better than the other smaller administrators and to prevent Bonitas from considering investing in its own administration capabilities. Rather, administrators aligned closely to their medical schemes have an incentive to attract members to their open medical scheme. This is discussed further below.

ADMINISTRATORS AS PURCHASERS OF HEALTHCARE (UPSTREAM MARKET)

435. The inquiry found that the administrator market is highly concentrated, with two (Discovery Health and Medscheme) firms accounting for 76% of the market. Both firms have individual market shares above 35%. Furthermore, the inquiry found Discovery Health to be more profitable compared to its competitors. It also has a very close relationship with its open medical scheme, DHMS. Given these market dynamics, the inquiry considered whether the large administrators exercise any market power.

436. The HMI has analysed how funders contract and purchase healthcare from facilities and practitioners. This is particularly important as the HMI found that healthcare expenditure makes up the majority (just over90%) of members' monthly contributions.[241]

437. In many cases, the administrators act as agents on behalf of medical schemes and members when it comes to purchasing healthcare. Administrators negotiate prices on behalf of medical schemes with facility groups, MCOs, and practitioner groups. They also may establish DSPs on behalf of their medical schemes. The HMI is therefore interested in seeing how this impacts on the administrators incentives to negotiate with providers. Therefore, the HMI looks at whether Discovery Health, in particular, uses its size in the tariff negotiations, especially with facility groups, to extract better tariff outcomes than the other administrators and medical schemes. In this way, Discovery Health has a competitive advantage in the tendering for new restricted medical schemes and lower pressure on premiums for its open medical scheme.

STAKEHOLDER SUBMISSIONS ON ADMINISTRATORS AS PURCHASES OF HEALTHCARE (UPSTREAM MARKET)

438. Administrators compete to attract and retain medical schemes through their ability to purchase healthcare.[242] Profmed identifies factors related to purchasing of healthcare that influence the medical scheme's choice over administrators, such as "the ability of an administrator to … conduct meaningful negotiations with service providers and its ability to enter into DSP arrangements"[243]

439. Discovery Health states that administrators have "strong incentives to purchase effectively on behalf of their closed scheme clients since this will increase their competitiveness in the market for closed scheme administration contracts. This will also ensure retention of existing clients, and increase the likelihood that the administrator will win new administration fee contracts"[244]

440. Large and sophisticated administrators may have better skills to contract with providers. Profmed, for example, states that large medical scheme administrators have more information about market dynamics such as utilisation and unbundling of procedure

241. Council for Medical Schemes Annexures 2016F17, Annexure S – calculated as Gross relevant healthcare expenditure / Gross Contribution Income.
242. Discovery Health Submission to the Competition Commission Market Inquiry into the Private Health Sector, 17 November 2014, pp 182 and 185.
243. Submission of Profmed Medical Scheme to the Panel of the Inquiry into the Private Health Sector, p 17.
244. Discovery Health response to the Revised Statement of Issues of the Competition Commission Market Inquiry into the Private Health Sector, 24 March 2016 p 38.

codes. Smaller players do not possess similar capacity, which has a detrimental impact on their negotiating ability. [245]

HMI ANALYSIS ON ADMINISTRATORS AS PURCHASES OF HEALTHCARE (UPSTREAM MARKET)

Tariff determination with hospital groups

441. Since the intervention by the competition authorities to prohibit collective bargaining in 2003, bilateral negotiations have taken place between individual hospitals or hospital groups and medical schemes or their administrators.[246]

442. The negotiating process is fairly standardised. The Tribunal decision described the negotiation process in the Netcare/CHG as follows: "Despite the end of central negotiations between hospitals and funders its culture still prevails. Negotiations occur once a year at the same time as they used to. Because hospitals have so many line items, negotiations over tariffs appear to revolve more around the general than the specific. What happens in practice is that there is first a discussion on what medical inflation for that year is and once established, a negotiation of what increase will be on the previous year's tariff for that group."[247]

443. Within this process, facilities negotiate for higher tariffs in order to increase revenues. Medical schemes negotiate for lower tariffs in order to reduce claims liability, maintain solvency and provide more affordable care to members. It also allows for open schemes to compete for members in order to grow their medical scheme.

444. Administrators, when negotiating on behalf of medical schemes, have an incentive to achieve lower tariffs contingent upon them increasing revenues and profits, through a combination of:

444.1 Charging higher administration fees;

444.2 Retaining existing scheme business;

444.3 Gaining new scheme business; and

444.4 Growing membership of existing schemes and hence increasing administration fee income (relevant for administrators of open schemes).

445. In a competitive market, each of these revenue-enhancing activities would be constrained by rival administrators. Thus, the incentive for administrators to achieve lower tariffs for schemes will depend on whether there is competition in this market, and the extent to which lower tariffs are a key determinant in the competition for schemes and competition for beneficiaries between schemes. However, the inquiry found that funders considered achieving an overall tariff increase that is sufficiently close to CPI to be a good outcome.

446. To understand how the opposing incentives of funders and facilities result in outcomes, it is useful to consider the relative strengths and weaknesses of each party in terms of the main factors which influence negotiations.[248] The HMI has identified these as

446.1 The relative size of negotiators;

446.2 The ability for funders to channel patients; and,

446.3 To a lesser extent, the use of ARMs.

Factors which influence negotiations with facilities: Size

447. Given the level of concentration in the facilities market, with the three large hospital groups accounting for 88,4% of the market,[249] the inquiry heard that a similarly concentrated funder market may provide sufficient purchasing power to balance out the market power of facility groups.

245. Submission of Profmed Medical Scheme to the Panel of the Inquiry into the Private Health Sector, p 23.
246. Industry Overview chapter for a more detailed history.
247. Non-confidential decision in the Netcare/CHG case number 68LMAug06, paragraph 60.
248. Based on HMI analysis and corroborated by submissions
249. Industry Overview chapter

448. Discovery Health is the only administrator that negotiates a single tariff with providers on behalf of all of its 17 client schemes. These medical scheme clients then have an option to participate or opt out of any negotiated agreement.[250] Based on the number of beneficiaries, Discovery Health had 30,9% of the market in 2016. Others, such as Medscheme and Metropolitan Health, conduct separate negotiations on behalf of client schemes or provide technical support to the larger schemes they administer that conduct their own negotiations. In many cases, the same negotiators within the administrator participate in the negotiations and discuss each scheme and the prices for that scheme independently of the group. It is worth noting that GEMS, with 20,4% of total beneficiaries, negotiates independently.[251] Therefore the HMI found that only two negotiators, Discovery Health and GEMS, representing 51.3% of the market in terms of beneficiaries, have sufficient size to match the facilities.

449. The difference in negotiation tactics is due to the lack of regulatory clarity on whether or not administrators may collectively negotiate on behalf of the medical schemes under administration. Afrocentric, Medscheme's holding company, self-referred a complaint regarding Discovery Health's collective bargaining on behalf of its medical schemes to the Competition Tribunal following a non-referral by the Competition Commission. The Tribunal ruled in Discovery Health's favour, on a technicality and not on the merits of the case.[253]

450. The disparity in relative size between funders and facilities, while likely to influence negotiations in its own right, may also proxy for several other factors. Notably, size will also influence the degree to which analytics and negotiating ability are able to impact tariff increases as the larger negotiators are likely to have greater access to information and more resources to bring to this exercise.

451. This is evident when looking at the outcomes of the negotiations where the HMI finds that Discovery Health and GEMS are able to consistently achieve better outcomes than the other negotiators.[254] Once we excluded these two negotiators from the analysis, the relationship between size and tariff outcomes ceased to exist.[255]

452. Over time, the consistently better tariff outcomes for Discovery Health has resulted in a substantial and widening gap in medical scheme tariff schedules. Given how Discovery Health operates, it offers these rates to induce other restricted schemes to join its cohort, thereby further entrenching its size advantage relative to other administrators. Other administrators are unable or unwilling to negotiate collectively on behalf of some or all of their schemes due to the concern that they may be acting anti-competitively by engaging in collective bargaining.

Factors which influence negotiations with facilities: ability to channel patients and the use of networks

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250. Discovery Health Submission to the Competition Commission Market Inquiry into the Private Health Sector, 17 November 2014, paragraph 259.
251. We have used beneficiaries in this instance to reflect the size of the negotiation team. GEMS negotiates on its own, so there is no concern on how to allocate their beneficiaries between the two administrators. CMS Annual Report Annexures, based on average number of beneficiaries for 2016 for Discovery Health and GEMS
252. The Commission chose not to refer the matter as Discovery Health as an administrator operates in a different line of business to, and therefore does not compete with, the open and closed schemes it administers. Hence it cannot be found to have engaged in collusive horizontal conduct as defined above. Additionally, the Commission was of the view that the HMI would be better placed to address the arrangements between the schemes and administrators.
253. Competition Tribunal case number: CRP003Apr15/EXC266May15.
254. Bargaining Technical Annexure. Since much of the information contained in the technical annexure is subject to confidentiality claims, the Inquiry will engage with the relevant firms to compile a non-confidential version of the annexure that will allow for meaningful engagement before publication of the final recommendations.
255. Ibid.

453. The means through which funders can direct patient flow include: [256]

453.1 the exclusion of hospitals from networks and the imposition of significant co-payments on members for use of non-network hospitals;

453.2 the use of managed care tactics, eg declined pre-authorisation requests at particular hospitals; [257] and

453.3 the direct communication to members urging them to avoid particular hospitals.

454. s these impositions rely on increasing the burden on the beneficiary in order to encourage a change in behaviour, this may also result in negative consequences for the medical scheme. Should these impositions result in beneficiaries choosing to switch to less burdensome medical schemes (or indeed medical scheme trustees choosing to switch to an administrator that doesn't require acceptance of these restrictive agreements), then the relationship between the funder's ability to channel patients and bargaining power may not be so straightforward.

455. Of the options available to funders, the use of networks is one of the more effective means to derive financial and potentially other benefits. Members who sign up for network options benefit from lower premiums relative to a scheme's standard option but incur a cost of having to use a smaller selection of contracted facilities or face significant co-payments which can be up to 40% of the total bill. By signing up for a network option, members effectively signal to the funder a willingness to be channelled.

456. Successfully establishing a network serves to increase funder bargaining power by significantly worsening the hospital groups' outside option during negotiations. The network is a strong commitment device on behalf of the funder to indicate its willingness and ability to effectively channel patients. This increases the opportunity cost of any hospital which fails to join the network. However, this advantage is predicated on the assumption that funders have an outside option which includes setting up a viable network excluding a particular hospital or hospital group.

457. This theoretical underpinning is borne out in the data which shows that funders effectively use of network agreements has resulted in lower tariffs. Recent analysis of GEMS EDOs further highlight the potential for networks to foster competition amongst facilities and thereby result in savings. Another example of this occurred in 2017 when Bonitas failed to reach a favourable agreement with Life Healthcare facilities. Bonitas subsequently excluded these facilities from its network by publically announcing that members would incur a 30% co-payment at 14 Life Healthcare hospitals. Shortly thereafter, Life re-considered its stance and announced that the hospital group would waive these co-payments.

458. While an important element of networks is the potential cost savings, funders should factor other elements into the establishment of networks. In this regard, network negotiations do not necessarily include other important metrics, such as patient outcomes or quality measurements. Consumers have little or no idea how funders establish these networks, by for example, knowing what criteria the funders use. They may believe that inferior services may be the cause of cost savings from networks are and they are therefore discouraged from joining these network options. Indeed, this may be the case for schemes which have set up network options to include state hospitals. State hospital networks are typically the

256. Not all methods are equally effective and the regulations surrounding PMBs mean funders are liable in full (i.e. no co-payments) for emergency PMBs, irrespective of networks.
257. Life Healthcare submission to the Inquiry, p. 39 – 40.
258. Bargaining Technical Annexure.
259. 2017 Insight Presentation: Progressive medical scheme benefit design.
260. Bonitas press release, 30 June 2017, Hospital Negotiations Crucial to Healthcare Cost – Containment, available at: https://www.bonitas.co.za/pressoffice/hospital-negotiations-crucial-healthcare-cost-containment/

most cost effective options within a medical scheme.

459. Given the benefits of networks to funders, the HMI has attempted to understand why network adoptions have not been more prolific among funders. In this regard, we note that implementation of networks may require substantial initial costs, in terms of negotiations, data on efficient hospitals, member awareness, etc. There may also be some apprehension regarding how members perceive this form of channelling. If negative, in the open scheme market, there may be a decline in beneficiary numbers as members switch to less restrictive funders. In the restricted medical scheme market, employers may fear backlash from disgruntled employees. Given that funders have to ensure access to all beneficiaries, regional dominance by some hospital groups can lead to difficulties in network negotiations. Finally, hospital groups may be reluctant to enter into network discussions where the volume benefits are not substantial, preventing some smaller funders from effectively contracting.

460. To some extent EDOs provide solutions to these concerns. That EDOs are sub-options within a package, meaning that they do not limit those beneficiaries who choose to remain on an unrestricted plan. In terms of size, it appears that smaller schemes are able to implement these plans, with Thebemed and Compcare Wellness both offering EDOs.[261]

461. A notable development regarding how consumers view network options is the medical scheme-wide implementation of networks in some schemes. For instance, Cape Medical Plan has networks for all PMB conditions across all plans. This either indicates a view that members do not value unrestricted hospital access or, if this is not the case, then it has been done despite potential membership loss but as a necessary response to escalating hospital costs.

462. The evidence available, particularly from EDOs which are able to directly compare the impact following the network adoption, show substantial benefits from networks, including beneficiary growth and improvements in net healthcare results.[262] Even so, among open schemes, uptake has been slow, with only eight medical schemes offering EDO options in 2016.[263] The number of beneficiaries belonging to these EDOs has increased steadily by between 12% and 15% per year between 2013 and 2016. However, despite the CMS permitting EDOs since 2008, the only restricted schemes to have introduced EDOs in the market were GEMS and Motohealth Care at the start of 2017.[264]

Factors influencing negotiations with facilities: Alternative reimbursement models

463. Stakeholders' submissions have indicated that alternative reimbursement models (ARMs) already form a significant proportion of the market in terms of revenues. Further, that this is a developing area in negotiations, with quality metrics and value-based contracting increasingly forming a greater part of negotiations.

464. However, there are concerns regarding the effectiveness of these ARMs given the substantial carve-outs included in the contracts and the subsequent implication for actual risk-transfer to the hospitals.[265]

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261. These two schemes are 15th and 16th in terms of beneficiaries amongst the 22 open schemes at the end of 2016, see Council for Medical Schemes Annexures 2016F17, Annexure Q.
262. Council for Medical Schemes Annual Report, 2016F17 pages 28 and 29. While likely impacted by the generally lower age profile of EDO members, the difference is substantial and, in the case of GEMS, is despite an older age profile on its EDO options.
263. Council for Medical Schemes Annexures 2016/17 p 29. These schemes were: Bestmed, Bonitas, Compcare Wellness, Discovery Health, Fedhealth, Medihelp, Momentum Health, and Thebemed
264. The HMI notes that the open medical scheme Resolution Health Medical Scheme also introduced EDOs for 2017 bringing the total number of medical schemes providing EDOs to 11 Council for Medical Schemes Annual report 2016/2017 p28. The three medical schemes that introduced their EDOs for 2017 are not yet reflected in the Council for Medical Schemes Annual Report Annexures for 2016/2017.
265. Carve-outs are caveats to the ARM contracts which set criteria under which expenditure will default to a FFS model.

Indeed, hospitals seem to be the ones proposing such reimbursement models, as opposed to the funders. This raises the question as to whether funders and consumers stand to benefit from these models in their current form.

465. A number of funders interviewed cited a lack of information to allow them to compare the costs associated with ARMs versus fee for service (FFS) tariffs over time and a scepticism that substantial real savings were being achieved, resulting in instances where funders have elected to end their ARM contracts in order to return to FFS models. Further, anecdotal evidence from stakeholders and analysis done by WTW further highlights the limited impact hospital initiated ARMs have had on scheme costs.[266]

Tariffs and utilisation

466. In our analysis of the claims data we found that restricted medical schemes administered by Discovery Health showed the lowest in-hospital cost increase and GEMS the highest. GEMS and the group of smaller open schemes had the highest increases in explanatory factors, primarily age. When looking at admission rates, Discovery Health administered restricted schemes and DHMS again showed the lowest total increase. Tables 67 and 69 in the Report on analysis of medical schemes claims data: A focus on Funders[267] illustrate this. The two tables show that administrators and medical schemes focus on managing tariffs and not utilisation.

Tariff determination with practitioners

467. From submissions the HMI received, it seems that the following general approach commonly applies across the industry: medical schemes or the administrators set a rate for each billing code and practitioners then choose whether to charge this scheme rate or some multiple thereof.[268]

468. It is clear from the submissions that subsequent to the prohibition of collective negotiations, it has not been feasible for funders to conduct bilateral negotiations with each individual practitioner. To this end a number of submissions have supported a return to some form of collective bargaining. Some have advocated for a return to how the collective bargaining originally operated while others have suggested a multilateral negotiation process between associations, on behalf of practitioners on one hand and funders on the other.[269] The HMI received further suggestions advocating for a collective bargaining model that determines maximum tariffs for PMBs and reference tariffs for non-PMB treatments and services.[270]

469. In terms of market power, the ability for funders to reimburse the patient rather than the provider provides some constraint on providers unilaterally charging above the scheme rates. Where the funder reimburses the member, the practitioner often faces challenges in recouping fees. This difficulty, and the desire for practitioners to avoid such a situation, provides funders some degree of market power over providers.[271]

470. Alternatively, submissions by funders have indicated that the ability for practitioners to bill patients regardless of medical scheme rates shifts the balance of market power in the practitioners favour. Funders also argue that practitioners are able to exert market power in relation to some disciplines and the legal requirement for schemes to fully reimburse PMBs at cost.[272]

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266. WTW Report on Analysis of Medical Schemes claims data – a focus on facilities, 15 December 2017 table 67, and Bargaining Technical Annexure.
267. Report on Analysis of Medical Schemes Claims Data- A focus on Funders, 15 December 2017 Tables 67 and 69.
268. RSSA submission to the Inquiry, 17 November, p 16. IPAF submission to the Inquiry, 2014 p 23.
269. For e.g. OTASA submission to the HMI Oct 2017, page 4. And SAAA submission on tariff determination, p 2
270. Discovery Health /DHMS Comments on the HMI document on Tariff Determination, 20 October 2017 p 2.
271. SAMA submission to the Inquiry,17 November p 36–37.
272. Submission of Profmed Medical Scheme to the Panel of Inquiry into the Private Health Care Sector, 30 October 2014 p.21, BHF submission: Submission on the Inquiry into the Private Healthcare Board of Healthcare Funders of Southern Africa (BHF), 29 September 2014 p 36-37.

Networks

471. In order to limit co-payments by members and to reliably estimate PMB costs, funders, MCOs and third-party providers have introduced networks.

472. The initiator of the network determines the intention and incentives for each type of network. Practitioners may establish networks in order to strengthen the bargaining position of the individual practitioners against funders. There are profit incentive motivates for MCOs and third party providers as they derive revenue from the successful implementation and management of networks. The CMS regulates MCOs to ensure medical schemes derive value from the MCO. Finally, schemes implement networks in order to foster competition amongst providers in an attempt to control rising expenditure.

473. The ability for networks to effectively channel significant patient volumes has meant that some providers, particularly GPs choose to accept scheme rates, with no co-payments, in order to be contracted-in. However, some funders have argued that the lack of sufficient competition, due to a concentrated market structure and PMB regulations, has prevented networks from being a ubiquitous feature.[273]

474. Submissions from Discovery Health have highlighted this difficulty. Discovery Health's way of addressing this challenge is to offer specialists rates which are substantially higher than the market rate in order to entice them to join a network.[274] This goes against the economic rationale that increased volumes from being part of a network should result in lower prices. Where this occurs, it is a clear indication that there is a degree of market power on behalf of specialists. Discovery Health justifies its increased tariffs for specialists who join the network as these specialists are then limited in what they can charge for PMBs which ultimately reduces the total specialist cost and they have to adhere to some quality standards. The HMI has not tested this.

475. 4Further, the ability to reimburse specialists at higher rates in order to contain costs seems likely to be a tool that only larger funders are able to implement, given the large upfront costs and the time investment required before savings are realised.

Alternative reimbursement models

476. Submissions from both funders and practitioners have indicated that at present remuneration is largely through FFS but acknowledge that introducing ARMs and other innovative measures would be beneficial in curtailing rising health costs.[275]

477. However, there remain some concerns, such as the potential for the incentive structures to lead to underservicing of patients, typically when the models are poorly conceived and without independent oversight.[276] In terms of global fee arrangements, there are further concerns that negotiations occur between funders and facilities, with limited or no input from practitioners, resulting in unclear pay structures and anecdotal abuse by facilities.[277]

478. Both the submissions received as well as actual behaviour in the market indicate an intention from funders and specialist groups to move towards more innovative and risk sharing models. However, current Health Professions Council of South Africa (HPCSA) regulations regarding fee-sharing and sub-contracting has dampened innovation and prevented ARMs from forming a greater proportion of healthcare expenditure.

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273. Discovery Health Submission to the Competition Commission Market Inquiry into the Private Health Sector, 17 November 2014 p, 144.
274. Discovery Health Submission to the Competition Commission Market Inquiry into the Private Health Sector, 17 November 2014 p 122.
275. Tariff determination submissions from: SASCI, section 2.3. SASP, section 2.2.2. and Discovery Health / DHMS Comments on the HMI document on Tariff Determination, 20 October 2017 8.
276. SASA submission on Tariff Determination, page 6.
277. Tariff determination submissions from OTASA, page 6 and SASP, section 2.2.2.

CONCLUSION ON TARIFF DETERMINATION FOR ADMINISTRATORS

479. Funders have a number of tools available to increase their bargaining position against both facilities and practitioners. However the use of these tools has been limited. The countervailing pressures in the procurement market have tended to focus on the two larger funders, Discovery Health and GEMS.

480. Size is an important consideration in negotiations, as the two largest negotiators, Discovery Health and GEMs, seem to enjoy a degree of countervailing power in negotiations which small and medium sized negotiators cannot match. This has afforded a significant advantage to these negotiators over other schemes and administrators.

481. The inquiry is of the view that consolidation within the administration market will continue to take place where Discovery Health will grow in size relative to the other administrators. This size advantage, its collective negotiation strategy, and the widening differential in tariffs relative to other administrators means the consolidation will be self-reinforcing.

482. The introduction of networks by funders has been an important development in both the facilities and provider markets. From a facilities perspective, it has resulted in increased competition amongst hospital groups. Notably, the evidence suggests that those schemes which were able to successfully implement network arrangements achieved relatively low tariffs when compared to similar, non-network options.

483. Given the evidence that network options are able to foster competition amongst hospital groups and result in lower tariffs, the question arises as to why network options are not a more ubiquitous feature in the market. Currently networks have a focus on reducing tariffs with very little quality or outcome measures built in. There is also a lack of communication with medical scheme members regarding how these networks are established.

484. On the practitioner side, the evidence suggests that funders have struggled to set up effective networks, except in the case of GPs. The inquiry found that schemes and administrators have been able to contract with GPs and, to a small degree, link payment levels to outcomes achieved. Market power on behalf of specialists, in no small part due to PMB regulations, has meant funders have struggled to contract with these providers. In order to do so, some network contracts have had to offer a premium over the market rate.

485. Despite the HPCSA regulations which frustrate innovation in reimbursement models, it seems there are a number of ARMs into the market. However, hospital groups typically initiate these and these initiatives do not seem to include substantial risk-transfer, lack transparency, often restrict the amount of information available to funders, and overall do not seem to have resulted in a substantial deviation from the FFS characterisation of the healthcare market

NON-HEALTHCARE EXPENDITURE OF ADMINISTRATORS ON THEIR DOWNSTREAM MARKETS

486. In the revised statement of issues, the inquiry hypothesised that medical schemes administrators might exercise market power: by driving up prices paid by medical schemes for administrative services, thus acting directly or indirectly to the detriment of the consumer. In this section we assess whether the total fees (excluding direct healthcare expenditure) the medical schemes pay the administrator reflect market power by the administrator.

487. In a competitive environment, firms operate in an efficient manner thus minimising the firms' average total costs. In the administrator market, a competitive environment implies that administrators pass cost savings, including through economies of scale, on to medical schemes through lower monthly fees while rewarding their shareholders with sufficient returns to stay in the market.

STAKEHOLDER SUBMISSIONS ON NON-HEALTHCARE EXPENDITURE OF ADMINISTRATORS ON THEIR DOWNSTREAM MARKETS

488. Funders told the HMI that medical schemes

consider closely the administration and managed care fees as part of the tender process. There are various factors that influence the negotiation on administration fees, both as part of the tender process and as an annual increase. Stakeholders identified the following factors:

1. the consumer price index;

2. the size and complexity of the medical scheme (for example, the number of benefit options);

3. the extent and nature of the service levels agreed to and then the performance of the administrator against agreed service levels in the previous year;

4. the extent of innovation and value-add and whether the administrator can provide efficiencies to the benefit of the medical scheme and its members;

5. the need for professional services (such as actuarial and marketing); and

6. additional requirements that the medical scheme may have that are not standard;

489. Stakeholders explained to the HMI that open medical schemes pay more in administration fees as they require advertising and marketing. They also require more sophisticated assistance compared to restricted medical schemes because they tend to have more benefit options, which require additional actuarial input and different claims processing mechanisms.

490. Discovery Health states that the fees it charges to restricted medical schemes are determined through a competitive tender process. For its open medical scheme, Discovery Health states that DHMS administration fees have been reducing in real terms for the last seven years.[278]

491. According to GEMS, the medical scheme's non- healthcare expenditure in 2015 was one of the lowest in the industry at 7.5%. They attribute this to the scheme having a multiple provider model, inclusive of multiple administrators and managed care organisations.[279]

492. Cape Medical Plan indicated that self-administered schemes operate at lower administration costs compared to third-party administrators. The non-healthcare expenditure, and in particular administration costs of small self-administered schemes, such as itself and Genesis Medical Scheme, is significantly lower than larger administered medical schemes such as DHMS and Momentum Health. Cape Medical Plan attributes this to the profit motive of large administrators.[280]

493. Profmed states that there are no risk sharing arrangements with regards to administration fees. Administration fees are paid on a fee-for-service basis expressed as a per member per month basis. Furthermore if an administrator has market power over their medical schemes, this weakens the schemes ability to negotiate optimal administration fees and SLAs and may result in compromises in the independence of the principal officer and board of trustees.[281]

494. Medical schemes and administrators state that there are economies of scale in the administrator market that arise from nature of investment required to provide administration services to multiple schemes.[282] The development of administration and managed care services requires specialised human capital and a fair amount of capital to set-up IT systems, operational processes and control systems.[283]

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278. Discovery Health response to the HMI's Revised Statement of Issues, Competition Commission Market Inquiry into the Private Health Sector 22 March 2016, p 46.
279. Government Employees Medical Scheme, Written submission: Health market inquiry, 1 March 2016, p 8.
280. Cape Medical Plan's written submissions to the Competition Commission of South Africa Inquiry into the Private Health Care Sector, 31 October 2014, p 13.
281. Submission of Profmed Medical Scheme to the Panel of the Inquiry into the Private Health Sector p 17.
282. Submission of Bestmed in Accordance with the Guidelines for Participation in the market inquiry into the private healthcare sector issued on 1 August, submitted on 31 October 2014, p 90.
283. Metropolitan Health's submission to the Health Market Inquiry, 18 December 2014 p 6.

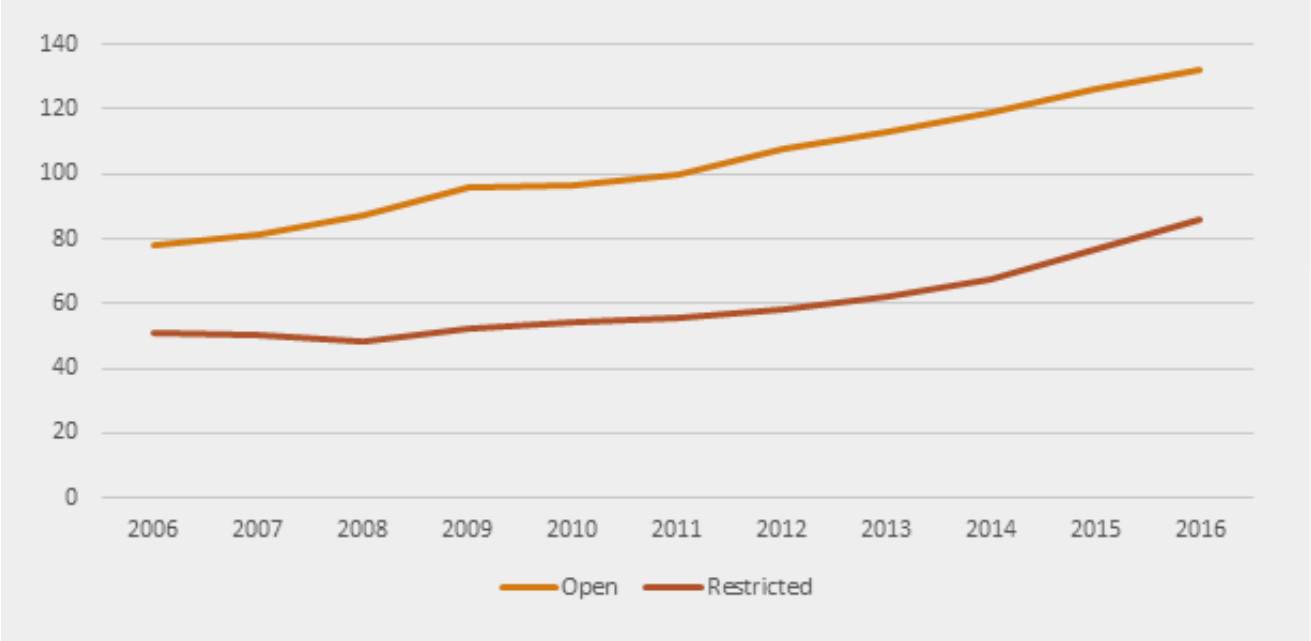
HMI ANALYSIS ON NON-HEALTHCARE EXPENDITURE

495. The HMI agrees with the stakeholders that there should be substantial economies of scale in this market. Larger administrators have more beneficiaries to spread these fixed administration costs over. There may also be benefits from the overlap between the administration and managed care business as IT systems and other administration functions can be utilised by both.

496. The HMI has looked at the per member per month administration fees and found that administrators charged different amounts to different schemes under their administration. Furthermore, some administrators charge some medical schemes benefit options within their portfolio a lower administration fee for the low cost plans and a standard fee for all other benefit options. The HMI also looked at the administration fees self-administered medical schemes face. The different prices administrators charge medical schemes, in its self, is not a competition concern. However, it may illustrate the extent to which the administrator competed on administration fees during the tender process.

497. Figure 5.9 shows the average administration fees restricted and open medical schemes pay in the form of gross administration expenditure.

FIGURE.5.9: GROSS ADMINISTRATION EXPENDITURE FOR OPEN AND RESTRICTED MEDICAL SCHEMES 2006-2016 (PABPM)



Source: CMS Annual Reports from 2006 to 2016/2017

498. This graph illustrates that open medical schemes have significantly higher administration expenditure compared to restricted schemes. The HMI agreed with stakeholders that the expenditure on administration is likely to be higher for open medical schemes as administrators may provide additional services to open medical schemes compared to restricted schemes. Another reason might also be that administration fees, in the restricted medical scheme market, are determined through a competitive tender process. As the inquiry has demonstrated, some of the larger open schemes are have little choice with their incumbent administrator and their ability to switch is limited. They therefore lack negotiation or buying power vis-à-vis their administrator.

499. In the Annexure titled "Economies of Scale on Administration Fees" the inquiry explores whether larger medical schemes benefit from lower administration fees compared to smaller medical schemes.

The inquiry also considers whether there are any economies of scale accrued to medical scheme, regardless of size, through lower administration fees from receiving administration services from a large administrator (in terms of market share). The HMI's assessment purely looks at the reported figures and does not consider the potential difference in quality and type of service the medical scheme receives. The inquiry did not find any benefits of economies of scale through lower administration fees on a pmpm basis amongst the large restricted medical schemes or by contracting with a large administrator.

500. The inquiry also did not find any economies of scale for the largest open medical scheme as DHMS pays more administration fees and total fees paid to administrators per member per month than the next three largest open medical schemes. DHMS, administered by the largest administrator, Discovery Health, is 4 times larger than the second largest open medical scheme, Bonitas, 10.5 times larger than the third largest Momentum Health and 13,5 times larger than the fourth largest, Bestmed. However, when looking at the gross administration expenditure as a percentage of gross contribution income, DHMS's fees are lower than Momentum Health's.

501. Discovery Health states that the administration fees it charges its "open medical scheme client is well within the market range as DHMS is currently 17th lowest of the 23 open medical schemes when measured as a percentage of gross contribution income."[284] Furthermore, Discovery Health has explained that its administration fees with DHMS has been constantly falling in real terms.[285] It appears to the inquiry that Discovery Health is gradually, over a number of years, reducing its fees to more comparable levels. The fact that Discovery Health can afford to take several years to reduce its fees to more competitive levels underscores the observation that both DHMS and Discovery Health enjoy considerable market power in terms of the consumer, and in terms of the open medical scheme respectively in the Discovery stable.

502. The HMI also looked at the amounts that individual open and restricted medical schemes pay in administration fees within a particular administrator to test the theory that the difference in admin fees may be a result of price discrimination between their open (captured) medical schemes and the restricted medical schemes. It is also one way to account for varying degrees of quality of service between the administrators. The HMI assumes that medical schemes should have access to, for the most part, all the services and innovative offerings that an administrator provides. When looking at these fees, the HMI recognises that the open medical schemes may pay more, to some degree, for marketing and distribution fees, and open medical schemes typically have more benefit options to manage which require additional actuarial skills.

503. The HMI found that, even by just looking at the restricted medical schemes, there were no clear signs of benefits of economies of scale for large medical schemes within one administrator.

CONCLUSION ON ADMINISTRATION FEES

504. By merely assessing the size of the medical scheme and administrator, the HMI found that there does not appear to be any benefits of economies of scale passed on to the members in the form of lower administration fees. The HMI is not in a position to assess the difference of quality and extent of the service either between administrators or from a single administrator to its medical schemes. The trustees of the medical schemes are responsible for assessing whether they receive value for money from their administrator. If they are of the view that they do not receive value for money, then they should go out to tender to compare administrators. The HIM has found that this is more likely the case for

284. Letter response to broker questions dated 27 February 2018.
285. Discovery Health Response to the Revised Statement of Issues: Competition Commission Market Inquiry into the Private Health Sector 22 March 2016 p 46

medical schemes that poses some degree of buyer power.

505. The restricted medical schemes' administration fees appear to be determined on a competitive basis through the tender process. The HMI has found that Discovery Health has been successful in winning tenders for restricted medical schemes. This may have less to do with the administration fees it charges, but more to do with the outcomes of the tariff negotiations. However, where the medical scheme has little buyer power and is unlikely to go to tender, as is the case for many open medical schemes, then the administrator is under less pressure to pass on any benefits of economies of scale through lower administration fees.

MANAGED CARE ORGANISATIONS

506. Managed health care developed as a systematic response to increasing costs and persistent quality concerns in healthcare markets. Health insurance providers (medical schemes) typically contract with MCOs to provide services to mitigate against cost and quality concerns. Managed care also seeks to address moral hazard, adverse selection and industry competitiveness. By combining consumer cost-sharing with a wide range of provider-side mechanisms, managed care can contribute to controlling moral hazard and reduce healthcare costs.

507. In South Africa managed care was introduced as a cost reduction mechanism in the 1990s[286]. The MSA incorporated managed care for the first time in 2000. According to the MSA managed health care "means clinical and financial risk assessment and management of health care, with a view to facilitating appropriateness and cost effectiveness of relevant health services within the constraints of what is affordable, through the use of rules-based and clinical programmes".[287]

508. Managed care, within the South African context, typically includes one or a combination of consumer cost-sharing arrangements, preferred provider arrangements, reimbursement mechanisms, monitoring service utilisation, and the specification of benefits covered and level of those benefits. Managed care mechanisms differ in their stringency and design. Combinations of these mechanisms change constantly over time and vary significantly between health insurance providers.

509. The inquiry is interested in whether medical schemes contract with providers of healthcare services on the basis of value-for-money and/or consumer responsiveness.

510. The annexure titled "Managed Care Organisations" provides the market definition for managed care, regulation of managed care, market structure, review of selected MCO contracts and review of stakeholder submissions. The HMI's analysis follows these sections, including barriers to entry and expansion, measurement and reporting of quality, managed care fees and risk transfer arrangements.

MARKET DEFINITION

511. MCOs provide clinical and financial risk management solutions to medical schemes. The medical scheme may decide to conduct these clinical and financial risk management solutions in-house or contract to a third-party administrator (accredited as a MCO) and/or an independent MCO. Administrators providing managed care services must receive separate MCO accreditation even if the administrator and MCO is the same entity. Medical schemes can contract with medical scheme administrators for the full administration and managed care services or a partial range of these services.

512. Managed care services include hospital benefit management services, pharmacy benefit management services, active disease risk management services, disease risk management support services, dental benefit management services, managed care network services, and health care services (risk transfer).

286. N Goldwyer (2004), "A History of the Politics of Private Health Care in South Africa".
287. Medical Schemes Act, 1998 (Act No. 131 of 1998).

513. The HMI found differentiated manage care services, and that MCOs compete in distinct specialised markets to the needs of the medical schemes. The different specialised services are not substitutable with each other. Given the varied nature of managed care services the inquiry and the research question the MHI seeks to answer, the HMI decided to not define each service separately as independent markets. Thus, the inquiry also did not calculate market shares for the managed care market.

514. The HMI has separated administration and managed care services for the purpose of defining the markets, but recognises that the two markets are often interrelated. This dynamic is considered in the analysis.

515. he HMI defined the geographical market for managed care service to be national.

THE HMI'S KEY FINDINGS ON MANAGED CARE ORGANISATIONS

516. The HMI found no barriers to entry for the MCO market. There may be economies of scope for those who offer more than one service. Discovery Health, Medscheme and Metropolitan who jointly account for 80% of the medical schemes administration market are also active in managed care. There is a need to separate managed care services fees and administration fees to allow independent MCOs to compete with administrators that also offer managed care services. This will also allow medical schemes to evaluate competing managed care services with greater ease.

517. The rate of increase in managed care fees has consistently been higher than CPI inflation. However, this above inflation increase in managed care fees has not resulted in the containment of overall healthcare costs. In spite of the prevalence of managed care, the industry has experienced real health expenditure that cannot be described by explanatory factors such as age, gender, disease profile, member movements and plan mix.

518. The development of quality indicators that are linked to managed care is still at an early stage. Where scant information is available - largely some structure and process information of quality of service supplied - results suggest that the quality of healthcare services under managed care is still unsatisfactory. Medical schemes should ensure that more energy and measures are in place to improve the quality of services that are under managed care and should insist on the registration and use of meaningful indicators of the quality of care provided.

519. Open medical schemes have incurred significant losses from capitation arrangements over a period of at least 10 years. These sustained losses point to poor governance of open medical schemes. In contrast restricted medical schemes have not incurred losses on capitation arrangements. This suggests that restricted medical schemes, in particular those employers who pay a subsidy towards employee contribution are better at managing capitation arrangements.

520. The Council for Medical Schemes has started collecting data on quality indicators and is in the process of collecting associated cost. The collection and dissemination of this data should be prioritised because it is difficult to assess whether or not beneficiaries are deriving good value from managed care without it. It is of utmost importance that outcome measures will become available in order to improve the effectiveness of risk sharing arrangement and monitor and assess contracts.

CONCLUSION OF THE FUNDERS' CHAPTER

521. Medical schemes are the primary source of financing for individuals wishing to access private healthcare.

522. Many medical schemes outsource their administration and managed care functions to third party administrators. The HMI's analysis of the medical scheme, administrator and MCO markets found that:

    522.1 Medical schemes operate under a governance model where an elected board of trustees and the principal officer supervise funds on behalf of beneficiaries. The HMI has found that trustees and principal officers do not have sufficient incentives to act as agents for members

and members are unable to hold contracted parties (administrators/ MCOs) to account. The salaries of trustees and principal officers are not linked to the performance of schemes or their contracted service providers (administrators/MCOs).

522.2 The delineation of medical schemes as non-profit organisations and medical scheme administrators/ MCOs as for-profit organisations is unique to South Africa, and tends to distort competition in the healthcare market. The HMI has observed that there is no real competition through lower contribution premiums and richer benefits between the 22 open medical schemes. Given the nature of medical schemes being not for-profit, there is very little incentive for most medical schemes to grow, because trustees and principal officers get paid regardless of the performance of the scheme. However, there a small number of medical schemes who have a very close relationship with their for-profit administrators drive competition on their behalf. These administrators see the value in growing the medical scheme as they benefit from increased revenue from medical scheme growth.

522.3 The current regulatory environment, as well as an oligopolistic market structure, has resulted in open medical schemes, in which competition is focussed on risk selection and avoiding price increases.

522.4 Limited attempts by medical schemes to curtail the rising healthcare expenditure has been observed. Annual negotiations take inflation as a given and focus almost exclusively on tariffs, paying almost no attention to value. Volumes and quality outcomes rarely form part of any negotiations. Innovative models that incentivise positive provider behaviour have yet to be introduced in a meaningful manner.

522.5 The largest open schemes have strong vertical relationships with an administrator. Discovery Health with DHMS, Momentum Health has a similar relationship with MMI Health, and Bonitas and Fedhealth are linked to Medscheme. Other open medical schemes add little to nothing in the way of a competitive constraint on these larger open schemes. The HMI has also observed a lack of innovative, entry and limited expansion by firms on the competitive fringe.

522.6 The administrator market is highly concentrated. Three large administrators — Discovery Health, Medscheme and Metropolitan Health — constitute around 80% of the market[288]. There has not been any sustainable and significant entry into the medical scheme administrator market in over a decade. Discovery Health is significantly more profitable than Medscheme and Metropolitan. While Discovery Health stated that third party administrators compete to provide administration services for both open and restricted medical schemes, it competes for restricted medical schemes only.

522.7 The observed dominance in the administrator market, coupled with no regulation on profit margins has meant that savings generated from this upstream competition, to the extent that it exists, has been taken out of healthcare and shared with shareholders rather than passed on to consumers. For instance, the expected inverse relationship between administration costs and number of beneficiaries does not hold in this market.

288. See profitability analysis in this chapter. The HMI conducted the profitability analysis on Discovery Health, Medscheme and Metropolitan. At the time Metropolitan was significantly larger than it is now, having recently lost two large medical scheme clients, Polmed and Bankmed.

Chapter 6
Facilities

INTRODUCTION

1. Healthcare facilities include hospitals, clinics and other treatment establishments that provide services which can be a mix of acute, sub-acute, general and specialised services. The Health Market Inquiry (HMI) team adopted the premise that the structure of the private facilities market of the healthcare sector ("private facilities market") is of central relevance in assessing competition in the sector.

2. The report focuses on assessing whether or not private healthcare facilities have market power and whether the market power may be exercised in a manner that harms competition and increases healthcare costs. We also assess potential distortions in the private facilities market. To do this, the inquiry specifically conducted the following assessments:

    2.1 Market definition, including whether the public sector is a competitive constraint to private sector facilities;

    2.2 Concentration analysis;

    2.3 Creeping mergers;

    2.4 Distribution of private facilities across provinces;

    2.5 Relationships between practitioners and facilities;

    2.6 Bargaining and tariff determination;

    2.7 Expenditure analysis;

    2.8 Utilisation and Supply Induced Demand analysis;

    2.9 Profitability analysis; and

    2.10 Barriers to entry and exit in the market.

INDUSTRY OVERVIEW

DEVELOPMENT OF THE PRIVATE HOSPITAL SECTOR

3. Healthcare facilities are establishments for the diagnosis, treatment or care of individuals suffering from illness and/or injury. There are different types of healthcare facilities; acute facilities, sub-acute facilities, day facilities, specialised facilities, healthcare centres and clinics (collectively referred to as facilities).[1] The World Health Organisation describes facilities as healthcare institutions with organised healthcare staff, and inpatient facilities that deliver a range of medical, nursing, and other related services.[2]

4. There are approximately 814 facilities providing healthcare services in the public and private the sector in South Africa, as of 2016.[3]

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1. See HMI glossary of terms.
2. World Health Organisation, "Health Topics: Hospitals," 2015. [Online]. Available: http://www.who.int/topics/hospitals/en/. [Accessed 18 August 2015].
3. Health Market Inquiry data compiled from various sources.

5. Public health facilities play a key role in the delivery of healthcare services in South Africa. The public healthcare sector serves most of the population, who are largely without medical insurance. There are 405 public facilities, reporting to national, provincial and district government authorities.[4]

6. The private sector predominantly serves consumers who are insured through medical schemes, health insurance products, and an insignificant number of consumers who pay out of pocket. There are 409 private facilities, distributed across all provinces.

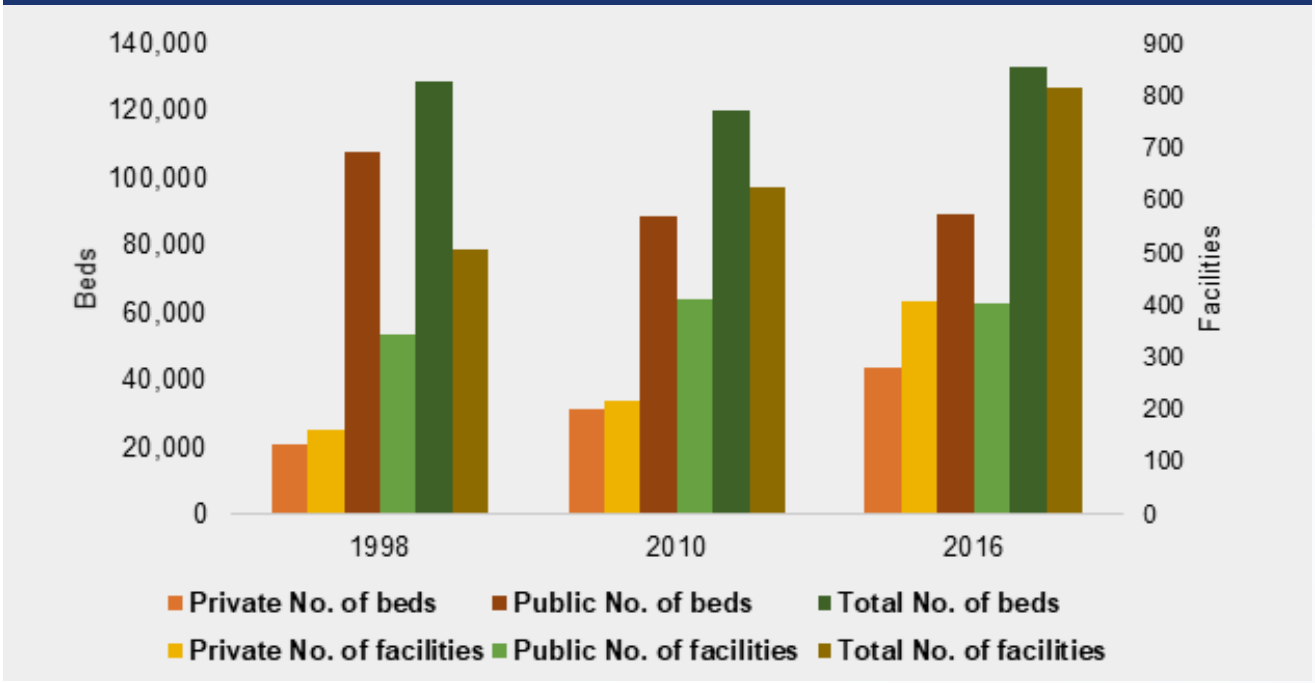
7. In addition, there are Private-Public-Partnership (PPP) arrangements between the public and private sector, and further designated service provider (DSP) agreements with medical schemes, where the public sector is contracted to provide certain healthcare services to private patients.

8. The private hospital sector developed fairly recently in South Africa. Before 1985 private sector care was uncommon and most insured members used public services which they paid for via medical schemes. Public services (which were segregated along racial lines) were free for lower income groups, with higher income groups with incomes in excess of a benchmark, determined by a means test, required to pay.

9. Private facility services started to grow significantly from the mid-1980s. For instance, private beds grew by more than 240% from 6 125 in 1986 to 20 908 beds in 1998. A further 10 000 private beds and 54 private facilities had been added by 2010.

10. As private beds increased, the number of public beds declined. Overall, the total beds (including both private and public) have been increasing over time. The total number of private facilities increased while the total public facilities declined. Overall, the total number of facilities (both private and public) have been increasing over time. Figure 6.1 below shows the number of facilities and hospital beds between 1998 and 2016.

FIGURE.6.1: NUMBER OF FACILITIES AND HOSPITAL BEDS (1998 – 2016)[5 6]



*Private facilities and private beds include acute, non-acute, day beds/clinics, psychiatric and sub-acute facilities and beds.

4. Health Market Inquiry data compiled from various sources.
5. Van den Heever AM. The role of insurance in the achievement of universal coverage within a developing country context: South Africa as a case study. BMC Public Health. 2012;12 Suppl 1:S5. doi: 10.1186/1471-2458-12-S1-S5. Epub 2012 Jun 22.
6. 6 Health Market Inquiry data compiled from various sources.

DESCRIPTION OF HEALTHCARE FACILITIES IN SOUTH AFRICA

11. Healthcare facilities in South Africa consist largely of general acute care hospitals with varying levels of clinical capability and associated patient referral patterns. Other facilities include outpatient clinics, day hospitals, chronic disease facilities, behavioural health facilities and post-acute (rehabilitation or skilled nursing) facilities.

12. For purposes of billing and claiming for healthcare services the industry classifies facilities into various practice types. The allocation of practice numbers is done by the Board of Healthcare Funders of Southern Africa (BHF), through the Practice Code Numbering System (PCNS) on behalf of medical schemes. This code is used by facilities and medical schemes for billing purposes.

13. For healthcare facilities, the following major practice type definitions are used.

    13.1. 047 - drug and alcohol rehabilitation facilities

    13.2. 049 – sub-acute facilities

    13.3. 056 – public hospitals

    13.4. 057 and 058 – private hospitals

    13.5. 076 and 077 – day hospitals/clinics

14. Further to the practice type classifications, facilities are granted unique practice numbers – usually linked to the practice type as a prefix.

15. In its assessment, the HMI will concentrate primarily on general acute facilities as they account for the largest share of market based on the number beds, admissions and expenditure. These facilities consist largely of hospitals but include day hospitals to some extent. These facilities are typically classified as 057 and 058, and to some extent 077. The corporate groups that largely own general acute care hospitals also own day hospitals. We refer to all these facilities as "hospitals" henceforth.

PRIVATE HOSPITALS IN SOUTH AFRICA[7]

16. The main private hospital groups currently operating in the private sector are (1) the three large corporate groups (Netcare, MediClinic and Life Healthcare); (2) the National Hospital Network (NHN), which is a loose grouping of independent hospitals which has an exemption from the Competition Commission to negotiate tariffs collectively; and (3) the 'Other' independent hospitals and day hospitals/clinics not affiliated to NHN.

    16.1. Netcare is the biggest hospital group based on number of beds and facilities. It listed on the Johannesburg Securities Exchange (JSE) in 1996. The group consists of 57 owned facilities and 9 242 beds in South Africa as well as an additional 425 beds in Lesotho.[8] [9] Netcare operates a self-administered closed medical scheme for its employees. BMI Healthcare is a division of the Netcare group which runs 56 acute care private hospitals in the United Kingdom.[10]

    16.2. Mediclinic is a wholly owned subsidiary of the international private healthcare group, Mediclinic International Ltd, which was founded in 1983 and listed on the JSE in 1986. The group includes 52 private facilities and 7 983 beds in South Africa.[11] Mediclinic falls within the same corporate structure as Discovery Health, as part of the REMGRO group of investee companies. Mediclinic also owns and operates hospitals in Namibia, Switzerland, and the United Arab Emirates as well as having a minority stake in Spire Healthcare Group PLC which operates private hospitals in the United Kingdom.[12]

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7. Refer to the Industry Overview Chapter and Cross Directorships.
8. Netcare. Public Hearing Presetation 11 March 2016, pg. 3.
9. Health Market Inquiry Database compiled from multiple sources. 2016.
10. See Netcare website, available at: https://www.netcare.co.za/Who-We-Are/Group-at-a-glance/Divisions
11. Mediclinic. Public Hearing Presentation 10 March 2016, pg. 10.
12. See Mediclinic website, available at: http://www.mediclinic.co.za/About-Us

16.3. Life Healthcare was founded in 1983 as a hospital division of African Oxygen Limited (Afrox). The company grew over the years through various acquisitions, mergers, and expansions. In 2009 Afrox rebranded its hospital business to Life Healthcare. Life Healthcare was re-listed on the JSE in 2010.[13] Life Healthcare operates 50 acute facilities, as well as 6 six acute rehabilitation facilities and seven mental health facilities. Life Healthcare has 7 942 registered beds.[14] It used to operate the largest PPP in South Africa, providing mental health services to indigent patients under contract to national and provincial departments of Health and Social Development through 10 facilities in five provinces[15] with 2 942 beds.[16] This PPP was terminated in 2016.[17] Life Healthcare operates internationally in Botswana and has investments in the following entities: [18]

16.3.1. Alliance Medical, which provides complex molecular and diagnostic imaging in the United Kingdom, Italy, Ireland, and eight other European markets;

16.3.2. Scanmed SA, providing primary, ambulatory, and acute care services in Poland, and;

16.3.3. Max Healthcare, which provides acute care facilities in India.

16.4. The NHN is a group of independent privately owned facilities. Founded in 1996, it comprises competing private facilities operating under an exemption from the Competition Commission[19] to bargain collectively on behalf of its members when negotiating tariffs and related matters with medical schemes. The NHN consisted of 209-member facilities as of 25 July 2017, which includes 59 acute facilities, 53 day clinics, 33 psychiatric facilities, 19 ophthalmology facilities, 43 sub-acute facilities and two rehabilitation facilities. Its geographical footprint includes major urban areas such as Johannesburg, Pretoria, Bloemfontein, Cape Town, Port Elizabeth and Durban.[20]

16.5. The other smaller independent facility groups not affiliated to the NHN include Clinix Health Group Ltd and Joint Medical Holdings (JMH). Mining companies such as AngloGold Ashanti also operate healthcare facilities and provide services predominantly to employees in the mining sector.

17. The three large hospital groups, Netcare, Life, and Mediclinic accounted for approximately 88.4% of acute in-patient beds nationally in 2015.[21] On a national basis, Netcare accounted for 33.3% of all acute in-patient beds, Life Healthcare for 28.8% and Mediclinic for 26.3% Figure 6.2. NHN and other independent hospitals and day clinics not affiliated to NHN accounted for 11.6% of acute in-patient beds nationally. As shown in Figure 6.2, the proportion of market share accounted for by NHN and other independent hospitals and day clinics not affiliated to NHN has reduced significantly over time. Their market share has been diverted to the three hospital groups, largely through mergers and acquisitions.[22]

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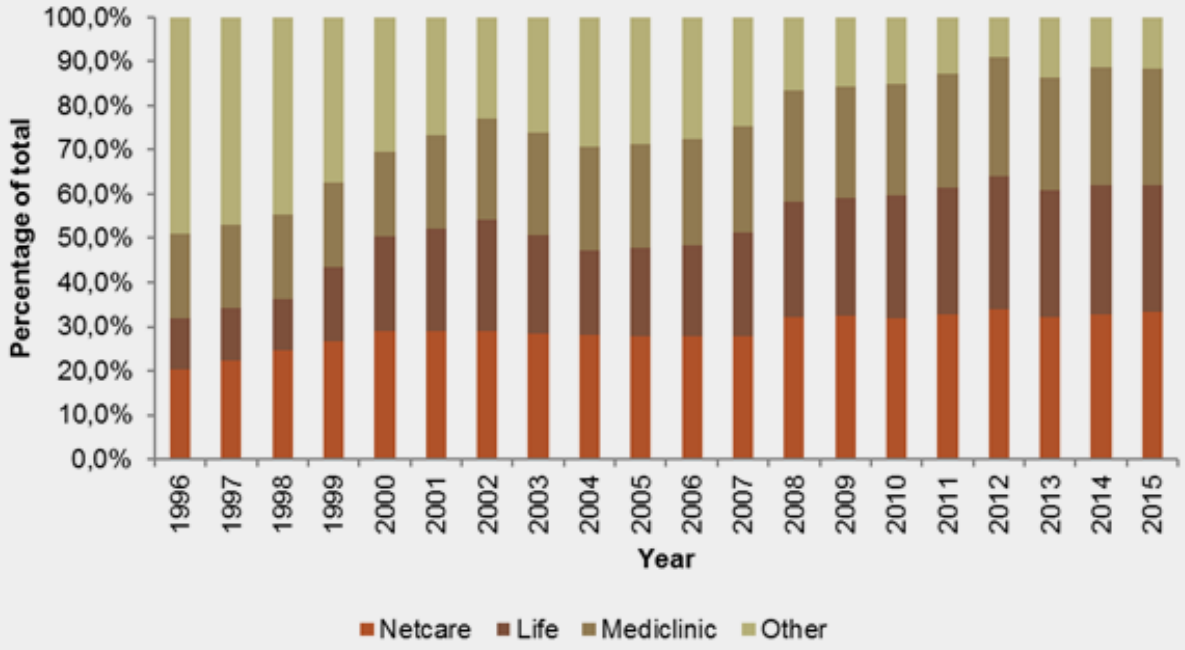
13. Life Healthcare. Accessed from: https://www.lifehealthcare.co.za/media/1312/listing-release-10-june-2010.pdf.
14. Life Healthcare. Public Hearing Presentation 10 March 2016, pg. 4.
15. Western Cape, Eastern Cape, Gauteng, Limpopo & Mpumalanga.
16. Life Healthcare. Accessed from: https://www.lifehealthcare.co.za/about-us/life-esidimeni/.
17. Section 27. Life Esidimeni Case. Accessed from: http://section27.org.za/wp-content/uploads/2017/02/Life-Esidimeni-Fact-Sheet-1.pdf .
18. See Life Healthcare website, available online at: https://www.lifehealthcare.co.za/about-us/a-closer-look/life-healthcare-at-a-glance/
19. The first exemption was granted in 2003 to date.
20. National Hospital Network, "National Hospital Network Member Facilities," Acessed from: https://nhn.co.za/
21. Health Market Inquiry data compiled from various sources.
22. Robb. G. 2014. Creeping mergers – should we be concerned? A case study of hospital mergers in South Africa. Accessed from: http://www.compcom.co.za/wp-content/uploads/2014/09/Creeping-mergers-conference-paper-Final.pdf.

FIGURE.6.2: HOSPITAL BEDS BY HOSPITAL GROUP (2000 – 2015) [23]



INDUSTRY ASSOCIATIONS

18. There are two main industry associations in the facilities market, the Hospital Association of South Africa (HASA), and the Day Hospital Association of South Africa (DHASA).

19. HASA is a non-profit organisation established to help improve access to healthcare and the quality of healthcare services.[24] HASA has 212 affiliated facilities, which represent more than 80% of South Africa's private facility beds. Members include Mediclinic, Life Healthcare, Netcare and the NHN.

20. DHASA represents day facilities in the South African healthcare sector. Its key objectives include providing support for day surgery facilities, helping to create a national footprint for its members in South Africa, and promoting the growth and use of day surgery facilities among patients, specialists, medical schemes and health insurers. DHASA members are also members of the NHN.[25]

REGULATORY FRAMEWORK

21. There is no sector regulator for private healthcare facilities. The National Health Act is the principal governing legislation, administered by the National Department of Health (NDoH). However, the NDoH delegates responsibility over hospitals to the nine provincial departments through provincial regulations - Regulation 158 and Regulation 187.[26] These regulations mandate the provinces to oversee the issuing of licences to facilities as well as other matters related to facilities (e.g. inspections) and the provision of healthcare services. The Free State provincial department instituted new policy regulations in place of Regulation 158 on 9 September 2014.[27] [28]

22. Facilities are also subject to the regulatory authority of the Office of Health Standards Compliance (OHSC) which was created by the National Health Amendment Act of 2013.

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23. Health Market Inquiry data compiled from various sources.
24. Hospital Association of South Africa, submission dated 6 June 2016, pg. 2-4.
25. Day Hospital Association of South Africa. Accessed from: http://www.Discovery Healthasa.co.za/
26. See Regulations Governing Private Hospitals and Unattached Operating Theatre Units (as amended) Regulation R158 of 1 February 1980, and Regulations Relating to Categories of Hospitals, Regulation R185 of 2 March 2012.
27. Free State Provincial Department of Health. Public Hearing Presentation 18 May 2016.
28. See para. 372.

In terms of section 78 of the Act, the mandate of the OHSC is to monitor and enforce compliance by health establishments with norms and standards prescribed by the Minister of Health in relation to the national health system.[29] However, while the OHSC's mandate extends to both public and private facilities, we understand that its powers in relation to the latter have not yet been enforced.

23. Private facilities are also subject to the Competition Act insofar as it relates to competition issues, ie merger transactions, enforcement and exemption investigations and market inquiries.

24. The facilities market is indirectly impacted by the regulatory authority of the Health Professions Council of South Africa (HPCSA). The HPCSA was established under Section 2 of the Health Professions Act as a professional body which regulates health professions along a wide range of dimensions, including the conduct of practitioners.

25. The HPCSA's conduct regulations, contained in its Ethical Rules, set out guidelines to which practitioners registered under the HPCSA must adhere. Among others, these regulate the manner in which they may operate their practices, the various forms these practices may take, and any relationships they may have with other health establishments such as facilities. For instance,

    25.1. The HPCSA regulates the employment of practitioners, sharing of fees, practitioners' financial interest in facilities, and the incentives that may be given to practitioners.

    25.2. Section 7(3) of the Ethical Rules prohibits practitioners from accepting incentives that would influence their clinical independence and induce them to under service, over service or overcharge patients.

    25.3. The Ethical Rules also do not allow practitioners to have direct or indirect financial interest or shares in a facility or any other healthcare institution unless certain requirements are met.[30]

26. The HMI notes that the HPCSA seems to be pursuing Ethical Rules selectively. For example, the HMI has found several contracts that are based on global fees, which could be a contravention of section 7(4) of the Ethical Rules (sharing of fees), but are approved by the HPCSA. Similarly, the HPCSA does not seem to effectively evaluate share ownership in facilities which could, by the same logic it uses against employment, influence clinical independence. This is discussed in more detail in Chapter 7 (Practitioners).

27. There are some failures associated with the regulatory framework guiding the facilities market. Such regulatory failure, as will be discussed in more detail in subsequent sections of the report, impede the competitiveness of the facilities market. In the recommendations section, recommendations are made to address the regulatory failures in the market.

MARKET DEFINITION

INTRODUCTION

28. This section describes the way in which the HMI has defined and analysed the relevant product and geographic markets of facilities in South Africa's private healthcare sector. The relevant markets defined, will provide a framework for the competitive assessments in the sections that follow.

29. In practice, the identification of markets in which competitors constrain one another uses similar inputs to an assessment of outcomes related to market power. However, market definition is no more than a tool; if direct evidence of the exercise of market power becomes available, that may suffice to conclude that market power exists and, if so, in which market(s).[31]

30. This section provides the market definition of private facilities in relation to product and

29. Office of Health and Standards Compliance, Public Hearing Transcript 4 May 2016, pg. 208-209.
30. HPCSA Ethical Rules: See rule 23A (a) – (h).
31. HMI Methodology paper, approach to assessing market power of health facilities, 26 August 2016, par 6 -9.

geographic markets. It considers whether the different types of private facilities are in the same product market and whether public facilities provide a competitive constraint to private facilities. An assessment of whether private facilities compete at the national or local level or both is also conducted in this section.

31. This section also provides the market share of hospitals and hospital groups at the national and local level and outline trends in market concentration. Furthermore, this analysis discusses drivers of market concentration with specific focus on creeping mergers.

MARKET DEFINITION AND THE MEASUREMENT OF MARKET POWER IN THE CONTEXT OF A MARKET INQUIRY

32. As stated in the Inquiry's terms of reference, a market inquiry is "a general investigation into the state, nature and form of competition in a market, rather than a specific investigation into the conduct of any particular firm."

33. Because the Inquiry seeks to evaluate the competitive dynamics of complex health care markets, rather than examining a single proposed market change (eg. a merger), the HMI may apply analytical methods that differ from those familiar to participants in contested matters. Competition enforcement is generally focused on actions (past, present, or proposed) by a small number of specific firms but a market inquiry focuses on the performance of the market as a whole and on how competition in that market may be improved.

34. A market inquiry may assess aspects of market performance that are not typically considered in an antitrust investigation. For instance, a market inquiry may assess not just price, but also access to goods or services, particularly by the poor. Quality and innovation arise in antitrust matters, but they may receive more emphasis in a market inquiry. A market inquiry may also consider market dynamics and long-term market performance more intensively than would an antitrust matter.

35. Where private conduct may be at issue, the HMI will focus more on identifying sources of existing market power (e.g. monopolisation, cartelisation) than on ascertaining the risk of future market power (e.g. from additional consolidation). The HMI also views market power with caution even if it is not presently abused, as it may reduce incentives for entry (thus preventing, distorting and restricting competition). The manner in which market power is attained, such as through sequential small mergers for example, will also be given more weight in this inquiry than it would in normal antitrust investigations.

36. As argued in Chapter 2 (Legal Framework) of the report, the HMI must also consider the intersection between competition law as conventionally understood and the constitutional right of access to healthcare services in South Africa. It must also take account of the stated objectives in the Competition Act, including expanding access to economic opportunity for all South Africans. The Inquiry therefore applies a holistic approach to its analyses to identify and minimise any unintended anticompetitive effects that arise from the exercise of market power.

37. In South Africa, healthcare facilities consist mainly of general acute care hospitals with varying specialities. Other actors in the facilities segment include outpatient medical clinics, day hospitals for outpatient surgery, chronic disease facilities, behavioural health facilities and post-acute (rehabilitation or skilled nursing) facilities.

38. Because general acute care hospitals account for the largest share of health care spending and serves both medical practitioners and the public most broadly, the HMI has chosen to concentrate on acute care hospital markets in its assessments of market power. Day hospitals are considered to a limited extent.

39. Most consumers/patients of healthcare facilities in the private sector have health cover through medical schemes which pay for most of their in-hospital expenses. Consequently, competition in facility markets works differently than in markets in which consumers pay directly for the goods or services they consume.

40. Patients are usually referred to a particular hospital by a medical practitioner with the result that hospitals typically compete for medical practitioners rather than for

patients directly. In situations where patients choose facilities themselves, proximity and reputation rather than price and quality tend to drive decisions, particularly because meaningful comparative information on quality and price is not available to them.

41. Medical schemes contract with hospitals, but generally do so non-selectively in that all large hospital groups and nearly all hospitals are generally included in these agreements. Moreover, corporate hospital groups sign national contracts with schemes, including all their facilities at uniform prices negotiated with each funder rather than contracting on a regional or hospital-by-hospital basis. To the extent that there are selective contracts, these influence the choice of hospital (and practitioner) by patients. Selective contracts are still limited to a small proportion of overall beneficiaries in South Africa.

42. A key aspect of assessing market performance is determining whether firms exercise market power and can profitably charge higher prices than under competitive conditions. This may harm consumers since they pay more for the same goods or services, and it harms society by reducing the amount of goods and services bought or sold to below the competitive level (ie allocative-inefficiency). The exercise of market power can also result in other harm such as reduced quality and reduced innovation. The HMI will, where appropriate and depending on data availability, also look at harm not generally considered in antitrust enforcement, such as any impact on access for specific groups, such as the poor.

43. One approach to identifying market power is a direct assessment. One looks at evidence of whether market power is being exercised and assesses how the firm or firms identified engage with competitors, suppliers or clients. A direct indication of market power may be that a firm or a group of firms refuse to react to demands from clients. For example, a general refusal to engage in alternative reimbursement models (ARMs) or in selective contracts may indicate market power on behalf of providers.

44. The most common approach to assessing market power is indirect; one examines factors that are likely to contribute to the exercise of market power such as market shares, concentration levels and barriers to entry, and assesses whether there is a significant likelihood that market power is prevalent. To do this, the Inquiry defined relevant product and geographic markets.

45. The Tribunal has not so far established an appropriate method for defining markets in the context of a market inquiry. The Tribunal has nevertheless adjudicated on several hospital mergers in which it has based its findings on a relevant product market. Although the scope of a merger review is different from that of a market inquiry as highlighted earlier, it is closely related.

46. In previous private hospital merger reviews, the Tribunal has consistently based its findings on a relevant product market for the provision of private hospital services, which includes a cluster of medical services.[32] Acknowledging the lack of substitutability for each healthcare service, the Tribunal found that it is analytically appropriate and expeditious to cluster a range of in-patient services offered by hospitals into a private healthcare services market. The Tribunal also found that public healthcare facilities do not pose a competitive constraint to the private healthcare facilities.

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32. Afrox Healthcare Limited / Amalgamated Hospital Limited [2001-2002] CPLR 106 (CT) (Case No. 53/LM/Sep01); Afrox Healthcare Limited & Wilgers Hospital Limited [2002] (CT) (Case no. 15/LM/Feb02); Medi-Clinic Corporation Limited / Curamed Holdings Limited [2002] (CT) (Case no. 74/LM/Oct 02); Business Venture Investments 790 (Pty) Ltd / Afrox Healthcare Limited [2004] (CT) (Case no.105/LM/Dec04); Medi-Clinic Investments & Wits University Donald Gordon Medical Center (Pty) Limited [2005] (CT) (Case no. 75/LM/Aug05); Phodiclinics / Protector Group Medical Services [2005-2006] (CT) (Case No. 122/LM/Dec05); Netcare Hospital Group (Pty) Ltd / Community Hospital Group (Pty) Ltd [2006-2007] (CT) (Case no. 68/LM/Aug06); Life Healthcare Group (Pty) Ltd / Amabubesi Hospitals (Pty) Ltd, Bayview Private Hospital (Pty) Ltd [2010] (CT) (Case no. 11/LM/Mar10); Life Healthcare Group (Pty) Ltd / Joint Medical Holdings Ltd [2011-2012] (CT) (Case no. 74/LM/Sep11); Mediclinic Southern Africa (Pty) Ltd / Mediclinic Limpopo Ltd [2014] (CT) (Case No. 018374), para. 10.

47. In the methodology paper for the facilities, the HMI acknowledges that given the difficulties of applying the SSNIP test, and similar price-based tests, scientific precision of market definition may not be possible.[33] The Inquiry conducted an analysis of demand substitution and supply substitution taking account of patients' health seeking behaviour and private healthcare facilities' competitive behaviour. The Inquiry specifically looked at where consumers access services, and depicted how the private healthcare facilities compete.[34] This will be discussed in more detail below.

HMI'S APPROACH TO DEFINING MARKETS AND ASSESSING MARKET POWER FOR FACILITIES: THE PRODUCT DIMENSION

48. The healthcare services referred to in the TOR are primarily examples of general acute medical care. Acute medical care consists of highly differentiated medical treatments, which can be segmented by type of care (in-patient, outpatient and day care) and according to specialty (urology, ophthalmology, pathology, etc). These specialised medical services are provided by specialist practitioners, who are self-employed, but who admit and treat patients in private acute medical care hospitals and day care hospitals.

49. In order to assess the product dimensions of acute medical services provided in private healthcare facilities in South Africa, the HMI considered both demand side substitution and supply side substitution. As we have seen, demand substitution between medical specialties is not likely, so from this perspective product markets must in principle, be distinguished according to specialty and in some cases sub-specialty.

50. Supply side substitution takes place rather between treatments within the same specialty, than across specialties. And the feasibility of within-specialty supply side substitution is generally speaking smaller for complex treatments that require large specific investments. Also, hospitals that do not offer a particular specialty might be tempted to add services that were not in their portfolio in response to a competitive challenge by another hospital or new entrant in close proximity. However, it normally takes a significant amount of time and investment to build up a new practice. While likely, new entry will not be timely and the threat of entry may thus not exercise competitive constraint. For the purpose of this analysis, the significance of supply substitution between specialties at different acute care hospitals, in response to a small but significant price increase, is thus taken to be negligible for the purposes of this market inquiry.[35]

51. In conclusion, acute private hospitals which generally offer in-patient, outpatient, and day care, compete on the basis of specialties and sub-specialties. However, for the purposes of this analysis it is not necessary to decompose acute facilities' service to this level of granularity to assess the relevant product market and competitive constraints on hospitals. Private hospitals compete on broadly the same set of specialties and services. They do so under the same or similar market conditions. This analysis will therefore aggregate the products of these hospitals and analyse the services

33. HMI methodology paper for the facilities: para 27 – 28, pg. 7.
34. HMI methodology paper for the facilities: para 28, pg. 7.
35. The HMI is aware that the UK market investigation that was concluded in 2014 acknowledged a degree of asymmetric competition between general acute hospitals and stand-alone day hospitals, but nevertheless decided to concentrate primarily on general acute hospitals alone. The HMI further considered supply-side substitution in terms of whether other facilities which do not provide a range of in-hospital healthcare services have the capabilities and assets to redirect healthcare services timeously to provide the range of in-hospital healthcare services provided by general acute hospitals. It normally takes a significant amount of time and investment to expand an existing hospital or to build a new facility for general acute healthcare. There is evidence of significant barriers to entry and expansion such as access to capital and facility licencing. This is explained in more detail in Section 12 (barriers to entry and expansion) of this Chapter. The HMI therefore concludes that there is limited scope for supply-substitution between the private healthcare facilities that provide a range of in-hospital healthcare services and the other facilities such as medical centres, sub-acute, specialist and mining facilities.

of private acute hospitals as one product market. Practically, that means that general acute hospitals on an in-patient, outpatient or day care basis, are considered to all be in the same product market, despite small differences in the specialities and sub-specialities provided.

52. Stand-alone day care hospitals have been included in the relevant product market. Private healthcare facilities typically provide a wide range of in-hospital services and most of them also provide a limited number of in-hospital day care services. Day care is also provided by a small number of stand-alone day hospitals. The HMI considered supply side substitution between general acute hospitals and stand-alone day facilities. There are asymmetries between general acute hospitals and day facilities in their ability to rapidly and easily add capacity so that they can provide new medical treatments across a spectrum of in-hospital care. General acute hospitals provide in-patient care, day-patient and outpatient care in the same facility. As a result, hospitals with overnight capacity could quickly and easily switch capacity across in-patient, day-patient and outpatient care. Stand-alone day facilities however, appear to have a very limited ability to rapidly and easily switch capacity into the provision of general acute in-patient care because of the scale of the investment and the time required.

53. Therefore, while general acute hospitals compete with and provide competitive constraints to stand-alone day hospitals, the latter may not be able to provide or switch to the same level of specialised day care as acute hospitals provide. They may therefore not be able to compete with general acute hospitals to the same extent. Competitive constraints between these segments is therefore asymmetric. Nevertheless, the Inquiry accepts the existence of competitive constraints between these two segments of facilities and will consider day care to be in the same product market as general acute hospital care for the purposes of this Inquiry.

54. With respect to demand-side substitution, the HMI also considers shifts in demand from the private healthcare sector to the public healthcare sector to be generally insignificant and insufficient to constrain providers in the private sector. Occasionally, medical schemes do contract with public hospitals and some substitution may occur once an individual's private cover is exhausted. The HMI has been provided with information that private patients with non-PMB conditions whose scheme in private hospitals' coverage has been exhausted are "dumped" in the public sector. Also, anti-selection of private patients might involve switching from public to private and vice versa. But on the whole, the clinical quality and service levels provided by the private sector cannot be compared to the public sector as has been confirmed by the Tribunal.

55. The HMI also looked at possible supply substitution between the public and private sector, ie. public hospitals entering the for-profit market if competitive conditions are favourable to do so. However, the for-profit private sector is fundamentally different from the public sector. Supply substitution does not happen and is not likely to happen in the current split system in South Africa. However, in principle there is no reason why this could or should not happen in future. The example of the UK shows that competition between private and public-sector hospitals may offer competitive constraints to private hospitals and the private sector and may serve the patient well.

56. In the current situation and for the purposes of this market inquiry, the HMI will not consider public healthcare facilities generally to be a reasonable alternative to the services of private facilities in South Africa. This Inquiry notes, however, that possible constraints from public hospitals on private providers, where that should happen, must be taken into account on a case by case basis. For more detail on this we refer to *Annexure 6* [36] on competition between private and public facilities in South Africa.

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36. Competition between private and public facilities in South Africa.

57. In defining the relevant market and analysing market concentration, the HMI relies on a data set of private healthcare facilities in South Africa, developed from information collated from various sources. There are 195 facilities classified as private hospitals and day facilities out of the data set of 356 private health facilities relevant for this analysis. This accounts for approximately 55% of the total private healthcare facilities. Out of the 195 private healthcare facilities that provide a range of in-hospital healthcare services, 181 (approximately 93%) were multi-disciplinary private acute facilities and 14 (approximately 7%) were stand-alone day facilities. This is also not significantly different from the data set provided by the facility groups.[37] [38] [39]

58. The HMI established that there is limited demand substitution between the private healthcare facilities that provide a range of in-hospital healthcare services (the 057, 058 and 077 facilities) and the other facilities that provide a narrow range of healthcare services such as medical centres, sub-acute, specialist and mining facilities. This is because the other facilities do not offer the range of in-hospital healthcare services offered by the multidisciplinary acute and certain day facilities. For example, specialist facilities are characterised by highly complex medical offerings which may not be available at a normal multi-disciplinary acute facility. Mining facilities generally offer services on a different model, can employ practitioners and face a largely different disease burden.

59. The HMI's approach is reasonably consistent with that followed by the three main facility groups for the market definition analysis and the CMA in its investigation into private healthcare.[40] We conclude that for the purposes of the market inquiry, the relevant private healthcare facilities that will be included in the analysis are the general acute and stand-alone day facilities that provide a range of in-hospital healthcare services (classified 057, 058 and 077 facilities).

HMI'S APPROACH TO THE GEOGRAPHIC DIMENSION OF THE RELEVANT PRIVATE HOSPITAL MARKET

60. As highlighted in the methodology paper for the facilities, "the relevant geographic market is the area within which rival firms currently supply, or could supply, the relevant product(s) to the same consumers".[41] It is the area in which consumers can and will practically turn for alternative sources of the product should they feel the need to do so.

61. There is no specific South African precedent for the relevant geographic market of private healthcare facilities in the context of a market inquiry. However, on several hospital merger reviews, the Tribunal's position has been to assess the transactions on both a local and a national basis. The Tribunal acknowledged that price competition between the major hospital groups occurs at a national level through bargaining with medical schemes, while local competition exists in terms of non-price competition to attract patients and specialists.[43] Non-price competition may take the form of providing rooms and facilities to medical specialists, investment in equipment, improvements in quality etc. The

37. Netcare's facility dataset included 363 private facilities, 211 of which (58%) were Full Hospitals that were used for the Netcare market definition analysis. See Netcare's Compass Lexecon "Market Definition and Relevant Markets: Assessment of Competitive Alternatives dated 30 October 2014, pg. 31.
38. Mediclinic's dataset was based on information obtained from HASA. The dataset included 280 private hospitals in South Africa. See Econex report "Local market concentration and hospital profitability: A study for Mediclinic SA dated October 2014.
39. The HMI also consulted the Life Healthcare paper on Local Market Assessment dated 18 March 2016, but it is not explicit on how Life Healthcare developed its database of facilities used in the market definition analysis.
40. See CMA case site, available online at: https://www.gov.uk/cma-cases/private-healthcare-market-investigation
41. HMI methodology paper for the facilities: para 5, pg. 2.
42. See Commission case number 2013Dec0598; Tribunal case number 11/LM/Mar10 & Commission case number: 2010Mar0463; Case number 122/LM/Dec 05; Life/Amabubesi merger, case number 11/LM/Mar10; 2011May0041.
43. See Tribunal merger review case number 122/LM/Dec 05.

Tribunal also pointed out that local market power can have an impact on national bargaining power.

62. In its methodology paper the HMI describes that catchment areas will be determined using patient flow data, using both a 80% cut-off criterion and an algorithmic approach. Market concentration in these catchment areas will then be measured in three ways: a fascia count, an HHI/market share analysis, and using the Logit Competition Index (LOCI). The methodology paper states that the HMI will also look at the overlaps between catchment areas and to infer the extent to which patients may switch between hospitals in response to hypothetical changes in price, quality or other variables relevant to competition.

63. The results of this analysis (the local measures of HHI, fascia counts and LOCI) serves to illustrate the degree of local market power across South Africa, and will be inputs into a more detailed quantitative analysis of competitive dynamics and exploration of the impact of concentration in markets.

64. Some of the market definition and market power measures proposed by the HMI are quite novel. As a result, stakeholders have raised concerns suggesting that these measures are not well supported theoretically and empirically. The HMI's methodology paper, however, has provided background to the choice of methods. Moreover, the Inquiry has not relied on any one method to the exclusion of others, but used a range of measures, including more traditional and relatively straightforward ones, to get a better sense of concentration levels across the country. The results of more 'novel' measures will be compared with results from more 'traditional' measures and may be supplemented, where appropriate, with information from the hospitals' own analyses.

65. The HMI's proposed use of the LOCI as a measure of market power has, in particular, received a lot of input from stakeholders. The LOCI (one minus) can be interpreted as a weighted average market share. Its advantage is that it can be calculated without defining a fixed geographic market or catchment area. LOCI calculates market shares based on patient numbers for a series of sub-markets, which can then be weighted according to relative importance and averaged to provide an overall market share. This formulation is derived from an underlying economic model of differentiated products and logit demand.

66. The LOCI is attractive because it is simple to compute and requires relatively little data. Unlike other patient-flow methods, it has been derived from a structural model of demand. However, it is important to bear in mind that LOCI takes into account only one aspect of consumer type or heterogeneity (albeit a very important one), namely location. LOCI abstracts from issues of specialisation and other factors which could influence consumers' likelihood of choosing a particular hospital by aggregating all patient behaviour into one measure of the probability that a random patient chooses the hospital in question.

67. The calculation of LOCI also does not incorporate bargaining dynamics between funders and hospitals, and ignores network dynamics. However, we know that the number of scheme members who are on a network plan is quite small. If a large number of patients were part of network plans in a particular area, LOCI may overstate the market power of a particular hospital which in fact has attracted a large number of patients through its competitive offering to the funder concerned.

68. LOCI, like most measures of market power, is also based on a static view of how patients behave in current market conditions, and not on what they would do if they were responding to a price increase or degradation in quality. These factors will have to be borne in mind as well.

69. Stakeholders' main concerns about the HMI's approach to assessing market power of health facilities paper can be summarised into the following three main areas.

TECHNICAL CONCERNS AROUND THE USE OF THE LAVIELLE ALGORITHM, CLAIMS DATA INSTEAD OF DISCHARGE DATA, AND ENUMERATOR AREAS

70. First, the method for determining catchment areas does not relate to the SSNIP test

–i.e. whether a small but significant price increase (or reduction in quality) would be profitable for a hypothetical monopolist. Stakeholders argue that this is because the methods suggested by the HMI do not focus on the marginal customers explicitly, ie. the customers most likely to switch to a different hospital in response to a price increase. The LOCI, in particular, is argued to give low weight to the marginal customers because it concentrates on existing patient flows, rather than how those flows may change in response to a price increase.

71. Second, the methods proposed by the Inquiry do not take account of patient and hospital characteristics, other than geography, and do not account for possible strategic responses by competitors such as entry and repositioning. The methods ignore the importance of national level bargaining or competition and give too much weight to local dynamics.

72. Lastly, stakeholders have questioned the appropriateness of the use of the Lavielle algorithm (which, to the best of our knowledge, has not been applied by competition authorities before).

The Inquiry responds as follows:

73. The HMI is aware that the Lavielle algorithm (Lavielle) has not been tested in these circumstances and has therefore suggested other, more traditional, simpler and well tested methods to be used in parallel to Lavielle. The potential advantage of Lavielle is that it does not make use of arbitrary cut off points or radii. The methods that have been used by the hospital groups in the analysis submitted to the HMI are radii, and 70%, 80% or 90% catchment areas or Primary Service Areas (PSAs). We discuss these further below. As stated in the methodology paper, the HMI will use different screening mechanisms including radii and an 80% PSA and will contrast the results with those from the Lavielle analysis. The results of the comparison is discussed in section 4 (paragraph 158-170).

74. With respect to the concerns about LOCI, the HMI acknowledges that LOCI is a relative newcomer in the instrumental kit of competition authorities, but notes that it has some convincing advantages. The Inquiry disagreed with the contention that LOCI systematically underestimates the competitive constraint on pricing imposed by individuals who are in market segments farthest away from the hospital and who are therefore most likely to switch if the hospital attempted to increase price. This is accounted for by LOCI. The fact that the hospital has a small market share at that distance accounts for the fact that those patients are more likely to switch. This weighting of shares flows directly from the Bertrand differentiated product oligopoly model with Logit demand. It therefore derives from a coherent economic model, heavily used for modelling differentiated product oligopoly. Additionally, this criticism ignores the fact that patients are less responsive in markets such as healthcare where payments are intermediated by a third party, such as a medical scheme. The price responsiveness of consumers is thus necessary more limited than an SSNIP test would rely on.

75. Another concern raised with LOCI was that "…a more appropriate analysis would be a demand-centred analysis." LOCI, however, is a "demand-centred" analysis. It is a competition index derived from a Bertrand differentiated product oligopoly model with (multinomial) logit demand. By contrast, the "demand-centred analysis" described by the stakeholder (eg fascia count, market shares and HHI, the "demand-centering approach" suggested in their comments) is ad hoc, and not derived from an economic model. The stakeholder further asserts that "… LOCI is sensitive to the geographic sub-market adopted." The fact that it is possible to construct arbitrary examples that result in nonsensical conclusions is not compelling. It is also possible to construct arbitrary examples where other methods (such as those suggested in their comments) produce nonsensical results. For example, the demand-centering approach does a fascia count within a specified drive time or distance from a patient. Obviously the count is sensitive to the drive time or distance chosen, and choosing too large or too small a distance will lead to meaningless results.

76. The third concern around the importance of national level bargaining is acknowledged; however, both local and national competitive dynamics are relevant in this market, as noted

by the Competition Tribunal on numerous occasions. The two are likely interlinked in that national bargaining, particularly around network inclusion, is at least partly a function of local market competition. For example, in an area where members only have one choice of hospital, their medical scheme has no option but to contract with that hospital, potentially giving the hospital bargaining power against the scheme at a national level.

APPROACHES USED BY STAKEHOLDERS IN THEIR OWN ANALYSIS

77. We briefly summarise the approaches to market definition and the assessment of market power used by the three major hospital groups in the reports which they have submitted to the HMI.

Life Healthcare

78. Life Healthcare uses a catchment area approach to determine the smallest geographic radius that captures 80% of patient admissions for each of its hospitals. It then conducts a fascia count for each catchment area. Standardised catchment areas are calculated based on the median drive distance for urban and rural hospitals separately. The argument against this approach is that relevant markets in areas with a high density of hospitals may be understated and that the available address data for some hospitals is imperfect. The authors suggest that hospitals with few competitors should be analysed in more detail.

79. The Life Healthcare report finds that they have nine hospitals with no competitors and nine that have only one competitor. Together, these account for 41% of Life Healthcare's hospitals, 31% of visits and 28% of revenue. However, Life Healthcare claims that some of these hospitals face competition from public and private hospitals outside the catchment area.

Mediclinic

80. Mediclinic uses a direct competitor test and fixed radii test to assess competition in local markets. PSAs are defined as including 75% and 90% of patients, which is in line with approach taken by the UK's previous private healthcare investigation. Fixed radii considered were 5km, 10km, 15km and 20km. Evidence from hospital managers about which hospitals they compete with was also considered.

81. Mediclinic's report uses several concentration measures, namely the Herfindahl-Hirschman Index (HHI), Comprehensive Competition Index (CCI), Rosenbluth Index, Gini Coefficient and the four-firm concentration ratio (CR4). However, the text focuses on the HHI and the results from other measures are provided in section 4 below (paragraph 113-155).

82. The report finds that 19 out of 48 Mediclinic hospitals are considered to operate in "highly concentrated" markets using all measures of concentration. Only three are considered not highly concentrated regardless of the measure used. The remaining 26 are highly concentrated under some measures and not under others. The authors note that hospital managers perceive a narrower market than suggested by the quantitative analysis.

Netcare

83. Netcare analyses local markets by starting with an 80% catchment area and then using the distances that Netcare patients have travelled to identify potential alternative providers. The report thus considers a radius bounded by the distance suggested by the catchment area, ie if the catchment area suggests patients travel up to 20km, they consider facilities located up to 20km from the hospital in question within the catchment area.

84. Netcare finds that for most of its hospitals, the catchment area is between 10km and 30km. It finds that urban hospitals have a broad catchment area of at least 25km. In addition, the report finds that most hospitals have many competitors and that there are many hospitals in the proposed geographic market with substantial capacity. It finds that 32 out of 49 Netcare hospitals have four or more competitors and that these competitors account for 50% or more of bed capacity. Eleven out of 49 hospitals have three competitors, and only six have fewer than three. Of these six hospitals, five are small hospitals.

85. The report notes that although HHIs appear high, there is obscure substantial capacity and

the high number of alternatives available in many areas. It also states that the catchment area approach is a static measure which may not be the best way to assess competitive alternatives as it ignores the possibility of entry and expansion, and may understate the competitive significance of small competitors. It finds that there is substantial pending entry or expansion in the most populated areas which suggests static measures of competition are less meaningful.

THE APPROACH TAKEN BY THE HMI

86. In the South African healthcare market consumers choose between medical plans offered by funders, which may or may not limit patients to particular network hospitals. Patients therefore do not choose between hospitals based on the cost of treatment directly, but rather between funders based on the cost and benefits of the cover offered. Funders negotiate with hospitals for a set of prices that will apply to patients on their different plans. When requiring treatment, patients choose a particular hospital based on a number of factors which may include the advice of their referring GP or specialist, the requirements of their particular health plan, perceptions about the quality or treatment and/or service at different hospitals, and the proximity of the hospital to their home or place of work.

87. There are several key characteristics of the South African market that bear mention. Firstly, South Africa has a relatively low (although growing) proportion of patients on network plans. Schemes have highlighted the difficulty of convincing consumers to limit themselves to a sub-set of hospitals for non-emergency treatment, which makes it more difficult for schemes to demand competitive pricing from hospitals. Secondly, schemes highlight the difficulty of channelling patients to particular hospitals. Patients in South Africa are said to be prone to “self-referring” to specialists and hospitals of their own preference.

88. An important factor for the analysis of local markets is that the three large hospital groups set prices nationally, meaning that local competitive dynamics are not expressed through localised differences in pricing. This means that local competition for patients is likely to be driven by other dynamics, such as by the most favourable location, the reputation of admitting specialists and the perceived quality of treatment and service at the facility. Any quantitative analysis looking at the impact of concentration at the local level would therefore need to focus on non-price indicators rather than on price. Unfortunately, no comparative public data on quality of treatment or service exists (though administrators and funders track some information), making it difficult for patients to assess quality of service and outcomes objectively.

89. The HMI’s methodology has been drafted with this context and the associated challenges in mind. The analysis used simple patient flow methods to conduct an initial screening exercise. It subsequently used several different approaches (as proposed in the methodology paper) to test the sensitivity of concentration measures. Details are discussed in Section 4 below (paragraph 141-146).

90. As highlighted earlier, the scope of the market Inquiry is broader than a case investigation, and as such the HMI has adopted a dualistic approach in defining the relevant geographic market of private healthcare facilities.

91. National contracting between funders and hospitals implies competition at the national level. However, in situations where patients choose facilities themselves, proximity and reputation rather than price tend to drive decisions. This implies that there is also competition at the local level.

92. The Inquiry's market definition approach is aware of both national and local dynamics and therefore assesses competition and market power at both the local and national level.

CONCLUSIONS ON MARKET DEFINITION

93. The Inquiry's analysis shows that there is limited substitution across specialties, both from a patient’s (demand-side) and a facility’s (supply-side) perspective. For practical purposes it is analytically appropriate and expeditious to cluster a range of in-hospital healthcare services offered by hospitals if the competitive conditions across these specialties are similar.

94. The analysis shows that there is asymmetric supply side substitution with some level of competition between general acute hospitals and stand-alone day hospitals. There is limited substitution between facilities that provide a range of in-hospital healthcare services and facilities that provide a narrow range of healthcare services such as medical centres, sub-acute, specialist facilities and mining facilities.

95. We exclude public hospitals on the basis that quality of care is generally poor in public hospitals relative to private hospitals, and public hospitals currently provide very limited competitive constraints to the private hospitals.

96. We assess the levels of competition at both the national and the local level. Competition between hospitals and hospital groups on the one hand, and schemes and/or their representatives on the other, defines which beneficiaries of funders are contracted and against what tariffs. Generally, patients prefer nearby hospitals.

97. For the purposes of the Inquiry, we define the relevant market as the provision of a cluster of in-hospital healthcare services by general acute hospitals (classified 057 and 058 facilities) and services of day hospitals (classified 077 facilities) at both the national and the local level.

CONCENTRATION ANALYSIS

AN OVERVIEW

98. We analyse the level of facility concentration at both the national level and the local level. In the methodology paper we describe how catchment areas will be determined using patient flow data, which we derived from hospital admission data and medical schemes claims data, using the Lavielle algorithm. As an alternative and to check our findings based on the Lavielle methodology, we also applied an 80% cut-off criterion based on distance to derive catchment areas.

99. As described in the HMI methodology paper,[44] the Lavielle algorithm measures the sudden change in surface area and selects the optimal outlier percentage for each of the hospital facilities. To use this approach, we calculate the minimum convex polygon (MCP) area (in km2) in increments of 5% around the facility. This means that starting at the centroid (the focus facility), the MCP includes points in increments of 5% and calculates the minimum convex hull area for each increment. The MCP increments and population sizes are fed into Lavielle algorithm which calculates the "break points" in the surface areas for the spatial population. The algorithm then determines the optimal value for the largest surface break with the smallest population increment. This calculated value is used to create the spatial catchment area by excluding "outliers".

100. This technique has the advantage that it takes informed decisions on which patients are considered outliers for each individual facility analysed. It is therefore less arbitrary when compared to traditional approaches. This methodology however has, to the best of our knowledge, never been applied in competition analysis of this kind before. The Inquiry will therefore also test a more traditional criterium, ie the radial area from which the hospital under consideration draws 80% of its patients, based on road distance between patient home postcodes[45] and hospital postcodes. This approach, the radial approach, is tested for consistency with the Lavielle algorithm method.

101. Contrary to what we envisaged to do in our methodology paper, in our analysis, we use residential suburbs because of deficiencies of the EAs that have been identified in the process of our analysis. Netcare was correct when it submitted to the HMI that EAs are extremely granular geographic measure for a country such as South Africa making it very difficult to accurately map patient episodes to individual EAs. It appeared in our analysis that some addresses of patients could not actually be allocated to

44. HMI methodology paper for the facilities: annexure 1, pg. 16.
45. In the methodology paper, we highlighted that we would do the cut-off criteria based on road distance or travel time. We have settled for the road distance because travel time in South Africa appeared to be a less reliable estimator of patients real travel times.

EA's because of the deficiencies in address information. To continue to use EAs[46] would have excluded an unacceptable number of patients/episodes from our analysis. We therefore opt to use the more aggregated suburb measure which increases the quantum of data utilised significantly.

102. Market concentration at the national level will be measured using HHI and the Logit LOCI. At the local level concentration level will be measured in three ways: a fascia count, HHI, and LOCI. We discuss below how we have applied the respective measures and also analyse the results.

FASCIA COUNTS

103. A facility's fascia count is calculated by summing the number of competitors that lie within each hospital's catchment area. The fascia counts will be hospital group and network adjusted[47] for hospitals belonging to the same hospital group or network (hereafter collectively referred to as "hospital groups"). In other words, if a facility has two competitors within its catchment area, both belonging to the same hospital group, then they are only counted as one competitor. This adjustment is based on the assumption that local competition between these two group or network members is not completely free from strategic coordination from the central group level. Fascia count is a simple concentration indicator that treats all competitors as equal, irrespective of size or range of specialties. The HMI considers a fascia count of one or less (that is, the reference hospital faces one or no competitors located within its catchment area) as an indication of a possible local concentration concern.

HERFINDAHL-HIRSCHMAN INDEX (HHIS)

104. The HHI is one of the most commonly accepted measures of market concentration. The HHI is calculated by squaring the market share of each firm competing in the market and then summing the resulting numbers. As an example, for a market consisting of four firms with shares of 30, 30, 20, and 20 percent, the HHI would be 2,600 (302 + 302 + 202 + 202)

105. HHI ranges from 0 (in the case of a very large number of small firms) to 10 000 (in the case of a single firm). In a merger review, while making reference to absolute HHI's, competition authorities in South Africa rely more on the changes in HHI to identify whether a merger is likely to pose competition concerns. The Tribunal and the Competition Commission have relied largely on the HHI thresholds stipulated in the International Competition Network (ICN) merger guidelines in merger reviews.[48] According to ICN merger guidelines,

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46. Netcare's submission dated 22 September 2016.
47. When correcting for network membership, it is important to note the distinction between other network groups and NHN. Unlike LHC, Mediclinic and Netcare, the NHN is not a group with common ownership and a common centralised commercial strategy, but it is a loosely cooperating network of hospitals. Despite this, we still treat the NHN similar to the rest of the facility groups and correct the local concentration indicators for NHN membership like we do for the other facility groups. This is because the NHN have an exemption from the Competition Authorities to negotiate tariffs as a group with funders, and therefore enjoy common pricing. Although facilities affiliated to NHN enjoy common pricing, we acknowledge that there are other critical decisions that influence competitive dynamics at the local level that facilities affiliated to NHN make independently. For instance, the facilities affiliated to NHN make independent investment decisions and compete against each other and against the larger facility groups independently. Therefore adjusting for network membership may not capture the independence of the NHN facilities at the local level. However, our analysis also considers how individual NHN hospitals compete with each other and with the large facility groups in the local markets.
48. See merger between NA CO Ltd and Nissan Diesel Motor Company (CASE NO: 28/LM/Mar07); merger between Imperial Holdings Limited and U Drive Car and Van rental (2008Nov4107); merger between Wesbank and Barloworld Leasing (2002Nov300); merger between JD Group Limited and Ellerine Holdings Limited (78/LM/Jul00); merger between Mutual and Federal Insurance Company Limited and Credit Guarantee Insurance Corporation of Africa Limited (2003AUG614); merger between Goal Acquisitions Ltd and Allied Domecq Pic (2005Jun1626); merger between Medi-Clinic Investments and Phodiso Health Services (2005Oct1917); merger between JD and Ellerines (78/LM/JUL00); merger between Nampak Ltd and Malbak Ltd (29/LM/MAY02); merger between Tongaat-Hulett and Transvaal Suiker Beperk(83/LM/JUL00).

competition authorities state they are unlikely to identify competition concerns where: (i) the post-merger HHI is below 1000; (ii) the post-merger HHI falls between 1000 and 1800-2000, and the change, or delta, is below a range of 100-250; and (iii) the post–merger HHI is above 1800-2000, and the delta is below 50-150.[49]

106. The Competition Commission has also relied on HHI thresholds stipulated by the guidelines of the US Department of Justice (DOJ) and Federal Trade Commission (FTC).[50] According to the US merger guidelines, a market is considered to be (i) not concentrated if HHI is below 1500 (ii) moderately concentrated if HHI is between 1500 and 2500 and (iii) highly concentrated if HHI is above 2500.[51]

107. What is apparent is that use of the lower ICN thresholds would result in additional catchment areas being considered highly concentrated. As mentioned in the HMI's methodology paper, our analysis will adopt the higher US guidelines for screening purposes.[52] These thresholds are more conservative relative to the thresholds adopted by the ICN.

108. Similarly, to the facia count analysis, we calculate the HHI in catchment areas for both individual hospitals and after adjusting for network membership. In other words, for the network adjusted calculations, individual hospital shares are summed by hospital group before being squared.

LOGIT COMPETITION INDEX (LOCI)

109. The LOCI measure is 'one minus a hospital's weighted-average market share' and is therefore a market-share-based concentration measure. As with the other approaches, this measure is calculated on an unadjusted and network adjusted basis. The LOCI measure will calculate a weighted average market share of the focus hospital across all submarkets (as mentioned, a submarket is a residential suburb).

110. The market share is weighted according to the importance of each submarket to a hospital group. The weights are a proportion of a hospital's patients originating from the corresponding submarket. The LOCI is calculated using data on admissions to the "focus" facility over the 2010 – 2014 time period.

111. LOCI ranges between 0 and 1. A value of 0 is equivalent to an average market share of 100% ie a pure monopoly and 1 is atomistic competition. The HMI uses the threshold of (i) weighted average market share (WAMS) > 0.4 and its equivalent (ii) LOCI < 0.6 to identify markets that are potentially of concern from a concentration and market power perspective. We borrow this from the thresholds adopted by the CMA in the UK healthcare market inquiry.[53]

112. 1For South African Competition Authorities, market shares less than 45% have been regarded as implying the absence of market power and shares between 35% and 45% may be of concern if the firm under consideration cannot show that it does not have market power.[54] Thus the LOCI thresholds adopted by the CMA reasonably accord with the market power thresholds identified in the South African Competition Act.

NATIONAL LEVEL CONCENTRATION

113. When assessing private facility concentration levels at the national level we consider both market shares and the associated HHI concentration indices. To

49. CN Merger Guidelines Workbook (2006).
50. Merger between Mecdiclinic Southern Africa and Matlosana Medical Health Services (2016Sep0508)
51. Horizontal Merger Guidelines of the US Department of Justice and the US Federal Trade Commission (2010).
52. HMI methodology paper for the facilities: para 66, pg. 12.
53. CMA Private Healthcare market investigation Final report. Accessed from https://assets.publishing.service.gov.uk/media/533af065e5274a5660000023/Private_healthcare_main_report.pdf on 04 September 2017.
54. See section 7 of the Competition Act of South Africa.

determine market shares we make use of admissions and bed data.[55] However, there are some issues regarding the use of bed data which we highlight below.

114. The principal source for establishing the bed data was the HASA publications (2000 to 2010). While this offered a substantial amount of information, the data was inconsistently recorded over time resulting in many inconsistencies. Missing or unreported data was further compound by hospital name changes as well as changes in ownership. Often resulting in data entries ending under one name and beginning under a new name. Multiple sources would also have conflicting bed figures as differing definitions were used. For example, often registered bed numbers do not necessarily match the number of installed beds in use.

115. While we were able to verify the latest bed data for the largest three facility groups, several assumptions have been used when developing the historical bed figures. We present and rely on both the admissions and bed data market share estimates.

116. Table 6.1 below depicts private hospital market shares and the HHI at the national level based on registered beds and number of admissions. As has been explained in the section 3 (paragraph 58-59), we use data for the relevant facilities classified 057, 058 and 077 as these facilities are considered competing hospitals.

TABLE 6.1: MARKET SHARES AND THE HHI BASED ON THE NUMBER OF REGISTERED BEDS (2016) AND NUMBER OF ADMISSIONS (2010-2014) [56]

	CMS market shares		GCI	
Network	**Admissions**	**Registered beds**	**Admissions**	**Registered beds**
Life Healthcare	28,6%	26,8%	2784	2521
Mediclinic	28,5%	25,3%		
Netcare	33,0%	31,1%		
NHN	7,7%	13,6%		
Independent	2,2%	3,2%		

Source: HMI Calculations

55. In merger review, both admissions data and bed data have been used to estimate market shares and calculate HHIs for facilities. For instance in the Mediclinic Southern Africa (Pty) and Mediclinic (Pty) Ltd/ Mediclinic Tzaneen (Pty) Ltd; Newcastle Private Hospital (Pty) Ltd; Howick Private Hospital Holdings (Pty) Ltd; Mediclinic Hermanus (Pty) Ltd; Mediclinic Upington (Pty) Ltd and Victoria Private Hospital (Pty) Ltd (Case numbers 2015Jun0327;2015Jun0328; 2015Jun0329; 2015Jun0331; 2015Jun0332 and 2015Jun0333) bed data was used to calculate market shares by the Commission. In the Mediclinic/ Matlosana merger (Case number: 2016Sep0508) the Commission used registered bed data to calculate market shares while one of the parties (Barloworld medical scheme) used admissions data to calculate market shares.
56. There is some market share disparity between admissions data and registered beds data for NHN. This is explained by the fact that NHN has most of the stand-alone day facilities relative to the rest of the facility groups. We find that out of the total of fourteen (14) day facilities in our list of private facilities, eleven are NHN. The majority of admissions take place in General acute facilities relative to day facilities as General acute facilities make both overnight and day admissions while day facilities are limited to day admissions only. Therefore, NHN's day beds translate more to market shares calculated based on registered beds less than to market shares when market shares are calculated based on admission rates. This also explains the disparity in HHI's calculated using registered beds and admission rates.

117. Both data sources portray a similar picture in terms of the distribution of market shares among the top three facility groups. The table 6.1 shows that Netcare, LHC, and Mediclinic account for the largest proportion of the private hospital market.

118. Netcare accounts for the largest proportion of the private hospital market with 33% / 31.1% share followed by LHC (28.6% / 26.8%), Mediclinic (28.5% / 25.3%) and NHN (7.7% / 13.6%). Independent hospitals account for only 2.2% / 2.3% of the private hospital market.

119. The differences observed between data sources can be attributable to the problems associated with the underlying bed data, as discussed above, which may be compounded by the differences in periods under consideration (2016 vs. 2010-2014). Notably, admissions share for the three largest facility groups is higher than the associated bed share, however the opposite is true for the NHN and independents.

120. The HHI and concentration ratio (CR3) for the national private hospital market is 2784 and 90.1% and 2521 and 83.2% based on admissions and registered beds respectively. If we consider the CR4, the combined market shares are 97.8% and 96.8% based on admissions and registered beds respectively. Based on these data, the private hospital market HHI is above the established highly-concentrated threshold and therefore conclude that the facilities market is concentrated at national level. Further, the market shares amongst the large incumbents are very high and have barely changed over time.

121. The national concentration level is an important factor to consider when attempting to understand national tariff and DSP bargaining outcomes between hospital groups and funders. As we have seen, each of the larger hospital groups are a must have for the funders in terms of contracting, although individual hospitals may be excluded from DSPs.

122. These national concentration indicators do not fully reflect local market conditions where individual hospitals are faced with competition from rival hospitals within their local area. At this local level hospitals will compete for patients, mostly through selecting, attracting and retaining the best admitting doctors, geographical location, and DSP regional membership. These conditions vary, as we shall show below, from hospitals facing competition from a number of rivals to solus hospitals which face little to no localised competitive constraints.

LOCAL LEVEL CONCENTRATION

123. To assess the level of concentration at the local level, we conduct the following analyses:

    123.1. Catchment areas which account for a large share of the focus hospital's patients, based on both a Lavielle algorithm and using a radial model based on travel distance.

    123.2. Using these catchment areas, we calculate fascia counts and HHIs as concentration measures for each hospital – both adjusted and unadjusted for hospital group/network membership (the 'network-adjusted' fascia and HHI);

    123.3. We also calculate HHIs for individual hospitals – corrected for group/ network membership - after increasing the catchment areas to include overlapping clusters in order to better approximate relevant markets; and

    123.4. Conduct LOCI analysis per hospital – including an adjustment for group/ network membership.

DERIVING CATCHMENT AREAS

124. As outlined in the HMI methodology paper,[57] we apply simple patient flow methods to derive catchment areas based using the Lavielle algorithm and a radial model using an 80% cut-off criterion based on travel distance. The principle of the two approaches is similar in that they both consider a catchment area to be one where a relevant hospital draws the bulk of its customers. The HMI's preferred method

57. HMI methodology paper for the facilities: para 47 and 48.

is the Lavielle algorithm to delineate the relevant catchment areas as highlighted in the HMI methodology paper.[58]

125. Based on the Lavielle and radial models, and using 80% cut off ratios, we derive a total of 195 catchment areas (clusters) throughout the country.

126. We calculate concentration indices for the respective catchment areas (i) of each individual hospital and (ii) adjusted for hospital group/network membership. The concentration indices adjusted for hospital group/network membership considers all hospitals of the same group/network in that catchment area as one. As stated before, we call that the network adjusted concentration index. As indicated before, we use these network adjusted concentration indices on the assumption that hospitals of the same group/network do not independently compete with one another.

127. The HMI is aware that in reality relevant markets may be broader than the catchment areas around hospitals as calculated with either the Lavielle or radial method. As explained in the methodology paper, we may apply quite complex methods of obtaining these broader relevant markets. Essential here is the level of competition a focus hospital may experience from hospitals nearby and the propensity of patients to choose an alternative hospital rather than the focus hospital if competitive conditions (e.g. prices or quality) change.

128. For the purposes of a market inquiry, we need not strive for the same level of exactness as to market definition as for example is required during a merger investigation or an in-depth case study. Instead, we are aiming for an accurate approximation. For this purpose, we calculate cluster-overlap catchment areas as an approximation of relevant markets.

129. These approximations increase the size of individual catchment areas by including the catchment areas of surrounding hospitals as part of the focus hospital catchment area. Additional catchment areas are included if they have at least a 10% overlap with the focus hospital. For example, in the diagram below, if Hospital A is the focus hospital and the overlaps with B and C are at least 10%, then the Overlap Cluster for Hospital A would be Hospital A, Hospital B and Hospital C's catchment areas.

130. This approach widens the local market and typically gives lower levels of concentration. A 10% overlap was chosen to be relatively small but to ensure unrealistic overlaps were excluded. In reality the size of an overlap and the competitive constraint exerted between hospitals may be influenced by additional factors (e.g. patient density, DSPs) but, for our purposes, the conservative 10% overlap criterion serves as an effective proxy to estimate conservative markets.[59]

131. This is borne out in the data (see table A6.2 in Annexure 6), which shows HHIs for overlapping clusters are typically lower than HHIs which do not have this adjustment (HHI 3 vs HHI 1 for unadjusted and HHI 4 vs HHI 2 for network adjusted),[60] in almost all catchment areas.[61]

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58. HMI methodology paper for the facilities: para 48.
59. We make the following distinction between the respective HHIs: HHI 1 is the HHI for the respective catchment areas not adjusted for network membership; HHI 2 is the HHI for the respective catchment areas adjusted for network membership; HHI 3 is the HHI for cluster overlaps not adjusted for network membership; HHI 4 is the HHI for cluster overlaps adjusted for network membership.
60. There are a small number of examples where this increase in area does not result in a lower HHI. This can occur when the overlap leads to an inclusion of a hospital with a significantly higher market share into the calculation. As an example, consider the diagram introduced earlier, Hospital B might be in A's HHI 1 and HHI 2 catchment area calculations, resulting in a 50/50 market share split, with associated HHI of 5000. When overlap clusters are considered, and Hospital C is introduced, the split becomes 20/20/80 and the associated HHI increases to 7200. \\
61. There are a small number of examples where this increase in area does not result in a lower HHI. This can occur when the overlap leads to an inclusion of a hospital with a significantly higher market share into the calculation. As an example, consider the diagram introduced earlier, Hospital B might be in A's HHI 1 and HHI 2 catchment area calculations, resulting in a 50/50 market share split, with associated HHI of 5000. When overlap clusters are considered, and Hospital C is introduced, the split becomes 20/20/80 and the associated HHI increases to 7200.

132. Concentration indices per hospital based on single catchment areas are likely to overstate the levels of concentration. We therefore rely on the more conservative concentration results derived from overlap clusters to derive an indication of market concentration in local markets.

FASCIA COUNTS RESULTS

133. Our preferred approach in deriving local markets is the clustered-overlap catchment areas based on the Lavielle algorithm. We have defined the fascia count concentration measure as the total number of competitors that lie within a hospital's local market. As highlighted earlier, we consider a fascia count equal to or below 1 to be indicative of a concentrated market.

134. Table 6.2 below shows the local markets with fascia count equal to or below 1 based on both individual hospital count as well as after adjusting for hospital groups.

FIGURE.6.3: EXAMPLE OF HOSPITAL OVERLAP CLUSTER

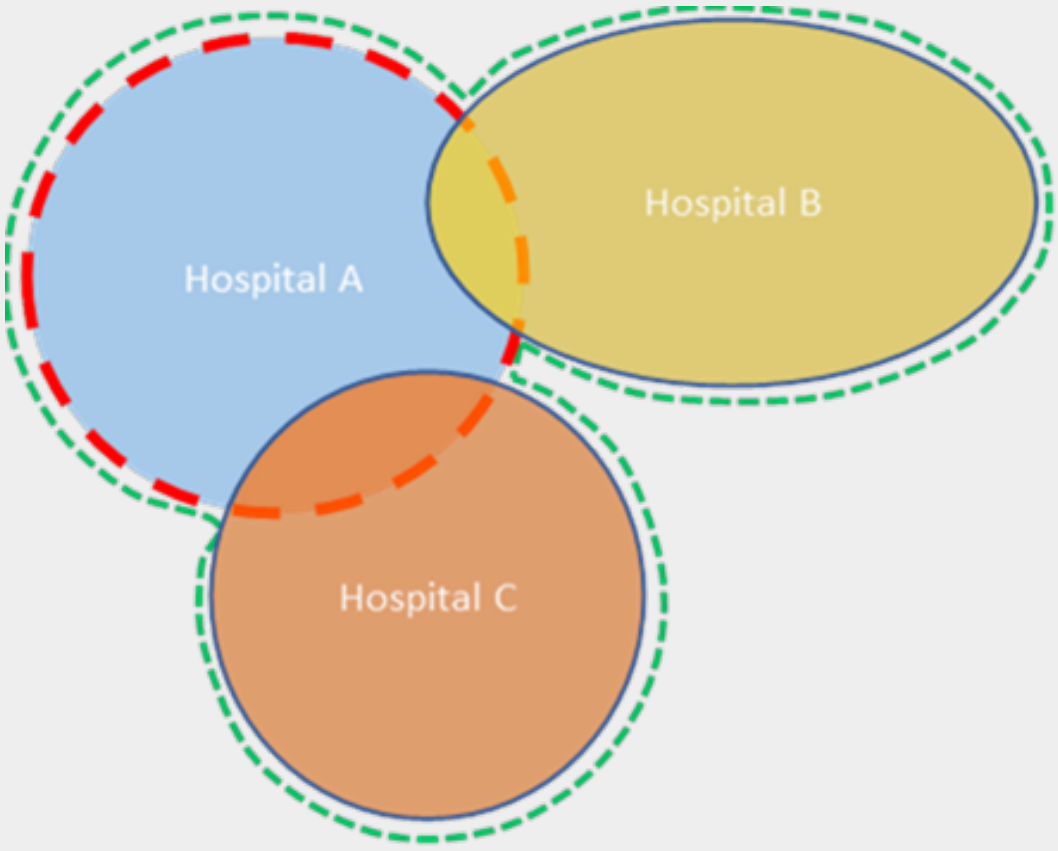


TABLE 6.2: LOCAL MARKETS WITH FASCIA COUNT EQUAL TO OR BELOW 1

Focus Hospital in a local market	Not adjusted for network membership	Adjusted for network membership
Tzaneen (Mediclinic)	1	0
Nongoma Private Hospital (NHN)	0	0
Zoutpansberg Private Hospital (NHN)	0	0
Beacon Bay Hospital (LHC)	3	0
Welkom Medical Centre (NHN)	3	1
Piet Retief Hospital (LHC)	0	0
Secunda (Mediclinic)	1	0
St Mary's Private Hospital (LHC)	1	1
St James Private and eye Hospital (LHC)	3	0
St Vincent's Hospital (NHN)	1	1
Lephalale (Mediclinic)	0	0
Empangeni Garden Clinic (LHC)	1	1
St Helena Hospital (NHN)	3	1
Riemland Clinic (NHN)	1	1
Barberton (Mediclinic)	2	1
Queenstown Private Hospital (LHC)	0	0
Thabazimbi (Mediclinic)	0	0
Kimberley (Mediclinic)	1	1
La Verna Hospital (NHN)	1	1
St Dominic's Hospital (LHC)	3	0
Nelspruit (Mediclinic)	2	1
East London Private Hospital (LHC)	3	0
The Bay Hospital (Netcare)	1	1
Vryburg Private Hospital (NHN)	1	1
Upington (Mediclinic)	0	0
Ermelo (Mediclinic)	1	0
Newcastle Private Hospital (Mediclinic)	0	0
West Coast Private Hospital (LHC)	0	0
Total number of local markets with fascia count =/< 1	20	28
Number of local markets that are solus hospitals	9	16
Number of local markets with 1 competitor	11	12
Proportion of total local markets with fascia count =/< 1	10%	14%
Proportion of the total local markets that are solus hospitals	5%	8%
Proportion of the total local markets with 1 competitor	6%	6%

135. Table 6.3 shows a total of 20 local markets with fascia counts equal to or below 1, without adjusting for hospital groups. Approximately 10% of the total unadjusted local markets have fascia counts equal to or below 1. Of these local markets, 11 markets (6%) face one competitor while 9 (5%) are considered solus hospitals.

136. After adjusting for hospital groups, the third column of Table 6.3 shows that there are a total of 28 local markets (14%) with fascia counts equal to or below 1. Of these local markets, 12 markets (6%) face one competitor while 16 (8%) are considered solus hospitals.

137. Using the radial model with the 80% cut-off criterion changes the outcomes of this analysis. For comparison we have include the tables showing the fascia counts of all the catchment areas derived based on both the Lavielle and radial model in table A6.1 in Annexure 6.

HHI RESULTS

138. We calculate the HHI per overlap cluster based on the Lavielle algorithm, both unadjusted and adjusted for hospital group membership. Table 6.3 below shows the HHI summary results for the respective local markets.

TABLE 6.3: HHI SUMMARY RESULTS FOR THE RESPECTIVE LOCAL MARKETS, UNADJUSTED AND ADJUSTED FOR NETWORK MEMBERSHIP

	Not adjusted for network membership		Adjusted for network membership	
	Number of hospitals	Proportion of total hospitals	Number of hospitals	Proportion of hospital groups
<1500	128	66%	69	35%
1500– <2500	13	6%	13	7%
2500 - <10000	45	23%	88	45%
10000	9	5%	25	13%
Total	195	100%	195	100%

139. Table 6.3 shows that, based on the internationally most widely applied HHI concentration thresholds and before hospital group adjustments, 45 out of 195 local markets are highly concentrated. This accounts for 23% of the total local catchment areas. Of these highly concentrated local markets, 9 markets are solus hospitals in their catchment areas, accounting for 5% of the total local markets. The number of local markets that are moderately concentrated is 13, accounting for 6% of the total local markets. The number of local markets that are not concentrated – if unadjusted for group and network membership is 128, accounting for 66% of the total local markets.

140. Adjusting for network membership, the HHI measure indicates 88 highly concentrated areas, accounting for 45% of the total local hospital areas. Of these highly concentrated local areas, 25 are served by solus hospitals, accounting for 13% of the total local markets. The number of local markets that are moderately concentrated is 13, accounting for 7% of the total local markets. The number of catchment areas that are not concentrated is 69, accounting for 35% of the total local markets. This shows that the hospital group adjustment has a significant impact on the levels of local concentration and that local hospital concentration in terms of catchment areas is very high in South Africa.

141. Table 6.4 below shows a comparison of the unadjusted results of the radial and Lavielle approaches. We present detailed results for both approaches in table A6.2 and A6.3 in Annexure 6.

142. As shown in Table 6.4, there are some differences between these approaches. The radial model typically indicates wider markets relative to the Lavielle approach, indicating additional less-concentrated markets and fewer outright solus hospitals.

143. These relatively larger areas are due to the unrealistic way in which radial markets are defined which, to some extent, is corrected for under the Lavielle approach. To see this, consider Figure 6.4 below, which shows differences in catchment areas based on radial and Lavielle models nationally. To further illustrate this at a local level, consider the market for Upington hospital shown in Figure 6.5 below. The radial model forces the market to be defined as a circle in which 80% of the patients are found. This leads to a catchment area which includes regions where no patient data has been identified.

TABLE 6.4: PROPORTION OF CATCHMENT AREAS IN THE RESPECTIVE HHI THRESHOLDS BASED ON THE RADIAL MODEL AND THE LAVIELLE FOR THE CLUSTER

HHI Thresholds	Radial Model results	Lavielle results	Difference
<1500	64%	66%	2%
1500 < 2500	12%	6%	(6%)
2500 < 10000	22%	23%	1%
10000	2%	5%	3%
Total	195	100%	195

FIGURE 6.4: DIFFERENCES IN CATCHMENT AREAS BASED ON RADIAL & LAVIELLE MODELS

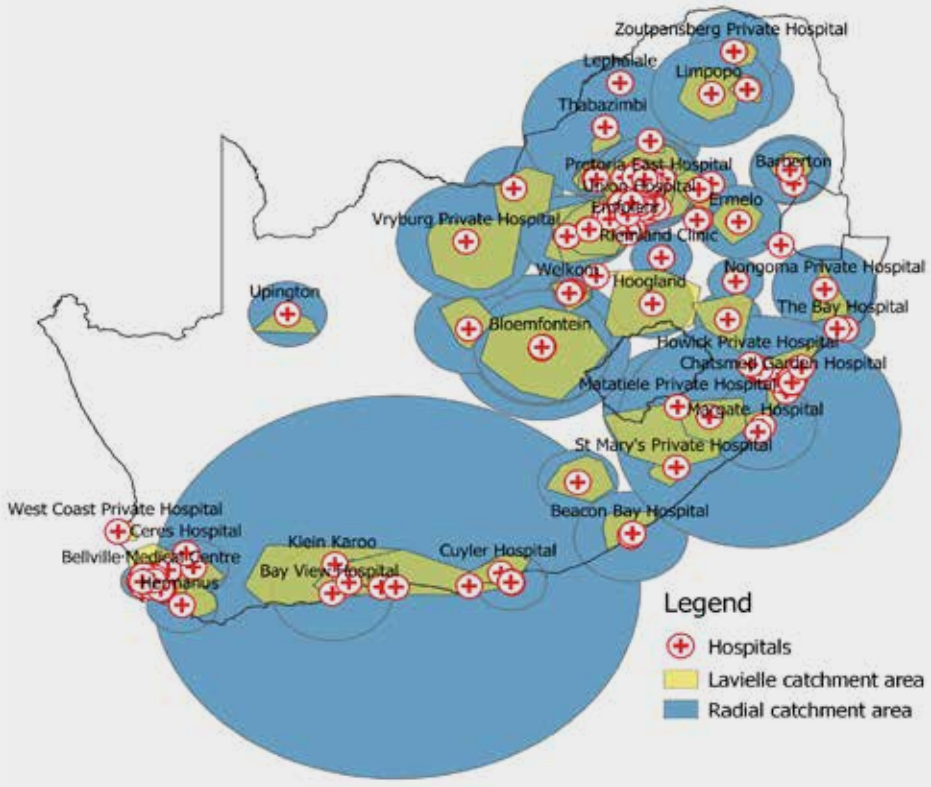
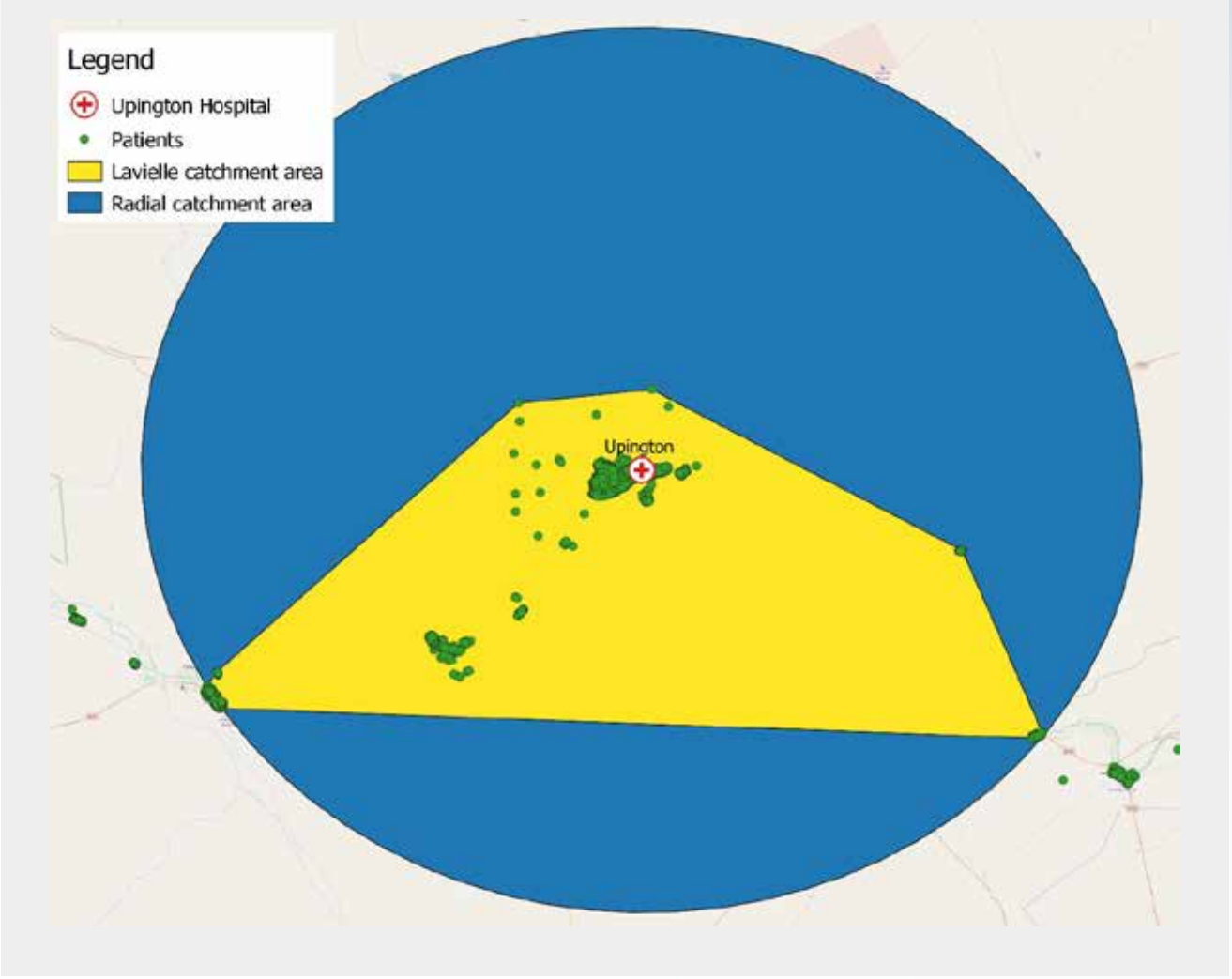
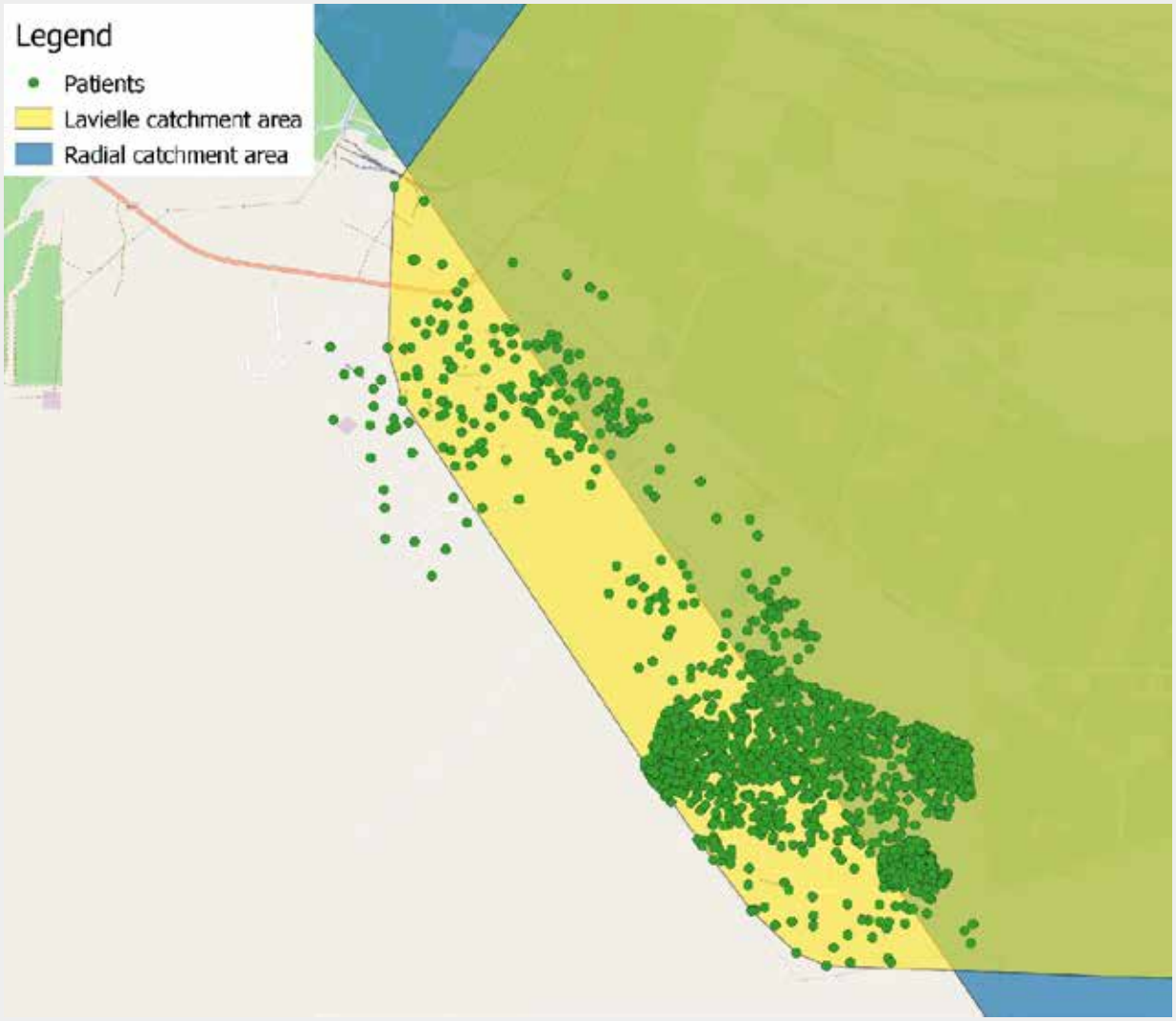


FIGURE 6.5: UPINGTON CATCHMENT AREA COMPARISON, RADIAL AND LAVIELLE



144. Similarly, it may lead to the exclusion of patients in areas which are clearly within the catchment area, as shown in the figure below. This figure enlarges the south-west corner of the Upington catchment area and shows how the radial model specification excludes a number of patients living in close proximity to patients considered part of the catchment area. These omissions are reduced under the Lavielle approach which corrects for this issue by not having a predefined shape requirement.

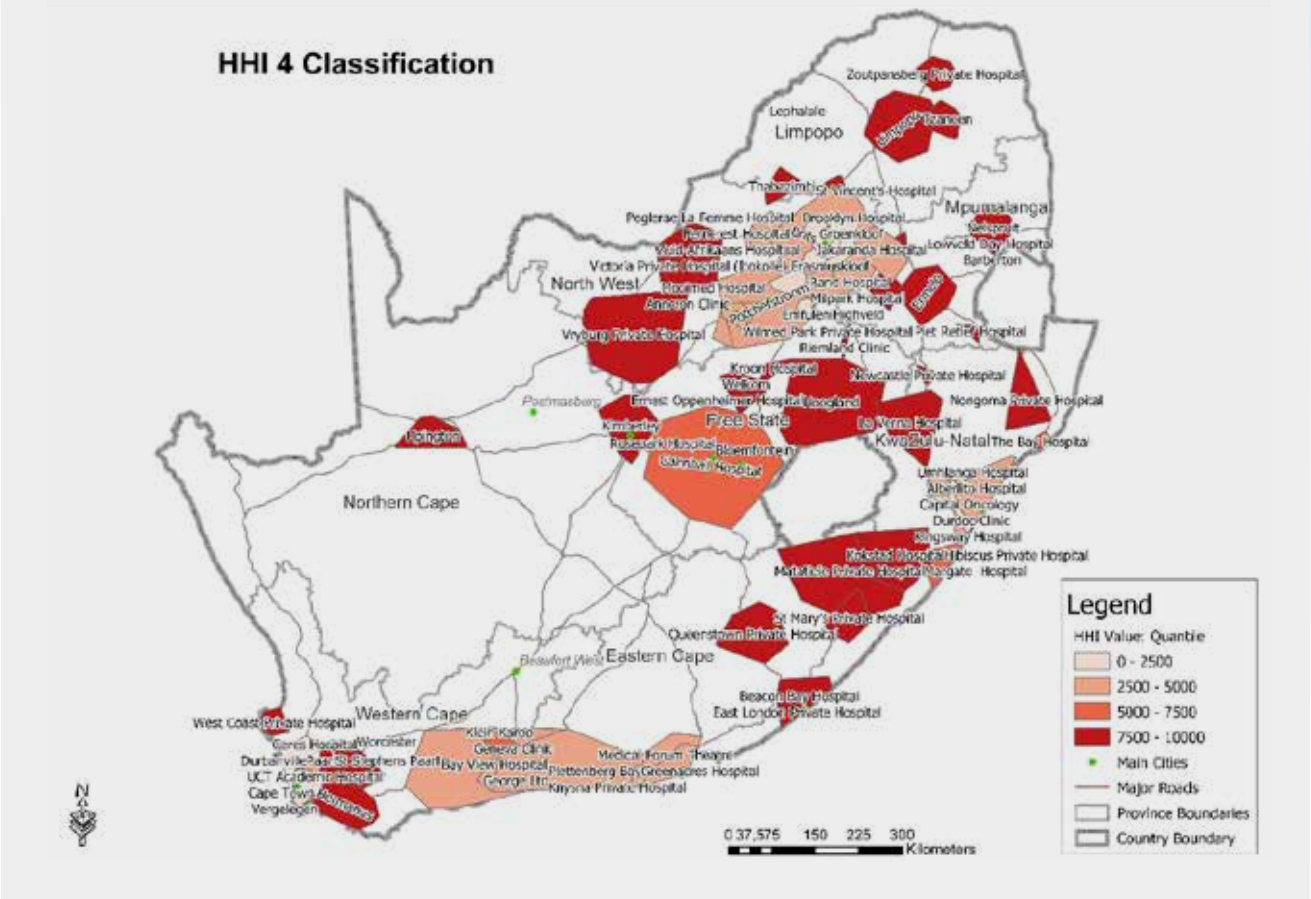
FIGURE 6.6: ENLARGED SOUTH WEST UPINGTON CATCHMENT AREA COMPARISON, RADIAL AND LAVIELLE



145. Thus it is our view that although the Lavielle model presents a narrower market, it is nevertheless a more realistic approach to defining catchment areas.

146. Figure 6.7 below shows the pictorial view of the level of concentration in the facilities market in South Africa based on the HHI's.

FIGURE 6.7: HHI CONCENTRATION IN THE FACILITIES MARKET IN SOUTH AFRICA BASED ON NETWORK-ADJUSTED, CLUSTERED OVERLAP AREAS, LAVIELLE APPROACH



Source: Analysis done by Riskcape

147. Figure 6.7 confirms that there are a number of local markets that are highly concentrated. The pockets with the darkest shade on the map show that there are a number of facilities that operate as solus facilities which face little to no localised competitive constraints.

LOGIT COMPETITION INDICES (LOCIS) RESULTS

148. Similarly to the HHI approach, we conduct LOCI analyses for each focus hospital both unadjusted and adjusted for group/ network membership. The unadjusted LOCI per hospital is calculated on the basis of weighted average market share of the individual hospitals. The LOCI, modified to reflect the hospital group effect is obtained by calculating the weighted average market share of a focus hospital, and adjusting market shares of the focus hospital and those of its competitors in each of its submarkets for hospital group membership. We refer to this LOCI measure as the 'network LOCI' measure.

149. As mentioned before, the calculation of LOCI is not based on a predefined fixed geographic market or catchment area. We consider local markets as being of potential concern if the LOCI is below 0.6.

150. Table 6.5 below summarizes the LOCI results. The table showing detailed results of the LOCIs is provided in table A6.4 in Annexure 6.

TABLE 6.5: SUMMARY OF LOCI RESULTS FOR LOCAL MARKETS, UNADJUSTED AND NETWORK ADJUSTED

	Number of hospitals		Proportion of hospitals	
LOCI	Not adjusted for network membership	Adjusted for network membership	Not adjusted for network membership	Adjusted for network membership
< 0.1	0	8	0%	4%
>0.1-0,2	1	17	1%	9%
>0,2-0,4	19	32	10%	16%
>0,4-0,6	30	57	15%	29%
>0,6	145	81	74%	42%
Total	**195**	**195**	**100%**	**100%**
Total less 0.6	**50**	**114**	**26%**	**58%**

151. Table 6.5 shows that, without adjusting for any network membership, 50 hospitals, accounting for 26% of the total hospitals have a LOCI of less than 0.6. This implies that 26% of the hospitals – if unadjusted for group/network membership - are in highly concentrated local markets while 74% of the hospitals are in less concentrated local markets.

152. Adjusting for network membership, the LOCI measure shows that 114 hospitals, accounting for 58% of the total hospitals have a LOCI of less than 0.6. This shows a strong network effect on the levels of concentration in the hospital market.

153. We draw broadly similar conclusions from our three approaches (fascia, HHI, and LOCI). We conclude that the facility market is highly concentrated at the local level with a notable number of solus hospitals. While the fascia counts point to local areas which are potentially a concern in terms of concentration, when considering local catchment areas with one competitor or none, the clustered HHI and the LOCI go a step further and provide more depth into the overall picture of concentration taking into account market shares of competing hospitals in the respective local markets.

154. We attach more value on the network adjusted clustered-overlap HHI and network adjusted LOCI values when providing an overview of local market concentration. These provide a highly informative overview of the level and problem of the prevailing high concentration levels of local hospital areas and markets in South Africa. Subsequently these indicators are also used by the Inquiry to filter those hospitals and local markets which may have potential concentration concerns for further analysis.

155. The HHI approach identified 113 out of a total of 195 to be concentrated markets while the LOCI approach identified 114.[62] The HMI concludes that the similarity in results with very different methodological approaches is remarkable and is providing reassurance that the results are robust. The conclusion must be that the majority of local hospital markets in South Africa are very concentrated indeed.

156. We have used the concentration indicators as have been found to select hospitals and/or local markets that are of potential concern in order to inform which areas may be

62. Although both approaches identify similar numbers and broadly similar markets of potential concern, there are some disparities with certain hospitals which are identified by one approach and not by the other.

looked at in a more detailed evaluation. We conducted a number of statistical tests on the effects of local market concentration on competitive outcomes in local markets. The results of the analysis show that facilities located in concentrated regions display characteristics perverse relative to the behaviour of facilities located in moderately or non-concentrated regions. The detailed results of the analysis are presented in section 9 of the report (paragraph 378 to 389).

157. We will also use the concentration indicators and the results of the statistical tests to select markets to conduct case studies. The case studies provide an in-depth analysis of the influence of concentration on competitive dynamics at a local level. To conduct the case study analysis, the HMI will request for submissions from the relevant stakeholders on selected areas of focus. The results of the case study analysis will be incorporated in the main report at a later stage.

COMPARISON OF HMI RESULTS WITH CONCENTRATION ANALYSES CONDUCTED BY THE THREE LARGEST FACILITY GROUPS

158. Our findings that there are a number of local markets that are highly concentrated is generally in line with the facility groups' own analyses.

159. The Table 6.6 below shows a summary of the comparison between the HMI concentration analysis and similar work done by the facility groups. We find that there is a significant amount of consistency in the findings when identifying concentrated regions despite differences in methodologies. The two approaches used by the HMI are the network-adjusted overlapping clustered Lavielle approach for HHI and the network-adjusted LOCI measure.

160. In the summary table below, the first column indicates which hospital group is being compared, the second and third columns provide the total number of concentrated regions found for each hospital group by the HMI's HHI (column 2) and LOCI (column 3) analyses. The fourth column (Facility Group) indicates the total number of concentrated regions that were found by the relevant group's own economic analysis. The fifth (Matched HHI) and sixth (Matched LOCI) columns gives the number of concentrated hospitals found by the facility groups' which were matched by the respective HMI analyses. The final two columns indicate the number of regions which were uniquely identified by either the facility group analysis or by the HMI.

TABLE 6.6: SUMMARY OF CONCENTRATION FINDINGS

Facility Group	HMI HHI	HMI LOCI	Facility Group	Matched HHI	Matched LOCI	Unmatched Facility Group*	Unmatched HMI
Life Healthcare[63]	20	32	17	17	17	-	16
Mediclinic[64]	36	39	32	28	30	1	9
Netcare[65]	37	38	16	9	11	4	30
Total	**93**	**109**	**65**	**54**	**43**	**5**	**55**

Source: HMI analysis and facility group expert reports
**This column ignores those facilities which do not appear in the HMI database, see text in main body for details.*

63. Life Healthcare Local Market Assessment submission dated March 2016, table 4 and 5.
64. Mediclinic submission dated October 2014. Econex report on Local market Concentration and Hospital Profitability.
65. Netcare submission dated October 2014. Compass Lexecon – Geographic Report, taken from multiple

161. In both HMI analyses (HHI and LOCI) the total number of concentrated regions (columns 2 and 3) are typically greater than those found by the facility groups (column 4).[66] Nevertheless, there is a substantial degree of consistency when comparing those regions identified by facility groups with those identified by the HMI (columns 5 and 6). The lower proportion of matching regions with regards the Netcare analysis may be slightly misleading as we have included those regions identified by Netcare to have "3 or fewer" competitors as concentrated regions (see below for more detail),[67] when considering only Netcare identified Solus hospitals, the proportion of matched regions increases to 100%.[68] The second last column indicates that there were no concentrated regions found in the Life Healthcare analysis which were not identified by either of the HMI's HHI or LOCI methodologies. Thirty-two (32) concentrated hospital regions were identified by Mediclinic of which only one (1) was not identified by the HMI and of the sixteen (16) identified by Netcare there were four (4) not identified by the HMI.

162. Across both HHI and LOCI methodologies, the HMI has identified an additional sixteen (16) Life Healthcare regions which are considered to be concentrated, nine (9) additional Mediclinic hospital regions, and thirty (30) additional Netcare regions. These discrepancies between analyses are considered in more detail below.

Life Healthcare

163. The Life Healthcare concentration identifiers have been taken from Table 4 of the Local Market Assessment report done by RBB Economics. Concentrated regions are identified as either having no, or one, competitor by facia count.

164. Despite the differences in methodologies, the HMI's and LHC's findings are broadly similar in terms of those facilities identified as being located in relatively concentrated regions. The only facility identified by LHC which was not similarly identified by the HMI's analyses is Suikerbosrand Clinic which has been excluded from the HMI analysis as it is a relatively new facility for which the HMI did not have access to admissions data.

Mediclinic

165. The analysis done by Econex on behalf of Mediclinic have identified concentrated regions as those hospitals having an HHI above 2500 when considering bed numbers. These figures have been taken from table 2 of the Econex report on Local market Concentration and Hospital Profitability. The report gives a number of different methodologies but as these were the figures that were apparently used in later regressions, they have been selected as the basis for comparison against the HMI findings.

166. Again, there is a significant consistency in the identification of concentrated regions and where there are discrepancies, the differences are typically at the margin. For instance, Econex identified Pietermaritzburg as being concentrated whereas the HMI analysis indicated a LOCI only just above the 60% concentration threshold (60.35%).

167. The Econex analysis also indicated that the Kathu hospital region is to be considered a concentrated market. This facility was dropped from the HMI's database as it changed ownership from Mediclinic to Lenmed Health which resulted in difficulties when attempting to obtain and match the facility with its associated admissions data.

Netcare

168. Turning to Netcare's submission on concentration, the analysis done by Compass Lexecon on behalf of Netcare indicates a distinction between facilities which have '4 or more competitors' and

66. Not all of the facility group reports clearly indicated which regions they considered to be dominant. Conservative estimates have been taken based on the HMI's reading of the relevant reports.
67. The '3 or fewer' delineation is given by Netcare's submission dated 2014 - Compass Lexecon in the Geographic Report.
68. This proportion ignores those Solus hospitals which were excluded from the HMI hospital database.

those that have '3 or fewer competitors'. They identify 6 facilities in the latter group which are identified as solus hospitals.

169. It is worthwhile noting that four (4) of the solus hospitals identified by Compass Lexecon, and for which there was a corresponding entry in the HMI dataset, the HMI finds similar conclusions on concentration. Two (2) additional solus hospitals did not have a corresponding facility in the HMI database as they were identified as public private partnership hospitals and therefore excluded, namely Port Alfred, and Settlers. Additionally, Pelonomi was identified as having '3 or fewer competitors' but was also dropped from the HMI analysis as it is classified as a private public partnership hospital.

170. Compass Lexecon goes further to identify another four (4) concentrated hospital regions, identified as those hospitals which face 3 or fewer competitors, which were not considered concentrated in the HMI's analysis. Although two of these hospitals had LOCI's in the HMI analysis only just above the 60% concentration threshold (Vaalpark, 61% and St. Anne's, 63%).

CONCLUSION ON CONCENTRATION ANALYSIS AND MARKET POWER

171. Our finding is that the facilities market is characterised by high levels of concentration at both the national level and in a majority of local markets. This finding on local market concentration is corroborated by the economic analyses submitted by the three largest hospital groups.

172. At the national level, the HHI for the private hospital market nationally is 2521 and 2784 based on the number of registered beds and the number of admissions respectively. Given the stated difficulties regarding estimating accurate bed figures, more weight has been placed on the HHI derived from admissions data. This indicates a very high concentration level by all international standards.

173. The high HHI estimate is as a result of the relatively large share of the market which is attributable to the three large facility groups. The concentration ratio (CR3) of these groups is 83.2% and 90.1% based on the number of registered beds and the number of admissions respectively. If we consider the CR4, the combined market shares are 97.8% and 96.8% based on admissions and registered beds respectively.

174. At the local level, the fascia counts show that there are twenty eight (28) catchment areas where a hospital operates as a solus hospital (16) or faces only one (1) competitor. These catchment areas account for 14% of the total number of catchment areas.

175. The network-adjusted clustered overlap HHI measures also show that there are a number of local markets which are highly concentrated (113) of which a number operate as solus facilities (25). These findings are supported by the LOCI approach, which does not rely on predetermined catchment areas. Adjusting for hospital group membership, the LOCI approach identifies 114 local markets which are considered to be highly-concentrated.

176. The facility groups also find some areas with high levels of concentration and are broadly in-line with our own analysis. These analyses go further to argue that concentration has little to no impact on market outcomes such as pricing, quality, margins and profits. Largely due to schemes and administrators having substantial bargaining power which is used to counter any possible exercise of market power on behalf of facilities.

177. The HMI finds that the national concentration levels provide a significant strategic advantage to the three largest facility groups – both individually and as a collective. This will be analysed in more detail in later sections of the report. But we note here that funders have been unable to prevent high year-on-year growth of in-hospital costs, which in part is determined by year-on-year utilisation and volume growth. Also, the fact that performance based remuneration contracts, ARMs, and the growth of more cost-efficient day clinics clearly lag behind international trends, there are clear signals that high concentration and market power of hospital groups at the national (bargaining) level has had a significant impact on competitive dynamics.

178. Literature on the effect of high market shares and high levels of supply side

concentration is also very clear that the levels of concentration as found at the national level of hospital markets in South Africa need not have a causal relationship with collusive conduct, but certainly may facilitate intended and unintended collusive outcomes in respect to key strategic decisions.

179. We note that high levels of concentration should however be interpreted with caution in the context of medical services markets specifically. This is because there are other important factors that may influence market power in the context of medical services. Important in this respect, and in line with submissions received from facilities, is the countervailing power of funders. When bargaining for tariffs, funders have a number of tools available which may to a certain extent control the exertion of market power of private hospitals, both at the national and local level. Examples of such tools are selective contracting and DSPs, managed care protocols, performance or global fee based reimbursement models, practitioner networks and incentives, deductibles, and the use of day clinics.

180. As to the effects of significant supply side concentration in the majority of local facility markets in South Africa, it is too simple to point to the absence of influence of local market concentration and market power on nationally defined price and profitability at the group level, as the hospital groups in their submissions did. Competition at the local level enters the competitive assessment framework from a different perspective.

181. Competition at the local level is for the patient and is therefore largely defined by competition for the inclusion in successful DSP networks in that region and by competition for the most successful admitting doctors.[69] In the absence of meaningful clinical choice information, practitioners bring in reputation, referring colleagues and clients. The question that needs to be answered is: is there an effect of local competition / local concentration on competition for practitioners and patients, how this works, and what pro-and anti-competitive outcomes are related to differences in local concentration levels.

182. Therefore, while we acknowledge that prevalent high concentration levels, both at the national level and in the majority of local markets, is not a definitive conclusion of market power, we are of the view that the high concentration levels at the national level certainly matter and individual dominance at the regional level cannot be simply dismissed offhand as some stakeholders do.

183. In subsequent sections, we conduct further analysis, including bargaining and tariff determination, relationships between practitioners and facilities, expenditure analysis, utilisation, profitability analysis and analysis on barriers to entry and exit. These analyses, further to the analysis on market concentration, will enable us to assess the full state of competition in the market.

CREEPING MERGERS

INTRODUCTION

184. It was established in section 4 that the facilities market is highly concentrated both at the national and at local levels (paragraphs 120 and 153). While increasing consolidation in the private facilities market is driven by a combination of factors such as an ineffective licensing system, creeping mergers have been identified as one of the main drivers of increased concentration in the facilities market.

185. The detailed discussion on the weaknesses in the licensing system is provided in section 12 (paragraph 483-496). In this section, we highlight the cumulative trend of mergers and acquisitions over time, known as creeping mergers.

69. At the local level the geographical location is obviously a very important factor for success of any hospital. This factor however is only of interest at the investment stage, and is taken for given in a dynamic competitive assessment.

CREEPING MERGERS AS A DRIVER OF CONCENTRATION IN THE FACILITIES MARKET

186. Creeping mergers refer to a series of acquisitions over time that individually do not raise competition concerns, but when taken together, have a significant impact on competition.[70]

187. As in other countries, significant consolidation in the facilities market has occurred in South Africa through a wave of merger activity.[71] [72]

188. Concentration in the private hospital market has increased substantially over time through a number of transactions by the big three hospital groups (Life, Netcare and Mediclinic). The groups have engaged in a substantial number of merger transactions, frequently involving the acquisition of smaller hospitals. For instance, between 1995 and 1999, the three groups acquired 125 hospitals. As a result, the total number of hospitals owned by the three groups and the national HHI increased steeply.[73] The extent of consolidation is apparent when one considers that the three groups accounted for 51% of acute beds in 1996 but currently account for approximately 80% of the private beds in South Africa.[74] A number of merger transactions continue to be notified implying continued consolidation in the market.

189. Table 6.7 below shows the hospital mergers that have occurred annually in different regions in South Africa.

TABLE 6.7: ACQUISITIONS AND ENTRY OVER TIME[75]

Year	Focus Hospital in a local market
1998	Netcare/Pretoria East
1999	Netcare/Excel Medical holdings Life Healthcare/PresMed
2000	Life Healthcare/Montana Park Kliniek
2001	Netcare/MediCross Life Healthcare/Amalgamated Hospitals Group
2002	Life Healthcare/Mary Hospital Mediclinic/Curamed
2003	Life Healthcare/Business Venture Investment 79, Wilgeheuwel Mediclinic/Victoria Hospital

70. Genna Robb, Creeping Mergers – Should we be concerned? A case study of hospital mergers in South Africa, Centre for Competition Economics University of Johannesburg.
71. Kjekshus L, Hagen T. Do hospital mergers increase hospital efficiency? Evidence from a National Health Service country. Health Policy 2007; 12: 230-235.
72. Erasmus, M. and Theron, N. 2016. Market Concentration Trends in South Africa's Private Healthcare Sector. Department of Economics, University of Stellenbosch; Econex. SAJEMS NS 19 No 1:53-63.
73. Health Market Inquiry. CCHMI_WHO_CountryFin_data_vF.xlsx. World Health Organisation. Global Health Observatory Data Repository used to compile a database of country expenditure information expressed as a percentage of Gross Domestic Product. [http://apps.who.int/gho/data/node.main.75, downloaded 15 August 2016]
74. Ibid.
75. At the time of compilation of the list of mergers and acquisitions in Table 6.8, some of the Tribunal decisions were pending. Therefore, the list is not exhaustive.

TABLE 6.7: ACQUISITIONS AND ENTRY OVER TIME *CONTINUED*

2005	Netcare/Prime Cure Holdings Mediclinic/Phodiclinics Mediclinic/Phodiclinics Mediclinic/Wits University Donald Gordon
2006	Netcare/Community Hospital Group Netcare/Netpartner Investments
2007	Netcare/Community Hospital Group*
2010	Life Healthcare/ Amabubesi (Bayview hospital)
2011	Life Healthcare/JMH[76]** Life Healthcare/Aurora; Life Healthcare/Midmed
2012	Mediclinic/ Solar Spectrum
2013	Mediclinic/ Holdco
2014	Netcare/Ceres Hospital Life HealthCare Group/Lowveld Hospital Pty and Interstate Clearing* Mediclinic SA/Mediclinic Limpopo
2015	Mediclinic SA/ Mediclinic Hermanus; Howick Private Hospital; Newcastle Private; Mediclinic Tzaneen; Mediclinic Upington; Victoria Hospital
2017	Netcare/Lakeview**; Netcare/Akeso** Mediclinic/Matlosana Medical Health Services*
2018	Mediclinic / Intercare***

Source: Various Provincial DoH submissions; Competition Commission/Tribunal merger reports and the HMI independent research.
Notes: *The asterisk (*)* indicates mergers that were prohibited by the Competition Commission but pending in the Tribunal. *(**)* indicates CC prohibited mergers which were subsequently conditionally approved by the Tribunal. *(***)* indicates mergers pending CC decision.

190. The number of mergers and acquisitions in the private hospital market are underestimated. This is because some transactions are not notified to the competition authorities for various reasons, including failure to notify by the merging parties, and that they fall under the threshold for notification. However, the HMI believes that these transactions do have an impact on competition. For instance, there have been partial investments in smaller firms that have in fact involved a change in control with the result that the smaller firms are swallowed up by the big groups. Based on precedent, it is likely that these transactions would be allowed by the Tribunal as the impact on competition would not change given historical links between the firms.[77] [78] In addition, the small size of the firms being acquired often results in

76. This transaction was later withdrawn by the parties, and Life Healthcare's interest in JHM was disposed of in 2013.
77. Network Healthcare Holdings Limited "Netcare" & Netpartner Investments Limited Merger. Case No: 46/LM/May06. Accessed from: https://www.comptrib.co.za/assets/Uploads/Case-Documents/46LMMay06.pdf.
78. Mediclinic & Wits University Donald Gordon Medical Centre. Case No: 75/LM/Aug05. Accessed from: https://www.comptrib.co.za/assets/Uploads/Case-Documents/75LMAug05.pdf .

some transactions being classified as small mergers in terms of the Act and therefore being non-notifiable despite the fact that the merger may be anticompetitive. There is a number of small transactions that were not notified to the authorities. [79] While some of these transactions were later investigated and found to be anticompetitive attracting prohibitions or conditional approvals[80], some we never reviewed by the competition authorities.[81] The HMI also noted some transactions which were implemented and only notified following an investigation of the complaint lodged with the competition authorities. [82]

191. The HMI also found that there are several transactions where idle and un-commissioned licences change ownership, or are sold to incumbent hospital groups. These transactions are not subjected to competition scrutiny, and often only notified to the licensing authorities after the fact.

192. Although hospital mergers are often justified as bringing about efficiencies and synergies in the healthcare system, thus leading to improved access to care and better quality of care,[83] over time they have resulted in a considerable increase in the concentration levels in the facilities market. Individual merger transactions which do not raise immediate anti-competitive concerns may lead to cumulative anti-competitive effects in the long term. As highlighted, consolidation in the facilities market has taken place gradually through notified and un-notified mergers and acquisitions.

193. The Tribunal's approach to creeping mergers in South Africa has not helped to address the problem of increasing concentration in the facilities market.[84] Some jurisdictions which faced the problem of creeping mergers instituted mechanisms to address the problem. However, there is no universal approach on creeping mergers across jurisdictions and in some instances creeping mergers are addressed indirectly through a raft of measures. In a number of jurisdictions, creeping mergers are addressed under competition provisions dealing with serial transactions or staggered transactions.[85]

194. The United States agencies typically evaluate each individual transaction independently on its own merits, asking whether the transaction at issue, in and of itself, will lead directly to anticompetitive effects (e.g. price increases or output reductions). Although there is no specific provisions in the Act to deal with creeping mergers, the Act indirectly addresses the problem of creeping mergers. Although under the United States competition law, each individual transaction is examined by considering whether that particular transaction will give rise to anti-competitive effects, where two or more transactions take place between the same undertakings, within a two-year period, such transactions will be treated as a single transaction.[86]

195. In the UK, while the key merger control legislation (the Enterprise Act 2002) does not specifically cater for creeping mergers, it does afford the CMA a broader time horizon to treat staggered transactions as having occurred simultaneously.[87] While Section 27 of the Enterprise Act does not deal with the type of creeping merger activity the CMA is

79. Lenmed Health & Mediclinic Kathu merger (acquired in 2015); Netcare & Ceres merger (2014); Netcare/ Lakeview (2018); LHC/Genesis merger (acquired in 2015)
80. Netcare/Lakeview Case No: IM193Oct17 (2018)
81. Lenmed Health & Mediclinic Kathu merger (acquired in 2015); Netcare & Ceres merger (2014); LHC/ Genesis merger (acquired in 2015)
82. Life Healthcare and Joint Medical Holdings Merger Case No: 013235; Competition Commission & Mediclinic.Southern Africa Case No: 020743
83. Ibid
84. Ibid
85. Serial transactions or staggered transactions refers to transactions where a firm acquires either parts of a company or complementary businesses through a number of consecutive and interrelated transactions.
86. OECD. 2014. Investigations of Consummated and Non-Notifiable Mergers. Accessed from: http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/WP3(2014)1&doclanguage=en.
87. Merger Assessment Guidelines 2010, CC2 (Revised), OFT1254.

concerned with, it does indicate that the UK legislation is more flexible in acknowledging that transactions need not be examined in isolation but may be considered in a wider historical context.

196. The European Union does not cater for creeping mergers per se but caters for staggered transactions. The EU, in Article 5(2) of the European Community Merger Regulation (ECMR), has passed regulations which allow the Authority in its calculation of turnover thresholds to consider historical transactions in their analysis.[88]

197. In the Netherlands, the Authority for Consumers and Markets (ACM) has published extensive merger control guidelines for the healthcare sector. Although the ACM notably prescribe reduced compulsory notification thresholds for mergers in the healthcare sector, mergers in the healthcare sector must nevertheless be notified to the ACM if, in the preceding calendar year, the undertakings had a certain prescribed turnover.[89] If a concentration is implemented without notification to the ACM, or without allowing for sufficient processing time, the ACM may impose severe penalties.

198. There is a view by some that the South African Competition Act does not explicitly cater for the trend of creeping acquisitions, other than using the conventional Substantial Lessening of Competition (SLC) test to determine the effects of a proposed merger. In approving mergers, the Tribunal has often argued that it considers the merits of an individual transaction and would not impose blanket prohibitions on specific enterprises in a particular sector if there is no evidence that the individual transaction would have a significant effect on competition.[90] The HMI's view is that the inquisitorial powers and the broad discretion that the Tribunal enjoys in conducting its proceedings[91] can be used more robustly to address the trend of creeping mergers which have a cumulative anti-competitive effect on the structure of the private facilities market. The Tribunal has taken a static approach to creeping merger analyses and as a result does not consider the cumulative effects of creeping merger transactions in the market. Evidence shows that the cumulative effects of transactions that were approved because they did not have static merger specific competition problems on concentration has been far-reaching with regard to concentration.

199. The HMI is of the view that the Tribunal has been hamstrung in its work by the lack of accurate data on current facility and bed distribution and capacity, which would have enabled better analysis of the effects of creeping mergers.

200. The HMI further notes that the well-intended moratorium by the NDoH on new hospital licences has fuelled concentration in that market participants used mergers and acquisitions as a way to circumvent licensing restrictions to enter the market. This was also noted by the Tribunal.[92]

201. The draft Competition Amendment Bill acknowledges the need to address creeping mergers and the phenomenon of creeping concentration.[93] The proposed amendments, among other issues, seek

88. Article 2 of Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings.
89. Chapter 5, Richtsnoeren Voor De Zorgsector, 2010.
90. See Phodiclinics/Protector merger, case number: 122/LM/Dec05.
91. See section 52 (1), 55 and Competition Commission of South Africa vs. Senwes Limited: Case no: CCT61/11(2012) ZACC 6. In that case, the Constitutional Court expressly stated that the Act "gives the Tribunal freedom to adopt any form it considers proper for a particular hearing, which may be formal or informal. Most importantly, it also authorises the Tribunal to adopt an inquisitorial approach to a hearing. Confining a hearing to matters raised in a referral would undermine an inquisitorial enquiry." [Paragraph 50 of the Concourt Judgment].
92. Phodiclinics (Pty) Ltd & Protector Group Medical Services Merger Report, pg. 43-44. Case No: 122/LM/Dec05. Accessed from: https://www.comptrib.co.za/assets/Uploads/Case-Documents/122LMDec05.pdf
93. Department of Economic Development. Competition Amendment Bill, 2017. Accessed from: www.economic.gov.za/edd-in-the-media/...competition-amendment.../download .

to ensure evidence based inquiry into and explicit scrutiny of concentration when mergers are considered. The amendments require disclosure of mergers activity engaged in by the merging parties in the preceding three years. This will ensure that transactions which give rise to creeping concentration are appropriately investigated and considered by the competition authorities. This would be a welcome addition to merger assessment in the private healthcare sector.

CONCLUSION ON CREEPING MERGERS

202. Creeping mergers is one of the main drivers of the increased concentration level in the facilities market. Some international jurisdictions have instituted mechanisms to address creeping mergers either directly or indirectly. Although there is broad acknowledgement that creeping mergers drive consolidation in the facilities market, there is at present no explicit clause that competition authorities can use to address creeping mergers. While amendments have been proposed to address the issue of creeping merger more effectively, the HMI believes that the Tribunal should use its inquisitorial powers to overcome the current legal shortcomings. There is further scope to use the public interest provisions embedded in the Competition Act, to assess the impact of concentrated markets in the context of healthcare.

DISTRIBUTION OF FACILITIES ACROSS PROVINCES

INTRODUCTION

203. The move towards Universal Health Coverage and the need for equity in access to healthcare facilities has been highlighted by stakeholders. To assess healthcare access across provinces, the HMI analysed the distribution of facilities and beds across provinces, and assessed the impact this distribution has on the equity and accessibility to healthcare facilities. This analysis includes both the public and private sectors to get a comparative picture.

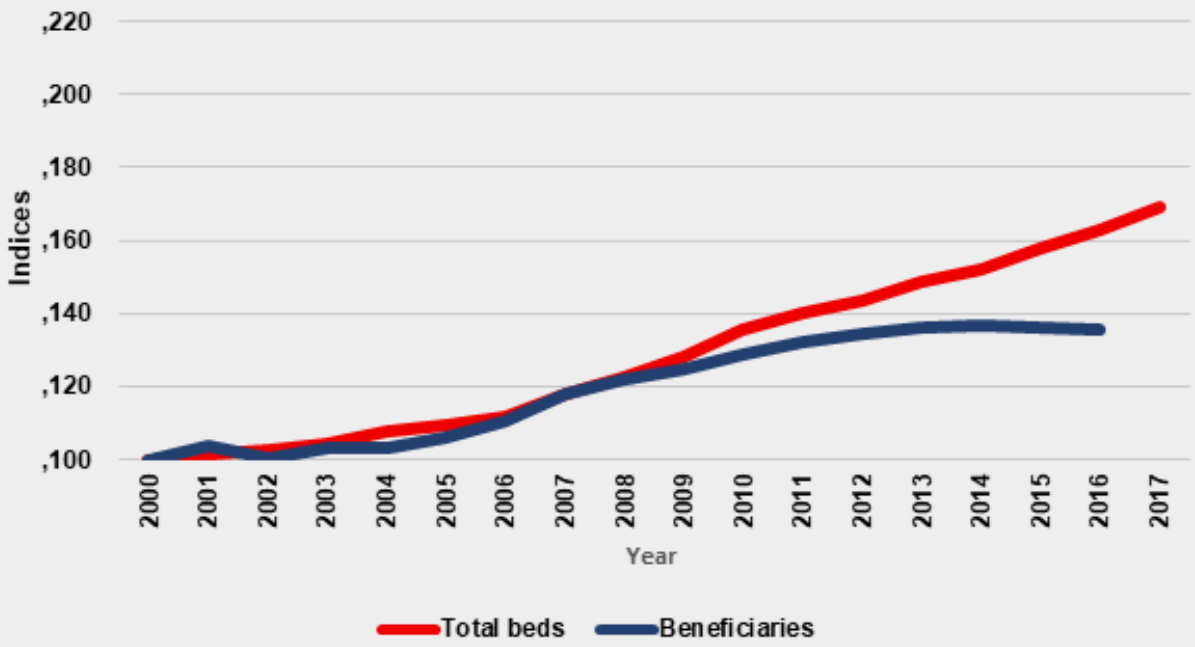
204. Registered bed and beneficiary population trends in the private healthcare sector

205. The HMI has considered the average number of registered beds and beneficiary population in the private healthcare sector in the South Africa. It found that there were approximately 36 076 hospital beds in the private sector, and 8 560 054 medical insured members over the five year period between 2010 and 2014.[94] [95]

206. The Inquiry then assessed the registered bed growth and the growth in beneficiary population over time, nationally. Figure 6.8 shows the trends in registered bed growth and beneficiary population growth over time.

94. This was calculated by adding annual medical aid membership numbers from 2010 to 2014 across the nine provinces.
95. Health Market Inquiry data compiled from various sources.

FIGURE 6.8: BED GROWTH AND BENEFICIARIES' BENEFICIARY POPULATION GROWTH (2000-2017)



207. Figure 6.6 shows a more pronounced increase in total beds from 2005 to 2017. From, between 2000 and 2009, the rate of growth of registered beds and beneficiary population were almost on par. Thereafter, the growth in registered beds outstrips the growth in beneficiaries. From 2010 a divergence was observed between bed growth and beneficiary population growth. This has resulted in overall excess bed capacity in private facilities.

DISTRIBUTION OF PRIVATE FACILITIES AND REGISTERED BEDS ACROSS PROVINCES

208. The Inquiry conducted an analysis on the distribution of beds across provinces to estimate the bed density per thousand insured population. Using data that was collated on the total number of beds per province for the five-year period, from 2010 to 2014, the following was then calculated:

    208.1. the average number of beds in the private sector; and

    208.2. the ratio of insured lives per bed.

209. This was done to assess the level of accessibility a patient has, in each province, to a hospital bed in the event of requiring hospitalisation.

210. Table 6.8 shows the provincial average distribution of beds per insured population between 2010 and 2014.

TABLE 6.8: PROVINCIAL AVERAGE DISTRIBUTION OF BEDS PER INSURED POPULATION (2010 – 2014)

Province	5 Year Average Number of Beds	5 Year insured lives
Eastern Cape	1 948	735 176
Free State	2 427	443 121
Gauteng	16 534	3 198 015
KwaZulu-Natal	5 036	1 365 326
Limpopo	464	427 198
Mpumalanga	1 556	477 427
North West	1 880	378 281
Northern Cape	389	180 373
Western Cape	5 842	1 355 138
Total	36 076	8 560 054

211. Figure 6.9 below shows the percentage distribution of beds across provinces between 2010 and 2014

FIGURE 6.9: PERCENTAGE DISTRIBUTION OF BEDS ACROSS PROVINCES (2010-2014)

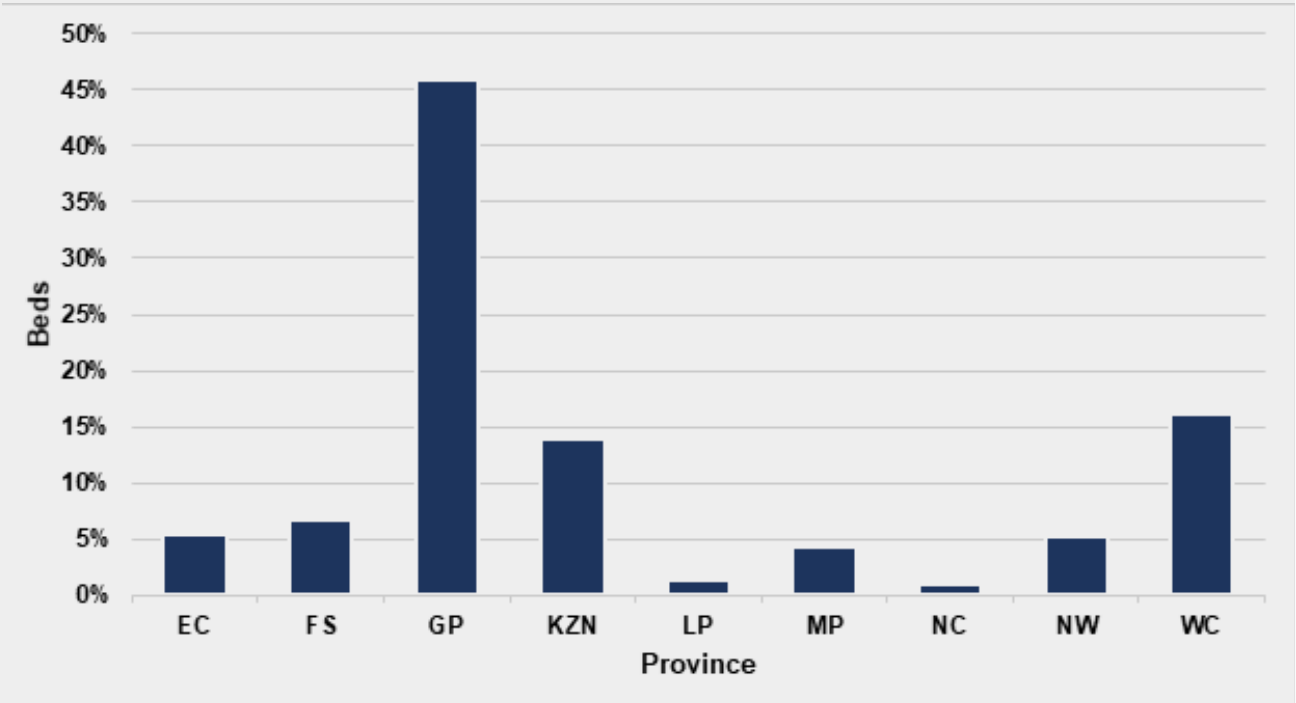


Figure 6.10 shows the locations of private facilities across provinces and the number of beds per hospital.

FIGURE 6.10: LOCATIONS OF PRIVATE FACILITIES ACROSS PROVINCES AND THE NUMBER OF BEDS PER HOSPITAL

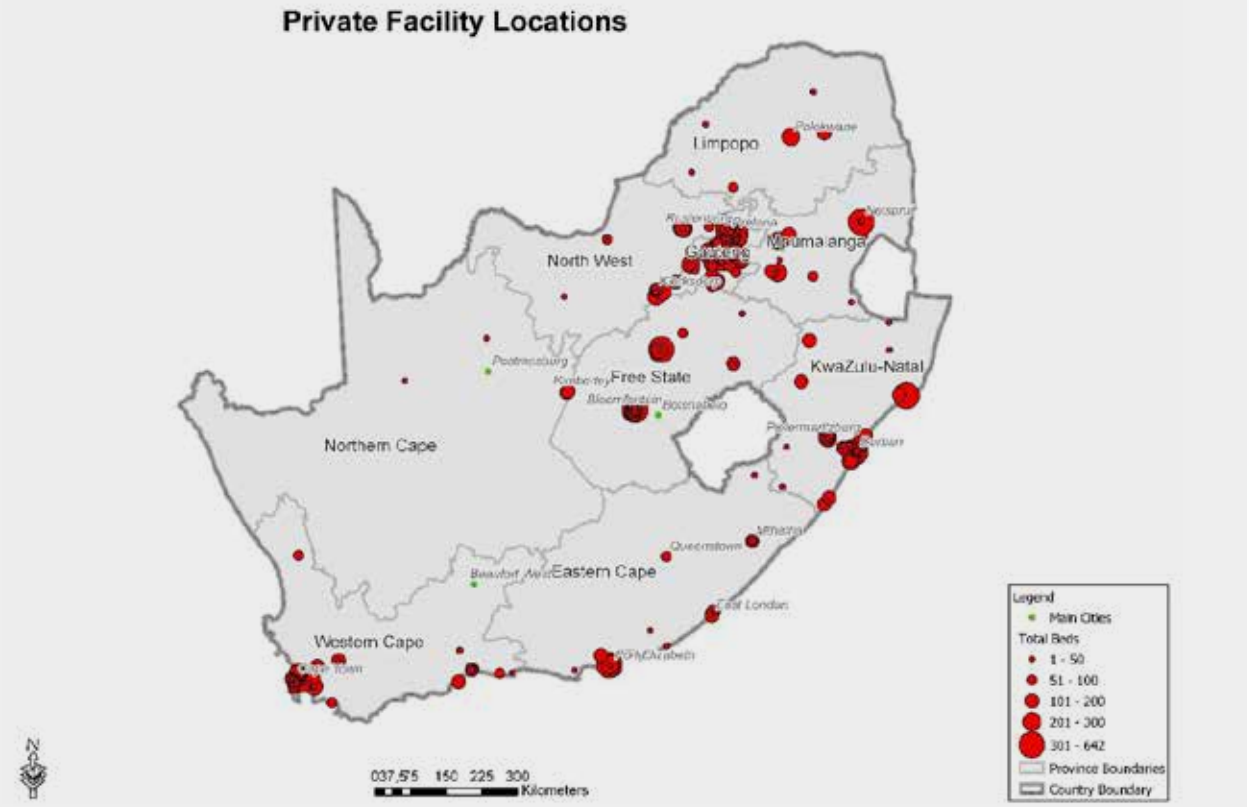
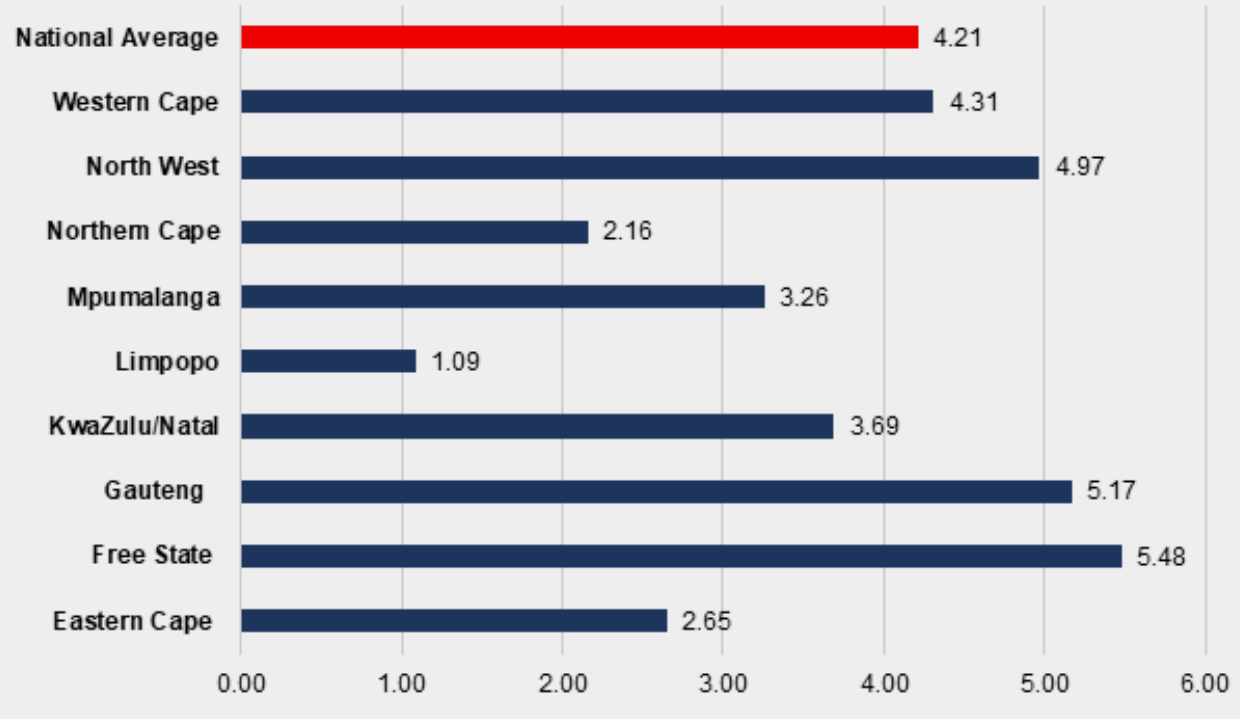


FIGURE 6.11: RATIO OF BEDS PER 1 000 OF THE INSURED POPULATION (2014)



212. To assess the degree of accessibility a patient has to a hospital bed among the insured population, the number of beds per thousand of the population across provinces was calculated. Figure 6.11 presents this calculation.

213. Figure 6.11 shows that the national average of the ratio of beds per thousand over the five year period was 4.21. There are significant disparities across the provinces.

214. Free State has the highest ratio of beds per thousand, 5.48. Gauteng has the second highest number of beds per 1000 insured lives at 5.17, followed by North West (4.97), the Western Cape (4.31), KwaZulu-Natal (3.69), Mpumalanga (3.26) and the Eastern Cape (2.65). Limpopo (1.09) and Northern Cape (2.16) have the lowest ratio of beds per thousand insured lives. Only the Free State, Gauteng, North West and the Western Cape have bed numbers per thousand above the national average.[96]

215. There is no internationally defined standard for beds per population that could be used as the threshold for comparison with South Africa. This is because most health systems have their own internal dynamics and the relative resourcing of the public and private facilities across countries are different. Ideally, one would expect the same distribution of beds across provinces with similar insured population numbers. For instance, one would expect more or less the same distribution of beds across Limpopo, Free State, Mpumalanga and North West because they have more or less the same size of insured population. Free State and Mpumalanga, to some degree, enjoy relatively higher levels of access to hospital beds compared to Limpopo and North West. Private healthcare facilities in Limpopo and the North West are overburdened with very high insured lives per bed ratios, which are more than triple the national average.

216. The trends in bed growth over time are different across provinces and have not corrected the uneven accessibility to healthcare facilities, therefore impacting on equity. For instance, the Northern Cape has had a relatively stable bed numbers between 2010 and 2015. While bed numbers marginally increased between 2010 and 2012, there was a marginal drop to 2013 and 2014. This may be an indication of saturation in this province as demand may have already been met and may no longer be profitable for new hospitals to open up in this province. For Limpopo, bed numbers have increased steadily by 55% from 360 beds in 2010 to 557 beds in 2014. In the North West, bed numbers have increased by 33% from 1,564 in 2010 to 2,088 in 2014.

217. There are a number of factors explaining the disparities in the distribution of beds across provinces. The South African Medical Association (SAMA) attributed the inequitable distribution of health facilities in the private sector to the current design of the healthcare system (licensing requirements etc.) and commercial considerations.[97] The HMI understands that private healthcare facilities operate hospitals for profit and opening up a hospital in a province is an investment decision. Mediclinic and Life Healthcare, in their submissions to the HMI, stated that in making the investment decision as to whether or not to open a hospital in a particular area, a market analysis is conducted. Consideration is given to the catchment area of use, population profile (age, employment status and household income), economic activity, number and mix of specialists present in the area, and nursing staff (ability to recruit and train in the area), amongst a host of other factors.[98] [99] This means hospital beds are needs-based and are dependent on the expectation from the hospital that scheme beneficiaries would utilise these facilities. Thus, given the commercial interests, it

96. The Inquiry notes that even within provinces with excess beds, e.g. Free State and North West, there are areas within those provinces, that are under served, particularly the rural areas.
97. South African Medical Association (SAMA), 'Health Market Inquiry: Licensing of Hospitals', presentation by Dr Selaelo Mametja on 28th February, 2018, available from: http://www.compcom.co.za/wp-content/uploads/2018/02/SAMA_pres__Licensing2018March01_smametja.pdf
98. Mediclinic Southern Africa (Pty) Ltd, submission dated 31 October 2014.
99. Life Healthcare Group submission dated03 April 2015.

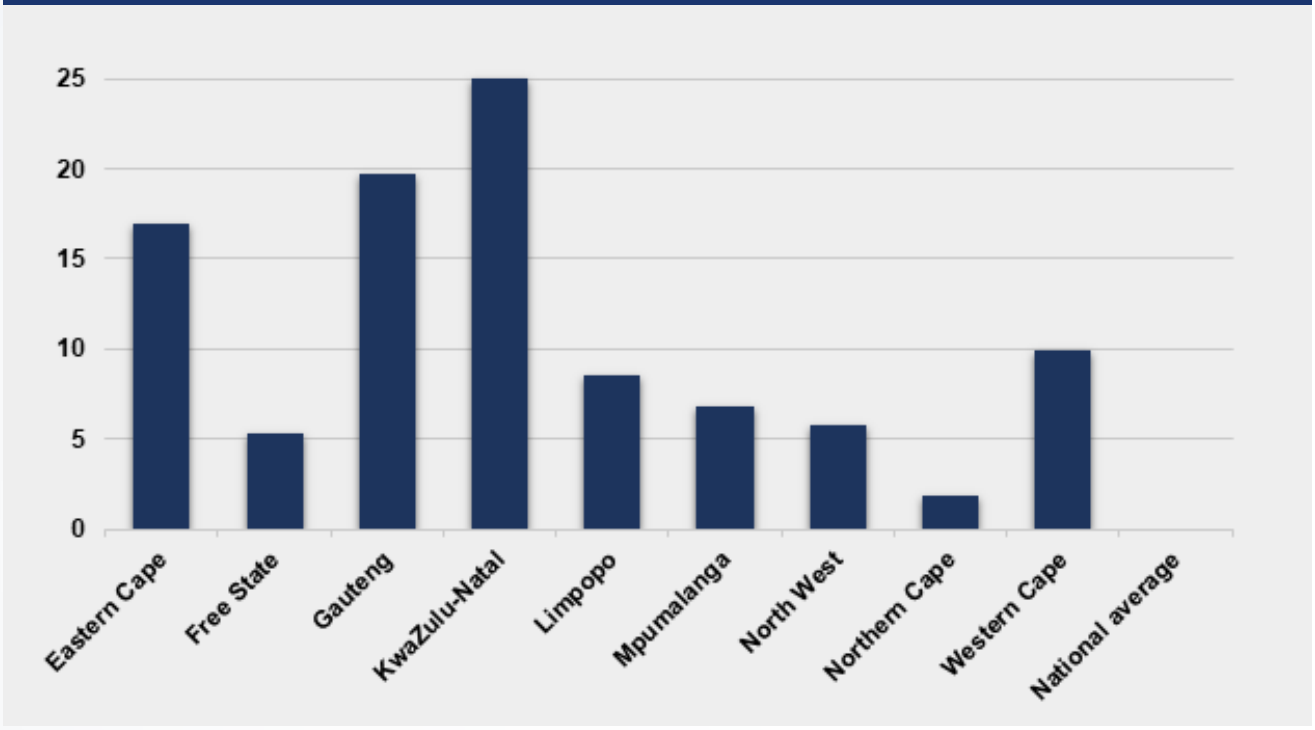
would be expected for private hospitals to be more prevalent in areas where there is a larger medically insured population. However, this has not been the case as provinces such as Limpopo, North West, Mpumalanga and the Eastern Cape with large medically insured populations have limited bed numbers. As we show below (Figure 6.10), Limpopo and the Eastern Cape have a high public-sector bed ratio which may indicate that even insured people in these provinces could be making use of existing public facilities. However, the lack of public sector data, restricted this assessment.

218. We observe that the licensing system has not corrected the unbalanced distribution of private facilities and beds across provinces in the country resulting in excess capacity of private facilities in some areas and shortages in other areas such as the North West. Similarly, there are widespread shortages in the public sector as discussed below.

PUBLIC SECTOR HOSPITAL BED DATA ANALYSIS

219. We analyse the distribution of public sector beds across provinces for 2016 to get a comparative picture with the private healthcare sector. Figure 6.10 shows the distribution of public sector beds per province for 2016.[100]

FIGURE 6.12: DISTRIBUTION OF PUBLIC SECTOR BEDS (PERCENTAGE) ACROSS PROVINCES (2016)

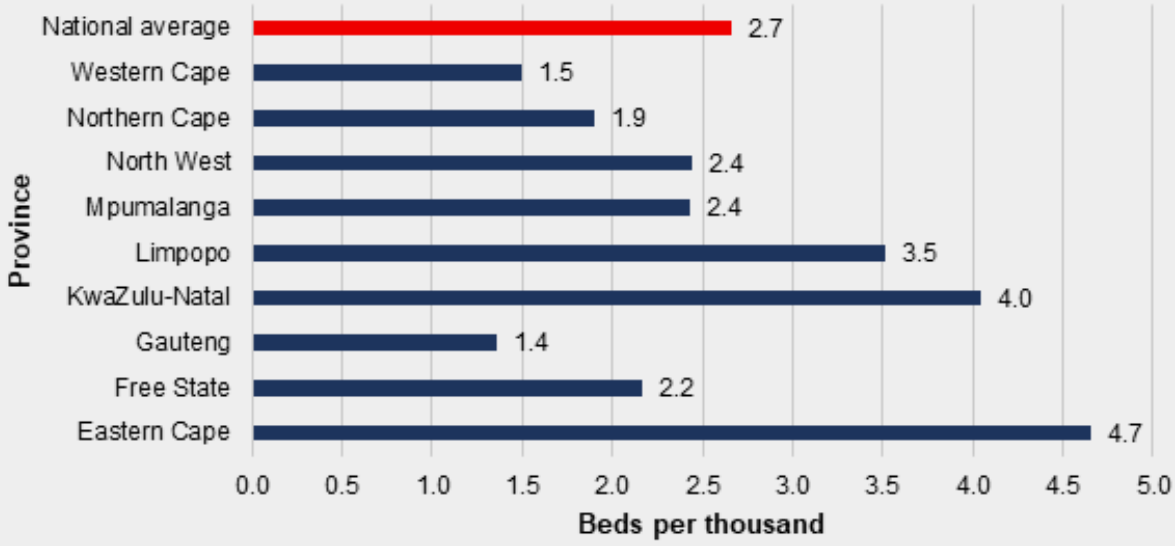


220. There are disparities in the distribution of beds in the public sector across provinces. KwaZulu/Natal has 25% of the total public sector beds with 22 324. Gauteng has 20% (17 451) and Eastern Cape has the third largest number of beds at 15 062. Provinces with the least number of public sector beds are Northern Cape (2%, 1 699) and the Free State (5%, 4 704). [101]

100. To ensure consistency in the analysis process for the public sector, the 2016 population census data was used in conjunction with estimated public sector bed data for 2016. This varies from private sector figures which are only up to 2014 and may slightly impact on the degree of comparability across the 2 sectors.
101. To ensure consistency in the analysis process for the public sector, the 2016 population census data was used in conjunction with estimated public sector bed data for 2016. This varies from private sector figures which are only up to 2014 and may impact on the degree of comparability across the two sectors.

221. The distribution of public sector beds is quite different to that of the private sector. In Limpopo and the Eastern Cape, the ratio of private beds to insured population is well below the national average but the ratio of public sector beds to population is well above the national average. In provinces such as the Western Cape, Gauteng and Free State the private bed ratio is well above the national average and the public sector ratio is below the national average. It is only the North West and Mpumalanga where both public and private bed to population ratios are both below their respective national averages.

FIGURE 6.13: RATIO OF BEDS PER 1 000 POPULATION IN THE PUBLIC SECTOR (2016)



222. Figure 6.13 shows that the national average of the ratio of beds per thousand in the public sector stood at 2.7 in 2016. This compares to a national average ratio of 4.21 in the private healthcare sector in 2016.

223. The Eastern Cape has the highest ratio of beds per thousand (4.7) in the public sector followed by Gauteng (1.4) and the Free State (2.2). The Northern Cape (1.9) and the Western Cape (1.5) have the lowest ratios of beds per thousand population.

LACK OF STRATEGIC AND EFFECTIVE PURCHASING BY THE PUBLIC SECTOR

224. The HMI notes the lack of strategic purchasing by the public sector from private facilities. In the South African healthcare sector, there is no strategic and competitive partnership between the public facilities and private facilities. Given the level of overcapacity in local private healthcare markets[102], the private sector can ensure the expansion of healthcare access by relieving the burden on the public sector, which fails to meet the healthcare demands of its population. For example, waiting lists in the public sector facilities can be reduced if it could competitively channel some patients to be treated at private sector facilities through strategic purchasing. The UK NHS serves as an example where the NHS has contracted with the private sector for maternity and neonatal services through a competitive bidding process.[103] This could also go a long way in addressing the problem of inappropriate utilisation occurring in the private sector, thus reducing overall costs,

102. Also noted from Medicross & Prime Cure Merger. Case no.: 11/LM/Mar05. Accessed from: https://www.comptrib.co.za/assets/Uploads/Case-Documents/11LMMar05.pdf

103. Department of Health. 2017. Safer Maternity Care: The National Maternity Safety Strategy - Progress and Next Steps. Accessed from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/662969/Safer_maternity_care_-_progress_and_next_steps.pdf .

discussed in detail in section 9 of this report (paragraph 328-357).

225. The Inquiry observed that the failure by the public sector to contract with the private sector might largely be due to budgetary constraints. Over the years, the South African government has not allocated budget to strategically purchase and contract with the private sector. If the public sector effectively contracts with the private sector to strategically purchase excess capacity available in the private sector, it will stimulate competition in the private sector and also improve healthcare access. Through fiscal policy, the government should allocate budget dedicated to the strategic purchase of excess capacity from private facilities.

CONCLUSION

226. The assessment of the HMI is that while there is excess capacity in most provinces in the private sector, there are widespread shortages in the public sector throughout the country. The national bed population of the private sector exceeds that of the public sector, despite servicing approximately 16% of the overall population. It was found in both the private and the public sector that there are widespread provincial disparities in accessibility to healthcare facilities. With respect to the private healthcare sector, the disparities in the distribution of beds and accessibility to healthcare facilities across provinces is largely explained by the current design of the licensing system and the commercial nature of private healthcare service delivery.

227. Compared to the private sector, the public sector has relatively higher populations per province accessing hospital beds. The capacity needed in the public sector to increase accessibility to public healthcare is actually available as excess capacity in the private sector.

228. The HMI believes that the excess capacity in the private facilities can be effectively utilised in the public sector through strategic purchasing and contracting, especially in areas where there is underservicing by the public sector. There is need for multi-sectoral partnerships in healthcare, specifically PPPs, to enhance access to the uninsured population in areas which have excess capacity and a limited number of insured lives. The Northern Cape is one such example. The utilisation of excess capacity in the private sector has an added benefit in that it addresses the problem of high utilisation in the private facilities market. Where inappropriate utilisation is driven by excess capacity, contracting with the public sector to purchase excess capacity would convert excess capacity to appropriate utilisation in areas underserviced by the public sector thereby addressing the problem of SID. The issue of SID will be discussed in more detail in section 10 and Chapter 8 (paragraph 318.6).

RELATIONSHIPS BETWEEN FACILITIES AND PRACTITIONERS

INTRODUCTION

229. This section outlines the various contracts and arrangements between facilities and associated practitioners, especially specialists. An assessment is made of whether there are any aspects of the relationship between practitioners and facilities that have an impact on increasing expenditure and/or show evidence of abuse of market power by facilities and/or practitioners. The incentives associated with the relationships between practitioners and facilities, and potential market failures associated with such relationships, are also analysed. Answers to the following questions are sought:

    229.1. How do facilities compete for practitioners and are facilities able to influence demand for medical services through their relationships with practitioners?

    229.2. Do relationships between facilities and practitioners restrict entry and growth of new entrants or otherwise adversely affect competition?

    229.3. How do the Health Profession's Council of South Africa (HPCSA) Ethical Rules of Conduct for Practitioners and their enforcement (or lack thereof) contribute to the fragmentation of healthcare delivery?

229.4. How do the practitioner-facility agreements affect care, costs and healthcare expenditure?

OVERVIEW

230. Private healthcare facilities and practitioners are important agents in the delivery of healthcare services. Practitioners and facilities provide complementary services. For instance, practitioners admit patients to a facility and provide care in these facilities. Facilities thus rely on referrals from practitioners while they, in turn, require the infrastructure provided by facilities to provide care.

231. There are different forms of associations between facilities and practitioners that facilitate collaboration between them. The relationships take various forms and may include facilities granting practitioners admission privileges, employment of practitioners by facilities, practitioner shareholding or outright ownership of facilities, and revenue sharing arrangements.

232. Other incentive arrangements between facilities and practitioners also exist. As discussed in the Chapter 7 (practitioners), these include practices such as facilities purchasing equipment on behalf of practitioners, providing specialised laboratories and equipment for some practitioner types, or providing loans to practitioners to purchase their own equipment. In some cases, facilities may provide a guaranteed base income to independent practitioners, such as practitioners running emergency facilities during their start-up phase.

UNDERSTANDING THE RELATIONSHIP BETWEEN PRACTITIONERS AND FACILITIES

Stakeholders' perspective

233. The HMI received several submissions from stakeholders regarding the relationships between facilities and practitioners. In their submissions, stakeholders raised the following issues:

233.1. Concerns about the contracting arrangements between facilities and practitioners, alleging that the arrangements may negatively impact competition and market outcomes.

233.2. That both facilities and practitioners (particularly specialists) possess market power which is being exercised in an anticompetitive manner to increase inappropriate clinical utilisation (ie SID), thus increasing healthcare expenditure.

233.3. The HPCSA's Ethical Rules concerning the employment of practitioners, fee sharing, rules regulating practitioners' financial interests in facilities and the incentives that can be given to practitioners. The views of stakeholders on the HPCSA's rules differ; facility groups argue that the Ethical Rules restrict competition and innovation in the private healthcare sector while others submitted that the rules should be maintained and enforced as they protect consumers and the profession.

233.4. The potential for the arrangements between facilities and practitioners to foreclose potential competition. In particular:

233.4.1. new facilities and independent or smaller facilities have raised concerns about their inability to attract practitioners to their facilities given the incentives, contracts and technology provided by the three largest facility groups - Netcare, Mediclinic and Life Healthcare. These incentives and contracts are often coupled with restrictive clauses.

233.4.2. historically disadvantaged individuals have raised concerns about exclusionary conduct that prevent them from gaining admission privileges at private facilities.

Contracting arrangements between facilities and practitioners

234. The HMI established that one of the main ways that facilities compete to attract patients, particularly at the local level, is by contracting with practitioners. The submissions made by facilities outlined clearly that attracting the right type of practitioners is key to their operations and to their ability to compete.[104] All facility groups submitted that there is a chronic scarcity of healthcare practitioners, mainly specialists, in South Africa and that this impacts on their ability to attract and retain specialists.[105 106 107]

235. The HMI observes that direct competition between facilities to attract patients is limited and competition is principally focused on attracting practitioners.

236. The facility groups also submitted that it is important that the interests of practitioners and facilities be aligned to deliver value and to contain healthcare costs (for example, through using particular protocols or implementing standardised care pathways).[108 109 110] Given that practitioners cannot be employed by facilities in South Africa due to the HPCSA's interpretation of its Ethical Rules, facilities argue that they are compelled to offer various incentives and enter into contracts to "align practitioner interests" with that of the facilities in which they work.

237. Relationships between facilities and practitioners take a variety of forms based on how facilities categorise practitioners. Facility groups distinguish between the following six main categories of practitioners:

237.1. Practitioners with admission and referral privileges, with practices located within the facilities. These practitioners operate fully within the facility and have lease/rental agreements with the facilities and may have service level agreements that define the level of service expected from each party.

237.2. Practitioners with admission and referral privileges, with practices located outside the facilities. The practices of these practitioners are located elsewhere, but they have arrangements to admit and treat patients within the facilities.

237.3. Practitioners with admission and referral privileges, with sessional rooms within the facilities. These practitioners usually have core practices elsewhere.

237.4. Practitioners registered for "Remunerative Work outside the Public Service" (RWOPS) may also have sessional rooms at a facility to service an additional patient base. Facility groups have stated that they do not have different formal contracts with RWOPS practitioners as they would not know if a practitioner is employed in the public sector when a practitioner applies for admission privileges.[111] Once a practitioner has passed the facility groups' vetting process they are offered admission privileges and the process is no different from that applied to non-RWOPS practitioners.[112] We attribute this to failure of the licensing system, as distribution of health resources should comply with the RWOPS

104. Life Healthcare. Public Hearing Transcript 10 March 2016, pg. 28-29.
105. Mediclinic submission dated31 October 2014, pg. 147.
106. Life Healthcare submission dated 31 October 2014, pg. 84.
107. Netcare. submission dated 2014pg. 16.
108. Life Healthcare. Public Hearing Transcript 10 March 2016, pg. 52-53.
109. Mediclinic. Public Hearing Transcript 10 March 2016, pg. 209-210.
110. Netcare. Public Hearing Transcript 11 March 2016, pg. 16-17.
111. Mediclinic. Public Hearing Transcript 10 March 2016, pg. 235.
112. An exception appears to be Mediclinic's Wits Donald Gordon Hospital where for some disciplines theatres are operational at night and weekends to allow public sector doctors to operate outside of public sector 'normal working hours.

framework. We deal with this in detail in Section 12 of the report (paragraph 483-496).

237.5. Practitioners who own and operate practices within the emergency/ casualty unit of the facilities. These practitioners almost always have a separate practice from the facility, but they operate under the facility brand name, renting the emergency space.

237.6. Practitioners who provide clinical management services, including monitoring and collecting clinical information on behalf of the facilities. These practitioners are normally appointed as consultants.

238. Practitioners are also classified on a referral volume, according to whether they have high, low or non-admitting practices.

238.1. Examples of admitting practitioners include cardiologists, gynaecologists/ obstetricians, nephrologists, orthopaedic surgeons, neuro surgeons, general surgeons, maxillofacial surgeons, paediatric surgeons, physicians, pulmonologists, rheumatologists, ENT surgeons, foetal abnormalities specialists, haematologists, urologists and vascular surgeons.

238.2. Non-admitting practitioners include psychologists, dentists, physiologists, orthodontists, physiotherapists, pathologists, and radiologists.

239. The administrative process of contracting with practitioners is similar in many of the facility groups and is generally handled centrally by their respective head offices. Facility managers assist with the day-to-day administrative processes of managing practitioner relationships and contracts.

240. The contracting process is initiated at one of three instances:

240.1. Greenfield facilities or facilities where there is vacant consulting space: local facility managers engage in recruitment drives to initiate contracting proposals with practitioners, setting out the proposal for the terms of the contract and the type of arrangement offered to the practitioner.

240.2. Recruitment drives initiated at the request of the existing practitioners at a facility: contracted practitioners may identify the need to recruit a specific speciality within the facility, require additional support to meet demand and/or replace retiring practitioners.

240.3. Newly qualified or other practitioners often approach a facility directly to request admissions and referral privileges and/or space to establish a practice. Local facility managers then assess the profiles of the practitioners including their credentials, practice record, qualifications, experience, and registration with the HPCSA and other relevant bodies. They also assess the space within the facility, available bed capacity, theatre time, nursing resources and the market need to establish if such practitioners can be accommodated.

240.3.1. In the case of an established facility, the application assessment is done in consultation with existing practitioners, to ensure that applicants are well equipped to deliver a good service, ensure good patient relations, maintain the image of the facility and that they complement the existing practitioner base. However, the facilities emphasised that the decision to contract or reject the application is made independently and objectively by the local facility managers. Notwithstanding this, it is important to note that including existing practitioners in the recruitment process may make it more difficult for new practitioners to enter.

240.3.2. Once the facilities are satisfied with the eligibility of a practitioner and the practitioner accepts the terms of the contract, a rental agreement or admission privileges arrangement is finalised.

240.3.3. It was noted from submissions that, generally, where facilities have under-utilised capacity for a variety of reasons, including expansions or licence approvals to increase bed capacity, they sought the services of practitioners to increase capacity utilisation.

EXAMPLES OF INCENTIVES, ARRANGEMENTS AND CONTRACTS BETWEEN PRACTITIONERS AND FACILITIES

241. Several incentives, arrangements and contracts are offered to practitioners to attract practitioners and to maintain these relationships, outlined below.

Practitioner shareholding in facilities

242. Practitioner shareholding is a key incentive granted to practitioners. Not all facility groups offer this incentive. Stakeholder submissions highlight that the main reasons for offering shareholding is not only to attract practitioners but also to align the interests of the practitioners with those of the facilities. This includes ensuring better engagement between practitioners and facilities on service quality and efficiency.[113] [114]

243. Independent facilities submitted that their shareholding models are different to those of the larger groups and are primarily driven by the need to attract start-up capital to establish facilities. The independent facilities' shareholding thus includes practitioners, non-practitioners, individuals, companies and trusts. They also indicate that shareholding is used by the large facility groups to compete for practitioners and that this negatively impacts the ability of independent facilities to attract practitioners.[115] [116]

244. The HMI makes the following observations in relation to shareholding as a mechanism to attract practitioners.

244.1. Some shareholding arrangements are in place because of historical arrangements carried through during mergers and acquisitions.

244.2. Shareholding is offered at the individual facility level, and not group level.

244.3. The larger facility groups prefer to hold most of the shares in the facility, with practitioners being offered a small proportion of the shares.

244.4. Shares are mostly (but not always) offered first to admitting practitioners.

244.5. Practitioners can only hold the shares if they practice at the particular facility.

244.6. The shareholding is limited only to the operations of the facility and the physical property is owned separately.

244.7. The percentage shareholding of individual practitioners can be limited and is dependent on the discipline of the practitioner.

244.8. The share prices and dividends are determined with reference to the operations of each hospital individually and not the group as a whole.

Rental/lease contracts between facilities and practitioners

245. Rental agreements are the other way in which facilities and practitioners formally contract with each other. The agreements follow standard rental terms including cost per square meter, duration of the contract and the size of the space to be rented, but differ according to practitioner type and the geographic areas in which the facility is based.

246. The HMI reviewed several rental contracts from various stakeholders with different practitioner types over several years and makes the following key observations:

113. Mediclinic submission dated 31 October 2014, pg. 25.
114. Life Healthcare. Public Hearing Transcript 10 March 2016, pg. 28.
115. Clinix. Public Hearing Transcript 4 May 2016, pg. 28.
116. Kiaat, Meeting Transcript 28 September 2016, pg. 16-17.

246.1. The market for practitioner rooms is regarded by the facilities as premium space and subject to significant demand. Despite this, the rentals charged are discounted relative to the general property market and rates are lower than prevailing office/retail rentals. Facilities regard this type of rental accommodation as a distinct market, and are consequentially subject to different rates.

246.2. Different practitioner types also pay different rental fees. Pathologists and radiologists generally pay much higher rental per square meter than other practitioner types. Non-admitting practitioners, including allied practitioners, are also charged a higher rate compared to the prevailing rental rate for admitting practitioners.

246.3. In some instances, practitioners do not pay any rentals. According to submissions, this is because of competition in the market for practitioners in particular areas or due to historical arrangements. Newly qualified practitioners who are still establishing their practices may also be afforded rent-free periods of between six to 24 months.

246.4. The HMI notes that these "no rental" arrangements exist despite an HPCSA rule which regards "no rental" or anything other than a market-related rental as a perverse incentive.[117] [118]

246.5. The facility groups justify the differential by saying that the non-admitting practitioners do not bring patients to the facilities, but benefit from direct referrals and access to patients already within the facility.

246.6. The rental agreements of smaller independent facilities do not have the rental differentials. This may suggest that the larger facility groups have market power over non-admitting healthcare practitioners.

246.7. The rental amounts also seem to differ between various areas, meaning that there is no national average or standard that is followed by facility groups. Rentals in the Western Cape, specifically Cape Town, are higher than in other areas.

246.8. The duration of rental agreements ranges from one to 10 years, while several contracts are open ended. The contracts contain a cancellation clause, with a notice period attached to it.

Other arrangements and incentives

247. The large facility groups indicated that there are also other forms of arrangements and incentives provided to practitioners, although some of these incentives have ceased.[119] [120] These incentives include:

247.1. Relocation fees to assist practitioners moving from a different area, province or facility group.

247.2. Furniture and equipment allowances.

247.3. Retainers or guaranteed income are offered to some types of practitioners, for instance to emergency room practitioners to provide a 24-hour service.

247.4. Direct loans are sometimes provided to practitioners to purchase necessary equipment. Alternatively, the facility may assist the practitioner to obtain a loan from a third party supplier by standing surety.

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117. Health Professions Council of South Africa, Guidelines for good practice in the healthcare in Healthcare Professions: Guidelines on over servicing, perverse incentives and related matters.
118. Part 3.8 of the HPCSA guidelines on perverse incentives state that health practitioners shall not "Pay rentals in lease agreements between health care practitioners .and health establishments that are not market related or are at preferential rates".
119. Mediclinic submission dated 31 October 2014, pg. 24-25.
120. Life Healthcare submission dated 31 October 2014, pg. 70.

247.5. Hospitality, including leisure events such as year-end functions, trips, and retirement and farewell gifts.

247.6. Scholarships and grants.

248. Incentives offered by facilities often differ depending on the local competitive dynamics.

249. Certain financial incentives become repayable by the practitioner should the practitioner leave the facility within a certain period. This can act as a constraint to practitioners wishing to move between competing facilities.

250. The above incentives indicate that practitioners do not generally invest heavily in setting up practices. Facilities seem to provide a lot of support to practitioners, contrary to the assertion that practitioners face significant start-up costs in establishing practices.

THE ROLE OF FACILITY MANAGEMENT IN ATTRACTING PRACTITIONERS

251. The HMI established that some of the large facility groups provide facility management services to attract or retain practitioners. Independent facilities and some of the large facility groups interviewed indicated that they do not offer similar incentives to their facility managers.

252. Facilities also make use of market recruiters to build and maintain relationships with practitioners.

DISCUSSION OF FINDINGS

253. In terms of the RSOI, the HMI sought to understand whether the relationships between facilities and practitioners contribute to inappropriate utilisation of healthcare resources (or SID) and whether the relationships demonstrate market power of facilities. The HMI also considered how the current regulatory framework operates and affects the incentives of both facilities and practitioners.

254. The HMI found that competition between private healthcare facilities is mainly driven by the need to attract practitioners, particularly at a local level. The relationship between facilities and practitioners is therefore key to competition, which is then expressed in the various incentive arrangements. Based on the way in which contracts and incentives are offered, the HMI observed that, there is significant competition for practitioners, particularly specialists, between facilities. However, some specialists are in higher demand than others.

255. This is not necessarily improper, and may be pro-competitive and promote consumer welfare. However, the HMI's analysis shows that the main objective of these relationships is not aligned to consumer interests and outcomes but may distort competition outcomes and ultimately harm consumers.

UTILISATION AND SUPPLY INDUCED DEMAND (SID)

256. In assessing several contracts and internal documents submitted to the HMI, there is evidence that some incentives were used to influence clinical utilisation by practitioners. The wording of some of the contracts suggest that the practitioners were encouraged to "make full/maximum use of the facilities" or ensure that they "treat a minimum proportion" of their patients in the facility. These provisions were sometimes accompanied with certain penalties such as "cancellation of the lease", or "the reduction in shareholding" should "their regular admissions decrease".

257. We have evidence that the contracts between practitioners and facilities are enforceable through different mechanisms including cancellation of leases and termination of practitioner shareholdings in facilities. There are instances were practitioners are cautioned of their obligations, where practitioner analysis indicated shift in volumes from their primary hospital of practice.

258. Notwithstanding the foregoing discussion, it is notable that the stipulations in the contracts between practitioners and facilities still require the practitioner to act within the bounds of the Ethical Rules and practice. The HMI also notes the arguments that these terms may be required to ensure efficient allocation and utilisation of resources, for example so that available,

but unused capacity, may be reallocated to another practitioner who needs it.

259. There may be a commercial rationale, as argued by the facilities, for providing incentives largely to admitting practitioners and those that practice within a facility. These practitioners may be more likely to improve the quality of care and improve cost efficiency in the interest of both the practitioners and facilities.

260. The HMI further noted that facilities tend to scrutinise practitioners' contributions to their facilities not only on clinical utilisation but also in terms of monetary and financial performance. Facilities argued that this is to ensure that practitioners are using resources efficiently. While this may be valid, the basis for measuring practitioner efficiency in clinical utilisation of resources is unclear. The HMI found no evidence in the contracts or policy documents submitted which clarifies this, and whether this is aligned to ensuring quality of clinical outcomes. This is contrary to the practice of independence for contracted practitioners.

261. Nevertheless, the HMI observes that the contracts between practitioners and facilities set specific volume targets for practitioners; that practitioners are urged to use underutilised capacity; that practitioners are monitored and that there are penalties for low utilisation. What is of interest is that, in competing for practitioners, the most sought-after practitioners are those who contribute the most in terms of expenditure. There is little evidence that these incentives improve clinical and patient outcomes. Further, although the HMI was not able to show a direct link between SID and the incentives offered to practitioners, it found significant unexplained utilisation suggesting the prevalence of SID.

262. The HMI therefore found that competition to attract practitioners may result in provision of these incentives which could influence practitioners to drive demand.

263. In their submissions to the HMI, the facility groups were adamant that some of the contracts and incentives provided to practitioners would not be necessary if facilities could directly employ practitioners to form multi-disciplinary teams in the provision of care. They argued that they could provide healthcare services much more efficiently if the two parties could align their interests through direct employment of practitioners, particularly in the context of the alleged "chronic shortage" of practitioners.

264. Practitioners interviewed by the HMI resisted the proposition of the employment on the basis that it will affect clinical independence and may decrease quality of healthcare. They believe that their ethical conduct and professionalism is not compromised by the incentives provided by the facilities. Therefore, it appears that practitioners are averse to being employed by the facilities, but are not opposed to receiving incentives from facilities, which could theoretically equally compromise clinical independence and quality.

265. We also find that that there is no per se prohibition of the employment of practitioners in the legislation but that the HPCSA has, in practice, adopted a strict approach to the issue. The facilities and other stakeholders have made various submissions to the HPCSA on various models that could be applied to allay any ethical concerns. The HPCSA did not respond positively to these models.

266. The HMI was unable to identify any publicly available studies conducted and/or cases adjudicated by the HPCSA reporting on the potential benefits and costs of allowing practitioners to hold financial interests in facilities, or on the relative effects of incentives and employment on clinical independence. Therefore, it is not clear why the HPCSA chooses to allow practitioners to hold financial interests or receive other incentives from facilities, but prohibits employment of practitioners.

267. Regarding the alleged shortage of practitioners, which is used to justify the incentives, the results of the practitioner density analysis in Chapter 7, shows that the alleged shortages of practitioners is not pronounced in the private sector. Even though there are some specialities where the absolute number of specialists in the private sector are low, practitioners (specifically specialists) appear to be in higher supply in the private sector and in metropolitan areas than claimed.

268. he lack of transparency around incentives is also concerning. The HPCSA and many other stakeholders, such as medical schemes, have only provided anecdotal evidence to the prevalence of these incentives.

268.1. The HPCSA has the legal mandate to adjudicate in complaints about the incentives that practitioners receive. However, it seems that it has never been able to assess the contracts between practitioners and facilities and has no knowledge of the exact nature and structure of the contracts or the impact they may have on practitioners' conduct. In a consultation between the HMI and the HPCSA, the HPCSA admitted to this. The HPCSA seems to adopt a reactive approach where it expects other stakeholders to lodge complaints for them to adjudicate. For example, the "no rental" arrangements are still in existence despite an HPCSA rule which regards "no rental" or anything other than market related rental as a perverse incentive.[121] This could be in contravention of the Ethical Rules. This brings into question the effectiveness of the HPCSA as a regulator and whether its enforcement of the Ethical Rules is effective in discouraging perverse incentives.

268.2. Medical schemes also seem to fail to address these incentives in the bargaining processes with facilities and practitioners, particularly as they may relate to the increased utilisation (volume) and expenditure since they should curb these in the interest of the patient and scheme members. A functioning competitive market should enable the bargaining process to expose and limit these practices in the interest of efficiency.

269. The HMI recognises that some alignment of interests between practitioners and facilities would be beneficial, and may make commercial sense. The alignment may even promote consumer welfare by improving access to quality healthcare, increasing cost efficiency and introducing innovative forms of healthcare delivery. Nevertheless, the HMI finds that some of the existing arrangements are not in the best interest of competition and consumer welfare and do not curb increasing utilisation and expenditure.

CONCLUSION ON RELATIONSHIPS BETWEEN FACILITIES AND PRACTITIONERS

270. The relationships between practitioners and facilities affect the nature of the competition in the private healthcare sector. These relationships form an integral part of competition between facilities, particularly at a local level. The incentives offered to practitioners by facilities can influence the manner in which each player behaves in the market.

271. The Inquiry found that the incentives are inappropriate, may drive expenditure, and have a detrimental effect on competition and consumer welfare. Facilities should compete for practitioners based on the quality of their services and the outcomes achieved in their facilities rather than on the basis of inappropriate incentives. The current incentive structure can create moral hazard as a result of facilities and practitioners acting outside the interests of consumers, while being more responsive to their own financial interests.

272. The Inquiry also find clauses in the contracts between facilities and practitioners, particularly those of the big facility groups, which may have the potential of exclusionary effects, while deterring entry and entrenching incumbent dominance.

273. Further, the HMI finds that the HPCSA's regulatory role is not executed in the interest of consumer welfare but in the interests of practitioners. The regulatory system is thus largely ineffective and selective.

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121. See Section 3.8 of the Health Professional Council of South Africa. Guidelines on Overserving, Perverse Incentives and Related Matters, 2008.

BARGAINING AND TARIFF DETERMINATION

INTRODUCTION

274. This section explores the nature of price determination in the private facilities market in South Africa. It provides an analysis of the state of tariff negotiations that occur between facilities and funders (medical schemes and/or administrators). The section assesses the existence of market power and the impact thereof on the bargaining dynamics, the factors that facilitate or hamper negotiations, and the overall impact of bargaining and tariff determination on competition.

HOSPITAL TARIFF DETERMINATION IN SOUTH AFRICA

275. From 1993/1994 until 2003, tariffs were determined through collective bargaining. In 2003, the Competition Commission found that the collective bargaining amounted to a prohibited restricted practice in contravention of section 4(1)(b)(i) of the Competition Act.[122]

276. Since this finding, except for the NHN, negotiations have taken place bilaterally between individual hospitals or hospital groups and medical schemes or their administrators. The negotiation generally revolves around a single inflation figure, which is to be applied across the various hospital tariff lines. Further, Fee-For-Service (FFS) is the dominant form of tariff setting, with limited use of Alternative Reimbursement Models (ARMs).

277. The negotiation process between funders and hospitals generally takes one of three forms:

    277.1. **No negotiation:** hospital groups inform schemes of the tariff increase (usually a percentage increase of the base tariff) and these increases are accepted and applied. These typically involve hospital groups and smaller schemes.

    277.2. **Limited engagement:** hospital groups inform schemes of the proposed increase and a short negotiation process follows, often via email.

    277.3. **Extensive negotiation:** hospital groups and schemes engage in a protracted negotiation process of face-to-face meetings, either directly between the hospital groups and the scheme, or between hospital groups and administrators. This is typically between large schemes / administrators and hospital groups.

MARKET POWER DYNAMICS BETWEEN FUNDERS AND FACILITIES

278. As highlighted previously, the facilities market is highly concentrated with the three large hospital groups accounting for the bulk of the market. NHN and the other smaller independent facilities that are not part of the NHN, including Clinix Group and Joint Medical Health, account for a smaller proportion of the market.

279. The funders' side is also dominated by a few larger players and many smaller players. For instance, in 2014 there were 29 negotiators representing 85 schemes. Of the 29 negotiators, two negotiators, Discovery Health and GEMS, represented 54% of beneficiaries. if the next three biggest negotiators, Medscheme, Metropolitan, and Bonitas, are included, the market share of the top five negotiators increases to 69% of beneficiaries. The remaining 24 negotiators represented only 31% of beneficiaries.[123]

280. This concentration of a few larger players on the facilities side and the funders' side dictates the power dynamics when negotiating tariffs bilaterally. These dynamics are influenced by the diverging incentives of the negotiating parties. In terms of incentives:

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122. For a more detailed description, see Industry Overview Chapter – History of Tariff Determination.
123. See: Responses to information request question 4 (Administrators) and 3 (Schemes) and CMS annual report data 2014. The HMI is aware that there have been several changes in the medical scheme market since these responses were initially received. Hhowever these changes do not impact on the inferences drawn from them in any meaningful way.

280.1. Hospitals have an incentive to negotiate for higher tariffs in order to increase revenues. This is traded off against the potential reduction in volumes as a result of the higher prices. However, given that the demand for hospital services is generally inelastic, hospitals would be able to increase prices substantially before lost volumes begin to offset profits.

280.2. For schemes, the incentive is to negotiate for lower tariffs in order to reduce claims liability, maintain solvency and provide more affordable care to members. Funder submissions indicate that achieving an overall tariff increase that is close to CPI inflation is considered a good outcome.[124]

281. When parties negotiate, the bargaining outcome depends on the alternatives, or outside options, available to both negotiating parties in the event that an agreement is not reached. In the context of hospital groups and funder negotiations, the outside options available to each party can be interpreted as the consequences of failing to reach a contractual agreement.

282. Analysis done by the HMI, and corroborated through submissions from stakeholders, indicates that there are a number of factors driving tariff negotiations. The main drivers have been identified as:

282.1. The relative size of negotiators;

282.2. The ability for funders to channel patients; and,

282.3. To a lesser extent, introduction of ARMs.

283. Detailed below is the influence of these main factors on the tariff outcomes.

SIZE OF NEGOTIATORS

284. Size is an important consideration for both sides of the market as it will impact the outside options available to the negotiators.[125] Furthermore, the degree to which analytics and negotiating ability are able to impact tariff increases, the larger negotiators are likely to have greater access to information and more resources to bring to this exercise.

285. If size is important, one would expect significant concessions to be made in favour of a relatively larger negotiator when contracting. However, if both parties are equally placed in terms of being necessary contracts, economic theory suggests that negotiations could result in price outcomes anywhere between perfect competition and monopoly prices. What determines the outcome will be additional differentiating factors influencing the bargaining dynamic.

286. The concentrated nature of the South African private healthcare facilities market means that, in terms of beneficiaries, the majority of negotiations will be between large funders (such as GEMS and Discovery Health) and the three large hospital groups.

287. Some hospital groups have indicated that when bargaining with Discovery Health, they are in a relatively poor position given the substantial amount of revenues at risk should negotiations fail. This is even higher for specific hospitals, some of which may derive over half of their revenue from beneficiaries of Discovery Health. Given the substantial volumes accounted for by Discovery Health it would be unable to switch all its beneficiaries to alternative hospitals. While this may weaken its bargaining position relative to any one hospital group, it may not be necessary to divert all volumes in order to significantly, and negatively, impact hospital revenue.

288. Hospital submissions indicate that the other large funder, GEMS, has an additional source of bargaining power[126] in that its members have high switching costs. GEMS members receive large government

124. Discovery Health submission dated 17 November 2014.
125. Netcare Compass Lexecon bargaining report, Competition Commission NHN Exemption, Tribunal Phodiclinics/Protecter merger: Case No: 122/LM/Dec05, Life Healthcare submission to the Statement of Issues 31 October 2014.
126. Life Healthcare. Submission to the Statement of Issues 31 October 2014, pg. 33.

subsidies which they would forfeit should they switch to an alternative scheme, which means that GEMS can more effectively use co-payments to induce members to avoid non-contracted hospitals without significant losses in membership.

289. The HMI noted from the stakeholder submissions, however, that smaller players from either side of the market, seem to get worse deals and are generally price-takers. For example, Mediclinic Kathu was sold to the Lenmed group (part of NHN) in March 2015 and has since received lower tariffs from schemes. Equally, one of the largest facility groups acknowledged that it places more effort in negotiating with larger schemes and the smaller schemes are given a price without negotiation. Apart from volumes, it is not clear what influences these tariff differentials. However, overall there is some evidence of a limited number of smaller schemes able to negotiate effectively.

290. The results show a strong negative relationship between negotiator size and tariff, with the result largely driven by these two large negotiators – Discovery Health (the administrator) and GEMS. The evidence shows that the two larger negotiators have a larger degree of countervailing power in negotiations relative to schemes below a particular membership threshold.[127] Over time, this has translated into lower tariffs for GEMS and Discovery Health.

291. However, the evidence also shows a wide range and dispersion of tariffs achieved across small and medium sized schemes, which illustrates that factors other than size are important in tariff determination.

ABILITY TO CHANNEL PATIENTS

292. The ability of funders to effectively channel patients worsens the outside option available to hospital groups during negotiations as this increases the credible threat that patients will be effectively channelled away from a non-contracting hospital. However, this advantage is predicated on the assumption that funders are able to set up a viable network excluding a particular hospital (or hospital group). [128]

293. In this regard, it is worthwhile to note that in certain regions there are a limited number of hospitals. In some local areas, there are hospitals in monopoly positions.[129] The HMI analysis of local concentration shows that, based on the HHI measure, 88 local markets, accounting for 45% of the total local hospital areas are highly concentrated. Based on the LOCI measure, 114 hospitals, accounting for 58% of the total hospitals are in highly concentrated markets. In practice, funders have to cater for all their beneficiaries and require national coverage, and therefore necessarily contract with all three major groups.[130] Where hospitals have local market power due to a lack of competition, it will negatively affect funders' ability to negotiate competitive network prices. These 'must have' hospitals represent instances where funders have no outside options.

294. Submissions by hospital groups indicate that the use of networks by funders has driven competition among hospital groups and resulted in substantial discounts being offered to funders for inclusion in networks. Hospital groups are generally unwilling to be excluded from networks and have substantiated claims that exclusions, when they occur, result in lost patient volumes and revenues. Further submissions indicate networks are an effective tool for smaller schemes to exercise countervailing power during negotiations against the larger hospital groups.

295. The HMI analysis shows that network options have resulted in lower tariffs. Non-network options almost always received a higher average tariff, with the lowest tariffs attributable to networks where the hospital group has a number of hospitals in the network.

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127. While submissions by LHC indicate that these two negotiators are able to 'impose onerous conditions on LHC" they maintain that size on its own does not determine bargaining strength and therefore smaller negotiators are not at a disadvantage. See: RBB Note on Bargaining Power, pg. 5.
128. Netcare Compass Lexecon bargaining report.
129. Discovery Health, Netcare, LHC, Mediclinic submissions.
130. Medscheme submission dated 2014.

296. More notably, analysis shows that smaller schemes which had not outsourced negotiations to administrators were still able to achieve low tariffs through successful implementation of network arrangements with the respective hospital groups.

297. The results also show that there is no significant difference for non-network tariffs between schemes which offer a network option and those that do not. Where there is a difference, it is schemes that have a network option as part of their offering which receive relatively lower tariffs for their non-network options compared with schemes that do not offer a network option.

298. Therefore, the results confirm that the introduction of network options has resulted in increased funder bargaining power during negotiations which has resulted in lower tariffs for these options. This appears to have been an important development in the market from a tariff perspective and has resulted in increased competition among hospital groups.

ALTERNATIVE REIMBURSEMENT MODELS

299. Alternative reimbursement models (ARMs) are a move away from the standard fee-for-service (FFS) model which characterises the South African healthcare market. The movement from FFS to ARMs is beneficial for both funders, as it provides a level of certainty in costs, and facilities, since the funder would have to compensate for the risk transfer.[131] In addition, ARM arrangements incentivise the hospitals to be sensitive to costs as, unlike in a FFS arrangements, hospital revenues do not necessarily increase with additional services rendered. ARMs are not without issues however, such as the potential for under-servicing, reduced granularity on patient cost information, etc.

300. Hospital group submissions have indicated that this is a developing area in negotiations, with quality metrics and value-based contracting increasingly forming a greater part of negotiations. Several hospital groups claim a substantial proportion of their revenues are classified as ARMs, an indication that these models are already a significant part of the market. However, there are concerns regarding the effectiveness of these ARMs given the substantial carve-outs included in the contracts and the subsequent implication for actual risk transfer to the hospitals.

301. The ARMs that are currently in the market have predominantly been initiated by hospital groups. This questions the credibility of the countervailing power of funders as ideally, from a consumer perspective, they would be the ones designing and proposing such reimbursement mechanisms for the benefit of their members. Instead, we find that most funders are averse to ARMs and default to the pervasive FFS.

302. Notwithstanding the benefits of ARMs for funders, evidence exists of unwillingness to initiate such proposals. This might be indicative of complacency, a result of market power of schemes (the ability to pass down costs to consumers) or insufficient incentives for them to compete or effectively bargain with the hospital groups.

303. Evidence received by the HMI and analysis done by Willis Towers Watson (WTW) indicates that the ARMs currently in the market are not effective at reducing scheme costs and have limited bearing on tariff negotiations.[132]

304. Thus, although some submissions have indicated the uptake of ARMs and their contribution to negotiations,[133] the available evidence is that the market continues to be largely characterised by FFS models.[134] Furthermore, where there are ARMs in place, it does not seem clear from the evidence provided whether there is substantial risk transfer or indeed whether funders are receiving value for these contracts. The

131. Netcare submission dated October 2014.
132. See: WTW Report on Analysis of Medical Schemes claims data – a focus on facilities, table 67, and Bargaining Technical Annexure.
133. Life Healthcare Group and Discovery Health/Discovery Health Medical Scheme– submission on Tariff Determination
134. Netcare submission dated October 2014.

market therefore continues to be deprived of the full benefits of using ARMs.

CONCLUSION ON BARGAINING AND TARIFF DETERMINATION

305. This section outlined the key drivers of tariff outcomes and the competitive implications for tariff negotiations between private hospitals and funders. Trends highlighted earlier suggest that tariff increases to funders have, on average, increased at levels within the CPI index. The bargaining process and the key drivers of tariff outcomes were assessed to establish if the power dynamics in the bargaining process were in fact the drivers of the tariff outcome.

306. The Inquiry found that both the funders' and the facilities are highly concentrated implying collective dominance by major players. Life, Mediclinic, and Netcare account for the bulk of the hospital market while Discovery Health and GEMS represent the bulk of the beneficiaries.

307. Based on theory, stakeholder submissions, and econometric analysis, the Inquiry concludes that the larger funders are generally able to provide some degree of countervailing power in negotiations. The HMI also found the following:

    307.1. Size is an important consideration in negotiations. The two largest negotiators, Discovery Health and GEMS, seem to enjoy a degree of countervailing power in negotiations which is not matched by small and medium sized negotiators. It appears that hospital groups cannot easily afford to risk a breakdown in negotiations with these larger funders relative to smaller schemes. However, size is not the only factor, with evidence of a limited number of smaller schemes able to negotiate effectively.

    307.2. The successful implementation of networks by funders is an important source of countervailing power against hospital groups and has been clearly seen to result in lower prices. The lowest tariffs are attributable to networks where the hospital group has a number of hospitals in the network. Where hospitals have local market power due to a lack of competition, it will negatively affect funders' ability to negotiate competitive network prices. These 'must have' hospitals represent instances where funders have no outside options.

    307.3. The market continues to be characterised by a FFS model although some submissions have indicated an uptake of ARMs. Furthermore, where there are ARMs in place, it does not seem clear from the evidence provided whether there is substantial risk transfer or indeed whether funders are receiving value for these contracts. Evidence of unwillingness to initiate ARMs may be indicative of complacency, potentially because of market power on the part of schemes or insufficient incentives to compete.

308. From our analysis it seems that the larger funders exert some degree of countervailing power against the large hospital groups. However, given the clear benefits from networks and ARMs, it is concerning that these have not been implemented by all funders. Even with the tools available to funders, tariff negotiations have consistently been at, or above, inflation with no thought of aiming for tariff reductions in real terms.

309. The HMI finds that the countervailing power exerted by funders on facilities is limited and likely due to a combination of facility market power, administrator complacency in the upstream market for services, and exacerbated by a lack of incentives to compete among all schemes. The complacency of funders is observed across several factors, ie the inability to curb increasing utilisation, contracting efficiently for alternative forms of care that reduce costs, and insisting on quality outcomes during negotiations.

310. The question on the tariff trends within CPI is discussed in more detail in the expenditure analysis section (paragraph 323). This will also shed more light on hospital costs factored in tariff negotiations and the influence of hospital market power on tariff levels.

EXPENDITURE ANALYSIS

INTRODUCTION

311. This section assesses healthcare expenditure attributed to private healthcare facilities, particularly hospitals. We analyse the trends in expenditure and the drivers of increasing healthcare expenditure and provide some insights into the price (tariff) and utilisation components of expenditure.

OVERVIEW

312. There is a broad consensus across most submissions to the HMI that expenditure has been increasing at a rate above that of CPI. Several submissions alluded to the fact that healthcare provider costs, specifically facilities (hospitals) and practitioner costs, are a major contributor to healthcare expenditure. A number of these submissions identify varying factors to explain the high levels of expenditure in the private facilities market.

313. Statistical analysis conducted by the Inquiry[135] shows that there are high levels of expenditure attributed to hospital costs. The analysis shows that in-hospital claims increased on average by 10.84% a year using both the narrow and broad disease burden definitions. We focus our analysis on the narrow disease burden.[136]

314. The section starts by providing stakeholders' perspectives of the drivers of expenditure and, then presents the Inquiry's assessment of the trends in expenditure and the probable reasons for the increases.

STAKEHOLDER SUBMISSIONS

315. There is a broad consensus across the different stakeholder submissions that expenditure has been increasing, and that it has been increasing at a rate above that of the CPI.

316. A number of the submissions decompose increases in expenditure into two components: a volume (utilisation) component and a price (tariff) component. Stakeholder submissions highlight that while tariffs have been rising, the marked increase in expenditure is largely due to increases in utilisation and further increase in input costs of hospitals.

INCREASE IN UTILISATION

317. Utilisation growth is identified by stakeholders as the main driver of in-hospital expenditure growth. The three large facility groups (Netcare, Life Healthcare and Mediclinic) submitted that utilisation accounts for a sizeable proportion of their expenditure growth.[137]

318. The following reasons were provided for increased utilisation:

    318.1. Stakeholders submit that the ageing patient and scheme membership profile, as well as anti-selection constitute significant drivers of utilisation. They also submitted that the increase in medical scheme membership has also increased utilisation.[138] [139]

    318.2. A number of other stakeholder submissions argue that prescribed minimum benefits (PMBs) are hospicentric and have thus led to limited primary care by many medical scheme options, resulting in increased in-hospital utilisation. Benefit designs by medical schemes and the hospital plan products also offer limited (or no) primary care benefits but cover PMBs. These are argued to impact on medical scheme hospitalisation costs because of unnecessary admissions.[140] As such there is an incentive to treat patients in-hospital to ensure that care is

135. Willis Towers Watson Analysis on behalf of HMI dated 15 December 2017, in the Report on analysis of Medical Schemes Claims Data – A focus on facilities ("Facilities report").
136. See analysis on Medical Schemes Claims Data – Descriptive Statistics (the Descriptive Statistics Report).
137. Submissions by Netcare, Life Healthcare and Mediclinic dated October 2014.
138. Life Healthcare Public Hearing Transcript, page. 16.
139. Mediclinic Public Hearing Transcript, page. 173.
140. Dr N Mabasa, Public Hearing Transcript, page 222.

covered. Others argued that provider behaviour has been influenced by a court decision that schemes had to pay in full for PMBs.[141]

318.3. During public hearings, certain practitioners have conceded that they admit patients for in-hospital care when it is not strictly necessary to do so, due to the structure of medical scheme benefits and fragmentation of care.

318.4. Several stakeholders submitted that hospitals and specialists make inappropriate investments in technology without considering cost effectiveness, thus driving up hospital expenditure. It is submitted that because hospitals compete to attract specialists, they invest heavily in equipment and technology that is then used unnecessarily to recover the costs of investment. The facility groups argue that the lack of proper regulatory mechanisms around importation and pricing of technology is contributing to rising healthcare expenditure while acknowledging that some new technology is effective at reducing admission rates and length of stay.[142]

318.5. Stakeholder submissions argue that fragmentation and poor co-ordination in the delivery of care increases utilisation and expenditure unnecessarily. For example, GPs play a minimal gatekeeper role as patients self-refer to specialists who are more inclined to admit patients for in-hospital care, and there is a range of duplication of services and care which is provided at inappropriate levels.[143] [144]

318.6. Another key submission argues that admission rates are in excess of those predicted by demographic factors, thus signalling overuse (or SID) by providers. The oversupply of hospital beds and practitioners in certain areas is argued to increase demand and the number of admissions.[145] [146]

INCREASE IN INPUT COSTS OF PRIVATE HEALTHCARE FACILITIES

319. The hospital groups submitted that the input costs they face provide a further explanation of the high expenditure. The following are highlighted:

319.1. Wage inflation

319.1.1. Hospital groups highlight wage inflation as a key driver of hospital costs and therefore tariff increases. In their submissions, hospital groups identified nursing costs as the key driver of private hospital cost increases.

319.1.2. Hospital groups indicated that nursing costs account for the largest share of their wage bill.[147] Further, the hospital groups submitted that their nursing salary inflation has been above the consumer price index (CPI) inflation, influenced by several factors, including a shortage of nurses (particularly skilled nurses) precipitated by the closure of public nursing colleges and restrictions on private sector training of nurses, emigration of nurses, and the difficulty in employment of foreign nurses. The private sector also competes with the public sector for nurses and the implementation of an occupational specific dispensation (OSD) for nurses placed upward pressure on private sector salaries.

319.1.3. The Inquiry has not been able to test the veracity of these claims in detail, apart from submissions

141. See submissions by Discovery, Medscheme, SAPPF, BHF, Dr Mabasa dated 2016.
142. See submission by SACCI and Dr J. King.
143. See submissions by Discovery dated 17 November 2014.
144. Netcare Public Hearing Transcript dated 11 March 2016.
145. Submission by Discovery Health to the statement of issues dated 17 November 2014.
146. GEMS submission dated 10 October 2016.
147. Public hearing transcript 04May 2016, pg. 21.

by hospital groups. While it is expected that nursing staff is a key component of the hospitals wage bill, the actual increases in nurses' salaries over time, and how they have impacted on expenditure, has not been tested.

319.2. Exchange rate depreciation

319.2.1. Hospitals also highlight that the volatile exchange rates and the overall depreciation of the Rand has an upward impact on costs, particularly the cost of technology and equipment which is often imported.[148] [149] They note that prices are sticky downwards and that appreciation does not generally feed through to price decreases.

319.3. Consumables

319.3.1. The hospital groups and some medical schemes submit that consumables and pharmaceuticals are more expensive in South Africa compared to international benchmarks. It was submitted that South African pharmaceutical prices could potentially decrease if parallel importation was allowed.[150] The depreciating Rand was also cited to have an impact on the cost of surgicals and medicines.

319.3.2. In addition, it is submitted that there may be some cross-subsidisation across private and public sectors. For example, based on prices of selected antibiotics, single exit prices (SEPs) are said to be 254% higher than prices of the same products in the public sector, again implying cross-subsidisation with the public sector.[151] The national DoH, however, argued that the products procured in the public sector are largely different from those purchased in the private sector. The high volume and procurement processes between the two sectors also differ, and are thus likely to impact on costs.

319.4. Additional input costs

319.4.1. The hospital groups also note additional input costs such as electricity and fuel. [152] [153]

HMI ASSESSMENT OF FACILITY COSTS AND EXPENDITURE

320. Most stakeholder submissions argue that the increase in hospital utilisation is the biggest driver of increasing healthcare expenditure. In this section, we assess the trends in expenditure and the probable reasons for the increases in healthcare expenditure attributed to hospitals. We also provide some insights into the utilisation and cost of hospital services, including in-hospital costs.

321. To assess the factors behind the increasing expenditure in private healthcare, the Inquiry analysed the trends in costs and expenditure patterns across hospitals based on detailed claims and membership data[154] sourced from the medical schemes and their administrators over a five year period (2010 – 2014). The Inquiry's assessment, based on a detailed technical analysis published in the facilities report, is below.

148. Life Healthcare. Public Hearing Transcript 10 March 2016, pg. 14.
149. Mediclinic. Public Hearing Transcript 10 March 2016, pg. 165-166.
150. Section 15C of Medicines and Related Substances Control Act, (Act 101 1965), as amended, allows for parallel importation following a granting of a permit by the Minister of Health. However, the stringent requirements and difficult processes that must be followed have prevented parallel importation from occurring in any substantial manner.
151. Mediclinic submission dated October 2014, pg. 21.
152. Mediclinic. Public Hearing Transcript 10 March 2016, pg. 146.
153. Netcare submission dated October 2014
154. The data is presented at an individual beneficiary level and contain demographic information about each beneficiary in each year.

322. Overall, the Inquiry's view is that beyond what can be explained by the demographic and clinical factors, increasing utilisation over time explains the bulk of the increase in hospital expenditure as seen in the increase in admissions, average length of hospital stay (LoS) and level of care (LoC).

TRENDS IN IN-HOSPITAL COSTS

323. The total in-hospital cost increases comprise the cost increases attributed to CPI and the cost increases above CPI. The cost increases attributed to CPI averaged 5.60% between 2010 and 2014. The cost increases above CPI are attributed to explained factors and unexplained factors. The bulk of the cost increase above CPI are attributed to unexplained factors (3.20%) while explained factors account for 2.04% (Table 6.10).

Summary of Overall Trends

324. The results in Table 6.10 show total costs per episode, including practitioner costs. The results are not significantly different from hospital-only costs (Table 6.11).

TABLE 6.10: AVERAGE IN-HOSPITAL TOTAL COST PER LIFE ATTRIBUTION SUMMARY, ALL SCHEMES (BROAD AND NARROW DISEASE BURDEN) (2011-2014)

IH Claims, All Schemes	Broad	Narrow
Total Increase	10.84%	10.84%
CPI	5.60%	5.60%
Explanatory Factors	2.96%	2.04%
Age	1.50%	1.50%
Gender	0.00%	-0.01%
Disease Profile	0.88%	0.22%
Member Movements	0.63%	0.51%
Plan Mix	-0.04%	-0.19%
Unexplained Factors	2.28%	3.20%

TABLE 6.11: HOSPITAL COST PER ADMISSION TRENDS, ALL SCHEMES 2010-14 (BROAD AND NARROW DISEASE BURDEN)

IH claims, all schemes	Broad disease burden	Narrow disease burden
Total increase	10.84%	8.90%
CPI	5.60%	5.60%
Explanatory factors	2.96%	1.28%
Age	1.50%	1.19%
Gender	0.00%	-0.02%
Disease profile	0.88%	-0.07%
Member movements	0.63%	0.05%
Plan mix	-0.04%	0.13%
Unexplained factors	2.28%	1.31%

325. The majority of the increase in in-hospital costs above CPI is attributable to increases in admission rates (2.17%), followed by length of stay (1.48%) and level of care (0.60%) (Table 6.12).

Trends in admissions

326. The three largest hospitals account for a combined 76% of the total admissions in South Africa: Netcare (29%), MediClinic (24%) and Life Healthcare (23%). The remainder of the admissions are distributed between NHN (13%), other (10%) and state (1%).[155] See Figure 6.14.

TABLE 6.12: SUMMARY OF TRENDS IN IN-HOSPITAL COSTS, ALL SCHEMES 2010-14

Trends summary, all schemes	Broad disease burden	Narrow disease burden
Total Increase	10.84%	10.84%
CPI	5.60%	5.60%
Explanatory Factors	2.96%	2.01%
Unexplained Factors	2.28%	3.23%
Admission Rate	2.17%	2.17%
Explanatory Factors	2.04%	0.99%
Unexplained Factors	0.14%	1.19%
Length of Stay	1.48%	1.48%
Explanatory Factors	0.84%	0.84%
Unexplained Factors	0.64%	0.64%
Level of Care	0.60%	0.60%
Explanatory Factors	0.43%	0.45%
Unexplained Factors	0.17%	0.15%
Other	0.63%	0.63%

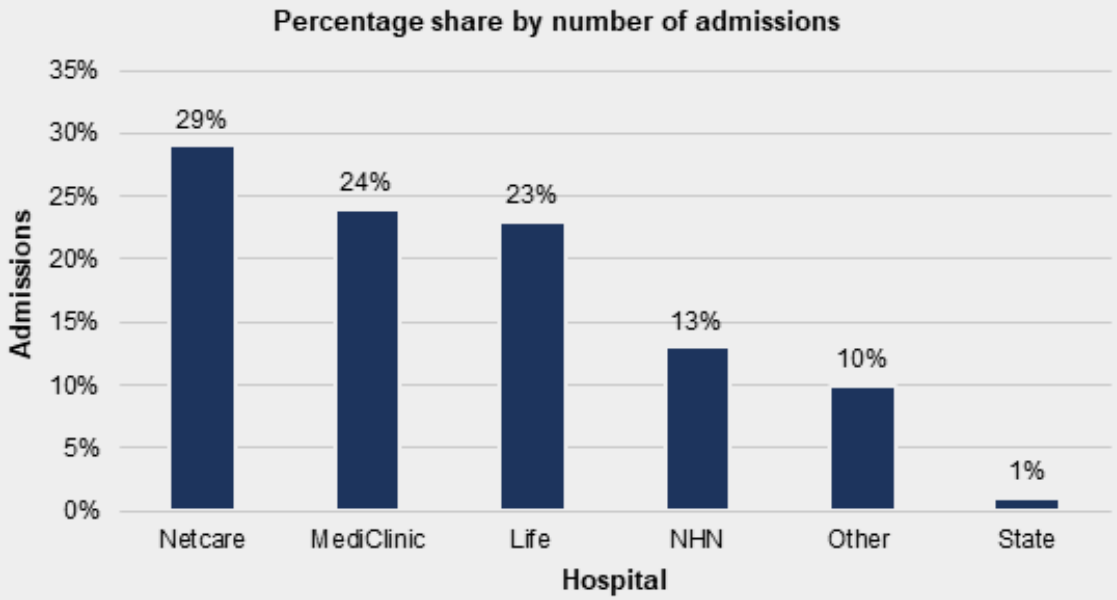
327. The admission rate in respect of day admissions has increased from 112 per 1 000 lives in 2010 to 121 per 1 000 lives in 2014 while the overnight admissions per 1 000 lives increased from 137 in 2010 to 149 in 2014. The average percentage change in day admissions over the five year period is 1.80%, whilst the average change in overnight admissions is 2.07%.

328. This trend is consistent with the observation that care continues to be provided predominately in acute facilities which generally provide overnight care, and to a lesser extent in day facilities. This is contrary to international trends.

329. In addition, the marginal increase in day admissions is consistent with the observed trend of growth in day beds. While this

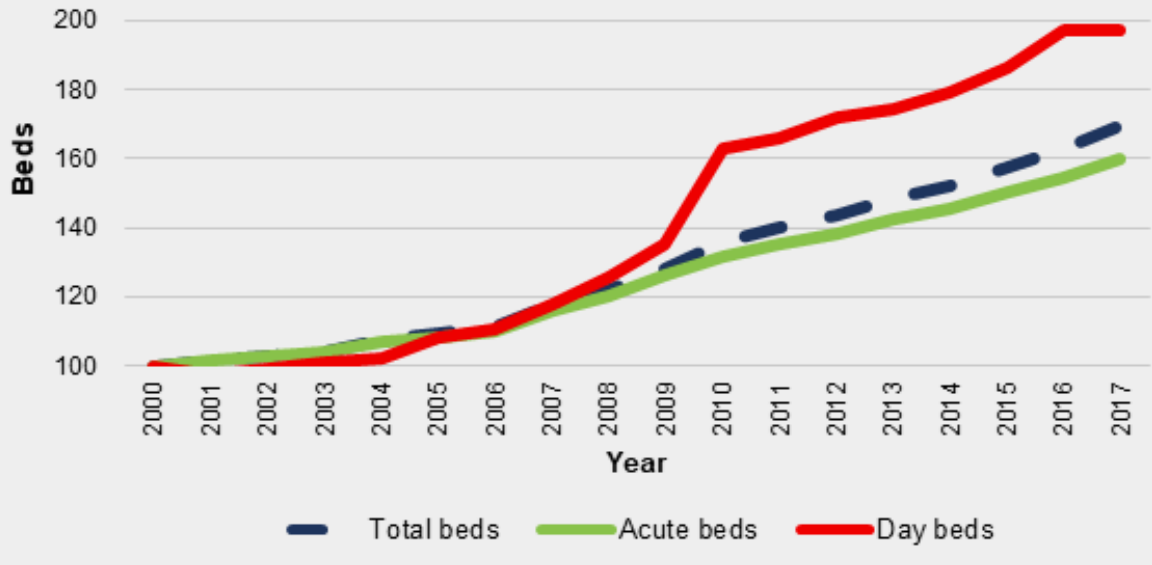
155. We note that the admission rates attributed to the State could be higher than what is reflected in Figure 6.14. Figure 6.14 underestimates the admission rates attributed to the State given that the billing system of the public facilities is inefficient. This is at the background of a number of medical scheme patients channelled to the public sector through designated service provider (DSP) arrangements, particularly for prescribed minimum benefits (PMBs).

FIGURE 6.14: DISTRIBUTION OF ADMISSIONS ACROSS HOSPITAL GROUPS (2014) [156]



marginal increase in day admissions is encouraging and signals some competition from day facilities, the Inquiry does not view this as an effective competitive constraint, as these increases are not impacting sufficiently on overnight admissions to suggest meaningful alternatives to day cases. Figure 6.15 shows a marked and steady increase in both acute beds and day beds from 2004 to 2017. Even as shown in Figure 6.15, the growth in day beds is not reflecting a significant move away from acute beds, but rather that both are growing overtime, with day beds growing at a higher rate than acute beds. Competition would be evident if the day cases or day beds were substituting acute beds, thus decreasing the number of acute beds overtime.

FIGURE 6.15: ACUTE VERSUS DAY BEDS OVERTIME



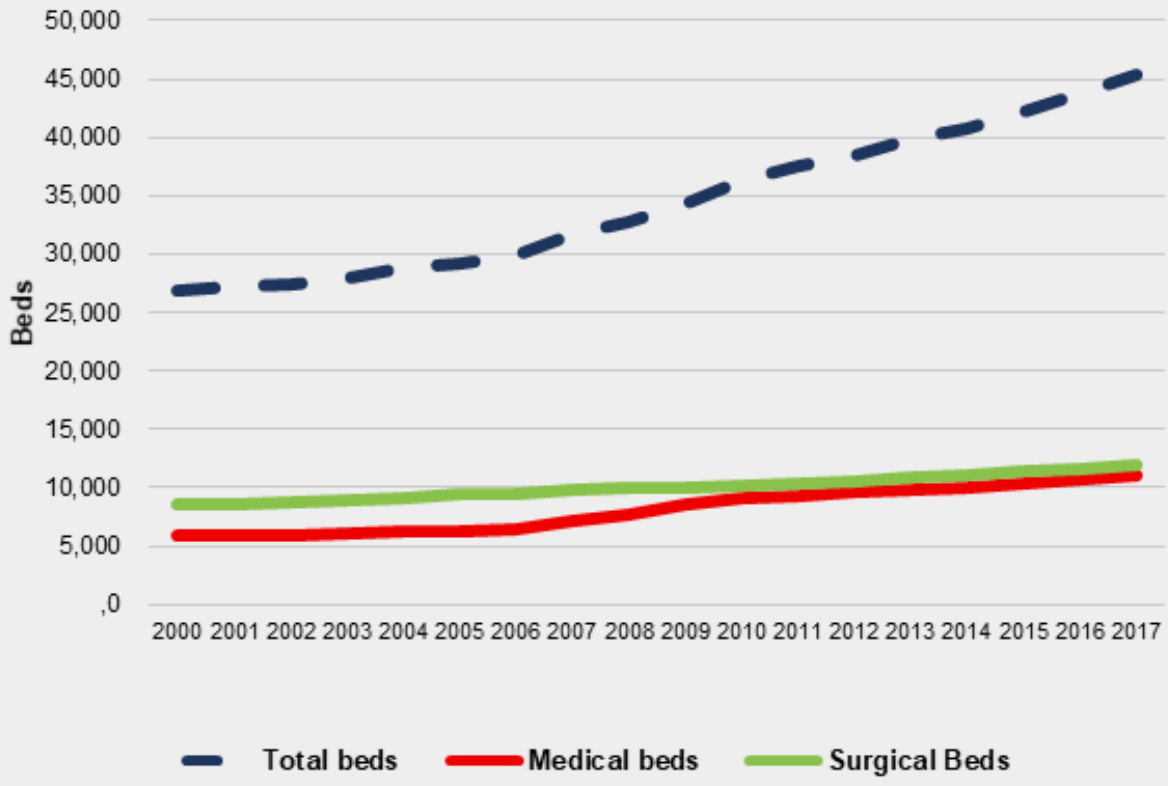
156. The market shares were calculated based on admission data for all the private healthcare facilities.

330. The admission rates have increased on average by 2.17% per year, of which 1.00% is attributable to the explanatory factors, mainly population ageing, and the remaining 1.17% to unexplained factors. The changes in the admission rates suggest that admission rates are increasing in the medical scheme population beyond what would be expected using the demographic indicators calculated. This effect is contributing over one third of the total unexplained increase.

Length of stay (LoS)

331. The average length of stay in hospitals increased marginally at an average of 1.48% between 2010 and 2014, of which 0.84% is attributed to explained factors, mainly ageing population (0.56%) and changes in admission type profile, ie case mix (0.24%) and 0.64% is attributed to unexplained factors. This unexplained component is made up of a significant increase in LoS from 2010 to 2011 and moderate reductions in subsequent years. LoS is decomposed into medical and surgical admission and the analysis shows that the length of stay has increased at a faster rate for surgical than medical admissions, at 2.89% and 1% respectively. We have looked at this expenditure against the growth in surgical and medical beds in Figure 6.16 below.

FIGURE 6.16: TRENDS IN MEDICAL BEDS AND SURGICAL BEDS (2000-2017)



332. Figure 6.16 shows constant growth paths for the surgical beds and the medical beds between 2000 and 2006 with a high number of surgical beds relative to the number of medical beds. Between 2006 and 2010, there was a significant increase in the number of medical beds with the number of surgical beds barely increasing. This almost evened the number of surgical beds and the number of medical beds from 2010 with the number of surgical beds remaining marginally higher than the number of medical beds. Between 2010 and 2017, the growth in surgical admissions is aligned to the growth in surgical beds. Figure 6.16 shows that overall surgical beds are higher than medical beds between 2000 and 2017. This probably explains why the length of stay has increased at a faster rate for surgical than medical admissions and suggesting that a number of admissions are surgical.

333. Although the increases in the average LoS in hospitals seem to be marginal, the cumulative effect on costs and accrued monetary benefits to facilities and practitioners may be significant. The total cost and unadjusted hospital cost per admission increased by 7.31% and 6.7% respectively from 2010 to 2011, and subsequently by between 7.5% and 10.0% a year. This amounts to an increase in total cost per admission from R32 395 in 2012 to R45 233 in 2014.

334. Overall, the unadjusted average LoS has been at low levels since 2011. There is a significant percentage decrease between 2010 and 2011, which has been maintained overtime with marginal annual increases between 2011 and 2014. Lower LoS are encouraging as they could reflect improved health outcomes. A shorter LoS should reduce the cost per admission and shift care from in patient to less expensive post-acute settings. Longer LoS can indicate care of poor value, inefficient hospital processes and poor quality and co-ordination of care. However, due to the lack of any defined and comparable data on the quality of outcomes in South Africa, the increasing levels of admission volumes and observed fragmented care suggest that these decreases are unhelpful in making any meaningful conclusions on improving health outcomes.

335. It could also be expected that decreases in LoS would lead to overall reduced cost per admission. However, as seen from the section below (paragraph 351), the costs per admission have been increasing over time by on average of 8.20%. This could be another signal of inefficiencies in the system.

336. A decrease in LoS that is not accompanied by lower readmission rates does not necessarily yield positive outcomes. We analysed overall readmission rates and overnight readmission rates between 2010 and 2014. Our analysis shows that overall readmissions rates and overnight readmission rates remained broadly unchanged between 2010 and 2014. We also found that the trends of readmission rates do not differ by scheme. We therefore conclude that the low levels of LoS were not accompanied by an increase in readmission rates.

337. Although the analysis shows that there is a decrease in LoS during the analysis period, the LoS per admission remain relatively high, compared to other OECD countries. This indicates high levels of hospital use.

Level of care (LoC)

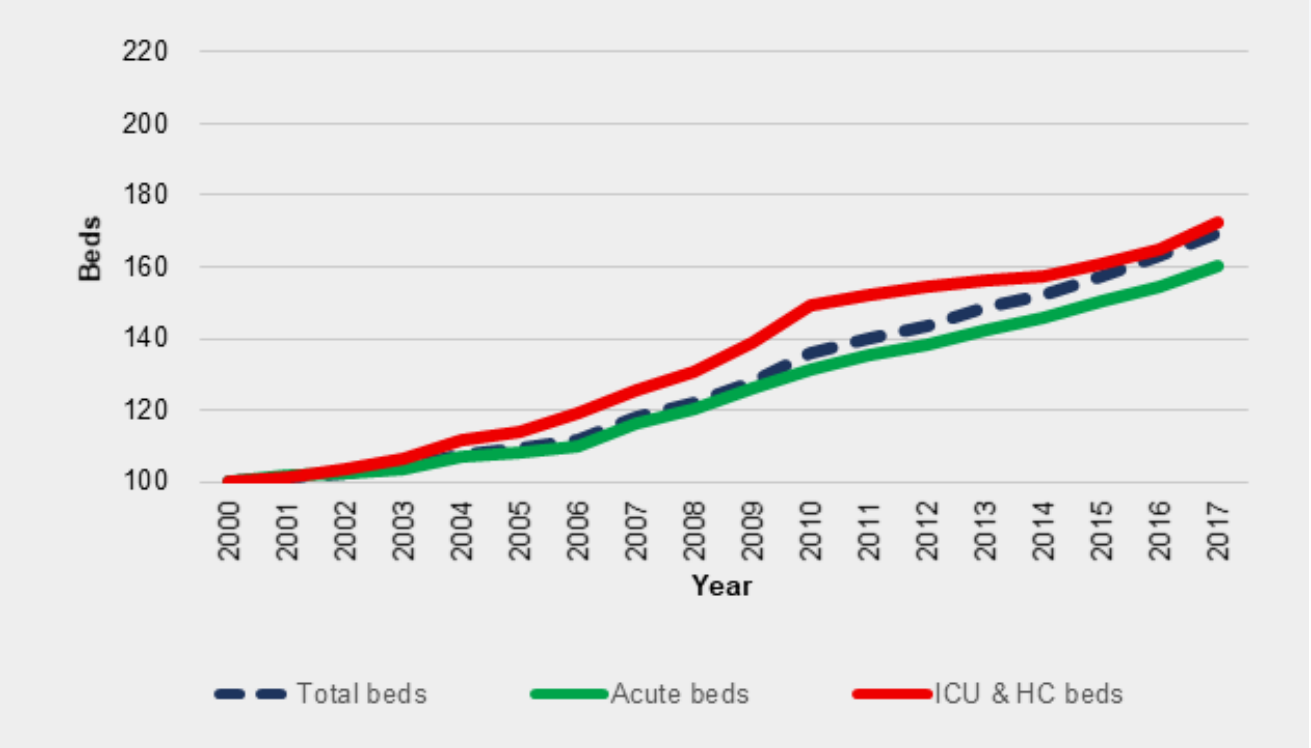
338. The number of admissions where intensive care or high care fees have been claimed has been gradually increasing over time. LoC has increased on average by 0.60%, of which 0.45% is attributed to explained factors, mainly ageing population (0.36%) and changes in admissions as determined by the admission type grouping, ie case mix (0.15%) and 0.15% is attributed to unexplained factors.

339. LoC is further decomposed in terms of medical and surgical admissions. The analysis shows that the level of care has increased at 0.75% and 0.56% for surgical and medical admissions respectively. Figure 6.16 shows a faster increase in surgical beds than medical beds.

340. This observation is consistent with the stakeholders' submissions that care is increasingly provided at inappropriate levels[157], and that there are gaps in the provision of coordinated care at primary level. Figure 6.17 similarly shows a significant increase in ICU and HC beds over time. The increase in ICU and HC beds was more pronounced between 2004 and 2010. The growth slowed between 2010 and 2014, becoming more pronounced again between 2014 and 2017. The pronounced increase in ICU and HC beds suggest a significantly sicker population, which is not evident in the Inquiry's analysis.

157. See submissions by Discovery, Medscheme, NdoH dated 2016

FIGURE 6.17: GROWTH IN TOTAL, ACUTE AND ICU&HC BEDS



341. The Inquiry considered LoC in the SID analysis in Chapter (8) on SID which confirms that LoC in South Africa is relatively higher compared to other OECD countries. While this analysis shows that ICU admission rates did not increase substantially over the period studied, they appear significantly higher than those experienced elsewhere. This may imply that there is a relatively high tendency to admit patients in ICU wards when it is not necessary.

342. As shown in Chapter 7 there are a number of procedures that could be undertaken at primary level in practitioner rooms, or on an ambulatory basis.[158] However, the majority of these procedures are provided in-hospital.

343. The Inquiry was anecdotally told of the shortages of nursing staff in general wards contributing to unnecessary ICU and HC admissions to ensure patient safety. This could also explain the alleged high nursing costs, as nursing staff appear to be allocated to inappropriate levels of care in ICU and HC, as opposed to general wards. The lack of clear, standardised economic value and critical care assessments (including treatment protocols) could also be contributing to care being provided at inappropriate levels, thus increasing expenditure.

344. Increased admissions at higher levels of care therefore raise cost of healthcare, thereby reducing access to private healthcare at primary levels of care.

Other factors

345. The increases in unexplained costs are due to other factors (38%), increase in admission rates (37%), increase in length of stay (20%) and increase in levels of care (5%). Other factors and admission rates thus account for the bulk of the unexplained increase in in-hospital costs.

346. It is difficult to isolate the other factors accounting for the unexplained increase in

158. Refer to table 3 in chapter 7 which shows a number of procedures that could be undertaken in practitioner rooms, or on an ambulatory basis.

in-hospital costs. The contribution of factors such as medical technology was not tested in the analysis and may have contributed to the increases.

347. There is no systematic data on expenditure on health technology in South Africa. To arrive at a sense of expenditure trends on health technology, the Inquiry looked at expenditure on medical devices, which can be used as a proxy for health technology. South Africa's total expenditure on medical devices increased from $1048 million[159] in 2010 to $1102 million in 2016[160], or a compound annual growth rate of 0.84%. Since South Africa's medical device industry is underdeveloped imports make up a large percentage (90%) of medical technology and devices. South Africa's national (public and private) per capita expenditure on medical devices is comparable to BRICS countries.[161]

348. The Inquiry also attributes the increases in expenditure on medical devices to the lack of appropriate health technology assessments in South Africa. This is a significant regulatory failure.

EXPENDITURE PATTERNS ACROSS HOSPITALS

349. The total cost per admission, direct hospital costs per admission and hospital cost per admission across the various tariff types is now assessed to determine if there are any particular expenditure trends.

Total cost per admission by hospital group

350. The Inquiry's analysis shows that the three large groups have higher unadjusted costs[162] per admission than NHN and the other independent hospitals, with admissions to Netcare hospitals marginally costlier than those of Mediclinic and Life hospitals. The Inquiry acknowledges that the cost per admission differences may be a result of case mix differences, as the NHN and other groups have a substantial proportion of day clinics and smaller hospitals, whereas the larger hospitals have a substantial proportion of specialised units potentially dealing with more complex cases are usually found. Nonetheless, this may not explain the difference completely, as NHN also has several specialised facilities which generally present more complicated disease burdens and cases. Overall, our view is that the higher unexplained costs per admission reflect some inefficiencies inherent in the system, particularly as they are not aligned to decreasing LoS.

Direct hospital costs per admission

351. The Inquiry's analysis of the annual changes in unadjusted in-hospital costs per admission across the various tariff types between 2010 and 2014 shows that overall unadjusted hospital cost per admission has increased by between 8% and 9% per year.

352. Considering the in-hospital costs only (excluding any costs billed by specialists or most other attending service providers), the Inquiry's analysis shows that ward fees and theatre fees are the largest component, as well as other costs which would include charges for gases, equipment, technology, and some National Pharmaceutical Product Index (NAPPI) codes items etc. This is in line with the trends highlighted earlier showing an increase in admission rates, both surgical and medical.

353. The increasing and higher ward and theatre fees could be an aftermath of the anticompetitive transfer of rebates on surgicals and consumables to hospital ward and theatre tariffs in 2007/8. These rebates became an industry scandal after the Board of Healthcare Funders of Southern Africa (BHF) publicised the practice of extensive rebates between the hospital groups and manufacturers of surgical and consumables. These were acknowledged by the industry

159. The South African Medical Device Industry.
160. U.S. Embassies abroad. 2018. South Africa - Medical Devices. [ONLINE] Available at: https://www.export.gov/article?id=South-Africa-medical.
161. Deloitte. "Research to guide the development of strategy for the Medical Devices Sector of South Africa".
162. It is noted that the presented figures are illustrative, although not adjusted for case mix or patient profile.

as inappropriate. [163] [164] To correct these rebates, which have since been billed at the Net Acquisition Price (NAP) to the medical schemes, the hospital groups shifted the margins on these products to ward and theatre tariffs.

354. The Inquiry believes that these margin transfers are therefore not reflective of real market prices, but an artificial way of correcting the rebates. In the Inquiry's view, this also provides a clear example of the hospital groups exercising market power (ie behaving independently of customers to an appreciable degree).

355. It is not clear why the rebates scandal was not pursued as fraud by the CMS, the NDoH or individual medical schemes. The failure to do so suggests that schemes have limited countervailing power to curb the market power of hospital groups. Discovery Health appears to have made a deal with the different hospital groups, which may explain why it did not pursue a case. It may bear investigating whether other schemes or their administrators reached similar agreements. There are also allegations that the conduct may not have ended in 2008 and may still be ongoing. The BHF submitted that the practice was endemic across the industry and estimated that the rebates accounted for adding 50% to the acquisition price.[165]

356. The Inquiry notes that costs attributed to the NAPPI items, although increasing, are increasing at a slower rate than the other categories, suggesting either increased use of so-called in-house tariff codes for NAPPI items or a slower inflation in medicine than overall costs. This slower inflation could, however, be attributed to the introduction of single exit price (SEP) regulations on pharmaceuticals.

357. Alternative reimbursement model (ARM) increases are off a very low base and seem unstable. The Inquiry cannot thus draw a meaningful conclusion on this trend apart from mentioning that the system shows a lack of meaningful uptake of ARMs. Again, the Inquiry believes this is linked to the ineffectiveness of medical schemes and their administrators to insist on ARMs during bargaining processes.[166]

CONCLUSION

358. The Inquiry notes that unexplained factors account for the bulk of the cost increases above CPI. Beyond what can be explained by the demographic and clinical markers used in the analysis, the bulk of the increase in healthcare expenditure is due to the increase in admissions. This suggests that the increases in healthcare expenditure reflect increasing utilisation over time. This aligns with stakeholder submissions which largely attribute the increased expenditure to the demand side factors, especially increased utilisation.

359. Therefore, the Inquiry is of the view that the increase in healthcare expenditure and to a lesser extent prices is being compounded by the increase in admissions. The observed increase in bed capacity over time further coincides with this increasing utilisation, thus suggesting that excess capacity is driving use, and a possibility of supplier induced demand (SID).

360. Notwithstanding, the Inquiry is still concerned about the price component of expenditure. This is dealt with in more detail below.

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163. A representative of Mediclinic explained that the move from charging a margin on pharmaceuticals and devices to the Net Acquisition Price (NAP) model in 2003 was done as a zero sum exercise ie the margin was worked into facilities fees from that point (transcript for case number 122LMDec05, p. 863). The Mediclinic representative also acknowledged that the medical schemes were not able to control the price of pharmaceutical products and that Discovery had been aware of the rebate system, prior to its agreement with Mediclinic to move to the NAP model in 2003 (transcript for case number 122LMDec05, pp. 923924)
164. Discovery, Mediclinic, Netcare and Life Health submissions to the Statement of Issues.
165. BHF submission to the Statement of Issues, pg.58.
166. See discussion on ARMs section 8 (paragraph 299-304).

ASSESSING THE PRICE COMPONENT OF EXPENDITURE

361. As highlighted earlier, healthcare expenditure is a function of both price and volume. The price component comprises tariffs while the volume component is a function of utilisation of healthcare services. The volume component, which has been discussed above, accounts for the largest portion of increasing expenditure. Stakeholder submissions also note that price increases present a lesser concern than utilisation as a driver of expenditure.[167]

362. Nevertheless, the Inquiry is still concerned about the price component of increasing expenditure. Overall, the Inquiry believes that the price component is inherently inefficient and derived from an anticompetitive, collusive base price. The Inquiry notes that the pricing models adopted after the end of the anticompetitive bargaining period did not correct the base price and hospital tariffs remain linked to a collusive price. Further, some tariff items (ward and theatre fees) contain historical inefficiencies, which have not been corrected. The persistence of fee-for-service (FFS) as a model of pricing and reimbursement further entrenches the inefficiencies in the system, as explained below.

Analysis of hospital price trends

363. The Inquiry's analysis of hospital price trends shows that across all 38 schemes for which data was available, the weighted average FFS tariff increase in 2014 was 6.9%. For the 18 schemes which only use FFS tariffs and for which data was available, the weighted average tariff increase for FFS tariffs in 2014 was also 6.9%. For the 20 schemes which use ARMs and for which data was available, the weighted average tariff increase for ARM tariffs in 2014 was 6.4%. This is 0.6% lower than their weighted average increase for FFS tariffs.

364. When assessing the tariff increases, these appear to be marginally within CPI increases. It may therefore be misconstrued that tariffs have been increasing within acceptable ranges. However, the Inquiry remains concerned about the initial base price from which increases were calculated, since this base price was still linked to a collusive outcome.[168] To assess this, the history of tariff determination in the facilities sector is briefly examined.

History of price determination in private healthcare in South Africa

365. As highlighted earlier, before 2004, tariffs were determined through collective bargaining. After 2004, they were based on an inflationary increase. The Inquiry agrees with the finding of the Competition Commission that tariffs prior to 2004 were anticompetitive because:

365.1. The coordinated or collusive approach to tariff setting pre-2004 implies that tariffs for private hospitals were determined in an anticompetitive way. The Competition Commission investigated a price fixing allegation against Hospital Association of South Africa (HASA), the Board of Healthcare Funders of Southern Africa (BHF) and the South African Medical Association (SAMA). The matter was resolved through a settlement agreement.[169] Although it was not adjudicated by the Tribunal, the respondents admitted to contravening section 4(1)(b)(i) of the Competition Act.[170]

365.2. The post-2004 tariff setting, based mainly on inflationary increases on the determined National Health Reference Price List (NHRPL) schedules, had some containing effect on price increases in that tariff adjustments were based on inflation increases. However, two important

167. Discovery Health, Submission to the Statement of Issues dated 17 November 2014.
168. The Inquiry notes that the collusive outcome may not have been above, or much higher than, the competitive price, this is discussed in more detail below.
169. See consent orders for case numbers: 23CRApr04, 24CRAor04 and 07CRFeb05.
170. See case numbers: 23CRApr04, 24CRAor04 and 07CRFeb05.

points should be noted. Firstly, the base tariff was not determined competitively and secondly, the subsequent tariff regimes did not correct the anticompetitive price base as market players had largely applied inflation to the increases. The NHRPL process was fraught with inefficiencies, which is why it was dismissed by the North Gauteng High Court in July 2010.

366. The Inquiry notes further adjustments of hospital ward and theatre tariffs post the denouncing of rebates on surgicals and consumables. These appear to reflect market power and are therefore anti-competitive. A competitive market in which sufficient countervailing power during negotiations by funders existed would have properly adjusted for the rebate system. This did not happen and hospitals continued to divert lost margins from illegal rebates towards other tariff items.

367. Although there is no empirical evidence that the coordinated approach to tariff setting prior to 2004 resulted in higher than competitive tariffs, reasonable inferences can be drawn. HASA, BHF and SAMA admitted in the settlement agreement that the collective tariff determination amounted to an agreement by an association of firms involved directly or indirectly in fixing a purchase or selling price. This was anticompetitive in that it had the effect of harmonising the pricing behaviour of firms in a horizontal relationship in the market. The Competition Commission's position was that the circulation by a trade association of recommended tariffs is liable to prompt firms to align their tariffs, irrespective of their costs. Such an approach dissuades firms with lower costs from lowering their prices and thus creates an artificial advantage for firms which have the least control over their production costs.

368. It may be argued that collective bargaining could yield efficient outcomes in the sense that it unifies healthcare tariffs, with both sides exercising bargaining power, thus simplifying tariff-setting in a complicated industry with many players. Notwithstanding this argument, the Inquiry holds that collective tariff determination was anticompetitive and that a collusive approach to the tariff setting prior to 2004 implies that the base tariff on which successive inflation adjustments have been effected was based on an inherently anticompetitive process, characterised by collusion between industry stakeholders. The bargaining mechanism qualifies as price fixing and these cases are generally illegal, as there can never be any justification for such a method of price determination.

369. The persistent reliance on FFS tariffs and the lack of meaningful diversion towards ARMs also exposes the inefficiency inherent in the hospital tariffs.

370. The concentrated nature of the hospital market, and lack of effective competition from smaller hospital groups and public hospitals, and the ineffective countervailing constraints from the medical schemes, suggest that this inefficient price is likely to persist, in the absence of any meaningful intervention.

371. The Inquiry also considered a study by the World Health Organisation (WHO) and the OECD on international comparison of South African hospital price levels.[171] The study found that South Africa has one of the most expensive private healthcare systems in the world. According to the study, price levels for private hospital services in South Africa are comparable to the levels observed across OECD countries and are higher than expected given the country's level of income. International comparison of South African private hospital tariffs levels shows that private hospital prices in South Africa are around the levels observed in countries with much higher GDP and GDP per capita levels, such as France, Germany or the United Kingdom.

171. Lorenzoni, L. and Roubal, T (2015) International Comparison of South African Hospital Price Levels OECD Working Paper No. 85, World Health Organisation and the Organisation for Economic Co-operation and Development. Accessed from http://www.oecd.org/southafrica/private-hospital-prices-in-south-africa-are-expensive-for-citizens.htm .

372. The Inquiry acknowledges that this study has been criticised inter alia relating to the methodology applied, the comparability of the health systems in the study and the sample size used in the analysis.

373. International comparison of prices, particularly in healthcare markets, is a complex exercise for a variety of reasons. For purposes of this analysis, the Inquiry does not do so but rather relies on its own findings.

374. The Inquiry regards the argument that tariff increases are within CPI increases, and therefore increasing within acceptable ranges, cautiously. If a firm has already raised prices substantially above competitive levels, subsequent price increases within the CPI level should not automatically be assumed to be acceptable. The Inquiry is of the view that the current level is already comfortable for industry players, and is thus maintained.

375. Given this context, the Inquiry concludes that the current hospital tariff regime has not corrected the inherently anticompetitive hospital tariff base and already incorporates levels indicating imposition of market power and ineffective countering constraints from the medical schemes. The small increases in hospital tariffs may be mistakenly considered to be a sign of low market power and tariffs increases within a competitive range. This conclusion is reached with the overall observation that where healthcare costs are high, access to healthcare is becoming increasingly unaffordable.

IMPACT OF HIGH CONCENTRATION ON EXPENDITURE

376. Several earlier papers argued that the high levels of expenditure in hospitals can be attributed to the concentrated nature of this market. It has been argued that a reason for high costs is increased concentration in the private hospital sector.[172] [173] This was argued by the Council for Medical Schemes (CMS) in 2008, when it said that there was a trend break in the cost to medical schemes from private hospitals from 1998 when the hospital market became concentrated in urban areas. Another study shows a correlation between hospital concentration (measured by Herfindahl-Hirschman Indices (HHIs)) and costs.[174]

377. Many other submissions to the Inquiry attributed the high expenditure to the concentrated hospital market.[175] [176]

378. The Inquiry assessed the level of expenditure in selected geographic markets that exhibit high levels of concentration based on the HHI. To select markets which are highly concentrated we considered catchment areas with an HHI greater than 2500. We purposefully selected many catchment areas with an HHI equal to 10000 which show markets where a hospital operates as a solus hospital.

379. The selected highly concentrated markets are contrasted with markets that are non-concentrated and those that are moderately concentrated. To select markets which are non-concentrated we considered markets with an HHI greater than 1500 but less than 2500. To select markets which are moderately concentrated we considered markets with an HHI of between 1 500 and 2 500.

380. The markets which are highly concentrated, not concentrated and moderately concentrated were selected purposively to ensure a balanced representation across all facility groups and of rural and urban areas. Our analysis attempted to test the following hypothesis:

"Regional hospital competition for doctors affects those factors which attract doctors. For instance, high care bed capacity, availability of nurses, etc. This in turn influences doctor behaviour in matters such

172. Matsebula & Willie. 2007. Private Hospitals. Accessed from: http://www.hst.org.za/publications/South%20African%20Health%20Reviews/SAHR2007.pdf.
173. McIntyre & Thiede. 2007. Health Care Financing and Expenditure. Accessed from: http://www.hst.org.za/publications/South%20African%20Health%20Reviews/SAHR2007.pdf
174. Van den Heever, A. 2012. Hospital costs and competition, Occasional Note.
175. Discovery Health. Submission to the Statement of Issues 17 November 2014, pg. 320.
176. Discovery Health. Submission to the Statement of Issues 31 October 2014, pg. 4.

as admissions, in general and at high care, and therefore expenditure. The overall result may be counter-intuitive in terms of the economic orthodoxy: less concentrated and competitive markets may imply inefficient, higher than necessary average costs of treatment and vice versa.."

381. While logical, this is a counter-intuitive hypothesis as it posits negative outcomes (greater unnecessary expenditure) will occur with greater levels of competition. To see why such a perverse outcome may occur in healthcare markets, consider the two-stage competition that takes place in the South African context:

382. Facilities and funders negotiate nationally for tariffs and network inclusion, so called competition for the market;

383. Subsequently, competition in the market occurs at a localised level amongst facilities.

384. In the absence of relevant information for consumers to make informed choices, healthcare becomes a credence good and the second stage competition manifests in facilities competing for practitioners. In such an environment, the doctor with the best reputation and largest clientele must be the best doctor, providing the best care. And the hospital he/she admits patients to must be the best hospital. Local competition for volume by individual hospitals therefore largely takes place through competing for doctors, in order to secure their patronage, admissions, and contracts. Doctors subsequently bring reputation and patients, they influence the number of admissions, treatments and prescriptions, possibly also supplier induced demand.[177]

385. Local hospitals across the groups may 'chase' for patients, beyond the level of efficient costs.[178] These additional costs will be reflected in the so called 'residual/ unexplained factors'[179] in our expenditure analyses. Local hospitals may offer rooms to doctors against non-market prices, invest in equipment that is scarcely used, provide service and assistance over and above what the patient in a competitive situation would be inclined to pay and may allow and/or stimulate all sorts of supply induced demand and admissions.

386. Thus we may find that more local competition (i.e. urban/metropolitan markets) for volume, leads to higher systemic costs and inefficiencies in terms of more admissions, overcapacity, lower utilization, overtreatment and higher expenditure on matters that generally are beneficial to the doctors, but not necessarily to the patient – and by implication not to the payer/member of a scheme.

387. As an initial test to validate this hypothesis the HMI, with assistance from WTW, has taken a statistical approach to compare expenditure and admissions in those regions identified as being concentrated against facilities located in non-concentrated regions.[180]

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177. Other non-price competitive factors that may influence patients' choice for a hospital or doctor are the range of medical treatments offered by a hospital, available technology and equipment, availability of nurses, location of day care, waiting rooms, parking, and waiting times.
178. More so then in the US/UK situation where authorities are expected to have aligned tariffs to efficient costs.
179. Averaging almost 4% per year over and above CPI (5.6%) over the period 2011-2014, after correcting for demographic factor changes averaging 1.3% (age, gender, disease profile, member movements and plan mix). See WTW preliminary report 1 dated July 2016.
180. This work follows on from the work done in previous published expenditure reports, for a detailed overview on methodology see: Report on Analysis of Medical Schemes claims data: a focus on Funders dated 15 December 2017

The results are supportive of our hypothesis that facilities in concentrated regions typically exhibit below expected admission rates and lower claim increases over time.

TABLE 6.13: ADMISSION RATES ACROSS DIFFERENT REGIONS, DIFFERENCES FROM EXPECTED VALUES, 2010-2014

Admissions	2010	2011	2012	2013	2014
Concentrated	-9,57%	-11,17%	-10,92%	-8,33%	-8,39%
Moderately Concentrated	7,15%	7,57%	10,09%	11,60%	11,31%
Non-Concentrated	1,38%	1,04%	3,13%	5,43%	7,23%

Source: Claims data, WTW analysis

TABLE 6.14: TOTAL AND UNEXPLAINED INCREASES IN CLAIMS ACROSS DIFFERENT REGIONS, EXCLUDING CPI, 2010 – 2014

Claims Increases		2011	2012	2013	2014	Average
Concentrated	**Total Increase**	5,50%	2,73%	2,35%	2,72%	3,32%
	Unexplained	2,44%	0,73%	1,88%	2,28%	1,83%
Moderately Concentrated	**Total Increase**	5,31%	5,48%	3,04%	4,20%	4,51%
	Unexplained	3,24%	3,44%	2,03%	3,45%	3,04%
Non-Concentrated	**Total Increase**	4,66%	3,08%	2,96%	2,95%	3,41%
	Unexplained	2,45%	1,21%	2,50%	2,42%	2,15%

Source: Claims data, WTW analysis, all claims

388. What is clear from table 6.13 above is that actual admission rates are clearly below the expected value in concentrated regions (negative values) and vice versa when considering moderately and non-concentrated regions (positive values).

389. In terms of claims increases, the concentrated regions have an average increase of 3.32% after removing increases attributable to inflation, this is slightly lower than the average increase in non-concentrated regions (3.41%). Moderately concentrated regions have the highest average increase at 4.51%. However, importantly, average unexplained increases in concentrated regions (1.83%) are substantively below the unexplained increases in both moderately (3.04%) and non-concentrated regions (2.15%).

390. While by no means conclusive, as a first step in understanding the impact of concentration on market outcomes, these analyses are supportive of the HMI's local concentration hypothesis. Namely, that facilities located in concentrated regions display characteristics which could be considered perverse and can be attributed to the fact that hospital groups at the national level have the market power to compensate for inefficient competition at the local level.

391. In order to better understand what is driving these results, it is necessary to embark on a more detailed analysis of individual regions. In this regard, the HMI will continue to further analyse these results, and do the work identified earlier as Phase 3, the case-studies of regional hospital concentrations, to be included in the final report.

392. Further, the HMI encourages submissions from relevant stakeholders which may shed any light on the findings presented above.

CONCLUSION

393. There is broad consensus across stakeholders that expenditure has been increasing at a rate above CPI. The increase in expenditure is attributed largely to increased utilisation and, to a lesser extent, increase in price. A breakdown of the expenditure growth shows that utilisation accounts for a considerable proportion of hospital expenditure growth.

394. Cost trends show a significant difference between the total in-hospital cost increases and the cost increases attributed to CPI. The cost increases above CPI are attributed to explained factors and unexplained factors with the bulk of the cost increase above CPI attributed to unexplained factors. Much of the increase in in-hospital costs above CPI is attributable to increases in admission rates followed by length of stay and the level of care.

395. The increase in unexplained costs over time is explained by the increase in utilisation, the increase in average length of hospital stay, the increase in the level of care, and other factors. Most of the increase in unexplained costs over time is explained by the increase in other factors followed by increase in admission rates, increase in length of stay and increase in levels of care. The increases in costs are reflective of increasing utilisation over time and may signal the prevalence of SID. This is also supported by our analysis on concentration which shows that facilities located in concentrated regions display characteristics which could be considered perverse relative to those in moderate and non-concentrated regions.

396. Notwithstanding that the hospital tariffs have been increasing within CPI increases, it may underestimate the market power of hospitals. The current hospital tariff regime has not corrected the inherently anticompetitive hospital tariff. While tariff increases are within headline inflation increases, exploitation exists and it may still hurt consumers. Our view is that exploitation may be precipitated by significant increases in utilisation due to a number of factors, including the mutual relationships between facilities and practitioners which leads to SID. This is analysed in detail in subsequent sections.

SUPPLY-INDUCED DEMAND IN THE PRIVATE FACILITIES OF THE HEALTHCARE SECTOR

INTRODUCTION

397. In this section, we explore the likelihood that supplier induced demand (SID) exists in the private facilities market in South Africa. The inquiry's view is that both facilities and practitioners are required to participate for SID to occur. While practitioners are directly involved in the clinical diagnosis and the final decision to admit the patient, the facilities provide a platform for the diagnosis and admission through the supply of medical equipment, hospital beds and theatre time. Therefore, a distinction between facilities and practitioners in the analysis of SID is not necessarily made.

398. The Inquiry uses both the qualitative and quantitative approaches to conduct an analysis of SID in the private facilities market in South Africa. First, an assessment of whether the private healthcare market possesses some structural features that are conducive for SID (a qualitative analysis) is made. Thereafter, the quantitative assessment is presented.

IS THE PRIVATE HEALTHCARE MARKET CONDUCIVE TO SID?

399. Some structural features of the private facilities market that potentially drive SID are highlighted. The main feature is the lack of perfect agency[181] in healthcare markets. There is information asymmetry between providers of healthcare and patients in the private facilities market in South Africa.

181. Perfect agency would only occur when practitioners take decisions that their principals (patients) would take if they had all the information and expertise that their agent has.

400. Another structural feature identified in literature that drives SID is the use of the FFS reimbursement system for medical services in conduit with non-salaried practitioners. In South Africa, the model of reimbursement primarily used for the facilities market is FFS alongside non-salaried practitioners. Where FFS is used and practitioners do not earn fixed income, it may incentivise them to increase the volume of treatment to earn more income.

401. The lack of effective regulatory authority to evaluate the introduction and use of medical technology may also drive SID. There is a lack of effective regulatory oversight to link the introduction and increased utilisation of new technology with the costs of acquiring technology. The assessment of clinical effectiveness of some of the medical technology is also lacking.

402. Literature also identified mutual dependency of stakeholders as a driving factor for SID. In the facilities market in South Africa, various direct and indirect incentive arrangements between facilities and practitioners may increase usage. Although the Inquiry was not able to show a direct link between SID and the incentives offered to practitioners, it found significant unexplained usage, suggesting the prevalence of SID. On the basis of the foregoing discussion, the private facilities market is characterised by structural features identified in literature as conducive for SID.

INSIGHTS FROM STAKEHOLDER INFORMATION

403. The Inquiry considered information submitted by some provincial departments that issue licences and therefore have some control over bed (over)supply. Specifically, submissions by the Western Cape and Gauteng provincial Departments of Health (PDoH) were considered. Insights were drawn from the hospital expenditure analysis conducted by Willis Towers Watson (WTW)[182] and the contracts and internal documents submitted by the hospital groups. Although stakeholders did not conduct specific studies on SID, they are of thlee view that there is likelihood that SID exists in the facilities market in South Africa.

404. The Western Cape PDoH submitted that there is unsustainable cost escalation in the private healthcare sector due to SID and over-servicing among other issues. The sentiment is that the FFS reimbursement model and the over-supply of beds both lend themselves to SID which in turn fuels the escalation of expenditure in the private sector. It was further submitted that there has been limited regulatory effectiveness hence the oversupply of private beds. The authority illustrated that there are two to four times more private sector beds in South Africa than in developed countries.

405. The Gauteng PDoH shared the same opinion that there is over-servicing in the private sector. The authority submitted that there has been a significant increase in the supply of beds due to an increase in new facilities from 95 hospitals in 2006 to 170 in 2017.[183] There are also 48 approved facilities that have not yet been built. According to the authority, the White Paper for the Transformation of the Health System in South Africa (April 1997) prescribed the public/private bed ratios and beds availability per 1 000 population as 3/1 000.[184] There is an oversupply of private health care beds far in excess of the 3/1 000 public/private bed ratios. Further, the ratio of uninsured to insured people in Gauteng is 75/25 and that, accordingly, the ratio of public to private beds should be 75/25. However, the ratio of public to private hospital beds is currently 50/50, implying that the per capita availability of beds in Gauteng is significantly higher in the private than the public sector. Although the oversupply of beds is not sufficient to conclude that SID

182. Willis Towers Watson Analysis on behalf of HMI dated July 2017.
183. Presentation by GDOH at an HMI Seminar on Discussion between Health Market Inquiry, National Department of Health, Provincial Departments and Relevant Stakeholders on 28 February 2018 at HMI offices.
184. Based on the ratio, per 1000 population the recommendation is that there should be 3 public beds for every private bed.

exists in the private facilities market in South Africa, the Gauteng PDoH indicated that over the years there has been a steady increase in hospital beds with no real proof of matched demand. The authority also indicated that the increase in beds has been more pronounced in selected affluent areas with high population incomes and bed densities.

406. The Inquiry also drew insights on SID from expenditure analysis conducted by WTW.[185] The analysis shows that usage accounts for the bulk of the increase in hospital costs over time with unexplained factors accounting for the majority of the healthcare cost increases above CPI. In the analysis, most of the increase in in-hospital costs above CPI is attributable to increases in admission rates. The increases in usage and consequently costs over time may signal the prevalence of SID.

407. The Inquiry further considered the relevant assessments conducted by other stakeholders on the likelihood that SID exists in the private facilities market in South Africa, presented below.[186]

INSIGHTS FROM DISCOVERY HEALTH'S STUDY[187]

408. The study conducted by Discovery Health focused on the financial impact of new private hospitals on medical schemes. Although the study did not focus exclusively on SID, it provides useful insights on the subject.

409. The study analysed the in-hospital bed day utilisation[188] patterns in 18 regions, including 12 months prior to a new facility opening, and 12 months after the new hospital opening, and compares the patterns to the usage patterns in regions with no new hospital, using a carefully defined comparator population.[189] The study was conducted in the 18 regions which had new hospitals and which met the evaluation criteria.[190]

410. The study found that once a new hospital becomes operational, it leads to an increase in demand as measured by utilisation[191] in the region where the new hospital was introduced. In 12 of the 18 regional case studies, the analysis demonstrates that new hospitals resulted in statistically significant increased utilisation levels in the region in which the new hospital was opened. The total excess cost impact over the 12 month evaluation period was R379.3 million. This implies that, as a result of new hospital openings in these twelve regions, Discovery Health's client schemes paid additional claims of R379 million that cannot be explained by changes in the underlying plan, demographic or disease burden of the scheme population in that region. The findings show a very strong correlation between the supply of beds, and the significantly higher utilisation rates in the regions in which the new hospital was opened, even after taking into account the changing disease burden and referral patterns within the specific region.

411. The source of the increased utilisation is the new hospital itself, as well as the reaction

185. Willis Towers Watson Analysis on behalf of HMI dated 15 December 2017.
186. Government Employees Medical Scheme. Submission to the Healthcare Market Inquiry (HMI) on Increases in Hospital Utilisation Submission dated 10 October 2016.
187. Discovery Health. The financial impact of new private hospitals on medical schemes dated 2016.
188. In the study, in–hospital bed days was used as the key utilization metric, since it captures the impact of admission rate, case mix and length of stay in a single metric.
189. The comparator population was selected from regions with no new facility opening over the post evaluation period, and has the same plan and demographic profile (as measured by age, gender and chronicity)
190. In the study, the comparator population was randomly sampled several times to obtain a statistical distribution of the change in utilisation patterns over the evaluation period, a process referred to as bootstrapping. This enables one to test if the change in utilisation patterns in a particular region is statistically different from the utilisation pattern observed in the comparator populations in regions with no new hospitals. If so, the excess utilisation change relative to the comparator's average change can be validly attributed to the impact of the new facility.
191. Utilisation is defined as admissions, length of stay (LOS) and case mix

from pre-existing hospitals which are acting to defend market share and revenues. The study finds that increased utilisation manifests through a combination of effects, which are:

411.1. A higher rate of hospital admissions.

411.2. A longer length of stay per admission.[192]

411.3. A reduced complexity and severity of the cases (case mix) being admitted.

412. The study also found that the excess financial impact of these new facilities continued beyond the initial 12 months. The regions that yielded statistically significant results 12 months post opening continued to show continued year-on-year utilisation growth, with the total claims impact up to the end of 2015 amounting to an additional R769 million.

413. The study was critiqued on behalf of Mediclinic by Econex. The study design and findings were disputed and shortcomings, to which Discovery Health responded, were identified. Econex argued that due to the study's technical flaws, the results do not allow for relevant or credible policy recommendations. A summary of Econex's main critiques of the Discovery health study and the latter's response are provided below.

414. Econex queried the inclusion of Secunda and Strand hospitals in the study on grounds that they were not newly established hospitals but existed previously. Although Discovery Health admits that the inclusion of Mediclinic Strand as a new hospital was erroneous, it believes it does not invalidate the study findings because there was increased capacity in the region over the analysis period and the increase in capacity is likely to have led to the increases in usage observed.

415. Econex further argued that rather than SID, there could be other reasons that explain increased utilisation associated with increased supply. In its response, Discovery Health states that there is limited evidence, if any, of unmet demand in the private sector and therefore it is unlikely that the increased utilisation observed is due to the alternative reasons, particularly pent up or unmet demand.

416. Econex raised reservations on the use of correlations to link demand behaviour to supply inducement without a well-founded theory that explicitly and exclusively links demand to supply inducement Discovery Health indicated that it adjusted for risk factors such as the changing disease burden and referral patterns within the region. The analysis thus suggests that the increase in utilisation is associated with an increase in supply of hospital beds.

417. Econex also argued that if there is some SID that can be proven and measured accurately, it operates via the practitioner and not the hospital. Discovery Health acknowledged the independent role of practitioners in the admission of patients but also highlighted the mutual financial benefit for both the practitioner and the hospital from increased utilisation. Discovery Health also further noted that the practitioner behaviour is influenced by available hospital beds.

418. Econex criticised the market definition applied by Discovery Health as being too broad. Discovery Health responded that the methodology applied created boundaries measured by patient's travel distances and is therefore based on observations of where patients who go to a particular facility live.

419. Netcare also commented on the findings of the study saying that it is not their experience that the opening of new hospitals or increase in bed supply induces demand. Netcare indicated that contrary to the study, there has been a fall in volumes as new competitor hospitals open up.

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192. In our expenditure analysis we however found a slightly different picture. Although the length of stay marginally increased at an average of 1.48% between 2010 and 2014, there was a significant percentage decrease in length of stay between 2010 and 2011 maintained overtime with marginal yearly increases between 2011 and 2014.

INSIGHTS FROM GOVERNMENT EMPLOYEES MEDICAL SCHEME (GEMS)

420. 420. The Government Employees Medical Scheme (GEMS) submitted that it experienced increases in the hospital admission rate over a prolonged period with the increase accelerating significantly since the final quarter of 2015.[193]

421. Like Discovery Health, GEMS attributed the steep increase in its hospital-related costs to, among other things, the opening of new hospitals in certain parts of the country. According to GEMS, between 2010 and 2015, over twenty new hospitals were opened, translating to an 18.4% increase in bed capacity. Over the same period, medical scheme membership increased by 6.0%. The increase in supply side capacity therefore outstripped the increase in demand. The increase in supply side capacity was perceived to be both excessive and unwarranted.

422. GEMS submitted that in September 2015, two new hospitals, Netcare Pholoso and Mediclinic Day Clinic, opened in Polokwane. Following the opening of these hospitals, the increase in the admission rate in Polokwane accelerated. Prior to the opening of these hospitals, the hospital admission rate was increasing by 3.6%. In the six months after the opening of these two hospitals, the increase ranged between 14.0% and 14.6%. There was no material change in the risk profile of beneficiaries for this period. According to GEMS, this suggests that the increase in supply side capacity (additional hospital beds) contributes to an accelerated increase in the hospital admission rate which may be evidence of SID.

423. In Pietermaritzburg, one new hospital, Life Hilton Hospital, opened in September 2015. Following the opening of the hospital, the increase in the admission rate accelerated. Prior to the opening of these hospitals, the hospital admission rate was increasing by just 0.2%. In the six months after the opening of the hospital, the increase ranged between 12.0% and 14.3% with no material change in the risk profile of beneficiaries for this period. GEMS indicated that the increase in supply side capacity (additional hospital beds) contributes to an accelerated increase in the hospital admission rate and may also suggest the existence of supplier-induced demand.

424. GEMS's analysis shows that the residual increase in the hospital admission rate not attributable to the clinical or demographic profile of beneficiaries is 3.6%. The increase in the admission rate is systemic across hospital groups and provinces or localities. Each of the major hospital groups is associated with an increase in admission rate and each of the provinces is associated with an increase in admission rate. While the GEMS submission identifies regional variations in practice as one of the key supply side factors that contribute to increases in the hospital admission rate, SID is considered as one of the factors behind the increase in hospital admission rates.

SUMMARY OF HMI'S ANALYSIS

RESEARCH QUESTIONS

425. The Inquiry conducted a comprehensive quantitative study to assess the likelihood that SID might be a significant cause of increased utilisation of healthcare services in private facilities in South Africa. Our quantitative study is organised around the following:

    425.1. Is the level of demand for discretionary services (ie those that suppliers can most easily influence) inordinately high compared to non-discretionary services after adjusting for acceptable demand drivers such as age and illness prevalence and severity, as well as other insurance market failures, such as adverse selection?

    425.2. Are rates of high (excessive) discretionary services correlated

193. Government Employees Medical Scheme. Submission to the Healthcare Market Inquiry (HMI) on Increases in Hospital Utilisation Submission dated 10 October 2016.

with high capacity/supply of that service? The study specifically asked whether areas with more beds per head of population exhibit more admissions or longer lengths of stay than those with fewer beds, other factors being equal. The study examined this where the benefiting entities do not act as agents for patients, but might be able to influence the practitioners, who do.

425.3. Do regulations, such as prescribed minimum benefits (PMB) worsen supplier-induced demand?

426. The quantitative study is comprehensively described in Chapter (8) on SID as it applies to both practitioners and facilities. However, this section refers to the summary of findings and conclusions to maintain context of SID as it relates to the facilities.

427. SID might be a cause of increased utilisation of healthcare services in the private facilities in South Africa. The study shows evidence that the rates of hospital admission are positively associated with levels of supply of hospital beds, after adjusting for clinical and demographic factors. The greater the proportion of hospital beds to the population, the higher the rate of admissions in a given region, and the greater the utilisation. Although this evidence may not be conclusive, it points to the likelihood of the existence of SID for private hospital beds in South Africa.

428. The study also found that SID in South Africa is more likely to be exercised in areas where there is discretion around whether or not to admit a patient. For instance, the supply of ICU beds was significantly positively correlated with ICU admissions, suggesting the likelihood of SID in ICU admissions. This is also confirmed by our finding that the supply of practitioners is significantly positively associated with a higher risk of admission in eight to nine out of ten specialties where the level of discretion around whether or not to admit a patient is exercised. Given that facilities and practitioners play a complementary role in the supply of healthcare, the study concludes that hospital beds also play a pivotal role in the admission of patients in the respective specialties.

CONCLUSION ON THE LIKELIHOOD THAT SID EXISTS IN THE PRIVATE FACILITIES IN SOUTH AFRICA

429. Overall, the analyses show that SID might be one of the causes of increased utilisation of healthcare in the private facilities market in South Africa. This is because of the following:

429.1. A number of stakeholders argue that there is evidence of oversupply and overuse of facility beds. The Inquiry agrees with most stakeholder sentiments that ineffective regulation in addressing the oversupply of beds may increase the likelihood of SID.

429.2. Contracts between practitioners and facilities may increase inappropriate utilisation. The Inquiry's view is that some of the contractual relationships between practitioners and facilities may facilitate SID in the private facilities market. Practitioners have some discretion around whether to treat, and they are being paid based on the number of interventions they undertake. This gives both the ability and the incentive for potential manipulation of patients' demand for health services through SID.

429.3. The studies by Discovery Health and GEMS show an increase in admission rates across hospital groups and provinces or localities following the opening of a new hospital in an area. The residual increase in the hospital admission rates was not explained by the clinical or demographic profile of beneficiaries.

429.4. The Inquiry's study shows evidence that the rates of hospital admission are positively associated with levels of supply of hospital beds, after adjusting for clinical and demographic factors. The greater the proportion of hospital beds to the local population, the higher the rate of admissions in a given region.

429.5. In areas where there is discretion around whether or not to admit

a patient, for instance ICU admissions, the supply of ICU beds was significantly positively correlated with admissions. In selected diagnosis where there is discretion around whether or not to admit a patient, South Africa tends to over-service compared to OECD countries. In selected discretionary specialties, the supply of practitioners is significantly positively associated with a higher risk of admission.

PROFITABILITY ANALYSES OF LIFE HEALTHCARE, MEDICLINIC AND NETCARE

430. As part of its comprehensive analysis of competition in a market, the Inquiry conducted a profitability analysis to get a preliminary indication of the competitive process and whether or not the private healthcare facility groups in South Africa are earning excessive profits.

431. Profitability analysis examines a firm's return on capital, to determine whether it is earning profits that differ from a normal return on capital to be expected in a competitive market. A profitability analysis, in the context of a broader competitive assessment[194] can provide indications of a lack of effective competition and resultant market power in the private healthcare facilities market. Healthcare facilities that persistently earn economic profits over and above the cost of capital, without the threat of new entrants, may have a degree of market power and be able to charge prices above the competitive level. As such, firms with market power will have an ability to control prices, volume and quality.

432. The Inquiry conducted a profitability analysis on the three largest private healthcare facility groups in South Africa: Life Healthcare, Mediclinic, and Netcare. For purposes of this section, these three-large private healthcare facility groups will be referred to as the "relevant firms". The relevant firms account for approximately 80% of the market for private healthcare in South Africa in terms of beds and admission rates, and have some pockets of local dominance[195] in certain geographic markets.[196] [197]

433. A time period of ten years from 2006 to 2015 was regarded as appropriate for the profitability analysis. However, since the comparable capital employed calculation for 2005 was not provided, Life Healthcare's profitability analysis has effectively been calculated over a nine year period. The Inquiry notes that the recent CMA's market investigation used a period of six years (2007-2012). A longer period was adopted by the Inquiry to adequately provide for the effects of recent upswings and downswings in the South African economy.

434. The relevant firms have different financial year ends but the inquiry believes that this does not undermine the interpretive value of the analysis.

HMI'S APPROACH

435. In September 2015, a paper detailing the proposed approach to the HMI's profitability analysis (the methodology paper") was issued.[198] The methodology paper set out the proposed methodology for assessing profitability, namely the return on capital employed (ROCE) and the truncated internal rate of return (TIRR). It also set out the proposed methodology for estimating an appropriate cost of capital for entities providing healthcare services in South

194. See Chapter 4, Competitive Assessment Framework, Profitability analysis.
195. Local dominance is the possession of market power in a locality or particular area - not at the national level
196. Willis Towers Watson Analysis on behalf of HMI dated July 2017.
197. National Hospital Network (NHN) and a small number of other independent facilities not affiliated to NHN, providing acute, sub-acute and specialist services together control approximately 20% of the market and hence are unlikely to have market power. Profitability analysis was therefore not conducted on NHN and a small number of other independent facilities not affiliated to NHN.
198. Commission methodology paper titled – Market Inquiry into the Private Healthcare Sector Profitability Analysis, September 2015.

Africa, namely the weighted average cost of capital (WACC).

436. ROCE is a measure of profitability in which the pre-tax operating profit for a period is divided by the average capital employed relevant to the same period and is expressed as a percentage. Internal rate of return (IRR) is a widely used technique for investment appraisals and takes into account the inflows and outflows of an activity or project over time. When calculating the IRR of a going concern rather than a project with a finite term, the fair value of capital employed at the beginning of the period of assessment is deducted (similar to the initial investment outflow) and the fair value of the capital employed at the end of the period of assessment is added at the end of the period. This approach is commonly referred to as the TIRR.

437. The ROCEs and TIRRs of the individual relevant firms were compared to the pre-tax weighted average cost of capital (WACC) of a hypothetical, large South African private hospital operator. A firm's cost of capital is derived from the cost of equity, determined using the capital asset pricing model (CAPM), and the cost of debt in proportion to the long-term target capital structure of the firm, resulting in a WACC.

438. In calculating the ROCE and a TIRR, it is necessary to use economic values rather than accounting values in order to ensure consistency and that the analysis is economically sound. In order to achieve this, guidelines were provided in the methodology paper regarding the tangible and intangible values to be included in capital employed, as the economic values of these line items were expected to differ from the accounting values.

439. The Inquiry's proposed methodologies, being the ROCE and TIRR, were adopted after consultations with the parties. The relevant firms raised concerns about the appropriateness of the methodologies proposed and subsequently adopted by the Inquiry. However, no better alternative methodology was put forward. The Inquiry acknowledges that some of the concerns pertain to the general methodological weaknesses of conducting a profitability analysis. Notwithstanding these, the Inquiry considers its approach appropriate to conduct a profitability analysis on the relevant firms.

440. Netcare put forward an alternate methodology, the price cost test, in its submission. However, the Inquiry does not believe that this test provides any additional insight not already captured by the ROCE and TIRR.

441. On the Inquiry's request, the relevant firms submitted profitability analyses following the methodological principles presented in the methodology paper. Following submissions received and meetings held with the relevant firms and their advisors, ROCE appeared to be the preferred methodology based on the nature of operations of the entities and limitations on information required to perform the TIRR calculation. Netcare was the only relevant firm to perform a TIRR calculation. This is referred to the discussion of these in the technical profitability analysis report.[199]

442. Being asset-intensive businesses, the values of tangible assets held by the relevant firms are key inputs into the ROCE calculation. In an effort to achieve broad consistency, guidelines were set out in the methodology paper based on the concept of a modern equivalent asset allowing for the asset's remaining useful life, ie depreciated replacement cost, but without specifying any single method of arriving at a depreciated replacement cost. Each of the relevant firms performed their own revaluation of tangible assets based on these guidelines. As a result, these revaluations were not performed using uniform assumptions.

443. It is worth noting that Netcare presented eleven different asset valuation scenarios, with the preferred scenario utilised for both Netcare and the Inquiry's ROCE and TIRR calculations. In Life Healthcare's first

199. Profitability Analysis Report of Healthcare Facilities.

submission, two scenarios were presented relating to the valuation of acute hospital facilities, assuming new assets at the beginning of the relevant period depreciated on a diminishing balance method. On request from the HMI for one scenario, Life Healthcare put forward a second submission applying Life Healthcare's preferred scenario. For consistency, the Inquiry requested that Life Healthcare apply the average actual age of its assets and depreciation on a straight-line basis to its calculations to be used for the Inquiry's calculations.

444. The concerns raised regarding revaluation gains were centred around the inclusion of revaluation gains and losses in operating profits as well as the "smoothing" of the revaluation gains and losses. Mediclinic and Life Healthcare generally contested the inclusion of revaluation gains in the profitability analysis. Netcare accepted this as the correct approach in the context of the Inquiry's methodology paper. In section 4.6.2 of the methodology, the adjustments to operating profit should include the profit or loss resulting from the change in value to the business of its assets (after allowing for disposals and acquisitions).

445. The reasons for their queries included that revaluation gains and losses are non-cash in nature, unrealised and therefore irrelevant in management decision making and assessment of performance. However, the same can be said for depreciation and amortisation. When revaluing tangible and intangible assets, the model needs to be fully articulated in order to ensure that all aspects of the revaluation are taken into account when calculating the ROCE. It is incorrect to ignore any one or more of the aspects of the revaluation (ie the value of the asset, depreciation and amortisation or revaluation gains and losses) as this would lead to inconsistencies in the calculation. The inclusion of revaluation gains and losses in the ROCE calculation also serves to moderate, for comparison purposes, the differences in approaches to revaluation by the relevant firms. The Inquiry therefore decided to include and smooth revaluation gains and losses. Although the Inquiry does not agree with the concerns, it has allowed both Life Healthcare and Mediclinic to submit alternative scenarios pertaining to the calculation of the revaluation gains.

446. Life Healthcare contested the Inquiry's approach to calculating revaluation gains. In applying the Inquiry's request to use a straight-line approach to depreciation, equipment had a zero value at the end of year seven which was then increased to the value of new assets in year eight. Since Life Healthcare did not in fact replace all of its short term assets at the end of year seven, this was reflected as a revaluation gain in the Inquiry's calculation. As a result, Life Healthcare submitted two additional scenarios which included an extension of the useful lives of its short-term assets so as to eliminate the inclusion of a hypothetical acquisition of assets as a revaluation gain. The first scenario included the useful life of equipment being extended from seven to 10 years and the second scenario included the useful life of all short-term assets being extended from seven to 10 years, which resulted in a marginal reduction of the average ROCE.

447. Netcare was concerned that the Inquiry's approach to working capital ignored seasonality and submitted a monthly working capital scenario which resulted in a reduction of the average ROCE of 0.3%.

448. Some of the relevant firms also raised concerns with the Inquiry's approach relating to the inclusion of intangible assets provided they meet a set of criteria. Consistency is key for meaningful relative comparisons amongst the relevant firms, hence the criteria for inclusion of intangible assets as set out in the methodology paper. Furthermore, as most of the assets are tangible in nature, the exclusion of certain intangible assets is not expected to have a material impact on the resulting ROCE.

449. As noted, the Inquiry recognises that it needs to view the outcome of the profitability analysis calculations within a reasonable degree of tolerance in the context of the Inquiry. This is to cater for the comparison of ex post performance against an ex ante WACC, differing methodologies and assumptions in the revaluation of assets by each of the relevant firms, inclusion and valuation of intangible assets and entity specific risk factors to name a few.

Interpretation of results

450. As explained in Chapter 4 (Competitive Assessment Framework) - the results of a profitability analysis can provide an indication of possible exertion of market power by hospitals. Persistent returns above what should be considered normal for that activity could indicate that competition is not operating effectively and might be indicative of the exertion of market power. Although profitability analysis may be useful as an indicator of possible exertion of market power, there are a number of associated difficulties and alternative considerations. For instance, a company might earn high profits over a prolonged period of time, but this may partly or entirely be because of its superior efficiency or innovation, or its exclusive access to superior sources. Also, a profitability test rests on the assumption that the firm in question is an efficient one. As such, low profitability may not necessarily signal lack of market power. In fact, an inefficient firm may exert market power but high costs arising from inefficiencies may depress the profitability of the firm.[200] Notwithstanding the highlighted complications with the interpretation of the results of a profitability analysis, the analysis, when put into context of a broader competitive assessment of the industry, may provide meaningful insights on the exertion of market power by hospital groups.

451. With this in mind, the summary of results of the profitability analyses are outlined and discussed and preliminary observations based on the firms' profitability provided. Reference will be made to the technical profitability analyses of relevant firms for more details on the discussions and decisions on the above. These reports will be published in due course as standalone reports. Since most of the information contained in the profitability analysis submitted is subject to confidentiality claims, the Inquiry is currently engaging with the relevant firms on the non-confidential versions of the detailed profitability analysis to allow for meaningful engagement on the results with the public before publication of the final recommendations.

Findings of the profitability analyses

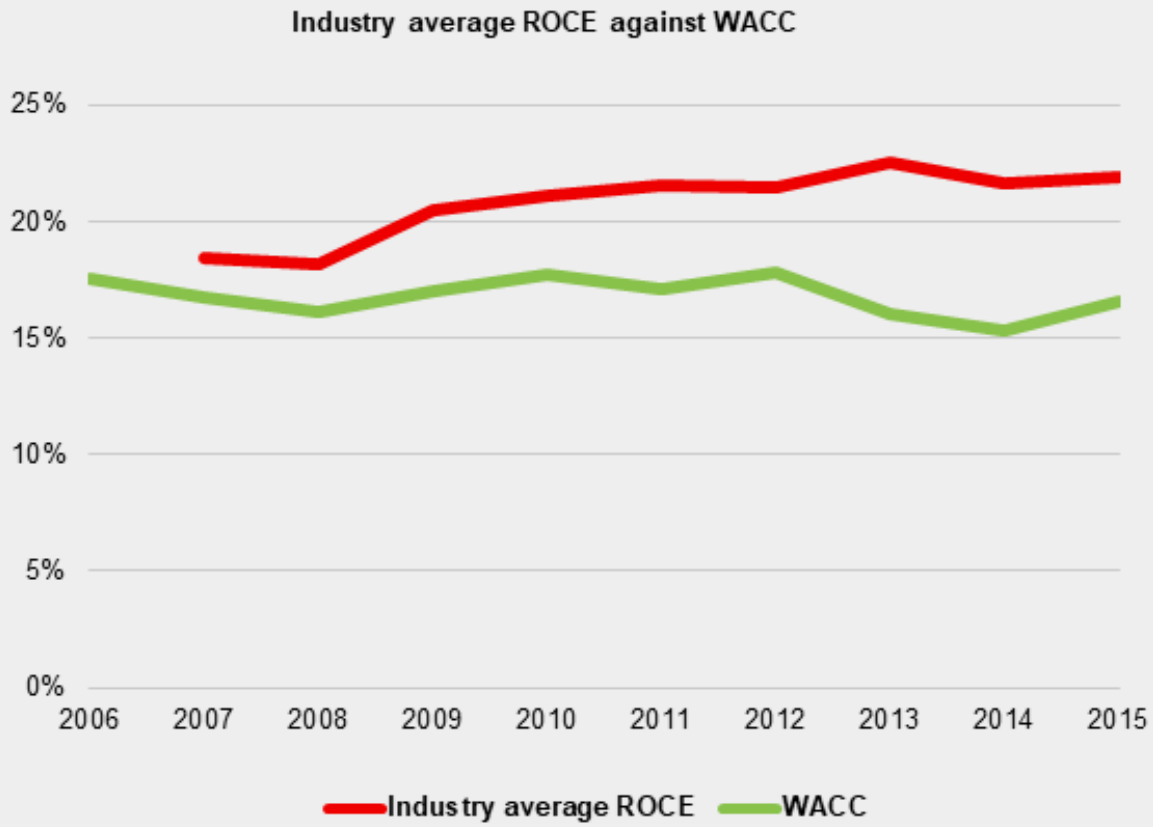
452. The approach to assessing profitability, as set out in our Methodology Paper, is to compare profits earned to an appropriate cost of capital. Table 6.15 and Figure 6.18 provide an industry summary of the average WACC and ROCE of the relevant firms for each year of analysis (10 years):

TABLE 6.15: INDUSTRY ROCE ANALYSIS

	2006*	2007	2008	2009	2010	2011	2012	2013	2014	2015
ROCE (average)	-	18,4%	18,1%	20,5%	21,1%	21,6%	21,5%	22,5%	21,6%	21,9%
WACC (average)	17,5%	16,7%	16,1%	17,0%	17,7%	17,1%	17,8%	16,0%	15,3%	16,6%

200. OECD (2011), OECD Best Practice Roundtables in Competition Policy: Excessive Prices.

FIGURE 6.18: AVERAGE WACC AGAINST ROCES OF THE RELEVANT FIRMS



453. Table 6.16 provides a summary of a ten-year average per the relevant firms' submissions and compared to the WACC, ROCE and TIRR as calculated by the HMI.

TABLE 6.16: SUMMARY OF RESULTS (10 YEAR AVERAGE)

Summary of results

	Healthcare Facilities			HMI		
	ROCE (Average)	TIRR	WACC (Average)	ROCE (Average)	TIRR	WACC (Average)
LHC	12,6%	-	13,6%	22,0%	20,6%	16,8%
Mediclinic	15,2%	-	14,7%	22,5%	20,9%	16,7%
Netcare*	17,4%	18,8%	16,2%	18,5%	19,1%	16,8%
Average	15,1%		14,8%	21,0%	20,2%	16,8%

454. Table 6.17 provides the relevant firms' specific average of the summary findings (WACC, ROCE and TIRR) for the relevant period (10 years) broken down into two five year periods.

TABLE 6.17: TIRR AND ROCE ANALYSIS (EXTRAPOLATED)

TIRR & ROCE Analysis: Relevant Firms						
	2006-2010			2011-2015		
	ROCE (Average)	TIRR	WACC (Average)	ROCE (Average)	TIRR	WACC (Average)
LHC*	19,2%	13,8%	17,1%	24,2%	30,7%	16,6%
Mediclinic	23,5%	19,2%	16,9%	21,5%	23,5%	16,5%
Netcare	17,2%	18,0%	17,1%	19,8%	20,9%	16,6%

455. The profitability analyses show that the relevant firms achieved average ROCEs over the relevant period of 22.5% for Mediclinic, 22.0% for Life Healthcare and 18.5% for Netcare (Table 6.17). This was compared to the benchmark WACC for the same period of 16.7% to 16.8%. This amounts to the ROCE being between 1.7% and 5.8% above the WACC.

456. The TIRRs achieved by the relevant firms ranged between 19% and 20.9% (Table 6.15). This amounts to the TIRR being between 2.2% and 4.2% above the WACC. However, the TIRR places more weight on the earlier years of the relevant period while the ROCE places equal weighting on each of the years of the relevant period. The ROCE therefore presents a more representative indication of the profitability of the relevant firms and their development over time during the relevant period.

457. The profitability analyses suggest that the relevant firms show consistently profitable margins over and above the long term cost of capital. However, the margins do not appear to be excessive when compared to the WACC. The average results of the profitability analyses indicate however that the relevant firms are consistently making fairly stable economic profits and that these profits are not decreasing over time as a result of competitive forces.

458. When comparing the developments over the second half of the observation period, compared to the first five years, profits of Mediclinic in terms of ROCE somewhat reduced from 23.5% for the first five years to 21.5% over the second five years of the observed period. Compared to the WACC of somewhat below 17%, this nevertheless represented a significant profit margin. A decrease of 2 percentage points, however, is consistent with some competitive pressure building up. Netcare has relatively stable profitability over the years, with 17.2% ROCE on average over the first five years (including two outer years 2007 and 2008) and 19.8% over the second half. Life Healthcare appears to gain traction over the observation period, with ROCE of 19.2% on average over the first four years[201] to a noteworthy 24.2% ROCE over the second half. Compared to the average WACC of 16.8% (or 16.6% over the last five years), Life Healthcare's profitability with a ROCE/WACC margin of almost 8% over the most recent years is high.

459. However, these levels of profits are not in themselves a concern. The relevant firms' profitability appears to be within tolerable levels. Life Healthcare's noteworthy financial success over the most recent years, and Mediclinic's slowing down, may signal some competitive dynamics in the industry.

201. The Financial Year 2006/07 is presented as year 2007 in Life Healthcare's data.

460. As indicated in the Chapter 4, persistent returns above the cost of capital could indicate that competition is not operating effectively but cannot be interpreted as per se evidence of the exertion of market power. It must be interpreted in the wider context of a competitive assessment. The same holds for profitability levels below a level that may be regarded as excessive; they are not necessarily conclusive evidence of a well-functioning market and of the absence of market power. An inefficient firm if unchallenged by efficient competitors or entrants, may exert market power but the high costs associated with its inefficiency may depress its profitability.[202] The consumer equally pays the bill as s/he would have should the firms have been efficient and excessively profitable.

461. The profitability analyses indicate an industry in which the three largest players have enjoyed a fairly consistent profitable life over a ten year period. The Inquiry has not found any indication – in the context of the profitability analyses or otherwise – that these fairly stable profits, despite some tendencies up and down, have been seriously challenged during the observation period or will be challenged in the near future. When considering the profitability of the three main groups together, we conclude that they have been consistently increasing their profits over the observation period, with the last five years seeing the ROCE's levelling off to 21% to 22% on average.

462. In addition, our analysis of supply-induced demand (SID) and expenditure have revealed levels of inefficiency, in particular with respect to the high number of admissions and the severity and frequency of treatments. Hospitalisation rates increased significantly for the South African private sector over the period 2010 to 2014, and were higher than the majority of the OECD countries.[203] There are no signs that the market in South Africa is correcting these levels of inefficiencies. The findings of these analyses should be considered together. Though the profitability analysis may be interpreted in isolation as showing fair returns, the SID and expenditure analysis raise questions about the costs structures and efficiency of firms indicating that there may not be sufficient competitive discipline to keep costs and tariffs low.

CONCLUSION ON PROFITABILITY ANALYSIS

463. The Inquiry concludes that based on the profitability analysis, profits of all three hospital groups are not excessive per se. However, the analyses also show consistently and increasingly high profits over a longer period across the hospital groups. No indication has been found that these profits are likely to be seriously challenged in the foreseeable future, either by the competitive process between the incumbent players themselves or by innovative, disruptive competition and/or entry to the market of significant new players. This will be followed up in our assessment of entry and entry barriers.

BARRIERS TO ENTRY AND EXIT

INTRODUCTION

464. In this section, an assessment of the barriers to entry and expansion (barriers) in the facilities market is provided. The types of barriers and how these influence the level of competition in the facilities market are identified. We do not focus on barriers to entry for each local market, but on the overall market barriers.

TYPES OF BARRIERS

465. A review of cases by competition authorities in the UK and in South Africa shows some convergence on the factors contributing to high barriers facing private health facilities.

466. The CMA's Private Health Market report[204] found that significant barriers to entry and

202. OECD (2011), OECD Best Practice Roundtables in Competition Policy: Excessive Prices.
203. Accessed from https://data.oecd.org/healthcare
204. CMA Private Healthcare market investigation Final report. Accessed from https://assets.publishing.service.gov.uk/media/533af065e5274a5660000023/Private_healthcare_main_report.pdf on 04 September 2017.

expansion exist in facility markets. The report concludes that "a combination of high sunk costs and long lead times associated with setting up a private hospital constituted a significant barrier to entry and expansion; and the lack of availability of suitable sites from which to operate a private hospital and difficulty in obtaining planning permission for a private hospital were further significant barriers to entry and expansion". In the CMA investigation, regulatory and strategic barriers; ie receiving recognition from private medical insurance and implementing clinician incentives, were not regarded as significant.

467. In South Africa, the Tribunal has highlighted the role of licensing regulations in various matters. The previous moratorium on the issuing of new licences imposed by some provincial departments was highlighted as a principal barrier to entry as the moratorium meant that new players could only enter through acquiring existing facilities, thereby maintaining high levels of concentration.

    467.1. During the Phodiclinics/Protector Group Medical Services merger, the Tribunal stated: "The private hospital industry is highly regulated. Prospective entrants are obliged to obtain licences in order to commence business."[205]

    467.2. During the Afrox/Amalgamated Hospitals merger the Tribunal also recognised that licensing is a major barrier likely contributing to low numbers of new entrants.[206]

468. Outside of licensing regulations, the Tribunal mentioned the "costs involved in constructing hospitals and the operational expertise or specialised skills required to run hospitals successfully" as contributing to high barriers.[207]

STRUCTURAL BARRIERS

STAKEHOLDER SUBMISSIONS

469. Many stakeholders submitted that the capital and funding requirements for either acquiring a private facility or for building and equipping a facility are significant and that investments are mostly sunk.[208]

ACCESS TO CAPITAL

470. Access to capital and funding was identified as a major stumbling block. After obtaining the required licences, potential entrants struggle to get the projects off the ground primarily due to a lack of capital, often until the licence expires.[209] [210] In most cases where health facilities are incomplete or not built despite receiving approvals, this is due to an inability to access funding after obtaining licences.[211]

471. Stakeholders indicate that it is also very expensive to purchase an already-established health facility.

472. Smaller players are often unsuccessful when approaching financial institutions for capital to fund alternative (non-acute) facilities. Formal financial institutions consider smaller players to be poorer lending risks because they lack market experience. Consequently, the conditions attached to funding are often onerous.[212] [213] In some cases, new entrants (particularly smaller entrants) are required to show that they have financial assistance from large facility groups or are required to partner with these larger players to be considered

205. Phodiclinics/Protector Group Medical Services Merger, Case No: 122/LM/Dec05, pg. 43. Accessed from: http://www.comptrib.co.za/assets/Uploads/Case-Documents/122LMDec05.pdf on 23 August 2017.
206. Afrox/Amalgamated Hospitals merger, Case No: 53/LM/Sep01, pg. 7. Accessed from: http://www.comptrib.co.za/assets/Uploads/Case-Documents/53LMSEP01.pdf on 23 August 2017.
207. Phodiclinics/Protector Group Medical Services Merger, Case No: 122/LM/Dec05, pg. 44. Accessed from: http://www.comptrib.co.za/assets/Uploads/Case-Documents/122LMDec05.pdf on 23 August 2017.
208. Sunk costs are irrecoverable even if the firm withdraws from the market.
209. Free State Department of Health, Public Hearing Transcript 18 May 2016, pg. 15.
210. Limpopo Department of Health, Public Hearing Transcript 18 May 2016, pg. 193.
211. Kwa-Zulu Natal Department of Health, Public Hearing Transcript 8 March 2016, pg. 220.
212. Clinix, Public Hearing Transcript 4 May 2016, pg. 47.
213. HMI and Phelang Bonolo, Meeting Minutes 21 October 2014, pg. 2.

for funding.[214] This lessens the potentially disruptive and procompetitive effect of new entry.[215]

473. Financial institutions are also cautious about supporting new types of facilities and often consider sub-acute or other new forms of facilities as less viable and profitable than standard acute facilities. Licensees are then forced to go back to provincial licensing departments to amend their licences based on the requirements of financial institutions.[216] [217] This creates a negative cycle in which licences awarded on the basis of assessment of market need are amended to meet the requirements of financiers.

LAND ACQUISITION, INFRASTRUCTURE AND EQUIPMENT COSTS

474. The cost of land is a significant barrier to the development of new health facilities. The HMI noted from the stakeholder submissions that the costs for land and construction for a community general hospital are significant.[218]

475. In addition to the acquisition of land, the development of specialised health infrastructure and buildings is very expensive and prohibitive to entry.[219]

476. New facilities require high-technology equipment to attract practitioners.[220] Technology and equipment are costly and often imported, and thus subject to fluctuations in the exchange rate. Independent and smaller facilities tend to have less high-technology equipment than big facility groups which dampens their ability to compete. As a result, practitioners often prefer to work with the big facility groups which have more advanced technology.[221]

OTHER COSTS

477. The effective operation of health facilities relies on accurate data and reporting systems. Big facility groups have greater financial ability to invest in sophisticated information technology systems than smaller groups. This restricts the ability of smaller groups to compete effectively with the big facility groups and may deter entry.[222]

478. The lack of access to sophisticated information technology also affects the ability of smaller groups to effectively process claims with medical schemes which results in many rejected claims and causes financial strain.[223]

THE HMI'S VIEWS ON STRUCTURAL BARRIERS

479. To test the above submissions, the Inquiry requested data from several firms on the capital costs incurred in developing a health facility. Several internal documents on investments by some facilities were also examined. The Inquiry found that, although the extent of the investments vary, the estimated cost per bed ranges between R1 million and R11 million. This is consistent with the findings of the costs per bed in the HMI's profitability analysis of the three main facility groups. The HMI found that the most significant costs are construction and land acquisitions, followed by equipment. Marginally lower costs per bed are incurred when entry occurs through the acquisition and renovation of existing facilities.

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214. Limpopo Department of Health, Public Hearing Transcript 18 May, pg. 194.
215. HMI and Phelang Bonolo, Meeting Minutes 21 October 2014, pg. 2.
216. Free State Department of Health, Public Hearing Transcript 18 May 2016, pg. 16.
217. Clinix, Public Hearing Transcript 4 May 2016, pg. 27-33.
218. Life Healthcare submission dated 4 March 2016.
219. Mediclinic, Public Hearing Transcript 10 March 2016, pg. 146.
220. Netcare, Public Hearing Transcript 11 March 2016, pg. 184.
221. Clinix Public Hearing Transcript 4 May 2016, pg. 38-39.
222. Clinix Public Hearing Transcript 4 May 2016, pg. 19.
223. Clinix Public Hearing Transcript 4 May 2016, pg. 21.

480. The Inquiry also engaged with development finance institutions including the Industrial Development Cooperation (IDC), Public Investment Cooperation (PIC)[224] and the National Development Fund (NEF). They confirmed that it is very costly to establish a health facility, particularly in township and rural areas.[225] For example, transactions funded by the IDC to establish health facilities ranged from R35 million to R105 million.[226] [227]

481. The inquiry's findings are also aligned with the reasons given for many mergers by target firms who often cite lack of access to capital as the primary rationale for the transactions.[228] [229]

482. The Inquiry concludes that the capital requirements for entry and expansion are significant.[230] New entrants are deterred from entering a market by the prospect of large sunk costs. In the context of health facilities, most of the costs are sunk and the inability to recoup these on exit may further exacerbate the risks of entry. [231] [232]

REGULATORY BARRIERS[233]

STAKEHOLDER SUBMISSIONS

483. Several stakeholders submitted that the current regulatory framework is often burdensome, constrains innovation and competition, and contributes to increased costs.[234] [235]

484. Several stakeholders identified provincial licensing processes, municipal land approvals and the ethical rules of the HPCSA as significant regulatory barriers.

FACILITY LICENSING

485. Prior to 1993, licensing of facilities was administered centrally by the national Department of Health (DoH), in terms of the Health Act. This changed when the interim Constitution of the Republic of South Africa devolved the licensing process to provincial departments. The decentralised licensing process was retained in the final Constitution of the Republic of South Africa. Stakeholders highlighted several difficulties with the licensing process that raises barriers for new entrants.[236] [237]

486. Regulation 158 of the National Health Act regulates the process of licensing private health facilities. It is used by seven of the nine provincial departments of health[238], aside from the Western Cape and Free State. The Western Cape used Section 44 of the old Health Act to enact its own regulations, Regulation 187.[239] The Free State repealed Regulation 158 and, since 2014, has relied on the provincial Health Act to introduce its own licensing regulations.[240] According to the provincial authority, this was done to curb the oversupply of beds, and to facilitate the process of granting licences to potential entrants who aim to

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224. The PIC's Isibaya Fund is a Developmental Investment Fund which was established in 1999 to invest in projects that have a positive social impact. It provides finance to both public and private sector organisations and the healthcare sector is one of the Fund's priority sectors.
225. These institutions were identified by many stakeholders as key funders of health facilities, although other mainstream financial intuitions were also mentioned.
226. Industrial Development Cooperation, Meeting with the HMI dated 22 September 2017.
227. Public Investment Cooperation, submission to the HMI dated 20 September 2017.
228. Competition Commission SA, Merger Report Case No: 2014Sep0530.
229. Competition Tribunal, Phodiclinics/Protector merger Case No: 122/LM/Dec05. Accessed from: http://www.comptrib.co.za/assets/Uploads/Case-Documents/122LMDec05.pdf on 14 September 2017.
230. Clinix, Public Hearing Transcript 4 May 2016, pg. 46-48.
231. Day Hospital Association, Submission to the Statement of Issues 31 October 2014, pg. 2.
232. Life Healthcare, Submission to the Statement of Issues 2014, pg. 64-65.
233. For detailed discussion on the regulatory challenges, refer to the Regulatory Framework Chapter.
234. Clinix Public Hearing Transcript 4 May 2016, pg. 15.
235. National Hospital Network, Public Hearing Transcript 9 March 2016, pg. 301.
236. National Hospital Network, Public Hearing Transcript 9 March 2016, pg. 297.
237. Clinix, Public Hearing Transcript 4 May 2016, pg. 42-43.
238. Gauteng, Eastern Cape and Kwa-Zulu Natal.
239. Western Cape Department of Health, Public Hearing Transcript 8 March 2016, pg. 56-57.
240. Netcare, Public Hearing Transcript 11 March 2016, pg. 102-104.

provide healthcare service in underserviced areas.[241]

487. The use of different regulations by the provincial departments creates inconsistencies in the interpretation and application of licence regulations. The provincial authorities follow different approaches and use different criteria to evaluate applications for provincial DoHs, even amongst those who all use Regulation 158.[242 243]

488. Stakeholders also highlighted practical problems with the application of Regulation 158 in its current form. Several submissions pointed out that the regulation is out of date and not compatible with current market requirements. For example, the manner in which Regulation 158 is drafted makes it primarily relevant for the establishment of general acute based facilities, thus limiting the establishment of other facilities such as day facilities which are scarcer in South Africa and lag international trends.[244] In this respect, some stakeholders regard the Western Cape's regulations as progressive since they make distinctions between the different types of facilities. [245]

489. The licensing process is not published and therefore not accessible to the broader public and potential new entrants. This lack of transparency was cited as a significant barrier.[246] Further, the reasons for granting and/or denying licences are allegedly not clearly communicated and explained.[247 248]

490. Stakeholders also raised concerns about the duration of the licensing amendment process. Several stakeholders stated that applying for a licence, whether to develop a new facility or for extensions and amendments, is a long process that can take more than two years. The lack of clear timeframes discourages potential new entrants.[249 250 251]

MUNICIPAL LAND APPROVALS

491. Stakeholders also raised concerns about the process of obtaining the necessary regulatory approval from municipal authorities for developing land. There are often significant delays in purchasing and registering land.[252]

492. Some stakeholders also indicated that they have faced ad hoc interference in these processes. In this respect, a number of submissions specified that provincial authorities often intervene to expedite the process by the respective municipal authority.[253 254 255]

HEALTH PROFESSIONS COUNCIL REGULATIONS[256]

493. Stakeholders believe that entry of innovative health delivery models is limited by the HPCSA ethical rules and regulations which govern practitioner conduct and their relationship with other players in the delivery of healthcare.[257 258]

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241. Free State Department of Health, Public Hearing Transcript 18 May 2016, pg. 12-13.
242. National Hospital Network, Public Hearing Transcript 9 March 2016, pg. 298.
243. Mediclinic, Public Hearing Transcript 10 March 2016, pg. 140.
244. National Hospital Network, Public Hearing Transcript 9 March 2016, pg. 299.
245. National Hospital Network, Public Hearing Transcript 9 March 2016, pg. 299-301.
246. National Hospital Network, Public Hearing Transcript 9 March 2016, pg. 300.
247. Life Healthcare, Public Hearing Transcript 10 March 2016, pg. 33.
248. Netcare, Public Hearing Transcript 11 March 2016, pg. 102.
249. Life Healthcare, Public Hearing Transcript 10 March 2016, pg. 33.
250. Netcare, Public Hearing Transcript 11 March 2016, pg. 102.
251. National Hospital Network, Public Hearing Transcript 9 March 2016, pg. 298.
252. Free State Department of Health, Public Hearing Transcript 18 May 2016, pg. 18.
253. Limpopo Department of Health, Public Hearing Transcript 18 May 2016, pg. 233.
254. Free State Department of Health, Public Hearing Transcript 18 May 2016, pg. 18.
255. Limpopo Department of Health, Public Hearing Transcript 18 May 2016, pg. 188.
256. For detailed analysis of the HPCSA rules refer to Chapter 6 of the report.
257. Improved Clinical Pathway Services, Public Hearing Transcript 19 May 2016, pg. 54-55.
258. Refer to section 7 on the relationship between facilities and practitioners for a more detailed discussion on the effects of the HPCSA regulations (paragraph 233-240).

THE INQUIRY'S VIEWS ON REGULATORY BARRIERS

494. The Inquiry engaged with some provincial departments and the HPCSA to assess the validity of stakeholder submissions on regulatory barriers.

495. Apparent contradictions in some of the stakeholders' submissions were noted. These submissions initially bemoaned the inefficient application of the licensing regulations, the contribution of HPCSA rules to barriers to entry and expansion, and the hampering of industry dynamism and innovation. In contrast, however, later submissions to the Inquiry highlight that although the current licensing regime is already fraught with inconsistencies, any introduction of innovation to the criteria, which is open to vastly different interpretations, may create an even more vague and indeterminate set of criteria, rather than the certainty which is required.

496. The Inquiry is of the view that the regulatory framework has an adverse effect on competition. Specifically, there are challenges with the administration of the regulations across the provinces, which is fragmented, ineffective and lacks transparency.[259] The lengthy timelines for approval of licences means that it often takes new entrants more than two years to obtain permission to enter the market. The licensing process also does not consider innovation and competition in its assessment of whether to grant a licence and therefore does not provide a competitive constraint to large incumbent groups. The ethical rules of the HPCSA also contributes to barriers in this regard. See Chapter 7 of the report.

BEHAVIOURAL BARRIERS

STAKEHOLDER SUBMISSIONS

497. Stakeholder submissions point to two main behavioural barriers:

497.1. relationships and incentives between incumbent facility groups and practitioners that make it difficult for new facilities to attract practitioners, and

497.2. the difficulty of gaining recognition as an approved service provider by medical schemes.

THE RELATIONSHIP BETWEEN FACILITY GROUPS AND HEALTHCARE PRACTITIONERS

498. Health facilities and practitioners generally collaborate and rely on each other to provide healthcare services. Facility groups submitted that attracting and contracting the right practitioners is regarded as a key element of competition between facilities.[260] As a result, some facility groups provide incentives to attract practitioners to practise at their facilities.[261 262 263]

499. The manner in which the relationships between facilities and practitioners are structured may foreclose potential competition from new entrants and smaller facility groups. Several new entrants and smaller facility groups raised concerns around the potential exclusionary nature of the current processes of granting admission rights and privileges,[264] the incentives given to practioners by incumbent facilities (including shareholding, access to technology and free rental arrangements), and about gatekeeping and territorialism. The nature of incentives have been extensively described in section

259. These challenges have been acknowledged by the provincial departments during the public hearings.
260. Submissions by Mediclinic dated 13 October 2015; LHC dated 30 October 2014 and Netcare dated 13 June 2015.
261. Netcare submissions dated 15 September 2016, pg. 53-54.
262. Life Healthcare submissions dated 16 August 2016, pg. 5.
263. Mediclinic submissions dated 2 September 2016, pg. 12-13.
264. Admission privileges enable a practitioner to admit and perform medical procedures or administer treatment at specific healthcare facilities. Practitioners are not required to have rooms in a facility to have admission privileges, but in practice, many do.

7 (paragraph 241-250) and will not be repeated here.

500. In their submissions, new entrants and smaller facility groups argue that large facility groups have a competitive edge in terms of the incentives they can offer to practitioners. New entrants and smaller facility cannot offer incentives comparable to those offered by large incumbents but are forced to offer minimal incentives to attract and retain scarce practitioner specialties to compete.[265] [266]

501. By way of example, Joint Medical Holdings (JMH) emphasised that it does not offer any 'soft benefits', such as meals, administration or even parking to practitioners. Practitioners must pay for everything that is provided by the facility and there is no incentive and kick-back system.[267] As a result, they struggle to attract and retain practitioners.

502. Kiaat and Lenmed made similar submissions. Kiaat submitted that they do not offer many incentives to attract practitioners, other than supplying standard equipment necessary for the operation of a facility.[268] However, Kiaat and LenMed indicated that recently they had started to provide some incentives to attract practitioners beyond the supply of standard equipment.269 270

503. Overall, new entrants and smaller players highlighted that the incentives they offer to attract practitioners come at a huge cost and that they would have to borrow from financial institutions to provide the same incentives as incumbents.[271] [272] Therefore, while small facility groups do react to competition by providing various incentives to practitioners, it is very difficult for them to fund these initiatives. [273]

504. It is also apparent that if the entrants and other smaller facility groups were to match the incumbents,it would translate into higher costs that would likely be passed on to consumers. [274]

THE HMI'S VIEWS ON BEHAVIOURAL BARRIERS

505. The Inquiry requested contracts and internal policies from several facility groups to assess the incentives provided to practitioners and their potential to restrict entry and competition. As indicated in section 7 (paragraph 241-250), the HMI found that the contractual relationships between practitioners and facilities, particularly those entered by the big facility groups, contain restrictive and exclusive clauses which may prevent or restrict entry and competition. These contractual relationships include the following restrictions:

    505.1. Restriction on shareholding: practitioners are restricted from having shareholding in another (competing) facility within a particular radius of the primary facility. If a practitioner is found to hold shares in another facility, s/he is compelled to dispose of his or her shares. Practitioners who hold shares in a particular facility are also restricted from practicing in competing facilities.

    505.2. Restriction on use of facilities: practitioners are either restricted from making use of another facility or are required to limit the amount of work they do in the secondary facility. If a practitioner is found to be using another facility or decreasing

265. Lenmed, Meeting Transcript 29 September 2016, pg. 15.
266. Kiaat, Meeting Transcript 28 September 2016, pg. 16-17.
267. Joint Medical Holdings, Meeting Transcript- 22 September 2016, pg. 2.
268. For instance, for medical wards – general equipment to monitor BP, high care –monitors, if ICU – ventilators, theatre – scopes, drills etc. See Kiaat - Meeting Transcript- 28 September 2016, pg.15-16.
269. Kiaat submitted that the plastic surgeon required more from the hospital, but they were not able to offer such assistance. See Kiaat - Meeting Transcript- 28 September 2016, pg.17.
270. Lenmed, Meeting Transcript – 29 September 2016, pg. 14.
271. Clinix Public Hearing Transcript 4 May 2016, pg. 73.
272. Lenmed, Meeting Transcript 29 September 2016, pg. 15.
273. Clinix, Public Hearing Transcript 4 May 2016, pg. 28.
274. Dr Moloto, Public Hearing Transcript 23 February 2016, pg. 115.

his or her work in the primary facility, the lease can be cancelled by the primary facility.

506. As highlighted earlier, the inquiry has evidence that the exclusionary clauses that were largely found in the contracts of the big facility groups are enforced. This is contrary to the inquiry being told that the clauses are no longer in existence or enforced. The fact that the contracts between practitioners and facilities are enforceable through different mechanisms including cancellation of leases and termination of practitioners' shareholdings in facilities is concerning and important for analysis. The practice of enforcing restrictive clauses is generally accepted in the hospital industry.[275] For example, there are instances were practitioners are cautioned of their shareholding obligations, wherein practitioner analysis indicated shift in volumes from their primary hospital of practice. The Inquiry's view is that by enforcing such restrictive clauses, the conduct of facilities has an adverse effect on competition and may amount to a substantial prevention or lessening of competition in a market in contravention of section 5(1) of the Competition Act. The Inquiry is also of the view that this may contravene the HPCSA guidelines on perverse incentives, which provides that a practitioner may not engage in, or advocate, the preferential use of a healthcare institution in which he has financial interest.

507. The Inquiry finds that the incentives and agreements between large facilities and practitioners have an adverse effect on competition. The inability of smaller facilities to attract and retain practitioners, coupled with restrictive contract clauses between practitioners and big facility groups, may deter market entry and restrict new entrants' ability to effectively constrain incumbents. These incentive structures have the capacity to entrench incumbency advantages over new entrants and smaller facility groups which find it difficult to attract and retain practitioners.

508. Exclusionary clauses may therefore heighten barriers to entry in the facilities market and should be regarded with circumspection. The Inquiry will recommend that the Commission and the HPCSA review this conduct in more detail to evaluate whether it amounts to a contravention in terms of their guiding legislation.

OTHER BARRIERS TO ENTRY: RECOGNITION AND REIMBURSEMENT BY MEDICAL SCHEMES

STAKEHOLDER SUBMISSIONS

509. Most medical schemes operate nationally and prefer to contract with facilities with a national network. Smaller facilities and new entrants do not have the benefit of scale or a national footprint and often operate from one or a few sites in a particular region. As a result, these facilities are often excluded from designated service provider contracts (or preferred provider networks) set up by medical schemes.[276] [277] [278]

510. Smaller groups are often price takers and some submit that they are subject to a "water-bed" effect wherein medical schemes compensate for losses from bigger facility groups (or for higher than targeted price increases) by reimbursing the smaller groups at lower tariffs.[279]

511. Linked to recognition and reimbursement by medical schemes, some stakeholders have also raised concerns about the long standing practice of having the Board of Healthcare Funders of Southern Africa (BHF) issue practice numbers. This is a result of an agreement between the Council for Medical Schemes (CMS) and the BHF. Practice numbers issued by the BHF are used by medical schemes for reimbursement and that facilities without this information could be hindered from reimbursement. This could heighten barriers

275. Day Hospital Association letter to the HMI dated 18 April 2018.
276. Clinix, Public Hearing Transcript 04 May 2016, pg. 32.
277. Kiaat, meeting transcript 28 September 2016, pg. 22-23.
278. Lenmed, meeting ttranscript 29 September 2016, pg. 3-4.
279. Clinix, Public Hearing Transcript 4 May 2016, pg. 29-30.

to entry and lead to exclusion of market players. The Inquiry does not believe that this function should be performed by market players, and should rather be embedded in the licensing process. In addition, the agreement between the CMS and BHF is potentially anti-competitive and should be remedied by the Competition Commission through its advocacy powers.

THE HMI'S VIEWS ON OTHER BARRIERS

512. The Inquiry has observed that smaller facilities and new entrants struggle during negotiations with medical schemes and that smaller facilities find it difficult to be recognised as providers by schemes.[280] Our analysis in section 8 (paragraph 284-291) confirms that size is a key factor in bargaining and tariff determination. Below we assess the entry and expansion in the facilities market over time, particularly experiences of smaller facilities, in more detail.

HMI ASSESSMENT OF ENTRY AND EXPANSION

FACILITY ENTRY AND EXPANSION OVER TIME

513. The Inquiry issued an information request to several stakeholders, including current market players, new entrants and the relevant provincial DoHs to assess trends in entry and expansion of health facilities. The information request covered a 19 year period from 1998 to 2017.

514. Only five provincial departments — Gauteng, KwaZulu-Natal, Western Cape, Limpopo and Free State — could provide the required information. Since there is no common and consistent record keeping system across provincial departments, the Inquiry could only obtain information in whichever format it was available.[281] The information, while limited, suffices for this analysis as market entry has mainly occurred in Gauteng, KwaZulu/Natal and Western Cape, and, to a limited degree, Free-State.

515. The information indicates that whilst there are significant barriers, they are not insurmountable and that there has been entry and expansion to varying degrees.

516. Table 6.18 provides an overview of facility entries that have taken place between 1998 and 2017 which have mainly occurred through mergers and acquisitions, in line with the Tribunal's previous observation. The table summarises acquisitions by the three major facility groups and greenfield entry by independent entrants.

TABLE 6.18: ACQUISITIONS AND ENTRY OVER TIME

Year	Netcare	Life Healthcare	Mediclinic	Independent entrants
1998	Netcare/ Pretoria East			
1999	Netcare/ Excel Medical holdings	Life Healthcare/ PresMed		Riverview Manor Specialist Clinic
2000		Life Healthcare/ Montana Park Kliniek		Talana Step-Down;
2001	Netcare/ MediCross	Life Healthcare/ Amalgamated Hospitals Group		JMH Durdoc Hospital
2002		Life Healthcare/ Mary Hospital	Mediclinic/ Curamed	Daymed Private Hospital

280. Reference Bargaining Report.
281. This is further an illustration of the administrative challenges of several PDoH.

Year	Netcare	Life Healthcare	Mediclinic	Independent entrants
2003		Life Healthcare/ Business Venture Investment 798; Wigeheuwel	Mediclinic/ Victoria Hospital	Hillcrest Private Hospital; Wembley House; Clinix Solomon Stix Morewa Memorial Hospital;
2004				Nongoma Private Hospital; Rose Clinic
2005	Netcare/ Prime Cure Holdings		Mediclinic/ Phodiclinics; Mediclinic/ Wits University Donald Gordon	Kokstad Private Hospital
2006	Netcare/ Community Hospital Group; Netcare/ Netpartner Investments			JMH Ascot Park Medical Centre
2007	Netcare/ Community Hospital Group			BloemCare Centre
2008				Ethekwini Private Hospital; Ikhaya Lobomi Health Centre
2009				Chatsworth Cheshire Rehabilitation Centre; Lorne Street Anaesthetic Clinic; St. James Clinic; St Vincent Private Hospital; Genesis Clinic; Genesis Clinic; Lancet Clinic.
2010		Life Healthcare/ Amabubesi (Bayview hospital)		Shelly Beach Day Hospital; Capital Oncology & General Sub-Acute; Akeso PMB; Welkom Medical Centre; M-Care Optima (Psychiatric); Bloemcare Centre; Ndlovu Medical Centre; Care Cure Queenstown; Loriesfontein Prov Aided Hospital; Kingsbury Maternity Home; Andrew Saffy Memorial Hospital; Ndlovo Medical Centre.

Year	Netcare	Life Healthcare	Mediclinic	Independent entrants
2011		Life Healthcare/ JMH; Life Healthcare/ Aurora; Life Healthcare/ Midmed		Shelly Beach Sub Acute; CityMed; M-Care Pentagon Park; Emalahleni Private Hospital; Rustenburg Medi-Care Centre; Rondebosch Medical Centre; Zoutspanberg; Theunis Fischardt Hospital; Cross-Med Health Centre; Bafokeng Hospital; Grootfontein Private Hospital; Rondebosch Medial Centre; St Mary's Hospital; Hillcrest Private Hospital;
2012			Mediclinic/ Solar Spectrum	M-Care Optima East London Eye Hospital; Quality Care Hospital; Clinix Phalaborwa; Kgatelopele Wellness Centre; Amcoal Highveld Hospital; St Mary's Hospital; Rustenburg Platinum mines; Lowveld Hospital; Jane Keyser Clinic; Mdantsane Private Hospital.
2013			Mediclinic/ Holdco	Richards Bay Medical Institute; Quality Care Private Hospital; Capital Oncology; Surgiclinic; Lenmed Daxina;
2014	Netcare/ Ceres Hospital	Life HealthCare Group/ Lowveld Hospital Pty and Interstate Clearing*	Mediclinic SA/ Mediclinic Limpopo	Phelang Bonolo (Butshilu Private Hospital) ; KZN Fertility Clinic; Mthata Private Hospital; Cure Day Clinics Somerset West; Gateway Private Hospital
2015			Mediclinic SA/ Mediclinic Hermanus; Howick Private Hospital; Newcastle Private; Mediclinic Tzaneen; Mediclinic Upington; Victoria Hospital	Kiaat Private Hospital; BusaMed Paardevlei; Pro Care Nursing Services; Cure Day Clinics Bloemfontein; Abalaqusi Hospital; Careline Clinic; Shifa Hospital; Vidamed Hospital; Tsumeb Private Hospital

Year	Netcare	Life Healthcare	Mediclinic	Independent entrants
2016				Healing Hills; Oatlands Care Centre; Akeso Umhlanga; Busamed Harrismith; Busamed Modderfontein; Nulane Investments; Melomed Tokai; New Beginnings Maternity; Al-Nisa Maternity Home; St Josephs Hospital;
2017	Netcare/ Lakeview**; Netcare/Akeso**		Mediclinic/ Matlosana Medical Health Services*	PMI Eshowe Private Hospital; Royal Hospital and Heart Centre; Ahmed Al-Kadi Private Hospital; Origin Family Centred Maternity Hospital Paranoma; Lenmed Randfontein; Peninsula Eye Hospital
2018			Mediclinic/ Intercare***	

Source: Various Provincial DoH submissions; Competition Commission/Tribunal merger reports and the HMI independent research.
Notes: The asterisk (*) indicates mergers that were prohibited by the Competition Commission but pending in the Tribunal. (**) indicates CC prohibited mergers which were subsequently conditionally approved by the Tribunal. (***) indicates mergers pending CC decision.

517. Table 6.18 shows several entrances into the market between 1998 and 2017. Although there are several entries by independent hospitals, these have a small footprint and the big three facility groups still account for the bulk of entry and expansion by bed numbers and absolute number of facilities.[282]

518. Entry has largely been driven by mergers and acquisitions, again predominantly by the three big facility groups that have acquired or merged with the smaller independent players. Smaller players and new entrants such as JMH, Lenmed, Melomed, Busamed and RH Bophelo have also grown through mergers and acquisitions.

519. Examples of entry by smaller players include:

519.1. Lenmed acquired Kathu which was previously owned by Mediclinic, introducing a new player in the Northern Cape where Mediclinic was previously the only private facility. [283] [284]

282. First National Bank, Providing a financial lifeline for a growing healthcare group, Accessed from: https://www.fnb.co.za/downloads/businessBanking/how-we-help/FNB-LENMED.pdf on 07 September 2017.
283. Industrial Development Cooperation, Letter to the HMI dated 10 October 2017.
284. Busamed entered the market through a strategic partnership with Growthpoint , a property development company. Standard Bank also facilitated the R1.7billion acquisition of the Gateway and Hillcrest facilities.

519.2. Busamed Hospital, a black-owned group, currently operates six hospitals; namely Gateway, Hillcrest, Paardevlei, Modderfontein, Harrismith and Bram Fischer. The latest of such acquisitions are Hillcrest and Gateway, which were acquired in 2017.[285] [286]

519.3. Phelang Bonolo, a black-owned private group, opened its first hospital, Botshilu Private Hospital, in October 2014 in Soshanguve. It also operates two facilities in partnership with Netcare, Waterfall City in Midrand and Pinehaven Hospital in Krugersdrop. The group is currently developing two other hospitals, Hartbeespoort Cardiac and Orthopedic Centre of Excellence in North West and Easymed Day Clinic. [287]

519.4. Kiaat entered the market in October 2014 in Mbombela, Mpumalanga. The major shareholders of the facility group are the Industrial Development Cooperation (IDC) and the Public Investment Cooperation (PIC).[288]

519.5. Melomed Tokai was also established during early 2016 in Gatesville, Western Cape.[289] [290]

520. Over the same period, the following greenfield entries by major groups took place:

520.1. Netcare Waterfall City and Pinehaven became operational during mid-2011 and 2015 respectively. This is a multi-disciplinary healthcare facility located in Midrand, Gauteng. These are partnerships between Netcare and Phelang Bonolo Healthcare Group.[291] [292] [293] [294]

520.2. Netcare Bay is a multi-disciplinary healthcare facility located in Richards Bay, KwaZulu/Natal.[295]

520.3. Netcare Pholoso is a healthcare facility located in Polokwane, Limpopo that started operating in late 2015. This facility was developed by Netcare in partnership with Pholoso Hospital Group. [296]

521. Mediclinic and Life Healthcare have also developed new facilities over the last few years:

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285. Busamed entered the market through a strategic partnership with Growthpoint , a property development company. Standard Bank also facilitated the R1.7billion acquisition of the Gateway and Hillcrest facilities.
286. Busamed Health Group, Accessed from http://www.africaoutlookmag.com/outlook-features/busamed-hospital-group on 21 July 2017.
287. Phelang Bonolo Health Group, Hospitals, Accessed from http://phelangbonolo.co.za/hospitals.html on 21 July 2017.
288. Kiaat, Meeting Transcript- 28 September 2016, pg. 1-8.
289. Melomed, New hospital gets to heart of the matter, Accessed from: http://www.melomed.co.za/documents/adverts/MT-2016.pdf on 17 October 2017.
290. Melomed, Melomed Tokai, Accessed from: http://www.melomed.co.za/hospitals/melomed-tokai.asp on 17 October 2017.
291. Netcare, Netcare Waterfall City Hospital, Accessed from: http://www.netcare.co.za/Hospitals/moduleId/2416/HospitalId/866/controller/HospitalDetail/action/Detail on 20 August 2017.
292. Netcare, Netcare Waterfall City Hospital expanding, Accessed from: https://www.netcare.co.za/News-Hub/Articles/ArticleId/305/netcare-waterfall-city-hospital-expanding 17 October 2017.
293. Netcare, Netcare Pinehaven Hospital, Accessed from: http://www.netcare.co.za/Hospitals/moduleId/2416/HospitalId/937/controller/HospitalDetail/action/Detail on 21 August 2017.
294. Krugersdorp News, New private hospital for growing population, Accessed from: http://krugersdorpnews.co.za/266136/new-private-hospital-for-growing-population/ on 21 August 2017.
295. Netcare, Netcare The Bay Hospital, Accessed from: http://www.netcare.co.za/Hospitals/moduleId/2416/HospitalId/178/controller/HospitalDetail/action/Detail on 14 September 2017.
296. Netcare, Netcare Pholoso Hospital, Accessed from: http://www.netcare.co.za/Hospitals/moduleId/2416/HospitalId/936/controller/HospitalDetail/action/Detail on 17 October 2017.

521.1. Mediclinic Midstream became operational during early 2015 and is Centurion, Gauteng.[297] [298] [299]

521.2. Life Healthcare Hilton in Hilton, KwaZulu/Natal, opened its doors in 2015. [300]

522. The examples of entry cited above were mainly for the provision of acute, inpatient care. In addition, there has been entry by day facilities, sub-acute, small-scale and specialist facilities:

522.1. Advanced Health is a day hospital group with facilities in the Western Cape and Gauteng.[301]

522.2. Cure-Day clinics operates eight facilities — four in Gauteng, one in Free State (Bloemfontein) and three in Western Cape. Wilgeheuwel in Gauteng was due to be operational in late 2017.[302]

522.3. Centurion day hospital started operating in 2016.[303]

522.4. M-Care Group, a sub-acute healthcare services group, funded by the National Empowerment Fund (NEF), operates four facilities in Highveld, Nelspruit, Bloemfontein and Potchefstroom. [304]

522.5. Intercare operates a number of day and sub-acute facilities across the country.[305] This facility is currently being acquired by Mediclinic and the Commission decision on the acquisition is still pending.

523. The three major groups have also been entering the day facilities sector. For example, Mediclinic is in the process of acquiring Intercare as part of its strategy to enter that segment of the market. Mediclinic was also recently awarded a licence to operate a day facility in Stellenbosch.[306] [307]

524. The private facilities market has also witnessed entry of specialist facilities such as the Pretoria Eye Institute, Horizon Eye Care Centre and the Urology Hospital.[308] [309] [310]

525. There have also been a number of applications for the refurbishment and/or expansion of existing facilities to add additional beds and/or theatres, largely by the big facility groups. Stakeholders submit that the expansion of facilities is merely meant to address a shortage of private hospital beds but the Inquiry notes that there could be a strategic element to these expansions. Increased investments in private beds, particularly in an environment where private bed numbers are already in excess, could indicate a strategic decision

297. Mediclinic, Mediclinic Midstream – a new hospital, Accessed from: https://www.mediclinicinfohub.co.za/mediclinic-midstream-new-hospital/ on 15 September 2017.
298. Mediclinic Letter dated “26 May 2016”, pg. 3.
299. Mediclinic, Annual Report 2015, pg. 40. Accessed from: http://annualreport2015.mediclinic.com/pdf/split/Operational.pdf on 17 October 2017.
300. News 24, Private hospital opens, Accessed from: http://www.news24.com/SouthAfrica/Local/Maritzburg-Fever/Private-hospital-opens-20150915 on 20 August 2017.
301. Advance Health, Accessed from http://advanceDiscovery Healthealth.co.za/ on 24 July 2017.
302. Cure Day Clinics, Accessed from: https://www.curedayclinics.co.za/company_profile.php on 22 August 2017.
303. Health Market Inquiry independent research.
304. National Empowerment Fund, M-Care Group (R75 million), Accessed from: http://www.nefcorp.co.za/FundingbrSolutions/InvesteeStories/MCareGroupR75million.aspx on 17 October 2017.
305. Intercare, Accessed from: http://www.intercare.co.za/day-hospitals on 16 October 2017.
306. Intercare, Investment in Intercare Extends Mediclinic's Healthcare Offering, Accessed from: http://www.intercare.co.za/articles/Investment-in-Intercare-Extends-Mediclinic-s-Healthcare-Offering on 12 September 2017.
307. Western Cape Department of Health, Teleconference with the HMI dated 7 September 2017.
308. Pretoria Eye Institute, Accessed from: http://www.eyeinstitute.co.za/A_aboutus.asp on 05 September 2017.
309. Urolocare Hospitals, Accessed from: http://urology.co.za/ on 5 September 2017.
310. Horizon Eye Care Centre, Accessed from: http://www.horizoneyecare.co.za/aboutus.php on 16 October 2017.

to raise the barriers to new entrants or incumbents. Excessive beds could also provide incentives to drive utilisation up.

526. Finally, there have been several failed attempts of entry and/or licence approvals which were not executed and ultimately withdrawn by the provincial DoH. There are various reasons for these failed entries including lack of capital, inability to attract practitioners, insufficient market opportunity, and difficulties with the administrative processes of the provincial departments or other regulators such as the HPCSA.[311] [312] The following are specific reasons for deterred entry:

    526.1. Mediclinic Kathu was not economically viable and was as a result acquired by Lenmed.

    526.2. Lowveld's lack of capital to expand was cited as the rationale for its proposed acquisition by Life Healthcare. [313] [314]

    526.3. The IDC submitted that it funded three facilities which had started operating, but failed owing to fraud and lack of market support. Others were approved for funding, but failed to commence operations. In addition, there were potential entrants with licences who were rejected for funding as they were not bankable.[315]

CASE STUDIES OF ENTRY

527. This section reviews case studies of entry by new or innovative models of care that could challenge the traditional acute inpatient facilities that dominate the sector. In this section, we review entry experiences of Advanced Health day hospital group. Other case studies (that of Improved Clinical Pathway Service (ICPS) and Professional Provider Organisation Services (PPOS)) have also been considered by the Inquiry but their experiences will be detailed in Chapter 7 for practitioners. Bearing in mind that there are many linkages between the entry dynamics of facilities and practitioners (facilities effectively compete to attract practitioners), the case studies will raise some cross-cutting issues.

ADVANCED HEALTH

528. Advanced Health currently has ten facilities operating in South Africa, and aims to double this by 2020.[317] In its submission to the inquiry[318], Advanced Health raised concerns about the larger hospital groups' response to its business model. Specifically, itclaims that its independent day hospital model threatens the market position of the three large hospital groups. The three main challenges to its business model are:

    528.1. a "cost shifting" strategy employed by the larger hospital groups,

    528.2. intense contestation for facility licences, and

    528.3. pressure exerted by larger facilities on practitioners.

Cost shifting

529. Advanced Health argues that larger hospital groups have not increased the tariffs they charge for procedures which can be provided in day hospitals and instead increase tariffs for longer procedures. The intention, according to Advanced Health, is to render day hospitals unprofitable and uncompetitive.

530. The Inquiry notes that care must be taken in interpreting these trends, which may simply be consistent with greater price competition in some segments of the market, and may thus be procompetitive on

311. Izak Fourie, Meeting with HMI 21 August 2017.
312. Advanced Health, Meeting with HMI 22 August 2017.
313. This transaction was abandoned after rejection by the Competition Commission, however Lowveld is still operating in the market.
314. Competition Commission SA, Merger Report Case No: 2014Sep0530.
315. Industrial Development Cooperation, Meeting with the HMI dated 22 September 2017.
316. See Advanced Health submission to HMI
317. Advanced Health. Accessed from: http://advanceDiscovery Healthealth.co.za/, accessed 3 October 2017
318. Day Hospital Association of South Africa. Submission to the Statement of Issues 31 October 2014.

balance. However, it would be problematic if procedures in the more competitive segment of the market were not assigned a fair proportion of the fixed cost of the facility. In that case, this could be an example of anti-competitive cross-subsidisation with the intent of blocking the entry and growth of day facilities.

Licensing:

531. The licensing process for day hospitals is administered by provincial DoHs. In 2014, the Day Hospital Association of South Africa (DHASA), expressed concern to the Inquiry about the preferential issuing of licences to larger hospital groups compared to new entrants, as well as the acquisition of day hospitals and sub-acute facilities by members of the larger groups. The DHASA was concerned that the continual granting of licences to the larger hospital groups, and their acquisitions of smaller day hospitals, would further entrench their strong market positions.

532. In its submissions, Advanced Health cites the following as examples of competitive distortion in the facilities market:

    532.1. Acquisition of Intercare Day Hospitals by Mediclinic. The proposed transaction has not been granted approval. Should it be approved, Mediclinic will acquire approximately 10% of the day hospitals under the DHASA.

    532.2. Acquisition of Welkom Day Hospital by Mediclinic. Advanced Health is concerned that Mediclinic, which owns the existing private hospital in Welkom, seeks to acquire the only competing day hospital in the locality.

533. While the above is subject to further investigation, it shows that larger hospital groups are engaged in strategic acquisitions of new entrants or potential competitors.

534. The acquisition of Genesis maternity clinic by Life Healthcare is another example of such acquisitions.

Practitioners:

535. Advanced Health submitted the following concerns regarding the pressures on practitioners from larger facilities:

    535.1 Large hospital groups prevent specialists from suggesting alternative treatment facilities to patients. Advanced Health cites a speech made by the CEO of Mediclinic on 6 December 2016 in which he stated that surgeons who are using theatre lists at Mediclinic facilities are not allowed to offer alternative treatment options in alternative facilities to patients.

    535.2. Advanced Health submits that facility administrators pressure specialists/surgeons to fill theatre lists at facilities from which they operate, even when costs are substantially higher than at a day hospital. Advanced Health points out that such behaviour restricts patients' ability to make informed decisions about both the facility choice and the type of treatment.

536. The following review of the Advanced Health application to acquire a licence in the Western Cape, Stellenbosch region provides an indication of how provincial DoHs influence competitive outcomes.

The Stellenbosch application

537. In 2013, Advanced Health, supported by the DHASA, applied to the Western Cape Department of Health for a licence to operate a day hospital in Stellenbosch. At the time of the application, Mediclinic had an existing facility in close proximity and also applied for a day hospital licence in the same area as the Advanced Health application. Pursuant to the department's review of both the applications it decided that neither licence should be granted. The private health establishment advisory committee (PHEAC) and the head of department (HOD) turned down Advanced Health's application for 30 day beds, three minor theatres and one endoscopy suite.[319]

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319. Meeting between Advanced Health and the HMI dated 22 August 2017.

538. Both the Advanced Health and Mediclinic applications were denied because the respective boards determined that there were ample healthcare facilities within the area for which the licence was sought.

539. However, Mediclinic appealed and was subsequently granted the licence to operate. This in effect, prevented entry by Advanced Health and strengthened the incumbent's position.

540. The Inquiry engaged the Western Cape provincial DoH to understand the rationale for the licensing decision. The department indicated that decisions are affected by market conditions at the time the application is made, taking into account the following factors.[320]

    540.1. The number of operating facilities and the approved non-commissioned licences at the time of the application;

    540.2. The population of the district where the particular licence is applied for; and

    540.3. The type of services already offered in the geographical area where the facility licence is applied for.

541. The quality of the offering is also considered by the department, based on the following criteria:

    541.1. The complaints raised against the applicant regarding quality; and

    541.2. The inspection of the facility to ensure that it meets quality standards.

542. Applicants may be granted time to remedy any quality concerns. If quality standards are still not satisfied, existing licences may be revoked. The department further invites public comment for assessing applications and provides an opportunity for the applicant to respond. The department also highlighted that they do not require feasibility studies and focus more on healthcare services, rather than the rand value of the service, when assessing applications.[321]

543. The assessment of a licence application includes an evaluation of whether there is sufficient need for the services for which the licence is sought, considering the existing supply of healthcare facilities at the time the application occurs. At the time of the Advanced Health application the number of non-commissioned beds owned by Mediclinic influenced the outcome of both the Advanced Health and Mediclinic applications. In effect, the existence of non-commissioned beds at acute facilities (those of Mediclinic) was regarded as an indication that there was no need for a day hospital in the area.[322]

544. Non-commissioned beds are beds that have been licenced for use but have not yet been put into operation. If regulatory authorities take non-commissioned beds into account when evaluating market needs, this could allow larger incumbents to strategically withhold capacity to influence the outcomes of rival licence applications.It would also create an incentive for licence applications to be made for as many beds as possible, in order to allow capacity to be withheld in this manner.

545. After the applications of both Mediclinic and Advanced Health for day hospitals beds were denied, both parties appealed the decision. In its appeal, Mediclinic suggested that the number of non-commissioned beds in acute facilities should not be used to evaluate day hospital licence applications. [323] They argued that day hospitals provide same-day surgery and should be evaluated against other licenced day hospitals or day beds. [324]

546. Additionally, Mediclinic argued that surgical beds cannot be categorised as acute beds, as they cannot be used to accommodate other services such as intensive care and that there is no guarantee that non-commissioned beds will be commissioned, so the department should only account for facilities for which the necessary plans have been submitted and where the facility will be operational within 12 to 18 months. Mediclinic's appeal was successful, and they were granted a

320. Teleconference minutes between the Western Cape DoH and the HMI dated 7 September 2017.
321. Teleconference minutes between the Western Cape DoH and the HMI dated 7 September 2017.
322. Teleconference minutes between the Western Cape DoH and the HMI dated 7 September 2017.
323. See Mediclinic Stellenbosch Appeal Part 1.
324. This again demonstrates the potential competitive threat day beds place on general acute beds.

day hospital licence, while Advanced Health was not. It is not clear why Mediclinic was ultimately awarded the licence ahead of Advanced Health.

547. Overall, the outcome of this licensing process suggests that the department did not take into account the impact of its decisions on competition and diversity of ownership particularly in a highly concentrated facility market. Ideally, competition concerns should be part of the initial decision-making process, which would allow licence decisions to take into account both the degree of substitutability between day and acute beds (as per Mediclinic's appeal) and the potential benefits of disruptive entry by a smaller competitor. It would have been ideal if both Mediclinic and Advanced Health had been required to put forward contesting arguments as regards the competitive impact of their respective applications during the first phase of adjudication.

548. In practice, on the basis of discussions held with the Western Cape provincial DoH, it appears that the licensing exercise is merely a procedural tick box. The regulatory process does not take into account its effect on the competitive and ownership structure of the market and the process is open to strategic over-investment by larger incumbents to prevent the entry and/or expansion of smaller players.

549. In conclusion, the Advanced Health case study shows that licensing processes adopted by the provincial DoH do not appear to explicitly consider their impact on the competitive structure and diversity of ownership in the market. The factors used to assess whether there is market need are unclear, and the potential for strategic manipulation of non-commissioned beds to foreclose rivals is not understood. The practice of granting licences to larger rivals at the expense of smaller and innovative entrants also raises concerns.

CONCLUSION ON BARRIERS TO ENTRY AND EXIT

550. The main barriers raised by stakeholders and from the HMI analysis are classified as follows:

550.1. **Structural barriers:** access to capital, funding, land acquisition, infrastructure and equipment costs;

550.2. **Behavioural barriers:** relationships between incumbent facilities and practitioners, recognition and contracting by medical schemes; and

550.3 **Regulatory barriers:** inefficient and fragmented licensing regime, HPCSA professional rules and municipal authority rules.

551. While these barriers exist, they are not insurmountable. Entry and expansion at varying levels of the facility market, including by facilities offering new and innovative models of care has happened. Even given the increasing entry by day hospitals and day beds, these do not present a significant switch away from general acute facilities. Section 9 (paragraph 328) demonstrated that care continues to be provided in general acute facilities. In general, the observed entry and expansion has had limited impact in changing the current competition dynamics.

552. The Inquiry notes with concern several shareholding and lease contracts that have restrictive clauses which restrict practitioners from practicing in competing facilities. It is also concerning how some facility groups enforce these contracts, despite submissions to the Inquiry that these clauses no longer exist. The Inquiry's view is that these clauses have an adverse effect on competition, particularly potential competition from smaller players and new entrants, and recommend that the CCSA initiate investigations in this regard.

553. On the whole, entry and expansion in the facility market has been 'more of the same' with innovation to bring about meaningful efficiencies in the sector lacking. New entrants more or less simulate the incumbents and do not constrain the behaviour of incumbents. There has been no real and significant impact on the contracting and tariff determination process, and no impact on patient clinical outcomes can be demonstrated. Moreover, incumbents have also continued to expand in a highly concentrated market.

554. Overall, we conclude that regulatory failures in the market largely explain this.

ANNEXURE 6

COMPETITION BETWEEN PRIVATE AND PUBLIC FACILITIES IN SOUTH AFRICA

AN OVERVIEW

555. The South African healthcare system comprise of two sectors which are the public and the private sector. There is an entrenched maldistribution of resources between the private sector and the public sector. As we illustrate below, the private sector serves a smaller proportion of the population and is well-resourced relative to the public sector.

556. The private sector serves approximately 17% of the population, but accounts for about half of the country's financial and human resources.[325] Despite the fact that the private sector serves less than a fifth of the population, it was estimated that 37% of the general practitioners (GPs), 59% of specialists and 38% of nurses were active in South Af¬rica's private sector.[326] The public sector, on the other hand, are under-resourced and generally are sub-standard in terms of clinical quality provided. They suffer from a scarcity of human, financial and other resources (e.g. physical infrastructure). And they face challenges of ever-increasing demands of healthcare services, generally poorly managed, though pockets of excellence are said to exist.[327] [328]

557. Given that public facilities operate alongside the private facilities, a critical question to address is whether or not the public facilities pose a competitive constraint to the private facilities. In other words, we have to establish whether the market is narrow (consisting of private facilities only) or broad (consisting of both the private facilities and the public facilities). We briefly highlight in international experiences and then dwell on the South African situation.

INTERNATIONAL EXPERIENCES

558. In other jurisdictions, there is evidence of greater competition between the private and public sector. In the UK for example, public and private sector facilities compete with one another. The UK National Health Service (NHS), which is a publicly funded national healthcare system has broadened consumer choice and forced public sector facilities to compete amongst themselves – mainly in quality. The NHS further increased competition between the public and private sector facilities, as they competed for providing healthcare services to NHS-funded patients.[329] The competition between the public and private sector facilities led to efficiencies (e.g. reduction in the lengths of stay) and improvements in the quality outcomes.[330] There is also a role that the public sector plays in influencing price outcomes in the private sector.

559. The Swedish health care system is another example where competition exists between the public and private healthcare sectors. Sweden introduced the customer choice system to increase freedom of choice for health care users, quality, accessibility and efficiency. The customer choice system

325. Ataguba, J.E. 2016. Health financing and NHI in South Africa: why do we need a reform? Accessed from: http://www.hst.org.za/hstconference/hstconference2016/Presentations/presentation_04-05-2016.pdf on 1 February 2018.
326. Econex. 2013. The South African Private Healthcare Sector: Role and Contribution to the Economy, pg. 1-2. Accessed from: https://econex.co.za/wp-content/uploads/2015/03/econex_researchnote_32.pdf on 24 January 2018.
327. Health Systems Trust. 2016. South African Health Review 2016, pg. 101. Accessed from: https://www.health-e.org.za/wp-content/uploads/2016/05/South-African-Health-Review-2016.pdf on 25 January 2018.
328. Ranchod et al. 2017. South Africa's hospital sector: old divisions and new developments, pg. 102. Accessed from: http://www.hst.org.za/publications/South%20African%20Health%20Reviews/HST%20SAHR%202017%20Web%20Version.pdf on 29 January 2018.
329. Cooper et al. 2012. Does Competition Improve Public Hospitals' Efficiency? Evidence from a Quasi-Experiment in the English National Health Service. Accessed from: http://cep.lse.ac.uk/pubs/download/dp1125.pdf on 31 January 2018.
330. Cooper, Z. 2011. Competition in the public sector: good for the goose, good for the gander? Accessed from: http://cep.lse.ac.uk/pubs/download/cp341.pdf on 6 February 2018.

encourages competition and diversity among players and supply in the Swedish health care sector. The Act on the system of choice applies during the process of contracting, wherein the contracting authority transfers the possibility to choose a service provider within the system to the healthcare users of the services. The users may, in many cases, choose between private suppliers with whom the contracting authority has concluded an agreement within the system of choice. The level of payment given to the suppliers is then set by the contracting authority and this is where price determination for healthcare services occurs. [331]

560. In developing countries such as Singapore, there is evidence of cross-sector competition in the healthcare market. Singapore adopted a largely tax-funded healthcare system, which is similar to the UK NHS referred to above. The private and public-sector facilities are required by law to publish certain price and quality related information. Patients technically have a freedom of choice when deciding where to receive healthcare services.[332]

SOUTH AFRICAN EXPERIENCE

561. Generally, when defining a market, demand side substitution and supply side substitution are considered.

562. The demand-side substitutability assesses the extent to which customers may switch to substitute products in response to a change in relative prices or quality or other features. In other words, demand-side substitutability concentrates on the behaviour or reaction of consumers to, for example, announcements of price increases by their supplier or service provider.

563. The substitutability between the public and private sector can be dependent on factors such as;

563.1 The range of services provided by the public when compared to the private sector.

563.2 The quality of healthcare services delivered by the two sectors.

563.3 The trend in tariffs overtime between the public and the private sector. The consumer behaviour following a price increase would provide an indication of how price sensitive they are and whether they can easily switch between the two sectors.

564. Supply-side substitutability examines the extent to which suppliers of alternative products may switch their existing production facilities to make alternative products in response to a change in relative prices, demand or other market conditions.[333] Under supply-side substitutability, entry should occur quickly, effectively (on a scale large enough to affect prices) and without the need for significant sunk investments/ costs (i.e. costs that may not be recovered).

565. In our context, we have primarily focused on demand side substitution. This is because supply side substitution is highly unlikely because the two sectors have very different motives and operate on different models. Public-sector facilities are owned and financed by the state and are not for profit. Private sector facilities in SA generally do not offer (and get paid for) clients from the public sector, unless the clients are paying privately. Public facilities provide services to private sector patients only where there is a Designated Service Provider (DSP) arrangement between the scheme and the state. The extent of these arrangements is limited in South Africa confounded by the fact that the hospitals in these arrangements are mostly on networks of the weak schemes with generally ineffective payment systems because of poor management of bills. Generally, scheme members utilise

331. Organisation for Economic Co-operation and Development. 2012. Competition in Hospital Services. Accessed from: https://www.oecd.org/daf/competition/50527122.pdf on 22 March 2018.
332. Gideon, A. 2016. Competition in the healthcare sector in Singapore – an explorative case study. NUS Working Paper 2016/009. Accessed from: http://law.nus.edu.sg/ewbclb/pdf/wps/CLB-WPS-1605.pdf on 2 February 2018.
333. ICN Merger Guidelines Workbook 2006.

private healthcare facilities. Private facilities have also provided evidence that the extent of out of pocket payments is relatively insignificant to suggest any meaningful switching between the two sectors.[334] It is in this regard that the supply-side substitutability is limited in this context.

566. Below we assess whether or not the evidence show that the public facilities pose a competitive constraint to the private facilities from the perspective of demand substitutability. We rely mainly on qualitative information, which is in the form of academic publications and previous merger cases, as public-sector information was not available to the HMI.[335]

567. Overall, the case precedents show that there is no competition between the private facilities and the public facilities. The competition authorities have acknowledged the lack of cross-sector competition between private facilities and public facilities. The Competition Tribunal ("the Tribunal") has explicitly detailed that "*community hospitals, public hospitals and specialty hospitals are sufficiently different from private hospitals and cannot be considered to be competitors"*. [336]

568. In terms of the services offered and the prices charged by the two sectors, the Tribunal stated that "*State hospitals provide mainly primary healthcare compared to private hospitals, which, while also providing some primary healthcare, mainly provide secondary, and tertiary healthcare. There is a huge difference between the prices charged by state and private hospital making it unlikely that they compete for the same clients"*. [337]

569. With regards to the quality of care, the Tribunal also referred to fact that the "*public sector is increasingly incapable of delivering quality healthcare to those who rely upon it while the private sector remains, as it were, structurally over capacitated*". [338]

570. The above is consistent with stakeholders' sentiments that public facilities are not a competitive threat to private facilities for patients. [339] [340]

571. The HMI also observed that pricing between the two sectors does not seem to influence each other's pricing mechanisms. We however noted some stakeholders' submissions, which suggested that, in the case of pharmaceutical products, public sector pricing largely influences pricing in the private sector. It is alleged that the lower public sector tender prices are being cross-subsided by the higher private sector prices.[341] [342] It is also understood from the NDoH, that the basket of pharmaceutical products purchased by the two sectors are different. Our view is that this is yet a reflection of the segmented nature of the industry, as ideally the basket of products purchased should not necessarily be different. If competition could play freely across sectors, one sectors' pricing and products should influence outcomes in the other sector.

572. Quality of care and outcomes is another important factor for competition.[343] This is also in line with the Tribunal's assertion in the case precedents highlighted earlier.

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334. Mediclinic. Submission to the Statement of Issues 31 October 2014. pg. 87.
335. Several information requests were sent to the NDoH, which was not made available to the HMI.
336. Afrox Healthcare & Wilgers Merger. Case No: 15/LM/Feb02. Accessed from: https://www.comptrib.co.za/assets/Uploads/Case-Documents/15LMFEB02.pdf on 19 February 2018.
337. Afrox/Amahosp Merger. Case No: 53/LM/Sep01. Accessed from: https://www.comptrib.co.za/assets/Uploads/Case-Documents/53LMSEP01.pdf on 6 February 2018.
338. Medicross & Prime Cure Merger. Case No: 11/LM/Mar05. Accessed from: https://www.comptrib.co.za/assets/Uploads/Case-Documents/11LMMar05.pdf on 19 February 2018.
339. Mediclinic, 2014. Submission to the Statement of Issues dated 31 October 2014, pg. 11.
340. Discovery Health. 2014. Submission to the Statement of Issues dated 17 November 2014, pg. 292.
341. Mediclinic, 2014. Submission to the Statement of Issues dated 31 October 2014, pg.193-202.
342. Netcare. Letter to the HMI dated 13 June 2015, pg. 57.
343. European Commission, 2015. Competition among health care providers-Investigating policy options in the European Union. Accessed from: https://ec.europa.eu/health/expert_panel/sites/expertpanel/files/008_competition_healthcare_providers_en.pdf on 31 January 2018.

Although quality outcomes are largely lacking in both the public and private sector due to lack of defined quality metrics and standards, it is generally accepted by stakeholders that the quality of care in the public facilities is poor when compared to the private facilities.[344] [345] [346] We also take cognisance of the fact that the public sector generally faces a significant burden of disease and resource constraints, which would naturally influence quality outcomes. It was not until the creation of the Office of Health Standards Compliance (OHSC) that the public sector started making efforts to manage quality.

573. The public sector further has significant purchasing power mainly through Government Employees Medical Scheme (GEMS), and the general fiscal allocations of funds towards public and private healthcare subsidies. This however does not seem to be exercised in a strategic manner that could influence pricing and outcomes in the private sector. Whereas, one of the key elements of the NHI reforms is to create a purchaser-provider split by creating an 'single-buyer' institution that will strategically purchase healthcare services irrespective of the sector in which the services are provided, a typical feature of many healthcare markets, this is absent in the South African context up to now.[347]

574. We considered whether we have similar dynamics at national and local level. Our observations are that at the national level, there is generally no systematic constraints between the public facilities and private facilities. However, in certain local areas the public facilities and private facilities constrain each other. For instance, tertiary academic hospitals such as Grote Schuur (in Cape Town) and Steve Biko (in Pretoria) to some extent pose competitive constraints on neighbouring private hospitals. These tertiary academic hospitals are relatively well-resourced and deliver quality healthcare.

575. In light of the above, with the exception of localised competition particularly from the academic hospitals, it is evident that public facilities have limited ability to pose a credible and significant competitive constraint to private facilities in South Africa.

576. In few instances, the HMI has observed some factors that may suggest that consumers may be forced to switch between the private and public sector as highlighted below;

    576.1 Where medical schemes have DSP arrangements with the public sector, usually in relation to PMBs conditions because of the perceived cost-effectiveness for the scheme. However, the exact details of how these arrangements operate is not clear.

    576.2 Possible unethical dumping of patients by medical schemes to the public sector for non-PMB conditions. The illegal dumping can occur where patients have exhausted their medical benefits and patients then default to the public sector, because the scheme would not pay for the services required.

    576.3 On the other hand, consumers would move from the public sector to the private sector possibly when they require specialised healthcare services not offered in the public sector.

577. Notwithstanding the limited competitive constraint by the public facilities to the private facilities in the South African healthcare sector, international precedent considered, showed that competition between the public and private sector is possible, the examples

344. DNA Economics. 2013. Regulating the Quality of Health Services: Benchmarking of Approaches, Institutions and Systems. Accessed from: http://www.dnaeconomics.com/assets/Usealexconstantinoudnaeconomicscom/OHSC-Regulating-the-Quality-of-Health-Services.pdf on 5 February 2018.
345. National Department of Health. Public Hearing Transcript 11 March 2016. pg. 267.
346. Discovery Health. Submission to the Statement of Issues dated 17 November 2017.
347. National Department of Health. 2017. NHI White Paper. Accessed from: www.health.gov.za/index.php/nhi?download=2257:white-paper-nhi-2017 on 15 March 2018.

being the UK, Sweden and Singapore healthcare systems. This competition can be of benefit to consumers in terms of favourable prices and improved quality of healthcare services, and also influence price determination for health services. The section below highlights the scope of interaction between private facilities and public facilities.

SCOPE OF INTERACTION BETWEEN PRIVATE FACILITIES AND PUBLIC FACILITIES IN SOUTH AFRICA

578. The advantages emanating from public and private healthcare sector collaboration are mainly centred on three central themes, namely the expansion of access to healthcare services, the achievement of better efficiency and the improvement of quality of care, all of which are key to competition.[348] [349] [350] [351] [352]

579. In the South African health care sector, there is no strategic and competitive partnership between the public facilities and private facilities. Given the level of excess capacity in local private healthcare markets and the overburdened public sector which fails to meet the healthcare demands of its population, the private sector can be a conduit of the expansion of healthcare access. For example, waiting lists in the public sector facilities can be reduced, if the public sector, could competitively channel some patients to be treated at private sector facilities. The UK NHS serves as an example where the NHS has contracted with the private sector for maternity and neonatal services through a competitive bidding process.[353]

580. There are incentives on both the private and public sectors as their collaboration is mutually beneficial. For instance, collaboration will enhance efficiency through the efficient use of limited resources. The public sector can benefit from the expertise of the private sector and the private sector can, in addition, complement the public sector approaches to delivering health care. The private sector would derive scale benefits from increased utilisation of its excess capacity. There will be an increase in general access to quality healthcare to the South African population. The state, as a big purchaser of healthcare services can also exert downward pressure on the private sector pricing, through price determination by competitive bidding process when contracting with private providers.

581. There are, however, disadvantages coupled with public-private healthcare sector initiatives. These disadvantages include unreliable levels of service and lack of transparency resulting in benefits not being shared with the public sector agencies.

582. Currently some Public-Private Partnerships (PPPs) already exist in the healthcare sector in South Africa. This is mostly between the listed hospital groups and respective provincial departments of health. For instance, Netcare operates about four PPPs with the Free State[354] and Eastern Cape[355]

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348. Africa Health Forum. 2013. Public Private Partnerships for Health: PPPs are Here and Growing. Accessed from: http://siteresources.worldbank.org/INTAFRICA/Resources/AHF-public-private-partnerships-for-health-ppps-are-here-and-growing.pdf on 2 February 2018.
349. Ter-Minassian, T. 2006. The Economics of Public-Private Partnerships. Accessed from: https://www.oecd.org/mena/governance/37147153.pdf on 1 February 2018.
350. International Finance Cooperation, IFC Support to Health Public-Private Partnerships. Accessed from: https://www.ifc.org/wps/wcm/connect/b10f4080498391e2865cd6336b93d75f/IFC_Support2Health_WEB.pdf?MOD=AJPERES&CACHEID=b10f4080498391e2865cd6336b93d75f , pg. 6.
351. Raman, A.V. Public-Private Partnership in Health Care: Context, Models, and Lessons. Accessed from: http://www.who.int/global_health_histories/seminars/Raman_presentation.pdf on 2 February 2018.
352. Fong, B. 2016. Public Private Partnership in Health Care in Hong Kong: What are the effective strategies? Accessed from: http://healthconf2016.cpce-polyu.edu.hk/wp-content/uploads/2016/01/E4-Public-Private-Partnership-in-Health-Care.pdf on 1 February 2018.
353. Department of Health. 2017. Safer Maternity Care: The National Maternity Safety Strategy - Progress and Next Steps. Accessed from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/662969/Safer_maternity_care_-_progress_and_next_steps.pdf on 22 March 2018.
354. Netcare Pelenomi and Netcare Universitas.
355. Netcare Settlers and Netcare Port Alfred.

provincial governments.[356] Life Healthcare Group and small facility groups such as Clinix Health Group have also previously been involved in healthcare service delivery arrangements with the state.[357] [358] PPPs are presently the main forms of collaboration between the two sectors, however regarded largely ineffective because of limited infusion of competition in collaborations.

583. The HMI has noted concerns raised by stakeholders regarding the lack of collaboration between the public and private sector. These concerns are discussed below:

    593.1 Firstly, stakeholders have stated that the collaboration between the public and private sector takes a lot of political will and it is fraught with difficulty.[359]

    593.2 Secondly, stakeholders have gone as far as arguing that the government terminates PPP agreements without placing any reasons on the table for such an action.[360]

584. The HMI has also found that the absence of competitive tender process followed for establishing PPP arrangements, is due to lack of planning from the provincial departments of health when having an arrangement in place to procure services from the private sector.

585. An example where there was lack of planning and failure by the government to effectively collaborate with the private sector was in Limpopo. The provincial government had a PPP arrangement with a private facility operator in terms of which the provincial department of health "had the option, but not an obligation to refer patients" to the private facility. Because of the low occupancy rates stemming mainly from the lack of patients' referrals, the private facility was financially unsustainable. The facility planned shutdown was deferred to early 2017.[361]

586. The Limpopo PPP arrangement example, shows how the South African healthcare system is fragmented, even in the presence of a PPP arrangement that there are still no real efficiencies bearing fruit. Limpopo is one of the rural provinces in South Africa[362], which has a relatively limited number of healthcare facilities. The province also faces a challenge of not being able to meet the healthcare demands of its population.[363] One would expect the state to competitively utilise such public-private initiatives to increase access to healthcare and to relieve the public sector from lengthy waiting lists.

CONCLUSION

587. In conclusion, there is limited competitive constraint by the public facilities to the private facilities in the South African healthcare sector. Despite the limited competitive constraint by the public facilities to the private facilities there is scope to harness competitive synergies and leverage the possible complementarities between the two sectors. Some collaborative mechanisms between the public facilities to the private facilities have been recommended by the HMI in the report.

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356. Guerin-Calvert, 2014. Market Definition and Relevant Markets: Assessment of Competitive Alternatives. Compass Lexecon Report by Netcare.
357. Life Healthcare Group. 2016. Public Hearing Transcript 10 March 2016, pg. 7.
358. Clinix Health Group, 2016. Public Hearing Transcript 4 May 2016, pg. 13.
359. Netcare, 2016. Public Hearing Transcript 11 March 2016, pg. 30.
360. Clinix Health Group, 2016. Public Hearing Transcript 4 May 2016, pg. 80-81.
361. Industrial Development Corporation. 2017. Letter to the HMI dated 10 October 2017.
362. Rural Health Advocacy Project. 2013. FACT SHEET Rural Health - November 2013. Accessed from: https://www.health-e.org.za/wp-content/uploads/2014/02/Updated-Rural-Fact-Sheet-27-Nov-2013.pdf on 6 February 2018.
363. Limpopo Department of Health. Public Hearing Presentation 18 May 2016. Accessed from: http://www.compcom.co.za/wp-content/uploads/2016/05/Presentation-by-Limpopo-DoH-18052016.pdf on 6 February 2018.

TABLE A6.1: FASCIA COUNTS BASED ON RADIAL MODEL AND THE LAVIELLE NON-NETWORK ADJUSTED AND NETWORK ADJUSTED

Facility Name	Network	Lavielle		Radial
		Non-network adjusted	Network adjusted	Non-network adjusted
Netcare	Linkwood Hospital	67	46	57
Mediclinic	Kloof	48	41	55
Mediclinic	Howick Private Hospital	5	4	7
Mediclinic	Tzaneen	1	0	2
National Hospital Network	Daymed Private Hospital	7	3	8
National Hospital Network	Nongoma Private Hospital	0	0	2
Life Healthcare	Isivivana Private Hospital	2	2	2
Netcare	Kokstad Hospital	3	2	3
Independent	Victoria Private Hospital (Itokolle)	2	2	4
Life Healthcare	Fourways Hospital	62	49	47
Netcare	Alberlito Hospital	19	14	25
Netcare	Blaauwberg Hospital	23	19	19
National Hospital Network	Zoutpansberg Private Hospital	0	0	2
National Hospital Network	Mooimed Hospital	22	12	21
Independent	Ascot Park Medical Centre	19	18	18
National Hospital Network	Matatiele Private Hospital	3	3	5
Mediclinic	Plettenberg Bay	7	4	39
National Hospital Network	eThekwini Hospital and Heart Centre	20	15	18
Life Healthcare	Beacon Bay Hospital	3	0	4
Mediclinic	Cape Gate	21	11	16
National Hospital Network	Cairnhall Hospital	4	3	9
National Hospital Network	Welkom Medical Centre	3	1	6
National Hospital Network	Emalahleni Private Hospital	9	7	10
National Hospital Network	Midstream	70	56	55
Netcare	Waterfall City Hospital	74	49	61
National Hospital Network	Hillcrest Private Hospital	21	16	22
Life Healthcare	Piet Retief Hospital	0	0	-
National Hospital Network	Erasmuskloof	74	58	74

National Hospital Network	Lowveld Day Hospital	2	2	2
National Hospital Network	St Stephens Paarl	25	21	22
National Hospital Network	Sub-Acute & Day Hospital Hazeldean	49	38	67
National Hospital Network	Daxina Medical Clinic	47	34	26
National Hospital Network	Randfontein Private Hospital	51	36	33
National Hospital Network	Sub-Acute and Rehabilitation Hospital Irene	69	55	53
National Hospital Network	Capital Oncology	20	15	23
Mediclinic	Secunda	1	0	2
National Hospital Network	Somerset West	24	20	25
Life Healthcare	Anncron Clinic	4	4	4
Life Healthcare	St Mary's Private Hospital	1	1	2
National Hospital Network	Fochville Hospital	27	17	7
Mediclinic	Gynaecological Hospital	43	35	47
Life Healthcare	St James Private and eye Hospital	3	0	5
National Hospital Network	St Vincent's Hospital	1	1	32
National Hospital Network	Sunningdale Hospital	4	2	4
Mediclinic	Lephalale	0	0	1
Independent	Cullinan Private Clinic	37	36	31
Life Healthcare	Faerie Glen Hospital	57	46	52
Life Healthcare	Empangeni Garden Clinic	1	1	4
National Hospital Network	St Helena Hospital	3	1	6
Mediclinic	Victoria Hospital	15	15	16
National Hospital Network	Midlands Medical Centre	14	10	8
National Hospital Network	Leslie Williams Private Hospital	33	23	6
Life Healthcare	Mount Edgecombe Hospital	15	12	15
Netcare	Vaalpark Hospital	7	7	7
Netcare	Clinton Hospital	52	33	36
Netcare	Ceres Hospital	3	2	3
Mediclinic	Geneva Clinic	5	2	5
Independent	Durdoc Clinic	19	18	18
Mediclinic	Strand Private Hospital	24	12	24
Mediclinic	Hermanus	23	12	10
National Hospital Network	Riemland Clinic	1	1	1

National Hospital Network	Cormed Clinic	15	9	9
Independent	Lakeview Hospital	51	50	46
Mediclinic	Barberton	2	1	2
Life Healthcare	Queenstown Private Hospital	0	0	1
National Hospital Network	Zamokuhle Private Hospital	62	49	41
Mediclinic	Thabazimbi	0	0	47
Life Healthcare	Vincent Pallotti Hospital	23	22	21
Life Healthcare	Entabeni Hospital	16	12	18
Netcare	Parklands Hospital	16	12	18
Netcare	St Augustine's Hospital	16	12	18
National Hospital Network	Bellville Medical Centre	24	20	23
Netcare	Park Lane Hospital	67	46	58
Life Healthcare	Brenthurst Clinic	48	38	58
Life Healthcare	Groenkloof	78	61	78
Netcare	Jakaranda Hospital	89	63	90
Netcare	Femina Hospital	44	30	40
Netcare	Rand Hospital	80	55	58
Life Healthcare	Robinson Private Hospital	49	40	33
Netcare	Union Hospital	53	34	38
Netcare	Milpark Hospital	80	55	59
National Hospital Network	Zuid-Afrikaans Hospitaal	79	61	90
Mediclinic	Sandton	61	54	49
Netcare	Garden City Hospital	66	46	52
Netcare	Rosebank Hospital	50	32	53
Life Healthcare	Eugene Marais Hospital	51	42	35
Mediclinic	Wits University Donald Gordon Medical Centre	80	70	61
Mediclinic	Louis Leipoldt	23	12	22
Life Healthcare	Roseacres Clinic	50	37	52
Life Healthcare	Springs Parkland Clinic	34	28	17
Life Healthcare	The Glynnwood Hospital	56	42	42
Netcare	Christiaan Barnard Memorial Hospital	23	19	22
Independent	Lesedi-Dr SK Matseke Memorial Hospital	47	45	36
Mediclinic	Morningside	70	62	55

Life Healthcare	Westville Hospital	17	13	18
Mediclinic	Medforum	49	41	51
Netcare	Greenacres Hospital	4	3	4
Life Healthcare	Flora Clinic	53	42	43
National Hospital Network	Arwyp Medical Centre	71	56	51
Mediclinic	George Ltd	5	2	5
Mediclinic	Panorama	23	12	23
National Hospital Network	Mitchells Plain Medical Centre	20	17	17
Mediclinic	Highveld	4	2	3
Life Healthcare	St George's Hospital	4	3	5
Life Healthcare	Cosmos Hospital	3	2	5
Mediclinic	Constantiaberg	23	12	16
Mediclinic	Worcester	13	6	10
Life Healthcare	Rosepark Hospital	2	2	7
Mediclinic	Vergelegen	24	12	12
Mediclinic	Kimberley	1	1	4
Mediclinic	Potchefstroom	39	35	20
Mediclinic	Muelmed	47	39	60
Mediclinic	Pietermaritzburg	13	12	8
Mediclinic	Vereeniging	15	12	11
National Hospital Network	Gatesville Medical Centre	23	19	19
Netcare	Krugersdorp Hospital	51	35	36
Netcare	Unitas Hospital	71	46	47
Life Healthcare	Dalview Clinic	27	22	19
Mediclinic	Bloemfontein	3	3	7
Life Healthcare	Carstenhof Clinic	68	54	48
Mediclinic	Limpopo	1	0	4
Netcare	St Anne's Hospital	13	10	8
Netcare	Kingsway Hospital	21	15	17
Life Healthcare	Chatsmed Garden Hospital	14	11	16
Netcare	Sunward Park Hospital	39	23	34
National Hospital Network	La Verna Hospital	1	1	2
Life Healthcare	Midmed Hospital	3	2	6
Mediclinic	Paarl	23	11	19
Netcare	Mulbarton Hospital	49	30	33

Netcare	Moot Hospital	39	28	29
Life Healthcare	St Dominic's Hospital	3	0	4
Life Healthcare	Bedford Gardens Private Hospital	49	39	41
National Hospital Network	Ahmed Kathrada Private Hospital	51	37	29
Mediclinic	Nelspruit	2	1	2
Life Healthcare	Peglerae La Femme Hospital	5	4	7
Mediclinic	Emfuleni	15	12	9
Netcare	Kroon Hospital	3	3	-
Netcare	Ferncrest Hospital	5	4	7
Mediclinic	Stellenbosch	24	12	25
Netcare	Sunninghill Hospital	75	50	60
Life Healthcare	East London Private Hospital	3	0	5
National Hospital Network	Shifa Hospital	16	13	18
Netcare	The Bay Hospital	1	1	4
Life Healthcare	Kingsbury Hospital	23	22	16
Mediclinic	Legae	22	18	24
Netcare	Linksfield Hospital	55	36	46
Netcare	Olivedale Hospital	62	43	46
Netcare	Margate Hospital	4	2	31
Netcare	N1 City Hospital	23	19	22
National Hospital Network	Ernest Oppenheimer Hospital	6	3	6
National Hospital Network	Vryburg Private Hospital	1	1	3
Netcare	Linmed Hospital	50	32	40
Life Healthcare	The Crompton Hospital	19	15	18
Netcare	Akasia Hospital	39	28	33
Life Healthcare	Mercantile Private Hospital	4	3	4
Netcare	Cuyler Hospital	4	3	3
Life Healthcare	Wilgers Hospital	49	41	85
Mediclinic	Milnerton	23	12	22
Independent	Botshelong - Empilweni Private Hospital	29	28	26
Mediclinic	Hoogland	3	3	2
Mediclinic	Brits	54	46	26
Netcare	Bell Street Hospital	45	29	35

Mediclinic	Welkom	4	4	6
Mediclinic	Durbanville	24	12	17
National Hospital Network	Sunshine Hospital	59	45	43
Independent	Tshepo-Themba Private Hospital	41	40	31
Life Healthcare	Bay View Hospital	5	4	5
Mediclinic	Upington	0	0	-
National Hospital Network	Wilmed Park Private Hospital	4	2	10
National Hospital Network	Louis Pasteur Medical Center	67	54	72
Life Healthcare	Wilgeheuwel Hospital	52	40	39
Netcare	Pretoria East Hospital	48	32	66
Mediclinic	Ermelo	1	0	4
Mediclinic	Newcastle Private Hospital	0	0	1
National Hospital Network	Midvaal Private Hospital	15	9	12
National Hospital Network	Hibiscus Private Hospital	3	3	17
Mediclinic	Klein Karoo	5	2	4
Netcare	Umhlanga Hospital	19	14	17
Independent	Naledi - Nkanyezi Private Hospital	22	21	11
Netcare	Bougainville Private Hospital	38	27	29
Life Healthcare	Knysna Private Hospital	5	4	4
Life Healthcare	West Coast Private Hospital	0	0	-
Mediclinic	Cape Town	24	12	16
Netcare	Montana Hospital	37	26	35
Netcare	East Rand N17 Private Hospital	37	22	20
Independent	Wisani Medical Centre	42	41	30
Netcare	UCT Academic Hospital	25	20	25
National Hospital Network	Medgate Day Clinic	49	35	33
National Hospital Network	Medkin	53	42	60
Life Healthcare	Pretoria North Surgical Centre	31	26	30
National Hospital Network	Mayo Clinic	69	52	46
National Hospital Network	Kilnerpark Clinic	36	27	29
Life Healthcare	Brooklyn Hospital	74	58	64
Independent	Medical Forum Theatre	6	6	6
Netcare	Kuils River Hospital	24	20	22

TABLE A6.2: LAVIELLE HHI FOR (I) RESPECTIVE CATCHMENT AREAS NOT ADJUSTED FOR NETWORK MEMBERSHIP (HHI1) AND ADJUSTED FOR NETWORK MEMBERSHIP (HHI2) AND (II) CLUSTER OVERLAPS NOT ADJUSTED FOR NETWORK MEMBERSHIP (HHI3) AND ADJUSTED FOR NETWORK MEMBERSHIP (HHI4)

Facility Name	Network	HHI 1	HHI 2	HHI 3	HHI 4
Cairnhall Hospital	National Hospital Network	5690	5690	3797	5718
Wisani Medical Centre	Independent	730	730	434	628
UCT Academic Hospital	Netcare	559	1084	529	1037
Kuils River Hospital	Netcare	703	1318	530	1071
Linkwood Hospital	Netcare	369	3057	249	2884
Kloof	Mediclinic	806	1116	390	899
Howick Private Hospital	Mediclinic	2664	3336	2477	3377
Tzaneen	Mediclinic	9821	10000	5709	10000
Daymed Private Hospital	National Hospital Network	2960	3108	2012	3008
Nongoma Private Hospital	National Hospital Network	10000	10000	10000	10000
Isivivana Private Hospital	Life Healthcare	8535	8535	3368	3368
Kokstad Hospital	Netcare	7207	8587	3964	8350
Victoria Private Hospital (Itokolle)	Independent	9859	9859	4775	10000
Fourways Hospital	Life Healthcare	557	1392	270	1142
Alberlito Hospital	Netcare	871	2059	706	2637
Blaauwberg Hospital	Netcare	670	1383	554	1245
Zoutpansberg Private Hospital	National Hospital Network	10000	10000	10000	10000
Mooimed Hospital	National Hospital Network	1288	1604	895	5067
Ascot Park Medical Centre	Independent	898	901	706	871
Matatiele Private Hospital	National Hospital Network	5855	5855	3887	8350
Plettenberg Bay	Mediclinic	2291	4223	2053	4103
eThekwini Hospital and Heart Centre	National Hospital Network	872	918	699	1012
Beacon Bay Hospital	Life Healthcare	3808	10000	3807	10000
Cape Gate	Mediclinic	1417	5233	596	3411
Welkom Medical Centre	National Hospital Network	8027	8102	8120	8188
Emalahleni Private Hospital	National Hospital Network	4556	4557	1956	3959
Midstream	National Hospital Network	329	348	242	318
Waterfall City Hospital	Netcare	272	2895	234	2945
Hillcrest Private Hospital	National Hospital Network	764	847	686	975

Piet Retief Hospital	Life Healthcare	10000	10000	10000	10000
Erasmuskloof	National Hospital Network	254	268	233	383
Lowveld Day Hospital	National Hospital Network	7297	7297	7286	9192
St Stephens Paarl	National Hospital Network	871	879	529	646
Sub-Acute & Day Hospital Hazeldean	National Hospital Network	710	747	376	565
Daxina Medical Clinic	National Hospital Network	753	794	352	536
Randfontein Private Hospital	National Hospital Network	633	642	339	444
Sub-Acute and Rehabilitation Hospital Irene	National Hospital Network	330	349	245	334
Capital Oncology	National Hospital Network	848	897	699	925
Secunda	Mediclinic	6443	10000	6861	10000
Somerset West	National Hospital Network	726	845	530	595
Anncron Clinic	Life Healthcare	4965	4965	3035	3035
St Mary's Private Hospital	Life Healthcare	9951	9951	9482	9482
Fochville Hospital	National Hospital Network	1787	2128	730	1760
Gynaecological Hospital	Mediclinic	804	1122	434	971
St James Private and eye Hospital	Life Healthcare	3852	10000	3807	10000
St Vincent's Hospital	National Hospital Network	9016	9016	8048	8048
Sunningdale Hospital	National Hospital Network	3853	4231	3035	3404
Lephalale	Mediclinic	10000	10000	10000	10000
Cullinan Private Clinic	Independent	734	734	541	823
Faerie Glen Hospital	Life Healthcare	576	1075	304	1027
Empangeni Garden Clinic	Life Healthcare	5326	5326	5360	5360
St Helena Hospital	National Hospital Network	8029	8104	8120	8188
Victoria Hospital	Mediclinic	2079	2079	949	949
Midlands Medical Centre	National Hospital Network	2746	2922	1050	2091
Leslie Williams Private Hospital	National Hospital Network	1354	1582	554	1342
Mount Edgecombe Hospital	Life Healthcare	1656	2528	949	2162
Vaalpark Hospital	Netcare	2687	2687	1975	1975
Clinton Hospital	Netcare	554	4322	311	3072
Ceres Hospital	Netcare	9718	9718	5954	9315
Geneva Clinic	Mediclinic	2750	4510	2452	4103
Durdoc Clinic	Independent	896	899	706	871
Strand Private Hospital	Mediclinic	810	3300	530	3315

Hermanus	Mediclinic	2342	6263	559	8196
Riemland Clinic	National Hospital Network	7242	7242	9545	10000
Cormed Clinic	National Hospital Network	2543	2638	1209	1565
Lakeview Hospital	Independent	689	691	299	401
Barberton	Mediclinic	5355	9665	7286	9284
Queenstown Private Hospital	Life Healthcare	10000	10000	10000	10000
Zamokuhle Private Hospital	National Hospital Network	647	683	272	394
Thabazimbi	Mediclinic	10000	10000	10000	10000
Vincent Pallotti Hospital	Life Healthcare	641	696	554	622
Entabeni Hospital	Life Healthcare	1002	3041	868	2471
Parklands Hospital	Netcare	1040	1970	868	2288
St Augustine's Hospital	Netcare	983	2019	868	2155
Bellville Medical Centre	National Hospital Network	601	657	530	595
Park Lane Hospital	Netcare	370	3090	247	3157
Brenthurst Clinic	Life Healthcare	554	1118	340	1203
Groenkloof	Life Healthcare	248	1058	221	971
Jakaranda Hospital	Netcare	221	2488	195	4150
Femina Hospital	Netcare	781	2707	420	2646
Rand Hospital	Netcare	312	2943	218	2945
Robinson Private Hospital	Life Healthcare	760	1499	352	937
Union Hospital	Netcare	472	3888	306	3015
Milpark Hospital	Netcare	312	2955	218	2721
Zuid-Afrikaans Hospitaal	National Hospital Network	236	255	221	403
Sandton	Mediclinic	487	575	273	384
Garden City Hospital	Netcare	372	3114	249	2978
Rosebank Hospital	Netcare	546	3072	333	2968
Eugene Marais Hospital	Life Healthcare	623	1082	354	917
Wits University Donald Gordon Medical Centre	Mediclinic	300	364	218	408
Louis Leipoldt	Mediclinic	693	2646	554	3315
Roseacres Clinic	Life Healthcare	702	1457	313	1243
Springs Parkland Clinic	Life Healthcare	1509	2931	491	826
The Glynnwood Hospital	Life Healthcare	579	1610	274	927
Christiaan Barnard Memorial Hospital	Netcare	664	1334	554	1183

Lesedi-Dr SK Matseke Memorial Hospital	Independent	743	780	357	399
Morningside	Mediclinic	356	410	238	395
Westville Hospital	Life Healthcare	960	2866	819	2471
Medforum	Mediclinic	686	1035	378	899
Greenacres Hospital	Netcare	2507	3711	2500	3702
Flora Clinic	Life Healthcare	516	1173	326	1171
Arwyp Medical Centre	National Hospital Network	347	355	239	304
George Ltd	Mediclinic	2748	4493	2452	4103
Panorama	Mediclinic	751	2852	554	3411
Mitchells Plain Medical Centre	National Hospital Network	1349	2515	619	678
Highveld	Mediclinic	6808	9957	3844	10000
St George's Hospital	Life Healthcare	2505	3634	2500	3622
Cosmos Hospital	Life Healthcare	4834	9334	3959	7571
Constantiaberg	Mediclinic	662	2648	554	3053
Worcester	Mediclinic	4526	9640	1236	7560
Rosepark Hospital	Life Healthcare	5582	5582	5718	5718
Vergelegen	Mediclinic	1431	3060	530	2899
Kimberley	Mediclinic	9999	9999	9758	10000
Potchefstroom	Mediclinic	765	1618	472	4391
Muelmed	Mediclinic	744	1089	394	899
Pietermaritzburg	Mediclinic	2936	3367	1129	1900
Vereeniging	Mediclinic	2549	4780	1209	3153
Gatesville Medical Centre	National Hospital Network	664	732	554	658
Krugersdorp Hospital	Netcare	681	2578	337	2990
Unitas Hospital	Netcare	310	2424	237	2608
Dalview Clinic	Life Healthcare	1826	4174	579	1075
Bloemfontein	Mediclinic	5719	5719	5610	5718
Carstenhof Clinic	Life Healthcare	425	1189	245	1209
Limpopo	Mediclinic	9867	10000	5709	10000
St Anne's Hospital	Netcare	2910	2915	1129	2275
Kingsway Hospital	Netcare	943	2122	667	2623
Chatsmed Garden Hospital	Life Healthcare	1538	4017	1007	2284
Sunward Park Hospital	Netcare	1286	3791	403	4209
La Verna Hospital	National Hospital Network	7065	7065	6213	10000

Midmed Hospital	Life Healthcare	4791	9395	3959	9298
Paarl	Mediclinic	1675	8087	551	3880
Mulbarton Hospital	Netcare	786	5029	317	2863
Moot Hospital	Netcare	708	2518	473	3457
St Dominic's Hospital	Life Healthcare	3856	10000	3807	10000
Bedford Gardens Private Hospital	Life Healthcare	769	1470	332	1022
Ahmed Kathrada Private Hospital	National Hospital Network	782	806	328	484
Nelspruit	Mediclinic	7287	9284	7286	9192
Peglerae La Femme Hospital	Life Healthcare	6228	6228	2452	3618
Emfuleni	Mediclinic	2545	4796	1209	3416
Kroon Hospital	Netcare	8150	8150	3878	10000
Ferncrest Hospital	Netcare	6050	6058	2452	3905
Stellenbosch	Mediclinic	834	4066	530	3637
Sunninghill Hospital	Netcare	281	2918	233	2809
East London Private Hospital	Life Healthcare	3805	10000	3807	10000
Shifa Hospital	National Hospital Network	1008	1058	868	912
The Bay Hospital	Netcare	5362	5362	5360	5360
Kingsbury Hospital	Life Healthcare	656	712	554	629
Legae	Mediclinic	3387	4147	865	1749
Linksfield Hospital	Netcare	467	3507	302	3151
Olivedale Hospital	Netcare	554	2836	274	2613
Margate Hospital	Netcare	4659	5791	4449	6023
N1 City Hospital	Netcare	669	1362	554	1107
Ernest Oppenheimer Hospital	National Hospital Network	8025	8092	5186	8188
Vryburg Private Hospital	National Hospital Network	9355	9355	5951	10000
Linmed Hospital	Netcare	932	2667	308	3540
The Crompton Hospital	Life Healthcare	997	3087	706	2625
Akasia Hospital	Netcare	708	2613	473	3267
Mercantile Private Hospital	Life Healthcare	2505	3635	2500	3622
Cuyler Hospital	Netcare	5002	6545	2500	3702
Wilgers Hospital	Life Healthcare	762	1262	378	787
Milnerton	Mediclinic	669	2677	554	3234
Botshelong - Empilweni Private Hospital	Independent	1887	1894	503	530

Hoogland	Mediclinic	9815	9815	4012	10000
Brits	Mediclinic	961	2060	342	1085
Bell Street Hospital	Netcare	899	2582	372	2996
Welkom	Mediclinic	8107	8107	5584	8120
Durbanville	Mediclinic	823	3131	530	3411
Sunshine Hospital	National Hospital Network	518	528	267	384
Tshepo-Themba Private Hospital	Independent	1073	1147	405	433
Bay View Hospital	Life Healthcare	2459	3257	2452	3744
Upington	Mediclinic	10000	10000	10000	10000
Wilmed Park Private Hospital	National Hospital Network	3048	3439	3035	3404
Louis Pasteur Medical Center	National Hospital Network	351	378	253	438
Wilgeheuwel Hospital	Life Healthcare	617	1314	328	860
Pretoria East Hospital	Netcare	799	2515	390	2646
Ermelo	Mediclinic	5241	10000	7387	10000
Newcastle Private Hospital	Mediclinic	10000	10000	10000	10000
Midvaal Private Hospital	National Hospital Network	2804	2914	1209	1454
Hibiscus Private Hospital	National Hospital Network	5506	5506	4506	5567
Klein Karoo	Mediclinic	5252	7936	2452	5482
Umhlanga Hospital	Netcare	873	2077	706	2862
Naledi - Nkanyezi Private Hospital	Independent	2182	2183	825	1220
Bougainville Private Hospital	Netcare	700	2732	496	3498
Knysna Private Hospital	Life Healthcare	2798	3485	2452	3744
West Coast Private Hospital	Life Healthcare	10000	10000	10000	10000
Cape Town	Mediclinic	604	3022	530	3493
Montana Hospital	Netcare	671	2357	522	3238
East Rand N17 Private Hospital	Netcare	1378	3195	437	4543
Medgate Day Clinic	National Hospital Network	626	631	345	442
Medkin	National Hospital Network	603	639	338	528
Pretoria North Surgical Centre	Life Healthcare	831	1198	659	985
Mayo Clinic	National Hospital Network	394	412	249	388
Kilnerpark Clinic	National Hospital Network	702	714	546	674
Brooklyn Hospital	Life Healthcare	265	1153	233	924
Medical Forum Theatre	Independent	2433	2433	2360	3275

TABLE A6.3: RADIAL HHI FOR (I) RESPECTIVE CATCHMENT AREAS NOT ADJUSTED FOR NETWORK MEMBERSHIP (HHI1) AND ADJUSTED FOR NETWORK MEMBERSHIP (HHI2) AND (II) CLUSTER OVERLAPS NOT ADJUSTED FOR NETWORK MEMBERSHIP (HHI3)

Facility Name	Network	HHI 1	HHI 2	HHI 3
Linkwood Hospital	Netcare	448	3 406	279
Kloof	Mediclinic	594	848	322
Howick Private Hospital	Mediclinic	2 879	3 350	1 891
Tzaneen	Mediclinic	5 066	9 462	5 219
Daymed Private Hospital	National Hospital Network	2 894	3 038	1 690
Nongoma Private Hospital	National Hospital Network	4 772	4 772	5 137
Isivivana Private Hospital	Life Healthcare	8 974	8 974	3 372
Kokstad Hospital	Netcare	4 640	7 896	4 316
Victoria Private Hospital (Itokolle)	Independent	8 093	8 093	3 095
Fourways Hospital	Life Healthcare	1 064	1 669	358
Alberlito Hospital	Netcare	697	2 042	563
Blaauwberg Hospital	Netcare	1 172	2 126	627
Zoutpansberg Private Hospital	National Hospital Network	4 364	4 364	5 219
Mooimed Hospital	National Hospital Network	1 090	1 416	891
Ascot Park Medical Centre	Independent	970	973	785
Matatiele Private Hospital	National Hospital Network	3 056	3 092	2 493
Plettenberg Bay	Mediclinic	544	2 065	387
eThekwini Hospital and Heart Centre	National Hospital Network	1 004	1 058	785
Beacon Bay Hospital	Life Healthcare	3 834	9 998	3 437
Cape Gate	Mediclinic	2 484	8 068	793
Cairnhall Hospital	National Hospital Network	2 967	2 970	2 518
Welkom Medical Centre	National Hospital Network	7 777	7 857	4 010
Emalahleni Private Hospital	National Hospital Network	4 539	4 541	1 546
Midstream	National Hospital Network	566	614	319
Waterfall City Hospital	Netcare	503	2 720	266
Hillcrest Private Hospital	National Hospital Network	1 248	1 341	639
Piet Retief Hospital	Life Healthcare	10 000	10 000	10 000
Erasmuskloof	National Hospital Network	277	294	231
Lowveld Day Hospital	National Hospital Network	7 734	7 734	7 734
St Stephens Paarl	National Hospital Network	1 317	1 319	629

Sub-Acute & Day Hospital Hazeldean	National Hospital Network	327	353	252
Daxina Medical Clinic	National Hospital Network	1 741	1 956	644
Randfontein Private Hospital	National Hospital Network	1 366	1 386	483
Sub-Acute and Rehabilitation Hospital Irene	National Hospital Network	677	732	340
Capital Oncology	National Hospital Network	719	793	626
Secunda	Mediclinic	6 153	10 000	5 206
Somerset West	National Hospital Network	716	830	521
Anncron Clinic	Life Healthcare	3 111	3 111	2 959
St Mary's Private Hospital	Life Healthcare	9 830	9 830	4 883
Fochville Hospital	National Hospital Network	3 813	5 065	2 022
Gynaecological Hospital	Mediclinic	653	1 003	392
St James Private and eye Hospital	Life Healthcare	3 772	9 997	2 633
St Vincent's Hospital	National Hospital Network	715	737	655
Sunningdale Hospital	National Hospital Network	3 088	3 474	2 959
Lephalale	Mediclinic	9 867	10 000	6 537
Cullinan Private Clinic	Independent	769	769	742
Faerie Glen Hospital	Life Healthcare	623	1 143	342
Empangeni Garden Clinic	Life Healthcare	5 105	5 105	2 679
St Helena Hospital	National Hospital Network	7 780	7 860	4 010
Victoria Hospital	Mediclinic	1 137	1 137	877
Midlands Medical Centre	National Hospital Network	2 873	3 027	1 690
Leslie Williams Private Hospital	National Hospital Network	3 718	5 035	2 442
Mount Edgecombe Hospital	Life Healthcare	2 530	3 033	960
Vaalpark Hospital	Netcare	2 921	2 921	1 952
Clinton Hospital	Netcare	968	4 966	390
Ceres Hospital	Netcare	9 158	9 158	7 212
Geneva Clinic	Mediclinic	3 293	5 524	2 442
Durdoc Clinic	Independent	926	930	785
Strand Private Hospital	Mediclinic	1 172	3 312	549
Hermanus	Mediclinic	4 725	9 895	1 618
Riemland Clinic	National Hospital Network	6 038	6 038	9 475
Cormed Clinic	National Hospital Network	2 841	2 921	1 568

Lakeview Hospital	Independent	891	891	326
Barberton	Mediclinic	5 391	9 697	7 734
Queenstown Private Hospital	Life Healthcare	9 996	9 996	6 246
Zamokuhle Private Hospital	National Hospital Network	1 402	1 639	392
Thabazimbi	Mediclinic	590	1 181	415
Vincent Pallotti Hospital	Life Healthcare	821	926	633
Entabeni Hospital	Life Healthcare	1 057	3 002	785
Parklands Hospital	Netcare	1 043	2 022	785
St Augustine's Hospital	Netcare	1 057	2 085	785
Bellville Medical Centre	National Hospital Network	863	924	564
Park Lane Hospital	Netcare	420	3 062	279
Brenthurst Clinic	Life Healthcare	425	1 172	279
Groenkloof	Life Healthcare	231	1 025	219
Jakaranda Hospital	Netcare	205	2 198	191
Femina Hospital	Netcare	730	2 557	467
Rand Hospital	Netcare	421	3 092	279
Robinson Private Hospital	Life Healthcare	1 391	2 643	482
Union Hospital	Netcare	911	4 902	373
Milpark Hospital	Netcare	407	3 039	275
Zuid-Afrikaans Hospitaal	National Hospital Network	206	231	191
Sandton	Mediclinic	760	990	328
Garden City Hospital	Netcare	512	3 128	304
Rosebank Hospital	Netcare	559	3 084	294
Eugene Marais Hospital	Life Healthcare	774	1 225	588
Wits University Donald Gordon Medical Centre	Mediclinic	380	432	265
Louis Leipoldt	Mediclinic	1 126	3 616	597
Roseacres Clinic	Life Healthcare	583	1 170	287
Springs Parkland Clinic	Life Healthcare	2 366	5 157	815
The Glynnwood Hospital	Life Healthcare	1 214	2 697	360
Christiaan Barnard Memorial Hospital	Netcare	829	1 524	597
Lesedi-Dr SK Matseke Memorial Hospital	Independent	968	1 046	412
Morningside	Mediclinic	604	760	294

Westville Hospital	Life Healthcare	1 172	3 106	785
Medforum	Mediclinic	593	986	352
Greenacres Hospital	Netcare	3 330	3 330	3 171
Flora Clinic	Life Healthcare	931	1 764	353
Arwyp Medical Centre	National Hospital Network	754	781	302
George Ltd	Mediclinic	3 495	5 612	2 442
Panorama	Mediclinic	699	2 724	564
Mitchells Plain Medical Centre	National Hospital Network	2 879	4 752	696
Highveld	Mediclinic	6 838	9 998	4 706
St George's Hospital	Life Healthcare	2 907	4 351	2 447
Cosmos Hospital	Life Healthcare	6 509	9 008	2 488
Constantiaberg	Mediclinic	1 541	2 275	736
Worcester	Mediclinic	4 118	9 736	1 897
Rosepark Hospital	Life Healthcare	5 552	5 552	2 957
Vergelegen	Mediclinic	7 039	9 325	1 250
Kimberley	Mediclinic	9 112	9 732	3 698
Potchefstroom	Mediclinic	1 475	2 633	865
Muelmed	Mediclinic	451	894	290
Pietermaritzburg	Mediclinic	3 109	3 317	1 690
Vereeniging	Mediclinic	2 758	5 108	1 359
Gatesville Medical Centre	National Hospital Network	916	1 044	676
Krugersdorp Hospital	Netcare	1 242	2 493	437
Unitas Hospital	Netcare	708	2 565	390
Dalview Clinic	Life Healthcare	1 767	4 428	769
Bloemfontein	Mediclinic	5 330	5 661	2 957
Carstenhof Clinic	Life Healthcare	728	1 191	324
Limpopo	Mediclinic	5 496	9 506	4 790
St Anne's Hospital	Netcare	2 947	2 966	1 690
Kingsway Hospital	Netcare	1 209	2 351	852
Chatsmed Garden Hospital	Life Healthcare	2 208	4 806	909
Sunward Park Hospital	Netcare	1 707	3 702	417
La Verna Hospital	National Hospital Network	8 529	8 529	3 956
Midmed Hospital	Life Healthcare	4 644	9 305	2 244
Paarl	Mediclinic	1 656	8 291	711

Mulbarton Hospital	Netcare	1 621	7 403	447
Moot Hospital	Netcare	680	2 265	795
St Dominic's Hospital	Life Healthcare	3 824	9 998	3 437
Bedford Gardens Private Hospital	Life Healthcare	878	1 615	348
Ahmed Kathrada Private Hospital	National Hospital Network	1 233	1 312	564
Nelspruit	Mediclinic	7 746	9 273	7 734
Peglerae La Femme Hospital	Life Healthcare	6 441	6 465	1 937
Emfuleni	Mediclinic	2 769	5 295	1 568
Kroon Hospital	Netcare	10 000	10 000	10 000
Ferncrest Hospital	Netcare	6 412	6 422	1 937
Stellenbosch	Mediclinic	686	3 739	521
Sunninghill Hospital	Netcare	495	2 583	266
East London Private Hospital	Life Healthcare	3 753	9 996	2 633
Shifa Hospital	National Hospital Network	1 073	1 115	785
The Bay Hospital	Netcare	5 315	5 387	2 679
Kingsbury Hospital	Life Healthcare	1 029	1 242	736
Legae	Mediclinic	3 170	4 441	688
Linksfield Hospital	Netcare	733	3 523	329
Olivedale Hospital	Netcare	1 003	2 458	351
Margate Hospital	Netcare	568	1 958	509
N1 City Hospital	Netcare	930	1 733	597
Ernest Oppenheimer Hospital	National Hospital Network	7 808	7 886	4 010
Vryburg Private Hospital	National Hospital Network	4 369	5 705	4 857
Linmed Hospital	Netcare	1 832	3 029	368
The Crompton Hospital	Life Healthcare	1 253	3 897	785
Akasia Hospital	Netcare	714	2 535	631
Mercantile Private Hospital	Life Healthcare	3 315	5 015	3 171
Cuyler Hospital	Netcare	9 175	9 175	4 518
Wilgers Hospital	Life Healthcare	220	1 089	198
Milnerton	Mediclinic	783	2 865	597
Botshelong - Empilweni Private Hospital	Independent	1 949	1 954	530
Hoogland	Mediclinic	9 953	9 953	8 872
Brits	Mediclinic	4 757	6 734	686
Bell Street Hospital	Netcare	1 592	2 701	453

Welkom	Mediclinic	7 855	8 039	4 010
Durbanville	Mediclinic	2 059	7 725	743
Sunshine Hospital	National Hospital Network	856	862	348
Tshepo-Themba Private Hospital	Independent	1 234	1 364	509
Bay View Hospital	Life Healthcare	2 752	3 520	2 442
Upington	Mediclinic	10 000	10 000	10 000
Wilmed Park Private Hospital	National Hospital Network	2 702	3 292	1 555
Louis Pasteur Medical Center	National Hospital Network	296	316	235
Wilgeheuwel Hospital	Life Healthcare	1 259	2 482	407
Pretoria East Hospital	Netcare	350	2 356	253
Ermelo	Mediclinic	3 863	9 133	3 240
Newcastle Private Hospital	Mediclinic	9 865	9 865	6 405
Midvaal Private Hospital	National Hospital Network	2 601	2 701	1 196
Hibiscus Private Hospital	National Hospital Network	2 350	2 367	978
Klein Karoo	Mediclinic	5 674	7 873	3 039
Umhlanga Hospital	Netcare	1 033	2 116	807
Naledi - Nkanyezi Private Hospital	Independent	2 909	2 909	1 359
Bougainville Private Hospital	Netcare	823	2 698	795
Knysna Private Hospital	Life Healthcare	5 004	5 453	2 791
West Coast Private Hospital	Life Healthcare	10 000	10 000	10 000
Cape Town	Mediclinic	1 005	2 277	736
Montana Hospital	Netcare	745	2 477	588
East Rand N17 Private Hospital	Netcare	1 711	2 682	755
Wisani Medical Centre	Independent	1 481	481	701
UCT Academic Hospital	Netcare	613	1 202	521
Medgate Day Clinic	National Hospital Network	1 333	1 336	482
Medkin	National Hospital Network	459	499	290
Pretoria North Surgical Centre	Life Healthcare	779	1 197	744
Mayo Clinic	National Hospital Network	565	569	320
Kilnerpark Clinic	National Hospital Network	699	713	795
Brooklyn Hospital	Life Healthcare	369	886	270
Medical Forum Theatre	Independent	2 499	2 499	2 378
Kuils River Hospital	Netcare	1 400	1 887	564

TABLE A6.4: LOCI RESULTS ON SUB-PLACE LEVEL NOT ADJUSTED FOR NETWORK MEMBERSHIP (LOCI1) AND ADJUSTED FOR NETWORK MEMBERSHIP (LOCI2).

Facility Name	Network	LOCI 1	LOCI 2
Linkwood Hospital	Netcare	99%	43%
Kloof	Mediclinic	85%	71%
Howick Private Hospital	Mediclinic	66%	43%
Tzaneen	Mediclinic	35%	17%
Daymed Private Hospital	National Hospital Network	96%	70%
Nongoma Private Hospital	National Hospital Network	85%	80%
Isivivana Private Hospital	Life Healthcare	71%	37%
Kokstad Hospital	Netcare	63%	36%
Victoria Private Hospital (Itokolle)	Independent	47%	46%
Fourways Hospital	Life Healthcare	70%	57%
Alberlito Hospital	Netcare	67%	41%
Blaauwberg Hospital	Netcare	59%	49%
Zoutpansberg Private Hospital	National Hospital Network	78%	74%
Mooimed Hospital	National Hospital Network	93%	83%
Ascot Park Medical Centre	Independent	97%	93%
Matatiele Private Hospital	National Hospital Network	92%	80%
Plettenberg Bay	Mediclinic	61%	44%
eThekwini Hospital and Heart Centre	National Hospital Network	90%	83%
Beacon Bay Hospital	Life Healthcare	66%	7%
Cape Gate	Mediclinic	69%	23%
Cairnhall Hospital	National Hospital Network	99%	97%
Welkom Medical Centre	National Hospital Network	97%	89%
Emalahleni Private Hospital	National Hospital Network	93%	91%
Midstream	National Hospital Network	100%	95%
Waterfall City Hospital	Netcare	88%	47%
Hillcrest Private Hospital	National Hospital Network	86%	81%
Piet Retief Hospital	Life Healthcare	57%	43%
Erasmuskloof	National Hospital Network	100%	95%
Lowveld Day Hospital	National Hospital Network	96%	94%
St Stephens Paarl	National Hospital Network	98%	97%
Sub-Acute & Day Hospital Hazeldean	National Hospital Network	100%	95%
Daxina Medical Clinic	National Hospital Network	95%	62%

Randfontein Private Hospital	National Hospital Network	98%	93%
Sub-Acute and Rehabilitation Hospital Irene	National Hospital Network	100%	96%
Capital Oncology	National Hospital Network	100%	87%
Secunda	Mediclinic	79%	16%
Somerset West	National Hospital Network	100%	98%
Anncron Clinic	Life Healthcare	50%	45%
St Mary's Private Hospital	Life Healthcare	34%	14%
Fochville Hospital	National Hospital Network	91%	75%
Gynaecological Hospital	Mediclinic	98%	62%
St James Private and eye Hospital	Life Healthcare	92%	7%
St Vincent's Hospital	National Hospital Network	83%	77%
Sunningdale Hospital	National Hospital Network	94%	71%
Lephalale	Mediclinic	46%	29%
Cullinan Private Clinic	Independent	89%	88%
Faerie Glen Hospital	Life Healthcare	86%	61%
Empangeni Garden Clinic	Life Healthcare	53%	49%
St Helena Hospital	National Hospital Network	97%	89%
Victoria Hospital	Mediclinic	55%	53%
Midlands Medical Centre	National Hospital Network	79%	72%
Leslie Williams Private Hospital	National Hospital Network	90%	78%
Mount Edgecombe Hospital	Life Healthcare	56%	45%
Vaalpark Hospital	Netcare	70%	62%
Clinton Hospital	Netcare	86%	27%
Ceres Hospital	Netcare	97%	89%
Geneva Clinic	Mediclinic	87%	24%
Durdoc Clinic	Independent	95%	92%
Strand Private Hospital	Mediclinic	99%	13%
Hermanus	Mediclinic	42%	14%
Riemland Clinic	National Hospital Network	76%	70%
Cormed Clinic	National Hospital Network	91%	87%
Lakeview Hospital	Independent	99%	98%
Barberton	Mediclinic	42%	8%
Queenstown Private Hospital	Life Healthcare	39%	11%
Zamokuhle Private Hospital	National Hospital Network	91%	70%

Thabazimbi	Mediclinic	85%	70%
Vincent Pallotti Hospital	Life Healthcare	78%	68%
Entabeni Hospital	Life Healthcare	85%	58%
Parklands Hospital	Netcare	92%	55%
St Augustine's Hospital	Netcare	80%	56%
Bellville Medical Centre	National Hospital Network	93%	85%
Park Lane Hospital	Netcare	97%	46%
Brenthurst Clinic	Life Healthcare	90%	73%
Groenkloof	Life Healthcare	94%	70%
Jakaranda Hospital	Netcare	98%	61%
Femina Hospital	Netcare	97%	58%
Rand Hospital	Netcare	95%	49%
Robinson Private Hospital	Life Healthcare	56%	42%
Union Hospital	Netcare	73%	28%
Milpark Hospital	Netcare	91%	46%
Zuid-Afrikaans Hospitaal	National Hospital Network	98%	94%
Sandton	Mediclinic	84%	70%
Garden City Hospital	Netcare	81%	44%
Rosebank Hospital	Netcare	89%	43%
Eugene Marais Hospital	Life Healthcare	82%	67%
Wits University Donald Gordon Medical Centre	Mediclinic	98%	82%
Louis Leipoldt	Mediclinic	81%	39%
Roseacres Clinic	Life Healthcare	75%	52%
Springs Parkland Clinic	Life Healthcare	61%	41%
The Glynnwood Hospital	Life Healthcare	75%	55%
Christiaan Barnard Memorial Hospital	Netcare	84%	68%
Lesedi-Dr SK Matseke Memorial Hospital	Independent	82%	72%
Morningside	Mediclinic	83%	68%
Westville Hospital	Life Healthcare	78%	45%
Medforum	Mediclinic	84%	59%
Greenacres Hospital	Netcare	65%	58%
Flora Clinic	Life Healthcare	75%	51%
Arwyp Medical Centre	National Hospital Network	78%	73%

George Ltd	Mediclinic	43%	20%
Panorama	Mediclinic	76%	33%
Mitchells Plain Medical Centre	National Hospital Network	70%	54%
Highveld	Mediclinic	40%	19%
St George's Hospital	Life Healthcare	64%	46%
Cosmos Hospital	Life Healthcare	34%	20%
Constantiaberg	Mediclinic	60%	46%
Worcester	Mediclinic	27%	9%
Rosepark Hospital	Life Healthcare	67%	64%
Vergelegen	Mediclinic	38%	15%
Kimberley	Mediclinic	19%	9%
Potchefstroom	Mediclinic	54%	43%
Muelmed	Mediclinic	89%	61%
Pietermaritzburg	Mediclinic	66%	60%
Vereeniging	Mediclinic	61%	41%
Gatesville Medical Centre	National Hospital Network	79%	66%
Krugersdorp Hospital	Netcare	56%	41%
Unitas Hospital	Netcare	63%	43%
Dalview Clinic	Life Healthcare	64%	35%
Bloemfontein	Mediclinic	42%	32%
Carstenhof Clinic	Life Healthcare	78%	64%
Limpopo	Mediclinic	36%	22%
St Anne's Hospital	Netcare	70%	63%
Kingsway Hospital	Netcare	53%	30%
Chatsmed Garden Hospital	Life Healthcare	54%	30%
Sunward Park Hospital	Netcare	64%	39%
La Verna Hospital	National Hospital Network	51%	44%
Midmed Hospital	Life Healthcare	38%	21%
Paarl	Mediclinic	35%	12%
Mulbarton Hospital	Netcare	70%	25%
Moot Hospital	Netcare	89%	57%
St Dominic's Hospital	Life Healthcare	61%	7%
Bedford Gardens Private Hospital	Life Healthcare	70%	51%
Ahmed Kathrada Private Hospital	National Hospital Network	73%	69%

Nelspruit	Mediclinic	27%	17%
Peglerae La Femme Hospital	Life Healthcare	38%	33%
Emfuleni	Mediclinic	60%	35%
Kroon Hospital	Netcare	39%	35%
Ferncrest Hospital	Netcare	80%	73%
Stellenbosch	Mediclinic	57%	20%
Sunninghill Hospital	Netcare	83%	46%
East London Private Hospital	Life Healthcare	93%	6%
Shifa Hospital	National Hospital Network	95%	86%
The Bay Hospital	Netcare	41%	32%
Kingsbury Hospital	Life Healthcare	87%	68%
Legae	Mediclinic	61%	44%
Linksfield Hospital	Netcare	73%	40%
Olivedale Hospital	Netcare	72%	47%
Margate Hospital	Netcare	59%	37%
N1 City Hospital	Netcare	71%	58%
Ernest Oppenheimer Hospital	National Hospital Network	95%	87%
Vryburg Private Hospital	National Hospital Network	56%	50%
Linmed Hospital	Netcare	68%	47%
The Crompton Hospital	Life Healthcare	66%	35%
Akasia Hospital	Netcare	68%	49%
Mercantile Private Hospital	Life Healthcare	57%	35%
Cuyler Hospital	Netcare	26%	16%
Wilgers Hospital	Life Healthcare	86%	61%
Milnerton	Mediclinic	70%	49%
Botshelong - Empilweni Private Hospital	Independent	78%	76%
Hoogland	Mediclinic	30%	15%
Brits	Mediclinic	48%	37%
Bell Street Hospital	Netcare	98%	43%
Welkom	Mediclinic	33%	21%
Durbanville	Mediclinic	63%	16%
Sunshine Hospital	National Hospital Network	97%	94%
Tshepo-Themba Private Hospital	Independent	81%	69%
Bay View Hospital	Life Healthcare	43%	36%

Upington	Mediclinic	27%	8%
Wilmed Park Private Hospital	National Hospital Network	80%	71%
Louis Pasteur Medical Center	National Hospital Network	93%	88%
Wilgeheuwel Hospital	Life Healthcare	76%	48%
Pretoria East Hospital	Netcare	82%	59%
Ermelo	Mediclinic	46%	29%
Newcastle Private Hospital	Mediclinic	27%	22%
Midvaal Private Hospital	National Hospital Network	86%	81%
Hibiscus Private Hospital	National Hospital Network	70%	66%
Klein Karoo	Mediclinic	42%	17%
Umhlanga Hospital	Netcare	74%	50%
Naledi - Nkanyezi Private Hospital	Independent	77%	75%
Bougainville Private Hospital	Netcare	81%	51%
Knysna Private Hospital	Life Healthcare	42%	31%
West Coast Private Hospital	Life Healthcare	35%	32%
Cape Town	Mediclinic	77%	56%
Montana Hospital	Netcare	83%	52%
East Rand N17 Private Hospital	Netcare	78%	63%
Wisani Medical Centre	Independent	98%	97%
UCT Academic Hospital	Netcare	98%	76%
Medgate Day Clinic	National Hospital Network	100%	96%
Medkin	National Hospital Network	99%	91%
Pretoria North Surgical Centre	Life Healthcare	98%	72%
Mayo Clinic	National Hospital Network	99%	96%
Kilnerpark Clinic	National Hospital Network	100%	95%
Brooklyn Hospital	Life Healthcare	99%	69%
Medical Forum Theatre	Independent	97%	97%
Kuils River Hospital	Netcare	61%	51%

Chapter 7
Practitioners

INTRODUCTION

1. Healthcare practitioners play a central role in the private healthcare market. Consumers are usually unable to judge what care they need and rely primarily on the guidance of their healthcare provider in this regard.

2. The HMI notes that practitioners are able to influence healthcare expenditure in two ways:

   2.1. Through their own activities, such as diagnoses and treatment, and

   2.2. Through the services and treatments they recommend, which include referral for further investigation, treatment, and hospitalisation.

3. Healthcare practitioners are thus central decision-makers in the use of healthcare services and have the ability to drive nearly all healthcare expenditure by virtue of the role they play in this market as agents.

4. The inquiry identified various concerns affecting practitioners in the Statement of Issues and subsequently in the Revised Statement of Issues. These concerns include:

   4.1 market power of practitioners,

   4.2 incentives that may influence the behaviour of practitioners,

   4.3 vertical relationships between practitioners and providers that may influence utilisation and expenditure,

   4.4 regulations that limit competition, and

   4.5 the effect of fee-for-service reimbursement models in driving expenditure.

5. In response to these questions, the HMI considered submissions from stakeholders, relevant literature, public data, and international comparisons. The HMI also met numerous stakeholders. This chapter sets out the evidence and analysis conducted with respect to these theories of harm.

6. The approach that was adopted by the HMI in its analysis of the practitioner market proceeds is:

   6.1. The number and distribution of medical practitioners[1] in the private healthcare sector was established to assess supply and/or scarcity of practitioners. The distribution analyses also provides insights into barriers to entry.

   6.2. Available claims data[2] was used to evaluate the contribution of practitioners to expenditure, as well as to understand certain behavioural matters revealed by the data.

   6.3. How practitioners organise

1. These are 'best estimates' given the absence of a national, reliable, and current, register.
2. See http://www.compcom.co.za/wp-content/uploads/2017/12/4-Report-on-Analysis-of-Medical-Schemes-Claims-Data-Descriptive-Statistics.pdf

themselves into groups, associations or corporate practices and the effect on competition was assessed.

6.4. In each of the areas described, the manner in which prevailing incentives influence the supply and location of practitioners, their behaviour and how they responded to market forces was considered.

6.5. The function of regulatory bodies relevant to medical practitioners, and the impact of the existing regulatory framework on competition was evaluated.

6.6. Key findings and preliminary recommendations conclude the chapter.

THE PRACTITIONER MARKET

7. The World Health Organisation classifies health workers into five groups:
   - health professionals,
   - health associate professionals,
   - personal care workers in health services,
   - health management and support personnel, and
   - 'other' health service providers not classfied elsewhere (which includes medical students, hospital volunteers and members of the armed services).[3]

8. This chapter focusses on health professionals, referring to these professionals as healthcare practitioners. Healthcare practitioners study, counsel, or provide precautionary, remedial, rehabilitative, and health-improving healthcare services based on factual and theoretical information in the diagnosis and treatment of diseases and other health problems.

9. In order to focus the inquiry, our analysis concentrates on general practitioners (GPs) and medical specialists registered with the Health Professions Council of South Africa (HPCSA). However, the findings and principles may be equally applicable to other healthcare practitioners.

10. Most medical practitioners work as individuals in their own private practice. A minority of medical practitioners work in a collective - a shared practice (GPs or Specialists) and work according to approved business models as prescribed by the HPCSA (see later). Another form of group practice is GPs who work together to run emergency services which are almost always located in a hospital. Certain medical practitioners are approved to form what the HMI calls corporate practices (pathologist and radiologists).[4]

11. In most instances medical practitioners are paid using a fee for service model – each service has a related fee which is claimed for. The more services, the higher the fee.

12. In South Africa, healthcare providers have no obligation to report on any activity or on the quality of services provided.

SUPPLY OF DOCTORS IN THE PRIVATE HEALTH CARE MARKET

13. Many of the stakeholder submissions to the HMI referred to an undersupply of medical

3. World Health Organization (WHO), "Classifying health workers: Mapping occupations to the international standard classification," World Health Organization (WHO), Geneva, 2010.
4. The HPCSA policy document on business practices, 26 October 2016, para 3.4 pg. 9-10 defines group practices as follows: "With regards to group practices, Practitioners should have regard to Rule 8 (3) of the Ethical Rules which provides that: "A practitioner shall practise in partnership, association or as a juristic person only within the scope of the profession in respect of which he or she is registered under the Act". The restriction Rule 8(3) does not apply to the following professions:
(i) A Pathologist forming an incorporated practice (Personal Liability Company), partnership or association with a Medical Technologist (ii) A Radiologist forming an incorporated practice, partnership or association with a Nuclear Physician or Radiographer." Profmed's submission to the HMI, 30 October 2014; Netcare submission to the HMI, Netcare overview paper, submitted on 30 October 2014; Mediclinic submission to the HMI, 31 October 2014; BHF response to submission to the HMI, 29 September 2014.

practitioners in South Africa.[5] The required number of providers in any country is determined by the way the health system is organised and the providers of choice for that health system. For example, some systems rely predominantly on doctors while others incorporate alternative providers such as nurses or clinical associates. There is no ideal number on which all agree.

14. According to some stakeholders, the claimed shortage of medical practitioners, especially specialists, in South Africa limits access to healthcare and contributes to the bargaining power of medical practitioners who can increase prices and resist alternative contracting methods intended to reduce prices and increase access.[6] [7] If correct, this market power may restrain innovation and competition with respect to alternative models of care and may reduce access to private healthcare.

15. A significant challenge for the HMI was to understand the number and distribution of practitioners in South Africa. No central registry of practitioners exists in the country which could provide reliable information about the number of medical practitioners, where and in what sector (public and/or private) they work, and whether they work full-time or part-time.

16. According to the Health Systems Trust, government's 'Personnel and Salary Information System of Government' (PERSAL) data indicates that there were 171 947 health workers employed in the South African public healthcare sector in 2017. Of these, 66 711 are professional nurses, 4 893 are medical specialists, 13 593 are general medical practitioners.[8] PERSAL data includes all health workers employed, not just qualified doctors and nurses.

17. There are 0.30 medical practitioners (public and private) per 1 000 total population in South Africa and 0.10 medical specialists per 1 000 total population.[9] [10]

18. These numbers are low.[11] However, the report disagrees with the approach of stakeholders who use national or public sector ratios when discussing dynamics in the private healthcare sector. The market conditions and populations served in the public and private sector are different. The inquiry is focused on the number of medical practitioners operating in the private market and the population served by these practitioners. In calculating this ratio, the report takes the view that the ratio of doctors to insured population (rather than the uninsured population) is the dominant influence in the dynamics and behaviour of private practitioners.[12]

19. As indicated above, no central register that identifies doctors who work in the private sector exists. The HPCSA has data that describes who is registered, licensed and accredited to practise in South Africa, but this data does not indicate if they live in South Africa or not, whether they are practicing or not, if they are in the public or private sector, or if they work full-time or part-time. The unique HPCSA licence number assigned to practitioners was not useful for this report.

20. In the absence of reliable data of private practitioners, the inquiry used claims data

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5. Profmed's submission to the HMI, 30 October 2014; Netcare submission to the HMI, Netcare overview paper, submitted on 30 October 2014; Mediclinic submission to the HMI, 31 October 2014; BHF response to submission to the HMI, 29 September 2014.
6. Department of Health Submission to the HMI, 17 November 2014.
7. Mediclinic, submission to the HMI 31 May 2013.
8. Padarath A, Barron P, editors. South African Health Review 2017. Durban: Health Systems Trust.
9. Padarath A, Barron P, editors. South African Health Review 2017. Durban: Health Systems Trust; Table 48 Page 309. 2017. URL: http://www.hst.org.za/publications/south-african-health-review-2017.
10. Certain assumptions are made in calculating this data as explained in the reference cited; this only underlines the need for better data.
11. See Paragraph 27 for comparative data.
12. The HMI acknowledges that out-of-pocket-payments by uninsured members of the population may be important for certain practitioners such as GPs but there is no data on this and it is thus not something that the HMI can take account of in our analyses. We assume a-priori that for specialists out-of-pocket-paying patients make up an insignificant proportion of their patients.

submitted to medical schemes for the period 2010 to 2014. From this data, we could identify the unique practice numbers that generated a claim from a medical scheme in that period. This made it possible to calculate the number of unique practices submitting claims in each year. To make the data more robust, we averaged the number of practices that billed over the period to give us a simple average of the number of practices billing over the 5-year period. The format of the practice number defines the doctor's type (GP, type of specialist, other provider). The location of the practitioner was determined from the address associated with each practice number. Addresses were assigned to individual enumerator areas which were then collated into districts and provinces.

21. This approach presents a number of challenges:

    21.1. The address data linked to a practice number may not be accurate as the BHF communicates with members via email and does not routinely verify physical addresses.

    21.2. Doctors may be seeing patients at locations other than at their registered address.

    21.3. Doctors can have more than one practice number – for example, one as a physician and one as a sub-specialty, such as a cardiologist. Thus a physician who is also trained as a cardiologist may bill as a physician while seeing both general medical and cardiology cases.

    21.4. To complicate matters further, doctors can also be members of a group practice and can submit their group's practice number or their individual practice number for billing purposes. Medical schemes can record either one or the other on their claims data. Uniformity across the industry in this respect is absent.

    21.5. Doctors who work as locums may use their own number or submit the bill under the number of the doctor for whom they are standing in, depending on the payment arrangement. (This issue is likely to have the least influence on our numbers.)

    21.6. Practice numbers are being used as proxies for individual practitioners.

    21.7. The practice number does not differentiate those people working full-time from those who work part-time.

22. Despite these challenges, the inquiry has concluded that these numbers are sufficiently robust to draw meaningful conclusions. Discovery Health believes that the number being used is likely to be an underestimate of the total number of practitioners operating in the market.[13] However we also note that people who are not working full-time are included, and there is thus both under- and over-counting. Nevertheless, we have assumed that these differences cancel each other out and thus do not influence our general conclusions.

23. The data used relies on unique medical practice numbers (per year). For ease of communication we will use GPs and specialists rather than practice numbers that originate from GP or specialist practices.

24. From the above challenges, the report recommends that a standard, unified, rational practice numbering system is created, managed and available to the public. We recommend that this function be performed by the proposed Supply Side Regulator for

13. In communication with the HMI in 14 September 2017, Discovery Health states: "The treating practice numbers relate to specific practitioners while the billing practice numbers relates to the practice billing for the service and includes group practices, particularly GP group practices such as Medicross. The treating practice numbers, however, are typically defaulted to the billing practice numbers as they are not provided on the claim unless there is a specific tariff agreement at the treating provider level. ….. The actual number of practitioners will be higher than either of these two numbers as there are still many practitioners that only bill as part of a group billing practice." World Health Organisation Global Health Observatory data repository. http://www.who.int/gho/health_workforce/physicians_density/en/ Accessed 30 March 2018.

Health (for further details on the Supply Side Regulator, see Recommendations Chapter 10).

RESULTS OF ANALYSIS ON THE NUMBER AND DISTRIBUTION OF MEDICAL PRACTITIONERS

25. Data using the above method of collation indicates that there are approximately 14 951 practitioners in the private sector, of which 53% are GPs. Moreover, the number of providers in the private sector has increased year-on-year from 7702 GPs in 2010 to 8 000 GPs in 2014 and from 6 565 specialists in 2010 to 7 513 specialists in 2014 (see Table 7.1).

26. These providers are not evenly distributed around South Africa, with more practitioners in Gauteng, the Western Cape and KwaZulu/ Natal than in other parts of the country.

27. Nationally, 1.75 medical practitioners per 1 000 patients service the private sector. As a comparison (noting that the number depends on how the health system is organised) the number of practitioners per 1 000 population is 2.8 in the UK, 1.7 in Brazil, 3.2 in France, and 4.2 in Sweden.[14]

28. The distribution of practitioners per 1 000 population by province is summarised in Table 7.1. Overall there is a relatively even distribution of GPs per 1 000 population at about one GP per 1 000 population. The Northern and Eastern Cape provinces have lower coverage rates.

29. Specialists, however, are skewed towards the more urbanised provinces, with the Western Cape having the highest ratio of specialists at 2.12 per 1 000 population

TABLE 7.1: MEDICAL PRACTITIONERS PER 1000 INSURED POPULATION 5-YEAR AVERAGE 2010-2014 BY PROVINCE

Province	GP's per 1 000 insured pop	Specialists per 1 000 insured pop			Unmatched HMI
		Surgical specialists	Medical specialists	Total	
Eastern Cape	0.88	0.28	0.16	0.44	1.32
Free State	0.94	0.42	0.28	0.70	1.64
Gauteng	0.91	0.62	0.43	1.05	1.95
Kwazulu-Natal	0.99	0.44	0.30	0.74	1.73
Limpopo	0.96	0.14	0.09	0.23	1.19
Mpumalanga	0.85	0.19	0.09	0.28	1.13
North West	0.98	0.27	0.18	0.45	1.43
Northern Cape	0.74	0.20	0.11	0.31	1.05
Western Cape	0.91	0.71	0.50	1.21	2.12
Total national	0.92	0.49	0.34	0.83	1.75

14. World Health Organisation Global Health Observatory data repository. http://www.who.int/gho/health_workforce/physicians_density/en/ Accessed 30 March 2018.

30. The distribution of all medical practitioners per district indicates the large differences across the country. For example, there are 2.68 medical practitioners per 1 000 population in iLembe north of Durban, compared to 0.54 in Alfred Nzo in the Eastern Cape (see Figure 7.1).

31. The distribution of GPs by proportion of insured population is relatively even across all districts. However, some variation is evident with iLembe again standing out as different to the rest of the country (Figure 7.2).

32. The distribution of specialists per 1 000 insured population shows a high degree of variation with the highest concentration in metropolitan areas and provincial capitals (Figure 7.3). It is reasonable to assume that some concentration of specialists should occur in urban areas and that these specialists may be seeing patients referred to them from further afield than the immediate area. Nevertheless, Eden, which is not a metropolitan area, has a high number of specialists.

FIGURE 7.1: FIVE-YEAR AVERAGE NUMBER OF MEDICAL PRACTITIONERS PER 1000 INSURED POPULATION BY DISTRICT IN SOUTH AFRICA 2010-2014

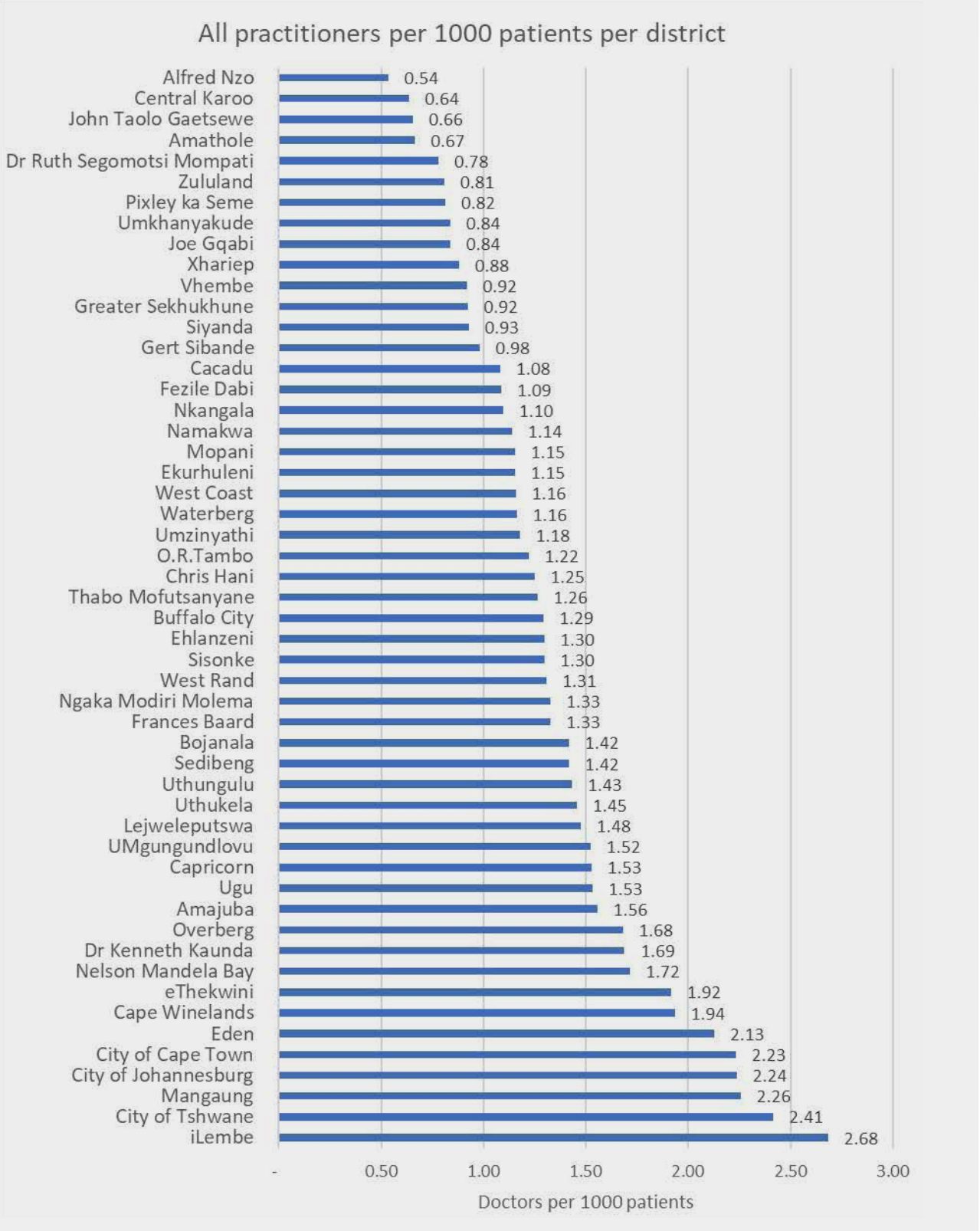


FIGURE 7.2: FIVE-YEAR AVERAGE NUMBER OF GPS PER 1000 INSURED POPULATION BY DISTRICT IN SOUTH AFRICA

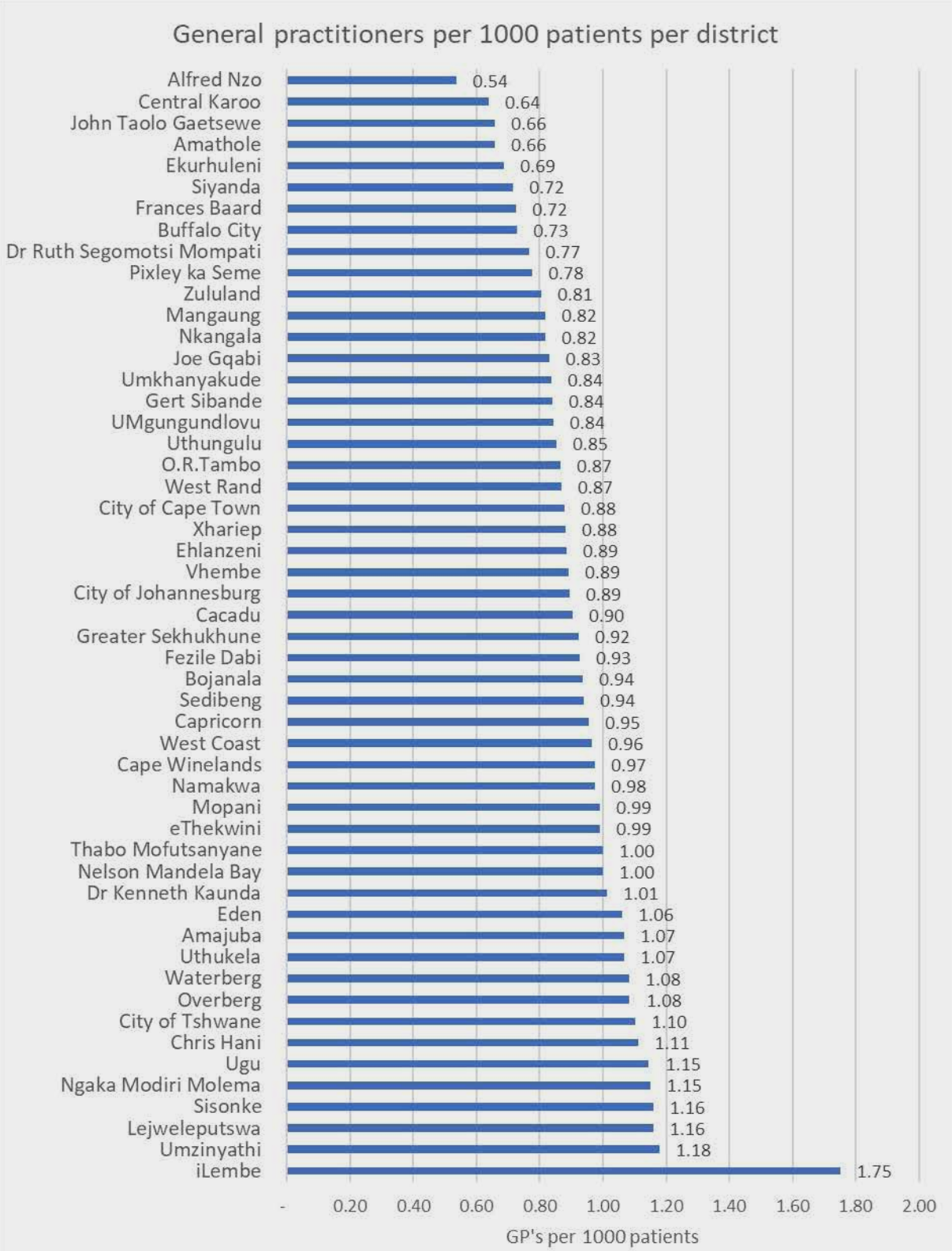
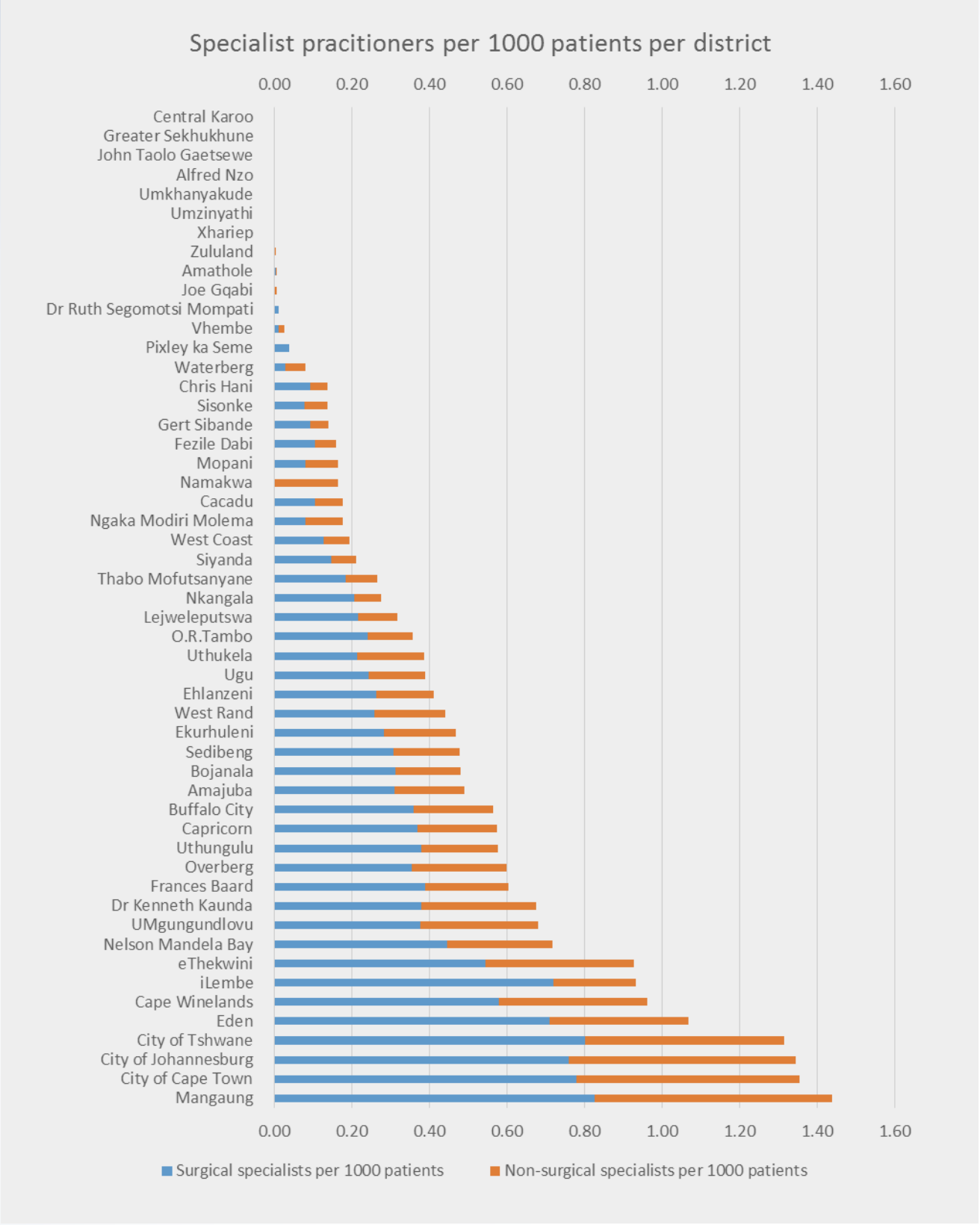


FIGURE 7.3: FIVE-YEAR AVERAGE NUMBER OF SPECIALISTS PER 1000 INSURED POPULATION BY DISTRICT IN SOUTH AFRICA 2010-2014



33. The report concludes that:

    - the distribution of medical practitioners across the population is uneven,
    - there is more equal access to GPs than to specialists and
    - some districts have no specialists at all.

34. Access to medical practitioners in the private sector (1.75 per 1 000 insured population) is in stark contrast to access in the public sector (0.3 per 1 000 non-insured population).[15]

35. A conclusion about the "appropriate" number of providers in a market is always contentious and is a product of how a particular market works. In a doctor-oriented hospi-centric market, there are usually more doctors and specialists. This is the case in Sweden, for example. It should be noted, however, that Sweden partially manages the related expenditure by the almost exclusive employment of specialists in salaried positions. A conclusion about whether the South African market has too many or too few medical practitioners should be drawn from an assessment of how these providers behave rather than referring to some absolute reference number of providers (which, in any event, does not exist). The behaviour of practitioners is explored further below. First the report explores the barriers facing practitioners entering the private health market in South Africa.

BARRIERS TO ENTRY AFFECTING PRACTITIONERS IN SOUTH AFRICA

36. Many submissions raised issues related to barriers to entry, expansion and innovation in the practitioner market to support the argument that there are too few specialists in South Africa, thus reducing access to healthcare and conferring high bargaining (and pricing) power to existing specialists.

37. The barriers to entry commonly cited include

    - high training costs associated with qualifying as a general practitioner or specialist,[16]
    - costs of setting up a new practice,
    - difficulty in renting rooms in major hubs (and particularly in private hospitals), and
    - territorial rules of practice by established practices and closed network agreements[17].

    Some barriers to entry, such as the cost of setting up new practices, are said to affect some disciplines more than others.

38. Before evaluating the barriers, the report reviews the evidence of practitioner entry over the period for which claims data is available.

EVIDENCE ON ENTRY, 2010 – 2014

39. As indicated above (paragraph 25) the number of practices submitting claims over the 5-year period for which the report has claims data has increased (Table 7.2). The number of GPs increased steadily by 1% per year (and 3.9% overall) and the number of specialists increased by 3.4% per year (14.4% overall).[18]

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15. Padarath A, Barron P, editors. South African Health Review 2017. Durban: Health Systems Trust; Table 48 Page 309. 2017.
16. The HMI notes that few if any of the submissions acknowledge that the costs of training of health care practitioners are highly subsidised and borne mainly by the national fiscus. Some of this may be off-set by the services that senior trainees provide as part of their training. Nonetheless the availability of fully trained practitioners to the private sector represents a form of cross-subsidisation of the private sector by the public sector.
17. Emerging Market Healthcare Ltd 'EMC' submission to the HMI, 31 October 2014; Dr Mahmood Haffejee's submission to the HMI, 31 October 2014; Independent Practitioners Association Foundation (IPAF) submission to the HMI, 29 October 2014; Department of Health Submission to the HMI, 17 November 2014.
18. Comparing the compound annual growth rate it is interesting to note that more than three times more specialists have entered the market than GPs.

TABLE 7.2: UNIQUE PRACTICE NUMBERS SUBMITTING CLAIMS TO MEDICAL SCHEMES 2010-2014

Year	Number of unique practice numbers classified as GPs	Number of unique practice numbers classified as specialists	Total unique medical practices submitting claims
2010	7 702	6 565	14 267
2011	7 835	6 885	14 720
2012	7 776	7 152	14 928
2013	7 976	7 351	15 327
2014	8 000	7 513	15 513
Five year average	7 858	7 093	14 951

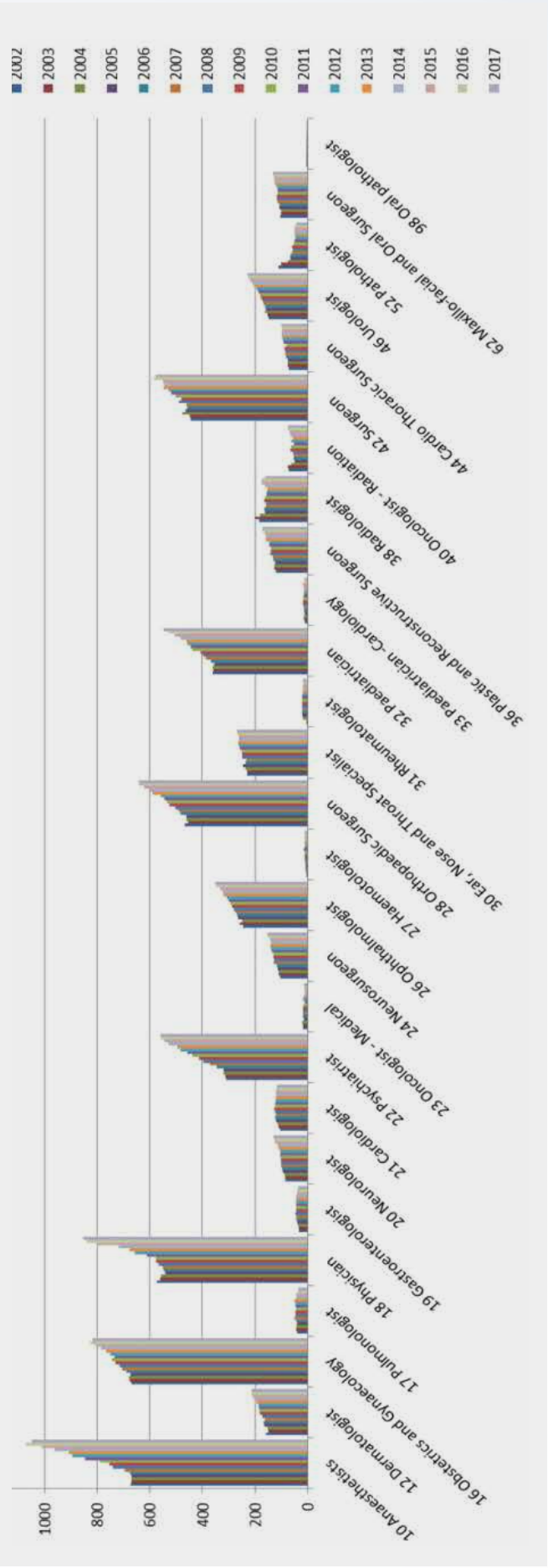
40. We assessed entry over a longer period of time using unique practice billing numbers provided by Discovery Health. This data included all schemes they administered over the period 2002-2017. As can be seen from Figure 7.4 , there has been variable growth in specialists who claim from schemes administered by Discovery Health over this 15-year period. For most specialities, the number of unique practice codes that have claimed from schemes administered by Discovery Health has increased. For some, such as subspecialists (pulmonology, gastroenterology, rheumatology and cardiology (both adult and paediatric), the picture is more stable.

41. The number of physicians has increased by 21.5% over the period. It has been reported that some subspecialists may revert to their general speciality - “physician”- as it allows them to see a wider range of patients. This may be part of the explanation for the rise in the number of physicians over this period of time.

42. We note that for some specialist disciplines the number of unique practices submitting claims has decreased. This is seen for pathologists, radiologists and radiation oncologists. However, these disciplines, often from group practices, and the decline in unique billing numbers may reflect consolidation in the market rather than an absolute decrease in the number of individual practitioners working in these specialities.

43. The entry of practitioners over the period for which data is available has been consistent, with particularly high entry by physicians, anaesthesiologists, psychiatrists, and orthopaedic surgeons amongst others. This shows that barriers to entry are not insurmountable. Nonetheless, stakeholders have suggested that there are important barriers to entry, which are explored below

FIGURE 7.4: NUMBER OF UNIQUE BILLING PRACTISE NUMBERS SUBMITTED TO DISCOVERY HEALTH ADMINISTERED SCHEMES BY SPECIALTY 2002-2015.



STAKEHOLDER SUBMISSIONS ON BARRIERS TO ENTRY

44. Stakeholders identified the following major structural, behavioural and regulatory barriers to entry and expansion:

44.1. Structural barriers to entry

44.1.1. *Cost of capital:* practitioners such as pathologists have to establish their own laboratories and incur significant start-up costs. Other specialists like radiologists and ophthalmologists also face large start-up costs. Besides start-up costs, ongoing maintenance and costs for the accompanying technology and reagents for use in the practice is required.

44.1.2. *Malpractice insurance:* The increase in the size of malpractice claims,[19] together with the increase in malpractice insurance premiums is a barrier to entry for many stakeholders. In specialities like obstetrics, spinal surgery, neurosurgery and neonatology, the cost of malpractice insurance cover is so high that practitioners are reluctant to specialise in these fields.[20 21 22]

44.2. Regulatory barriers to entry, expansion and innovation

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19. South African Medical Journal 2013;103(2):83-84. DOI:10.7196/SAMJ.6457.
20. SEGGIE, Janet. The 'boom' in medical malpractice claims – patients could be the losers. South African Medical Journal, [S.l.], v. 103, n. 7, p. 433, jun. 2013. ISSN 2078-5135. Available at: <http://www.samj.org.za/index.php/samj/article/view/7127/5206>. Date accessed: 30 May. 2018. doi:10.7196/SAMJ.7127.
21. Mediclinic's response to submissions, Annexure 21.
22. Mr Muller's presentation at the Pretoria Public Hearing on 24 February 2014.

44.2.1. According to confidential submissions to the inquiry, the national Department of Health (DoH) has not funded sufficient posts to match specialist training.[23]

44.2.2. Some HPCSA regulations create barriers to entry for healthcare practitioners. The examples that were provided to the inquiry include the HPCSA's training and education requirements, policies that limit the number of students, and the scope of practice regulations.[24]

44.2.3. *HPCSA's Ethical Rules* limit the employment of practitioners. The regulation on sharing of rooms is restrictive and limits innovative business models.[25] [26] [27] [28] [29]

44.2.4. *The Certificate of Need* was identified as potentially restricting practitioners as it dictates where practitioners may or may not practice.

44.3. Behavioural barriers to entry

44.3.1. Vertical relationships: Vertical agreements such as designated service providers (DSP) or preferred provider networks (PPN) are alleged to be exclusionary.

44.3.2. Horizontal relationships: Some submissions raised concerns about arrangements between practitioners. Some associations provide peer review, set standards and protocols for procedures. This excludes those practitioners who do not want to conform to the associations' processes.[30] Because practitioners often interact through their associations or groups, a practitioner who does not want to be part of the group may not be able to access information, referrals from colleagues or even contracts with funders.

44.3.3. The vertical relationships between practitioners and other parties in the healthcare sector and horizontal relationships among practitioners is a complex area that affects competition beyond barriers to entry. This is discussed in more detail below.

ASSESSMENT OF BARRIERS TO ENTRY BY HMI

Regulatory barriers to entry: Training of practitioners

45. The HPCSA regulates the medical professions, sets and promotes education standards, and accredits education programmes.[31] The various boards operating under the HPCSA have complete autonomy over the rules and conditions that must be met prior to registration as a healthcare practitioner.[32]

46. Although this is a barrier to entry, regulatory control over training standards, curricula and registration is necessary to protect the public and is not only unavoidable but is, on balance, beneficial to consumers and society at large.

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23. Mediclinic's submission to the HMI on 31 October 2014; MMI Holdings comments on the Revised Statement of Issues, submitted to the HMI on 16 March 2016.
24. MMI Holdings comments on the Revised Statement of Issues, submitted to the HMI on 16 March 2016; Allied Health Professions Council of South Africa (AHPCSA), submission to the HMI on 31 October 2014.; Emerging Market Healthcare (EMC)'s submission to the HMI, 31 October 2014.
25. Vision Operations Pty Ltd, submission to the HMI, 19 February 2014.
26. South African Private Practitioners Forum (SAPPF)'s submission to the HMI, Section A, November 2014.
27. Radiological Society of South Africa (RSSA)'s submission to the HMI, 17 November 2014.
28. The South African Society of Cardiovascular Intervention's presentation at the Pretoria Public Hearing, 18 February 2018.
29. Mediclinic, submission to the HMI 31 May 2013.
30. Emerging Market Healthcare (EMC)'s submission to the HMI, October 2014.
31. See page 6, HPCSA oral presentation to the HMI.
32. See page 6, HPCSA oral presentation to the HMI.

47. Stakeholders acknowledge that some regulation of providers is required, but argue that restrictions on private sector provision of training exacerbate the alleged shortage of practitioners (and particularly of specialists).[33] At present, GPs and general specialists are trained in public universities[34] and can perform their in-service training only in public institutions.

48. In this regard, the HMI notes that the HPSCA has indicated that there are no per se rules which imply or dictate that training will take place in public institutions. The HPCSA specifically noted during its oral presentation to the inquiry that the only legal prerequisite is that training take place in accredited institutions.

49. It would appear, however, that the HPCSA believes that training of practitioners is appropriately located in public institutions, for the following reasons:

    49.1. Firstly, when people are trained in public institutions, they contribute to public sector service delivery. An accredited training hospital increases its capacity to treat members of the public as it trains more interns.

    49.2. Secondly, training in public institutions does not involve a profit motive, thereby removing perverse incentives.

50. According to the HPCSA, the private sector can pursue training accreditation if it meets required roles and responsibilities.

51. In its Human Resources for Health (HRH) strategy document, the DoH highlights that the education and training system for the health sector has not grown to meet the country's health needs and health system requirements.[35] In the DoH's view, the lack of integrated planning between the health and education sectors, as well as inadequate funding mechanisms for health professional development, has contributed to this lack of growth.

52. The inquiry was advised that various initiatives are underway to increase the number of medical practitioners and the number of graduates over the past five years has grown. Currently South Africa produces approximately 1 800 graduate medical practitioners (GPs) per year. The intention is to increase this by 900 students by 2019 with the ultimate intention of producing approximately 3 000 graduates per year, which will equate to about 1.5 doctors per 1 000 population (across the public and private sectors). To achieve this, existing medical schools have increased the number of students they admit: the University of Limpopo is admitting first and second year medical students, Nelson Mandela University aims to admit medical students in 2019/20, and the University of Johannesburg and North West University plan to admit medical students after 2020.[36]

53. Training standards and constraints are thus a barrier to entry, but a necessary one that is, on balance, in the public interest. The proposed expansion of training capacity may assuage concerns raised by stakeholders.

Start-up costs

54. constitute a barrier to entry, the analysis must take the conditions in the particular market into account. Stakeholders indicate that start-up costs are significant. However, a number of methods of mitigating the effect of start-up costs on entry were presented. These include:

    54.1. Practitioners who set up a new emergency unit in hospital premises sometimes receive guaranteed income from the hospital until the practice reaches an agreed break-even point;

    54.2. At times, hospitals issue loans to practitioners to buy equipment;

    54.3. Hospitals purchase equipment on behalf of practitioners, for example anaesthetic machines and set up cardiac catheterisation labs;

33. We note that stakeholders focus their requests to provide private training on specialist training only.
34. Some subspecialists are trained in private facilities for example at the Wits Donald Gordon Medical Centre.
35. See page 41 of the NDoH submission, HRH_strategy2.
36. Personal communication Prof Martin Veller, Dean Faculty of Health Sciences, University of the Witwatersrand 17th March 2017.

54.4. Relocation costs from one location to another have occasionally been paid by hospital groups who want to attract a particular provider;

54.5. Corporate services or rentals are offered at rates below market value for the area to attract providers;

54.6. Certain specialists, such as ophthalmologists, radiologist and pathologists jointly share the cost of expensive equipment; and

54.7. Certain specialists have opened hospitals catering for specific disciplines to share costs.

55. The inquiry did not receive any complaints about inadequate access to finance to set up practices. This implies that while there are significant start-up costs, they are not a major barrier to entry and have been offset by various market related arrangements.

56. Even in relation to setting up a solo private practice, the inquiry did not received information to suggest that start-up costs are a systematic problem.

57. We therefore conclude that start-up costs are not a significant barrier to entry.

Innovative entry

58. Attempts at innovation were evaluated in order to understand the barriers to entry facing new and potentially disruptive entrants. Two examples of entry are evaluated, that of Improved Clinical Pathway Services and Professional Provider Organisation Services.

Improved Clinical Pathway Services (ICPS)

59. ICPS is a private company formed by Dr. Grant Rex in 2010 to implement the use of standardised clinical pathways in disease treatment. The first clinical pathway adopted by ICPS was for knee and hip replacements.

60. Standardised pathways are appropriate treatments for both the most common and most expensive conditions, and can also be used for any conditions that are treated regularly in a healthcare delivery context. Standardised clinical pathways are "based on the latest scientific evidence to the comprehensive treatment of various clinical conditions which is then described as 'best practice' for the comprehensive management of those conditions."[37]

61. Clinical pathways allow for greater efficiency and coordination in consumer care. For example, the pathway provides clear guidance on whether a patient will benefit from physical therapy rather than surgery which makes coordination between health practitioners and handover of patients more efficient, and reduces inappropriate over-servicing. Surgeons participating in the programme get sufficient case-flow to develop expertise, which improves outcomes. Outcomes are also extensively monitored to ensure quality.

62. Ensuring that practitioners participate in the system is crucial to its success, both in terms of developing capacity, and in managing the impact of practitioner decisions on the end-to-end cost and quality of treatment.

63. ICPS pays all clinical practitioners (surgeons, anaesthetists and physiotherapists) a fixed fee for uncomplicated standard joint replacement which is higher than the standard (100%)[38] medical aid tariff and is at the lower-end of the range usually charged by surgeons and anaesthetists. Paying a slight premium helps to incentivise practitioners to follow the care protocol, and is recovered by cost savings from, for example, reduced complication rates. Ideally, ICPS has indicated that they would prefer to employ practitioners directly, which would allow greater mentoring and quality and cost control, but this is not currently allowed in terms of HPCSA regulations.

64. Medical schemes and administrators take on the financial risk for complications, with ICPS getting a percentage of the saving generated relative to the average price of an equivalent

37. See ICPS submission to the HMI.
38. Medical aids offer payment at scheme rates and to some providers they may offer above the scheme rate often indicated as 200% or 300% above the scheme rate. We assume 'standard' rate here refers to the base scheme rate.

surgery. ICPS also negotiates discounted rates on prosthetics because it buys in bulk. The net result is a substantial improvement in costs and quality of outcomes, according to ICPS.

65. The ICPS model is premised on moving a minimum volume of patients along the pathway. An early entry concern was the firm's ability to access sufficient patient numbers via agreements with medical schemes. The breakthrough for ICPS was an agreement with one medical scheme. At the time, the scheme was struggling to find cost-efficient treatment for its ageing membership, and had resorted to using public healthcare facilities. The substantial cost savings and improved quality associated with switching to ICPS proved decisive in securing the scheme as a client. A second scheme, who was under substantial pressure to manage cost while providing an adequate level of care, was another important initial client. Once the value of the ICPS model was established with its first clients, client growth and retention became easier. At present ICPS has relationships with two of the three largest medical administrators.

66. The standardised pathway model relies on extensive cooperation from participating practitioners. ICPS has faced a lot of criticism of this model, particularly from members of the particular specialist associations who do not participate in the network.[39] According to ICPS, the resistance is centred on the perceived exclusivity of the ICPS surgeon network, concern over potential third party interference in clinical decision-making (through ICPS' use of clinical guidelines), and ethical concerns around the use of global billing, which has been viewed as introducing unnecessary risk into the treatment of patients, purely in the interest of savings to medical schemes. Some specialist associations appear to be concerned that surgeons outside ICPS are likely to experience a drop in their case load as a result of ICPS volumes.

67. ICPS maintains that it contracts with any clinician provided that s/he has post-qualification experience and is prepared to have his/her clinical outcomes and quality measured. ICPS points out that the clinical pathways are meant to serve as a reference and are not prescriptive, thereby allowing flexibility by the practitioner to meet specific patient needs.

68. ICPS has also reported difficulties with the HPCSA. ICPS regards the HPCSA's Ethical Business Practice Policy, which prevents ICPS from directly employing practitioners, as outdated and needing to be reviewed considering the overwhelming evidence on the cost effectiveness and clinical quality associated with standardised pathways. According to ICPS, resistance by the HPSCA is preventing innovation and contributes to unsustainable cost increases in the most common joint replacements.

69. Much of the difficulty experienced by ICPS is attributable to regulatory frameworks and to resistance from professional associations. The use of the ICPS model decreases the incentive for practitioners to over-service and/or over-charge by more closely linking the treatment provided to an evidence base. Although practitioners can maintain some flexibility in terms of how they practice, buy-in has nonetheless been low. Ultimately, if the relevant bodies are not willing to engage further and test the robustness of the system, the benefits of newer models of healthcare delivery such as the ICPS model, which could challenge traditional acute inpatient services, will not be fully realised.

Professional Provider Organisation Services (PPOS)

70. PPOS was started by Dr Brian Ruff and Mr Riedwaan Jabaar, who designed a 'value contract' to replace the fee-for-service (FFS) payment model. According to PPOS, the biggest challenge in the private sector is the lack of teamwork and coordination of care. They argue that FFS disincentivises practitioners from working in teams and results in fragmented care with many gaps

39. See ICPS submission to the HMI in 2015.

and much wastage. Additionally, in the FFS model, practitioners are more inclined to simply react to the immediate problems of individual patients rather than taking an holistic and preventative approach to care.

71. By funding each service individually, rather than on the basis of patient health outcomes, the FFS approach also breaks the link between the quality of medical care provided (patient outcomes) and the fee earned, and creates an incentive to over-service the patient.

72. A major contribution (or perhaps response) to this uncoordinated care is that medical schemes reimburse individual practitioners using a transactional model that relies on processing many claim lines per consultation. Schemes have invested significantly in making this kind of payment possible. Systems for making team-based payments are absent or underdeveloped.

73. PPOS's alternative, The Value Contract, is based on team-based care and links suitable access, comprehensive benefits and quality outcomes with appropriate rewards for a consortium of practitioners (known as the Integrated Clinical Consortium or ICC™). PPOS describe this as a value-based contract in which a team is paid for providing care to a population and the payment is proportional to the positive health outcomes achieved by the team – for example, keeping people out of hospital.

74. Under the ICC™, practitioners work in multi-disciplinary teams and are proactive in planning ahead for patients with complex care. Formerly independent groups of practitioners and allied health professionals such as psychologists and nurses are organised into ICC™s who practice together and are remunerated as a team. The teams take responsibility for a population or group of patients, so they can see patterns and design interventions that impact on their patients as a group. Ultimately, ICC™s shift care into a community setting, reducing costs by stopping unnecessary hospital admissions and improving the quality of care.

75. PPOS is currently running a patient care coordination project in Alberton with a multi-disciplinary team, which includes consulting specialists and some large GP practices with a sizeable patient population. In practice, the system requires sharing and analysing clinical data between practitioners to monitor and improve patient outcomes. PPOS is working for practitioners on the supply side, with the medical scheme as a contracted supporter. In this instance, Discovery Health is supporting PPOS in Alberton.[40]

76. This system shares commonalities with the ICPS offering which aims to reduce costs by offering team-based care. It faced similar barriers to those of ICPS, particularly with respect to the HPCSA 'ethical' rules against team-based work. However, PPOS believes that it is not the rules per se that inhibit the PPOS approach to care but rather the interpretation of these rules. PPOS further notes that its approach is consistent with government policy articulated in the National Health Insurance White Paper.

77. Both ICPS and PPOS currently work from existing acute facilities where there is excess capacity and do not intend setting up their own facilities.

Conclusions on innovation

78. While innovative entry has occurred, it has been has been slow and difficult, and

40. Both Dr Ruff and Mr Jabaar worked for Discovery Health as administrators for approximately 16 years, and were involved in the analysis of DH data and strategic planning. This may have assisted them in obtaining the administrator's buy-in for the PPOS pilot model in Alberton. Without similar access to DH, others with innovative models may face greater hurdles. To the HMI's knowledge, this is the only model supported by DH. According to PPOS, despite DH agreeing to this project, support for the project has been complicated by DH's reluctance to move away from the current industry 'fee-for-service' transactional payment model, and that the contracting model with the clinical team supported by PPOS in Alberton, rather than DH's benefits and managed care interventions, takes accountability for the patient outcomes.. The loss of income from managed care work and potentially from the transactional claims processing administration fees, replaced in the model by a monthly fee, will probably represent a loss of income for DH, but not for scheme members.

has not been embraced by funders and some practitioner associations. It appears to be characterised by a lassitude among providers, and a comfort with existing models by the majority of funders, practitioners and facilities.[41] [42] However, disruptive innovative entry – the kind that stimulates competition and expands access to healthcare services in the private healthcare sector – is ¬almost absent.

CONCLUSION ON BARRIERS TO ENTRY

79. In general terms there appear to be few barriers to entry into the market for individual medical practitioners.

80. Innovative, disruptive entry that decreases costs while holding quality constant or improving quality and or access –regarded by the inquiry as positive – is, however, negligible.

81. Entry into the current practitioner market is skewed towards urban and high-income coastal areas. This raises the question of whether there are sufficient incentives to encourage practitioners to work in areas that are not already well supplied. If unequal distribution of practitioners continues, regulation may need to be considered.

82. The relative absence of new/innovative forms of entry such as multidisciplinary practices and practitioners that initiate new payment models is noted with concern.

83. The HMI draws attention to the role of the HPCSA and in particular its lack of attention to the impact of rules and regulations on competition (see further detail below).

84. The HMI noted that some of the barriers to entry identified by stakeholders (related to preferred provider networks) do not raise competition concerns.

MEDICAL PRACTITIONERS' ENGAGEMENT IN THE MARKET: EVIDENCE FROM BILLING PRACTICES

APPROACH BY HMI TO ANALYSING THE CLAIMS DATA

85. One of the objectives of the inquiry was to understand the trends in expenditure and identify the major drivers of sustained increases in expenditure over time. The industry claims data obtained by the inquiry provides an opportunity to quantitatively describe and understand expenditure trends in the private health market. In this section, the inquiry focuses on expenditure attributed to provider behaviour.

86. The inquiry's approach to the analysis of the claims data is to describe changes in claims costs over time and understand how much of the increase can be explained by known drivers of healthcare costs (such as age, sex) and to assess the size of the residual increase which cannot be explained.

    86.1. The factors that would logically make a difference to health care claims costs are identified. These are called the "explained factors" and are age, gender, the disease profile of the covered population (if someone has co-morbidities), and the actual problem for which they are seeking health care in each encounter (case mix). Our analyses also account for a CPI-linked increase in the prices of individual healthcare services or 'tariffs'.

    86.2. Once the explained factors are accounted for, an 'unexplained" portion of claims costs remains. This is the proportion of cost charges over and above that which could be caused by inflation, the age and sex of the population served, the state of ill-health, and the severity of the person/condition being treated.

41. 'Competition to make the Healthcare market work for all South African communities', Dr Brian Ruff Durban Public Hearing, 17-19 May, 2016.
42. Improved Clinical Pathway Services (ICPS)'s presentation on 'A standardised care pathway with global billing: second level technology', Durban Public Hearing, 17-19 May, 2016.

87. In doing this analysis, it is important to find a way to estimate the health of a population in a way that provides useful and usable data, and to neither over nor underestimate it, since the relative illness/health of the population will be correlated with expenditure. In the claims data, the 'degree of sickness' of the population is estimated using the diagnoses (and related codes) entered into the data set by health care providers. In estimating the 'degree of sickness' of the population, the inquiry struck a balance in defining disease burden.

87.1. Some stakeholders argue that only age, sex and HIV status need to be taken into account as most healthcare need is related to age and sex. However, HIV also needs to be taken into account since it is not age related in the same way as most other diseases.

87.2. Other stakeholders maintain that the inquiry underestimates the degree of illness in the covered population by not including every diagnosis as if it is 'legitimate' or required care. A problem with this broader approach is that if there is a propensity to over-diagnose and over-treat particular conditions, then a broad definition of disease profile will incorrectly include these over-diagnoses or up-coding behaviours as explicable factors and the unexplained portion of expenditure will go down.

87.3. Understanding healthcare demand is essential to make sense of healthcare costs. Specifically, do individuals demand healthcare directly, or is their fundamental demand for health? The latter would make demand for healthcare a secondary or derived demand. The derived demand model is almost universally accepted for the healthcare industry.

87.4. The derived demand model assumes that people first present to a healthcare professional with a requirement (demand) for better health, and through the process of diagnosis and referral the professional identifies the best healthcare intervention that will satisfy that demand for health.

87.5. 'Need' is the situation of a sub-optimal sate of health, and the existence of intervention that can improve that health state. Without need, demand for health should not translate into demand for healthcare. Furthermore less need would translate into less demand for healthcare by a rational individual consumer, or a benevolent agent acting on their behalf

87.6. The identification and quantification of need is thus the essential role of the healthcare professional – so that s/he is able to advise his/her patients on the interventions most likely to satisfy their primary demand, which is for health.

87.7. However, incentives exist for professionals to distort this advice. Because they are often financially and intrinsically rewarded for delivering healthcare, doctors will be inclined to stimulate demand for more healthcare than levels of need would warrant. This is known as supplier induced demand, and will contribute to cost escalation.

87.8. Supplier induced demand only makes sense when the demand for health and healthcare are distinct. If they are the same, then all demand for healthcare results from perfectly informed consumer decisions, and supplier induced demand cannot exist.

87.9. Not all inappropriate demand for healthcare is supplier-induced. Where patients do not have to pay for the full cost of care – usually because they have insurance cover – they may also demand more care than they need. This is called moral hazard.

87.10. Medical Schemes should be aware of supply-induced demand and moral hazard and expect their administrators to actively manage these to protect scheme members' health and financial interests. An ability to effectively manage these (and clearly demonstrate it) should be a competitive advantage for an administrator.

87.11. There are thus two possible approaches to follow: a narrow disease burden analysis which takes disease burden

into account but does not assume every admission or diagnosis is essential, or a broad disease burdenwhich assumes that all diagnoses admissions are valid, thereby ignoring the presence of over-servicing and supply-induced demand.

87.12. Given that the inquiry has shown evidence of supply-induced demand in the private healthcare sector in Chapter 8 the broader disease burden analysis will overestimate the sickness of the population and will effectively hide or legitimise supply-induced demand. Practitioners have acknowledged that in instances where a patient only has a hospital plan they will admit the patient to ensure that the patient will have cover for the consultation.[43] This confirms our decision to use the narrower definition.

88. The inquiry therefore believes that the narrow definition of disease is appropriate in assessing trends in expenditure. Before assessing the trends in expenditure, we provide a brief overview of the approach to analysing the claims data. We also assess trends in in- and out-of-hospital claims costs, with particular focus on the specialities contributing the most to expenditure and the extent to which those expenditure changes can be explained by factors known to drive healthcare need.

89. As far as possible given the data available to it, the inquiry used the claims data to describe trends over time and ascertain what the drivers of costs are.

90. We have often used trend data to evaluate change over time rather than absolute values as we are not looking for the rand value of one event or the absolute measure of any specific event. Instead, we are looking to understand the patterns that emerge from the data.

91. Cost per event, or cost per patient covered, rather than absolute cost, is considered.

92. We describe patterns and explain them based on our understanding of the private health care market - ie, within the context of incentives that operate in the market.

93. Through various recognised and standard approaches to statistical analysis, we attribute likely explanations for observations. As will be clear in the technical analysis we tested different approaches and our approach has been found to be robust.[44] We have also taken feedback from stakeholders into account. Minor differences in absolute measures/values, which do not alter the interpretation of the data, have been found.[45]

94. The data is restricted to five years, but nonetheless constitutes a very large data set. We describe the overall picture and avoid being distracted by incidental or minor findings.

OUT-OF-HOSPITAL CLAIMS ANALYSIS

95. In the period 2010 – 2014, out-of-hospital claims costs have increased on average by 7.28% per year per member. The attribution analysis indicated that 5.6% of this increase is associated with inflation (CPI); 1% of the increase is associated with the various explanatory factors in our model (age, gender, disease profile, member profile and plan mix) while 0.68% is unexplained (Table 7.3).

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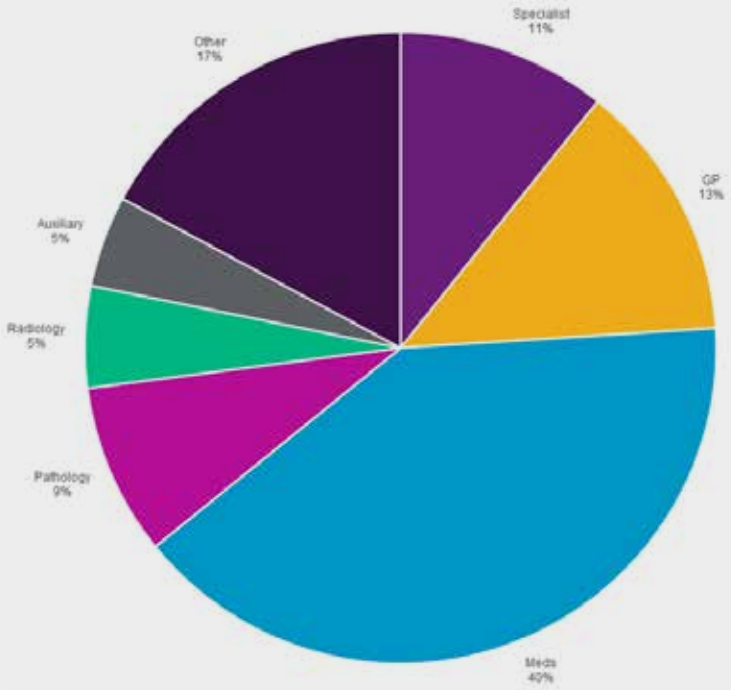
43. The HMI in public hearings were informed of the difficulty of getting out-of-hospital cover for mental health care and were also told of doctors admitting patients to ensure patients were covered.
44. Technical Annexure to Expenditure Analysis Reports.
45. The HMI reanalysed its data taking into account stakeholder critique. One example concerned our approach to attribution analyses. We compared our approach to one suggested by stakeholders. When comparing the percentage of change that was considered to be unexplained; the one approach produced a result of 2.20% the other approach produced a result of 2.16%. See tables 5 and 6 in Technical Annexure: Response to Data Room Submissions

TABLE 7.3: CHANGE IN OUT-OF-HOSPITAL COSTS AND ATTRIBUTION OF COST CHANGE 2010-2014 [46]

Out-of-hospitals claims, all schemes	2011	2012	2013	2014	Average
Total Increase	7.59%	5.23%	6.96%	9.33%	7.28%
CPI	5.00%	5.60%	5.70%	6.10%	5.60%
All Explanatory Factors	2.49%	-1.22%	1.50%	1.14%	0.98%
Age	0.43%	2.14%	1.00%	0.73%	1.08%
Gender	-0.01%	-0.01%	0.03%	0.03%	0.01%
Disease Profile	1.46%	-0.85%	0.90%	0.62%	0.53%
Member Profile	2.24%	0.04%	0.09%	0.28%	0.66%
Plan Mix	-1.63%	-2.54%	-0.51%	-0.51%	-1.30%
Unexplained Factors	0.10%	0.85%	-0.23%	2.09%	0.70%

96. Beneficiaries in the dataset claim on average 2.5 out-of-hospital consultations with GPs per annum and 0.55 out-of-hospital consultations with specialists per annum. Consultations with GPs has been pretty stable over the 5 year period and consultations with specialists has declined over the 5-year period by 1.4% (Table 33 Expenditure analysis report 5 practitioner analyses). Despite the decline in specialist visits and the fact that specialists only saw 17% of all out-of-hospital patients in the 5 year period, they account for 11% of total expenditure. By comparison, GPs saw about 82% of out-of-hospital patients and account for 13% of total expenditure (Figure 7.5)

FIGURE 7.5: OUT-OF-HOSPITAL CLAIMS SPLIT, 2010-14



46. Taken from Expenditure analysis report 5 practitioner analyses – Table 1

97. The data allows us to describe those disciplines contributing the most to claim cost increases over time and what percent of out-of-hospital costs are spent on each discipline. (Table 7.4)

97.1. GPs account for the largest share, at just over 60% of the total practitioner out-of-hospital expenditure. GP expenditure increased by 5.85% per year.

97.2. Specialists make up a smaller percentage of out-of-hospital cost but the costs per event has increased at a greater rate than that of GPs and by more than the average increase for all practitioners (7.09%). The biggest increases are from psychiatrists (15.0%), ophthalmologists (14.67%), physicians (13.82%), and surgeons (13.48%) as illustrated in Table 7.4.

TABLE 7.4: OUT-OF-HOSPITAL CLAIMS SPLIT, 2010-14[47]

	Claim Cost per Beneficiary per Annum (Rands)						
Practice	**2010**	**2011**	**2012**	**2013**	**2014**	**Trend**	**% practitioner type contributes to costs**
GPs	696	757	773	821	874	5.85%	61.44%
Radiation Oncologist	73	85	93	100	100	8.44%	7.06%
Gynaecologist	70	75	79	83	88	5.86%	6.18%
Physician	48	55	61	70	81	13.82%	5.69%
Ophthalmology	33	38	44	51	57	14.67%	4.04%
Paediatrics	31	34	35	37	40	6.27%	2.81%
Psychiatrists	23	25	30	35	39	15.00%	2.77%
General Surgeons	16	18	20	23	26	13.48%	1.85%
Dermatologists	16	18	18	19	21	6.15%	1.47%
Orthopaedic Surgeons	15	16	18	19	20	8.56%	1.42%
Other Practitioners	60	64	70	72	75	5.56%	5.27%
All Medical Practitioners	1082	1 183	1 242	1 329	1 423	7.09%	100.00%

98. From the analysis below (Table 7.5) it can be seen that there has been an overall increase in the number of out-patient-visits per 1 000 lives (0.48% per year[48]) and that this differs by practitioner type. Visits to psychiatrists have increased by 5.07% per year, to physicians by 4.79% per year and to ophthalmologists by 4.16% per year. All claims costs have increased, on average by 6.21% per year. In terms of trends in claims costs, all specialists individually listed in the table have increased by more than the average with general

47. December 2017 (http://www.compcom.co.za/wp-content/uploads/2017/12/3-Response-to-Data-Rooms-Technical-Annexure.pdf). The conclusions of the HMI are not influenced by the 0.4% difference.
48. Please note that trend data reflects change per year in all tables unless otherwise stated – the methods are explained in detail in the annex and are not repeated in the body of the report to keep the report to a readable length.

surgeon claims costs increasing the most (by 11.82%); ophthalmologists by 8.8%; gynaecologists by 8.18%; physicians by 8.13%; and psychiatrists by 8.0%. There are also different patterns across practitioner types. Some illustrate an increase in both the number of visits and the claim cost per visit (psychiatrists, physicians and ophthalmologists) while some only show an increase in the claim cost per visit (surgeons).

TABLE 7.5: OUT-OF-HOSPITAL VISITS PER 1 000 POPULATION, COST PER VISIT 2014, AND COST TRENDS (% INCREASE PER YEAR) 2010-2014[49]

Practitioner type	Visit per 1000 insured population in 2014	Average annual increase in visits 2010-2014	Average cost per visit in 2014	Average annual increase in costs 2010 - 2014
GPs	2 494	0.43%	379.79	5.23%
Gynaecologists	128	-2.36%	819.21	8.18%
Physicians	93	4.79%	1 003.32	8.13%
Paediatricians	76	-1.85%	609.02	6.94%
Ophthalmologists	54	4.16%	1 211.46	8.80%
Psychiatrists	45	5.07%	994.74	8.00%
Orthopaedic Surgeons	45	0.73%	615.16	6.92%
Dermatologists	36	-1.20%	702.97	7.55%
General Surgeons	32	-0.08%	994.19	11.82%
Otorhinolaryngologists	28	-2.13%	646.94	5.29%
Other Medical Practitioners	99	1.91%	1 840.36	4.58%
All Medical Practitioners	3 131	0.48%	507.39	6.21%

99. Table 7.5 also illustrates that while the number of visits to GPs and costs per visit have increased, the increase has been below the average increase for all practitioners combined.

100. The data indicates either that, over a five year period, patients have either become sicker or required more care or that patients are receiving more care in spite of a constant state of health or patients are receiving care that is more costly over time. This is more so when they are seen by specialists comparted to GPs. This is more pronounced for some specialists than others. The patterns in claims costs are also different for patients who are seen by a GP before being seen by a specialist than for those who go to a specialist directly.

101. In South Africa care is generally uncoordinated. A person can see a GP who may refer the patient to a specialist (or more than one specialist) or the person can go directly to one (or more) specialist(s) and/or other practitioners. Providers do not

49. Expenditure analysis report 5: Practitioner analyses. Table 10

work in multidisciplinary teams and seldom meet to discuss a patient[50 51 52 53] The results of any investigation or test may or may not be shared between providers and care may or may not be co-ordinated.

102. The data in Table 7.6 indicates that for patients who see GPs only an increase in out-of-hospital claims costs of only 5.72% has resulted, while for those who see multiple specialists without a prior GP consultation, an increase in out-of-hospitals costs of 19.47% has resulted. For those who see GPs and multiple specialists, costs have gone up by 9.97% per year over the period 2010 to 2014. It may be that people seeing multiple specialists are sicker and so require more care or more costly care (these data are not risk adjusted) but it may also be that there is some inefficiency (repeated tests, more visits etc.).

103. The data appears to support the notion that coordination through a GP is desirable. A more definitive conclusion could be drawn if these analyses were risk adjusted. However, there is strong corroborating evidence to support a gate-keeping function for GPs.

104. The inquiry notes that at least one medical scheme has implemented and evaluated mandatory GP referrals to specialists and has documented reduced costs, improved health care outcomes and decreased admission rates.This is one of the reasons the inquiry seeks to promote an environment that will stimulate innovation in forms of service provision in South Africa.

TABLE 7.6: AVERAGE CHANGE PER YEAR IN OUT-OF-HOSPITAL CLAIM COST BY TYPE OF MEDICAL PRACTITIONER SEEN: 2010-14 – UNADJUSTED[54]

Pattern of use	Specialist	GP	Meds	Pathology	Radiology	Auxiliary	Other	Total OH
No Medical Practitioners			7.81%	12.22%	12.17%	9.41%	5.78%	7.42%
Single GP only		5.72%	6.67%	11.73%	9.55%	8.13%	3.04%	6.05%
Multiple GPs seen		4.84%	6.94%	11.26%	12.00%	14.45%	2.51%	6.26%
Single specialists only	8.33%		5.43%	13.79%	9.99%	6.63%	5.39%	7.50%
Multiple specialists seen	19.47%		9.14%	12.31%	21.74%	8.30%	7.94%	13.38%
GPs and Specialists								
- single	7.84%	6.01%	5.49%	10.95%	8.65%	5.78%	4.31%	6.45%
- multiple	9.97%	5.78%	5.97%	10.92%	10.21%	9.47%	5.17%	7.39%
All Lives	**9.06%**	**6.58%**	**6.83%**	**12.38%**	**10.12%**	**8.20%**	**4.56%**	**7.28%**

50. Medscheme Holdings (Pty) Ltd's submission to the HMI, October 2014.
51. Independent Clinical Oncology Network (ICON)'s response to information request from the HMI.
52. Netcare regulatory overview document, submission to the HMI, 31 October 2014.
53. The Society of Private Nurse Practitioners of South Africa, submission to the HMI, October 2014.
54. Expenditure analysis report 5: Practitioner analyses. Table 3.

105. Another interesting issue that arises from the analysis of claims costs is an understanding of who carries the cost for out-of-hospital-care. The terms of reference identified the affordability of private healthcare as one of the important questions the inquiry must consider. The inquiry thus assessed the source of payment for out-of-hospital claims and found that different patterns emerge. Expenditure for some specialities such as general surgeons, ophthalmologists, physicians and psychiatrists has been increasingly covered by pooled funds (risk cover). For most of these specialists, the proportion of payment from savings accounts decreased between 2010 and 2014.[55] The opposite is true for other specialists, such as dermatologists, where less is paid from risk and more from savings but, at the same time, increasingly amounts are unpaid. Between 2010 and 2014, the specialists for which an increasing proportions of medical bills have been recorded as "unpaid" by schemes are gynaecologists, orthopaedic surgeons and dermatologists. The inquiry assumes that at least a proportion of these 'unpaid' claims must be paid out-of-pocket by the patient.[56]

106. The importance of highlighting the source of payment is that increased payments from risk pools results in medical scheme contributions increasing for everyone, – observing the principle of solidarity inherent in medical insurance; while increased payment from savings or larger unpaid amounts accrue to the individual. In cases where care is needed, this is rational and required expenditure. If care is discretionary, on the part of the provider or the consumer, the increases in costs must be looked at differently. If these additional costs are related to care that is not strictly necessary, this consumption should be reduced to decrease costs for consumers.

107. To reduce unnecessary care, the inquiry must understand what brings it about. Our understanding is that it can be as result of information asymmetry in profit maximising individuals – ie doctors offering care that is not strictly required, or practitioners not guiding patients to only purchase medically necessary consumption, or patient's demanding care even when it is not strictly required.

108. In summary, out-of-hospital claims costs are increasing. This is partly driven by increased utilisation as illustrated in Table 7.5. The increase is more marked for people who see particular specialists. As a result, medical scheme members pay more because monthly scheme membership costs increase (when schemes pay from risk pool funds) and through increased self-payment from savings accounts and/or out-of-pocket payments.

IN-HOSPITAL CLAIMS ANALYSIS

Admission rates

109. Admissions have been divided into day and overnight admissions. Day admissions are those admissions where patients do not spend the night in hospital but have generated a facility fee or have a day ward fee or were admitted but were discharged on the same day. Overnight admissions are those where a patient has slept in the hospital for at least one night.

110. Admission rates have increased by just under 2% per year for both day admissions (1.8%) and overnight admissions (1.99%) over the five years studied.[57]

111. Not all practitioners demonstrate an increase in admissions rates, and there are some that have a larger increase in admission rates than others.

112. The majority of day admissions (those which incur a facility-fee) are related to GPs. This is most likely due to patients attending an emergency room. The next largest group of admitting practitioners are general surgeons, ophthalmologists, orthopaedic surgeons, ENTs, gynaecologists, and urologists. These are practitioners who

55. Expenditure analysis report 5: Practitioner analyses. Tables 14, 15 and 16 .
56. It is possible that for a proportion of providers may forgo the unpaid amount as collecting it may be more costly, but for others where providers insist on payment then out-o-pocket costs will be incurred
57. Expenditure analysis report 5: Practitioner analyses. Tables 17 and 18

are likely to be doing day procedures so it is unsurprising that the rates are high. However, the change over time is of more interest.

113. The data indicate that physicians have increased their rates of admission over this five year period by 7.34% per year followed by ophthalmologists (5.46% per year), and urologists (3.61 % per year). Such a large change is unlikely to the result of increasing disease burden and new screening interventions that have picked up hitherto undiagnosed disease to an extent that explains this trend are unlikely. The chapter on supply-induced-demand also concluded that underserving is not a feature of this market. Without understanding the outcomes associated with the increase in interventions, it is difficult to make any definitive statements about the necessity and benefit of these interventions. However, it is apparent to the inquiry that increasing utilisation is driving expenditure.

TABLE 7.7: DAY-ADMISSION RATES BY YEAR AND ANNUAL AVERAGE TREND IN ADMISSION RATES BY ADMITTING DISCIPLINE AND THE PERCENTAGE THAT DISCIPLINE CONTRIBUTES TO ALL ADMISSIONS[58]

	Day Admissions per 1 000 Lives						
Admitting Discipline	**2010**	**2011**	**2012**	**2013**	**2014**	**Trend**	**% of total admissions**
General Practitioners	61.74	64.48	66.15	65.56	65.49	1.49%	54.35%
General Surgeons	9.45	8.78	8.88	9.58	9.58	0.35%	7.95%
Ophthalmology	7.40	7.66	8.33	9.01	9.15	5.46%	7.59%
Orthopaedic Surgeons	6.49	5.91	6.07	6.50	6.64	0.54%	5.51%
Otorhinolaryngologists	6.29	5.82	5.82	6.22	6.07	-0.87%	5.04%
Gynaecologists	5.56	5.28	5.14	5.37	5.25	-1.42%	4.36%
Urologists	4.98	4.86	5.08	5.43	5.74	3.61%	4.77%
Physicians	3.21	3.20	3.47	3.87	4.26	7.34%	3.54%
Gastroenterologists	1.24	0.91	0.95	0.98	1.00	-5.33%	0.83%
Paediatricians	1.15	1.03	0.99	1.09	1.11	-0.94%	0.92%
Cardiologists	0.63	0.49	0.58	0.57	0.58	-2.40%	0.48%
Psychiatrists	0.22	0.11	0.12	0.12	0.16	-7.90%	0.13%
Other Disciplines	3.84	3.61	4.07	4.83	5.49	9.33%	4.55%
All Disciplines	112.20	112.15	115.64	119.14	120.51	1.80%	100.00%

58. Expenditure analysis report 5: Practitioner analyses. Table 17

114. Overnight admissions also show large increases. Over the five year period, admissions by physicians increased at 5.93% per year, urologists by 3.92% per year, orthopaedic surgeons by 3.30%, psychiatrists by 2.63%, and general surgeons by 2.62% per year. Given the relatively stable medical aid population, this is not likely explained by is the served population getting sicker each year. It is hard to imagine such a dramatic increase in illness exists that requires admission as described in Table 7.8.

TABLE 7.8: OVERNIGHT-ADMISSION RATES BY YEAR AND ANNUAL AVERAGE TREND IN ADMISSION RATES BY ADMITTING DISCIPLINE AND THE % THAT DISCIPLINE CONTRIBUTES TO ALL ADMISSIONS

	Overnight Admissions per 1 000 Lives						
Admitting Discipline	**2010**	**2011**	**2012**	**2013**	**2014**	**Trend**	**% of total admissions**
Physicians	23.24	25.33	26.35	28.06	29.27	5.93%	19.73%
Gynaecologists	20.02	20.55	20.22	19.77	19.92	-0.11%	13.43%
General Practitioners	18.09	18.63	18.30	17.77	17.53	-0.80%	11.82%
General Surgeons	17.35	18.52	18.62	18.79	19.23	2.61%	12.97%
Paediatricians	15.44	16.01	15.39	15.71	15.93	0.78%	10.74%
Orthopaedic Surgeons	12.37	13.21	13.41	13.54	14.09	3.30%	9.50%
Psychiatrists	5.56	5.90	5.96	6.04	6.17	2.63%	4.16%
Urologists	4.99	5.53	5.59	5.53	5.82	3.92%	3.92%
Cardiologists	3.48	3.30	3.17	3.06	3.03	-3.43%	2.04%
Otorhinolaryngologists	3.31	3.79	3.58	3.23	3.24	-0.49%	2.19%
Ophthalmologists	1.19	1.27	1.29	1.24	1.29	2.04%	0.87%
Gastroenterologists	1.02	1.06	0.95	0.79	0.72	-8.54%	0.48%
Other Disciplines	11.03	11.37	11.50	11.75	12.07	2.29%	8.14%
All Disciplines	137.09	144.46	144.33	145.29	148.30	1.99%	100.00%

115. In the following section, we evaluate the total costs associated with admission. Currently hospitals are not able to directly influence either who is admitted or for how long people stay in hospital. Doctors admit patients to hospitals and thus influence hospital utilisation as well as which services are used while in hospital. The analysis of total admission cost is thus one way of assessing how doctors' behaviour influences overall health care costs.

Admission claims costs

116. The average claims cost per admission (including all ward and provider fees) has increased by 8.8% per year for day admissions and 8.42% per year for overnight admissions.[59] This differs depending on the

59. Expenditure analysis report 5: Practitioner analyses. Tables 19 and 20

admitting discipline. For day admissions, for example, paediatric admissions have increased by 15.81%, physicians by 11.74% and orthopaedic admissions have increased by 9.92% per year. Overnight psychiatric admissions have increased by 10.55% per year.

117. Practitioner day-admission claims costs (excluding the associated admission costs such as hospital fees or services rendered by providers other than doctors) have increased by 8.8% per year on average for day admissions and by 12.95% for paediatricians, 10.83% for orthopaedic surgeons, 10.44% for gastroenterologists, and 7.01% for GPs.[60]

118. Overnight admissions claims costs for medical practitioners only have increased on average by 9.36% per year. This varies by practitioner type. Physician costs have increased by 11.01% per year, orthopaedic surgeons by 10.15% and ENTs by 9.95% per year.[61]

119. To assess the impact of admissions on all medical schemes members, a "cost per life covered" metric, made up of admission per life multiplied by cost per admission, is evaluated. For day admission, total costs per life have increased by 10.76% and 10.84% for practitioner-only costs.[62] For overnight admissions, total cost per life has increased by 10.58% per year and 11.53% per year for practitioners-only costs over this period.[63]

120. Tables 7.9 (trends in day admissions and 7.10 (trends in overnight admissions) provide a useful summary of these trends. Table 7.9 shows that the majority of day-admissions are related to GPs. The number of day admissions by GPs has gone up by 1.49% per year, total claim costs per admission has gone up by 8.54% per year and practitioner-only claim costs have gone up by 7.01% per year. This can be compared to physicians who make up only 3.54% of day-admissions; but where the admission rate increased by 7.34% per year, total claim cost per admission has gone up by 11.74%, and the practitioner-only claim costs per admission has gone up by 9.39% per year.

121. For overnight admissions, the majority of admissions are generated by physicians (19.73%); where the rate of admission has gone up by 5.93% per year, total costs by 8.41% per year; and practitioners' costs have gone up by 11.01% per year.

122. Other trends can also be seen for example that rates of day- and overnight-admissions for gastroenterologists have gone down. This may point to a change in practise incentivised by funders who are promoting in-room procedures (not using a facility) for certain procedures that gastroenterologists perform. However we draw attention to footnotes in the tables that indicate that other factors maybe influencing this trend; gastroenterologists may be using their physician speciality practise number and not their sub-specialist number.

123. Interestingly, both total day and overnight admissions have this gone up. While we would expect day-care, which is relatively new in the SA market and utilises new technologies to increase day-admission rates, one would expect this to be accompanied by a decrease in overnight admissions. This is not universally the case across all disciplines.

60. Expenditure analysis report 5: Practitioner analyses. Table 21
61. Expenditure analysis report 5: Practitioner analyses. Table 22
62. Expenditure analysis report 5: Practitioner analyses. Tables 23 and 25
63. Expenditure analysis report 5: Practitioner analyses. Tables 24 and 26

TABLE 7.9: DAY ADMISSIONS TRENDS: % OF ADMISSIONS BY PROVIDER DISCIPLINE, AVERAGE ANNUAL CHANGE PER YEAR IN ADMISSION RATES, COST PER ADMISSION AND COST PER LIFE[64]

Day Admissions Trends by Discipline 2010-2014					
Discipline	% of admissions attributable to this provider	Average annual admission rates change per year	Average annual change in total cost* per admission	Average annual change in practitioner cost per admission	Average annual change in contribution to cost per life for this provider
GPs	54.35%	1.49%	8.54%	7.01%	8.60%
General Surgeons	7.95%	0.35%	8.93%	8.67%	9.05%
Ophthalmology	7.59%	5.46%	6.64%	6.46%	12.28%
Orthopaedic Surgeons	5.51%	0.54%	9.92%	10.83%	11.43%
Otorhinolaryngologists ENTs	5.04%	-0.87%	7.01%	6.59%	5.67%
Gynaecologists	4.36%	-1.42%	7.15%	10.11%	8.54%
Urologists	4.77%	3.61%	7.82%	8.17%	12.08%
Physicians	3.54%	7.34%	11.74%	9.39%	17.42%
Gastroenterologists[65]	0.83%	-5.33%	8.33%	10.44%	4.55%
Paediatricians	0.92%	-0.94%	15.81%	12.95%	11.98%
Cardiologists[67]	0.48%	-2.40%	8.98%	9.39%	6.76%
Psychiatrists	0.13%	-7.90%	7.07%	4.52%	8.97%
Other Disciplines	4.55%	9.33%	6.92%	6.40%	15.76%
All Disciplines	100.00%	1.80%	8.80%	8.88%	10.84%

* total cost refers to all costs associated with the admission: practitioner, hospital, consumables etc

64. Data for this table is drawn from table 27: Day Admissions Summary Trends by Medical Practitioner Discipline, Average 2010-2014 plus trend data from table 25
65. The HMI has been informed that it some gastroenterologists submit claims under their general specialisation that is physician rather than under their sub-specialty that is gastroenterology - it is not impossible that the data for gastroenterologists are underestimated and physicians values are too high
67. Similar to cardiologists the HMI has been informed that some gastroenterologists may claim as physicians rather than gastroenterologists

TABLE 7.10: OVERNIGHT ADMISSIONS TRENDS: PERCENTAGE OF ADMISSIONS BY PROVIDER DISCIPLINE, AVERAGE ANNUAL CHANGE PER YEAR IN ADMISSION RATES, COST PER ADMISSION AND COST PER LIFE [68]

Overnight Admissions Trends by Discipline 2010-2014					
Discipline	% of admissions attributable to this provider	Average annual admission rates change per year	Average annual change in total cost* per admission	Average annual change in practitioner cost per admission	Average annual change in contribution to cost per life for this provider
Physicians	19.73%	5.93%	8.41%	11.01%	17.60%
Gynaecologists	13.43%	-0.11%	6.85%	7.76%	7.63%
General Surgeons	12.97%	2.61%	7.23%	7.76%	10.58%
GPs	11.82%	-0.80%	8.13%	9.16%	8.29%
Paediatricians	10.74%	0.78%	7.46%	8.21%	9.06%
Orthopaedic Surgeons	9.50%	3.30%	8.21%	10.15%	13.78%
Psychiatrists	4.16%	2.63%	10.55%	9.33%	12.21%
Urologists	3.92%	3.92%	7.88%	7.76%	11.98%
Otorhinolaryngologists	2.19%	-0.49%	9.12%	9.95%	9.41%
Cardiologists[69]	2.04%	-3.43%	6.92%	8.18%	4.47%
Ophthalmologists	0.87%	2.04%	7.17%	7.20%	9.39%
Gastroenterologists[70]	0.48%	-8.54%	5.25%	8.88%	-0.41%
Other Disciplines	8.14%	2.29%	7.80%	9.18%	11.68%
All Disciplines	100.00%	1.99%	8.42%	9.36%	11.53%

* total cost refers to all costs associated with the admission: practitioner, hospital, consumables etc

68. Data taken from Table 28 Overnight Admissions Summary Trends by Medical Practitioner Discipline, Average 2010-2014 plus trend data from table 26.
69. The HMI has been informed that it is not unusual for cardiologists to submit claims under their general specialisation that is physician rather than under their sub-specialty that is cardiologist – it is not impossible that the data for cardiologists are underestimated and physicians values are too high
70. Similar to cardiologists the HMI has been informed that some gastroenterologists may claim as physicians rather than gastroenterologists

124. It is important for the inquiry to understand what motivates the increase in admission rates. Aging and a large increase in the disease burden are not rational explanations. The funding industry believes that there may be a buy-down effect at play, in that an increasing proportion of people have hospital plans necessitating admission if care is to be covered.[71] The administrative requirements to ensure payment without hospitalisation may also be too burdensome[72] for individuals and practitioners, in spite of the inflationary effect on the market as a whole. Another explanation could be that the convenience for both doctor and patient to access a range of services from a variety of providers in one admission is attractive. It may also be more convenient for the practitioner who can rely on ward nurses to clerk the patient and have the patient ready for care when the practitioner arrives, allowing the practitioner to schedule his or her day efficiently. Based on information provided to the inquiry, these factors appear to be likely reasons for an increase in admission rates

125. It is safe to conclude that increased admissions rates benefit both doctors and hospitals. This also explains hospitals' preference for 'admitting disciplines' in share allocation and the competition between hospitals to have practitioners working from their facilities and attracting practitioners with equipment, low rentals, assistance with equipment and guaranteed income for emergency room practises. (See Chapter 6.)

126. Whatever the factors driving increased hospitalisation, the inquiry's primary concern is that it is pushing up expenditure, which is one of the primary issues the HMI was tasked to investigate. Of particular concerns is that higher hospitalisation and associated increasing expenditure makes medical aid membership more expensive and so less accessible.

127. In the attribution analyses done, we investigated if the costs are driven by how long people stay in hospital, or how many are admitted, or if they required higher levels of care (e.g. High Care or ICU which incurs higher costs). These analyses are standardised by inflation, age, sex, disease burden and case mix which would explain some of the drivers. Once these factors are taken into account, we investigate the unexplained factors.

128. The analyses standardised factors such as age and sex which impact on healthcare needs. Other factors, such as what the person is being treated for (termed case-mix), were also taken into account, since some conditions are more expensive to treat or require longer time in hospital. In the original analysis, the model accounted for explicit diagnosis, ie whether someone had a chronic disease diagnosed by a doctor. Some stakeholders criticised this approach, arguing that it was too narrow. To accommodate their critique, a second method of measuring chronic disease status was defined. This was an implied chronic disease status inferred by the person being in hospital or taking particular drugs. In this broader approach a doctor's explicit diagnosis was not required. Our original approach came to be knowns as the narrow disease burden and the revised method as the broad disease burden.

129. As described[73] the inquiry is interested in the amount of expenditure that is unexplained.[74] In the attribution analyses we focus on that

71. Discovery Health's submission to the HMI, 17 November 2014; Council for Medical Schemes (CMS), comments on the HMI's Draft Statement of Issues, 30 June 2014; Medscheme Holdings (Pty) Ltd's submission to the HMI, October 2014; MMI Holdings, comments on the Revised Statement of Issues, 11 February 2016.
72. A number of presentation at the public hearings indicated that this was the case for both practitioners and patients.
73. http://www.compcom.co.za/wp-content/uploads/2017/12/1-Panel-Overview-and-Observations-of-Claims-Data-Analyses.pdf
74. The unexplained portion is that proportion of cost changes that are due to other factors not related to the easily describable health/ill health of the population served. This unexplained increase is therefore over and above what could be understood to be caused by inflation, the age/sex of the population served, the state of ill-health and the severity of the person/condition being treated.

part of the admission rates (and associated claims costs) that are unexplained. It is worth noting that when the broad definition is used in the attribution analyses, its major effect is on proportion of admission rates that are unexplained; i.e., under the broad definition, less of the increase in admissions is unexplained. This is not a surprise as being admitted was included as a 'marker' for chronic disease status in the broad definition. This is a circular argument and explains why, in our original approach to analysis, we did not include admissions related diagnoses to describe disease burden. Similarly a difference is found in those analyses that investigate the cost per beneficiary – again this is rational as cost per beneficially includes the number of admissions/events. Had the broad definition had a systematic impact on level of care, for example, or length of stay, as it does for admissions, we may be more convinced of its usefulness. In other analyses there is no real material difference in the results using the broad versus the narrow definition. Based on this, we base our analysis on the narrow definition of disease.

130. Nonetheless, the inquiry notes that some stakeholders (hospital groups and some health care providers) were comfortable with the broad definition.

FINDINGS ON ATTRIBUTION

131. In summary we find the following using the narrow definition of disease:

131.1. Claims costs for all disciplines have increased over the five year period with the exception of gastroenterologists.

131.2. The factors driving claims costs in each discipline, and the degree to which these are due to logical explanatory factors such as age, differ.

132. In trying to understand the factors driving claims costs and whether they differ by discipline, the inquiry investigated factors driving increased admissions, length of stay, and level of care for 17 practitioner types (Tables 7.9 and 7.10). The HMI finds that:

132.1. For 14 of the 17 specialities, there were "other" unexplained factors related to cost increases. This may include use of costlier technologies, more interventions, higher salaries etc. and ranged from 10.2% for ophthalmologists followed, to 2.69% for gastroenterologists and 0.26% for dermatologists.

132.2. For 11 of the 17 specialities, unexplained admission rates contributed to cost increases. This ranged from 7.44% in neurology to 0.44% in general surgery.

132.3. Nine of the 17 had unexplained increases in level of care; from 1.63% for neurosurgery to 0.06% for ENTs

132.4. For four of the 17 specialties, there were unexplained increases in length of care. The degree to which this was unexplained varied from 4.16% in psychiatric admissions to 0.04% for GPs

133. Thus increased costs are driven by various factors beyond those demographic factors that can explain increased costs. We looked at four modalities: unexplained increased admissions; unexplained increased length of care; unexplained increased costs; unexplained increased level of care (Table 7.11 and Table 7.12).

133.1. In five of the 17 specialists types all four modalities operate: psychiatry, dermatology, internal medicine, orthopaedics and neurology.

133.2. In six practice types three modalities are seen: ENT, paediatrics, general surgery, urology, O&G and GPs.

133.3. In four of the 17 practise types two modalities are seen: cardio thoracic surgery, cardiology, neurosurgery, ophthalmology.

133.4. In two, gastroenterology and oncology only one modality is seen: other and length of stay respectively.

133.5. The large increase ascribed to ophthalmology in 'other' costs stands out as well as the large increase in admission rates for neurology. Psychiatric admissions have a high rate of unexplained length of stay driving costs. The consistency of physicians across all modalities is noticeable.

TABLE 7.11: MEDICAL DISCIPLINES: PERCENTAGE OF ADMISSIONS AND CONTRIBUTION TO TOTAL COSTS, AND DESCRIPTION OF PROPORTION ADMISSION RATES, LEVEL OF CARE, LENGTH OF STAY THAT ARE EXPLAINED AND UNEXPLAINED IN THE ATTRIBUTION ANALYSES.[75]

Increases Breakdown	Cardiology	Dermatology	GP	Internal Medicine	Medical - Gastroenterology	Neurology	Paediatrics	Psychiatry
% of Admissions	1.36%	0.07%	31.08%	12.81%	0.64%	1.12%	6.34%	2.37%
% of Total Cost	2.84%	0.04%	5.96%	21.41%	0.40%	1.49%	6.78%	3.20%
Total Increase	3.29%	12.21%	8.36%	14.67%	-1.55%	17.65%	8.55%	13.49%
- CPI	5.60%	5.60%	5.60%	5.60%	5.60%	5.60%	5.60%	5.60%
- Explanatory Factors	2.52%	1.04%	-0.15%	3.49%	0.58%	1.79%	-0.46%	0.60%
- Unexplained Factors	-4.82%	5.57%	2.90%	5.58%	-7.74%	10.26%	3.41%	7.29%
Admission Rates	-3.25%	3.57%	1.03%	5.87%	-6.64%	7.97%	0.76%	2.74%
- Explanatory Factors	2.65%	0.48%	-0.06%	2.66%	0.80%	0.53%	-1.56%	0.54%
- Unexplained Factors	-5.90%	3.09%	1.09%	3.21%	-7.45%	7.44%	2.32%	2.19%
Length of Stay	0.60%	1.54%	0.06%	0.69%	-1.27%	0.80%	1.26%	4.14%
- Explanatory Factors	0.18%	0.33%	0.02%	0.25%	-0.48%	0.72%	0.42%	-0.02%
- Unexplained Factors	0.43%	1.21%	0.04%	0.43%	-0.79%	0.08%	0.84%	4.16%
Level of Care	-1.08%	0.78%	-0.43%	0.33%	-1.50%	1.02%	1.48%	0.05%
- Explanatory Factors	-1.00%	-0.17%	-0.20%	0.21%	-0.31%	0.48%	0.50%	-0.15%
- Unexplained Factors	-0.08%	0.96%	-0.23%	0.12%	-1.19%	0.54%	0.98%	0.20%
Other	1.60%	0.26%	1.93%	1.54%	2.69%	1.33%	-0.72%	0.40%

75. Day and overnight admissions combined, specialist physicians have been grouped with a number of the less frequently used consulting disciplines into 'Internal Medicine'; plastic surgeons have been combined into the general surgery group; medical and radiation oncologists have been combined into an 'Oncology' category; and to the extent that any are registered, paediatric cardiologists have been combined into the 'Cardiology' category.

TABLE 7.12: SURGICAL DISCIPLINES: PERCENTAGE OF ADMISSIONS AND CONTRIBUTION TO TOTAL COSTS, AND DESCRIPTION OF PROPORTION ADMISSION RATES, LEVEL OF CARE, LENGTH OF STAY THAT ARE EXPLAINED AND UNEXPLAINED IN THE ATTRIBUTION ANALYSES [76]

Increases Breakdown	Cardio Thoracic Surgery	General Surgery	Neuro-surgery	Obstetrics and Gynaecology	Onco-logy	Ophthal-mology	Orthopae-dics	Otorhino-laryngo-logy	Urology
% of Admissions	0.56%	11.59%	1.49%	9.37%	0.84%	3.89%	7.71%	3.46%	4.30%
% of Total Cost	4.28%	14.85%	4.28%	8.96%	1.39%	3.16%	13.65%	2.33%	3.76%
Total Increase	10.13%	10.38%	9.23%	6.62%	9.09%	11.98%	11.69%	7.51%	12.04%
- CPI	5.60%	5.60%	5.60%	5.60%	5.60%	5.60%	5.60%	5.60%	5.60%
- Explanatory Factors	2.34%	3.03%	2.54%	0.01%	3.60%	5.21%	3.16%	0.18%	2.40%
- Unexplained Factors	2.19%	1.74%	1.09%	1.01%	-0.12%	1.17%	2.93%	1.72%	4.04%
Admission Rates	1.90%	2.15%	2.12%	-0.35%	3.02%	5.13%	2.42%	-0.66%	3.79%
- Explanatory Factors	2.61%	1.71%	1.64%	0.06%	4.00%	4.63%	1.72%	-0.31%	2.03%
- Unexplained Factors	-0.71%	0.44%	0.48%	-0.41%	-0.97%	0.50%	0.70%	-0.35%	1.77%
Length of Stay	1.71%	1.70%	-0.03%	0.47%	2.10%	-3.82%	0.87%	2.00%	0.84%
- Explanatory Factors	-0.12%	1.04%	0.50%	0.30%	-0.31%	-0.31%	0.77%	0.38%	0.55%
- Unexplained Factors	1.83%	0.66%	-0.53%	0.17%	2.41%	-3.51%	0.09%	1.62%	0.29%
Level of Care	-0.69%	-0.02%	2.41%	0.20%	-0.40%	-5.02%	0.87%	-0.20%	-0.19%
- Explanatory Factors	0.23%	0.38%	0.78%	0.07%	0.38%	0.26%	-0.05%	-0.26%	0.03%
- Unexplained Factors	-0.93%	-0.41%	1.63%	0.13%	-0.78%	-5.28%	0.93%	0.06%	-0.22%
Other	1.32%	0.64%	-1.07%	0.65%	-1.40%	10.42%	1.49%	0.67%	1.56%

76. Day and overnight admissions combined, specialist physicians have been grouped with a number of the less frequently used consulting disciplines into 'Internal Medicine'; plastic surgeons have been combined into the general surgery group; medical and radiation oncologists have been combined into an 'Oncology' category; and to the extent that any are registered, paediatric cardiologists have been combined into the 'Cardiology' category.

134. The HMI believes that these unexplained increases point to inappropriate drivers of claims costs, since the factors already known to result in more ill-health (age, co-morbidities, seriousness of illness etc.), have already been taken into account. The question that arises is thus what could be driving these unexplained admissions, length of stay and level of care. The HMI believes that the explanation can partly be found in understanding the incentives operating in the market that influence practitioners' behaviour.

INCENTIVES INFLUENCING PRACTITIONER BEHAVIOUR

135. The inquiry has tried to understand these patterns of care in the incentive structure of the market, taking into account that health markets are characterised by imperfect information and information asymmetry.

136. A patient will generally not be fully aware of what care is required. It is likely that when a patient is ill and wants the best possible care, more care and more tests will be perceived by the patient as better care. Additionally, there are no outcome or process quality measures available to evaluate the care after it has been administered. We also note that practitioners operate in a fee-for-service environment which incentivises greater utilisation.

137. In healthcare it is likely that consumers imagine that any limitation on what they consume is to their detriment. However this is not always the case, and sometimes treatments are unnecessary. According to J Cromwell and JB Mitchell: "Surgical operations of doubtful marginal utility drive up health care expenditures both through physicians' fees and through hospital charges. At best, such operations may be a misallocation of scarce health resources; at worst, they may endanger the health and well-being of patients who undergo them."[77]

138. The data presented in Table 7.11 and Table 7.12 strongly suggests that in some instances doctors are either admitting patients when it may not be required, are keeping patients in hospital longer than may be needed, are using a higher level of care (high care, ICU) than may be indicated, or are charging more, doing more or more expensive tests on patients than may be indicated.[78] [79] The inquiry investigated whether there are features of the private healthcare sector that may explain this behaviour.

139. Some stakeholders have indicated that the increase in admission may be understood by the provision and greater use of hospital plans by consumers. These plans only reimburse in-hospital care which providers at the public hearings indicated led them to admit patients who perhaps could be treated out of hospital and more cheaply. While hospital plans may offer individual members a cheaper option they appear to have a perverse consequence in the market where they drive up costs for all.

140. Admission rates and costs associated with psychiatric admissions provide an example where a range of incentives in the market can operate to produce perverse outcomes. As indicated above, the average annual increase in overnight admissions associated with psychiatrists increased by 12.21% per year between 2010 and 2014. If an admission can be secured for a patient

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77. Cromwell J, Mitchell JB Physician-induced demand for surgery. J Health Econ. 1986 Dec;5(4):293-313.
78. The only way to assess if an intervention is of benefit is if there is evidence of positive health outcomes. There is not data to this effect and there are few systematic methods to collect such data on the part of practitioners. Some registries have been started and some quality measures are in place but most are process measures and not outcome measures. Failing outcome measure being available evidenced based best practise may guide behaviour. Publishing of routine, objective, disinterested guidance is not a feature of the SA health market.
79. Naturally medical practitioners will indicate that they are being careful, doing what is best for their patient, making sure that they are leaving no stone unturned in caring for their patients, and perhaps avoiding possible litigation. There is no reason to doubt this motivation. However, it can only be corroborated when it is linked to health outcomes which would improve if this were the case but unfortunately no data on health outcomes is systematically collected.

by a psychiatrist, most in-hospital care will be covered on most scheme options. This will provide relief for the patient who knows that his or her care will be covered and ensure payment for the provider. If the psychiatric diagnosis is also a PMB diagnosis,[80] admission is covered for 21 days. In such an instance, there is good reason to admit the patient for the period that will be covered. While such a patient could be covered as an outpatient, it may be administratively simpler to admit the patient rather than having to motivate for full cover for out-of-hospital care.[81]

141. Similarly, there are certain features and incentives in the private healthcare market that may explain the high utilisation of high-care and intensive care wards in South Africa.[82] Working as an individual provider (rather than in a group) means that doctors are on call 24-hours a day. High care or ICU care gives doctors a sense of security and time off, as they will be alerted if their patient's health status alters. Simultaneously doctors in the public hearings indicated that the quality of care in general wards in hospitals cannot be relied on.[93] Therefore, despite it being more costly, doctors may want to use these high care facilities. Collectively, these conditions make it possible to 'over-use' high care wards regardless of the greater cost of doing so. Overall what the data indicates is that various practices drive costs, even though they appear to have no easily medically explicable basis. This is concerning. Developing an understanding of the value of interventions and the quality of outcomes is a first step towards interrogating levels and effectiveness of care. This is discussed in more details in chapter 9 and addressed in the recommendations.

ORGANISATION OF SERVICES AND MODELS OF CARE

142. The claims data also allowed us to assess how patients access care and who they see. We note the following:

142.1. Many patients go directly to specialists (Table 7.6) bypassing GPs. We also note that those patients who see a specialist after a GP incur lower claim costs than those who go directly to specialists.

142.2. From Table 7.13 and Table 7.14, it can be inferred that many patients, when admitted to hospital have not seen a doctor two weeks prior to admission. This implies that many patients, in their first contact with the health service, have a serious enough illness to require immediate hospitalisation. This would make sense if most of such admissions were for accidents, but many are not as they are attended by non-surgical disciplines. This suggests that there is a lost opportunity to provide care to avoid hospitalisation or that doctors, in particular specialists, preferentially admit patients to hospital rather than seeing them in their rooms. Evidence in the public hearings confirmed that this is a practice that doctors employ.[84]

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80. Medical Schemes Act 131 of 1998, Chapter 9-Annexure A (Explanatory Note) Categories (Diagnosis and Treatment Pairs) constituting the PMBs under section 29(o) of the Medical Schemes Act
81. In public hearings the inquiry was informed of the difficulty of getting out-of-hospital cover for mental health care and was also told of doctors admitting patients to ensure patients were covered. Mr Kyle Drescher's presentation at the Cape Town public hearing on 9 March 2016. South African Medical Association (SAMA), presentation at the Pretoria public hearing on 24 February 2016.
82. Chapter 8 (Excessive utilisation and supplier induced demand) also illustrates that South Africa has a very high rate of ICU admissions.
83. Profmed's submission to the HMI, 30 October, 2014.
84. South African Medical Association (SAMA), presentation at the Pretoria public hearing on 24 February 2016.

TABLE 7.13: SURGICAL ADMISSIONS PER 1000 PATIENTS AND PROPORTION WITH A DOCTOR'S CONSULTATION UP TO TWO WEEKS (14 DAYS) PRIOR TO ADMISSION

Surgical admissions			
Year	Admission per 1 000	% with GP consultation	% with specialist consultation
2010	26.77	44.38%	34.53%
2011	27.30	44.72%	32.58%
2012	27.50	44.34%	30.72%
2013	28.37	42.52%	28.47%
2014	28.84	41.41%	26.63%

TABLE 7.14: MEDICAL ADMISSIONS PER 1000 PATIENTS AND PROPORTION WITH A DOCTORS CONSULTATION UP TO TWO WEEKS (14 DAYS) PRIOR TO ADMISSION

Medical admissions			
Year	Admission per 1 000	% with GP consultation	% with specialist consultation
2010	26.38	57.86%	16.00%
2011	28.53	59.25%	15.46%
2012	29.82	59.35%	14.16%
2013	31.94	57.13%	13.50%
2014	33.58	54.71%	13.24%

143. Another example of inappropriate care is obstetric practice. The inquiry analyses indicate that between 60% and 90% of deliveries by gynaecology practices are performed by caesarean section, with an increasing proportion falling into the over 90% category over time[85]. While optimal caesarean section rates may vary, 60% to 90% is far in excess of the norm.[86] Providers have indicated that working in an individual obstetrical practice requires being on 24-hour call 24-hours. The possibility of organising time by scheduling deliveries is a rational choice under such

85. Expenditure analysis report 5: Practitioner analyses. Table 107
86. "The optimal caesarean section rate—that is, the percentage of births achieved by caesarean among all live births that results in the best possible health outcomes—is difficult to determine as it is challenging to ascertain the true medical need at the population level. Proposals for optimal caesarean section rates have ranged from 5% to 20%, capturing both minimal desirable levels for emergency caesarean section and those constituting overuse of elective caesarean section. Adeline Adwoa Boatin et al BMJ 2018;360:k55 | doi: 10.1136/bmj.k55. See also Ye J, Betrán AP, Guerrero Vela M, et al Searching for the optimal rate of medically necessary cesarean delivery. Birth 2014;41:237-44. doi:10.1111/birt.12104; Molina G, Weiser TG, Lipsitz SR. Relationship between cesarean delivery rate and maternal and neonatal mortality. JAMA 2015;314:2263-70. doi:10.1001/jama.2015.15553.

circumstances. It may also reflect patient choices which providers accommodate. These results reinforce messages from many during the public hearings that the most efficient use of providers may not be occurring in South Africa. In many jurisdictions outside the country, care is provided by a team, preventing repeat investigations and allowing patients to be seen at an appropriate level of care.[87] The approach also has positive spin-offs for providers This model is increasingly perceived internationally as the ideal "standard of care" and is also the model in academic medicine.[88] There is no reason why it should be otherwise in private health care.

144. In the following section we report on specific case studies that explain how practitioners operate. The specialties have been chosen because they contribute significantly to in- and out-of-hospital costs (in the case of radiology) or because the data provides evidence of supply-induced demand (in the case of ophthalmology).

CASE STUDIES ON SPECIFIC GROUPS.

Radiologists

145. Radiologists work in group practices and do not initiate care but respond to requests from other providers. They thus warrant separate investigation as they have a different model to other providers. Radiologists rent space in hospitals.

146. Radiology is a significant component of in- and out-of-hospital care costs. These costs have increased by 10.98% per year. 3.75% of this increase cannot be explained by age, gender, disease profile or plan mix (Table 7.15).

TABLE 7.15: ATTRIBUTION ANALYSIS OF RADIOLOGY CLAIMS 2010-2014

Claims Increases, All Schemes	2011	2012	2013	2014	Average
Total Increase	10.41%	11.60%	11.28%	10.64%	10.98%
CPI	5.00%	5.60%	5.70%	6.10%	5.60%
Explanatory Factors	1.78%	0.93%	2.06%	1.76%	1.63%
Age	0.61%	3.09%	1.31%	0.98%	1.50%
Gender	0.00%	0.02%	0.01%	0.04%	0.02%
Disease Profile	0.65%	-0.82%	0.71%	0.42%	0.24%
Member Profile	1.95%	0.02%	-0.01%	0.30%	0.57%
Plan Mix	-1.43%	-1.38%	0.03%	0.02%	-0.69%
Unexplained Factors	3.62%	5.07%	3.52%	2.78%	3.75%

87. Weeks WB, Gottlieb DJ, Nyweide DE, et al. Higher health care quality and bigger savings found at large multispecialty medical groups. Health Aff (Millwood). 2010 May;29(5):991-7. doi: 10.1377/hlthaff.2009.0388.

88. Care provided by individual doctors working isolation has consequences: there is "Very little accountability in the private sector (sometimes in the public sector as well). But little scrutiny of what a doctor does, (if) indications for a procedure (are present),…, no formalized peer review. Prof Andrew Sarkin, Head Department of Cardiology, University of Pretoria and Steve Biko Academic Hospital

147. In investigating the causes of these cost increases, the inquiry found a shift from less expensive investigations such as X-rays, which decreased at 1.6% per year, to more expensive modalities, such as ultrasound (0.87% increase per year), CT scans (1.65% increase per year), and MRIs (1.17% increase per year (Table 7.16).

TABLE 7.16: PERCENTAGE OF COSTS CONTRIBUTED BY VARIOUS RADIOLOGICAL MODALITIES OVER TIME

% of Cost	2010	2011	2012	2013	2014	Trend
X-Ray	29.47%	28.56%	28.29%	28.15%	27.87%	-1.60%
Ultrasound	8.56%	8.72%	8.97%	9.23%	9.43%	0.87%
CT	24.80%	25.36%	25.71%	25.86%	26.45%	1.65%
MRI	24.15%	24.58%	25.04%	25.15%	25.32%	1.17%
Other[89]	13.02%	12.78%	11.99%	11.60%	10.93%	-2.09%

148. The inquiry acknowledges that CT and MRI scans may produce more definitive results when used appropriately which means that the change in use may be justified. However, without evidence indicating the benefit and value of the shift it is not possible to prove or disprove this.

149. Nevertheless, if high cost machinery is used more often, the unit cost (consumables aside) should decrease as they amortise. So it seems that there may be room to reassess the unit cost of high cost investigations as currently old coding (and relative value units (RVUs)) still apply.

150. Radiologists claim that they only respond to requests from other medical practitioners and are not directly driving usage. The inquiry notes that in the current situation, in which fee-for-service dominates and individual practice is the norm, it seems too easy for radiologists to absolve themselves of responsibility for the quantity and nature of tests used.

151. However, the HMI believes that radiologists are well-placed to conduct research on diagnostically and radiologically worthwhile practices. They are also useful team members in making these decisions in conjunction with other care providers. However, such models do not exist in the South African private sector. Radiologists are in a position to provide data to inform evidence-based guidance which can indicate which investigations are diagnostically useful and cost effective.

152. Alternatively, team-based models that incorporate radiologists into cooperative care may encourage them to assess the diagnostic necessity of tests and improve care while decreasing health care costs.

Ophthalmologists

153. South Africa has a higher rate of cataract procedures compared to many other countries as illustrated in chapter 8 on Excessive utilisation and supplier induced demand. Cataract operations are to some extent discretionary procedures.

154. The number of ophthalmology practices that claimed for cataract procedures increased from 262 in 2010 to 294 in 2014. In 2010, 57% of ophthalmology practices did more than 100 cataract procedures per year. In 2014, 69% of practices did more than 100 cataract procedures per year, despite a relative young population under care (albeit aging by one year over the period).

89. Pretoria. Presentation to HMI Public Hearing May 2016.

155. In summary, not only are there are more ophthalmology practises over this time, but a greater proportion are doing more than 100 surgeries a year on a relatively stable population. Without any information about the quality of life of patients before and after surgery, it is not possible to assess if these interventions are improving health outcomes and it could suggest over-servicing.

TABLE 7.17: DISTRIBUTION OF CATARACT PROCEDURES AMONG OPHTHALMOLOGISTS AND CHANGE OVER TIME

Cataract Surgery Procedures:	2010	2011	2012	2013	2014
Number of Ophthalmologists performing:					
- less than 10 procedures	16	14	18	15	15
- 10 - 25 procedures	19	20	18	15	20
- 25 - 50 procedures	30	30	20	28	25
- 50 - 100 procedures	47	41	46	34	31
- more than 100 procedures	150	163	179	197	203
Ophthalmologists total	**262**	**268**	**281**	**289**	**294**

156. A conundrum associated with possibly unnecessary care is that unnecessary intervention pushes up medical aid membership fees such that people buy down to a more affordable (lower cover) package, never join, or exit. They may thus not be able to afford, nor are they covered for, care they may need in future and may need more than the (unnecessary) intervention that pushed up costs. The inquiry therefore recommends that South Africa establishes a Supply Side Regulator for Health (SSRH) which includes a health technology assessment (HTA) function and a system that measures quality of care and outcomes. These difficult decisions can then be made in the abstract (not relating to a particular individual patient) using the best pooled data available that can objectively inform providers and consumers of what is worth providing or purchasing. This guidance can then be applied by the individual provider to the patient he or she is seeing. Similarly, outcomes registries are an essential requirement to promote value driven care in South Africa. These have relevance to both the public and the private sector.

THE IMPACT OF PRACTITIONER RELATIONSHIPS ON COMPETITION

157. Medical practitioners arrange themselves into groups for professional and administrative reasons. These groups include professional associations, management groups, and networks designed to contract with funders and MCOs. The inquiry provides an overview of these network arrangements in Chapter 3 (Industry Overview). In this part of the report, we focus on understanding how these groupings affect competition.[90]

PRACTITIONER GROUPINGS

158. Practitioners organise themselves into discipline-specific associations such as the South African Heart Association,[91]

90. 'Other' refers to consumables used in radiology, as well as some nuclear medicine and any in-house codes used by the administrators and schemes which supplied the data.
91. M. E. Porter and E. Olmsted Teisberg, Redefining Health Care: Creating Value-based Competition On Results, Boston: Harvard Business Review Press, 2006.

consisting of cardiac specialists, and the Independent Practitioner Associations (IPAs), made up of groups of GPs. In addition to discipline-specific groups, there are also multi-disciplinary groupings such as the South African Medical Association (SAMA) and the South African Private Practitioners Forum (SAPPF). A practitioner may thus be a member of both a discipline-specific and a general grouping. Some discipline-specific groupings, such as IPAs, are not restrictive thus allowing practitioners to be part of several IPAs.

159. Specialist associations usually represent the interests of their members in relation to negotiations with funders on billing, coding, and tariff determination. They also provide industry research and analysis, and some provide administration or management support to members, including billing and practice management.[92] These administrative functions are often contracted out to independent management companies. IPAs operate somewhat differently to specialist associations. Their primary focus is usually on working with funders to get "preferred provider" status for their GP members and performing peer review.

160. Practitioners also participate in either funder- or provider-initiated networks for the delivery of treatment, as described in Chapter 3 (Industry Overview). Funders set up preferred provider networks (PPNs) or networks of designated service providers (DSPs) by either contracting with practitioners individually or contracting with an association. Practitioners can also initiate a network by approaching funders on behalf of their grouping. Network arrangements could also be intermediated by an MCO who contracts with both funders and practitioners

161. The inquiry has noted that practitioner groupings take different structural forms and cannot always be easily classified into any one category for the purposes of regulatory oversight. For instance, some associations conduct themselves as MCOs or network managers but are not classified as MCOs. This classification is important insofar as it influences the robustness of regulatory oversight. This is discussed in Chapter 5 on Funders.

ASSESSING THE COMPETITIVE EFFECT OF PRACTITIONER GROUPINGS

162. The Commission (and subsequently the HMI) has received a range of complaints in relation to the conduct of practitioners, particularly specialists, through associations with regard to the tariff setting, billing practices, and coding practices. The primary complaint is that the specialist associations are a platform for collusion.

163. Historically, as outlined in Chapter 3, tariffs were set collectively with practitioners' interests represented by SAMA or its predecessor(s). This ended with the competition authority's prohibition of collusive tariff determination in 2003/4. In the absence of industry-wide collective bargaining after this, practitioners' fees are now determined in one of four ways.

    163.1. A medical scheme/administrator will determine the fees that it is willing to pay practitioners and provide this information to practitioners;

    163.2. A practitioner grouping may negotiate fees with a medical scheme/ administrator on behalf of its members;

    163.3. A practitioner grouping publishes guideline tariffs and coding for use by its members; and/or

    163.4. A practitioner may determine the fees that he/she will charge to patients individually.

164. Discovery Health summarised its current practice of practitioner tariff determination as follows:

92. The South African Heart Association (SA Heart®) together with two of its special interest groups, SASCI and SCTSSA represent the scientific, educational, socioeconomic, ethical and professional interests of South African cardiac specialists, with a combined membership of over 200 members. We are the only national organisations exclusively representing practising cardiologists and cardiothoracic surgeons. https://www.saheart.org/cms-home/category/17

"It is impossible for each individual health professional practice to negotiate with the 86 medical schemes or their administrators, and the converse is true as well. In practice, this means that each year, every scheme unilaterally revises the tariffs it is willing to pay to health professionals for each billing code (typically this involves an inflation-related adjustment), and health professionals then choose whether to accept these prices in return for direct settlement by the medical scheme, or to charge a higher rate. In the latter case, the higher rate is generally collected directly from the patient, who then claims back from their medical scheme the portion of the account which the scheme has set in terms of its tariff."[93]

165. The general approach seems to be that medical schemes set a rate for each billing code, but that practitioners choose whether or not to accept the scheme rate. Practitioners who choose not to accept the scheme rate have greater discretion in what they charge, but this comes with a higher administrative burden and greater risk as they need to collect fees from patients directly.[94] However, in practice, many practitioners (particularly specialists) continue to charge above the scheme rate indicating that these risks are likely to be insignificant

The role of associations in tariff negotiations

166. Some funders claimed that practitioner associations, IPAs and other management groups facilitate collusion amongst practitioners. They allege that this is done both indirectly by issuing guidelines or providing advice on fees, coding and billing, or directly, by advising members whether or not to accept tariffs offered by funders, or making overt changes to the codes that practitioners use.

167. An example that illustrates this conduct is a complaint against the South African Paediatric Association (SAPEADS) and SAMA that was previously investigated by the Commission. In this case, SAPEADS/ SAMA amended the wording of "Modifier 0019" which inter alia allowed neonatologists or paediatricians to add an extra 50% to the tariff payable when patients were admitted to neonatal ICU.[95] The modification seems to have had no objective rational other than to increase prices. Similarly, the inquiry was told that the obstetrician society changed its guidance to members on post-natal care in a manner that (collectively) increased prices. Previously, the routine six-week post-natal consultation was included in the fee for a delivery. The association then redefined a "delivery" to cover care up to four weeks after delivery only which allowed practitioners to levy an additional charge for the routine 6-week post-natal visit. There seems to have been no objective justification for this change either, other than to increase prices. Importantly, it seems that funders were not able to resist these changes, a situation that is indicative of unequal bargaining power between funders and practitioners in these cases.

168. The inquiry considered the current practices and concerns related to practitioner groupings and determined that these mostly relate to horizontal coordination or collusion between practitioners in relation to the tariff and fee determination, coding and billing practices, and network negotiation. There are, however, indications of unilateral market power in certain groups (such as corporate pathology practices), and aspects of anticompetitive vertical arrangements in relation to the potential exclusionary effects of practitioner networks.

169. The inquiry developed a framework for the assessment of these and other competition

93. For example, Surgicom's (a surgeon management group) functions include "Ongoing contact with the funding industry to attempt to achieve an appropriate level of remuneration, and to establish a strong voice when decisions are made" and "facilitates the consolidation of surgical claims data to negotiate coding and reimbursement with Medical Schemes". Similarly, the South African Society of Anaesthetists (SASA) states that it continuously engages in tariff negotiations on behalf of its members and that its benchmark studies on private practice costs resulted in substantial improvement in remuneration to its members.]
94. We note that the implementation of funder networks increases the number of practitioners who accept scheme rates.
95. Case No.: 2012May0243\

concerns in relation to practitioner groupings. The framework takes some guidance from the approaches of the European Union and United States authorities in their assessment of horizontal and vertical agreements involving practitioners. The inquiry believes that the framework could be used by stakeholders as a self-assessment tool to evaluate the competitive effects of the horizontal and vertical agreements in which they participate and could also be adopted by the Competition Commission going forward. Illustrative examples of the application of the framework are provided below, including a more detailed assessment of the framework in relation to the conduct of Healthman and their client associations. See Annexure 7.1 to this chapter.

A FRAMEWORK FOR ASSESSING PRACTITIONER RELATIONSHIPS

The United States approach

170. The issue of practitioner coordination has received much attention in the US in recent times. The Federal Trade Commission (FTC) has dealt with a number of cases and complaints by various groups (physicians, hospitals and/or third parties) seeking guidance on how to engage in collective bargaining platforms. The central theme is that various competing physician groups have been using collective bargaining platforms to increase their reimbursement rates and that tension between these physician groups and healthcare funders who try to constrain price/tariff increases exists.[96]

171. In assessing the competitive effect of collective tariff negotiation by practitioner groupings, the FTC notes that "when the competing physicians are not financially or clinically integrated in a manner that is likely to produce efficiencies, the Commission has consistently maintained that this type of conduct amounts to illegal price fixing".[97]

172. The two key questions that emerge in their assessment is whether the formation of an association (or physician group) will lead to anticompetitive effects and whether efficiency gains arise from the arrangement. The US authorities follow a six-step process in assessing the competitive effects of the arrangement, including an evaluation of the following:

- the rationale for the association in terms of clinical and financial benefits,
- the restrictiveness of the agreement,
- concentration levels in the relevant market,
- alternatives available to consumers,
- the barriers to entry for smaller players, and
- the type of information exchanged.

173. In order to assess the potential benefits of the arrangement, the authorities consider, inter alia, reductions in costs and improvements in quality, and weigh these against any anticompetitive effects.

174. Like the South African Competition Act, the USA courts treat agreements which result in price fixing between practitioners as hard-core cartel conduct which are prohibited per se.

The EU approach

175. Article 101(1) of the Treaty on the Functioning of the European Union (TFEU) prohibits "all agreements between undertakings, decisions by associations of undertakings and concerted practices which may affect trade between EU countries and which have as their object or effect the prevention, restriction or distortion of competition." However, Article 101 (3) provides a framework for exemptions to this rule in the case of agreements which provide efficiency benefits.

176. As in South Africa and in the USA, hard core cartels, i.e. price fixing, market sharing and collusive tendering, are strictly forbidden under EU law. The TFEU framework

96. See Opinion of the Commission, In the matter of North Texas Speciality Physicians, a corporation, Docket No.9312
97. Op cit

provides a useful means for thinking about efficiency benefits in horizontal or vertical agreements. It consists of a four-part cumulative test, conducted once an agreement has been found to have anticompetitive effects, and is designed to assess the likely procompetitive benefits so that they can be weighed against the anticompetitive harm. For the test to be met, it must be shown that:

176.1 There are clear and measurable efficiency gains arising from the agreement;

176.2 Consumers will gain a fair share of these benefits;

176.3 The restrictions are indispensable in order to achieve the benefits; and

176.4 Competition in the market will not be entirely eliminated as a result of the agreement.

177. The conditions are considered cumulatively, such that if any one condition is not met, the test for exemption is failed. In practice, the third condition provides the greatest hurdle as it is often the case that benefits arising from anticompetitive arrangements can be achieved through less restrictive arrangements.

A proposed framework for SA

178. The USA and EU frameworks both provide helpful guidance for an assessment of competition amongst practitioner associations in South Africa. The framework applied in the USA provides a more detailed approach to answering the question of whether or not the agreement is likely to lead to anticompetitive effects, while the EU test gives greater clarity on a mechanism for balancing of anticompetitive and efficiency effects.

179. Both frameworks have been taken into account in the inquiry's suggestion of a staged approach to assessing practitioner conduct:

179.1. Stage 1: Assess whether the conduct amounts to a contravention of section 4(1)(b);[98]

179.1.1. If yes, the conduct is considered per se illegal and no efficiency defences can be brought.

179.1.2. If no, proceed to stage 2.

179.2. Stage 2: Assess whether the conduct is likely to lead to a substantial lessening or prevention of competition; and

179.3. Stage 3: Assess whether there are efficiency benefits which outweigh the anticompetitive effects.

The proposed assessment framework for SA: an illustration

Stage 1: Assess whether the conduct amounts to a contravention of section 4(1)(b)

180. If conduct amounts to the direct or indirect fixing of prices or other terms of trade, to dividing markets or customers, or to collusive tendering, the assessment need go no further. The restrictive practice is forbidden by law.

181. The case law is clear on the principles required to show a contravention of section 4(1)(b):

181.1. The parties must be in a horizontal relationship, and

181.2. There must be an agreement, concerted practice, or decision,

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98. section 4 of the Competition Act states: 4. Restrictive horizontal practices prohibited
(1) An agreement between, or concerted practice by, firms, or a decision by an association of firms, is prohibited if it is between parties in a horizontal relationship and if –
(a) it has the effect of substantially preventing, or lessening, competition in a market, unless a party to the agreement, concerted practice, or decision can prove that any technological, efficiency or other pro-competitive gain resulting from it outweighs that effect; or
(b) it involves any of the following restrictive horizontal practices:
(i) directly or indirectly fixing a purchase or selling price or any other trading condition;
(ii) dividing markets by allocating customers, suppliers, territories, or specific types of goods or services; or
(iii) collusive tendering.

181.3. To fix prices or any other trading conditions, to divide markets, or to tender collusively.

182. With respect to practitioner associations, the inquiry notes the following:

182.1. Members of discipline-specific associations, such as the South African Paediatric Association, are competitors. Even in associations such as SAPPF and SAMA, who represent a wide range of disciplines, there are horizontal relationships between the members who are of the same discipline. Management groups such as HealthMan, DENIS, PPNe, ISIMO and Iso Leso are not always formed by, or comprised of, practitioners and the assessment of whether they are comprised of competitors must be done on a case by case basis.

182.2. When a practitioner grouping directly or indirectly negotiates tariffs or when it issues coding guidelines, for example, and the members of the association align themselves with the decision of the association and adhere to it, this constitutes at minimum a concerted practice and at worst an outright agreement between the members.

182.3. The tariff schedules set out prices for various procedures or services. Medical codes can be readily converted into prices. Billing practices, which are sometimes managed via associations, can be classified as trading conditions in terms of section 4 of the Competition Act.

183. The inquiry is thus of the view that the determination of tariffs, fees and standardisation of certain business practices (such as coding) via associations are likely contraventions of section 4(1)(b).

Stage 2: Assess whether the conduct is likely to lead to a substantial lessening of competition

184. In stage 2, we assess whether any conduct that does not amount to per se anticompetitive conduct (fixing prices, dividing markets or collusive tendering) results in a substantial lessening or prevention of competition.

185. The assessment includes the following considerations, among others:

185.1. Market share/concentration of the association where a higher market share increases the likelihood that coordination will lead to a substantial lessening or prevention of competition.

185.2. Membership rules and other restrictions, noting that onerous membership requirements raise barriers to entry and participation by a broader range of practitioners and will likely lead to substantial prevention or lessening of competition;

185.3. The potential exclusionary effect of any rules of the association, including the duration of the rules and alternatives available, noting that lengthy exclusionary clauses are more likely to lead to a substantial lessening or prevention of competition, and

185.4. The type of information exchanged under the auspices of the association with the exchange of commercially sensitive information on prices and costs being more problematic than sharing information on, for example, quality of interventions or on clinical best-practice.

186. With respect to the existing practitioner associations in South Africa the inquiry notes the following:

186.1. By their own assessment, many practitioner groups say that they have a high market share and represent upwards of 70% of the practitioners in their respective discipline. Any coordinated conduct is thus more likely to have substantial anticompetitive effects.

186.2. However, the inquiry found no evidence to suggest that membership of associations is overly restrictive or that practitioners are prevented from free choice of fees and association with funders. The associations thus do not appear exclusionary, nor do they appear prescriptive in how members contract with funders.

186.3. Structures such IPAF, PPN and Iso

Leso are more problematic in that even though they are voluntary groups, any practitioner who forms part of the group must adhere to the negotiated benefit plans and tariffs. The prescriptive nature of these agreements is more likely to result in anticompetitive effects.

187. The competitive effect in each specific case is not always clear and the effect of the conduct of practitioner groups on competition must be assessed on a case by case basis.

Stage 3: Assess whether there are efficiency benefits which outweigh the anticompetitive effects

188. The inquiry recognises that there are several potential benefits from information sharing within associations. For example, improving the measurement of clinical quality may require cooperation and sharing of data amongst practitioners. This may, on balance, be beneficial to consumers and may improve competition about quality amongst practitioners.

189. In evaluating whether there are efficiency gains from coordination and to weigh them against the anticompetitive conduct, the inquiry follows the EU's approach and evaluates the following criteria:

189.1. Are there efficiency gains arising from the agreement? These efficiencies are most likely to stem from two areas: financial/cost savings which lower the cost of care, and improvements in clinical quality and outcomes. The gains should be clearly and concretely demonstrated and must be subject to testing and measurable. Respondents who engage in the potentially anticompetitive conduct would be responsible for demonstrating these effects.

189.2. Do consumers share in the benefits? The benefits from the restrictive arrangements should, to a significant extent, be passed on to consumers. Arrangements which merely increase the rents appropriated by intermediaries should not pass this test.

189.3. Are restrictions indispensable to achieve the benefits? This criterion asks whether the objective can be achieved in ways that are less restrictive of competition and set a high bar that is not easily met in practice.

189.4. Is competition eliminated as a result of the agreement or association? This criterion rules out forms of restrictive conduct which would entirely remove competition from the market.

190. The framework presented above provides a useful way of assessing the market power and conduct of associations. The inquiry believes that it is also a useful tool for self-assessment by stakeholders and has applied the framework to an association against which complaints of anticompetitive conduct have been filed with the Commission in the past (Appendix 1 to Chapter 7 Assessment of Practitioner Associations).

191. In the following section, the the conduct of two disciplines which were identified in the TOR as having a notable impact on increasing expenditure, namely anaesthetists and pathologists, are evaluated. In particular, the manner in which these disciplines are organised (an association in the case of anaesthetists and corporate groups in the case of radiologists) and their impact on competition is assessed.

AN ASSESSMENT OF PRACTITIONER ASSOCIATIONS

192. Medical practitioners operate largely as independent practices, which, on the face of it, are quite fragmented and would not be regarded as having any market power. However, as discussed above, South Africa's medical practitioners have traditionally formed discipline-specific associations. When acting collectively through these associations, practitioners bring the force of an entire profession into any negotiation and exert market power through coordinated conduct.

193. The market power amassed through coordinated conduct is often exercised by sharing information on fees, tariffs and codes, coordinating contracting strategies, and coordinated refusal to participate in networks. The manner in which associations exert market power or

otherwise affect competition is examined by means of particular case studies, which are discussed below.

Anaesthetists

194. Anaesthetists are specialists who provide anaesthesia to patients for operations and procedures. They are doctors who have chosen after qualifying to undertake postgraduate specialist training. While usually in support of surgeons they also work in intensive care medicine and pain management.

195. Anaesthetists provide services based on requests from other providers. They are likely to work in group practices and are one of the specialities identified in the TOR as driving increased expenditure. Our analysis illustrates that, on average, claims costs generated by anaesthetists have increased by 9.51% per year over the five years from 2010 to 2014. The attribution analysis found that 3.51% of the claim cost increases is unexplained and cannot be attributed to factors such as the age, gender, and wellness of the patient being treated.

TABLE 7.18: ATTRIBUTION ANALYSIS ANAESTHETISTS: FACTORS RELATED TO ANNUAL CHANGE IN CLAIMS COSTS AND AVERAGE ANNUAL CHANGE OVER THE FIVE YEAR PERIOD

Claims Increases	2011	2012	2013	2014	Average
Total Increase	7.78%	10.99%	9.71%	9.55%	9.51%
CPI	5.00%	5.60%	5.70%	6.10%	5.60%
Explanatory Factors	-0.10%	0.39%	0.81%	0.50%	0.40%
Age	0.28%	0.51%	0.62%	0.36%	0.44%
Gender	-0.01%	-0.01%	0.01%	-0.01%	-0.01%
Disease Profile	-0.13%	0.04%	-0.11%	-0.12%	-0.08%
Case Mix	-0.12%	-0.12%	-0.11%	0.02%	-0.08%
PMB Diagnoses	-0.12%	-0.03%	0.39%	0.25%	0.12%
Unexplained Factors	2.89%	5.00%	3.21%	2.94%	3.51%

196. Further, the HMI found that the increase in unexplained portion in costs per admission is higher when anaesthetists are paid by closed/restricted schemes than when they are paid by open schemes.[99] As indicated in that report the HMI found that "cost per admission increases as well as the unexplained increases are significantly larger for restricted medical schemes than open schemes. Since previous analyses have not suggested a material risk profile difference between the two groups, this may suggest a price effect since restricted schemes are generally smaller and may be less able to secure favourable tariff agreements (or agreements at all) with specialist groups."[100]

197. Analyses were performed to compare SASA members with non SASA members and are reported in Tables 72-74 in the Expenditure analysis report 5: Practitioner analyses. In that analysis we found that SASA anaesthetists are between 5% and 8% cheaper than their non-affiliated peers. SASA raised concerns about these results and requested a meeting with the inquiry with regard to two issues. The HMI noted

99. Tables not shown in this report but available Expenditure analysis report 5: Practitioner analyses. Tables 68 and 70.
100. Expenditure analysis report 5: Practitioner analyses. Page 86

their concerns and agreed to publish a comment on these tables.

197.1. SASA's first concern is that the inquiry's analysis indicated that most anaesthetists were not members of their society, which they dispute. From SASA's data they estimate that the majority of anaesthetists are members of the association.

197.2. The list of members used to compile Table 72 was provided to the inquiry by SASA but it appears that our classification is incorrect. The reason for this is that a doctor can have two numbers that identify him or her; an individual number and, if they are part of group (as many anaesthetists are), they can also have a group number. In submitting a bill, both numbers are usually included. However, when schemes process the claim, one or the other may be used and there is no consistency in the usage. SASA provided us with the individual practice numbers and we may have had the group number from many of the schemes. There was thus no way for the inquiry to allocate the numbers provided to us by the schemes. We agreed with SASA that we would state this in public and ignore those results. It does, however, point to the need for a standard numbering system so that there is a consistent way of identifying any provider.

198. A second issue raised by SASA was that it appeared from the inquiry's expenditure analysis that non-SASA members received better remuneration than members and that this was disadvantageous to SASA in recruiting new members.

199. The second concern raised by SASA is particularly interesting. Fundamentally, SASA was concerned that its image as an association would be tarnished if it appeared (incorrectly) that its members were not getting the highest fees. However, SASA claims on its website that one of the benefits of joining the association is that it will negotiate fees for members. This illustrates that associations do not see their collective price setting and coordinated action as anticompetitive.

200. The inquiry believes that SASA practice implies that a restriction of competition exists, and that their practices should be referred to the Competition Commission for further evaluation.

Pathologists

201. Pathology is a specialist branch of medicine that focusses on the examination of blood samples, body tissue, and fluids for diagnostic purposes to establish the cause and effects of diseases. The main branches of pathology are clinical pathology, anatomical pathology or a combination of the two, referred to as general pathology.[101]

202. Pathologists are relatively unique in the South African market as under the current HPCSA regulations they may form corporate groups. Pathologists that form part of a corporate group thus constitute a single economic entity and cooperation amongst pathologists within the same group may raise concerns about unilateral market power rather than coordinated conduct, as with the association of anaesthesiologists above.[102]

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101. Submission by Ampath, 2014

102. section 8 of the Competition act states: 8. Abuse of dominance prohibited. It is prohibited for a dominant firm to - (a) charge an excessive price to the detriment of consumers;
(b) refuse to give a competitor access to an essential facility when it is economically feasible to do so;
(c) engage in an exclusionary act, other than an act listed in paragraph (d), if the anti-competitive effect of that act outweighs its technological, efficiency or other pro-competitive gain; or engage in any of the following exclusionary acts, unless the firm concerned can show technological, efficiency or other pro-competitive gains which outweigh the anti-competitive effect of its act –
(i) requiring or inducing a supplier or customer to not deal with a competitor;
(ii) refusing to supply scarce goods to a competitor when supplying those goods is economically feasible;
(iii) selling goods or services on condition that the buyer purchases separate goods or services unrelated to the object of a contract, or forcing a buyer to accept a condition unrelated to the object of a contract;
(iv) selling goods or services below their marginal or average variable cost; or
(v) buying-up a scarce supply of intermediate goods or resources required by a competitor.

203. The South African pathology market is concentrated. The three largest private pathology practices — Pathcare, Lancet and Ampath — all have a national footprint. They offer a wide range of services across the various pathology disciplines. There are a number of smaller pathology practices in the country, some of which have a specialist focus in terms of the types of tests they perform (eg histopathology).

204. The market for pathology services is determined by the type of test as well as its urgency. For urgent specimens the testing laboratory needs to be in close proximity to where the sample is taken, which is why hospitals will have in-house pathology practices. Most hospitals will not have more than one laboratory onsite as this will require significant floor space and duplication in infrastructure investment.

205. The National Pathology Group (NPG), a specialist subgroup of SAMA, represents pathologists who are members of SAMA. As part of its activities the NPG publishes a guideline for coding, but this does not include any prices, price recommendations or relative value units.

206. In the "Expenditure analysis report 5 - practitioner analyses" we note that pathology tests form a significant part of both in- and out-of-hospital costs. The data show that claims have increased by 10.94% per year and that between 3.16% and 3.83% of those annual increases are "unexplained" (see tables 75 and 76 in Expenditure analysis report 5: Practitioner analyses).

207. The HMI assessed if this increase in costs was due to more tests being done per member or to more expensive tests being done. Our data indicates that there are more tests being performed per patient over the five years (see tables 81 and 82 in Expenditure analysis report 5 - practitioner analyses). Pathologists indicate that they do not influence this demand and simply do the tests that are requested by other healthcare practitioners. It is important to try to find a logical explanation for the cost increase.

208. Many submissions stated that the population covered is sicker and older, which may explain the increasing volume of tests.[103] The inquiry finds it difficult to imagine that the population is becoming more ill at a rate of over 3% per year in a five-year period. The population is not aging at that rate. Therefore, this does not appear to be a rational explanation of why patients are having more tests.

209. The inquiry believes that it is more likely that other factors may be motivating this behaviour, such as doctors trying to "make sure", "exclude anything else" do not want to "miss something" and, in some cases, may be concerned about litigation. This may be driving utilisation.

210. We also note that funders have not been effective when attempting to force changes and contain the increase in pathology costs, pointing to market power of pathology groups. Funders submitted that while is it possible to negotiate with pathology groups, it is not easy.[104] Discovery Health's experience is instructive:

    210.1. Discovery Health reported that it has issued three tenders for pathology services for its members: a national tender in 2005 and regional tenders in 2012 and 2014. Ampath, Lancet and Pathcare all participated in the first national tender. However, Discovery abandoned the process as the price points were so similar that it offered no benefit in spite of the guaranteed increase in volume for the winner. In the regional tenders issued in 2012 and 2014, "(b)oth Lancet and Ampath declined to participate…despite the fact that both had a substantial presence in the tender regions." As a result, these tenders were awarded to smaller lab

103. Discovery Health Medical Scheme, response to the HMI's Revised Statement of Issues, 24 March 2016.; Council for Medical Schemes (CMS), Response to submissions, HMI, 5 March 2015.; Mediclinic's submission to the HMI, 01 August 2014
104. Discovery Health. Submission to the Competition Commission Market Inquiry into the Private Health Sector 17 November 2014 Section 3.3.1.3 Limitations to shaping competition in the pathology market. Page 130.

groups who participated in the tender process.[105]

211. Assuming that Discovery Health's custom in pathology is significant, this suggests that the large pathology groups are comfortable with the status quo and can, to an appreciable degree, act independently of (large) customers, which may point to market power.

212. At a minimum, and even if outright dominance is not shown, the contribution of pathology to rising expenditure is significant and the failure of large pathology groups to engage in competitive bidding for the business of the largest open scheme may point to a market where competition is not functioning optimally.

213. There is thus a need to explore alternative models that emphasise a change in the model of care such that pathologists are an integral part of group practices to ensure that only essential tests are done in a bundled payment for care of a person or a disease, rather than the atomised FFS system currently common in SA.

214. The HMI analysis of the impact of belonging to a range of specialists associations is described in Expenditure analysis report 5: Practitioner analyses summarised in Table 63 of that report. Not all associations demonstrate the same effect but, as an example, otorhinolaryngologists affiliated to ENTS show around 20% higher specialist costs per admission (compared to non-association members), although this diminished to around 13% in 2014. Ophthalmologists affiliated to OSSA consistently show higher specialist cost per admission that their non-affiliated peers. These are risk and case-mix adjusted results.

HMI OBSERVATIONS ON THE IMPACT OF ASSOCIATIONS ON COMPETITION IN THE MARKET

215. The inquiry found that the activities of associations and their arrangements with third-party management groups inter alia dissemination and publication of information on tariffs/fees, coding, and billing practices, could amount to collusion. Whether or not the conduct of practitioners and associations discussed here meets the full tests of the Competition Act in terms of sections 4, the conduct certainly has or can have the effect of preventing, distorting or restricting competition in the practitioner market, which suffices in the context of a market inquiry.

216. Participation in provider networks may bring about procompetitive and efficiency benefits. A detailed analysis is required to decide whether they are, on balance, pro-competitive see Appendix 1 to Chapter 7 Assessment of Practitioner Associations.

217. Overall, many of the practices of associations are problematic.

218. Associations operate in an environment characterised by:

218.1. Inadequate stewardship from the national Department of Health as expressed in:

218.1.1. failure to promulgate the required regulations which would allow for the publication of some kind of reference price list;

218.1.2. the absence of a reference price. This created a space for the HPCSA to set unethical charging at 300% above the then most recent (2006) NHRPL level. This signalled to the market that a rise to below that level would not invoke sanction; and

218.1.3. delayed review of the prescribed minimum benefit list.

218.2. The failure of leadership by academic professionals to provide guidance on evidence-based care and treatment protocols, as is done by specialists colleges in other jurisdictions;

218.3. A failure of medical curriculum to focus sufficiently on the economic consequences of medical decision-

105. Email confirmation of facts from Discovery Health received 17th May 2018.

making with regard to investigations and treatment options and the absence of a focus on the need for medical interventions to provide value for patients (irrespective of where the funder is public or private);

218.4. The absence of a central multi disciplinary body to agree on coding and relative values;

218.5. The absence of guidance on the value of new technologies allowing associations to embrace and promote new technologies irrespective of the value proposition.

219. Under these circumstances associations worked unimpeded to promote the interests of their members which, among other things, allowed coordinated action if not collusion and, in certain circumstances, allowed profit-maximising individuals to prosper.

220. The inquiry is mindful of the system-wide problems and will take this into account in its proposed recommendations

REGULATORY GOVERNANCE IN THE PRACTITIONER SECTOR

221. The primary regulatory body for practitioners is the HPCSA. The HPCSA derives its powers and competencies from Section 3(c) of the Health Profession's Act, 1974 (Act No. 56 of 1974).

222. In South Africa the HPCSA determines strategic policy in accordance with national health policy as determined by the Minister, and makes determinations about education, training, registration, ethics and professional conduct, disciplinary procedures, scope of practice of the professions, inter-professional matters and maintenance of professional competence. It also has a duty to assist in the promotion of the health of the population of the Republic.

223. The HPCSA is an example of a self-regulatory regime which, in general, establishes a "social contract" between health professionals and the public.[106] Self-regulation of professions is an appropriate institutional arrangement where the costs of rule-formation, monitoring, adjudication and enforcement are low compared to the alternative, being a state regulatory regime.[107] It includes features which are typically present in industries with a high level of technical specialisation and where there is consequently high information asymmetry, meaning that members of the industries are best-placed to interrogate issues concerning quality.

224. The primary argument in favour of self-regulation in the healthcare profession is to preserve high levels of professional autonomy (in particular that professionals are not influenced by self or corporate profit-making interests).[108] Self-regulatory regimes are best suited to industries in which there is a high standard of integrity and competence of its members. Historically, and across multiple jurisdictions, the healthcare profession has been assumed to have a superior ethical character.

225. Self-regulatory regimes rest on the premise that violations of the ethical rules are easy to monitor and proportional sanctions easy to enforce to ensure deterrence.

226. However, if medical professionals are motivated mainly by self-interest the risk exists that a self-regulatory regime might result in professions adopting regulations that benefit professionals to the detriment of the public interest.[109] In that case, medical professional councils shift from ostensibly engaging in positive cooperation that sets

106. A. A. Khaliq, A. K. Mwachofi and R. W. Broyles, "Physician Autonomy vs. Self-Regulation: You Can't Have One Without the Other," Ethics & Medicine: An International Journal of Bioethics, vol. 26, no. 2, p. 111, 2010.
107. B. Bouckaert and G. (. De Geest, "V. The Economics of Crime and Litigation," in Encyclopedia of Law and Economics, Cheltenham, Edward Elgar, 2000, p. 722.
108. "Declaration of Madrid on Professional Autonomy and Self-Regulation," 2009. [Online]. Available: http://www.wma.net/en/30publications/10policies/20archives/a21/
109. M. Friedman and S. Kuznets, Income from Independent Professional Practice, New York: National Bureau of Economic Research, 1946.

effective standards for the industry, to engaging in negative cooperation with the intention of benefiting practitioners. In the healthcare market, this type of regulatory capture could result in reduced quality of services and rising healthcare costs.[110]

227. In general, to ensure that regulations do not promote self-interest of the profession at the expense of the public interest, it must be shown that 1) regulations are necessary for protecting the public interest, and 2) there is no means less restrictive of competition to achieve the same purpose.[111] [112]

FUNCTIONS OF THE HPCSA RELATING TO COMPETITION

228. Section 41 of the Health Professions Act allows the HPCSA's professional boards to institute an inquiry into any complaint, charge or allegation of unprofessional conduct against any person registered under this Act, and, if guilty, the penalties are prescribed in section 42(1). Section 41A deals with the manner in which investigations may be instituted. Section 19A(1)(e) of the Act permits the HPCSA to suspend a healthcare professional who poses an imminent threat or danger to the public in terms of his or her professional practice.

229. The Act does not state how long it should take for the complaints to be investigated and completed.

230. A complaint is received by the registrar, who then requests an explanation from the practitioner in question before forwarding both the complaint and the practitioner's explanation to a preliminary committee of inquiry, which is appointed by the professional board in terms of section 15(5)(f) of the Act. Once the preliminary committee has reviewed the complaint and directed that a professional conduct inquiry is held, the chairperson of the professional board in question appoints the members of the professional conduct committee. The committee assesses the evidence and decides the outcome of a complaint. An ombudsman handles all minor complaints that do not warrant a formal professional conduct inquiry in terms of Regulation 2(3)(d) of the Regulations Relating to the Conduct of Inquiries into alleged Unprofessional Conduct under the Health Professions Act.

231. The annual reports of the HPCSA provide a record of the complaints that warranted a formal inquiry in each financial year. A brief summary of the complaints reviewed between 2010 and 2015 is provided in Table 19:

110. OECD, "'Policy Roundtables Report: Enhancing Beneficial Competition in the Health Professions," 2004.
111. European Commission, "Communication from the Commission: Report on Competition in Professional Services," COM, 2004.
112. The European Court of Justice (ECJ) has previously applied that general test when it has evaluated the rules governing accountants and lawyers. In the Wouters judgment, the ECJ held that "professional rules shall be allowed only insofar as necessary to protect the proper functioning of the profession" and that "account must […] be taken of its objectives […], qualifications, professional ethics, supervision and liability, in order to ensure that the ultimate consumers of legal services and the sound administration of justice are provided with the necessary guarantees in relation to integrity and experience. It has then to be considered whether the consequential effects restrictive of competition are inherent in the pursuit of these objectives." Case C-309/99, Wouters and Others v Algemene Raad van de Nederlandse Order van Advocaten ECR I-1577 (2002) at para. 97.

TABLE 7.19: HPCSA COMPLAINTS

Year	Number of complaints received	Number of complaints finalised	Top three categories of complaints
2010/2011	2903	554	• Refusing to complete forms/inaccurate reports (34) • Insufficient care/treatment and mismanagement of patients (23) • Damaging professional reputation of a colleague (20)
2011/2012	2687	815	• Damaging professional reputation of a colleague (44) • Incompetence or over-servicing (28) • Refusing to complete forms / producing inaccurate reports (27).
2012/2013	2997	734	• Fraud and theft (49) • Insufficient care/treatment and mismanagement of patients (41) • Overcharging/charging for services not rendered (30).
2013/2014	3026	1115	• Overcharging/charging for services not rendered (66) • Fraud and theft (38) • Insufficient care/treatment and mismanagement of patients (36).
2014/2015	2597	1206	• Incompetence (55) • Fraud and theft (66) • Overcharging/charging for services not rendered (33).
2015/2016	2944	1013	• Fraud and theft (59) • Issues relating to consent (30) • Insufficient care/Treatment & Mismanagement of patients (28)
2016/2017	2755	1326	• Fraud and theft (27) • Overcharging/charging for services not rendered (20) • Unethical advertising (19)

232. From a competition point of view, the inquiry notes that in every year there are complaints related to overcharging/ charging for services not rendered which is consistent with our findings that lack of transparency about costs is a problem in the private health care market. Further the HMI notes that only people who know that they can complain and have time and resources will do so.

233. Every year since 2010, the HPCSA has reported being unable to reach a conclusion on all complaints, resulting in a backlog of complaints. The inquiry heard from HSPCA that efforts were being made to address the backlog of complaints. However, at the time of drafting this report, the inquiry was still unclear of the full plan and timelines envisaged by the HPCSA.

234. In its annual reports, the HPCSA states that it lacks the capacity to enforce the sanctions that have been ordered by its disciplinary committees and that an Inspectorate Office had consequently been established on 1 February 2015 that will be responsible for "law enforcement and compliance".[113]

235. The inquiry's opinion is that, in its current form, the HPCSA does not meet one of the requirements for a self-regulator to ensure that "violations of the ethical rules are easy to monitor and proportional sanctions easy to enforce to ensure deterrence".

236. In relation to the sanctions and penalties imposed by the HPCSA, the inquiry is of the opinion that the penalties are an inadequate deterrence to unethical conduct. The HPCSA imposed amounts of less than R10 000 for relatively serious offences such as the failure to obtain patients' informed consent (in 2015).[114] In January 2017, a practitioner was sanctioned R70 000 after being found guilty of five counts of unprofessional conduct regarding claiming monies for services that were never rendered or that the practitioner was not entitled to.

237. The inquiry also noted that in 2015, a Ministerial Task Team (MTT) investigated several anonymous complaints regarding administrative irregularities, mismanagement and poor governance by the HPCSA. The MTT made various recommendations, including that disciplinary proceedings be instituted against the registrar, chief operating officer and head of legal services and that an interim executive management team be appointed to manage the HPCSA.[115] The HPCSA nonetheless indicated that the MTT recommendations are not binding and that it would make its own decisions pertaining to the report.[116] This inquiry does not make any pronouncements on the findings of the MTT report. However, the inquiry remains interested in any further developments that may affect the ability of the regulator in this sector to operate optimally and ensure competitive dynamics in the market.

238. To the extent that the HPCSA may not have the capacity to properly investigate complaints, it might be necessary for a further intervention to provide for the necessary capacity in relation to complaint procedures. Further to this, there may need to be more oversight from the national Department of Health on issues of complaints and sanctions, since this is a contentious area of self-regulation by practitioners.

THE HPCSA ETHICAL RULES AND THEIR IMPACT ON THE MARKET

239. Various stakeholders raised concerns about the effect of some of the HPCSA Ethical Rules on competition in the practitioner market. The main concerns are that the ethical rules hinder innovation in the healthcare sector and result in fragmentation of care. Its ultimate effect is increased expenditure or loss of efficiencies that could otherwise be gained.

240. In terms of Section 15B of the Health Professions Act, the professional boards are responsible for enforcing the HPCSA Ethical Rules, with the HPCSA ratifying any decisions of the boards that do not fall wholly within their ambit. The HPCSA Ethical Rules are to be read in conjunction with various guideline documents that have been published by the HPCSA and its constituent boards.

241. The HPCSA's Ethical Rules are subject to the Competition Act which regulates

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113. Annual Report 2013-2014 at 16; Annual Report 2014-2015 at 43.
114. Based on data collected from http://www.hpcsa.co.za/RecentConvitions accessed 30 May 2015.
115. M. T. T. Report, "Report of the Ministerial Task Team to Investigate Allegations of Administrative Irregularities, Mismanagement and Poor Governance at the He4\6alth Professions Council of South Africa: A Case of Multi-System Failure," 25 October 2015 .
116. I. Skosana, "HPCSA ignores recommendations of ministerial task team," Mail and Guardian , [Online]. Available: http://mg.co.za/article/2016-01-06-hpcsa-ignores-recommendations-of-ministerial-task-team.

competition matters comprehensively and has general jurisdiction over conduct, including conduct that is subject to public regulation.[117] [118]

242. The inquiry identified the following rules that may give rise to competition concerns:

242.1. Rule 7 – Fees and commission;

242.2. Rule 8 and 8A – Partnership and juristic persons & Sharing of rooms;

242.3. Rule 18 – Professional appointments;

242.4. Rule 23 – Financial interests in hospitals.

243. We discuss the competitive effects of these rules below.

RULE 7 - FEES AND COMMISSION

244. Rule 7 restricts practitioners from accepting or paying certain commissions or material considerations (monetary or otherwise) to third parties (including suppliers and other practitioners.

245. A strict interpretation of this rule may restrict the development and use of alternative reimbursement models (ARMs) such as global fee arrangements, the establishment of multidisciplinary teams, or alternative models of care in the private healthcare sector that may have efficiency gains. Stakeholder submissions claim that this rule restricts the development of arrangements amongst service providers that could reduce costs to patients.[119] [120] [121]

246. The HPCSA's rationale for the rule is the protection of patients and preservation of practitioner autonomy. Further, once fee arrangements include people or entities outside the jurisdiction of the association, they become difficult for the association to manage which is why it only allows practitioners to share fees with other HPCSA registered practitioners who are in their employ, associated as partners, shareholders or locum tenens.

247. On 13 April 2017, the association issued a media statement in which it warned practitioners from entering into global fee and other similar arrangements until it has canvassed all the aspects of law, ethics, clinical autonomy and funding mechanisms with all stakeholders and guidance is provided by them.[122] In a further media statement, the association urged practitioners to seek advice and guidance from it on any ARM arrangement they may be part of.[123]

248. The association argues that risk-sharing arrangements carry the risk of undermining the professional autonomy of doctors.

249. The association also claims that the professional autonomy of professionals runs the risk of being compromised if one provider (the holder of a global fee contract) decides on how the fee should be shared.

250. The main challenge raised by various stakeholders regarding rule 7 is that the HPCSA applies it in an overly restrictive manner and that it interprets this rule rigidly as if the rule provides for a complete ban or prohibition of fee sharing, even though there are circumstances where fee sharing may be appropriate.

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117. The Competition Act is a law of general application which establishes the Commission to regulate competition matters in all sectors irrespective of whether the sector or industry is regulated in terms of statute or not. The Commission has jurisdiction to investigate and evaluate the competition aspects of a statutory body where appropriate.
118. The Competition Commission of South Africa and Telkom SA Limited, Case No. 623/2008 at para. 35 (citing New Modderfontein Gold Mining Co. v. Transvaal Provincial Administration 1919 AD 397 401; R v Gwantshu 1931 EDL 29 31; Sasol Synthetic Fuels (Pty) Ltd).
119. Profmed's submission to the HMI, 30 October, 2014.
120. Vision Operations Pty Ltd, submission to the HMI, 19 February 2014.
121. Mediclinic, submission to the HMI 31 May 2013
122. http://www.hpcsa.co.za/Uploads/editor/UserFiles/downloads/publications/Press_Release_2017/HPCSA-Media-Release_HPCSA-position-on-global-fees.pdf
123. http://www.hpcsa.co.za/Uploads/editor/UserFiles/downloads/publications/Media%20Release%20-%20Global%20fees.pdf

251. The inquiry acknowledges that aspects of rule 7 are appropriate and necessary. For instance, sub-rule 7(3) restricts practitioners from offering or receiving payment in exchange for under- or over-service or over-charging a patient. This is an important restriction. However, the inquiry is concerned about the effects of sub-rules 7(4) and (5) which ostensibly restrict a practitioner from sharing fees with another practitioner who has not taken a commensurate part in the service, and prevents a practitioner from charging fees for services s/he has not personally rendered. However, these sub-rules have been interpreted to prohibit team-based care. Irrespective of the intention of the rule, the interpretation of the rule in the market and in conjunction with warning notices from the HPCSA on global fees leaves the impression in the market that ARMs are not encouraged and may be prohibited. The inquiry believes that this dampens competition and inhibits innovation, in particular of new models of care.

252. The inquiry is of the view that fee-for-service, as a payment method predominantly used in the South African healthcare markets, carries a significant risk of incentivising practitioners to over-service. The evidence of supply-induced demand provided in this provisional report bear out this concern. More investigations/treatment are certainly not always better for the patient. The preservation of the autonomy of doctors, while appropriate in many circumstances, should not extend to the preservation of an environment where every individual doctor is allowed to maximise income unfettered by an obligation to register and report evidence that the treatments provided are consistent with clinical best practice. For this reason the inquiry has made recommendations about registration and reporting. Patients, and consumers in general are entitled to information about the quality of service provided and about outcomes.

253. Consumers also have a right to cost-effective care. Resources are scarce, and healthcare forms a major part of consumers' budgets. One way of making practitioners aware of the budgetary aspects of the treatment choices they make is to introduce an element of risk sharing. This is a mechanism widely used in other health care markets, whereby providers have to make choices about what investigations and treatments are appropriate within a particular bundle of resources, while remaining cognisant of quality outcomes. Global fees are one such mechanism. It provides certainty to a payer about the costs of treatment and, if designed properly, provides an incentive to providers to include the element of costs into the cycle of decision-making around treatments.

254. There is nothing unethical in doctors being made aware of the financial consequences of treatment options for their patients.

255. Doctors are perfectly capable of acting according to professional standards when developing contracts with each other in relation to fee sharing.[124]

256. Innovative types of inter-provider team-based contracts are one possible solution to the problem which the inquiry was set up to address – that of the rising costs of health care.

RULE 8 AND 8A – PARTNERSHIP AND JURISTIC PERSONS / SHARING OF ROOMS

257. In terms of Rule 8, practitioners are allowed to practise in partnership or association with, or employ other practitioners, provided that the practitioner so employed either provides a supportive health care service to complete or supplement the employing practitioner's healthcare or treatment intervention or is in the same professional category as the employing practitioner. Furthermore, in terms of rule 8A practitioners are prohibited from sharing rooms with practitioners or entities not registered under the Health Professions Act.

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124. Culbertson R. A. and Lee P. R. (1996). Medicare and Physician Autonomy, Health Care Financing Review, 18(2).

258. This rule may effectively restrict practitioners from entering into multi-disciplinary practices with other professions and may restrict other alternative forms of group practice and or corporate practice. This may have the effect of restricting innovation, entry and/or expansion in the market.

259. The restriction is also said to hinder innovation in developing improved protocols that may arise from interdisciplinary co-operation between the different professional categories.

260. The inquiry believes that a rigid approach that holds all multi-disciplinary practices are wrong has an adverse effect on competition. Models that allow for practices with a general practitioner, nurses, community health workers and allied health professionals could be beneficial in the South African context. As illustrated earlier, specialist-only care generates higher claims costs than patients who have seen both GPs and specialists. Multi-disciplinary practices are said to have efficiency benefits such as more detailed clinical and patient management, initialisation and constant review of cost containment measures.[125] [126] [127] [128]

261. It is also worth noting that the National Health Insurance (NHI) is supportive of team-based care and multi-disciplinary practices and HPCSA ethical rules should allow for options that accommodate such policy direction. The inquiry is therefore of the view that the rule should be crafted in a manner that allows multi-disciplinary practices and partnerships, and provide clear guidelines of the grounds that will lead to a prohibition.

RULE 18 – PROFESSIONAL APPOINTMENTS

262. This rule restricts the employment of practitioners by non-practitioners without approval from the HPCSA and in accordance with a written contract of employment or appointment, which is drawn up on a basis that is in the interest of the public and the profession. Under this rule, non-practitioners and others who wish to employ practitioners require approval from the HPCSA.

263. The HPCSA Policy Document on Undesirable Business Practices recognises that employment of doctors is a complex issue that might result in benefits to patients, but that the risk of a negative effect on clinical independence is equally likely.[129] The policy states that, with the exception of employment by a university for the purposes of providing training or services to students, or by the public service, a committee made up of the Councils who are affected by the proposed group practice, should decide the issue of employment of doctors by other entities on an ad hoc basis.

264. That committee should consider the motive for the employment as the basis for its decision. In general, a fee-sharing or profit motive will result in a rejection of the employment arrangement. The policy states that any employment arrangement that violates the clinical independence of the practitioner or otherwise results in perverse incentives should not be allowed.

265. While the association indicates that there are instances in which such employment arrangements may be allowed on consideration of efficiencies and benefit to patients, the main concern is that the HPCSA interprets and applies it too restrictively as though there is a blanket prohibition on the employment of practitioners.

266. In relation to Rule 18, the inquiry is of the view that a prohibition may be justifiable where there is clear evidence that such employment arrangement would be harmful to patients, and exposes them to increased costs or overtreatment/over-

125. Vision Operations Pty Ltd, submission to the HMI, 19 February 2014.
126. The Society of Private Nurse Practitioners of South Africa, submission to the HMI, October 2014.
127. Netcare regulatory overview document, submission to the HMI, 31 October 2014.
128. Profmed's submission to the HMI, 30 October, 2014.
129. The HPCSA Policy Document on Undesirable Business Practices (2005) is available http://www.hpcsa.co.za/downloads/conduct_ethics/undesirable_business_practices.pdf. Last Accessed: 11 June 2018

servicing or where the practitioners' clinical independence, ethical or professional responsibilities and duties would be compromised. The HMI is, however, concerned that the HPCSA has taken a stance prohibiting employment altogether.

267. The North Gauteng High Court in Netcare Hospitals (Pty) Ltd v Health Professions Council and Others (A480/2014) [2016] ZAGPPHC 293 (28 April 2016) provided some guidance on the proper interpretation and application of Rule 18. The court was critical of the HPCSA's approach to the rule. In this matter, the HPCSA was defending its decision to deny Netcare accreditation to employ radiotherapists and medical physicists at hospitals that provide oncology health services. It appears that at its core, the HPCSA's refusal to accredit Netcare had nothing to do with the merits of Netcare's application but rather that it had to do with the association's policy not to accredit private hospitals to employ practitioners because hospitals are for-profit enterprises.

268. The court held that the HPCSA inconsistently applied the rules (by differential treatment between private hospitals and practitioners in private practice) and misdirected itself by not giving sufficient weight to certain relevant considerations (including the high cost incurred by Netcare to set up the oncology department and ignoring the benefits to both patients and practitioners). The HPCSA was also found to have given weight to other irrelevant considerations in reaching its decision.

269. The court pointed out the safeguards provided to the HPCSA for the review of the employment contracts entered into by the practitioner and the private hospital to ensure that the interests of the public and the profession are protected. The court found that the HPCSA also erred in applying the provisions of the Policy Document on Undesirable Business Practices.[130] The court concluded that the HPCSA and its Committee misdirected themselves as to the nature of the discretion the Committee was called on to exercise in that the Committee gave unwarranted weight to some facts and ignored others.

270. The inquiry's opinion is that the HPCSA must play an oversight role on employment of doctors but this must be measured and permissive and should specifically look to approve those arrangement where the benefits in terms of cost and quality will accrue to patients.

RULE 23A – FINANCIAL INTERESTS IN HOSPITALS

271. Rule 23A allows practitioners to have a direct or indirect financial interest or shares in a hospital or any other healthcare institution, provided that they meet a number of conditions, including that:

271.1. they enter into arm's length transactions and pay market-related prices;

271.2. maintain good, ethical and safe practices of their profession, including avoiding over-servicing patients;

271.3. declare their interest to the patients; and

271.4. that the purchase agreement is approved by the HPCSA based on the aforementioned criteria.

272. The rule also provides that practitioners should submit annual reports of the number of patients referred by the practitioner to the institution in which s/he has a financial interest.

273. The inquiry's main concern with this rule is that there is no proper monitoring or review system by the HPCSA to ensure compliance with it. There are also no clear criteria regarding how the shares are allocated among the practitioners, as well as how many shares can be allocated. Hospitals have confirmed that they have preferences in the disciplines they allocate shares to. As shown in Chapter 8, specialists are among the key contributors of high hospital use

130. The HPCSA Policy Document on Undesirable Business Practices (2005) is available at http://www.hpcsa.co.za/downloads/conduct_ethics/undesirable_business_practices.pdf. Last Accessed: 11 June 2018

and that greater concentration of specialists leads to higher levels of use. It is strange that the HPCSA is selectively enforcing this rule, while strictly interpreting the rule against employment of doctors, while both may theoretically have a negative effect on the autonomy of doctors.

THE HMI'S OPINION ON COMPETITION ISSUES AND THE HPCSA

274. The inquiry recognises the importance of maintaining health practitioners' independence and protecting consumers and acknowledges the need for considered regulation. There is significant potential for abuse in a system where there is information asymmetry which could be exploited for financial gain by one party.

275. We are in support of many of the functions of the HPCSA and acknowledge their role in training, registration and in dealing with complaints. We would encourage the HPCSA to improve its efficiency in all these areas.

276. We have specific recommendations on curriculum that we believe will improve graduates' ability to understand the economic consequences of health care decisions.

277. It is not always clear to the he inquiry when primacy is placed on preserving clinical autonomy compared to economic autonomy of practitioners. However, we acknowledge that these are interrelated. The lack of vigilance by the HPCSA in applying rule 23A (share ownership in hospitals) raises this question.

278. The inquiry is aware that inefficiencies associated with professional rules and regulations can result in substantial costs to consumers and payers without significant improvement in the quality of care, particularly if governments do not control fees for practitioners.[131] On the other hand, the advantages that can be gained from innovative models of care and funding are evident as they bring certainty about the cost of care, allow for the coordination of care, and, in some respects, lead to a saving of costs where efficiency is increased.

279. The inquiry is particularly concerned about the way ethical rules have been applied in particular in relation to fees and commissions, partnerships and sharing of rooms. The way this is understood in the market and in some cases applied by the HPCSA is limiting innovation in models of care in the market.

280. The HMI notes the concern identified by the HPCSA that any form of joint practice is problematic as they are only able to regulate practitioners registered in terms of the Health Professions Act and thus would not be able to control the rent-seeking behaviour of other stakeholders. This reasoning does not seem to be fully correct. Where a practitioner is a party to an employment contract or ARM arrangement, the HPCSA will still have jurisdiction because the practitioner is still registered with the HPCSA.

281. The inquiry believes that the concern with professional autonomy over-occupies the HPCSA. New forms of payment like bundled care or global fees or per capita payment systems offer adequate opportunity to maintain doctor autonomy. Disinterested medical practitioners would be involved in the establishment of treatment protocols based on best available evidence. Appropriate decisions in cases that require deviation are possible and should be encouraged. Such arrangements may protect the interests of consumers by ensuring that costs are managed appropriately in relation to evidence-based care. As stated earlier, it is not unethical for practitioners to know about and take into account the financial consequences of care for their patients. It may indeed be argued that not to do so is unethical.

282. With regard to professional appointments, the inquiry considers that the alignment of medical practitioners and hospital interests is too close. The coincidental benefit of

131. OECD Policy Roundtables, Enhancing Beneficial Competition in the Health Profession, 2004

increased utilisation of facilities that accrue to both medical practitioners and hospitals is evident in the market and illustrated in this report. In most instances where doctors are employed by hospitals (aside from the USA which is the one of the most costly health system in the world and so does not provide a good model), hospitals are not-for-profit organisations and the private health sector is better regulated than it is in South Africa. Currently in South Africa neither hospitals nor doctors provide any data to assess quality, so value cannot be assessed. To ensure competition in the market this would be a minimum requirement before employment of doctors by hospitals can be considered. At this point, the inquiry does not advocate unrestricted and unmonitored employment of doctors. In the current market, unrestricted employment of doctors could have serious unintended consequences for consumers and the industry as a whole. There are many other initial steps that can and should be taken that will realise more immediate value (see recommendations). The inquiry recommends that employment of doctors should not be prohibited, but employment of doctors should be conditional.

283. There are other forms of employment of doctors outside of employment by for-profit private hospitals. Where such employment can demonstrate that it is pro-competitive and adds value and that benefits accrue to consumers, it should not be prohibited.

284. The inquiry believes that if the market remains as it is, and doctors' shareholding in facilities continues, the HPCSA should be more vigilant in monitoring this.

285. The HMI believes that the HPCSA may not have given sufficient attention to its role in ensuring that its rules meet the requirements of the Competition Act.

286. The inquiry advocates a thoroughgoing review of all ethical rules with a view to their impact on competition. Significant changes to the wording of ethical rules are proposed to make them more permissive to ensure that they encourage actions that promote value for consumers. For example, fee sharing should be allowed, except when it is detrimental to patients. The HPCSA can then provide guidance on the circumstances that would lead to a prohibition of unethical and unprofessional fee sharing. Similarly, employment should be excluded when it is designed purely to extract profit to the detriment of patients and the practitioners' autonomy.

287. This would remedy confusion and promote innovation for the benefit of patients.

INFORMATION ASYMMETRY

288. Consumers are often not informed of the prices practitioners will charge or the costs associated with the various elements of the care they will receive. The situation is exacerbated where a third-party payer (e.g. a medical scheme) is responsible for the payment of the services. In these situations, the consumer has little incentive to even ask for pricing information from the practitioner.

289. When a consumer needs healthcare services, there is often little or no time for them to consider pricing information for the services or products they need. This leads to a situation where they are less price sensitive, even if they pay out-of-pocket.

290. Similar to pricing, quality of care and outcomes in healthcare provision is complex. In typical transactions, information on quality and past outcomes would assist the consumer to make a decision that ensured that they receive the best quality of care. However, with healthcare, unless sufficiently large samples of specific risk-adjusted outcomes are provided, it is not possible to assess outcomes. Consumers can only consider certain heuristics, such

as reputation, social relations, referrals, prices (where available) and testimonials as a means to assess the quality of care they can anticipate.[132]

291. Healthcare practitioners' role as agents for consumers is noted and we acknowledge that in general, practitioners act in the best interests of their patients. However, it cannot be gainsaid that providers stand to benefit financially from advice they give and that there is a risk of over-servicing. We acknowledge that over-servicing may not only be due to financial incentives. In the light of the degree of supply-induced demand that has been demonstrated in this inquiry, a remedy must be sought.

292. Patients are not always informed about costs and have no metric against which to measure quality and thus the value they receive.

293. There are no obligations for practitioners to report on quality. This must be remedied to allow for a measure of value.

294. In this regard, the inquiry proposes that information on the cost and quality of healthcare services, including all current and potential consumers of healthcare, be provided to the public. This is discussed in detail in Chapter 9.

295. With regard to the relationship between practitioner and facilities, the inquiry found that the incentive structure can lead to parties acting outside the interests of the consumers, and be more responsive to the financial interests of either or both the facility and/or the practitioners. See Chapter 6 for a full discussion.

PRELIMINARY FINDINGS

Supply of practitioners and supplier induced demand (SID)

296. The degree to which there is an absolute under-supply of practitioners in the market can only be evaluated once the extent of SID in the market (which appears to be significant) has been assessed.

297. The inquiry has demonstrated inefficiencies in the market including rising hospital admissions in spite of adjusting for the level of health and the age of the population served.

298. The inquiry is thus of the opinion that a shortage of health care practitioners is not the primary reason for increased costs.

299. We conclude that there are system-wide incentives in the market that motivate practitioners, in varying degrees, to either admit where it may not be required, keep patients in hospital longer than may be strictly needed, use a higher level of care (high care, ICU) than may be indicated, or to charge more, do more tests or do more expensive test on patients that may be absolutely indicated. These factors push up costs.

Value-based contracting

300. The absence of a system to measure quality makes it impossible to assess the value associated with these increased costs.

301. Value should be the primary basis for purchases in the health market. The absence of any measure of value deepens information asymmetry to such an extent that consumers are more vulnerable than they need be and this must be addressed.

Fee-for-service reimbursement

302. The practitioner market is dominated by one model of care – that of fee-for-service. Changes to this model of care, which include multidisciplinary group practices and risk sharing models, will be beneficial to consumers. It will also put in place a more affordable and thus sustainable health care market in the long term and create synergies with the longer term plans for NHI. This will

132. K. Arrow, "Uncertainty and the Welfare Economics of Medical Care," American Economic Review, vol. 53, 1963.; A. Dixon, R. Robertson, J. Appleby, P. Burge and N. J. Devlin, "Patient Choice: How patients choose and how providers respond," The Kings Fund, 2010.; D. Haas-Wilson, "Arrow and the Information Market Failure in Health Care: The Changing Content and Sources of Health Care Information," Journal of Health Politics, Policy and Law, vol. 26, 2001.; R. G. Frank, "Behavioral Economics and Health Economics," NBER Working Paper 10881, 2004.

be of benefit to the health sector overall and the public and private market.

303. The inquiry is concerned about the lack of effective alternative reimbursement models (ARMs) in the market and believes that the absence of alternative models of care and reimbursement indicate complacency by funders and practitioners who are clearly benefiting from the status quo. The inquiry's recommendations consider barriers/ disincentives to ARMs (such as the strict interpretation of HPCSA ethical rules) and the recommendations propose facilitating factors that will encourage effective ARMs (such as compulsory quality measurement and reporting). If and where fee-for-service remains, it is clear that guidance on pricing is required for health practitioners.

Organisational forms/practitioner associations

304. Associations have a role to play but can only do so in a positive pro-competitive way if an external, trusted body determines codes.

Health technology assessment

305. Practitioners will benefit from evidence-based information about technologies, treatments and models of care that add value to health outcomes. This will allow them to apply this knowledge appropriately to their individual patients.

The role of the HPCSA

306. The HPCSA provides an important function but it has not paid attention to the impact of its ethical rules on competition and has stifled innovation in the market.

307. Practitioners could be prepared better for their role in the private sector if they understood value-basis (cost and health outcome) of their decisions for their patients. The HPCSA can play a role in ensuring the transformation of health professional training so that this is routinely taught at undergraduate and post graduate levels.

Public service

308. Consideration can be given to extending the public service role of health care practitioners. Such extended community service for post graduates will allow for ongoing interaction between public and private providers, thereby improving quality in both sectors. It can also contribute to increasing access to care for a greater proportion of the population which the inquiry was tasked to consider in the TOR.

RECOMMENDATIONS

Establish a supply-side regulator

309. The inquiry proposes that the establishment of a Supply Side Regulator of Health (SSRH). The functions and structure of the Regulator are described in more detail in the recommendations chapter 10.

310. The inquiry recommends that health care practitioners be registered with the SSRH which will be responsible for determining the obligations related to receiving and maintaining registration.

311. To remedy the lack of information about the number type and distribution of providers in the private health market the SSRH will be the only body authorised to issue practice numbers. These will be individual practitioner numbers and the only numbers that can be used for re-imbursement of private providers (whatever the source of payment, whether public or private). [133]

312. To remedy the gaps in the current market the numbers should have the following features:

312.1. Practitioner numbers will include coding that allows the number to identify the type of provider (Physio/GP/specialist etc.), whether the provider is full- or part-time (definition of this to be decided by the SSRH), and whether the provider is also employed in the public sector

312.2. Practitioner numbers must be renewed on an annual basis and will only be

133. It should be noted that this will be required for payment but will not preclude any group based payment system.

reissued on conditions set by the SSRH. The inquiry proposes that the minimum conditions include the following:

312.2.1. The applicant must submit an annual return containing information pertaining to the practitioner's specialty and employment (detail to be specified by the SSRH), and an up-to-date address indicating the location of their practice (where the provider practices in more than one location they give the address where they spend the majority of their time). Providers' premises will also have to be registered and will require a SSRH physical practice registration number.

312.2.2. For practitioners working in the private sector, a certificate from the provincial health authority will indicate whether or not the practitioner is approved to do remunerative work outside the public sector (RWOP). This may not be required for part-time employees of the public sector but a decision in this regard will be made by the SSRH in consultation with the DoH and providers.

312.2.3. Practice numbers will only be issued if providers comply with any relevant reporting functions of the outcomes registry that exist in the year prior to their application.

312.3. After a five-year period of the setting up of the SSRH – during which the market can adapt and innovate in any way it sees fit – individual practice numbers will only be issued to practitioners who are active in a system of payment that includes some kind of alternative reimbursement system that demonstrates meaningful risk sharing. At this point, no limits will be set on the type of arrangements. It is assumed that innovation in the market will generate many options. This should, however, be periodically reviewed to ensure that real risk transfer occurs, benefits are passed on to consumers, and quality is not compromised.

Review of HPCSA Ethical Rules

313. The HPCSA must undertake a review of its ethical rules with a view to::

313.1. Review all rules from a competition perspective.

313.2. Re-phrase rules to be more permissive or enabling in nature, including that:

313.2.1. Group practises are encouraged;

313.2.2. Global fees are not prohibited;

313.2.3. Allow conditional employment of doctors so that unnecessary barriers to innovation and alternative models of care that have a positive effect on health outcomes, but prevent revenue maximising behaviour with no demonstrable health outcome benefit, are allowed.

314. Improve oversight of pro-competitive ethical rules. In particular, the HPCSA must be more proactive including that:

314.1 doctors make the costs of treatment clear to patients prior to treatment;

314.2 shares in facilities are either properly displayed or if employment of doctors is allowed, doctors may no longer hold shares in any hospital/hospital group where they are employed (save those bought on the open share market);

314.3 ownership of any product related to health care must be declared (eg if a dermatologist has an income sharing arrangement with a line of emollients, or an orthopaedic surgeon has any income sharing agreements with joint suppliers etc.)

315. The HPCSA must review its requirements for approval of training institutions such that the training includes:

315.1. an understanding of coding of procedures;

315.2. the cost and value implications of health care; and

315.3. an understanding of the purpose of HTA-like bodies their methods.

These modules should also be included in continuing medical education so that post graduate providers also gain this knowledge.

Create a system to encourage value based alternative reimbursement systems and models

315.4. Dominant groups that seem to evade market forces eg pathologists and hospital groups, should be broken up.

315.5. Revenue, in particular in relation to corporate groups that are dominant and evade market forces or possess unchallenged market power e.g. pathology groups should be capped

Training in the private sector

316. Corporate groups and in particular pathologists (with whom there is little to no direct patient contact) are in a position to train specialists. We recommend that consideration be given to allowing pathologists in training to rotate through pathology practices that have met HPCSA training criteria. As a quid pro quo, such pathology practices will accept particular public sector specimens at a rate agreed to by the state but at a similar rate as the NHLS.

ANNEXURE 7

ASSESSMENT OF PRACTITIONER ASSOCIATION

THE HMI APPROACH TO ASSESSING PRACTITIONER ARRANGEMENTS: AN APPLICATION OF THE COMPETITION ASSESSMENT FRAMEWORK

1. 1. It is important to note that the HMI is not performing an investigation into any particular allegation of anticompetitive conduct. A market inquiry in the context of the Competition Act is not an enforcement action. Instead, the Competition Act requires the HMI to establish whether or not there are features of the market that prevent, distort or restrict competition. This is a wider remit than an enforcement action under the Competition Act and does not require the HMI to establish whether or not the Act has been contravened. However, the HMI remains guided by case precedent in considering allegations of anticompetitive conduct brought before it.[134] As a first step, the proposed framework considers whether a contravention of the Act has occurred as that would be a strong indicator that there has been an effect on competition.

2. In this instance, the "features of the market" under consideration are: (1) the horizontal relationship between practitioners and (2) vertical relationships between practitioners on the one hand and funders and/or MCOs on the other.

3. At the outset, the HMI notes that economic theory suggests that vertical agreements are less likely to be anticompetitive and more likely to have efficiency benefits than horizontal agreements. Agreements between parties in a horizontal relationship have the potential to lessen competition significantly, as it involves firms that are in direct competition with one another and have the incentive to coordinate their activities in order to increase prices and profits.[135] On the other hand, parties in a vertical relationship do not compete directly and, to some extent, have competing objectives. Since they provide complementary products, both the upstream and downstream firm would generally prefer that the other party lowers rather than raises its price. In addition, vertical agreements often generate efficiencies. They can allow upstream and downstream suppliers to coordinate product design, incentivise investment, reduce free-riding and eliminate double-marginalisation.[136] That said, vertical relationships can lessen competition indirectly, if the upstream or downstream firm has market power and is able to use the market power to foreclose competitors.[137]

4. 4. The HMI has developed a framework for the assessment of horizontal and vertical arrangements in the practitioners market, which was presented in section 7 of Chapter 7 of the Provisional Findings Report. Below, the HMI applies the framework to a complaint about anticompetitive conduct against HealthMan that was brought before the HMI. The case study illustrates how stakeholders can apply the framework to assess the competitive effects of any arrangements in which they participate.

BACKGROUND TO THE CASE STUDY

5. HealthMan is a privately-owned healthcare consultancy established in 1996. It specializes in the management and administration of specialist and healthcare networks, group practices, individual practices and other professional medical associations. HealthMan's main areas of expertise include network administration, legal support, research, and financial modelling.

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134. Note that this does not preclude the HMI from making recommendations to the effect that certain conduct does, in the view of the HMI, contravene the Act.
135. Bishop, S. and Walker, M. (2010). The Economics of EC Competition Law: Concepts, Application and Measurement. Sweet and Maxwell 2010. See pp. 211-212.
136. Riordan, M. and Salop, S. (1995). Evaluating vertical mergers: a post-Chicago approach. Antitrust Law Journal Vol 63, Issue 2.
137. Bishop and Walker (2010). See pp. 426-427.

6. In 2004, HealthMan was commissioned by the CMS to perform coding and tariff studies as part of the National Health Reference Price List (NHRPL) determination process. During the subsequent RPL process, SAMA commissioned HealthMan to conduct costing studies for GPs and specialist societies as input into the Department of Health's RPL process.

7. After the RPL was set aside in 2010, HealthMan has not been commissioned to conduct any further costing studies. However, it used these previous costing studies as the basis to independently determine "Tariff Guidelines" for various medical disciplines. It provides these Tariff Guidelines to the various practitioner associations that contract with it either directly or indirectly through their affiliation with the South African Private Practitioners Forum and/or the South African Medical Association.

8. In June 2011, the BHF filed a complaint with the Competition Commission alleging that HealthMan's practice of publishing Tariff Guidelines for various specialist disciplines amounts to price-fixing in contravention of the Competition Act.[138]

9. Below we provide background information on HealthMan's clients and how it determines these Tariff Guidelines.

HEALTHMAN'S CLIENTS

10. HealthMan's clients include the following associations and management groups:

- Association of Dietetics of South Africa (ADSA)
- Clinical Psychology Forum (CPF)
- ENT Society and Management Group (ENTMG & Society)
- Faculty of Consulting Physicians of South Africa (FCPSA)
- General Practitioner Management Group Ltd (GPMG)
- Gynaecology Management Group Ltd (GMG & SASOG)
- Iso Leso Optics Ltd
- Neurological Association of South Africa (NASA)
- Ophthalmology Management Group Ltd (OMG & OSSA)
- Paediatrician Management Group Ltd (PMG)
- Psychiatry Management Group Ltd (PsychMG)
- Radiography Management Group (RADMG)
- Society for Endocrinology, Metabolism and Diabetes South Africa (SEMDSA)
- Society of Neurosurgeons of South Africa (SNSA)
- South African Audiology Association (SAAA)
- South African Private Practitioners Forum (SAPPF)
- South African Rheumatism Arthritis Association (SARAA)
- South African Society of Psychiatrists (SASOP)
- South African Society of Physiotherapy (SASP)
- Surgicom Ltd

11. The HMI requested information from some of HealthMan's clients to understand what the main activities of the associations are and how they interact or contract with HealthMan:[139]

12. The South African Private Practitioners Forum is an independent not-for-profit company that represents approximately 3000 private practitioners across various disciplines. SAPPF's role is largely to respond and engage on behalf of its member in legislative and policy processes. SAPPF contracts HealthMan as its full-time administrator and as an independent consultant on projects where actuarial, legal and economic expertise is required.

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138. Competition Commission Case No. 2011Jul0142
139. We note that this is not a comprehensive exposition of all Healthman's client relationships as our intention was simply to understand HealthMan's main functions. The sample selected is illustrative and provides a reasonable overview of Healthman's business model and key functions.

13. The ENT Society and Management Group is an affiliate of the SAPPF. One of the objectives of the ENT Society is to establish relationships amongst otorhinolaryngologists, and between otorhinolaryngologists and other stakeholders in the healthcare sector, including hospitals, government authorities, and the pharmaceutical industry. The ENT Society and Management Group contracts with HealthMan to compile Tariff Guidelines for its members.

14. The Faculty of Consulting Physicians of South Africa is a public company owned and managed by various specialists (Dermatologists, Endocrinologists, Nephrologists, Neurologists, Physicians, Pulmonologists and Rheumatologists). It is also an affiliate of SAPPF. The activities of the group include dealing with coding and dispute resolution with medical schemes, and the consolidation of claims data to negotiate coding and tariffs with Medical Schemes and Department of Health.

15. The General Practitioner Management Group has approximately 15 000 providers as part of their system.[140] They offer administrative services to their members through a consultancy agreement with HealthMan. The GPMG operates as a PSN and provides some medical scheme contracts to its members. It is, however, the members' prerogative to accept the terms of these contracts or not. GPMG also conducts peer review of its members.

16. *Iso Leso* is a public company that was established in 1999. It is owned by its members who are all optometrists. Members of Iso Leso coordinate some commercial operations, for example collectively negotiating the terms of managed care agreements and related services contracts collectively with funders. The HMI notes that Iso Leso's members are independent optometrists who technically compete with one another. It contracts with HealthMan directly.

17. *The Ophthalmology Management Group* was established in 1996 to assist OSSA with the fulfilment of the business functions related to private ophthalmology practice. The Ophthalmology Management Group represents the majority of practicing ophthalmologists in the country. The group's activities include providing clinical and coding support and representing the profession in matters relating to policy and legislation. The Ophthalmology Management Group is an affiliate of SAPPF and a direct client of HealthMan.

18. The Psychiatry Management Group is fully owned and managed by psychiatrists. It represents the psychiatrists within SASOP in the private sector. Amongst its activities, PsychMG has engaged with SAPPF on the cost-based RPL and the HPCSA with regard to the ethical tariff guidelines. PsychMG contracts with HealthMan directly.

19. Surgicom was established in 1996 as the business arm of the Association of Surgeons of South Africa to manage strategic private practice matters for General Surgeons. Surgicom is a public company owned and managed by General Surgeons. It represents its members in matters that affect the future of the profession and has ongoing contact with the funding industry to attempt to achieve an appropriate level of remuneration for its members. Surgicom contracts with HealthMan directly.

20. In relation to tariffs, HealthMan has two functions:

    20.1 It collates the reimbursement rates of various medical scheme for easy reference and comparison by providers (the "Comparative Tariffs");

    20.2 It publishes its own tariff based on independently-determined and self-funded costing assessments referred to as the 'HealthMan Private Tariff' (the "Tariff Guidelines").[141]

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140. See website: http://www.gpmg.co.za/About
141. It is noted that historically the HealthMan tariff guidelines where based on cost studies conducted for the CMS and later the NDoH as part of the NHRPL process. This ceased in 2009 when the RPL was set aside.

COMPILATION OF COMPARATIVE TARIFFS

21. In collating the Comparative Tariffs, HealthMan compiles the reimbursement rates from various schemes including GEMS, Discovery Health Medical Scheme, Profmed, Bankmed and Fedhealth into a single document. The reimbursement rates are obtained from publicly available sources. The Comparative Tariff schedules are said to cover 90% of the most frequently used codes per discipline. The tariffs are compiled for the convenience of the practitioners who then have the information readily available in a user-friendly manner.

COMPILATION OF TARIFF GUIDELINES

22. Since 2011, HealthMan has prepared Tariff Guidelines on the basis of independent research conducted and funded by the organization itself. According to Healthman, it is currently not contracted by any of the associations or groups affiliated to it to conduct costing studies and determine tariff guidelines on their behalf.

PUBLICATION OF THE TARIFF GUIDELINES

23. A schedule containing both the comparative tariffs and the HealthMan tariff guideline is published for a number of practitioner disciplines (see Figure 1 and 2 below for an excerpt from these schedules). The schedule contains the comparative tariffs from various schemes, the HealthMan tariff guideline labelled 'HealthMan Private Tariff', and the HealthMan Rand Conversion Factor (RCF).[142] These tariffs are reviewed and updated annually. According to HealthMan these schedules are meant to be used by practitioners in costing their own services and determining their own fees taking into account individual variables such as level of expertise, the time taken to perform the service, the litigation risk, the practice's overheads, and profit.

142. The Rand Conversion Factor "represents an average cost per minute and is calculated by taking into account the cost of the resources required to perform a health care intervention, including the professional income of the health care professional. The reference price of each of the items in a schedule is determined through a multiplication of the RVU of each concept by the RCF". http://www.hpcsa.co.za/Uploads/editor/UserFiles/downloads/service_fees-tariff/submissions/sappf_e_medical_coding_billing_2013_03_19.pdf

FIGURE A7.1: EXCERPT OF HEALTHMAN COMPARATIVE TARIFFS AND TARIFF GUIDELINES – GPS 2016

HEALTHMAN GENERAL PRACTITIONERS COSTING GUIDE 2016

COMPARATIVE TARIFFS: Scheme Rates

Code	HealthMan Terminology	Average Duration Professional	HealthMan Private Tariff (VAT Incl)	HealthMan RCF	BankMed Tariffs (Incl VAT)	BankMed RCF	Discovery Tariffs (VAT Incl)	DH RCF	Discovery Tariffs (VAT Incl) on DHGP Network	DHGP RCF	GEMS Non-Contracted Tariffs (VAT Incl)	GEMS Non-Contracted RCF	GEMS Contracted Tariffs (VAT Incl)	GEMS Contracted RCF	Profmed (VAT Incl)	Profmed RCF
		Units	R	R	R	R	R	R	R	R	R	R	R	R	R	R
	Consultations:															
	See the Notes below for All Tariffs															
0107	Newborn Attendance -Visit in Ward	33	993,60	30,110	634,50	19,227	616,10	18,670	616,10	18,670	632,28	19,160	641,30	19,433	721,50	21,865
0109	Hospital follow-up visit	15	451,70	30,110	288,40	19,227	280,00	18,667	280,00	18,667	287,40	19,160	291,50	19,433	328,00	21,865
0113	Newborn Attendance - emergency at all hours	45	1 355,00	30,110	865,20	19,227	840,20	18,671	840,20	18,671	862,20	19,160	874,60	19,436	983,90	21,865
0129	Prolonged first/follow-up consultation : for each 15-minute period only if service extends 10 minutes or more into the next 15-minute period following on the first 60 minutes	15	451,70	30,110	288,40	19,227	280,00	18,667	280,00	18,667	287,40	19,160	291,50	19,433	328,00	21,865
0130	Telephone consultation (all hours) *(Refer to rules and interpretation)*	12	361,30	30,110	230,70	19,225	224,20	18,683	224,20	18,683	219,00	18,250	233,20	19,433	262,40	21,865
0132	Consulting Service, e.g. Repeat Script	5	150,60	30,110	107,80	21,560	93,20	18,640	93,20	18,640	102,20	20,440	97,20	19,440	109,30	21,865
0133	Writing of special motivations and treatment	9	271,00	30,110	173,10	19,233	167,80	18,644	167,80	18,644	164,30	18,256	174,80	19,422	196,80	21,865
0145	Consultation AWAY from doctor's home or rooms (non-emergency). Add to consultation	6	180,70	30,110	115,30	19,217	112,10	18,683	112,10	18,683	109,50	18,250	116,70	19,450	131,20	21,865
0146	Unscheduled emergency consultation at doctor's home or rooms. Add to consultation	8	240,90	30,110	1 537,00	192,125	149,40	18,675	149,40	18,675	146,00	18,250	155,50	19,438	174,90	21,865
0147	Unscheduled emergency consultation AWAY from doctor's home or rooms. Add to consultation	14	421,50	30,110	269,10	19,221	261,60	18,686	261,60	18,686	255,50	18,250	272,10	19,436	306,10	21,865

Source: HealthMan Comparative Tariffs for GPs, 2016.[143]

143. Accessed from http://www.healthman.co.za/tariffs/pubtariffs2016

FIGURE A7.2: EXPERT OF HEALTHMAN COMPARATIVE TARIFFS AND TARIFF GUIDELINES – GP 2016 (NOTES)

HEALTHMAN GENERAL PRACTITIONERS COSTING GUIDE 2016

COMPARATIVE TARIFFS: Scheme Rates

Code	HealthMan ADDING BUSINESS ACUMEN TO YOUR PROFESSIONAL EXPERTISE Terminology	Average Duration Professional	HealthMan Private Tariff (VAT Incl)	HealthMan RCF	BankMed Tariffs (Incl VAT)	BankMed RCF	Discovery Tariffs (VAT Incl)	DH RCF	Discovery Tariffs (VAT Incl) on DHGP Network	DHGP RCF	GEMS Non-Contracted Tariffs (VAT Incl)	GEMS Non-Contracted RCF	GEMS Contracted Tariffs (VAT Incl)	GEMS Contracted RCF
		Units	*R*	*R*	*R*	*R*	*R*	*R*	*R*	*R*	*R*	*R*	*R*	*R*

Note:

1. *Codes, Descriptors and Unit Values have been extracted from the SAMA Electronic Medical Doctors Coding Manual (eMDCM) previously known as the SAMA Doctors Billing Manual (DBM).*
2. *Tariffs may differ due to rounding*
3. *Above codes are the most frequently used codes and is not all inclusive of all the codes*
4. *Increases from 2015 are as follow:*
   a. *HealthMan = 2015 Tariff + 7.2%*
   b. *Bankmed = New to Schedule*
   c. *Discovery Health = 2015 Tariff +5%*
   d. *GEMS = 2015 Tariff +5%*
   e. *Profmed = 2015 Tariff +6%*
5. *The Healthman tariff for codes that relate to equipment have been retained at GEMS rate**
6. *All Tariffs are inlcusive of VAT*

Disclaimer:
The above schedule is based on information avaiable to HealthMan and HealthMan will NOT be held responsible for any losses incurred by practitioners resulting from the use of this schedule.

Legend:
DH = Discovery Health

CASE STUDY ANALYSIS

24. In the case study analysis, we apply the competitive assessment framework to HealthMan and its client associations. In particular, we evaluate whether HealthMan's conduct in compiling and publishing Comparative Tariffs and/or Tariff Guidelines may have an adverse effect on competition.

25. The first step is to assess whether the conduct amounts to collusion in contravention of section 4(1)(b) of the Act, which would constitute the most egregious effect on competition.

Stage 1: Assess whether the conduct amounts to a contravention of section 4(1)(b):

26. In order to find a contravention of section 4(1)(b) of the Act, it is necessary to prove the following elements:

27.1 That the parties to the conduct are in a horizontal relationship, and

27.2 That the parties have entered into an agreement, concerted practice, or decision; which involves:

27.2.1 directly or indirectly fixing a purchase or selling price or any other trading conditions;

27.2.2 dividing markets by allocating customers, supplier, territories, or specific types of goods or services; or

27.2.3 collusive tendering.

27. In relation to HealthMan itself, the HMI notes that the company is not comprised of practitioners but that it is an independent consulting company that provides various services to client associations working in the healthcare sector. HealthMan is thus in a vertical relationship with the practitioners who form its client base. However, many of the associations and management groups that are HealthMan's clients consist of practitioners who are in horizontal relationships with one another.

28. Members of discipline-specific associations such as the Psychiatry Management Group, Iso Leso and Surgicom (who are clients of HealthMan), can be classified as parties in a horizontal relationship. Even within broader groupings such as SAPPF and SAMA that are comprised of various disciplines, there are horizontal relationships amongst the members of each particular constituent discipline. These horizontal relationships are relevant to our analysis.

29. Having established that HealthMan is not comprised of competing practitioners but is in a vertical relationship with practitioners, its conduct cannot be considered a direct contravention of section 4(1)(b). However, HealthMan's conduct still has the effect of distorting competition amongst the practitioners to whom it provides services. Below, we thus continue the stage 1 analysis, this time focusing on HealtMan's client associations, to understand whether there is an agreement, concerted practice or a decision amongst them to engage in collusive conduct.

30. Section 1 of the Competition Act determines that the term agreement "includes a contract arrangement or understanding, whether or not legally enforceable". The essence of an agreement is that the parties have reached some kind of consensus.[144] A concerted practice is something less than an agreement. The Act defines it as "co-operative, or coordinated conduct between firms, achieved through direct or indirect contact, that replaces their independent action, but which does not amount to an agreement". For conduct to amount to a concerted practice, there does not have to be consensus or "meeting of the wills" and the emphasis in the competitive assessment is placed on understanding the nature or the purpose of the conduct.

31. It is the HMI's view that when an association acts on behalf of its members to seek

144. Netstar (Pty) Ltd and Others v Competition Commission South Africa and Another (99/CAC/MAY10, 98/CAC/MAY10, 97/CAC/MAY10) [2011] ZACAC 1; 2011 (3) SA 171 (CAC) (15 February 2011)

HealthMan's services and subscribes to Healthman's Tariff Guidelines, the members of the association can be considered to have aligned themselves with the decision of the association to use the guidelines. At a minimum, this constitutes a concerted practice and, at worst, an outright agreement between the members.

32. does not discuss the implementation of the tariff guidelines with its client organisations or their members and does not know whether the tariffs are implemented or not, the HMI believes that it is reasonable to assume that the tariff guidelines obtained from HealthMan will be shared amongst the members of its different clients associations. This is sufficient to show that there is co-operative conduct between the members of the association, which would constitute; at minimum, a concerted practice.

33. In terms of our framework, the only question that thus remains is whether the use and dissemination of Guidelines Tariffs amongst competing practitioners amounts to the direct or indirect fixing of prices and/or trading conditions.

34. The HMI notes that the collation and publication of different scheme reimbursement rates, which information are already in the public domain, cannot constitute a contravention of section 4(1)(b) as it does not involve any agreement to fix any prices or trading conditions. The scheme rates are determined independently by each scheme and this information is then collated for use by practitioners.

35. With regard to the Tariff Guidelines, the HMI is of the view that these Guidelines may influence how practitioners set their own fees and could thus amount to an indirect fixing of fees by practitioners. From a competition perspective, the concern surrounding the use of any reference price list (such as "The HealthMan tariff") is that it reduces the uncertainty of competition and encourages coordinated pricing.

36. The HMI also notes that the Commission has previously expressed the view that applying Tariff Guidelines, as with adhering to a uniform coding system, can decrease the transaction costs of collusion and increase anticompetitive concerns (especially when done outside the regulatory framework and in their private interests). The ability of practitioners to apply the Tariff Guidelines and the associated coding system make it easier for practitioners to agree on a collusive outcome.

37. Therefore, the HMI is of the view that the conduct of individual associations/groups and their members in subscribing to and using HealthMan's Tariff Guidelines may be in contravention of section 4(1)(b)(i) of the Act.

38. Below, we summarise how the conduct of some of the organisations affiliated to HealthMan may be viewed in terms of section 4(1)(b)(i) (see Table 7.1).

TABLE A7.1 SUMMARY OF FINDINGS: SECTION 4(1)(B)(I)

Organisation	Relevant Factors	Possible contravention of section 4(1)(b)(i) (Y/N)	Notes
HealthMan	HealthMan is a consultancy and not an association of practitioners	No	HealthMan's conduct has an effect on competition in the practitioner market
SAPPF	The SAPPF consists of a number of societies representing different disciplines. The organisation itself does not determine any tariff or coding guidelines but it contracts with HealthMan and makes HealthMan's information available to its members.	No	The individual societies that are part of the SAPPF may engage in issuing guidelines to members and each one would need to be considered.
ENTMG & Society	The ENT Society is made up of ENT specialists. The management group contracts HealthMan to determine a tariff guideline for their members. The society negotiates with the relevant institutions to secure fair and equitable recognition of and remuneration for services provided by the discipline on an ongoing basis.	Yes	
FCPSA	The organisation is owned and managed by competing specialists. The association negotiates tariffs on behalf of its members. It would appear that HealthMan does provide some of the members with tariff guidelines.	Yes	
GPMG	GPMG is a provider network that negotiates rates? with schemes. Practitioners can decide whether to participate or not.	No	The conduct may still have an adverse effect on competition. Further analysis is required In terms of Stage 2 and 3 of the assessment framework.

Iso Leso Optics	Iso Leso Optics as a network manager negotiates with schemes. However, the shareholders of Iso Leso Optics are optometrists in a horizontal relation operating in competition with each other.	Unclear	The conduct may still have an adverse effect on competition. Further analysis is required In terms of Stage 2 and 3 of the assessment framework.
OMG & OSSA	OSSA represents ophthalmologists in a horizontal relationship. OMG provides guidance on coding to OSSA members and HealthMan provides tariff guidelines.	Yes	
PsychMG	SASOP represents psychiatrists in a horizontal relationship. PsychMG, through the services of HealthMan, provides tariff guidelines to SASOP members.	Yes	
Surgicom	ASSA represents general surgeons that are in a horizontal relationship. Surgicom, through the services of HealthMan, provides tariff guidelines to ASSA members.	Yes	

39. In the instance that any of the above may not amount to an unequivocal contravention of section 4(1)(b) of the Act, the analysis should proceed to Stage 2 of the assessment framework, which asks whether the conduct substantially prevents or lessens competition.

Stage 2: Assess whether the conduct is likely to lead to a substantial lessening of competition - section 4 (1)(a) (or 5(1):

40. Rather than considering the conduct of each association individually, the HMI will discuss the principles for assessing the conduct in broad terms. In considering whether the conduct amounts to a substantial lessening or prevention of competition, the assessment framework considers the following:

40.1. The levels of concentration in the market and/or the proportion of practitioners covered by an agreement,

40.2. The restrictiveness of the agreement,

40.3. The alternatives available in contracting with practitioners,

40.4. The barriers to entry or expansion created by or associated with the agreement, and

40.5. The type of information exchanged under the auspices of the agreement

Levels of concentration

41. Without doing a detailed market definition exercise, the HMI notes that many practitioner groups themselves state that they represent a majority of the practitioners in their discipline (see Table 7.2). Any conduct by the association is thus more likely to have anticompetitive effects.

TABLE A7.2: NATIONAL REPRESENTATION OF PRACTITIONER GROUPS (SELF-REPORTED), 2016

Association	National Representation (% of total practitioners), self-reported, 2016
IPAF	59%
PPN	98%
NPG	90%
SAOA	75%
ICON	80%

Restrictiveness of the agreement

42. In assessing the terms of the agreements entered into between associations on the one hand and funders and facilities on the other, the HMI found no evidence to suggest that practitioners are restricted in terms of the fees they may charge or how they contract with schemes or facilities. However, in practice, the HMI concluded that the position negotiated by an association that represents the majority of practitioners in a discipline often becomes the default (minimum) position. There may thus be an indirect restriction on a practitioner.

43. Structures such IPAF, PPN and Iso Leso are more restrictive in that even though they are said to be voluntary groups, any practitioner who joins the group does so on the understanding that they will adhere to the negotiated benefit plans and tariffs.

44. The question of the restrictiveness of the agreements entered into by practitioner groups cannot be answered definitively and must be assessed on a case by case basis.

Alternatives contracting options available

45. In assessing the alternatives available to consumers and providers, the HMI notes that because some of these practitioner associations represent the majority of practitioners in a particular discipline (see Table 7.2), it is unlikely that there are many alternatives for funders or consumers. This increases the potential for a substantial anticompetitive effect.

Barriers to entry and expansion

46. In assessing whether the practitioner associations hinder entry and expansion in the market, the HMI notes that submissions primarily point to vertical restraints to competition. Smaller funders in particular have reported having difficulty in negotiating contracting terms with large practitioner groupings.

Information exchange

47. Assessing the competitive effects of information exchanged within practitioner associations is also not straightforward. There is usually a wide range of information exchanged within any group; from tariffs guidelines and codes to information on practitioner networks. The sensitivity of the information being exchanged varies, and must be assessed on a case by case basis.

Preliminary conclusion on Stage 2 assessment

48. It is difficult for the HMI to assess whether the conduct of associations amount to a substantial lessening of competition within the time and resources available to the inquiry. The HMI nonetheless believes that there is sufficient evidence to motivate for a more detailed assessment of the conduct of

the practitioner groupings by the Competition Commission.

49. This must be done in conjunction with the final step in the assessment framework, which assesses any efficiency benefits associated with the anticompetitive conduct and weighs these against the anticompetitive effects.

Stage 3: Assess whether there are efficiency benefits which outweigh the anticompetitive effects

50. The HMI recognises that there are several benefits that can arise from practitioner groupings. These include cost savings from common investments and improved clinical quality form sharing outcomes and performance data. It is important to note that in the Stage 3 assessment, it would be up to the respondent to demonstrate any efficiencies which the authorities must then examine. The following questions will help to guide practitioners in identifying and assessing efficiency gains.

Are there efficiency gains arising from the agreement?

51. The efficiencies that are likely to be put forward would include cost saving and the improvement of quality or outcomes. However, for these to be used in an efficiency defence, the parties must show concrete evidence of indisputable gains.

Do consumers share in the benefits?

52. If there were any benefits arising from the conduct, the parties would need to demonstrate that these are being passed on to consumers and that consumers benefit significantly from the efficiency gains. It is not enough that providers themselves benefit from stated efficiencies.

Are restrictions indispensable to achieve the benefits?

53. This requirement turns out to be an important hurdle in relevant European case law. It might be that a particular restriction is helpful in obtaining a certain goal, but in many cases, the same goal can be achieved through less intrusive forms of cooperation between competitors.

54. For example, stakeholders have argued that practitioners need guidelines in order to determine their prices to avoid over- or under-charging patients relative to their own costs. In the light of this criterion, this argument is not convincing. Every entrepreneur is responsible for their own cost calculations and practitioners should be no exception. If price calculation is truly a problem for individual practitioners, the role of associations could be limited to sharing costs-calculation models, instead of guidelines on pricing; thus leaving the pricing decision to each practitioner.

Is competition eliminated as a result of the agreement?

55. The idea behind this question is that if competition is completely eliminated by a restrictive agreement, it is not acceptable – no matter the benefits.

Preliminary conclusion on Stage 3 of the Assessment Framework

56. If there is a prima facie case that the conduct of practitioners via their associations amounts to a substantial lessening or prevention of competition (which the HMI argues there is), the practitioners will have to follow this exacting process in arguing for efficiency benefits that outweigh the anticompetitive effects. Though the demands are rigorous, the competition authorities would be open to considering benefits that are shown to have positive effects for consumers and contribute to better quality and outcomes in the sector.

CONCLUSION

57. In conclusion, the HMI believes that the conduct of associations in either determining or prescribing to Guidelines Tariffs such as those published by HealthMan has a chilling effect on competition between practitioners.

58. The Guidelines Tariffs remove the uncertainty of competition and provides a benchmark tariff towards which practitioner tariffs will gravitate, regardless of the bargaining and contracting efforts of schemes. This has an adverse effect on competition.

59. Though the conduct may not amount to a contravention of section 4 or 5 of the Competition Act, the HMI has clearly set out the process that will be followed in assessing such a contravention and encourages stakeholders to utilise this framework in assessing their own conduct.

Chapter 8
Excessive utilisation and supplier induced demand

CONTEXT – HEALTHCARE UTILISATION AND SUPPLIER-INDUCED DEMAND

1. In previously published papers[1] the HMI has demonstrated that a large part of healthcare cost escalation is driven by increases in the volume of services performed, rather than increases in the tariffs charged per service. This utilisation increase remains even after taking into account measures of underlying patient need – their age, chronic disease prevalence and regulatory requirements such as changes in Prescribed Minimum Benefits.

2. Rapidly increasing rates of consumption of a good or service are of course not problematic in and of themselves. In healthcare, however, some of the natural constraints on demand do not apply:

- Most costs are borne by insurance, and thus have a very low or zero cost to the consumer at point of service – so price has a significantly muted effect on demand (so called "moral hazard"). The vast majority of consumers of private healthcare in South Africa have medical scheme coverage so we would expect this to apply.

- For both providers and consumers there is uncertainty – regarding the diagnosis, the best therapy and the amount of that therapy needed. Since the results of an incorrect decision can be significant and irreversible, natural risk aversion would tend to drive more service demand. Litigation (or the fear of it) might worsen this.

- Notwithstanding the uncertainty on both sides, practitioners typically have far more information than the payers for, or recipients of, a health service (i.e. information asymmetry). In most cases the health practitioner both advises of the need for a service and then provides that service. Since providers are typically paid by volume of services provided, a revenue-maximising professional will tend to recommend more, rather than fewer services. This is called supplier-induced demand.

3. Moral hazard and uncertainty are difficult to address through any government intervention. Supplier induced demand, however, represents a distortion of the agency role that healthcare practitioners are expected to perform, and most healthcare payers and governments seek to both prevent it through better aligned incentives, and intervene where the most egregious examples become evident.

4. There is substantial international literature on supplier-induced demand, and on the methods that have been applied to address it (see accompanying background paper[2]). It is accepted that this phenomenon can and does exist in healthcare, particularly for interventions where:

1. Health Market Inquiry. Report on analysis of medical schemes claims data – descriptive statistics. Version 2: 8 December 2017
2. CCSA – HMI. Towards an understanding of Supplier Induced Demand (SID): Practitioners. Research Note – May 2015

- practitioners have some discretion around whether to treat, and
- they are being paid based on the number of interventions they undertake.

5. This chapter thus focuses on whether supplier induced demand might be a significant cause of cost escalation, and is hence a barrier to affordability and access in the South African private health sector. We have thus sought to answer three locally pertinent questions:

- Is the level of demand for discretionary services (i.e. those that suppliers can most easily influence) inordinately high compared to: non-discretionary services, the past, or other country settings after adjusting for acceptable demand drivers such as age, illness prevalence, and severity, as well as other insurance market failures, such as adverse selection.
- Are rates of high (excessive) discretionary services correlated with high capacity/ supply of that service? For example, do areas with more beds per head of population exhibit more admissions or longer lengths of stay than those with fewer beds, other factors being equal? We have examined this effect for practitioners (where the agency relationship on behalf of patients is most obvious) as well as facilities (where the benefiting entities do not act as agents for patients, but might be able to influence the practitioners, who do).
- Do regulations, such as Prescribed Minimum benefits worsen supplier induced demand?

HEALTHCARE UTILISATION

METHODS AND DATA

6. We have organised our analysis around the three questions framed above. The core data used for this purpose are the aggregated claims data for medical schemes for the period 2010 to 2014. We have focused our analysis on hospital events because these represent bigger expenditures and produce sufficient clinical data to conduct adequate patient risk adjustment.

7. The dataset used contained the claims and anonymised membership data for over 90% of medical scheme beneficiaries over the period 2010 to 2014. Complete data were received from each of the three major Medical Scheme administrators, as well as many (but not all) smaller administrators and self-administered schemes. Details of these data can be found in an earlier report[3]. Unless otherwise mentioned, all data were drawn from the medical schemes claims and beneficiaries dataset. Extensive standardisation and cleansing of these data was undertaken before analysis. This is described in detail in a prior report[2].

BENCHMARKING THE LEVELS OF HEALTH SERVICE UTILISATION

8. In the first instance we sought to examine the absolute rates of health service utilisation. This was done for total hospital admissions, and for specific interventions where there is significant discretion (and disagreement) on the part of treating practitioners as to whether an intervention is warranted or not.

   Seven "discretionary" procedures were chosen based availability of comparable data from the OECD, namely:

- Cholecystectomy
- Tonsillectomy
- Major joint arthroplasty (hip, knee and other)
- Inguinal hernia repair
- Cataract surgery
- Coronary artery bypass grafting (CABG) for coronary ischaemia
- Caesarean section

9. Both overall and procedure-specific admissions were looked at over the five year time period from 2010-2014. A uniform common coding system between the South African and OECD datasets did not exist so

3. Health Market Inquiry. Report on analysis of medical schemes claims data – descriptive statistics. Version 2: 8 December 2017.

these were matched on the basis of similar text descriptors, thus limiting the number of event types that could be compared. Total days of hospital stay per person per year were chosen as the measure of utilisation. Rates were standardised by five year age band. In all of the comparator countries citizens have universal coverage through publicly funded national health or insurance schemes. Since all of them have significantly higher GDP that South Africa it was felt that utilisation rates in each should represent a relative "high water mark" for demand unconstrained by resources.

10. **Rates of intensive care unit (ICU[4]) usage** were measured relative to population, and as a proportion of all hospital bed days. While ICU admission is usually reserved for critically ill patients needing ventilation or 24-hour monitoring, if beds are available, doctors might use these for less ill patients even where medical necessity is questionable. Reimbursement rates for both doctors and facilities are considerably higher for patients admitted to ICU. Admission rates were compared over time and against ICU admission rates in a sample of previously documented developed countries[5] [6]. For this analysis we included all ICU and high care episodes but excluded neonatal ICU episodes.

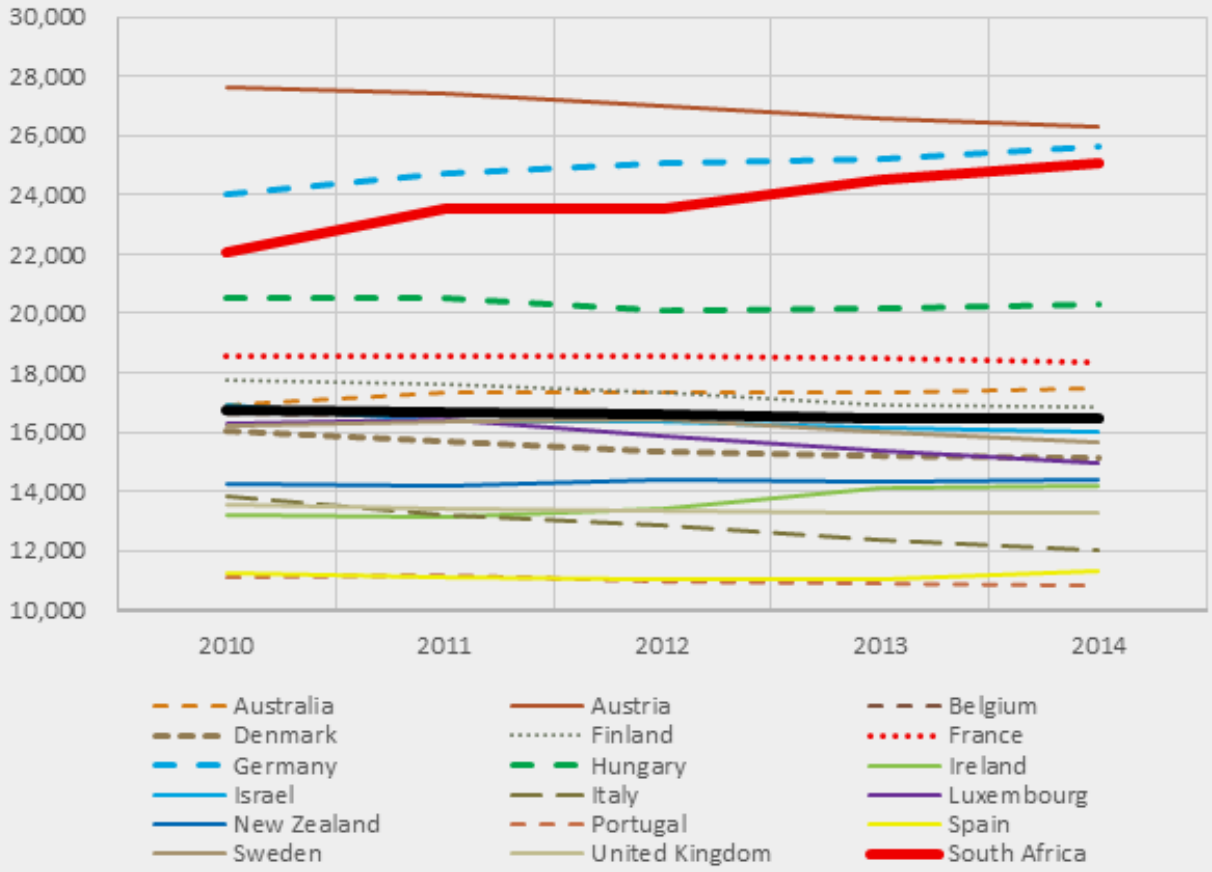
RESULTS

Overall hospitalisation rates

11. Overall hospitalisation rates increased significantly for the South African Private sector over the period 2010-2014, and were higher than all but 2 of the OECD countries for which complete data were available over this period. The absolute level, and rate of increase of admissions in South Africa are, in combination, very worrying. This picture is not typically appreciated because most people are used to seeing unadjusted rates, which are substantially lower (~20%) for South African medical schemes (due to their young enrolee population)

4. Throughout the rest of this document, ICU is taken to include high care and intensive care services.
5. Hannah Wunsch, MD, MSc; Derek C. Angus, MD, MPH; David A. Harrison. Variation in critical care services across North America and Western Europe, Crit Care Med 2008 Vol. 36, No. 10.
6. Australia and New Zealand Intensive Care Society. ANZICS Centre for Outcome and Resource Evaluation (CORE) Annual Report 2014

FIGURE 8.1: AGE-STANDARDISED HOSPITAL ADMISSION RATES FOR SOUTH AFRICAN PRIVATE SECTOR AND A SUBSET OF 17 OECD COUNTRIES



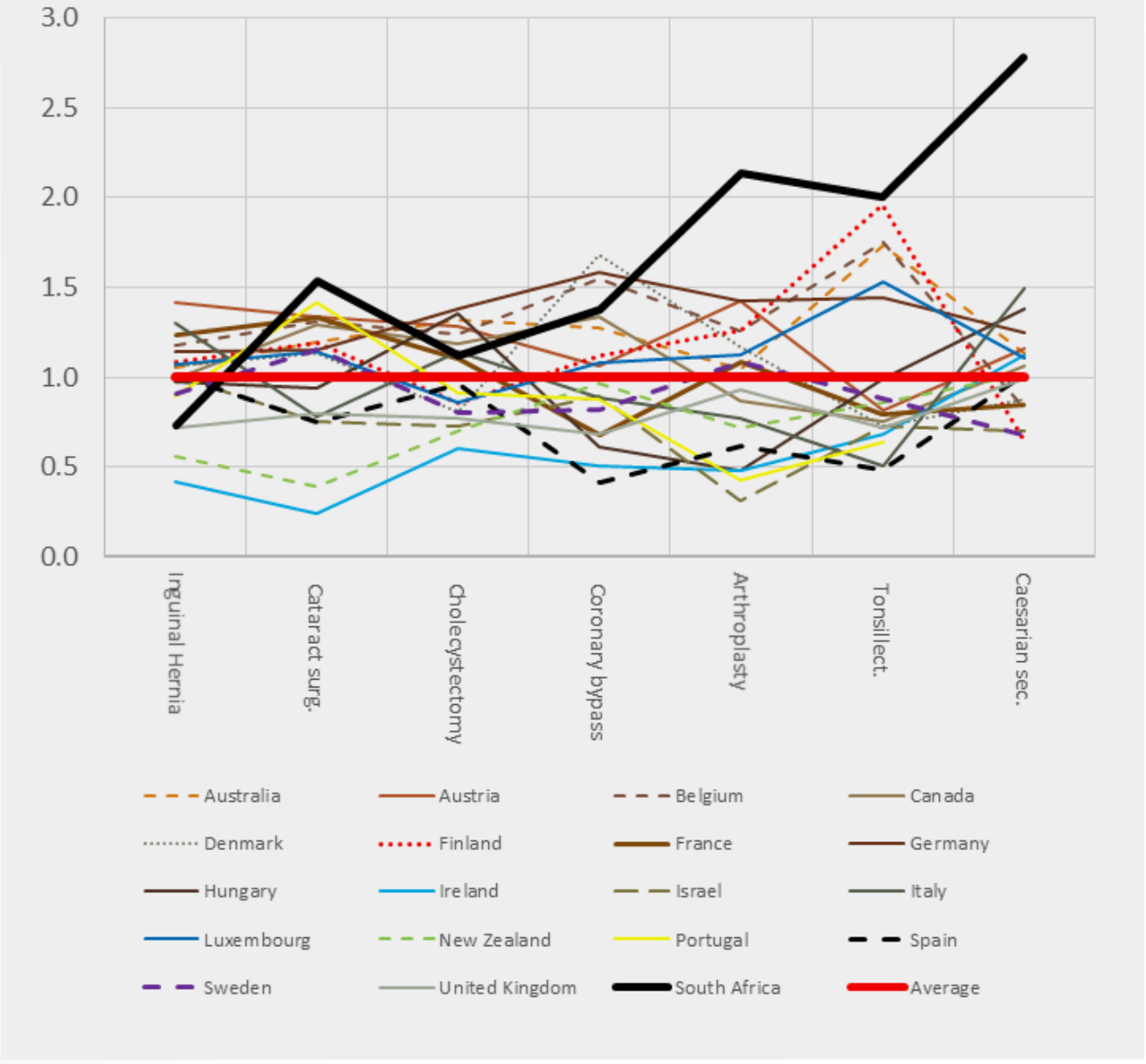
Utilisation growth for discretionary conditions

12. Results on the unexplained growth in utilisation of healthcare services have already been presented in a prior publication[7]. Our intention here is to assess whether some of this utilisation is in the areas that are more "Influenceable" by healthcare providers, and whether it is growing over the period studied.

7. Health Market Inquiry. Report on analysis of medical schemes claims data – descriptive statistics. Version 2: 8 December 2017

13. Seven reasons for admission were examined and compared to rates in a range of other developed countries as collated by the OECD[8]. Figure 8.2 shows relative admission rates compared to a sample of OECD countries[9] for discretionary procedures[10]. Rates are indexed to the average for all comparator countries – so values above the red line (i.e. above one) indicate a figure higher than the benchmark. South African private rates are above the benchmark for 6 out of seven conditions, and are higher than any other country for three procedures – arthroplasty, tonsillectomy and caesarean section. While these procedures are not necessarily suggestive of all of healthcare,

FIGURE 8.2: RELATIVE AGE-ADJUSTED ADMISSION RATES (INDEXED TO 1) FOR SEVEN COMMON DISCRETIONARY ADMISSIONS IN SOUTH AFRICA AND A SELECTION OF DOCUMENTED OECD COUNTRIES



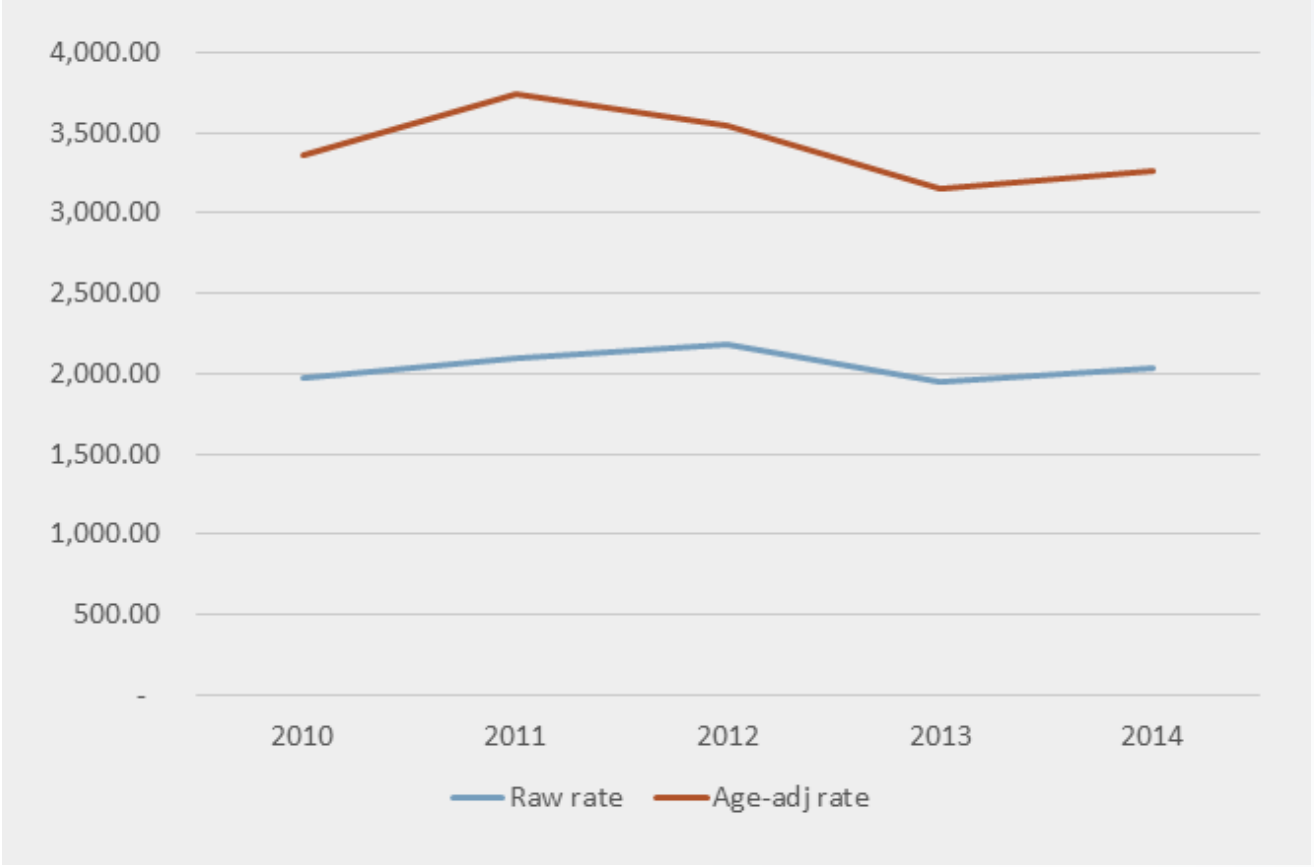
8. https://data.oecd.org/healthcare
9. Countries were chosen if they had complete data for the procedures examined for each of the five years from 2010 to 2014)
10. Since the South African data were not ICD-coded it was not possible to match conditions exactly. The six conditions shown here were chosen because we were confident that the text descriptions were sufficiently similar.

they suggest no indication of systemic underservicing in the South African context, and if anything, a tendency towards over-servicing.

Utilisation levels – Intensive Care Admissions

14. For any admission, there is also a degree of discretion in what type of ward a patient is admitted to. Figure 8.3 shows the rate of Intensive Care Unit (ICU) admissions on a population basis for the South African private sector as a raw rate, and age-adjusted to the OECD country populations used in Figure 8.1 above. The South African rate increases significantly with age adjustment because of the relatively young age profile of the South African population. There was no significant trend in ICU admission in South Africa rates over the period studied.

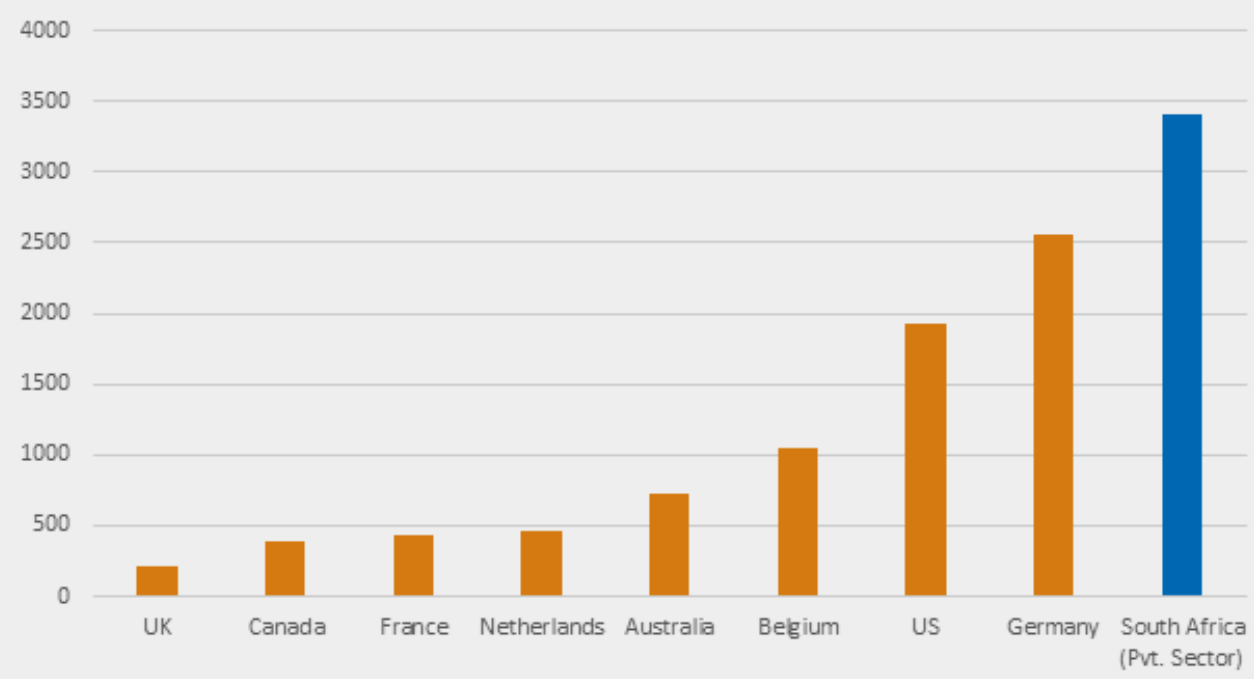
FIGURE 8.3 ICU ADMISSIONS PER 100 000 POPULATION PER YEAR FOR THE SOUTH AFRICAN PRIVATE SECTOR



15. Whilst the ICU admission rates did not increase substantially over the period studied, they appear significantly higher than those experienced elsewhere. Figure 8.4 shows South African ICU admission rates compared to published rates from other countries.

16. Of all of our findings this is perhaps most startling given its cost implications. For the same length of stay, patient age, chronic and illness profile and procedures provided, an admission that includes an ICU[11] stay costs approximately R38 000 more than one that does not involve ICU . If the ICU admission rate per head of population was reduced to half of its current level (i.e. to a rate between that of Belgium and the USA) and half of the costs associated with these avoided ICU admission costs were reinvested in better ward care, approximately R2.7b would still be saved annually. This amounts to 2.3% of the total annual cost of private healthcare over the period studied, or 4.1% of total in-hospital claims.

FIGURE 8.4. AGE-ADJUSTED RATE OF ICU ADMISSIONS PER 100 000 POPULATION PER ANNUM.



SUPPLIER-INDUCED DEMAND

CORRELATING EXCESS UTILISATION WITH SUPPLY MEASURES

17. We also sought to associate levels of utilization with the supply of facilities and practitioners. To confirm our hypothesis of supplier-induced demand we looked for a significant positive correlation between utilisation and levels of supply, after adjusting for expected causes of higher utilisation such as patient age and gender, chronic disease prevalence, and level of medical scheme cover.

18. Because this analysis requires a denominator "exposed population", service supply was aggregated by small area geography. We sought to identify a relationship between high

11. This includes all excess costs, including hospital, professional and equipment fees

levels of supply of practitioners or hospital beds in a geography, and associated likelihood of health service utilisation, taking into account: demographics (sex, and age) chronic illness and scheme plan type. We used the "municipality" level of geographic aggregation for the analysis – whereby the country is broken down into 234 geographies.

19. Overall risk of any hospital admission in the year concerned was used as the main outcome variable of interest. In keeping with the methods described above, we focused on risk of admission under a specialty where there was a lot of doctor discretion in admitting the patient (i.e. non-life threatening, non-emergency admissions). The specialties with high rates of discretionary admission chosen for the analysis were:

- Orthopaedics
- ENT Surgery
- Neurosurgery
- Psychiatry
- Urology
- Cardiology
- Cardio-thoracic surgery
- Paediatrics (with regard to admission vs ambulatory treatment)
- General surgery
- Obstetrics (with regard to choice of Caesarean section vs vaginal delivery)

DATA

20. In order to assess the relationship between excess utilisation and the supply of clinicians and hospital beds, we combined medical schemes claims data with the best available data on the supply of doctors and hospital beds over the five-year period from 2010 to 2014. Once again, the focus was on specialties / forms of care where there was greater discretion regarding whether or not to treat (or admit) patients.

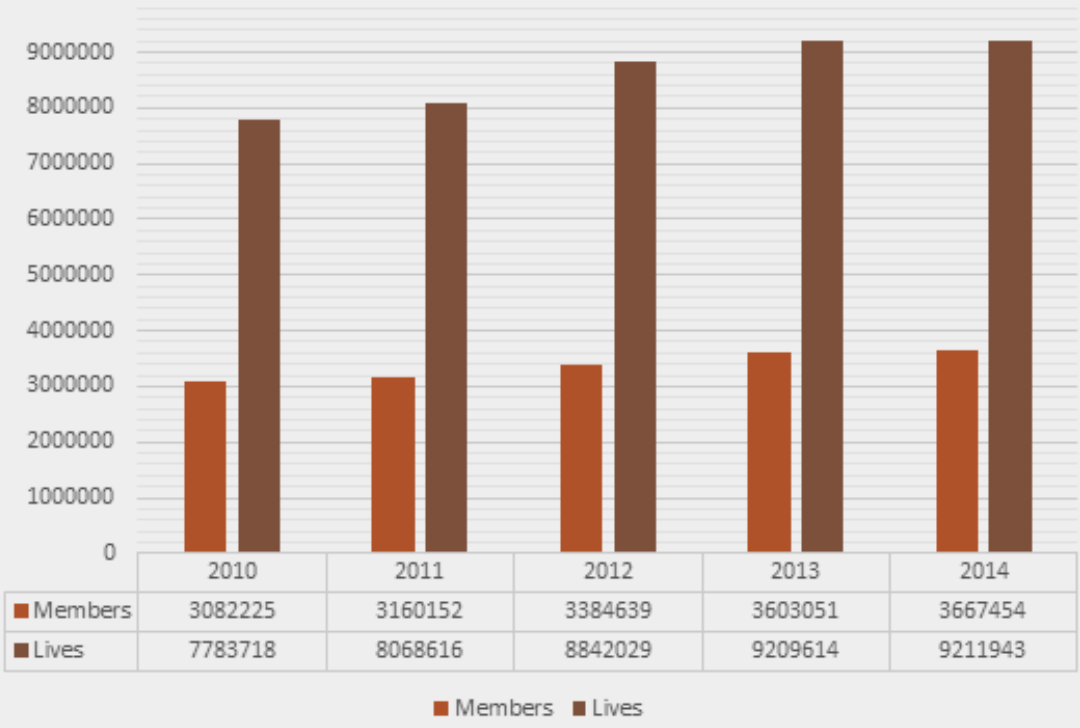
- The medical schemes beneficiary dataset contained 43 million records on the beneficiaries' membership information and existing chronic illnesses, where each record represents a full or partial calendar year of membership
- Hospital claims data identifying doctors and admitting hospitals, along with procedure and diagnosis information. The admissions dataset contained 11 million records, covering each admission event during the investigation period, including length of stay by hospital ward, hospital fees charged, specialty of admitting doctor, and doctor-assigned diagnosis and procedures.
- Data on the supply doctors and hospital beds were also joined to this dataset to create the final dataset used for analysis. Data on doctors was obtained from the lists of registered providers produced by the Board of Healthcare Funders annually. However, since many doctors on their lists were not actively practicing, doctors who had not claimed at least once during the year concerned were removed from the doctor supply data. Because of lack of a single source during the study period, hospital bed data were compiled from a number of different sources. The approach used is described in Appendix G and has had to infer bed numbers for some years by interpolating between known years. This is an imperfect approach, but we believe still captures the macroscopic distribution of private beds across the country.

Data summary and descriptive statistics

21. Figure 8.5 shows the number of members and lives covered by year of analysis, where members are the number of distinct memberships to each medical scheme, whilst each principal member may have several lives (typically family members) covered under their plan.

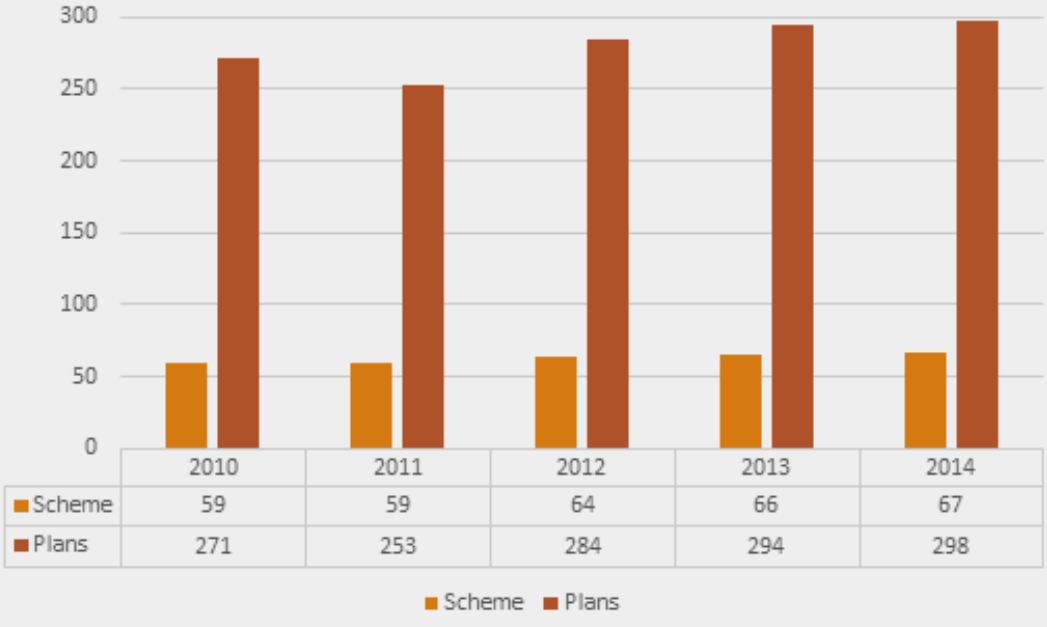
22. Figure 8.6 shows the number of distinct scheme providers and the number of unique plan offerings across all providers by year of analysis.

FIGURE 8.5. NUMBER OF MEMBERS AND LIVES COVERED BY YEAR



	2010	2011	2012	2013	2014
Members	3082225	3160152	3384639	3603051	3667454
Lives	7783718	8068616	8842029	9209614	9211943

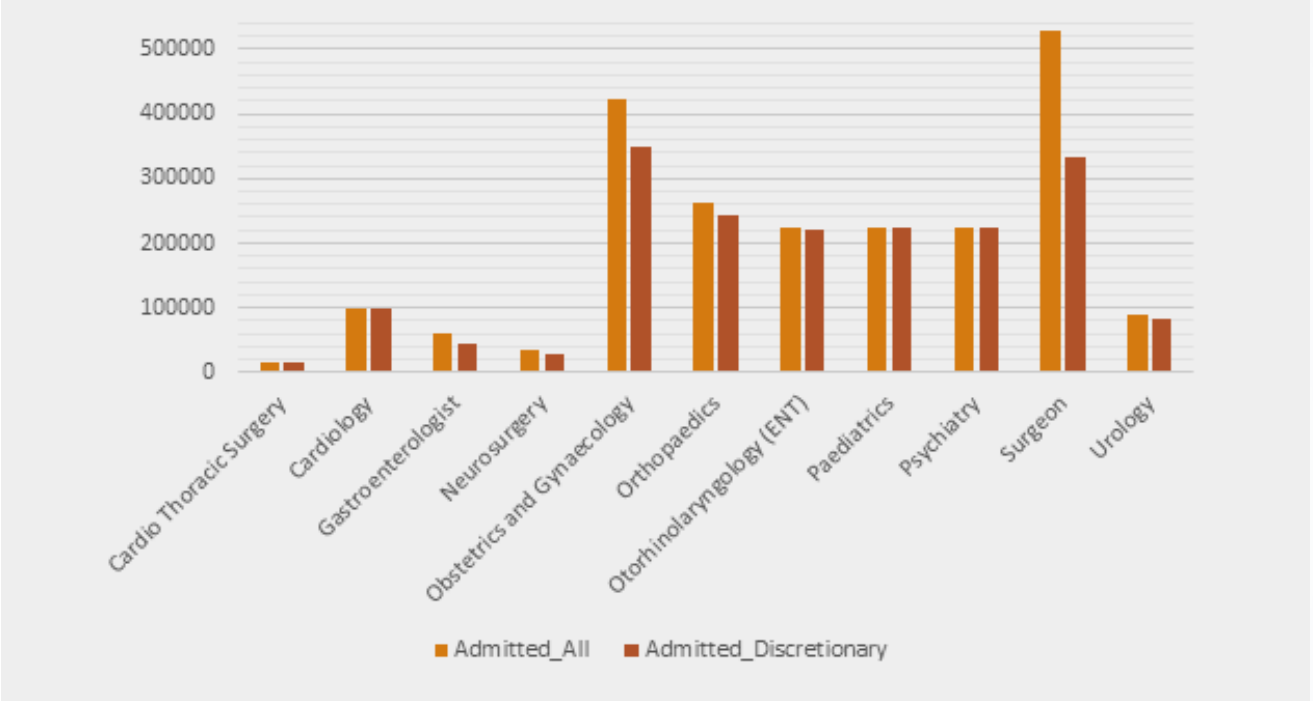
FIGURE 8.6. NUMBER OF SCHEMES AND PLAN OFFERINGS BY YEAR



	2010	2011	2012	2013	2014
Scheme	59	59	64	66	67
Plans	271	253	284	294	298

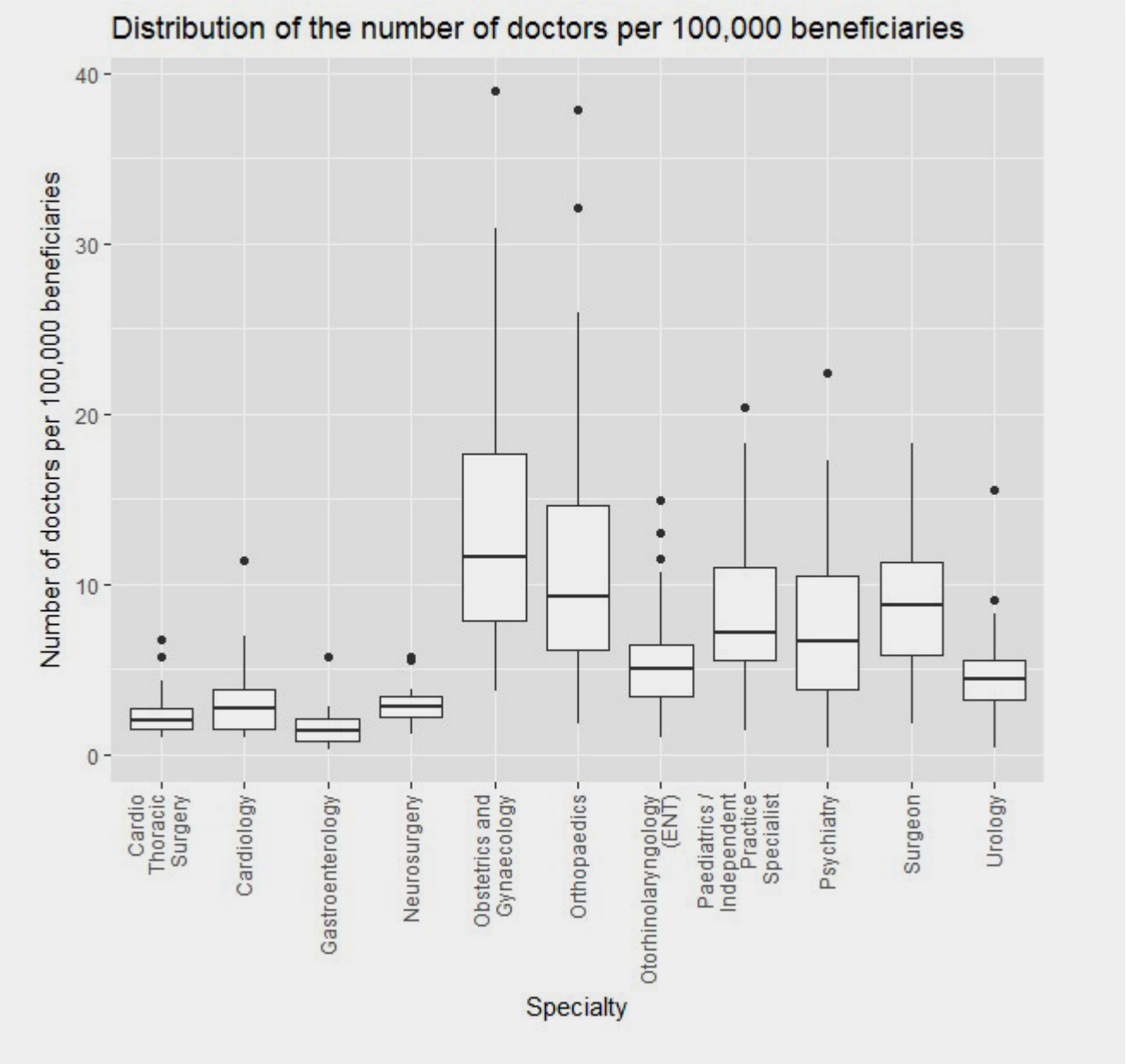
23. Figure 8.7 shows the number of events used in our specialty-specific analysis of the drivers of demand. We examined demand for all hospital admission activities in each specialty, and for a subset of discretionary interventions, i.e. admissions where the attending doctor had a significant degree of discretion as to whether or not to admit a patient. These are described in Appendix B. For Paediatrics and Psychiatry, we did not separate out discretionary interventions due to lack of specificity of diagnosis coding. We also considered the obstetrics related demand in analysing the demand for caesarean childbirths as a proportion of all births. ICU admission demand was also examined, but was not linked to any single medical specialty.

FIGURE 8.7. NUMBER OF ADMISSIONS IN SELECTED SPECIALTIES – TOTAL AND DISCRETIONARY (CAESAREAN SECTIONS AND ALL OF PSYCHIATRY AND PAEDIATRICS WERE TREATED AS DISCRETIONARY FOR THIS ANALYSIS)



24. Figure 8.8 is a box and whisker plot describing the distribution of the number of doctors per 100,000 beneficiaries in each municipality. The box represents the interquartile range of the distribution with the horizontal bar representing the median. The upper and lower whiskers extend to the largest value no further than 150% of the interquartile range from the upper and lower quartile respectively. Outlier data points beyond the end of the whiskers are plotted individually.

FIGURE 8.8 DISTRIBUTION OF THE NUMBER OF SPECIALIST DOCTORS PER 100,000 BENEFICIARIES BY MUNICIPALITY (ZEROS COUNTS EXCLUDED)



ANALYTIC METHODS

Outline

25. We used a logistic regression model to test supplier-induced demand for hospital utilisation. Our hypothesis was that, after adjusting for patient characteristics – age, level of coverage, chronic illnesses, year of treatment, and potential adverse selection markers – residual demand variation could be explained by the supply of both hospital beds and doctors in a geography. We tested this hypothesis for overall hospital admissions, and specialty-specific admissions for ten

specialties. The response variable for all models was the likelihood of hospital admission for any health scheme member in a given year.

Response variables

26. For the overall hospitalisation model (Model 1), the binary outcome variable for each person year of coverage (Admitted) indicated whether or not the individual had one or more hospital admissions (taking a value of 1) or not (taking a value of 0).

27. For each of the specialty-specific models (Model 2):

- Admitted_All was a binary response variable which takes a value of 1 when the specific medical practitioner was involved in an admission, i.e. this variable indicates admissions under a certain medical discipline.
- Admitted_Discretionary was a binary response variable which takes a value of 1 the specific medical practitioner was involved in an admission and the procedure performed was classified as discretionary (see Appendix B), i.e. this variable indicates discretionary admissions under a certain medical discipline.
- The ICU admissions and caesarean delivery model are similarly constructed with the following exceptions:
- For the ICU admissions model, the response variable Admitted_All takes a value of 1 when the admission involved utilising ICU or special beds. Since ICU admissions are non-discretionary by nature, there was no equivalent to the discretionary variant of the model.
- For the caesarean delivery model, the response variable Admitted_C (analogous to Admitted_Discretionary) takes a value of 1 when a caesarean delivery was recorded out of the sample of all childbirth procedures.

Predictor variables

28. The following explanatory variables were used in each model

- *Year:* A categorical variable indicating the year an admission event occurred (or did not occur). Levels include: 2010, 2011, 2012, 2013, 2014. If overutilization was increasing, we would expect the likelihood of admission to increase over time.
- *Gender:* A categorical variable indicating gender where females are represented by 1 and males are represented by 2.
- *Age Group:* A categorical variable indicating the age group of the beneficiary for a year in the investigation. Levels generally include: 0-1, 2-5, 6-9, 10-19, 20-29, 30-39, …, 90+ (for the childbirth model: 0-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50+)
- *Years since joining scheme:* A categorical variable with three levels indicating the difference in the number of years between joining a medical scheme and the year of analysis. Levels include: <1, 1-2, 2+. If adverse selection was operating, we would expect a higher likelihood of admission 0 or 1 years after joining – indicating that persons had joined a medical scheme because they anticipated needing care.
- *Membership months:* An integer between 0 and 12 identifying the number of months in the calendar year (Year) that a beneficiary was a member of a scheme. This was included to account for members with less than a full year of exposure to risk of admission if they had joined or left during that year.
- *Chronic conditions:* A categorical variable with 18 levels identifying the presence of any chronic or pre-existing medical conditions. Levels included: Healthy, Acute Respiratory, Anaemia, Blood Disorders, Arthritis, Back Problems, Cancer, Chronic Respiratory, CNS Disorders, “Coma, Brain Damage, Paralysis”, Congenital Conditions, Diabetes, Heart Conditions, HIV, Hypertension, Infections, Cardiovascular, Psychiatric, Renal Failure and “other” chronic conditions.
- *Beds per 100 population:* A numeric field representing the supply of hospital beds available to a beneficiary in a geographic region. This is calculated as the number of beds divided by the number of medical scheme members in a given municipality and then scaled by a factor of 100. The types of hospital beds included for each specialty in the speciality specific models is shown in Appendix B, while all beds were

included in the overall admissions model. The scaling factor was chosen to normalise the magnitude of the coefficient estimates in the charts that depict the results.

- *Doctors per 100 population:* A numeric field representing the supply of medical doctors available to a beneficiary in a geographic region. This is calculated as the number of active specialist doctors divided by the number of medical scheme members in a given municipality region and then scaled by a factor of 100. This field represents all doctors who have lodged at least one private claim for a hospital event in the year concerned (see Appendix A). The numbers were calculated for all specialist doctors in aggregate, and individual specialties of interest (see appendix B). General practitioners were excluded because, by and large, they do not manage patients in hospital
- *Scheme-Plan:* A categorical variable representing a beneficiary's scheme and the level of coverage that the scheme provides. This factor was formed by concatenating a unique key identifying each scheme and a plan rating. Plans from each scheme provider were evaluated on a 4-point scale for coverage, based on their average age-adjusted premium. All resulting scheme-plan combinations were included as a level of this categorical variable. Scheme plan was included to adjust for the different levels of cover available to members. We would expect that it also acts as a proxy for member socio-economic status.

MODEL 1: OVERALL HOSPITALISATION MODEL

29. The first model aims to determine whether the aggregate supply of facilities and practitioners are significantly positively correlated to overall admissions after adjusting for expected demand drivers such as gender, age, pre-existing illness, etc.

30. All 43 million partial or full person-years of exposure were fitted to a logistic regression model with the predictor variables described in the previous section. An intercept was included in the model and each level of a categorical variable was treated as a binary predictor.

31. Both the supply of doctors and supply of hospital beds had positive and statistically significant relationships with the overall rate of admissions. This supports the notion that the greater the availability (number per exposed life) of facilities and doctors in an area, the greater the overall admission rate in private hospitals.

Coefficients

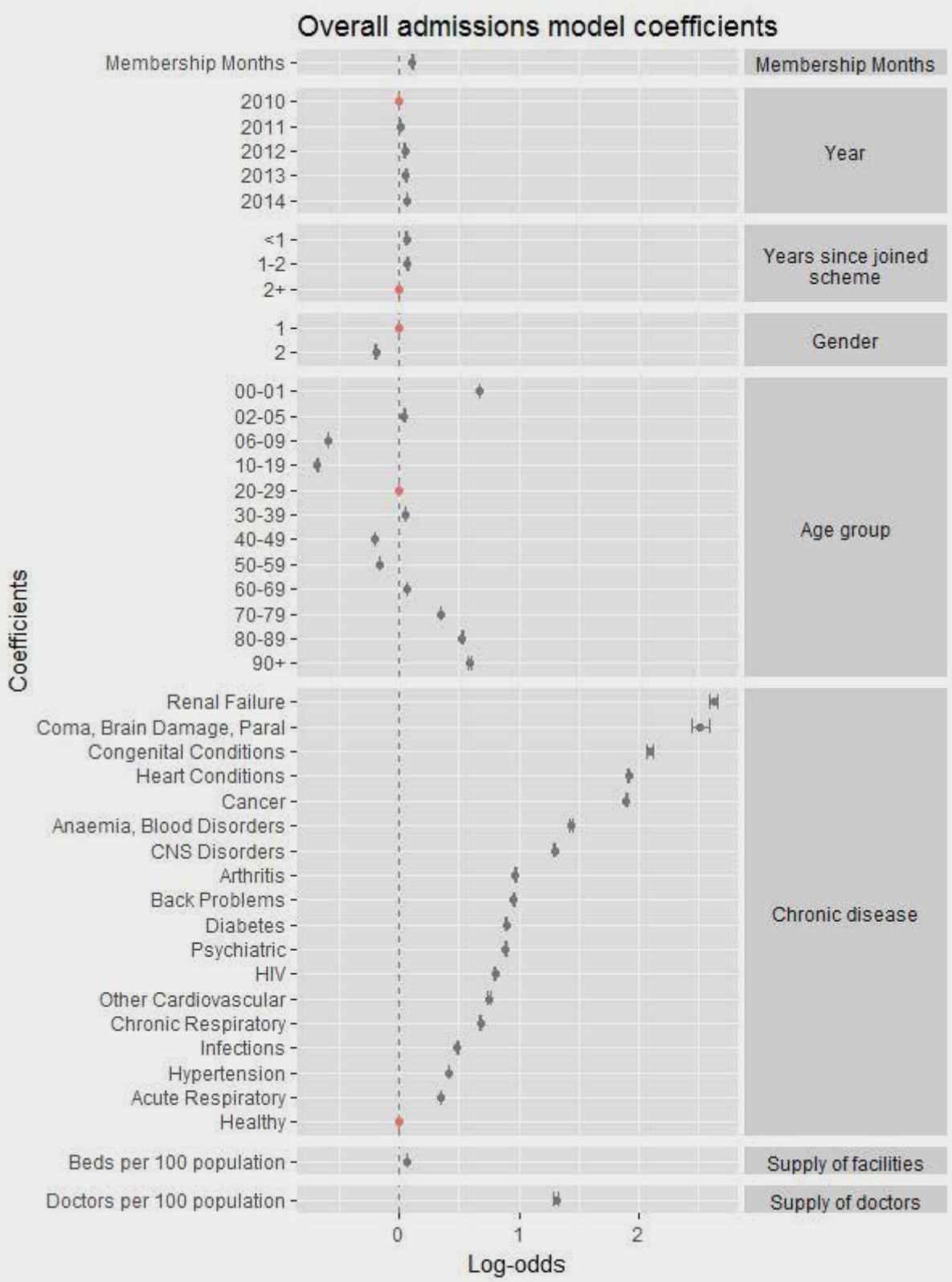
32. Figure 8.9 shows a plot of the logistic regression coefficient magnitudes with uncertainty in the overall hospitalisation model. Coefficient estimates are plotted in grey as a point estimate with 95% confidence intervals and the reference level for each set of categorical variables as a red point. Since the sample is very large, confidence intervals are very narrow and barely discernible from the point estimate for many effects – suggesting a high degree of certainty in the effect. The intercept and Scheme-Plan variables have been omitted from the plot to aid readability.

33. Figure 8.9 shows the relative effects of individual specific factors on an individual's risk of admission. A positive log-odds value for a certain effect denotes that an individual possessing that trait is more likely to be admitted to hospital (and a negative score the converse). Within each variable, the magnitude of this effect can be compared, e.g. a beneficiary with CNS disorders is more likely to be admitted to hospital than a beneficiary with diabetes, holding all else equal. However, caution must be taken in comparing effects between variables, especially numerically encoded ones such as the doctor and hospital supply factors, where the size of the effect has less meaning than the narrowness of confidence limits.

34. The key observations from these results are outlined below.

- *Year:* This variable captures the change in the rate of admissions over time after adjusting for member characteristics and supply factors affecting each individual, i.e. the residual temporal trend. The overall admissions model shows that there was an increasing likelihood of admission observed over the period from 2010 to 2014, all other factors being equal.

FIGURE 8.9. LOG-ODDS OF HOSPITAL ADMISSION – ALL HOSPITAL ADMISSIONS COMBINED



- *Years since joining scheme:* People who had more recently joined a medical scheme were more likely to be admitted to hospital than those who had been a member for 2 or more years. This suggests that adverse selection may be operating – with some people joining a scheme only when they knew they were going to need hospitalisation.
- *Gender:* Males (2) were overall less likely to be admitted to hospital compared to females (1).
- *Age group:* The age effect was characteristic of a typical age specific health costs curve. New-born babies had high rates of admission, but this rate quickly fell through childhood to a minimum between ages 10 and 19 and increased afterwards. There was a bump in the curve between ages 20 and 40, which can be explained mainly by (female) admissions related to pregnancy and childbirth. Beyond the age of 40, the rate of admissions steadily increased to reach peak admission rates after age 90. Limited data points representing members exceeding 90 years of age required data beyond this point to be grouped.
- *Chronic disease:* The effects of chronic diseases were also typical. All chronic conditions were associated with significantly higher rates of admission compared to the baseline status of "healthy". The highest increases in rates of admissions were generally associated having the most severe and debilitating conditions requiring frequent hospital-based treatment, e.g. "renal failure" and "coma, brain damage and paralysis" while lower but still elevated rates of admission were associated with "hypertension" and "respiratory" conditions.
- *Beds per 100 population:* After adjusting for the above effects which pertain to the medical condition of the member, the per capita supply of hospital beds in a geographic region is seen to be significantly positive predictor of hospital admissions. Therefore, the greater the proportion of hospital beds to the local population, the higher the rate of admissions in a given region. This provides evidence to support that supplier-induced demand operates for private hospital beds.
- *Doctors per 100 population:* Having also adjusted for the physiological factors pertaining to each member, the number of doctors operating in a municipality is also a significant driver of admissions. A greater proportion of doctors to the population in an area is linked to a higher rate of admissions. Therefore, there may again be a supplier-induced demand effect on hospital utilisation due to having an excess of doctors in a given region.

Model fit

TABLE 8.1. MODEL FIT MEASURES FOR THE OVERALL HOSPITALISATION MODEL

Measure	Value (%)
Pseudo R squared	7.96%
Gini	39.92
AUC	69.96

35. The overall admissions model scored relatively low in terms of model fit metrics. The pseudo R squared statistic for the logistic regression is an indication of the proportion of variance in the data that is explained by the model and predictors. A value of 7.96% is quite low but typical of regression models of this nature, which bundle together a wide range of different patients, diseases, specialties, interventions (discretionary and non-discretionary) and forms of care. We conclude that these findings support the existence of supply-induced demand but cannot be seen as conclusive.

MODEL 2: SPECIALTY SPECIFIC MODELS

36. The second set of models aim to determine whether the supply of facilities and practitioners in a specific specialty were significantly positively correlated with admissions pertaining to that speciality.

37. For each of the disciplines in Appendix B, (except for the ICU and childbirth models), two logistic regression models were fitted and analysed. The first set of models using the *Admitted_All* response variable analysed all admission events under that specialty. The second set of models with the *Admitted_Discretionary* response variable investigated

a subset of discretionary admissions in that specific specialty.

38. For each of the selected disciplines, all persons having an admission event under that discipline were selected, and a sample of control observations of equal size was appended. Control observations were sampled from the remaining records after excluding the events of interest. This was done to create a sample with an adequately high proportion of events of interest since the natural rate of occurrence per specialty was less than 1%.

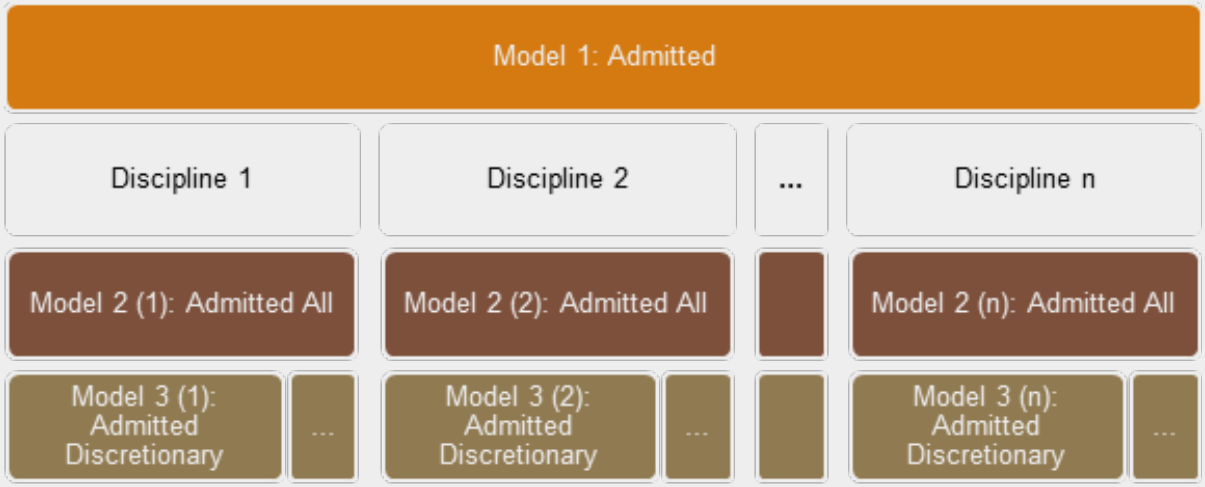
39. Figure 8.9 shows the relationship between response variables of the two models.

40. Exceptions for the ICU and childbirth models were the following:

- For the ICU model, only the first model with Admitted_All was used and ICU admissions of patients with age less than two were excluded to remove neonatal ICU admissions in the absence of a neonatal ICU admission information.
- For the childbirth model, only the second model with Admitted_C was used, representing the caesarean childbirth events (analogous to Admitted_Discretionary). The control sample used included all other childbirth related admissions.

41. For each of these disciplines, the appropriate beds types were matched to represent the supply of facilities, as shown in Appendix B.

FIGURE 8.10. RELATIONSHIP BETWEEN THE ADMISSION RESPONSE VARIABLES BY SPECIALTY



Overview of regression results

42. A summary of the significance of results (except for the childbirth and ICU models) is shown in Figure 8.11 and 8.12. Red tiles denote positive effects on admission rates, blue tiles denote negative effects and the degree of opacity represents statistical significance in terms of p-values, so that transparent/pale effects are not statistically significant. Completely opaque tiles represent p-values less than 0.0001.

43. The total admissions model and discretionary admissions models are very similar – which is unsurprising

FIGURE 8.11. SIGNIFICANCE AND SIGNAGE OF REGRESSION VARIABLES ON ADMISSION RATES FOR TEN SPECIALTIES (ALL ADMISSIONS)

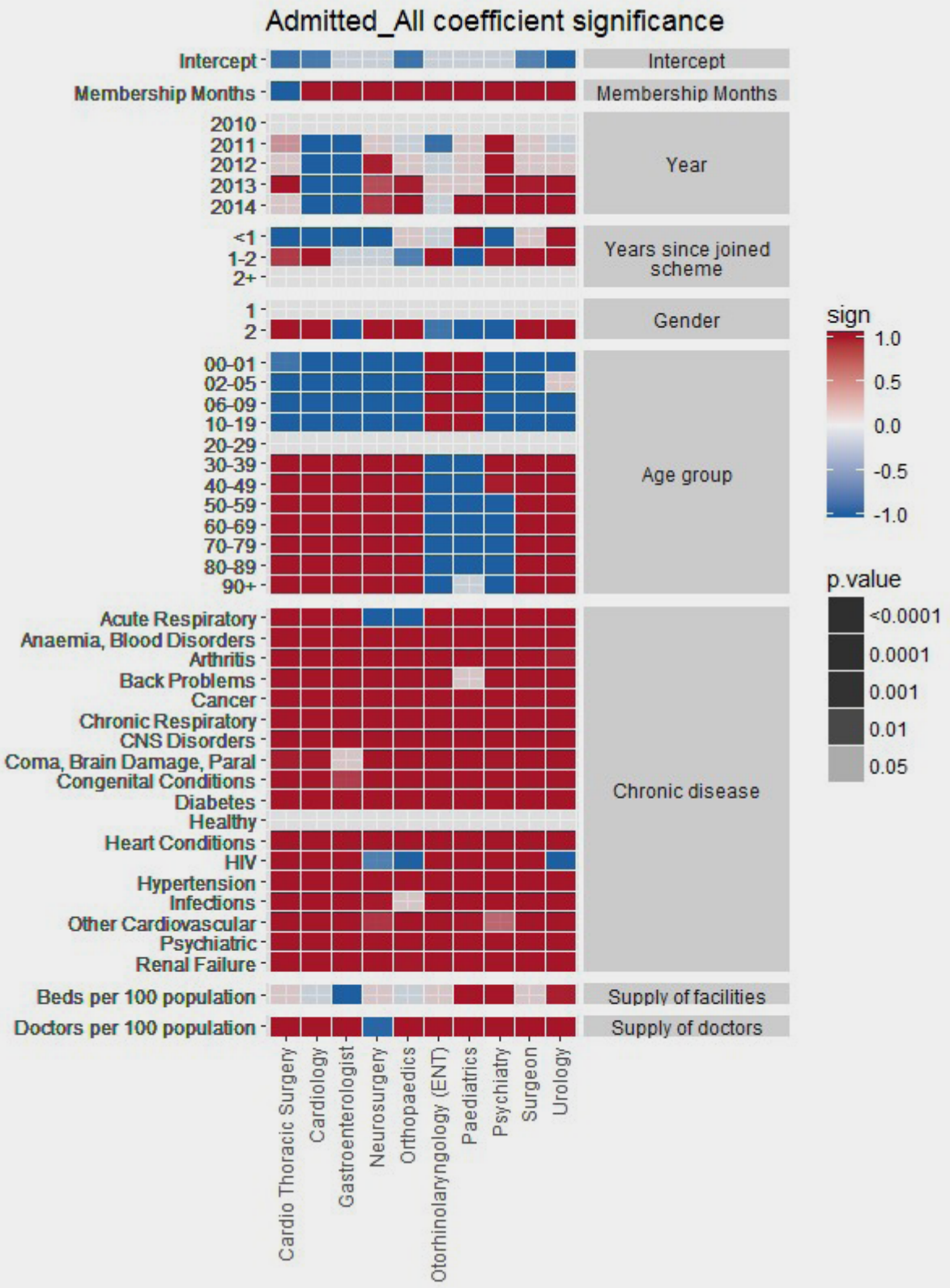
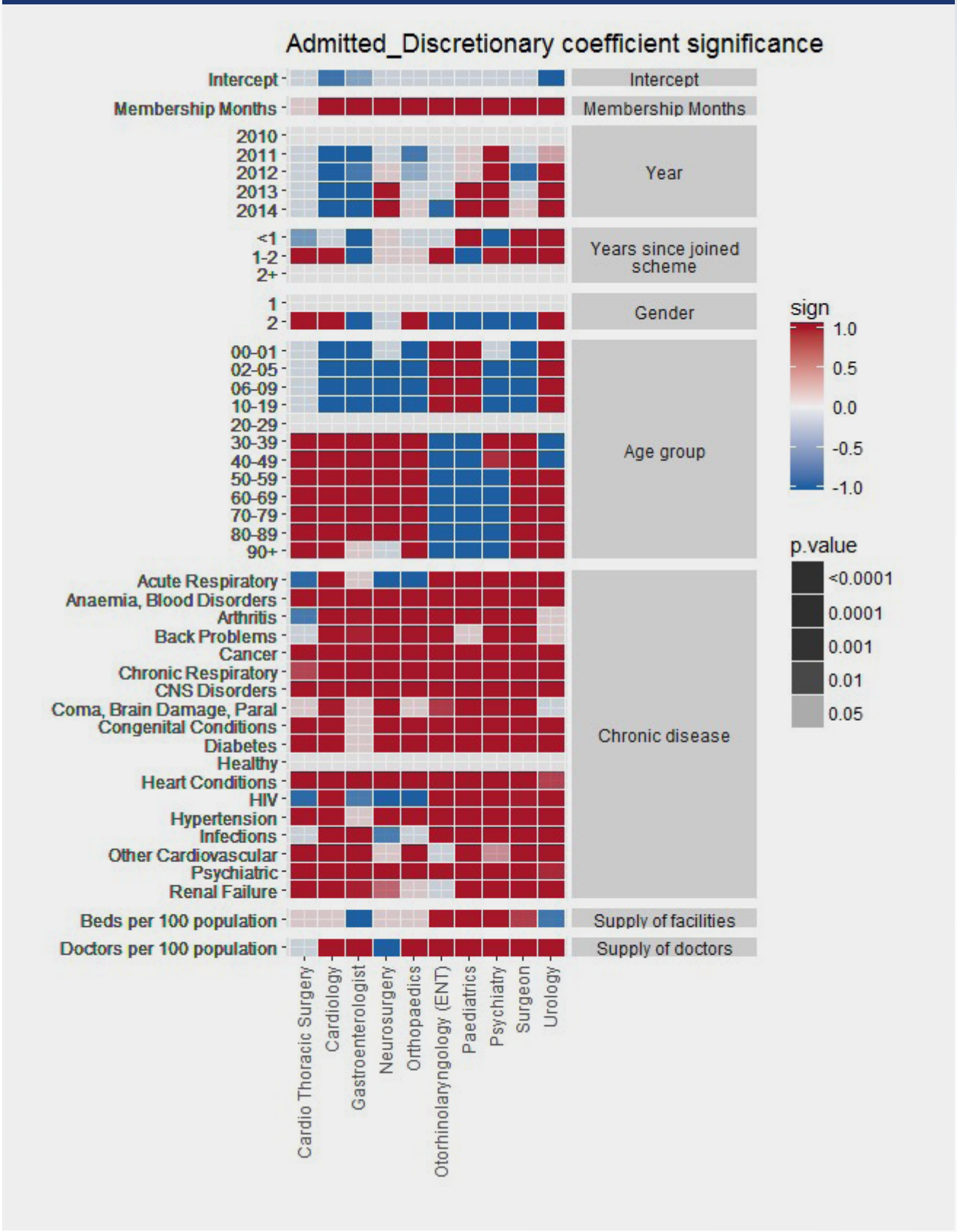


FIGURE 8.12. SIGNIFICANCE AND SIGNAGE OF REGRESSION VARIABLES ON ADMISSION RATES FOR TEN SPECIALTIES (ONLY DISCRETIONARY ADMISSIONS)



44. Plots showing the coefficient point estimates and 95% confidence intervals for each of these models are shown in Appendix E (results for the discretionary variant of the model were omitted due to similarities to wider speciality specific model). Specialty models generally fitted far better than the overall hospitalisation model, explaining most of the variation in outcomes. The worst fitting model was general surgery, probably because this can cover a very wide range of procedures, whereas most other specialties earned over 50% of their revenue from 2 or three procedure types. Furthermore, a significant proportion of general surgery work can be emergencies, where the mix between public and private sectors is very different by geography.

Childbirth model

45. The childbirth model (Figure 8.13) aimed to distinguish the factors affecting the choice between caesarean and vaginal mode of delivery. Thus, the event of interest is caesarean delivery, and these were compared against all other childbirth episodes for which hospitalisation occurred.

46. Caesarean section risk increased with maternal age and the presence of a chronic disease, as would be expected. It also increased with increasing numbers of maternity beds in a geography. However, higher caesarean section rates were strongly associated with lower availability of private obstetric specialists, suggesting supply-induced demand is unlikely in this area of care. A possible explanation for this effect is that vaginal deliveries, which take longer and are less feasible to accurately schedule, become more feasible when there are many obstetricians available; where there are few obstetricians, the relative shortage of capacity leads to more scheduled and "time-efficient" deliveries – i.e. Caesarean section.

FIGURE 8.13. LOG-ODDS OF CAESAREAN DELIVERY WITH RESPECT TO OTHER CHILD-BIRTH PROCEDURES

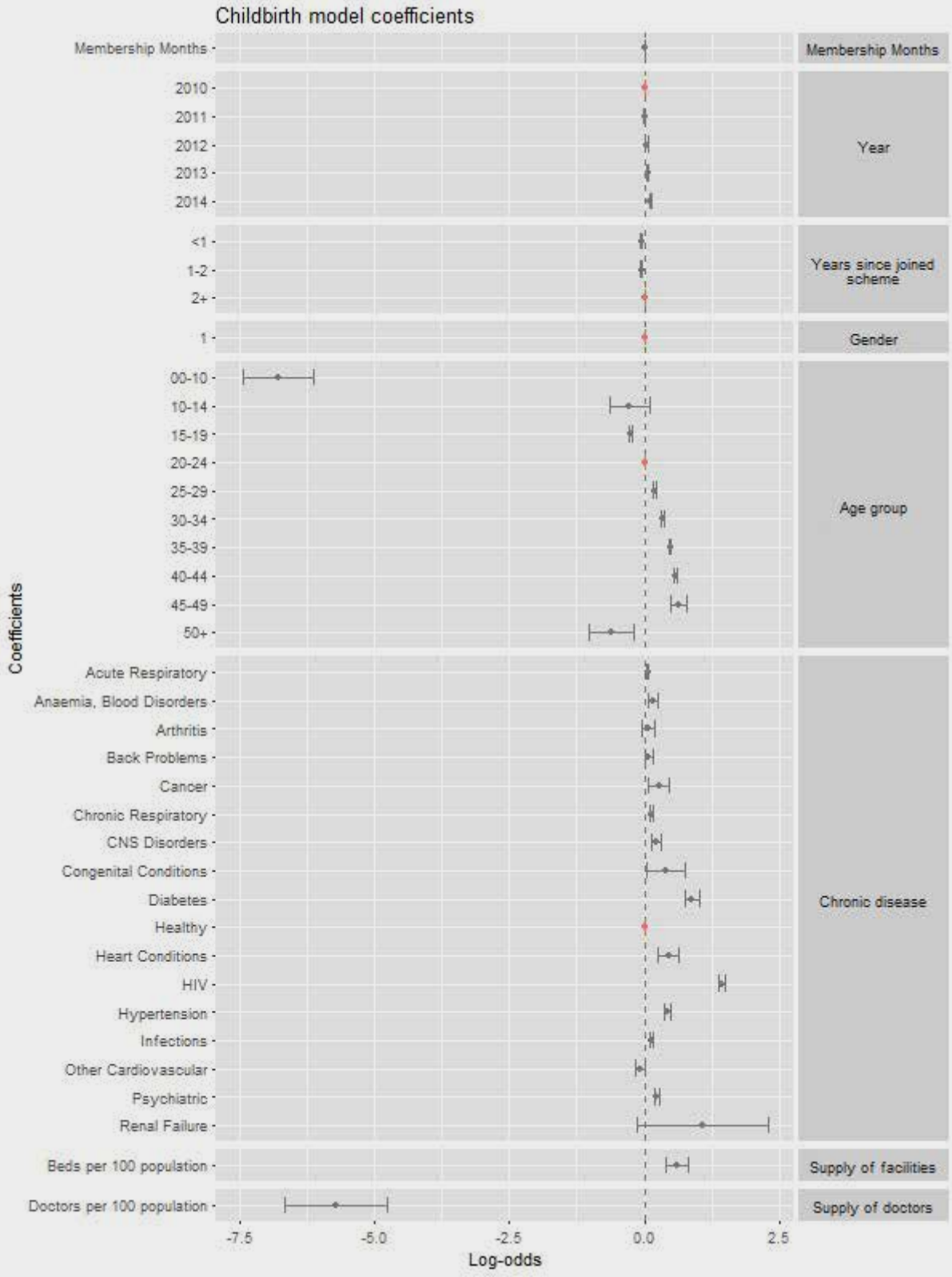
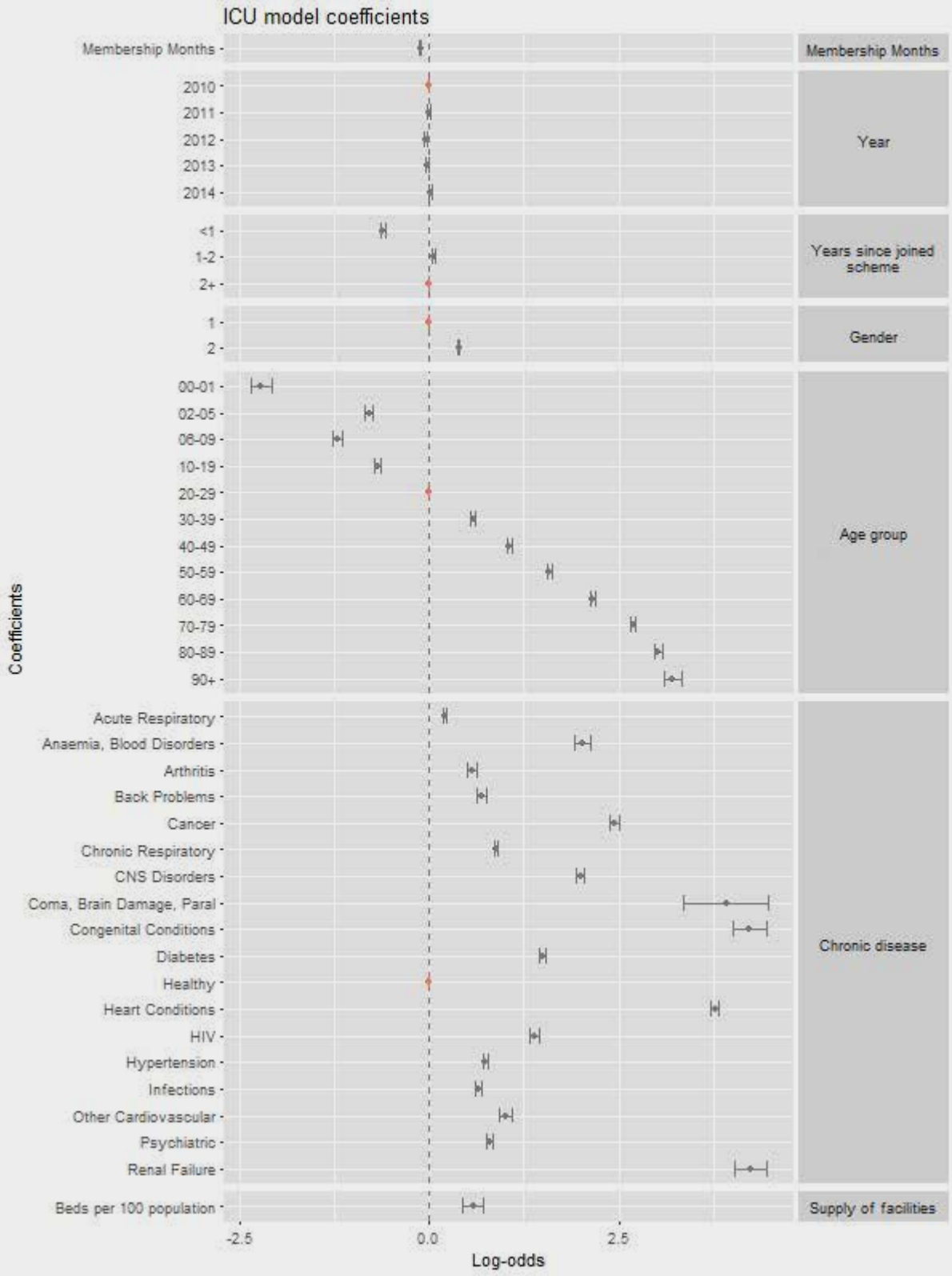


FIGURE 8.14. LOG-ODDS OF ICU ADMISSION WITH RESPECT TO ALL OTHER PROCEDURES



ICU model

47. The ICU model (Figure 8.14) examines the presence of supply-induced demand in non-neonatal ICU admissions. Only facility supply (ICU and high care beds) was included as a factor in this model as there were no separately-identified intensive care physicians in the data

48. Furthermore, since there was no explicit indication of neonatal vs other ICU usage in the admissions data, ICU events that occurred for patients aged less than two years old were excluded.

49. The supply of ICU beds was significantly positively correlated with ICU admissions, suggesting a facility-based supply induced demand effect. The coefficients on age and chronic disease markers were in line with expectations.

MODEL 3: OVERALL PMBD ADMISSIONS MODEL

Coefficients

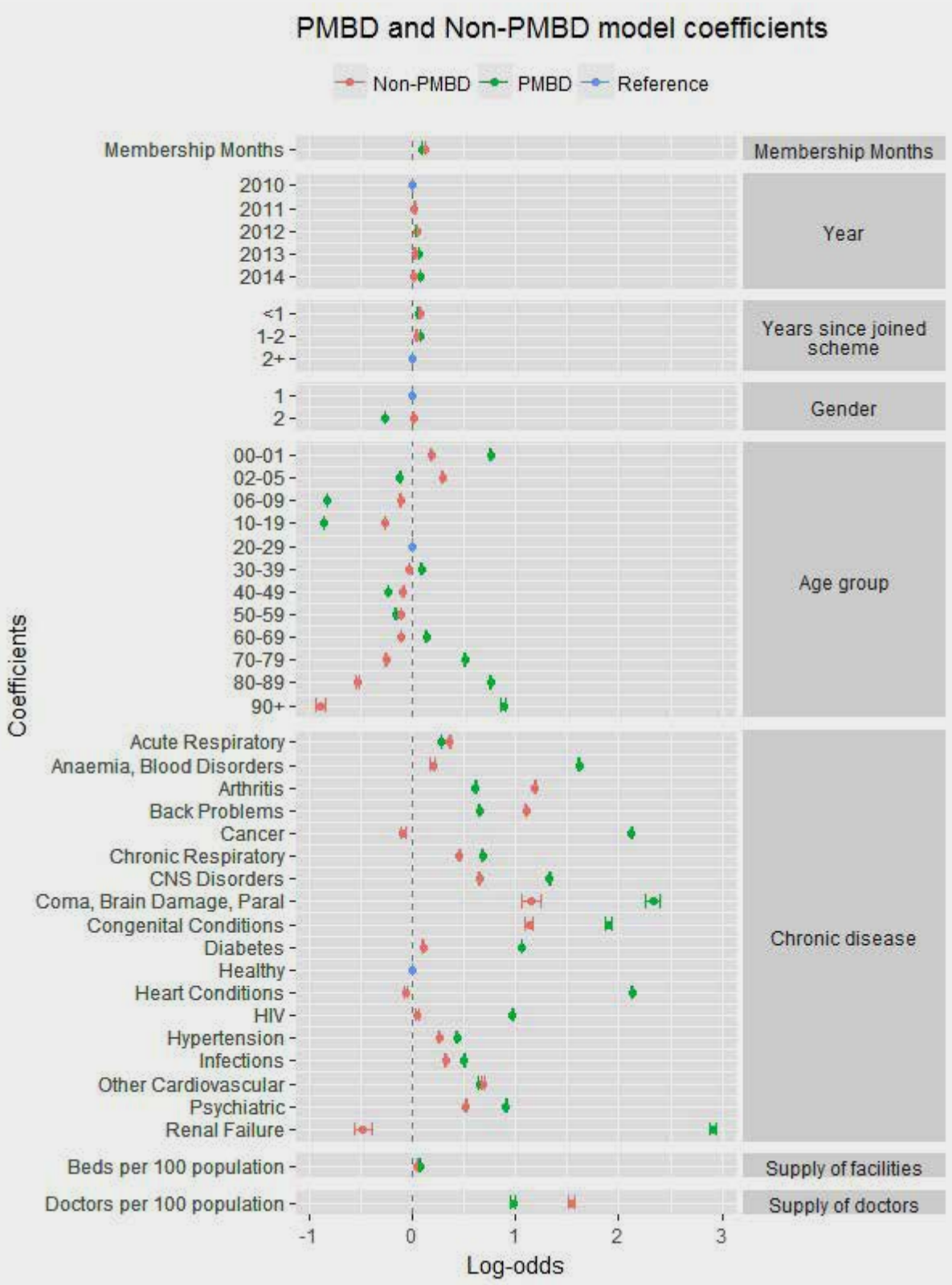
50. Figure 8.15 shows a plot showing the coefficient magnitudes and errors of the admissions model that separated out admissions for diagnoses that fell within, and outside the list of prescribed minimum benefit diagnoses. Coefficients are plotted in red (non-PMBD) and green (PMBD) as point estimates with 95% confidence intervals and the reference level for each set of categorical variables as a blue point.

51. Admissions for both prescribed minimum benefits and non-PMB diagnoses are positively associated with bed numbers and doctor numbers. For doctors, however, the effect on non-PMB diagnoses is significantly larger, confirming that supply-induced demand is more prominent for more discretionary interventions. While PMB legislation may aggravate SID, this is not as significant a contributor as the discretionary nature of certain interventions.

52. As would be expected, the influence of pre-existing chronic diseases was significantly greater on admissions for PMBD treatment. The age effects diverged at older age groups, with the very old having far fewer discretionary (non-PMBD) admissions but more PMBD ones.

53. Admission risk for PMB diagnoses increased significantly over the study period, but remained roughly constant for non-PMBDs. Adverse selection was apparent for both categories.

FIGURE 8.15. LOG-ODDS OF ADMISSION UNDER PMBD AND NON-PMBD PROCEDURES



Model fit

54. Model fit for each of the specialty specific models was significantly better than for the overall admissions model (Table 8.2). The (Nagelkerke) pseudo R-squared statistic gives an approximation of the variance explained by the model, which is much higher than 0.08 statistic reported for the overall admissions model. Likewise, the Gini and Area Under Curve metrics are significantly higher than in the more general model. PMBD/Non-PMBD models have similar levels of fit to the overall model.

TABLE 8.2 MODEL FIT MEASURES FOR THE OVERALL HOSPITALISATION MODELS BY SPECIALTY

Model	Sensitivity	Specificity	Gini	AUC	Pseudo-R^2
Cardio Thoracic Surgery	0.8094	0.7700	0.5806	0.8716	0.5218
Cardiology	0.8320	0.8360	0.6675	0.9166	0.6411
Gastroenterologist	0.7728	0.8527	0.6272	0.8811	0.5632
Neurosurgery	0.7607	0.7494	0.5101	0.8344	0.4272
Orthopaedics	0.6892	0.6852	0.3737	0.7561	0.2632
Otorhinolaryngology (ENT)	0.7432	0.7046	0.4471	0.7893	0.3259
Paediatrics	0.8609	0.9062	0.7675	0.9411	0.7242
Psychiatry	0.7374	0.7248	0.4610	0.8216	0.4206
Surgeon	0.6492	0.6828	0.3312	0.7290	0.2186
Urology	0.6887	0.6924	0.3810	0.7666	0.2879
Childbirth	0.7006	0.8643	0.5646	0.6090	0.0680
ICU	0.8107	0.7919	0.6024	0.8837	0.5478
PMBD	N/A	N/A	0.4263	0.7132	0.0736
Non-PMBD	N/A	N/A	0.3124	0.6562	0.0175

CONCLUSIONS FROM MULTIVARIATE MODELLING

55. In summary, on the basis of a logistic regression analysis of the medical schemes dataset from 2010 to 2014, there is sufficient evidence to confirm that rates of hospital admission are positively associated with levels of supply of both doctors and hospital beds, after adjusting for clinical and demographic factors. While this does not imply intentional misrepresentation by either doctors or hospitals, it does suggest that supply-induced demand exists in areas where there is discretion around whether or not to admit a patient.

56. An overall model of demand for discretionary admissions suggests statistically significant supplier induced demand effect for both hospital beds and practitioners. This model does not fit the data particularly well however – as it encompasses such a wide range of clinical cases. Therefore, we re-estimated the model for each of 10 specialties where we thought there would be a relatively high degree of discretion around whether or not to treat.

57. In general, similar trends are seen in the specialty specific models compared to the general admissions model.

- A majority of the specialties studied showed a significantly increased rate of admissions over time after accounting for beneficiary specific and supply factors.
- Beneficiaries were more likely to be admitted at the beginning of their membership term, suggesting that adverse selection operates in this market.

58. The supply of hospital beds was not that significant an explanatory factor in the specialty models. In one specialty – gastro-enterology – there was a negative association between beds and admission rates – but given that the vast majority of gastroenterology admissions were endoscopy day cases not requiring a bed, this is not surprising. Only for the ICU, childbirth and psychiatry models were the bed numbers matched accurately to specialty under study. In all the other cases, overall medical or surgical beds had to be used as a rather imprecise proxy.

59. The supply of doctors, was significantly positively associated with a higher risk of admission in nine out of eleven specialties examined.

60. Finally, an assessment of the risks of PMBD-associated admission and non-PMBD admission is interesting. Non-PMBD admissions appeared significantly more influenceable by clinicians (which is intuitively correct), suggesting that the PMB regulations are not the main factor driving supply induced demand.

ADDITIONAL REMARKS AND CAVEATS

Validation studies to test our results

61. The overall admissions data was also modelled using a random forest algorithm in H2O that explored non-linear relationships and relaxed the assumption of independence between features. The predictive power of this model was nearly identical to the simpler logistic regression model, but the logistic regression results were reported as statistical inference can be computed much more easily. Taking the random forest model as the best-case benchmark, the logistic regression model used above appears to be very sound as the results and conclusions are consistent, hence the model is likely to be suitable.

Increasing admissions due to beneficiaries becoming sicker rather than supply-induced demand

62. The degree to which the model results are influenced by deteriorating health of the population, rather than increased utilisation due to supply induced demand is difficult to determine with the data available. The chronic disease variable consistently explains the most variance out of all the predictors but is rather crude in its classification of chronic disease as the severity of a given chronic condition is not represented. The year variable adjusts for unexplained changes in admission level over time and should therefore allow for changes in the general population health level over time.

Beneficiary socioeconomic status

63. The models account for beneficiaries' income and socio-economic status to a degree. The Scheme-Plan variable classifies plans with a similar level of coverage from each provider on a 4-point scale. Plans with greater coverage and inclusions are priced higher by their providers and thus the coverage rating can be used as a proxy for the income and affluence of the beneficiary. In this way, people with higher income and socio-economic status are accounted for through the Scheme-Plan predictor variable.

Adverse selection

64. There is evidence of an adverse selection effect in the overall admissions model and in slightly less than half of the specialty models. This was captured by including the Years since joining variable to adjust for higher admission rates due to expectant patients taking out cover only when they knew they were about to need it. For discretionary specialist admissions (typically not PMBs), many could be subject to waiting period before claiming (typically 12 months), which might explain why admission risk is highest 1-2 years after joining.

Adequacy of facility supply measure

65. The approach used is described in Appendix G and involved consolidating and

interpolating bed numbers for some hospitals and years from data across multiple datasets and sources over time. This is an imperfect approach, but we believe still captures the macroscopic distribution of private beds across the country.

Adequacy of practitioner supply measure

66. The practitioner dataset did not have any indication of the workload capacity of each of the doctors. For example, doctors may practice in both private and public facilities or not have standard full time working arrangements. This is a limitation of the dataset used in analysis.

Adequacy of supply allocation method

67. The method used to calculate the supply of doctors and facilities for a beneficiary was defined as the number of doctors and beds that primarily operated and existed within the municipality associated with the beneficiary. Municipality codes were used as keys to map the data on supply and utilisation of hospitals. Supply data was aggregated to the municipality level and then joined to each record of the medical schemes data where the location of hospitals and the area of operation of doctors coincide with the municipality of the beneficiary's address.

68. This represents the simplest approach and has some inherent limitations in representing the true supply of facilities available since it relies on somewhat arbitrarily designated geographic boundaries rather than actual distance to facilities, accessibility of hospitals and other factors influencing the availability of hospitals and doctors to individuals.

ANNEXURE 8

TABLE A8.1. HOSPITAL SPECIALTIES INCLUDED UNDER "TOTAL DOCTORS" FOR THE OVERALL HOSPITALISATION MODEL

Description	2010	2011	2012	2013	2014	Average
Cardio Thoracic Surgery	82	94	100	104	99	95.8
Cardiology Independent Practice Specialist	139	141	143	146	156	145.0
Clinical Haematology	13	16	16	16	16	15.4
Dermatology	180	180	191	191	199	188.2
Gastroenterology	57	59	59	64	65	60.8
Independent Practice Specialist Medicine	819	862	909	933	976	899.8
Independent Practice Specialist Neurosurgery	144	145	144	158	143	146.8
Medical Oncology	17	13	14	17	17	15.6
Neurology	110	111	114	121	128	116.8
Ophthalmology	295	295	304	322	324	308.0
Orthopaedics	544	557	582	605	602	578.0
Otorhinolaryngology	256	260	267	266	268	263.4
Paedatrics	487	499	510	520	539	511.0
Plastic and Reconstructive Surgery	140	146	147	160	155	149.6
Psychiatry	451	473	502	517	540	496.6
Pulmonology	119	211	219	219	216	196.8
Rheumatology	32	34	32	36	35	33.8
Surgery Independent Practice Specialist	498	538	543	571	560	542.0
Urology	182	190	205	216	215	201.6
Grand Total	4565	4824	5001	5182	5253	4965.0

TABLE A8.2 DISCRETIONARY PROCEDURES AND BED TYPE USED FOR EACH SPECIALTY SPECIFIC MODEL

Model/discipline	Discretionary procedure	Bed type
Cardio Thoracic Surgery	Coronary artery bypass graft (CABG)	Surgical beds
Cardiology	Diagnostic ultrasound of heart (echocardiogram)	Medical beds
	Percutaneous transluminal coronary angioplasty (PTCA)	
	Diagnostic cardiac catheterization; coronary arteriography	
Neurosurgery	Colonoscopy and biopsy	Day beds
Orthopaedics	Spinal fusion	Surgical beds
	Bunionectomy or repair of toe deformities	Orthopaedic beds Surgical beds
	Arthroscopy	
	Excision of semilunar cartilage of knee	
	Arthroplasty knee	
	Hip replacement; total and partial	
	Arthroplasty other than hip or knee	
	Injections and aspirations of muscles; tendons; bursa; joints and soft tissue	
Otorhinolaryngology (ENT)	Tympanoplasty	Surgical beds
	Myringotomy	
	Plastic procedures on nose	
	Tonsillectomy and/or adenoidectomy	
Paediatrics	All paediatrics procedures	Paediatric beds
Psychiatry	Psychological and psychiatric evaluation and therapy (no further diagnostic information was available for psychiatric admissions)	Psychiatric beds

TABLE A8.2. DISCRETIONARY PROCEDURES AND BED TYPE USED FOR EACH SPECIALTY SPECIFIC MODEL *CONTINUED*

Model/discipline	Discretionary procedure	Bed type
Surgery	Varicose vein stripping; lower limb	Surgical beds
	Upper gastrointestinal endoscopy; biopsy	
	Proctoscopy and anorectal biopsy	
	Haemorrhoid procedures	
	Cholecystectomy and common duct exploration	
	Inguinal and femoral hernia repair	
	Other hernia repair	
Urology	Transurethral resection of prostate (TURP)	Surgical beds
	Open prostatectomy	
	Circumcision	

TABLE A8.3. DISCRETIONARY PROCEDURES AND BED TYPE USED FOR EACH SPECIALTY SPECIFIC MODEL

Model	Sample set	Event of interest	Bed type
ICU	All admissions	All ICU admissions	ICU & HC beds; Specialised ICU beds
Childbirth	Doctor diagnosis: Normal birth/live born	Caesarean section	Maternity beds

MODEL FRAMEWORK

Several statistical models were constructed to assess the relationship between supply of beds and practitioners in a geography and utilisation in the dataset. All model variants used logistic regression models as the basis of analysis. The overall hospitalisation model was computed using the generalised linear model fitting functionality of H2O version 3.14.0.2, a machine learning platform by H2O.ai, while the remainder of the specialty specific models were fitted using the glm function in R version 3.4.3.

The response variable was a binary response representing whether a beneficiary had been admitted under certain conditions that varied by model. In a logistic regression model the linear predictor η has the following relationship to the response variable y:

$$\eta = \text{logit}(y) = \ln\left(\frac{y}{1-y}\right)$$

Equivalently,

$$y = \frac{\exp(\eta)}{1+\exp(\eta)} = \frac{1}{1+\exp(-\eta)}$$

Where the linear predictor η is given by:

$$\eta = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \cdots + \beta_p x_p = \mathbf{x}^{\mathrm{T}}\boldsymbol{\beta}$$

Here each x describes a feature or property of the beneficiary or supply, e.g. x1 represents a beneficiary's gender and x2 represents the number of hospital beds per capita.

This model has the benefit of ease of interpretation, where the estimated response variable y represents the probability of a beneficiary with features x being admitted during the period of a calendar year. Alternatively, the response can be interpreted as the rate of admissions for a large number of beneficiaries with features defined by x.

All results provided below were produced without any regularisation in the model (neither L1 LASSO or L2 ridge penalties were employed). In the process of model selection, a penalised version of the model was fitted but the results from the unpenalized version are presented as there was almost no difference between the results of the respective models and statistical inference naturally follows from the unpenalized models.

TABLE A8.4. OVERALL HOSPITALISATION MODEL REGRESSION COEFFICIENTS ESTIMATES

Overall hospitalisation model	Estimate	Standard error	Statistic	P-value	
Age Group					
00-01	0.668	0.002	280.266	0.000	***
02-05	0.039	0.002	20.920	0.000	***
06-09	-0.596	0.002	-270.638	0.000	***
10-19	-0.687	0.002	-392.089	0.000	***
20-29					
30-39	0.052	0.002	34.700	0.000	***
40-49	-0.210	0.002	-132.639	0.000	***
50-59	-0.170	0.002	-99.427	0.000	***
60-69	0.063	0.002	32.127	0.000	***
70-79	0.346	0.002	144.482	0.000	***
80-89	0.522	0.004	149.895	0.000	***
90+	0.586	0.009	67.534	0.000	***
Chronic disease					
Acute Respiratory	0.344	0.001	278.613	0.000	***
Anaemia, Blood Disorders	1.441	0.007	217.154	0.000	***
Arthritis	0.968	0.004	245.582	0.000	***
Back Problems	0.952	0.004	262.576	0.000	***
Cancer	1.900	0.004	464.232	0.000	***
Chronic Respiratory	0.677	0.002	444.253	0.000	***
CNS Disorders	1.297	0.003	413.463	0.000	***
Coma, Brain Damage, Paral	2.517	0.039	65.276	0.000	***
Congenital Conditions	2.098	0.016	133.972	0.000	***
Diabetes	0.893	0.003	321.036	0.000	***
Healthy					
Heart Conditions	1.918	0.004	473.620	0.000	***
HIV	0.800	0.004	224.286	0.000	***
Hypertension	0.411	0.002	208.477	0.000	***
Infections	0.486	0.003	198.064	0.000	***

Overall hospitalisation model	Estimate	Standard error	Statistic	P-value	
Other Cardiovascular	0.750	0.005	140.752	0.000	***
Psychiatric	0.886	0.002	366.566	0.000	***
Renal Failure	2.633	0.017	153.133	0.000	***
Exposed					
Exposed	0.323	0.000	484.482	0.000	***
Gender					
1					
2	-0.200	0.001	-237.515	0.000	***
Intercept					
Intercept	-1.408	0.185	-14.512	0.000	***
Supply of beds					
Beds per 100 population	0.029	0.001	64.791	0.000	***
Supply of doctors					
Doctors per 100 population	0.070	0.011	143.936	0.000	***
Year					
2010					
2011	0.012	0.001	8.785	0.000	***
2012	0.045	0.001	32.788	0.000	***
2013	0.054	0.001	39.778	0.000	***
2014	0.063	0.001	46.399	0.000	***
Years since joined scheme					
<1	0.058	0.002	35.338	0.000	***
1-2	0.069	0.001	54.119	0.000	***
2+					

TABLE A8.5. COEFFICIENTS OF EACH SPECIALTY SPECIFIC MODEL – MODELLED ON FULL ADMISSION DATASET

Cardio Thoracic Surgery	Estimate	Standard error	Statistic	P-value	
Age group					
00-01	-0.142	0.057	-2.487	0.013	*
02-05	-1.325	0.056	-23.626	0.000	***
06-09	-1.579	0.068	-23.237	0.000	***
10-19	-0.749	0.040	-18.806	0.000	***
20-29					
30-39	0.329	0.031	10.720	0.000	***
40-49	0.736	0.030	24.277	0.000	***
50-59	1.230	0.031	39.700	0.000	***
60-69	1.703	0.034	50.695	0.000	***
70-79	2.101	0.040	53.136	0.000	***
80-89	1.819	0.057	31.853	0.000	***
90+	1.420	0.150	9.475	0.000	***
Chronic disease					
Acute Respiratory	0.716	0.026	27.960	0.000	***
Anaemia, Blood Disorders	1.991	0.107	18.522	0.000	***
Arthritis	0.473	0.078	6.033	0.000	***
Back Problems	0.380	0.073	5.187	0.000	***
Cancer	3.361	0.060	55.647	0.000	***
Chronic Respiratory	1.765	0.027	65.638	0.000	***
CNS Disorders	1.642	0.055	29.912	0.000	***
Coma, Brain Damage, Paral	1.736	0.575	3.022	0.003	**
Congenital Conditions	6.337	0.248	25.579	0.000	***
Diabetes	0.998	0.045	22.018	0.000	***
Healthy					
Heart Conditions	3.953	0.058	68.233	0.000	***
HIV	2.088	0.054	38.361	0.000	***
Hypertension	0.497	0.032	15.302	0.000	***
Infections	1.012	0.048	21.049	0.000	***
Other Cardiovascular	0.810	0.092	8.793	0.000	***

Cardio Thoracic Surgery	Estimate	Standard error	Statistic	P-value	
Psychiatric	0.594	0.051	11.750	0.000	***
Renal Failure	3.193	0.230	13.913	0.000	***
Gender					
1					
2	0.540	0.016	34.006	0.000	***
Intercept					
Intercept	-2.560	0.991	-2.584	0.010	**
Membership Months					
Membership Months	-0.031	0.003	-9.374	0.000	***
Supply of doctors					
Doctors per 100 population	28.254	6.788	4.162	0.000	***
Supply of facilities					
Beds per 100 population	0.049	0.059	0.843	0.399	
Year					
2010					
2011	0.052	0.026	2.005	0.045	*
2012	0.040	0.026	1.543	0.123	
2013	0.096	0.025	3.810	0.000	***
2014	0.026	0.025	1.007	0.314	
Years since joined scheme					
<1	-0.203	0.030	-6.820	0.000	***
1-2	0.060	0.024	2.476	0.013	*
2+					

Cardiology	Estimate	Standard error	Statistic	P-value	
Age group					
00-01	-1.804	0.094	-19.241	0.000	***
02-05	-3.041	0.106	-28.625	0.000	***
06-09	-2.656	0.095	-28.000	0.000	***
10-19	-0.775	0.033	-23.309	0.000	***
20-29					
30-39	0.538	0.024	22.753	0.000	***
40-49	1.210	0.023	53.006	0.000	***
50-59	1.824	0.023	79.063	0.000	***
60-69	2.313	0.025	94.361	0.000	***
70-79	2.719	0.028	97.570	0.000	***
80-89	3.012	0.037	81.224	0.000	***
90+	3.066	0.086	35.555	0.000	***
Chronic disease					
Acute Respiratory	0.239	0.020	11.803	0.000	***
Anaemia, Blood Disorders	1.748	0.076	23.002	0.000	***
Arthritis	0.329	0.053	6.228	0.000	***
Back Problems	0.316	0.049	6.416	0.000	***
Cancer	1.116	0.042	26.347	0.000	***
Chronic Respiratory	0.747	0.023	32.861	0.000	***
CNS Disorders	1.672	0.037	45.719	0.000	***
Coma, Brain Damage, Paral	1.881	0.578	3.252	0.001	**
Congenital Conditions	5.145	0.190	27.053	0.000	***
Diabetes	1.272	0.030	42.188	0.000	***
Healthy					
Heart Conditions	4.031	0.038	104.887	0.000	***
HIV	0.555	0.056	9.920	0.000	***
Hypertension	0.850	0.020	42.147	0.000	***
Infections	0.216	0.042	5.155	0.000	***
Other Cardiovascular	0.789	0.061	12.991	0.000	***

Cardiology	Estimate	Standard error	Statistic	P-value	
Psychiatric	0.843	0.032	26.072	0.000	***
Renal Failure	3.145	0.158	19.910	0.000	***
Gender					
1					
2	0.435	0.011	38.770	0.000	***
Intercept					
Intercept	-3.055	1.254	-2.436	0.015	*
Membership Months					
Membership Months	0.076	0.003	26.686	0.000	***
Supply of doctors					
Doctors per 100 population	38.739	3.085	12.559	0.000	***
Supply of facilities					
Beds per 100 population	-0.008	0.046	-0.182	0.856	
Year					
2010					
2011	-0.137	0.018	-7.550	0.000	***
2012	-0.133	0.018	-7.413	0.000	***
2013	-0.200	0.018	-11.199	0.000	***
2014	-0.242	0.018	-13.510	0.000	***
Years since joined scheme					
<1	-0.083	0.023	-3.680	0.000	***
1-2	0.067	0.018	3.692	0.000	***
2+					

Gastroenterology	Estimate	Standard error	Statistic	P-value	
Age group					
00-01	-3.755	0.185	-20.293	0.000	***
02-05	-3.980	0.125	-31.761	0.000	***
06-09	-3.341	0.100	-33.385	0.000	***
10-19	-1.092	0.033	-33.489	0.000	***
20-29					
30-39	0.272	0.024	11.228	0.000	***
40-49	0.542	0.025	21.792	0.000	***
50-59	0.857	0.026	33.162	0.000	***
60-69	1.227	0.029	42.047	0.000	***
70-79	1.318	0.036	36.623	0.000	***
80-89	1.413	0.055	25.536	0.000	***
90+	1.480	0.142	10.416	0.000	***
Chronic disease					
Acute Respiratory	0.273	0.024	11.574	0.000	***
Anaemia, Blood Disorders	2.012	0.102	19.721	0.000	***
Arthritis	0.484	0.070	6.923	0.000	***
Back Problems	0.369	0.063	5.860	0.000	***
Cancer	1.291	0.061	20.997	0.000	***
Chronic Respiratory	0.606	0.030	20.455	0.000	***
CNS Disorders	0.825	0.053	15.487	0.000	***
Coma, Brain Damage, Paral	1.323	0.777	1.702	0.089	.
Congenital Conditions	0.854	0.348	2.452	0.014	*
Diabetes	0.571	0.046	12.543	0.000	***
Healthy					
Heart Conditions	0.959	0.064	15.048	0.000	***
HIV	0.705	0.070	10.078	0.000	***
Hypertension	0.236	0.030	7.839	0.000	***
Infections	0.780	0.046	17.051	0.000	***
Other Cardiovascular	0.804	0.081	9.891	0.000	***

Gastroenterology	Estimate	Standard error	Statistic	P-value	
Psychiatric	0.621	0.041	15.223	0.000	***
Renal Failure	1.689	0.247	6.850	0.000	***
Gender					
1					
2	-0.246	0.014	-17.210	0.000	***
Intercept					
Intercept	-2.181	1.159	-1.882	0.060	.
Membership Months					
Membership Months	0.133	0.004	35.066	0.000	***
Supply of doctors					
Doctors per 100 population	381.606	8.193	46.579	0.000	***
Supply of facilities					
Beds per 100 population	-1.947	0.217	-8.978	0.000	***
Year					
2010					
2011	-0.231	0.023	-10.134	0.000	***
2012	-0.253	0.023	-11.204	0.000	***
2013	-0.377	0.023	-16.710	0.000	***
2014	-0.431	0.023	-18.849	0.000	***
Years since joined scheme					
<1	-0.102	0.028	-3.656	0.000	***
1-2	-0.021	0.023	-0.914	0.361	
2+					

Neurosurgery	Estimate	Standard error	Statistic	P-value	
Age group					
00-01	-0.143	0.038	-3.785	0.000	***
02-05	-0.858	0.031	-27.584	0.000	***
06-09	-1.052	0.034	-31.071	0.000	***
10-19	-0.479	0.022	-22.040	0.000	***
20-29					
30-39	0.329	0.018	18.052	0.000	***
40-49	0.814	0.018	45.870	0.000	***
50-59	1.105	0.018	60.165	0.000	***
60-69	1.367	0.020	67.146	0.000	***
70-79	1.543	0.024	63.697	0.000	***
80-89	1.441	0.034	41.833	0.000	***
90+	1.188	0.091	13.025	0.000	***
Chronic disease					
Acute Respiratory	-0.087	0.016	-5.367	0.000	***
Anaemia, Blood Disorders	0.846	0.075	11.314	0.000	***
Arthritis	1.216	0.038	31.854	0.000	***
Back Problems	3.438	0.031	109.701	0.000	***
Cancer	1.586	0.039	40.835	0.000	***
Chronic Respiratory	0.500	0.018	28.016	0.000	***
CNS Disorders	2.377	0.030	79.129	0.000	***
Coma, Brain Damage, Paral	3.338	0.321	10.406	0.000	***
Congenital Conditions	2.959	0.152	19.482	0.000	***
Diabetes	0.626	0.028	21.957	0.000	***
Healthy					
Heart Conditions	0.911	0.040	22.752	0.000	***
HIV	-0.111	0.047	-2.346	0.019	*
Hypertension	0.785	0.018	43.876	0.000	***
Infections	0.105	0.032	3.240	0.001	**
Other Cardiovascular	0.146	0.058	2.533	0.011	*

Neurosurgery	Estimate	Standard error	Statistic	P-value	
Psychiatric	1.177	0.024	49.121	0.000	***
Renal Failure	0.790	0.164	4.809	0.000	***
Gender					
1					
2	0.089	0.009	9.563	0.000	***
Intercept					
Intercept	-2.227	1.399	-1.592	0.111	
Membership Months					
Membership Months	0.086	0.002	36.116	0.000	***
Supply of doctors					
Doctors per 100 population	-8.821	3.074	-2.870	0.004	**
Supply of facilities					
Beds per 100 population	0.048	0.034	1.421	0.155	
Year					
2010					
2011	0.011	0.015	0.692	0.489	
2012	0.044	0.015	2.921	0.003	**
2013	0.035	0.015	2.330	0.020	*
2014	0.038	0.015	2.518	0.012	*
Years since joined scheme					
<1	-0.157	0.019	-8.426	0.000	***
1-2	-0.008	0.015	-0.575	0.565	
2+					

Orthopaedics	Estimate	Standard error	Statistic	P-value	
Age group					
00-01	-1.720	0.040	-42.824	0.000	***
02-05	-0.927	0.019	-48.727	0.000	***
06-09	-0.592	0.018	-33.352	0.000	***
10-19	-0.187	0.013	-14.615	0.000	***
20-29					
30-39	0.051	0.012	4.248	0.000	***
40-49	0.377	0.012	31.542	0.000	***
50-59	0.716	0.012	57.471	0.000	***
60-69	1.006	0.014	71.083	0.000	***
70-79	1.137	0.017	65.216	0.000	***
80-89	1.239	0.026	48.146	0.000	***
90+	1.463	0.064	22.770	0.000	***
Chronic disease					
Acute Respiratory	-0.076	0.010	-7.345	0.000	***
Anaemia, Blood Disorders	0.315	0.057	5.562	0.000	***
Arthritis	2.224	0.027	81.353	0.000	***
Back Problems	1.349	0.025	52.965	0.000	***
Cancer	0.302	0.032	9.484	0.000	***
Chronic Respiratory	0.129	0.013	10.006	0.000	***
CNS Disorders	0.960	0.024	39.967	0.000	***
Coma, Brain Damage, Paral	3.157	0.272	11.619	0.000	***
Congenital Conditions	3.253	0.114	28.527	0.000	***
Diabetes	0.261	0.022	12.124	0.000	***
Healthy					
Heart Conditions	0.284	0.031	9.163	0.000	***
HIV	-0.102	0.032	-3.146	0.002	**
Hypertension	0.428	0.014	31.258	0.000	***
Infections	0.082	0.021	3.955	0.000	***
Other Cardiovascular	0.204	0.041	4.958	0.000	***

Orthopaedics	Estimate	Standard error	Statistic	P-value	
Psychiatric	0.503	0.019	26.848	0.000	***
Renal Failure	0.551	0.135	4.093	0.000	***
Gender					
1					
2	0.257	0.006	39.947	0.000	***
Intercept					
Intercept	-1.348	1.227	-1.098	0.272	
Membership Months					
Membership Months	0.158	0.002	84.370	0.000	***
Supply of doctors					
Doctors per 100 population	9.966	0.587	16.986	0.000	***
Supply of facilities					
Beds per 100 population	-0.063	0.026	-2.472	0.013	*
Year					
2010					
2011	-0.019	0.011	-1.756	0.079	.
2012	-0.005	0.010	-0.465	0.642	
2013	0.027	0.010	2.578	0.010	**
2014	0.042	0.010	4.126	0.000	***
Years since joined scheme					
<1	0.004	0.013	0.270	0.787	
1-2	-0.011	0.010	-1.055	0.291	
2+					

Otorhinolaryngology (ENT)	Estimate	Standard error	Statistic	P-value	
Age group					
00-01	1.157	0.018	62.916	0.000	***
02-05	1.768	0.013	136.038	0.000	***
06-09	1.084	0.014	77.314	0.000	***
10-19	0.184	0.013	14.272	0.000	***
20-29					
30-39	-0.109	0.013	-8.584	0.000	***
40-49	-0.266	0.013	-19.729	0.000	***
50-59	-0.401	0.015	-26.739	0.000	***
60-69	-0.461	0.018	-25.392	0.000	***
70-79	-0.590	0.024	-24.290	0.000	***
80-89	-0.786	0.040	-19.821	0.000	***
90+	-1.076	0.120	-8.944	0.000	***
Chronic disease					
Acute Respiratory	0.834	0.009	92.016	0.000	***
Anaemia, Blood Disorders	0.850	0.063	13.495	0.000	***
Arthritis	0.278	0.044	6.343	0.000	***
Back Problems	0.348	0.039	8.872	0.000	***
Cancer	1.623	0.034	48.318	0.000	***
Chronic Respiratory	1.477	0.011	132.378	0.000	***
CNS Disorders	2.195	0.024	92.744	0.000	***
Coma, Brain Damage, Paral	1.063	0.275	3.864	0.000	***
Congenital Conditions	1.339	0.112	11.986	0.000	***
Diabetes	0.593	0.028	21.063	0.000	***
Healthy					
Heart Conditions	0.817	0.040	20.355	0.000	***
HIV	0.745	0.033	22.529	0.000	***
Hypertension	0.315	0.020	15.983	0.000	***
Infections	0.343	0.020	17.083	0.000	***
Other Cardiovascular	0.339	0.055	6.146	0.000	***

Otorhinolaryngology (ENT)	Estimate	Standard error	Statistic	P-value	
Psychiatric	0.531	0.023	23.479	0.000	***
Renal Failure	0.669	0.152	4.409	0.000	***
Gender					
1					
2	-0.012	0.007	-1.850	0.064	.
Intercept					
Intercept	-0.797	1.416	-0.563	0.574	
Membership Months					
Membership Months	0.144	0.002	77.352	0.000	***
Supply of doctors					
Doctors per 100 population	48.566	1.315	36.919	0.000	***
Supply of facilities					
Beds per 100 population	-0.021	0.026	-0.808	0.419	
Year					
2010					
2011	-0.014	0.011	-1.337	0.181	
2012	-0.004	0.011	-0.335	0.738	
2013	0.001	0.011	0.116	0.907	
2014	-0.010	0.011	-0.922	0.356	
Years since joined scheme					
<1	-0.013	0.013	-1.008	0.313	
1-2	0.076	0.010	7.657	0.000	***
2+					

Paediatrics	Estimate	Standard error	Statistic	P-value	
Age group					
00-01	5.459	0.025	214.602	0.000	***
02-05	3.932	0.022	180.112	0.000	***
06-09	2.935	0.022	130.560	0.000	***
10-19	1.636	0.022	73.320	0.000	***
20-29					
Chronic disease					
Acute Respiratory	0.674	0.012	54.965	0.000	***
Anaemia, Blood Disorders	1.689	0.101	16.644	0.000	***
Arthritis	0.831	0.103	8.060	0.000	***
Back Problems	0.103	0.128	0.803	0.422	
Cancer	2.050	0.104	19.638	0.000	***
Chronic Respiratory	1.299	0.015	84.824	0.000	***
CNS Disorders	1.975	0.042	47.446	0.000	***
Coma, Brain Damage, Paral	3.983	0.385	10.357	0.000	***
Congenital Conditions	2.225	0.155	14.349	0.000	***
Diabetes	2.000	0.062	32.011	0.000	***
Healthy					
Heart Conditions	1.827	0.133	13.782	0.000	***
HIV	1.544	0.054	28.407	0.000	***
Hypertension	0.462	0.096	4.829	0.000	***
Infections	0.742	0.025	29.709	0.000	***
Other Cardiovascular	0.504	0.168	2.993	0.003	**
Psychiatric	0.550	0.043	12.904	0.000	***
Renal Failure	2.278	0.272	8.386	0.000	***
Gender					
1					
2	-0.091	0.009	-9.635	0.000	***
Intercept					
Intercept	-2.484	6.427	-0.387	0.699	

Paediatrics	Estimate	Standard error	Statistic	P-value	
Membership Months					
Membership Months	0.099	0.002	44.815	0.000	***
Supply of doctors					
Doctors per 100 population	31.705	1.116	28.397	0.000	***
Supply of facilities					
Beds per 100 population	1.736	0.162	10.700	0.000	***
Year					
2010					
2011	-0.001	0.015	-0.048	0.962	
2012	-0.002	0.015	-0.108	0.914	
2013	0.035	0.015	2.287	0.022	*
2014	0.048	0.015	3.141	0.002	**
Years since joined scheme					
<1	0.219	0.018	12.376	0.000	***
1-2	-0.067	0.014	-4.831	0.000	***
2+					

Psychiatry	Estimate	Standard error	Statistic	P-value	
Age group					
00-01	-8.131	0.707	-11.494	0.000	***
02-05	-6.412	0.183	-35.020	0.000	***
06-09	-4.359	0.065	-66.657	0.000	***
10-19	-0.839	0.013	-62.470	0.000	***
20-29					
30-39	0.056	0.011	4.913	0.000	***
40-49	0.036	0.012	3.025	0.002	**
50-59	-0.208	0.013	-15.634	0.000	***
60-69	-0.732	0.017	-42.214	0.000	***
70-79	-1.000	0.024	-41.486	0.000	***
80-89	-1.178	0.039	-30.324	0.000	***
90+	-1.742	0.123	-14.153	0.000	***
Chronic disease					
Acute Respiratory	0.218	0.011	19.240	0.000	***
Anaemia, Blood Disorders	1.189	0.056	21.215	0.000	***
Arthritis	0.473	0.036	13.158	0.000	***
Back Problems	0.653	0.031	21.398	0.000	***
Cancer	0.721	0.039	18.571	0.000	***
Chronic Respiratory	0.854	0.014	62.952	0.000	***
CNS Disorders	1.770	0.026	69.381	0.000	***
Coma, Brain Damage, Paral	1.167	0.333	3.508	0.000	***
Congenital Conditions	1.024	0.188	5.444	0.000	***
Diabetes	0.954	0.023	41.462	0.000	***
Healthy					
Heart Conditions	1.168	0.036	32.898	0.000	***
HIV	1.036	0.027	38.264	0.000	***
Hypertension	0.269	0.017	15.567	0.000	***
Infections	0.319	0.023	14.055	0.000	***
Other Cardiovascular	0.113	0.052	2.178	0.029	*

Psychiatry	Estimate	Standard error	Statistic	P-value	
Psychiatric	3.007	0.017	174.780	0.000	***
Renal Failure	1.100	0.142	7.776	0.000	***
Gender					
1					
2	-0.471	0.007	-63.549	0.000	***
Intercept					
Intercept	-14.279	374.482	-0.038	0.970	
Membership Months					
Membership Months	0.073	0.002	40.924	0.000	***
Supply of doctors					
Doctors per 100 population	30.583	0.585	52.274	0.000	***
Supply of facilities					
Beds per 100 population	1.814	0.139	13.091	0.000	***
Year					
2010					
2011	0.050	0.012	4.158	0.000	***
2012	0.105	0.012	8.864	0.000	***
2013	0.134	0.012	11.375	0.000	***
2014	0.151	0.012	12.895	0.000	***
Years since joined scheme					
<1	-0.124	0.014	-8.843	0.000	***
1-2	0.034	0.011	3.024	0.002	**
2+					

General Surgery	Estimate	Standard error	Statistic	P-value	
Age group					
00-01	-0.649	0.025	-26.482	0.000	***
02-05	-0.987	0.018	-54.816	0.000	***
06-09	-1.042	0.019	-55.314	0.000	***
10-19	-0.548	0.013	-42.487	0.000	***
20-29					
30-39	0.222	0.011	19.830	0.000	***
40-49	0.369	0.011	32.492	0.000	***
50-59	0.516	0.012	42.567	0.000	***
60-69	0.753	0.014	53.924	0.000	***
70-79	0.944	0.017	54.423	0.000	***
80-89	1.047	0.025	41.181	0.000	***
90+	1.216	0.067	18.231	0.000	***
Chronic disease					
Acute Respiratory	0.151	0.010	15.561	0.000	***
Anaemia, Blood Disorders	1.432	0.048	29.798	0.000	***
Arthritis	0.329	0.032	10.345	0.000	***
Back Problems	0.463	0.029	16.119	0.000	***
Cancer	2.117	0.030	70.870	0.000	***
Chronic Respiratory	0.334	0.012	26.968	0.000	***
CNS Disorders	0.653	0.025	26.035	0.000	***
Coma, Brain Damage, Paral	1.506	0.311	4.839	0.000	***
Congenital Conditions	2.135	0.116	18.475	0.000	***
Diabetes	0.488	0.021	23.426	0.000	***
Healthy					
Heart Conditions	0.668	0.030	22.131	0.000	***
HIV	0.434	0.028	15.390	0.000	***
Hypertension	0.310	0.014	22.295	0.000	***
Infections	0.553	0.019	29.404	0.000	***
Other Cardiovascular	1.565	0.036	43.400	0.000	***

General Surgery	Estimate	Standard error	Statistic	P-value	
Psychiatric	0.616	0.018	33.404	0.000	***
Renal Failure	2.812	0.122	23.121	0.000	***
Gender					
1					
2	0.037	0.006	5.922	0.000	***
Intercept					
Intercept	-15.579	364.664	-0.043	0.966	
Membership Months					
Membership Months	0.120	0.002	73.220	0.000	***
Supply of doctors					
Doctors per 100 population	13.248	0.663	19.993	0.000	***
Supply of facilities					
Beds per 100 population	0.020	0.024	0.842	0.400	
Year					
2010					
2011	0.007	0.010	0.671	0.502	
2012	0.010	0.010	0.960	0.337	
2013	0.028	0.010	2.786	0.005	**
2014	0.047	0.010	4.705	0.000	***
Years since joined scheme					
<1	0.034	0.012	2.814	0.005	**
1-2	0.072	0.010	7.446	0.000	***
2+					

Urology	Estimate	Standard error	Statistic	P-value	
Age group					
00-01	-0.400	0.025	-15.797	0.000	***
02-05	0.038	0.016	2.423	0.015	*
06-09	-0.193	0.017	-11.400	0.000	***
10-19	-0.405	0.014	-28.667	0.000	***
20-29					
30-39	0.370	0.013	29.417	0.000	***
40-49	0.520	0.013	40.805	0.000	***
50-59	0.724	0.013	53.918	0.000	***
60-69	1.210	0.015	81.682	0.000	***
70-79	1.450	0.018	80.663	0.000	***
80-89	1.392	0.027	52.149	0.000	***
90+	1.017	0.069	14.677	0.000	***
Chronic disease					
Acute Respiratory	0.106	0.010	10.599	0.000	***
Anaemia, Blood Disorders	0.528	0.059	8.960	0.000	***
Arthritis	0.089	0.034	2.642	0.008	**
Back Problems	0.442	0.030	14.964	0.000	***
Cancer	1.774	0.029	61.295	0.000	***
Chronic Respiratory	0.182	0.013	14.218	0.000	***
CNS Disorders	0.488	0.027	18.405	0.000	***
Coma, Brain Damage, Paral	1.503	0.239	6.291	0.000	***
Congenital Conditions	3.108	0.114	27.268	0.000	***
Diabetes	0.296	0.022	13.549	0.000	***
Healthy					
Heart Conditions	0.289	0.032	9.177	0.000	***
HIV	-0.245	0.035	-6.936	0.000	***
Hypertension	0.252	0.014	17.611	0.000	***
Infections	0.405	0.019	21.002	0.000	***
Other Cardiovascular	0.486	0.042	11.709	0.000	***

Urology	Estimate	Standard error	Statistic	P-value	
Psychiatric	0.554	0.020	27.506	0.000	***
Renal Failure	1.990	0.110	18.094	0.000	***
Gender					
1					
2	1.201	0.007	178.659	0.000	***
Intercept					
Intercept	-15.368	218.667	-0.070	0.944	
Membership Months					
Membership Months	0.159	0.002	84.971	0.000	***
Supply of doctors					
Doctors per 100 population	42.964	1.506	28.534	0.000	***
Supply of facilities					
Beds per 100 population	0.091	0.026	3.440	0.001	***
Year					
2010					
2011	0.002	0.011	0.220	0.826	
2012	0.032	0.011	3.014	0.003	**
2013	0.046	0.010	4.386	0.000	***
2014	0.088	0.010	8.402	0.000	***
Years since joined scheme					
<1	0.068	0.013	5.234	0.000	***
1-2	0.071	0.010	7.114	0.000	***
2+					

ICU	Estimate	Standard error	Statistic	P-value	
Age group					
02-05	-0.790	0.027	-28.988	0.000	***
06-09	-1.215	0.034	-36.178	0.000	***
10-19	-0.685	0.021	-32.185	0.000	***
20-29					
30-39	0.578	0.016	36.284	0.000	***
40-49	1.054	0.016	67.828	0.000	***
50-59	1.584	0.016	100.689	0.000	***
60-69	2.158	0.017	128.344	0.000	***
70-79	2.688	0.019	140.463	0.000	***
80-89	3.016	0.025	118.904	0.000	***
90+	3.211	0.060	53.421	0.000	***
Chronic disease					
Acute Respiratory	0.211	0.014	15.576	0.000	***
Anaemia, Blood Disorders	2.017	0.052	38.625	0.000	***
Arthritis	0.566	0.034	16.572	0.000	***
Back Problems	0.700	0.032	21.874	0.000	***
Cancer	2.444	0.030	80.973	0.000	***
Chronic Respiratory	0.880	0.015	60.009	0.000	***
CNS Disorders	1.992	0.026	77.616	0.000	***
Coma, Brain Damage, Paral	3.912	0.285	13.744	0.000	***
Congenital Conditions	4.223	0.115	36.761	0.000	***
Diabetes	1.494	0.021	71.179	0.000	***
Healthy					
Heart Conditions	3.769	0.029	131.860	0.000	***
HIV	1.386	0.029	48.120	0.000	***
Hypertension	0.740	0.014	51.314	0.000	***
Infections	0.649	0.025	26.096	0.000	***
Other Cardiovascular	1.000	0.043	23.348	0.000	***
Psychiatric	0.800	0.023	35.222	0.000	***

ICU	Estimate	Standard error	Statistic	P-value	
Renal Failure	4.241	0.110	38.667	0.000	***
Gender					
1					
2	0.386	0.008	50.193	0.000	***
Intercept					
Intercept	-0.636	1.345	-0.473	0.636	
Membership Months					
Membership Months	-0.120	0.001	-82.914	0.000	***
Supply of facilities					
Beds per 100 population	0.577	0.073	7.945	0.000	***
Year					
2010					
2011	-0.010	0.013	-0.759	0.448	
2012	-0.047	0.013	-3.737	0.000	***
2013	-0.023	0.012	-1.825	0.068	.
2014	0.021	0.012	1.700	0.089	.
Years since joined scheme					
<1	-0.609	0.014	-42.429	0.000	***
1-2	0.063	0.012	5.118	0.000	***
2+					

Childbirth	Estimate	Standard error	Statistic	P-value	
Age group					
10-14	-0.271	0.183	-1.480	0.139	
15-19	-0.257	0.019	-13.384	0.000	***
20-24					
25-29	0.189	0.011	17.856	0.000	***
30-34	0.339	0.011	31.715	0.000	***
35-39	0.475	0.012	39.310	0.000	***
40-44	0.570	0.019	30.314	0.000	***
45-49	0.634	0.074	8.511	0.000	***
50+	-0.615	0.214	-2.873	0.004	**
Chronic disease					
Acute Respiratory	0.061	0.009	6.833	0.000	***
Anaemia, Blood Disorders	0.173	0.043	3.985	0.000	***
Arthritis	0.066	0.058	1.134	0.257	
Back Problems	0.078	0.039	2.011	0.044	*
Cancer	0.275	0.101	2.725	0.006	**
Chronic Respiratory	0.144	0.015	9.764	0.000	***
CNS Disorders	0.219	0.044	4.947	0.000	***
Congenital Conditions	0.404	0.177	2.284	0.022	*
Diabetes	0.887	0.066	13.544	0.000	***
Heart Conditions	0.449	0.094	4.781	0.000	***
HIV	1.448	0.028	50.920	0.000	***
Hypertension	0.439	0.031	14.131	0.000	***
Infections	0.128	0.018	6.987	0.000	***
Other Cardiovascular	-0.069	0.048	-1.452	0.147	
Psychiatric	0.234	0.024	9.560	0.000	***
Renal Failure	1.080	0.619	1.745	0.081	.
Healthy ~					
Intercept					
Intercept	-9.711	72.463	-0.134	0.893	

Childbirth	Estimate	Standard error	Statistic	P-value	
Membership Months					
Membership Months	0.006	0.002	3.143	0.002	**
Supply of doctors					
Doctors per 100 population	-5.713	0.487	-11.723	0.000	***
Supply of facilities					
Beds per 100 population	0.602	0.107	5.609	0.000	***
Year					
2010					
2011	0.005	0.010	0.478	0.632	
2012	0.047	0.010	4.617	0.000	***
2013	0.066	0.010	6.501	0.000	***
2014	0.112	0.010	11.001	0.000	***
Years since joined scheme					
<1	-0.060	0.011	-5.263	0.000	***
1-2	-0.054	0.008	-6.715	0.000	***
2+					

APPROACHES TO DERIVE BENEFICIARY AND CLAIMS VARIABLES USED

Age group

Approximately 100,000 records did not have age data and were omitted from analysis to prevent inadvertent bias. This was because the rate of admissions in this subset was nearly zero and significantly different from that of the rest of the sample.

Joining year

Data for the joining year of a small proportion of the dataset was also not available and was found to be indistinguishable from the class that had joined for greater than two years. Therefore, undefined fields were grouped together with the equal to or greater than two class.

Scheme-Plan

Plans offered by medical schemes were rated on a 4-point scale in terms of their comprehensiveness of cover relative to the plans from a particular provider. This was done to account for the differences in scheme and plan coverage for hospital admissions. This also creates a more parsimonious model by reducing the number of variables needed to adjust for different levels of coverage.

SUPPLY OF HOSPITAL BEDS

Purpose

This report provides the methodology used to construct a database of private hospital beds from 2000 to 2017.

Data sources

The data used to compile the dataset came from multiple sources.

These include:

- The Hospital Association of South Africa (HASA) publications for the periods 1999 to 2010.
- Data provided by the hospital groups reflecting bed numbers in 2014.
- A HASA data file representing membership as at March 2016.
- Data provided by individual hospital groups provided in 2017. This data was provided separately by Netcare, Mediclinic, Life and the National Hospital Network (NHN) data.
- Data on billing start dates for new hospitals for the period from 2009 based on claims data provided by Discovery Health (Pty) Ltd.
- Data provided by Riskscape providing hospital locations by enumerator area (used to update location data).

Data challenges

The data provided from the HASA publications (2000 to 2010) was used as the principal source for establishing the database. This offered a substantial amount of bed data by bed type over this period. However, the data was inconsistently recorded through time resulting in many apparent inconsistencies. This included the following:

- Bed type categorisations were not continued consistently (e.g. sometimes neonatal ICUs were classified as specialised ICUs with categorisations changing arbitrarily over the period); and bed data would be missing in some years.
- Data for the year 2000 presented problems as missing data could indicate either that a hospital did not exist yet or merely that data was not provided.
- Hospital changed their names over the period due to changes in ownership. This resulted in data entries ending under one name and beginning under a new name.

The additional datasets used to estimate the data for the period from 2011 onward also present many difficulties:

- No bed data breakdowns were available for the period 2011 to 2015.
- Over the period 2011 to 2015 only total beds per hospital were available for one year - 2014.
- The data for 2016 was only available for some and not all hospitals identified. And, although this data was broken down by bed type it sometimes differed materially from the last available detailed breakdown for 2010 as well as the overall beds per hospital for 2014.
- The data provided in 2017 was essentially the latest data available on the hospital groups.

This data in a not insignificant number of instances differed from 2016, 2014 and 2010 data.

- The NHN data for 2017 provided additional hospitals that were not included in any of the HASA data – but only provided total beds and no breakdown.

It is important to note that the Health Market Inquiry (HMI) requested this data in an electronic format from the hospital groups for the time period 2000 to the present, it was claimed that no such database existed. Given this somewhat surprising claim, it was necessary to generate a consistent database taking into account all available data.

Methodology

The following process was adopted to get the most accurate representation of the data over the period 2000 to 2017.

- The 1999 HASA data was used to validate the 2000 HASA data. This clarified whether missing data from hospitals was because they did not exist. Big deviations in the bed numbers between the two years was also flagged for further review using data from later years.
- Bed breakdowns and hospital bed totals were also compared across all years. Inconsistencies in trends, such as anomalous changes in bed categories, were adjusted to what appeared to be the most consistently entered data through time. A table such as that indicated in Table 8.1 (supported by the graph in Figure 8.1) was used to provide a visual consistency check.
- The visual consistency check allowed for the following consistency check:
  - Comparisons over the period 2000 to 2010;
  - Comparisons of adjusted data with unadjusted data;
  - Overall total comparisons of the 2010 and 2016 data with a 2014 total;
  - Comparisons with a 2017 breakdown, where available; and
  - Comparisons with a 2017 overall total, where only the total was available.

Hospitals that changed names and owners over the period were categorised according to their practice number. All hospitals are therefore compared as a single hospital over time regardless of ownership or name changes.

The following approach was followed to generate the time series information:

Where bed information was consistent for long periods, gaps in data were adjusted to the most recently available consistent data.

- The period 2011 to 2015 was estimated as follows:
  - Consistency was matched between three sets of relatively complete data: the 2010 data by bed type, the 2016 data by bed type and the 2014 total beds per hospital.
  - The closest match consistent with all three data sets was used to fill in the missing data.

To achieve the most consistent breakdown of beds over the entire period the following approach was used:

- Inconsistencies were always resolved in favour of the longest series of supplied data. This including adjustments required to the 2017 data.
- Inconsistences were as far as possible resolved in such a way that the overall totals for the main sub-categories of beds were “protected”.
- The main sub-categories were: overall inpatient beds excluding ICU and HC (which includes medical, surgical, maternity, oncology and orthopaedic beds); overall ICU beds (which includes all types of ICU bed and HC beds); psychiatric beds; day beds; and other beds.

Additional data supplied by NHN was used to supplement bed information provided from the HASA datasets. The new hospital data did not include bed breakdowns. The following approach was therefore used to adjust the database:

- The 2017 data was treated as applicable unchanged to all the years the hospital had been in existence;
- Where a hospital was categorised as a

general hospital a rough breakdown of beds was used based on the general structure of known hospitals in the database; and

- Hospital categorised as “day” or psychiatric” had all beds added to those categories.
- The location data was based on the following approach:
- Hospital data provided by enumerator area from the Riskscape database was read into the time series database using practice code numbers. Missing data was based on enumerator area names developed using the actual addresses of hospitals. Where no database contained location information, the hospital was googled and information was taken directly from current websites.

Any gaps information that could not be obtained from the various databases were resolved through reviews of hospital websites.

FIGURE A8.1. FIGURE USED TO PROVIDE A VISUAL CONSISTENCY CHECK OVER THE PERIOD 2000 TO 2017

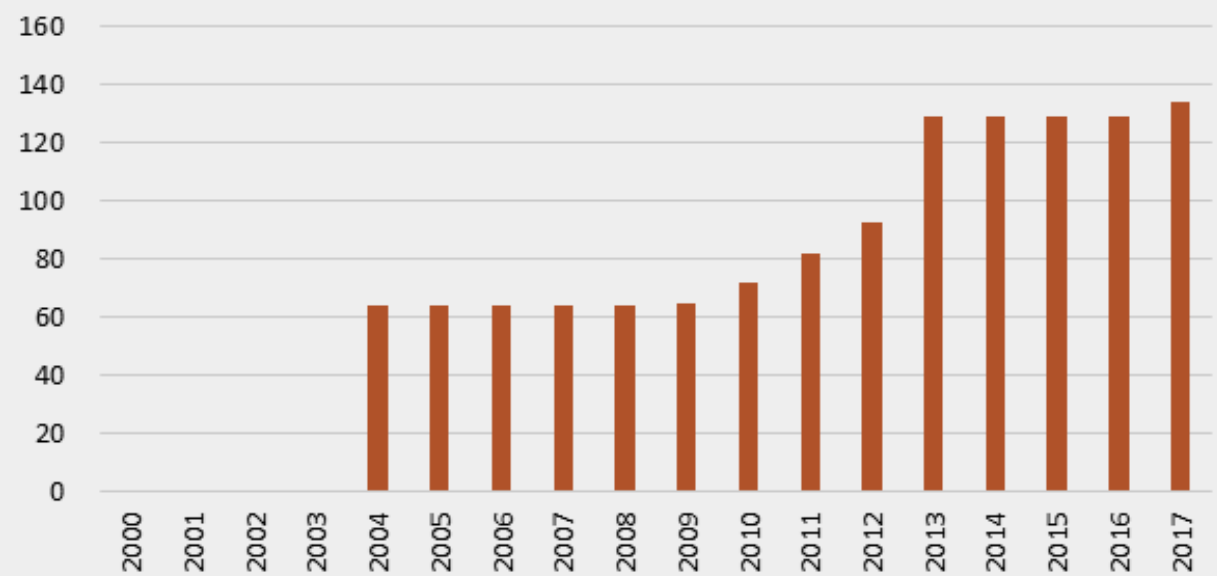


TABLE A8.6 TABLE USED TO PROVIDE A VISUAL CONSISTENCY CHECK OVER THE PERIOD 2000 TO 2017

Tzaneen	000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2014	2017
Total	0	0	0	0	64	64	64	64	64	65	72	82	93	129	129	129	129	134	129	134
	Results according to bed type																		2016	2017
Medical	0	0	0	0	18	18	18	18	18	16	20	23	25	35	35	35	35	35	**35**	**35**
Surgical	0	0	0	0	18	18	18	18	18	20	20	23	25	35	35	35	35	35	**35**	**35**
Maternity	0	0	0	0	12	12	12	12	12	12	15	17	19	28	28	28	28	28	**28**	**28**
ICU	0	0	0	0	3	3	3	3	3	3	3	5	8	10	10	10	10	10	**3**	**10**
ICU neonatal	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	6	**1**	**6**
ICU specialised	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**
High Care	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	3	**3**	**0**
Paediatric	0	0	0	0	12	12	12	12	12	13	13	14	14	17	17	17	17	17	**17**	**17**
Psychiatric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**
Day	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**
Orthopaedic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**
Oncology	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**3**
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	**122**	**134**

Chapter 9
Outcomes Measurement and Reporting

INTRODUCTION

1. An important element of an effective and well-functioning market is information. This means that any material information that may impact a buyer or seller's decision is known and well understood. It is widely accepted that healthcare markets are characterised by imperfect and asymmetric information.

2. Theory of Harm 5 in the HMI's Statement of Issues (SoI) deals with imperfect information. It is concerned with the extent to which imperfect information distorts outcomes in healthcare markets and harms competition.[1]

3. In the SoI the HMI argues that imperfect information could compromise patients' ability to choose medical schemes and to choose the most appropriate provider. In the Revised Statement of Issues (RSoI) the HMI stated that consumers are unable to make informed choices in the selection of health products due to lack of transparency in the healthcare sector.[2] In the RSoI the HMI also notes that imperfect information could compromise healthcare funders' ability to compare costs and quality when contracting with providers. Finally, it is also likely that most providers (practitioners and facilities) have incomplete information on the outcomes of the care that they provide.

4. In the RSoI the HMI stated that value-based competition requires the availability of cost and standardised outcomes data to enable competition to operate effectively. If outcomes data is not standardised, it becomes less useful. Therefore, the HMI is also interested in understanding the constraints to the collection, standardisation, and distribution of health outcomes data.

5. Information problems on medical schemes benefit options, the pricing and cost of provider services, and information on the quality and effectiveness of provider services affect patients, practitioners, hospitals and funders in various ways. A detailed discussion of information problems in healthcare is included in a report entitled "Towards an understanding of imperfect and asymmetric information in private healthcare" published by the HMI. This chapter will focus on information relating to the quality and outcomes of provider services. Other sources and consequences of imperfect information have been dealt with throughout the chapters dealing with assessments of the Funders, Facilities and Practitioners markets.

6. A promising quality improvement initiative is quality measurement and reporting. This requires defining quality indicators, collecting data, auditing the data, performing necessary risk-adjustment of the data, measuring quality using the indicators and disseminating the results to providers and

1. Health Market Inquiry's Statement of Issues, dated 01 August 2014.
2. Health Market Inquiry's Revised Statement of Issues, dated 11 February 2016.

the general public. Broad facets of quality that can be measured are structure, process, outcomes and patient experience. Although this chapter will focus on the measurement of outcomes, when reference is made to quality measurement it should be understood to mean any combination of the quality facets referred to above.

7. Information on outcomes can serve as a critical driver of competition and improved quality in healthcare as making comparable information on provider outcomes available to the public enables consumers to choose providers based on outcomes. Patients (or schemes) choosing providers with better outcomes will incentivise providers to invest in and adopt processes that improve outcomes. In this environment, providers are less likely to attract patients simply on the basis of proximity, qualifications, word of mouth, scheme contracts or networks, or organisational affiliation. They will also be able to benchmark their own performance relative to peers.

8. It has been shown internationally that quality measurement and reporting improves health outcomes. The mechanism from measurement to improvement in outcomes entails: (a) the collection of high-quality clinical process and outcomes data, (b) identification of variations in health outcomes and differences in clinical practice at local, regional and national level, (c) in- depth analysis of causes in clinical outcomes variations to identify adherence to best practice and to enhance best practice, and (d) active feedback of data to practitioners to enable identification and uptake of clinical best-practice.

9. Several critical success factors have been identified in this respect. They include:

    9.1 Clinician engagement: broad and active participation of the clinical community is critical to the success of an outcome measurement and reporting system. Outcome measurement has been shown to be more effective when clinicians are actively involved in defining indicators, collecting and interpreting data as well as in leading clinical improvement efforts. Therefore, any efforts aimed at creating an outcome measurement and reporting system must win the support of the clinical community.

    9.2 Patient's perspective: the most important objective of healthcare is to improve patients' health. Therefore, outcome measurement must be done from the patients' perspective, including patient-driven registration of symptoms, quality of life and functional status both pre- and post-intervention.

    9.3 National infrastructure: effective systems require common standards for tracking diagnoses and treatments at a patient level and an appropriate legal framework to support the quality measurement and reporting system. IT platforms used by providers should be compatible with those used by the organisation that collects quality data. In addition, governments should provide strategic direction to the institutionalisation of quality measurement and reporting and should make it part of a public discourse.

    9.4 Comprehensive, high quality data: it is important to ensure that data collected by the quality measurement and reporting organisation is reliable and comparable as this helps to win the trust of providers and broader stakeholders. This requires a combination of both choosing the right variables and having an adequate number of observations. Common standards for coding must be established and followed by all providers and case mix adjustment mechanisms need to be agreed to and applied.

    9.5 Outcomes-based incentives: when outcomes are a primary basis for contracting between providers and funders, value-based competition is stimulated. This is strengthened when consumers choose providers based on outcomes data and GPs base their referral decisions on outcomes of hospitals and specialists.

CONSUMERS

10. In order to choose the right provider, patients need information that they can use to compare different providers. Information on healthcare outcomes enables consumers to choose the most appropriate provider of healthcare given their illness.[3]

11. In the absence of high quality information, there is a risk that patients can make suboptimal decisions. Suboptimal decisions can have dire consequences in healthcare, including impairment or even the loss of life, but; more commonly, wasted expenditure on treatment that is unlikely to be effective. Therefore, given the health and economic risks posed by illness, the value of information in healthcare is high.

PRACTITIONERS

12. GPs can play an important role in the healthcare industry as the first point of contact for patients and through their referral function. When acting in an appropriate gatekeeping role, they refer patients to specialists and hospitals and suggest particular treatment options and medication. In order to perform these functions well, they need to have good information and knowledge regarding the patient's condition and preferences, while at the same time also being aware of the quality and costs associated with potential treatments, specialists and hospitals. GPs are also able to understand the information available.

13. Comparable information on the quality of provider services enables GPs to direct patients to appropriate high-quality specialists and hospitals. Directing patients to high-quality providers will intensify competition on quality in the market.

14. Patients purchase health services from doctors with the hope that they will be offered the optimal health services at the lowest feasible price. It is common cause that there is a fair amount of information asymmetry between the doctor and the patient because the patient knows less than the doctor about their illness, the correctness of diagnosis, and appropriateness of the treatment that may be provided by the doctor.

15. Doctors have a genuine interest in treating the patient as best they can, but are also in a position to use their information advantage to their own benefit and behave without consideration of the full financial impact of a particular course of treatment on patients. They can, for example, order extra tests to protect themselves from legal liability, use reciprocal referrals to specialists to their mutual advantage or refer to a hospital in which they have a financial interest and not necessarily to the best hospital for any specific patient. The public availability of reliable information on outcomes may mitigate this problem.

16. Access to information on outcomes also enables practitioners to benchmark themselves against their peers, which is vital for any improvement of treatment practices and outcomes.

FACILITIES

17. Health outcomes data would also enable facilities to benchmark themselves against their peers which, as with practitioners, is an important basis for quality improvement. It also enables more informed and objective engagement when facilities negotiate contracts with funders. In addition, it allows hospitals to engage practitioners more meaningfully on issues relating to quality.

QUALITY INDICATORS CLASSIFICATION

18. Quality measurement requires conceptual clarity on what should be measured. Quality measures are often classified into process, structure and outcomes measures.

19. *Process measures* seek to determine the extent to which providers follow best practice when offering their services. They are generally linked to procedures or treatments that are known to improve health status.

    19.1 Process measures often reflect professional standards of care and

3. Information problems between consumers and schemes or their administrators, such as stemming from moral hazard and adverse selection, are discussed throughout the Funders chapter.

derive from research evidence which shows processes that reliably improve particular outcomes.[4] They are therefore actionable in that the measure itself prescribes actions that providers need to take to improve their performance. They are less complex to calculate because there is less need for risk-adjustment. They can be collected immediately whereas outcome measures need more time.

19.2 Overreliance on process measures is however discouraged because they do not always predict outcomes accurately. Process measures may not directly measure the effectiveness and appropriateness of care but give credit simply for performing a particular action, or sequence of actions.[5] They can also suppress innovation, sensible critical thinking and accountability on the part of clinicians. This can occur if clinicians focus too much on adherence to process guidelines and less on other factors that are important for outcomes. It is for this reason that clinicians are critical about process prescriptions that restrict their space for discretionary decisions.

20. Structure refers to the attributes of the settings in which healthcare occurs. It includes attributes such as number and qualifications of practitioners, equipment, administrative systems, and the internal organisation of medical facilities. Structure measures share the same weakness as process measures in that variations in structural features do not sufficiently reflect variations of patient outcomes. Structure measures are necessary, but not sufficient, to ensure that providers deliver good outcomes.

21. Outcomes refer to results achieved for a patient after a given set of interventions. Outcomes are measured at the level of the individual patient and seek to determine the impact of care received on the health status of the patient.[6]

21.1 Outcomes are what ultimately matter to patients. When combined with cost data, they enable measurement of value which is an appropriate indicator for comparing providers.

21.2 Whilst health outcomes are what ultimately matter to the patient, their measurement and interpretation is not straightforward because they depend on factors other than medical intervention including social determinants of health, severity of illness, co-morbidity, age, etc. For outcome measures to be correctly interpreted, it is therefore necessary to risk-adjust the data to control for these factors.

21.3 Outcomes measurement requires a sample size that is large enough to provide statistically meaningful results. Often adverse outcomes are rare, requiring data on many patients to draw robust conclusions. This challenge is worse in small hospitals that may have a small number of patients for specific procedures.

22. In addition to outcomes, structure and process measures, there is widespread use of patient experience indicators. These indicators provide feedback on patients' experiences of care but must be carefully interpreted because patients may value something that has no relationship to good health outcomes. For example, patients may like a friendly provider and a well-designed consulting room and report positively on the experience but nonetheless experience poor health outcomes.

23. The remainder of the chapter is organised as follows: section II provides a policy and legal context for quality measurement in South Africa, section III discusses quality measurement efforts in South Africa, section IV outlines a framework for outcomes measurement and reporting, and section V contains recommendations.

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4. R Berenson, P Pronovost and H Krumholz (2013). 'Achieving the Potential of Health Care Performance Measures'.
5. A hospital might receive credit for administering a recommended medication, even if the wrong dose is administered, or used in a patient at risk for an adverse drug interaction.
6. Health Systems Improvement (2004). 'Measuring Healthcare Quality: an Overview of Quality Measures'.

POLICY AND LEGAL CONTEXT

POLICY CONTEXT

24. The provision of quality health services is an important priority for the South African government. The National Department of Health's vision is a long and healthy life for all South Africans, its mission is to improve the health status of South Africans and to improve the health delivery system by focusing on quality of care, access, efficiency and sustainability.[7]

25. One of the targets in the National Development Plan (NDP) is for the health system to provide quality care to all South Africans by 2030.[8] The NDP proposes a number of reforms aimed at improving quality of healthcare. These include the use of evidence to inform clinical practice and maximum support to promote quality. The NDP also proposes reforms aimed at health information systems, including the development of effective data systems, integration of information systems across spheres of government and ensuring that these systems link to secure online electronic patient records and other data systems.

26. The government has also proposed a National Health Insurance scheme which aims to provide universal coverage of quality health services for all South Africans. In order to support high quality delivery of health service, all health facilities will be required to comply with national norms and standards for quality. When the NHI becomes operational only health facilities that meet approved standards will be certified by the Office of Health Standards Compliance (OHSC) to render services, and will be eligible for accreditation and contracting through the NHI Fund.[9]

27. The NHI also makes provision for the measurement of patient satisfaction. According to the NHI White Paper (as amended) the patient satisfaction results will be used by the OHSC to identify gaps and put in place action plans to ensure sustained patient satisfaction.

28. 28. In order to be eligible for contracting with the NHI Fund, providers will be required to regularly submit specified information which will be used to monitor health outcomes. Providers will be assessed against indicators of clinical care, health outcomes and clinical governance and not simply on perceived quality of services.[10] The NHI White Paper does not clearly specify an institution that will be responsible for the administrative work associated with the collection, analyses and dissemination of health outcomes information.

LEGAL CONTEXT[11]

29. The relevant laws that apply to information on the quality of provider services include the Constitution, the Promotion of Access to Information Act (PAIA), the Health Professions Act (HPA), the National Health Act (NHA), and the Medical Schemes Act (MSA).

30. According to section 32 of the Constitution, everyone has a right of access to any information held by another person that is required for the exercise or protection of rights (such as the right contained in section 27 of the Constitution to have access to healthcare services). Section 32 further states that national legislation must be enacted to give effect to this right.

31. The PAIA was promulgated to give effect to this right. However, the PAIA applies to recorded information. This means that a party can sidestep another party's right to information by not recording the information. Currently, healthcare providers are not required to record any information regarding the quality of healthcare services. Therefore, the disclosure of such information will not be

7. National Department of Health. Vision & Mission. [ONLINE] Available at: https://www.samedical.org/cms_uploader/viewArticle/146. [Accessed 10 March 2017].
8. National Planning Commission. 'National Development Plan 2030: Executive Summary".
9. National Department of Health (2017). National Health Insurance for South Africa.
10. National Department of Health (2017). National Health Insurance for South Africa.
11. A more detailed discussion of the legal framework see Annexure X which is a report titled "Legal context to imperfect and asymmetric information".

enforceable via the PAIA. The little quality information that providers have is patchy and it is not collected in a standardised form across the industry. Therefore, even a mandate to record information without agreement on specifications and standardisation of this information would not substantially change the status quo.

32. Section 74(1) of the NHA requires the National Department of Health to facilitate and co-ordinate the establishment, implementation and maintenance of health information systems. Good health information systems are an essential feature of successful quality measurement and reporting systems. Therefore, the development of a well-functioning nationally comparative information system will contribute towards the success of quality measurement and reporting initiatives. It will also help to reduce the fragmentation of information in the healthcare system. However, it will not solve the problem of the lack of information if the information is not verified and if it does not compel providers to make available such information.

33. The OHSC and the CMS have statutory mandates which include the collection and dissemination of healthcare information. The OHSC is a statutory body created by the National Health Amendment Act (NHAA) of 2013. Its main function is to "*inspect and certify health establishments as compliant or non-compliant with prescribed norms and standards or, where appropriate and necessary, withdraw such certification*".[12] The NHAA 2013 also established the Health Ombudsman which is located within the OHSC. The main function of the Health Ombudsman is to "*investigate complaints relating to breaches of prescribed norms and standards*".[13]

34. The OHSC quality domains are mostly structural and to a lesser extent process and patient experience. It does not focus on patient outcomes. For example the six priority areas for measurement are waiting times, cleanliness, values and attitudes, availability of medicines, patient safety, and infection prevention[14]. The OHSC is allowed, but not compelled, to collect information relating to prescribed norms and standards.[15] The OHSC is mandated to publish information relating to prescribed norms and standards.[16]

35. The role of the OHSC is that of an inspectorate, guaranteeing adherence of providers to minimum norms and standards of care by inspections on site and by certification of providers that comply with the prescribed norms and standards. Its role is therefore not that of an institution that facilitates provider benchmarking and analysis of registered outcomes in feedback loops between providers and a central analytical professional centre, nor does it extend to the collection and dissemination of standardised information on patient outcomes relevant for patients' choice, bargaining and contracting between funders and providers.

36. One of the functions of the Council for Medical Schemes is to "*make recommendations to the Minister on criteria for the measurement of quality and outcomes of the relevant health services provided for by medical schemes, and such other services as the Council may from time to time determine*"[17]. Another function of the Council for Medical Schemes is to "collect and disseminate information about private health care"[18].

37. The above provision can be interpreted as granting the CMS powers to recommend indicators that can be used to measure the quality of healthcare. The MSA also empowers the CMS to collect and disseminate information about the private healthcare. However, the MSA does not regulate providers, it is limited to regulating funders. Therefore, these provisions cannot be used

12. Ibid
13. Ibid
14. Office of Health Standards Compliance, 2015/2016 Annual Inspection Report.
15. Ibid
16. Ibid
17. Section 7 (c) of the Medical Scheme Act No. 131 of 1998.
18. Section 7 (e) of the Medical Scheme Act No. 131 of 1998.

to enforce the collection and dissemination of health quality data from providers. It was submitted by MMI that minor amendments to the MSA would enable the CMS to collect outcomes data from providers, analyse, and disseminate it to the public.[19]

Conclusion on Policy and Legal Context

38. 38. Outcomes measurement and reporting is recognised as an important tool for quality improvement in policies relating to healthcare, and can also enhance competition. The policies and legislation discussed have objectives for outcomes measurement and reporting but none provide direct support for the mandatory collection and provision of data on healthcare outcomes and have not been translated into systematic actions at a national (or any other) level to monitor, benchmark, and disseminate quality information.

QUALITY MEASUREMENT INITIATIVES IN SOUTH AFRICA

39. In the course of the Inquiry, stakeholders were engaged on the issue of quality measurement and reporting through submissions and public hearings and through the conduct of consumer and doctor surveys. Following these engagements and its own research, the HMI issued a Discussion Document on the measurement and reporting of health outcomes (Discussion Document).[20] Stakeholders responded to the discussion document through written submissions and oral discussions in a follow-up seminar which was hosted by the HMI on the 22nd of September 2017.

40. All three large private hospital groups (Netcare, Mediclinic and Life Healthcare) undertake various forms of quality measurement. Their results are not shared with the general public but are used internally and shared with doctors and medical schemes. An exception to this is Mediclinic's patient experience survey. Mediclinic uses a patient experience survey to measure the quality of its hospital level services. The survey results are made public at a hospital level through a publicly accessible website.[21]

41. In principle, all three major hospital groups support the idea of introducing health outcomes measurement and reporting. However, they emphasised that all private hospitals should be compelled to register and publish their health outcomes. They argued that selective publishing of outcomes might lead to misinterpretation of the results and could have a negative impact on their business.[22] A statutory obligation on hospitals to provide quality metrics will be more effective than reliance on voluntary cooperation.[23]

42. Hospital groups recommend the establishment of an independent body that will collect outcomes information from doctors and hospitals, analyse .data and disseminate it to the public. They also emphasised the importance of involving doctors in the process which includes securing their buy-in and allowing them to lead and take part in designing the outcomes measurement and reporting system. They also argued that there should be agreement amongst stakeholders on how the quality metrics are defined, standardised, audited and published.

43. The Hospital Association of South Africa (HASA) commissioned a report which assesses quality measurement and reporting in South Africa. The report relies on international literature, interviews with local stakeholders and international experts, and the author's own experience in the healthcare sector. The report strongly

19. MMI Health's submission to the HMI's Discussion Document and Call for Submissions on Health Outcome Measurement and Reporting, dated 18 September 2017.
20. Health Market Inquiry's document titled "Health outcome measurement and reporting: Improving the cost and effectiveness of clinical care in a competitive private healthcare sector in South Africa", dated 28 August 2017.
21. Mediclinic. 2017. Patient Experience Survey Results. [ONLINE] Available at: http://patientexperience.mediclinicinfohub.co.za/. [Accessed 20 June 2017].
22. Health Market Inquiry's public hearing held on the 10th of March 2016.
23. Health Market Inquiry's public hearing held on the 10th of March 2016.

supports outcomes measurement and reporting. Findings of the report include:[24]

43.1 Many South African hospitals measure some aspects of quality. However, the results are generally not shared with the general public at a hospital level but are used internally and shared with funders. The approaches followed by hospitals were not designed to enable comparability across the private sector.

43.2 Quality measurement and reporting has now been mandated in most international settings reviewed in the HASA report. The report further notes that voluntary action could have varying levels of participation which may impose costs less fairly. Simply mandating providers to participate is however not sufficient, a willing, multi-stakeholder engagement which harnesses intrinsic motivation and professionalism is required.

43.3 According to the HASA report industry stakeholders strongly believe that any organisation tasked with quality measurement and reporting must be independent from government and other stakeholders.

43.4 The HASA report cautions against entrusting the OHSC with quality measurement and reporting because, it argues, the OHSC is perceived to lack independence and has limited capacity.

44. In addition to hospital groups, there are many organisations that are currently involved in quality measurement and reporting. These include the Independent Practitioners Association Foundation (IPAF), Health Quality Assessment (HQA), Discovery Health, and Lancet Global Health Commission.

45. Independent Practitioners Association Foundation (IPAF)[25]

45.1 IPAF is a voluntary organisation of GPs who are in private practice. It was formed to represent the interest of GPs. Its mission is to promote quality and cost-efficient patient – centric care. It has collaborated with medical schemes to measure the quality of services offered to medical scheme members. Participation by GPs is voluntary. Of the more than 5000 GPs who are members of IPAF, about 3500 participate in the quality measurement process.

45.2 IPAF measures quality using the medical schemes' data based on the following indicators: 6 screening and preventative care metrics, 3 disease management process metrics,and 3 disease management outcomes metrics.[26] The data is used to create benchmark reports which are used in the peer review process.

45.3 The results are shared with individual doctors, IPAF and with participating medical schemes. IPAF uses the results to make informed decisions about what to communicate to doctors. For example, if the results show general overuse of antibiotics, IPAF will share with GPs information relating to the best practice regarding antibiotics use. The data is not shared with the general public. The initiative has sufficient buy-in from doctors through IPAF but it is not imposed by the medical schemes.

46. Health Quality Assessment (HQA)

46.1 HQA is a not-for-profit organisation which was established by the private health sector in 2000 and started operating in 2004. Its members are predominantly firms that are involved

24. Insight Actuaries & Consultants (2017). "Quality Measurement and Reporting in the South African Private Hospital Industry". The report contains a rich menu of national and international analyses and recommendations, and can be found on the HMI's website.
25. This is based on IPAF's presentation in the Health Market Inquiry's public hearing held on the 03rd of March 2016.
26. They measure the number of days in hospital for respiratory diseases, cardiac diseases and diabetes. Even though they call these outcome measures, they are not strictly outcome measures but proxies for outcome measures.

in the funding side of the healthcare sector and also includes practitioner associations such as IPAF and SAMA.

46.2 HQA is governed by a board which includes representatives from the Board of Healthcare Funders of Southern Africa (BHF), medical schemes, and the SA National Consumer Union (SANCU). The HQA has a multi-disciplinary and multi-stakeholder Clinical Advisory Board appointed by the HQA Board from its member organizations.

46.3 The purpose of HQA is to "develop a health audit report for the healthcare industry that focuses on quality, with the goal of becoming the South African national standard for objective quality performance measurement".[27]

46.4 HQA has developed a set of nearly 200 health quality indicators. The indicators are process and usage indicators, the latter being used as proxies for outcome indicators. The use of proxy indicators instead of true outcome indicators is purportedly due to a lack of availability of clinical data.

46.5 HQA measures quality based on data submitted by 19 medical schemes. The data represents 78% of the insured lives in the South African medical schemes industry[28]. From these data HQA produces an annual aggregate report as well as scheme- specific reports. The report with aggregated results are shared with all members and affiliate members of HQA.

47. Discovery Health

47.1 Discovery Health's quality measurement initiatives include patient experience surveys, measurement of selected outcomes (mortality and readmissions) and measurement of adverse events. It also measures quality through the HQA and the Industry Technical Advisory Panel created by the CMS.

47.2 One of Discovery Health's patient experience surveys is based on the rating of in-hospital care by DHMS adult members after their discharge from hospital. The survey started in 2014. Results of the top 20 hospitals are published and available to the public.[29]

47.3 Other quality of care initiatives by DH include the provision of cost and quality data for select specialists. Quality reports are drawn at the individual level and demonstrate the doctor's performance relative to peers. The reports measure performance using readmission rates, diabetics bundle tests and the use of potentially inappropriate medications (PMIs) in patients over 65 years.[30] Performance is therefore not based on true outcome measures.

47.4 The reports are supported by peer review by the relevant professional bodies so that doctors are coached by their peers on how and what to improve. The reports also form the basis for alternative reimbursement arrangements that reward providers who demonstrate improvement on key quality measures.

47.5 Discovery Health has a number of value-based contracting initiatives. They submitted that value-based contracting could progress faster if there was a more accommodating regulatory environment. An example of a regulatory impediment is that when Discovery Health wanted to implement a bundled fee for hip/ knee replacements and build in outcome measures, they were stopped by the HPCSA that was of the view that this would go against HPCSA ethical rules.[31]

27. HQA's submission of 18 September 2017 tiled "Quality Measurement in Healthcare".
28. HQA's submission of 18 September 2017 tiled "Submission to the HMI".
29. The results are available on: https://www.discovery.co.za/medical-aid/patient-survey-score
30. Discovery Health's Quality Presentation to the HMI on the 11th of August 2017.
31. Health Market Inquiry's meeting with Discovery Health on 11 August 2017.

47.6 In 2006 Discovery Health published an index to compare and rank hospitals on quality and value to the general public. The index, referred to as the Hospital Rating Index, was created from claims data by combining factors such as mortality, complications of care and readmissions together with cost information.

47.7 The publication of the index was welcomed by the media and consumers but faced strong resistance from hospitals. Because of this resistance DH withdrew the publication.[32]

47.8 Hospitals and doctors raised concerns about data quality in the publication due to poor coding of quality information submitted by hospitals. In addition, hospitals argued that the index is not a reliable measure of quality because it is based on a limited sample. By using DH data only, the index excludes data from patients belonging to other medical schemes and data relating to self-funded patients. Given that there is no legal mandate for hospitals and doctors to submit clinical information, legal concerns were raised about whether hospitals and doctors were being unjustifiably maligned.

48. Lancet Global Health Commission

48.1 Lancet's Global Health Commission on High Quality Health Systems (HQSS Commission) started a health quality improvement initiative which focuses on low-income and middle-income countries. The HQSS Commission brings together academics, policymakers, and health system experts from 18 countries (including South Africa).

48.2 The South African arm of the HQSS Commission is chaired by two medical professors who form part of a 15-member expert team drawn from the public and private sectors, universities, training and research institutions, patient advocacy groups, statutory bodies, quality assurance and health systems organizations.

48.3 The HQSS Commission observed that there is no consensus on quality metrics in low and middle income countries. It also notes that "*patients' experience of care and patient reported-outcomes, which influence people's decisions to use or avoid services and provide valuable insights on performance, are rarely measured*"[33].

48.4 One of the HQSS Commission's working groups is the Measurement Working Group. It has the following tasks: (a) to assess the usefulness of current quality measures, (b) to propose new measures, (c) to identify quality measurement research agenda and (d) to explore innovative and efficient tools for measuring quality.

CONCLUSION ON QUALITY MEASUREMENT INITIATIVES IN SOUTH AFRICA

49. There are a number of organisations involved in various forms of quality measurement in South Africa. However, their results cannot be compared because they do not use the same indicators to measure quality and do not measure the same quality dimensions. Their results are generally not shared with the public. In the case of hospitals the results are shared with doctors and some of it is also shared with medical schemes.

50. There is no common definition of what quality is and there are no common indicators that are used across the private healthcare sector. As a result, where data is collected, different methods and measures are used for collection.

51. Even if the results were to be made available to the general public, there is still a problem of credibility and comparability. This is because the healthcare quality data that is collated

32. Discovery Health's submission to the Health Market Inquiry titled 'Quality Monitoring and Reporting', dated 06 July 2016.
33. M Kruk, M Pate and Z Mullan (2017). "Introducing the Lancet Global Health Commission on High-Quality Health Systems in the SDG Era". Lancet Global Health Journal, Vol. 5, No. 5.

is not standardised, it is not prepared by an independent and trusted organisation and is not scientifically verified. So there is no shared understanding of how each provider defines and measures outcomes and how its performance must be understood.

52. Without sufficient buy-in by practitioners and by hospitals and without enabling legislation, unilateral collection and publication of quality data will cause disputes and contestation limiting any impact on quality, on the empowerment of patients and on competition in general. This is evident in the experience of Discovery Health in its attempt to publish the Hospital Rating Index. Where providers have collected data themselves, as in the case of IPAF there seems to be more buy-in.

53. Most of the data that is collected is structure and process data, it is seldom on outcomes. In cases where stakeholders say they measure outcomes, they often use proxy indicators and not true outcome indicators. Most patient surveys focus on patient's experience of care, not on patient reported outcomes.

A QUALITY MEASUREMENT AND REPORTING SYSTEM FOR SOUTH AFRICA

STAKEHOLDER RESPONSES TO THE DISCUSSION DOCUMENT

54. Recommendations made in the HMI's Discussion Document include: that the quality measurement and reporting system in South Africa should focus on outcomes measurement, establishment of a new and independent statutory body to perform this function, mandatory reporting, staged implementation of outcomes measurement, and funding options for the implementation of a quality measurement and reporting framework. Funding options that were proposed in the Discussion Document are government funding, levies, voluntary funding and a hybrid funding model. The envisaged statutory body was referred to in the Discussion Document as the Outcome Measurement and Reporting Organisation (OMRO).

55. The focus on outcome indicators is supported by most stakeholders who responded to the Discussion Document. However, some stakeholders submitted that outcome indicators should be complemented by structure and process measures, particularly where process and structure measures are already accepted by doctors and have been shown to improve outcomes.[34]

56. An overwhelming majority of stakeholders emphasised the importance of a strictly independent and targeted organisation to collect, analyse data and disseminate information to participating doctors, facilities and ultimately to the public.

57. Some stakeholders questioned the establishment of a new organisation. Their argument is that it could be wasteful and that some of the existing institutions have capacity to perform proposed functions of the OMRO. Their recommendation is that the health sector should build on these institutions so that they are able to measure and report health outcomes at a national level.

    57.1 It was submitted that the proposed functions of the OMRO should be carried out by the OHSC and the National Department of Health. This is because of the need to ensure that quality measurement and reporting covers both the public and private sectors.[35]

    57.2 It was also recommended that the OMRO function be assigned to the CMS as a transitional arrangement until capacity is better developed. It was argued that only minor amendments to the Medical Schemes Act are required to make OMRO functions part

34. Medscheme's submission to the HMI's Discussion Document and Call for Submissions on Health Outcome Measurement and Reporting, dated 18 September 2017.
35. BLF's submission to the HMI's Discussion Document and Call for Submissions on Health Outcome Measurement and Reporting, dated 18 September 2017.

of the CMS's functions.[36] Instead of establishing a new body, the capacity of the CMS or OHSC should thus be expanded to enable outcomes measurement and reporting.[37]

58. Many stakeholders who responded to the Discussion Document support mandatory provision of outcomes data. However, some stakeholders have expressed concerns about the administrative burden and the cost of mandatory participation[38] [39].

59. Some stakeholders emphasized that doctors must, in principle, initially be approached on a voluntary basis, and; with the right financial incentives in place, can be expected to cooperate.[40]

60. It was submitted that quality measurement and reporting should apply equally to both private and public sectors because all South African citizens have a right to high quality care irrespective of where they receive that care.[41]

61. There is mixed support for each of the funding models. Some stakeholders are of the view that the OMRO should be funded by the government.[42] Others believe it should be funded by means of a patient levy payable in both the public and private sectors.[43] Others argued that the OMRO should not be funded by a single source, and therefore propose a hybrid model[44] [45]. Some suggested that voluntary funding would be a good source of funding for the initial transition period but not for long term sustainability.

62. It was recommended that a sub-committee representing key stakeholders should be created to advise on the most robust funding model taking into consideration some of the funding options proposed in the Discussion Document.[46]

HMI'S VIEWS

Focus on measuring outcomes

63. Structure, process and patient experience measures matter insofar as they result in better outcomes. Quality measurement and reporting is costly to providers in terms of financial, human and other related resources. Given that outcome indicators are the most useful and cognisant of the need to minimise the provider cost of collecting data, the HMI recommends that the quality measurement and reporting system that will be part of its recommendations should focus primarily on measuring outcomes.

64. The OHSC accreditation criteria will include structure, patient experience and to a lesser extent process measures. The OHSC measurement is expected to be rolled out to the entire healthcare system including the private sector. Therefore a focus on outcomes

36. MMI Health's submission to the HMI's Discussion Document and Call for Submissions on Health Outcome Measurement and Reporting, dated 18 September 2017.
37. The South Africa Medical Association's submission to the HMI's Discussion Document and Call for Submissions on Health Outcome Measurement and Reporting, dated 18 September 2017.
38. South African Society of Anaesthesiologists' submission to the HMI's Discussion Document and Call for Submissions on Health Outcome Measurement and Reporting
39. The South African Medical Association's submission to the HMI's Discussion Document and Call for Submissions on Health Outcome Measurement and Reporting, dated 18 September 2017.
40. The South African Orthopaedic Association's submission to the HMI's Discussion Document and Call for Submissions on Health Outcome Measurement and Reporting.
41. Best Care Always's submission to the HMI's Discussion Document and Call for Submissions on Health Outcome Measurement and Reporting, dated 18 September 2017.
42. Universal Care's submission to the HMI's Discussion Document and Call for Submissions on Health Outcome Measurement and Reporting, dated 18 September 2017.
43. The Independent Practitioner Association Foundation's submission to the HMI's Discussion Document and Call for Submissions on Health Outcome Measurement and Reporting, dated 14 September 2017.
44. Life Healthcare's submission to the HMI's Discussion Document and Call for Submissions on Health Outcome Measurement and Reporting, dated 18 September 2017.
45. The Council for Medical Scheme's submission to the HMI's Discussion Document and Call for Submissions on Health Outcome Measurement and Reporting, dated 18 September 2017.
46. Health Funders Association's submission to the HMI's Discussion Document and Call for Submissions on Health Outcome Measurement and Reporting, dated 18 September 2017.

is also justified by the fact that other aspects of care are covered by the OHSC.

Independent statutory body

65. The independent model of governance is often used when creating regulatory entities where commercial stakes are high and any interference with processes is detrimental to the public and private trust in outcomes. Regulators such as the Competition Commission and the Council for Medical Schemes are based on this model. It is also used by other institutions that provide vital information and services such as Statistics South Africa and the South African Reserve Bank.

66. The primary reason for an independent governance structure is to insulate the day-to-day operations and decisions of the regulatory entity from political and commercial considerations.[47] Independence increases trust in the regulatory entity by stakeholders and members of the public. Here, the HMI is contemplating who should measure the outcomes of sometimes very complex interventions in people's lives and health, the impact of which in itself can be challenging to fully comprehend.

67. The HMI finds it essential that outcome measures are based on highest professional and scientific standards, designed and fully supported by doctors, and that results can be trusted beyond any doubt – both by the medical practitioner and the patient alike. The HMI therefore recommends that outcomes measurement and reporting should be carried out by an independent statutory professional body with no other task than this. The statutory body will be referred to as an Outcomes Measurement and Reporting Organisation (OMRO).

68. The OMRO should be able to make operational decisions without prior approval of any government or private entity. It must not be unduly influenced by any specific interest. It must however not operate in isolation; it needs the full cooperation and involvement of key private stakeholders, regulators and government. It must be fully transparent and accountable to these structures for its overall performance.[48]

69. The OMRO should be created by primary law, rather than by a decree or other subsidiary legislation. Its powers, functions, how and to whom it will account, executive organisational structure and funding should be clearly set out in the primary law.

70. The OMRO should have board members that are appointed by the President with recommendations from Parliament. Board members should come from diverse professional background and training which must include a combination of the following: statistics, medical sciences, medical practice, and healthcare financing. At least one board member must come from one of the following stakeholder groups: hospitals, practitioners, funders, academia, public sector, and patient representatives.

71. The envisaged OMRO must have organisational independence, financial independence and management independence. Organisational independence means that the OMRO must be organisationally separate from the Government and from the private sector.

72. Financial independence means that the level of funding should not depend directly on the associated industry (the private healthcare sector in this case) or Government. This is operationalised by mandating relevant private healthcare stakeholders to pay levies, supplemented by funds from the State to be approved by Parliament. Management independence means that the executive and staff of the OMRO must have autonomy over internal administration and should be protected from dismissal without due cause.

73. Independence does not mean that the government has no role to play in the outcomes measurement and reporting system. Government has a role to play in providing strategic direction and in helping to make outcomes measurement and reporting part of the public discourse. Government is primarily responsible for healthcare policy

47. The World Bank (2006). Handbook for Evaluating Infrastructure Regulatory Systems.
48. The OMRO must publish an annual report on its performance to the public. It should present itself to Parliament annually to report and account for its performance.

and the OMRO objectives and functions should align with Government policies. Independence is difficult to achieve if the objectives and functions of the OMRO are unclear or ill-defined.

Functions of OMRO

74. The OMRO will be responsible for identifying conditions that will be prioritised for outcome measurement and reporting (which may change over time). It will also be responsible for creating outcome indicators that will be used to measure health outcomes. It should work with registries and providers to collect clinical outcomes data from providers. It should; together with registries, professional medical societies, funders, Government and hospitals, advocate for measurement of outcomes by doctors.

75. OMRO should provide expert support (which include clinical, epidemiological, methodological, logistical, technical and legal expertise) across providers through its central management structure. It should also provide central implementation support by helping to reduce the administrative burden of data collection.

76. OMRO should play a role in ensuring data accuracy, maintenance of patient confidentiality. It should pre-define the data format for submission and ensure that it is standardised across all providers, and should also ensure that the data is de-identified.

77. Once the data is collected, OMRO should risk-adjust the data, perform any relevant analysis and report the data back to providers and the public. It should identify variations in outcomes and work with providers on efforts to improve their outcomes.

New Body

78. In a survey conducted by the HMI, practitioners were asked to express their views on an organisational method for outcomes measurement and reporting.[49] They were asked to rank each of the following options: (a) discipline specific societies, (b) Colleges of Medicine (c) HPCSA, (d) the OHSC, (e) universities, (f) a new body specifically set up for measuring and reporting clinical outcomes.

79. The structure most preferred by practitioners is discipline specific societies, followed by a new body and then by Colleges of Medicine. The least preferred structure is the HPCSA, followed by the OHSC, universities fall in the middle.

80. Given that a new body is one of the organisational structures preferred by doctors, the HMI recommends that outcomes measurement and reporting in South Africa should be carried out by a new body created for this purpose. The new body should collaborate with discipline specific societies.

81. The survey also assessed the attitude of practitioners on reporting clinical outcomes. The majority of doctors (77%) said they would be happy to participate in reporting clinical outcomes amongst themselves.[50] Fifty five percent of doctors said they support the reporting of clinical outcomes to the public whereas 25% indicated that they are opposed to it, the remaining 20% are indifferent.

Mandatory Reporting

82. One of the factors for success of an outcomes measurement and reporting system is comprehensive data.[51] This requires sufficient participation by providers and the inclusion of a sufficiently high number of patients. Under a voluntary reporting system there is no guarantee that the data collected will be comprehensive. This may result in under-reporting which may in turn undermine the credibility of reported outcomes data.

83. The HMI recommends mandatory provision of outcomes data by providers to the OMRO. To

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49. The number of doctors who responded to the survey is 696, which is a 3% response rate. Many of these practitioners are based in the Gauteng province, followed by KZN and the Western Cape. The patient population served by the practitioners is largely from large metros and small towns.
50. 13% said they are indifferent, 5% said it is neither relevant nor useful and a further 5% said they would not want to participate.
51. International Consortium for Health Outcomes Measurement (2016). 'Building National Outcomes Registries in the Netherlands: the Dutch Institute for Clinical Research'.

give effect to mandatory provision, the OMRO should have legislated legal powers which will allow it to collect outcomes data from providers.

84. Voluntary buy-in and participation is always more effective than forced participation. Mandatory legal provisions may then serve as a 'last resort' measure. Practically this may happen automatically since legislation takes some years to be promulgated.

Consistency with NHI

85. Both the NHI and the NDP refer to the need for quality improvement and measurement efforts that apply to the entire healthcare system. The future NHI Fund will procure services from public and private facilities. Therefore, it is necessary that all facilities be subjected to comparable outcome standards and registration requirements. The requirement of outcomes measurement and reporting should thus apply equally to both public and private providers.

86. One of the central concepts introduced by the NHI White Paper is "strategic purchasing". An important dimension of strategic purchasing will be cost–effectiveness or value for money.[52] This requires information on health outcomes and the costs of services. Outcomes measurement and reporting is thus expected to be an important part of the NHI Fund in its role as a strategic purchaser.

87. The NHI will use treatment guidelines to guide the delivery of healthcare services. The guidelines will be based on available evidence about the most cost-effective interventions.[53] Cost-effective interventions are those that result in the highest outcomes per cost or those that minimize cost of a given outcome. Information on health outcomes will help to determine the most cost-effective interventions.

88. Outcomes will improve if providers know their performance relative to peers and are incentivised to act on that knowledge. The NHI Fund should incorporate outcomes-based metrics when contracting with providers and its contracting should reward providers with better outcomes.

Staged implementation

89. A statutory body will require a relevant statute which takes time to develop and pass. Even after the statute has been developed, there can be a long lag before the body starts operating. Measurement and reporting should not wait for the legal framework to be finalised. The outcomes measurement and reporting system should therefore be introduced in a staged manner. It should start with voluntary participation, followed by mandatory provisions in later years once the legal structure has been established.

90. The staged process should have a first phase and a second phase, as explained below:

91. First phase (within 3 – 4 years from [date]):

    90.1 The legal framework that will establish the OMRO should be finalised in the first phase. The development of a legal framework should be undertaken by the National Department of Health in consultation with the relevant stakeholders.

    90.2 Relevant stakeholders (government, facilities, practitioners, patient representative groups, funders) should create a body to be used for developing a voluntary outcomes measurement and reporting system.

    90.3 The constitution of the body could resemble that of the Dutch Institute for Clinical Auditing (DICA). DICA is a body that facilitates collaboration around health outcomes measurement and reporting in the Netherlands. The organisation currently maintains 19 national registries covering a range of medical conditions such as breast cancer and spinal surgery. It includes professionals from a wide range of disciplines such as analytics, clinical medicine, information technology, administration and law. DICA follows a process outlined below in forming a registry, measuring and disseminating outcomes data:

52. National Department of Health (2017). National Health Insurance for South Africa.
53. National Department of Health (2017). National Health Insurance for South Africa.

a) DICA and the condition-specific professional medical society agree to collaborate on outcomes measurement and reporting.

b) DICA and the condition-specific professional medical society form a Scientific Board of clinicians and methodologists to develop a dataset for measurement by participating hospitals.

c) DICA facilitates measurement at provider sites and the professional medical society advocates measurement of the dataset to its clinicians across the Netherlands.

d) Participating hospitals submit their data to the registry. Once the data is submitted, DICA analyses, risk adjusts and reports it back to the participating hospitals and professional medical society[54].

90.4 The voluntary body should identify specific conditions for outcome measurement and reporting. For each condition, the voluntary body must come up with outcome indicators that will be used to measure performance of providers. For each condition, the process must involve clinicians with expertise in that condition and if possible a condition-specific medical association.

90.5 One of the potential organisations that could oversee the voluntary process is the HQA. The CMS is another possibility. However, the CMS is not focused exclusively on quality measurement. Outcomes measurement and reporting will be more effective if undertaken by a body that is created to focus exclusively on quality.

90.6 Both the HQA and the CMS have developed internal capacity for quality measurement. Their quality measurement however is currently based on data from medical schemes. HQA membership is largely funders, if it were to assume the role of the voluntary body it will need to broaden its membership to include providers. In addition, it will need to collaborate with existing registries, practitioner associations, and academics to measure outcomes from providers at a national level.

90.7 There are international organisations such as ICHOM and the AHRQ that develop outcome indicators. Indicators that have been developed by these organisations can be adapted for use in the local setting. These indicators are tested in international practice and are available free of charge. Therefore, the body need not come up with completely new indicators.

90.8 ICHOM focuses exclusively on outcome indicators. It develops a set of indicators for identified medical conditions ranging from digestive to cardiovascular conditions. ICHOM currently has standard sets for 21 conditions and is working on 10 more conditions. ICHOM's current standard sets cover 47% of the global disease burden, and they are targeting 50% of the global disease burden by the end of 2017.[55] Examples of indicators developed by ICHOM are: one-year post - treatment mortality rate in patients diagnosed with invasive breast cancer and change in bowel symptoms in patients diagnosed with inflammatory bowel disease, measured every 6 months from the time of diagnosis or start of treatment.

90.9 In the first phase, indicators that have been agreed upon through the voluntary process can for instance be tested in a sample of hospitals from each facility group and from independent providers. Results and experiences from the voluntary process should be used as an input towards developing the OMRO. They can also be used internally by providers to promote adoption of best practices.

54. International Consortium for Health Outcomes Measurement (2016). 'Building National Outcomes Registries in the Netherlands: the Dutch Institute for Clinical Research'.
55. International Consortium of Health Outcomes Measurement: http://www.ichom.org/ [Accessed 12 July 2017].

90.10 In the first phase, the data must be shown only to the participating providers in a feedback cycle aimed at improving the data and improving the delivery of healthcare amongst participants.

90.11 Each provider can receive its own data together with a national average. Each provider can also receive anonymised results of other providers, particularly the top performing ones. Information as to what informs variations in outcome should be provided. This will help individual providers to benchmark their performance against the average and against top performing providers in the country.

90.12 The sharing of results initially with practitioners and facilities will help assess if the system is working effectively. If there are important areas of improvement and differences, they should be resolved within this initial period.

92. Second phase (within 4 - 6 years from July 2018):

91.1 The legal framework should have been finalised by the beginning of the second phase, and the Outcome Measurement and Reporting Organisation should start operating. Outcomes should be included in reimbursement contracts between purchasers and providers.

91.2 In addition to creating the legal framework, Government (through the National Department of Health) should help in funding outcome measurement efforts, particularly in the initial years. It should also help with political and other support that may be necessary to drive the development of outcome measurement.

91.3 In the second phase the data collected by the OMRO should be shared with the general public. This is to enable value-based competition in the system. The Council for Medical Scheme (CMS) should encourage funders to incorporate healthcare outcomes when contracting with providers.

Funding

93. Consideration should be given to how the OMRO will be financed, since the subject is closely linked to its operational effectiveness. The source of funding should be stable, reliable and sustainable. There are four funding models that can be used: government funding, levies, voluntary funding and a hybrid funding model. Whichever funding model is chosen it is important to ensure that the OMRO is adequately funded to enable it to meet all its responsibilities. The funding model that is chosen should support the principle of independence.

94. Government funding: the experience of Sweden shows that government played a big role in funding quality measurement and reporting. The Government should contribute towards funding outcomes measurement and reporting the initial phase. In the second formal phase funding will come largely from levies.

95. Levies: receiving funding through levies, rather than from government, is considered an important measure to ensure independence.[56] Levies can be assessed as a percentage of medical scheme contributions. Alternatively, they can be assessed as a percentage of providers' revenues. The former is administratively better as there are fewer medical schemes compared to providers.

96. Voluntary funding: another possible source of funding is voluntary contributions from philanthropic organisations, corporates or from stakeholders in healthcare. When it comes to contributions from stakeholders in healthcare it is important to ensure that they don't come with conditions that can affect the credibility of the OMRO. This source of funding is less reliable because it depends on the generosity of agents who are not compelled to give such funds.

97. Hybrid funding – another possible model is the hybrid model which combines any of the above three. A hybrid model is used by many organisations in South Africa, for example the CMS and the National Energy Regulator of South Africa.

56. Waverman L and Koutrmpis P (2011). 'Benchmarking telecommunications regulation'. Telecommunications policy, 35.

96.1 Using the CMS as an example we look at the composition of the hybrid model. In terms of the Medical Schemes Act, the funds of the CMS shall consist of: (a) appropriations from Parliament, (b) fees raised on services rendered, (c) penalties, (d) interest on overdue fees and penalties. A large part of CMS's funds come from levies followed by accreditation fees.[57] [58] In the 2015/16 financial year levies accounted for 90% of funds received by the CMS while accreditation fees accounted for 5%[59].

RECOMMENDATIONS

98. The HMI recommends the establishment of an outcomes measurement reporting system which should be done in two phases: the first phase should be within 3 – 4 years from the implementation of the recommendation and the second phase should be 4-6 years from thereafter.

99. The first phase should be a voluntary process in which relevant stakeholders form a collaborative body for developing a voluntary outcomes measurement and reporting system. The collaborative body should involve hospitals, practitioners, government, civil society, funders and organisations that have an interest in quality measurement and reporting.

100. The collaborative body should identify specific medical conditions for outcome measurement and reporting. For each condition, it must come up with outcome indicators that will be used to measure performance of providers. For each condition, the process must involve clinicians with expertise in that condition and if possible a condition-specific medical association.

101. Data collected in the first phase must be shown only to the participating providers in a feedback cycle aimed at improving the outcomes measurement and reporting system. Results and experiences from the collaborative body should then be used as an input towards developing the OMRO as discussed above.

102. The development of the legal framework which will establish the OMRO should happen in the first phase in parallel with the voluntary process and it should be undertaken by the National Department of Health in consultation with the relevant stakeholders.

103. The HMI recommends an establishment of a statutory body (OMRO) which should start operating in the second phase. The OMRO should be independent from government and the private sector. It should have board members that are appointed by the President with recommendations from Parliament. Its board must have at least one representative from each of the following stakeholders: hospitals, practitioners, funders, academia, public sector medical professionals, and patient representatives'. It must be must be organisationally separate from government, private or public providers.

104. Providers should be mandated to provide outcomes data to the OMRO. In order to give effect to mandatory provision, the OMRO should have legislated legal powers which will allow it to collect outcomes data from providers. Mandatory provision should start applying in the second phase.

105. To the extent possible, the OMRO should collaborate with condition specific registries for measurement of some conditions. Together they should develop a dataset for measurement by providers, providers should submit their data to the condition specific registry. The OMRO should analyse, risk-adjust the data and report it back to providers.

106. The OMRO should be funded using a hybrid model which combines levies, government funding and voluntary funding. However a large portion of its funding should come from levies. The funding should be based on a fixed amount per patient and should be linked to the number of conditions tracked. It will therefore increase as the number of patients and conditions tracked increases. The exact mechanics of how the model would work should be determined by the NDoH in consultation with stakeholders.

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57. Levies are amounts paid by medical schemes based on the number of principal members.
58. Accreditation fees are fixed tariffs paid over 2 years by administrators, managed care organisations, and brokers.
59. Council for Medical Schemes, Annual Report 2015/16.

Chapter 10
HMI Recommendations

INTRODUCTION

1. The South African private health sector suffers from multiple market failures. The sector comprises a complex set of interrelated stakeholders who interact with one another in an imperfect environment replete with information asymmetry, a lack of transparency and moral hazard. The HMI has found that there are a number of features of the private healthcare sector, including the conduct of some of these stakeholders that have an adverse effect on competition.

2. The HMI has thus developed a set of recommendations aimed at addressing the competition concerns identified, but also at introducing changes that will promote competition to the benefit of consumers and the long-term sustainability of the market. These recommendations are made in the context of broader policy considerations.

3. In particular, the HMI considered government policy such as the NHI and the NDP in order to locate these recommendations within the context of current national objectives. This is done on the understanding that the interventions proposed here are important not only for competition, but in the public interest at large.

4. These are the provisional recommendations of the HMI. The recommendations are made in line with section 43C(1) of the Competition Act, which states that upon completion of a market inquiry the Commission must publish a report of the inquiry "*with or without recommendations, which may include…recommendations for new or amended policy, legislation or regulations; and recommendations to other regulatory authorities in respect of competition matters.*"

5. Stakeholders are requested to provide submissions in respect of the proposed recommendations. Submissions should focus on the stakeholder's view of the recommendations, the proposed manner of implementation, the proposed entity responsible for implementing the recommendation, and the proposed timelines.

6. Submissions should be as detailed as possible and any views or opinions expressed should be substantiated, as far as possible, by evidence.

PRINCIPLES CONSIDERED IN DESIGNING RECOMMENDATIONS

7. At the onset, it should be stated that the HMI's findings and recommendations were based on the evidence and information provided by the stakeholders through written and oral submissions, as well as its own research and analyses of data and information collected.

8. The HMI considered some well-accepted jurisprudential principles in determining these recommendations. Though noting that these principles derive from enforcement actions, which are quite different from a market inquiry, the HMI is of the view that these principles are still relevant as these recommendations may have notable effects on the rights and duties of affected parties.

9. One of the principles extracted from the South African jurisprudence is that of "appropriateness", referred to in Section 49D(1) of the Competition Act.[1]

10. In the *Competition Commission v SAA and others*[2] the Tribunal stated that "appropriate" simply means "suitable":

> "…it is suitable in the sense that it is an agreement that suits the contending interests of the Commission, as the proxy of the public interest, and the respondent, and in that sense, can be said to be appropriate as between themselves".[3]

11. The principle of appropriateness suggests that the remedy must be measured against the harm it wishes to address, the effect on the stakeholders involved, and the purpose it wishes to achieve. Simply put, there must be a fit between the recommendations made and the harm they wish to address.

12. The HMI also considered the factor of practicability, that is, whether its recommendations would be practical to implement. We evaluated whether there were any legal and structural hurdles to the implementation of the recommendations and where those existed, how they could be dealt with.

13. Lessons were also drawn from the criteria used by the UK CMA when considering its remedial action. For example the CMA considers how comprehensively the possible remedy options (individually or as a package) address the adverse effects on competition and/or the resulting detrimental effects on customers and whether they are reasonable and practicable.

14. The CMA also explicitly considers the effect of the remedial action on consumer benefits. In the health sector, it is imperative to ensure that any recommendations made by the HMI do not negatively affect the patient, but rather increase benefits to them.

15. The South African private healthcare system is subject to many distortions that have an adverse effect on competition. These recommendations focus on the key interventions necessary to correct harm to competition and improve access and affordability of private healthcare. The interventions we have proposed are closely interrelated and market failures may persist if a partial approach to the implementation of the recommendations is adopted. The recommendations should thus be seen as a package.

16. In some cases, the HMI has proposed an explicit sequence for implementation. In others, we have made the interdependencies known and have cautioned against piecemeal implementation. In considering these recommendations, stakeholders should thus have regard to the links between recommendations as well as the sequence of implementation, where specified.

RECOMMENDATIONS FOR FUNDERS

17. Overall, the HMI finds that competition in the funders market is neither as vigorous nor as effective as it could, or should, be. This is true of both administration services and medical schemes.

18. In both the administration and open scheme markets, one large player (Discovery Health in administration and DHMS in open schemes) leads the market, especially in terms of growth, innovation and profitability. Other players largely follow its lead. Restricted schemes, by their very nature, do not compete with open schemes nor

1. Section 49D(1) states: If, during, on or after completion of the investigation of a complaint, the Competition Commission and the respondent agree on the terms of an appropriate order, the Competition Tribunal, without hearing any evidence, may confirm that agreement as a consent order in terms of section 58(1)(b)
2. Case Number: 83/CR/Oct04
3. At paragraph 47

do restricted schemes compete with each other. The HMI found that there is limited competition between schemes on factors that increase the value of medical scheme cover (in terms of both cost and quality) and limited evidence of efforts to design and implement alternative reimbursement models to contain expenditure and encourage value-based contracting. The HMI believes that there are failures in regulation, governance and adverse incentives associated with the current market structure that contribute to this lack of competition and innovation.

19. At the heart of the failure of funders to deliver better value to consumers lie multiple problems: a profound lack of transparency (including on scheme options and quality of outcomes), a lack of accountability of schemes to members, and a failure of governance that align scheme interests too closely with that of administrators. The lack of incentives operating at scheme level weakens schemes' resolve to hold administrators to account for delivering value to members. Health care costs and administration costs fees are increasing and benefit packages cover less care.

20. The Inquiry has also found that all schemes have failed to adequately manage supply-induced demand. Given that supply-induced demand is known to exist in healthcare markets (and has been shown to exist in South Africa too), we would expect medical schemes to force their administrators to actively manage this in the interest of protecting scheme members' health and the financial sustainability of the scheme. The ability to effectively manage SID should also be a competitive differentiator for administrators. The widespread inability to manage and supply-induced demand suggests a lack of effective competition in the market for administration.

21. With respect to the lack of transparency, consumers simply do not know what they are purchasing and cannot hold funders accountable. There are too many plan options, very little understanding of what they cover, how the plans compare, and no measure of the value that consumers are receiving. In the absence of such information, consumers may simply choose what they can afford.

22. Ideally the trustees of schemes should be interceding on behalf of members to ensure that they receive value for money and that administrators are delivering the best possible value to scheme members. But, the governance of schemes is problematic.

23. There are few incentives to ensure that scheme employees, trustees and principal officers always act in the best interest of consumers. And even if they tried, administrators generally have far more analytical capacity and 'know how' than schemes and generally make decisions on behalf of schemes, even on key issues of strategy. The 'separation' between schemes and administrators often seems artificial, particularly in the case of large open schemes. This failure in governance is severe and is a major concern for the Inquiry.

24. A unique feature of the South African private market is that not-for-profit-schemes are administered by for-profit administrators. Our overall observation is that the interests of the for-profit administrators are dominant; scheme members and trustees are too weak and or disempowered to force administrators to align to schemes members' interests.

25. The incentive alignment between restricted schemes and their members (from whom trustees are often appointed) is closer than that between open schemes and their disparate members. In closed schemes, particularly employer-based schemes, the cost of scheme administration influences the employer directly if they subsidise membership or indirectly if employees are dissatisfied with their health cover. We have found that closed schemes tend to have lower healthcare related costs, on average, than open schemes. For instance, non-healthcare expenditure for GEMS was amongst the lowest at 7.5% in 2015.

26. However, even if restricted schemes exert some pressure on administrators, nonetheless administrators face insufficient pressure from schemes. Non-healthcare costs for the 10 largest schemes in South Africa range from 5% to 13.4% of gross

contribution income compared to only 3% of GCI on average for OECD countries. Additionally, during annual negotiations it seems that trustees are generally satisfied with CPI-linked increases in member contributions year after year.

27. We find no evidence that schemes demand information on the costs saved by administrators related to, for example, managed care or fraud control and whether the related savings are passed on to scheme members.

28. The Inquiry has considered various options to address this failure in governance. We have decided that it is not practicable to recommend that administrators be converted to not-for-profit entities or that schemes be allowed to become for-profit entities in order to resolve the incentive constraint. We cannot trust that for-profit schemes will deliver better value for consumers given multiple information failures and adverse incentives shown to exist in the South African healthcare sector.

29. Therefore, the panel recommends measures to strengthen governance to ensure that schemes place greater pressure on administrators to deliver value to members, that members place greater pressure on schemes to improve value for money, and measures that enable the regulator (the CMS) to exercise more effective oversight over funders.[4]

30. The Inquiry would like to see an environment in which schemes promote alternative models of care that lower healthcare expenditure. This includes:

    30.1. multidisciplinary team-based care,

    30.2. investing in models of care where appropriate providers provide primary care,

    30.3. re-affirming/strengthening the care co-ordinator role of GPs,

    30.4. investing into innovation forms of care,

    30.5. employment of doctors in specific value-based quality-assured managed care service provision,[5] and

    30.6. designing alternative reimbursement models that shift more of the risk of excess utilisation onto providers.

31. To improve transparency and promote competition we propose:

    31.1. The introduction of a stand-alone, standardised, obligatory 'base' benefit package that all schemes must offer. The package must include cover for catastrophic expenditure, i.e. the current Prescribed Minimum Benefits (including making provision for treating PMBs out of hospital) and; additionally, include, primary and preventative care. The base option would include a standard basket of goods and services and will thus be easily comparable across schemes.

    31.2. The introduction of the base package must be accompanied by a system of risk adjustment (see below), which will remove schemes' incentives to compete on risk factors such as age, and will instead encourage schemes to compete on value for money and innovative models of care.

    31.3. Supplementary cover can be provided for care not included in the base package. We recommend that the CMS develop standards and requirements for all options for supplementary cover. This will improve transparency and assist consumers in comparing products, coverage and value across the industry.

    31.4. That administrators must report publicly on the value and outcomes of all ARMs, PPNs and DSP arrangements they have entered into on an annual basis. These reports must be presented in a simple and accessible way, so that it allows consumers to see how much

4. The Medical Schemes Bill, 2008 which sought to strengthen scheme governance, among other things, have not yet been implemented.
5. Cataract surgery and joint replacement were put forward as examples from stakeholders during the inquiry

administrators have saved from these arrangements.

32. 32. To improve governance and align schemes' interests with those of consumers, we propose:

32.1. That the remuneration packages of employees of schemes, particularly that of trustees and Principal Officers, be linked more explicitly to the performance of schemes. Performance will be measured in terms of the value delivered to members. Presently, the remuneration of Principal Officers and Trustees is poorly connected to performance. We propose that the remuneration of Principal Officers and trustees be set at a minimal base level and that the rest of their package be linked to clearly-defined quantitative objectives of the scheme such as reductions in non-healthcare costs, administration costs etc.

32.2. That administrators' comparative performance on metrics such as non-healthcare costs; the value of PPNs, DSPs and ARMs, claims payment ratio, and the proportion of PMB and non-PMB claims paid from risk versus those paid from savings be published annually for each administrator compared to a national average. This publication should be produced by the CMS.

32.3. That schemes encourage member participation in its Annual General Meeting (AGM). This includes:

32.3.1. Modifying the requirements for attendance at the scheme AGMs to ensure adequate representation of members who are not employees, brokers, officers, consultants or contractors of the scheme or its administrator and do not have a material relationship with anyone contracted to or employed by the scheme to provide administrative, marketing, broker or managed care services. In other words, all conflicts of interest must be avoided.

32.3.2. That members must be notified of the scheme AGM in a timely manner and the AGM must be held at a time convenient for members (e.g. after office hours or on weekends).

32.3.3. That AGMs make use of technology to facilitate participation of members who are not there in person.

32.3.4. That the CMS review its criteria for election of trustees such that sufficient time and appropriate information is available to members to consider and choose trustees and that electronic election of trustees is possible to avoid abuse of proxy votes. Election of trustees must be conducted over an extended period and completed and audited prior to the confirmation of the election results at the AGM.

32.4. The CMS's contact number must be included on the medical scheme card, to allow members to have direct access to the CMS.

32.5. A set of core competencies for trustees also needs to be developed, taking into account the diversity of expertise required.

32.6. The CMS's proposed remuneration framework that seeks to cap Board of Trustees and Principal Officer Remuneration and align remuneration with performance should be implemented. The remuneration framework should take into account concrete indicators of improvements in the scheme's performance which must be linked to the performance of individual trustees.

32.7. That the broker system is an active opt-in system so that the interests of brokers and scheme members are more closely aligned. Members will be required, on an annual basis, to declare if they want to use the services of a broker. For those that do, the scheme will facilitate the payment to the broker. Members who chose not to use the services of a broker will pay proportionally lower scheme membership fees.

33. To improve regulation and ensure that the basic obligatory package is appropriate, we recommend that:

33.1. The mandated cover for Prescribed Minimum Benefits must be revised to make provision for out-of-hospital and cost-effective care for PMBs. This will remove the current incentive to admit patients to hospital, often at higher cost, for PMB care.

33.2. The PMB package be expanded to include primary and preventative care.

33.3. This revised PMB package should make hospital plans obsolete and will be replaced by the obligatory standard package.

33.4. The services provided for in basic obligatory package can be extended over time as cost savings allow for greater depth or breadth of care.

33.5. That PMBs be reviewed regularly, as provided for in legislation.

33.6. That the Council for Medical Schemes produces a biennial report on the value of managed care services including the extent to which risks and benefits are shared between contracting parties and how savings are passed on to scheme members by lowered premiums or increased range of benefits.

34. To facilitate competition, we recommend facilitating the entry of regionally-based schemes. Innovation in the healthcare sector almost always starts small. New innovations will often be limited to particular services or geographies. However, schemes and administrators mostly have national membership and thus prefer national coverage. Facilitating the entry of regionally-based schemes may provoke different forms of competition in the market. However, if these regionally based entrants were to enter the current medical schemes environment, they would have to compete on risk selection, and thus face demographic risk and claims risk when beginning with only a few members. To mitigate this, the inquiry proposes reinsurance for small new entrants.

35. Below, we provide more detail on these recommendations, where necessary.

ACHIEVING STANDARDISED BENEFITS

36. The mandatory minimum benefits, referred to as prescribed minimum benefits (PMBs) are currently only available in the form of diagnosis treatment pairs, rather than simple standard benefit designs, making it impossible to compare between schemes and options. To address the lack of comparability across scheme options and inability of consumers to compare the value of these options, the HMI proposes that a standardised benefit package be developed that must be offered by all schemes (the obligatory 'base benefit option').

37. Every person joining a medical scheme must buy the base option. The base option would cover catastrophic expenditure as well as some level of out-of-hospital and primary care. However, simply standardising the standard benefit package would not address the issue of affordability.

38. Because schemes would still be subject to the principles of open enrolment and community rating, the standard benefit option may be easy to interpret but would still be expensive in the absence of a legislated risk adjustment mechanism. Without risk adjustment, schemes would still have an incentive to compete on risk factors such as age rather than factors such as value for money and innovative (alternative) models of care.

39. Therefore, alongside the standardisation of benefits, a risk adjustment mechanism must be implemented. The risk adjustment mechanism will "equalise" risk associated with the standard benefit option across all schemes, with lower risk schemes being net payers and higher risk schemes being net receivers of disbursements from the risk adjustment fund. This will remove the current incentive for schemes to compete on low level competitive factors such as attracting a younger population.

RISK ADJUSTMENT MECHANISM

40. Risk adjustment would be of little use if it is not applied to a standard basket of benefits. In the absence of a standard package, it would be impossible to measure the risk across schemes fairly. Therefore, as

indicated above, the HMI proposes that a risk adjustment mechanism be implemented for the base benefit package to be offered by all schemes.

41. The HMI recommends that the proposed risk adjustment mechanism (RAM) be initially facilitated by the CMS but will migrate to a separate authority established for this purpose with full independence from the executive to avoid a conflict of interest with the CMS's regulatory role.

42. The HMI has not decided on the most appropriate mechanism to achieve the risk adjustment. In principle, schemes could be required to pay money into a risk adjustment fund on the basis of their respective risk. That is, low risk schemes would pay money into the risk adjustment fund while high risk schemes would receive risk adjustment subsidies from the fund.

43. To address the needs of low-income scheme members, it is recommended that the current tax credit regime be reconstituted to take the form of a contribution subsidy administered through the RAM rather than though the South African Revenue Services. In this way the RAM would be able to integrate both a risk and income adjusted subsidy in a manner consistent with similar arrangements around the world.

44. For the RAM to operate efficiently, the following measures must be in place:

    44.1. All medical schemes must, by law, be required to belong to the RAM,

    44.2. A database of all insured beneficiaries and the relevant demographic information to determine the prospective risk status of each beneficiary must be developed and maintained by CMS,

    44.3. A set of mandatory minimum benefits that all insurers must offer (the "base package" in our terminology) must be defined and implemented,

    44.4. The administrator of the RAM (the CMS) must establish technical capability to provide within-financial-year financial transfers between schemes and the central fund based on the extent to which schemes' inherent risk profile vary from the average for the industry, and

    44.5. The administrator of the RAM must have legislated structural independence from any party with a commercial interest in the risk adjustment outcomes (which may include other regulators, the government executive, medical schemes and related parties, healthcare providers, etc.).

45. With the base benefit package and the RAM in place, schemes would have stronger incentives to differentiate themselves on factors such as efficiency, level of non-healthcare costs, procurement, volume management and generally offering demonstrable value for money to beneficiaries.

ADDITIONAL/SUPPLEMENTARY BENEFITS

46. In addition to the base benefit package, schemes will be allowed to offer additional (supplementary) benefits for care not included in the standard benefit package.

47. The following principles apply to supplementary benefit packages:

    47.1. Supplementary benefits can only be sold to those who have base cover.

    47.2. Risk rating will be allowed on supplementary benefit packages (SBPs) provided that base cover is comprehensive[6]. Should the base cover be limited such that supplementary cover becomes a 'must have', then the supplementary cover must also be excluded from risk rating.

    47.3. Supplementary benefit packages should be easily comparable across schemes. This means that they will need to conform to rules set by the CMS as the appropriate regulatory body.

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6. This caution is required as the base cover is yet to be defined.

PRESCRIBED MINIMUM BENEFITS (PMBS)

48. The HMI proposes that the PMB package (which will be included in the base benefit package) must be reviewed and updated at least every 3 years. This is consistent with existing legislation and in line with current initiatives by the CMS to review the PMBs.

49. To facilitate scheme members' understanding of PMBs, including what they are entitled to and when additional (out-of-pocket) payments may arise, schemes must, at a minimum, provide the following information:

    49.1. The ICD-10 checklist and plan formulary description for each PMB,

    49.2. The list of DSPs for the treatment of PMBs, and

    49.3. During the pre-authorisation process, members should explicitly be told whether their choice of service provider or treatment course has additional cost implications and what alternatives are available.

50. Treatment plans and formularies will not be binding on schemes, but will constitute a minimum level of care. The development and review of formularies and treatment plans will likely be a resource-intensive process which must be run in an inclusive, comprehensive and reputable manner.[7]

ANTI-SELECTION MEASURES

51. The SID analysis presented in Chapter 8 confirms that there is anti-selection in the market. What is not clear to the inquiry (nor is known to stakeholders) is whether the current legal provisions against adverse selection (waiting periods and late joiner penalties) offset the financial implications of anti-selection. Without this knowledge it is difficult to know whether additional steps must be taken to address anti-selection. Presently, one of the ways in which anti-selection is managed is that schemes are able to impose a late joiner penalty on an applicant who is 35 years or older when joining a medical scheme for the first time. The late joiner penalty is calculated on the basis of the applicant's age, the number of years since the applicant was a member of a medical scheme and the number of years that the applicant had no cover at all. The late joiner penalty discourages consumers from joining a scheme later in life, when they are older and more likely to require care. We recommend that an incentive be put in place to encourage younger members to join schemes. This could take the form of a regulated discount on the medical scheme premium for new joiners younger than 35 to nudge younger members to join. The discount can be determined by the Minister of Health in consultation with the CMS.

52. The HMI affirms that non-risk benefits (such as medical savings accounts) should not attract any waiting periods as schemes do not bear any risk for any claims paid from non-risk benefits. Further, savings accounts cannot be part of the basic obligatory package.

53. We note that stakeholders submitted that mandatory membership of all people earning above a defined income threshold would reduce anti-selection risk. This is true and though the inquiry supports the principle of mandatory membership, we do not believe that it should be implemented within the current flawed system. At this stage, mandatory membership would simply add more beneficiaries into a system with high and rising costs, significant SID, limited competition and no incentives to create value for members.

RECOMMENDATIONS ON THE BROKER REGIME

54. 54. We believe that brokers play an important role in advising members but that their interests should be aligned more closely to those of applicants/members. The HMI makes the following recommendations:

    54.1. That the broker system must change to an active opt-in system so that the interests of brokers and scheme

7. This function will be assigned to the Supply Side Regulator for Healthcare that we propose in section X below.

members are more closely aligned. Members will be required, on an annual basis, to declare if they want to use the services of a broker. For those who do, the scheme will facilitate the payment to the broker. Members who chose not to use the services of a broker will pay proportionally lower scheme membership fees.

54.2. Members must be free to choose any licensed broker they wish and not just those with contracts with particular schemes,

54.3. Brokers who are marketers for a specific scheme (and are thus not independent) should earn lower commissions than independent agents,

54.4. Medical schemes must report broker fees separately to the CMS from distribution and other marketing fees. The CMS must also make these separate figures available in the annual report

55. As a condition of registration, medical schemes must also be able to deal directly with the public without the use of brokers. This would include administering membership applications.

RECOMMENDATIONS FOR SUPPLIERS OF HEALTHCARE SERVICES

56. The provider side of private healthcare markets suffers from several structural, behavioural and regulatory imperfections that harm competition and undermine access to healthcare. The main supply-side failures that our recommendations seek to address are:

56.1. The highly concentrated structure of the facilities market. At a national level, the three largest hospital groups have a market share of approximately 90% based on hospital admissions and 83% based on registered beds.[8] Also, in the majority of local markets, concentration levels are alarmingly high according to several recognised metrics commonly used to screen for concentrated markets. One of the challenges of this, from a competition perspective, is that it affords the three biggest hospital groups "must-have" status in bargaining for contracts with funders which reduces funders' countervailing power.

56.2. The fragmented and poorly-enforced licensing regime for facilities. The licensing framework varies across provinces, is not clearly formulated, lacks transparency and operates without access to basic data such as the number of people in the catchment area, number of beds, per speciality and ward type. Without these data it is unclear how the need for new facilities or more beds is assessed. Additionally, the licensing process does not take factors such as competition, innovation, and supply-induced demand into account, nor does it routinely seek input from stakeholders with in-depth knowledge of health dynamics, such as funders, when assessing applications.

56.3. The merger regime is not effective at identifying and assessing dominance in hospital markets, principally because of the weaknesses in dealing with creeping mergers within the framework of the existing legislation.

56.4. The supply-side regulatory system is fragmented, with little synergy and cooperation between various regulatory and oversight bodies mandated to oversee providers.

56.5. Inadequate and inconsistent enforcement of rules by the HPCSA.

8. Claims data excluded some smaller schemes, if members of these schemes systematically use hospitals other than the three big hospital groups then the admission rates may be overestimated but not to a degree to change the overall conclusion

Self-regulation of the medical professions seems to have failed to work in the interest of consumers and has not encouraged models of care that expand access and improve affordability. The interpretation of some of the HPCSA's Ethical Rules and the manner in which they have been enforced has, in fact, maintained the status quo provision of high-cost healthcare, prevented the formulation of multidisciplinary models of care, and stifled innovation and competition.

56.6. The lack of consistent and standardised reporting of health outcomes.

56.7. The lack of transparency on the pricing of healthcare goods and services.

56.8. The failure to implement evidence-based guidelines and treatment protocols.

56.9. The lack of an effective framework for health resource planning and economic value assessments of, for example, new healthcare technology.

56.10. Serious levels of supplier-induced demand and the continued predominance of fee-for-service as the primary mode of reimbursement for healthcare goods and services.

57. Many of the recommendations to address these failures require adjustments to the existing legal framework, and/or the passage of new laws, rules, and regulations. In cases where we cannot afford to delay the implementation of the recommendations owing to the length of the legislative process, interim steps have been proposed.

58. For effective and efficient regulatory oversight of the supply-side of the healthcare market, the Inquiry recommends the establishment of a dedicated healthcare regulatory authority, referred to here as the Supply Side Regulator for Healthcare (SSRH). However, some of the recommendations proposed to deal with significant supply-side failures cannot wait for the establishment of a new regulatory authority. In these cases, interim proposals are made for existing regulatory or interim bodies to oversee the implementation of the recommendations.

59. First, we set out four key areas of supply-side regulation that are currently lacking in the South African private healthcare sector and make recommendations in this regard. Thereafter, we provide an overview of the institutional structure of the SSRH.

THE SUPPLY-SIDE REGULATION OF HEALTHCARE

60. The current regulatory measures on the supply side have been limited and fragmented compared with other countries where there is often a single, dedicated supply-side regulator. In South Africa, the supply side has generally been left to operate within a fragmented, poorly enforced regulatory system, with weak oversight. It is clear that the existing regulatory system does not go far enough in terms of achieving optimal healthcare outcomes and appropriate access to quality healthcare services.

61. Supply-side regulatory measures aim to affect the behaviour or operation of health care service providers and usually include four critical pillars:

61.1. healthcare capacity planning,

61.2. economic value assessments,

61.3. implementation of appropriate payment mechanisms, and

61.4. outcome measurement, registration, and reporting.

62. Healthcare capacity planning seeks to govern the number and distribution of providers for current and future needs through mechanisms such as licensing and accreditation.

63. The primary purpose of economic value assessments is to ensure rational use of health resources. It often includes comparative analyses of alternative courses of action, such as an analysis of the cost-effectiveness of new technology or the development of clinical treatment protocols to assess the cost and clinical effectiveness of health interventions.

64. Payment mechanisms shape the structure of payment systems for health services to achieve cost effective positive health outcomes for the covered population.

65. Outcome measurement and reporting facilities competition on the basis of improved health outcomes and enables value-based payment.

66. A consolidated approach to supply side regulation is required within a coherent supply-side framework. Importantly, existing functions that contribute to supply side regulation must be complementary to and work in a coordinated manner with the additional supply-side regulation proposed here and the workings of the proposed SSRH.

HEALTHCARE CAPACITY PLANNING

67. Healthcare capacity planning includes the assessment of available capacity, planning for future healthcare needs and demands, and the licensing of facilities. The HMI recommends interventions in two areas: developing a coordinated facility licensing framework to replace the existing fragmented system and implementing a new practice code numbering system.

Facility Licensing

68. The National Health Act provisions dealing with the issuing of certificate of need (CON) need to be implemented in a manner that gives effect to the constitutional right of access to healthcare services.[9] The Minister may issue appropriate regulations for the granting of the CON in line with a centralised national licensing framework for all health establishments, including day clinics, hospitals, sub-acute facilities as well as primary care facilities such as dental surgeries, GP rooms and primary care clinics. The extension of the licensing regime beyond acute facilities can be implemented over time. Provincial health authorities will remain responsible for assessing and granting licences according to the principles set out in the national licensing framework.

69. The licensing framework should be based on a comprehensive national plan that takes capacity in both the private and public sectors into account. New licences will be issued in line with the national plan and should have regard to diversity of ownership of facilities, should consider whether the supply of beds and practitioners bears reasonable relation to the population served, and should prioritise innovative models of care. The national plan will be developed in a consultative manner with relevant stakeholder representation facilitated by the Department of Health.

70. Regular monitoring, inspection and reporting will be embedded in the licensing framework to ensure that a reliable database of supply side services is established. Licensed establishments will, at a minimum, provide the following information to provincial departments of health on an annual basis:

    70.1. Number of operational beds, operating theatres, Intensive and High Care Units;

    70.2. Bed allocation by type and changes to bed allocation, by type, over the previous calendar year;

    70.3. Ownership of the group/establishment and any planned acquisitions that have been notified but not yet assessed by the competition authorities;

    70.4. Occupancy rates by unit and/or bed types;

    70.5. The names of practitioners who work from or have admission privileges to the facility by discipline; and

    70.6. Documentary proof of approval for RWOPS for public sector practitioners who work from, or have admission privileges to, their hospitals

71. Provincial DoHs (PDoHs) should report annually on the data and information collected from health establishments. Reporting should follow a standardised format to be determined by the SSRH with automatic updates to a national database accessible to NDoH and all PDoHs and be available in the public domain.

72. The renewal of a facility's licence will be dependent on the facility meeting its annual reporting requirements. Initially, penalties (to

9. Section 36, 37, 39 and 40 of the amended NHA. See Chapter 2, Regulatory Framework, para 43 and 48.1.

be determined by the SSRH) may be levied on facilities that do not comply but continuous infringements should lead to revocation of a facility's licence.

73. The Inquiry proposes that the new licensing framework should have two phases. In the first phase, an interim license may be granted. The applicant must, at a minimum provide the following information:

    73.1. Information on the proposed site indicating whether it has already been acquired or an indication of a tentative right to acquire,

    73.2. High-level description of the need identified, including hospital type as well as the type and number of beds proposed, and

    73.3. Initial, high-level architectural drawings.

74. The applicant will then be given a deadline for the submission of the second part of the application. In the second phase, a permanent licence may be granted. Submissions required for the phase 2 include, at a minimum:

    74.1. A comprehensive market study, highlighting local demographics, the business case for the facility, and how the facility plans to introduce new/ innovative models of value-based care;

    74.2. Letters of support from local funders managing at least 50% of the insured local population. Examples of funders in this context include medical schemes, large employers (e.g. mines), government agencies (e.g. Compensation Fund);

    74.3. Social and environmental impact studies;

    74.4. Practitioner recruitment plan;

    74.5. Final architectural drawings;

    74.6. A provisional financing agreement; and

    74.7. A comprehensive project plan for construction with detailed timelines.

75. Stakeholders will have the opportunity to object to the application. Their reasons for objection must be based on the principles and objectives of the national health plan and licensing framework.

76. No facility licence will be issued without confirmation that a specific site has been identified. Applicants who do not already own the site should provide proof that they have secured the right to acquire the site should the application succeed. This is essential for any useful need assessment to be done and should reduce the issuing of licences to parties that have no real capacity to operationalise them.

77. Licences will not be evergreen, failure to progress without adequate explanation of reasons for delays and mitigation thereof will lead to licences lapsing.

78. The inquiry has made detailed proposals for a revised licensing framework that supports beneficial use of the licence by the applicant. However, these principles will not address the problem of concentration.

79. We have considered a number of options on how to address this, including divestiture and imposing a moratorium on issuing licences to the three large hospital groups, namely, Netcare, Life and MediClinic. The moratorium would require that these hospital groups should not be granted licences for new facilities, nor licences or permission to increase the number of beds within existing facilities until such time as the national market share of each of the big three hospital groups, by number of beds, is no more than 20%. The moratorium will be in place until new entry or growth in the private sector achieves a better competitive balance.

80. Divestiture raises a number of questions such as proportionality, its effectiveness and whether it is the less intrusive means. Moratorium raises similar issues including how to measure whether a better competitive balance has been achieved. We would be reluctant to rule out these remedies without hearing the stakeholders' views on them.

81. To further address concentration, the inquiry recommends that the appropriate regulator(s) - in our view, both the SSRH and the PDOHs – develop a set of criteria for assessing local concentration. The assessment framework should specify the maximum allowable level of concentration of private hospitals at the local level. These

concentration levels may vary according to local conditions, i.e. available public hospital capacity and insured population capacity

82. The inquiry notes that the OHSC's mandate, which extends to quality inspections and accreditation of private facilities, will remain. Licences will only be issued to facilities and practices that have been certificated by the OHSC. Close collaboration between the SSRH and the OHSC will be required.

83. To further address the sale of hospital licences, which we believe materially affects competition and transformation in the sector, we recommend that the sale of licences be jointly notified to competition authorities, the SSRH and the PDOHs. The competition authorities should assess the effect of any sale on competition and the public interest. Given the current concentration in the market all transactions must be notified.

Practice Code Numbering

84. 84. code numbering service, which is currently managed by the Board of Healthcare Funders, be assigned to the SSRH where it will be housed in its Facility Licensing Unit (see Figure 10.1).

85. Practice code numbers must be allocated to both public and private facilities to support strategic public purchasing from private providers in the National Health Insurance framework, and vice versa to support inclusion of public hospitals in private funders' provider networks, for example.

86. The issuing of practice code numbers to practitioners requires close collaboration with the regulators for all health professionals (HPCSA, SAPC, AHPSA, SANC, SAPC etc.) who must provide proof of registration of each applicant. Practitioners should be issued with an individual, unique practice number to be used for re-imbursement, irrespective whether the payer is a public or private sector purchaser.

87. The format of practice numbers should readily identify the type of practitioner (e.g. whether the practitioner is a GP, physician, anaesthesiologist or physiotherapist), whether they are in full- or part-time practice,[10] and whether the provider (also) works in the public sector.

88. Practice numbers should be unique, and be issued to each practitioner for life to avoid confusion and to facilitate monitoring of practitioner profiles over time. Practice numbers should only be changed in specified circumstances, such as when a former GP qualifies and starts practising as a specialist. The old GP number must not be reallocated to another practitioner.

89. Group and multi-disciplinary practices must have their own practice numbers, separate from those of the practitioners within the practice. Claims submitted by group practices should include both the group and individual practitioners' practice numbers. Funders will only pay claims that reflect both numbers and claims information must contain both numbers. Public sector practitioners allowed to do private practice work will use their practice number when doing locum work. This is essential to ensure that individual and group practice profiles can be analysed without confusion.

90. Practice numbers must be renewed on an annual basis and will only be reissued on conditions set by the regulator (the SSRH). The inquiry recommends that the minimum conditions for renewal must include the following:

    90.1. The applicant must submit an annual return containing information on the practitioner's specialty, employment and an up-to-date address indicating the location of their practice. Where the provider practises in more than one location, they may provide the address where they spend most of their practice time.

    90.2. Practitioners' premises must be registered and will be allocated a facility practice number separate from that of the practitioner.[11] The facility practice number where care

10. We note that 'full-time practice' will have to be defined. This should be done by the SSRH, in consultation with relevant regulatory entities.
11. We note that it may take time for every practice location to be licensed and this condition will be applied mindful of this possibility

was provided must be captured in all claims to funders, with defined exceptions, e.g. roadside emergency. Proof of location of premises will be a core requirement for practice number renewal for both practitioner and premises. This is essential to enable routine and random inspections by the OHSC; to reduce the scourge of "ghost" practices and practitioners as well as to minimise claims fraud. Cleaning up of practice locations is a necessary step in improving resource planning and to support growth of meaningful provider networks to service both private and public sector funders.

90.3. Practitioners who work from facilities not owned by themselves, e.g. anaesthesiologists, will submit supporting documentation from management of the relevant facilities.

90.4. Practitioners employed in the public sector who also work in the private sector must produce a certificate from the provincial health authority indicating that the practitioner has approval to do remunerative work outside the public sector.

91. Practice numbers will only be issued if providers comply with all relevant reporting functions of outcomes registries relevant to their area of work.

92. To be clear, practice facilities/premises will be licensed by the SSRH licensing unit after certification by the OHSC, while regulatory entities like the HPCSA remain responsible for the certification of qualified practitioners. Practice numbers will only be issued to providers who have valid licences or certification from the relevant body.

93. Given the enormity of the task of extending licensing to establishments which provide primary care, e.g. doctors' rooms, the OHSC may outsource some of its proposed functions but will remain accountable for all work done by its service providers.

ECONOMIC VALUE ASSESSMENTS

94. The Inquiry could not find good evidence of publicly available cost-effective standards of care and treatment protocols being used in the healthcare sector. This makes it difficult to assess the appropriateness of certain courses of treatment and to evaluate quality of care and value for money in the healthcare sector. The Inquiry recommends that this be remedied. Specifically, standards of care, evidence-based treatment protocols and processes for conducting health technology assessments to assess the impact, efficacy and costs of medical technology, medicines and devices relative to clinical outcomes must be developed.

95. The process of developing HTAs, pharmaco-economic and standards of care evaluations should be based on standard accepted approaches. Where appropriate, collaboration with representatives of patients, academia, regulators such as SAHPRA and CMS, and national and international experts should be ensured.

96. Findings of the economic value assessments should be published to stimulate competition in the market, to mitigate information asymmetry, and to inform decisions about strategic purchasing by the public and private sectors.

HEALTH SERVICES MONITORING

97. Currently, there is no standard mechanism for measuring the performance and outcomes of practitioners and facilities. Individual providers do not have the necessary information and data to analyse and compare outcomes of services provided against peers.

98. Patients, practitioners and funders lack information on outcomes of healthcare. Individual funders measure the performance of practitioners they contract with to varying degrees. This leads to a situation where the same practice could be deemed compliant by one funder and non-compliant by another because of different methodologies used. This is untenable.

99. In line with requirements for greater transparency and more objective benchmarking, a standard system should be developed to monitor the quality and outcomes of healthcare services. This requires the development of standard metrics that can be used to analyse the performance of a wide range of facilities and practices.

100. The Inquiry recommends that the requirement to measure quality and outcomes will eventually be legally enforceable,[12] if necessary, by the SSRH in partnership with the proposed Outcomes Measurement and Reporting Organisation, discussed in a separate section below. Given the importance of developing an outcomes registry, we also recommend a phased approach to implementation.

HEALTH SERVICES PRICING

101. One of the most frequent complaints made to the Inquiry is that there is currently a "tariff vacuum" in the private healthcare sector that makes it very difficult for schemes and members to estimate and compare the costs of care amongst providers.

102. This tariff vacuum is often linked to the 2003/04 decisions by the competition authorities confirming that the previous tariff determination process (so-called "collective bargaining") amounted to collusion in contravention of the Competition Act. The parties to the collusive agreements consented to these findings. After this finding, the CMS's National Health Reference Price List (NHRPL) temporarily provided some clarity on reference prices for healthcare goods and services. The NHRPL was followed by a NDOH-led process to determine a Reference Price List but, as discussed in Chapter 3 (Health Sector Overview), the RPL was struck down by the courts. No regulated tariff determination process has been implemented since.

103. As a result, fee-for-service prices are now largely determined bilaterally between individual providers and funders (either individual schemes or with administrators on behalf of all the schemes they administer), or between associations of providers and funders.[13] Fee-for-service tariffs, regardless of how they are negotiated, are a reflection of market failure within the private healthcare system. These prices do not consider quality of care, nor do they consider or try to reduce supply-induced demand.

104. While many of the structural changes recommended in this report seek to redress the incentives that maintain fee-for-service, it is very likely that fee-for-service contracts will remain a significant feature of the market for the foreseeable future. There is therefore a need to directly address the market failures involved in the setting of these prices.

105. The Inquiry's recommendations on the pricing of health services are made with the following principles in mind:

    105.1. Ensuring greater access to quality healthcare services by improving affordability of private healthcare goods and services;

    105.2. Reducing price uncertainty for healthcare services;

    105.3. Introducing fixed tariffs for PMBs to manage healthcare expenditure;

    105.4. Standardising coding systems to facilitate the monitoring, analysis and publication of expenditure trends and health outcomes;

    105.5. Promoting innovative models of healthcare funding and delivery; and

    105.6. Promoting competition among service providers.

106. Before we set out our recommendations regarding an appropriate tariff determination structure, we discuss why price determination cannot revert to the pre-2004 situation of collective bargaining. Thereafter, we propose an alternative.

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12. The Minister has extensive powers to prescribe norms and standards to measure the quality of healthcare services and monitor quality. See Chapter 2, Regulatory framework, para 46 and 48.2.
13. The Inquiry is concerned about the collective negotiations by provider associations on behalf of their competing members. See Chapter 7.

THE COMPETITION AUTHORITIES' PREVIOUS DECISIONS ON COLLECTIVE BARGAINING

107. The Inquiry received a number of submissions suggesting that the competition authorities' decision to prohibit collective bargaining is responsible for the tariff vacuum and proposing that the decision be reviewed. The NDoH and BHF submitted that a rule of reason analysis should have been applied and that the conduct did not amount to a per se prohibition of the Act.

108. While the HMI does not support a review of the 2004 consent orders, the HMI's recommendations seek to balance both a pro-competitive outcome as well as an interpretation of the Competition Act that is in line with the constitutional imperative of equitable access to healthcare. In this regard, the HMI does not recommend a blanket ban of collective bargaining, but rather proposes that bargaining should be facilitated by the SSRH, to safeguard against collusive behaviour among competitors and foreclosure of new entrants.

109. The Inquiry has two proposals to remedy the "tariff vacuum"; a regulatory solution with multilateral inputs and a multilateral price-setting mechanism where stakeholders conduct tariff negotiations under a framework determined by the Supply Side Regulator. In both cases, failure to reach agreement and/or fundamental disagreements with the outcomes will be resolved through a compulsory arbitration mechanism.

Proposal 1: Regulated pricing

110. Multilateral price-setting where competitors determine prices collectively (whether through associations or other groups) without regulatory oversight will likely contravene the Competition Act. At the same time, the Inquiry does not support unilateral price setting by a regulatory entity without meaningful participation by stakeholders. With this in mind, the first option we put forward is that the regulator, in this case the SSRH, assumes responsibility for setting fee-for-service tariffs within the following framework:

110.1. Stakeholders representing providers, funders, government and civil society will make simultaneous submissions on FFS tariffs within a multilateral setting which will be managed and governed by the SSRH.

110.2. The SSRH will determine the FFS after consideration of stakeholder presentations and its own research.

110.3. Tariffs related to (current) PMBs will be binding.

110.4. FFS tariffs for other (non-PMB) services will have the status of reference prices from which stakeholders may deviate.

111. In cases where stakeholders want to challenge the tariffs confirmed by the SSRH, we propose a deadlock-breaking mechanism.

Multilateral Forum (MF)

112. We recommend that FFS tariffs be determined by the Health Services Pricing Unit of the SSRH. This will occur after extensive consultation with stakeholders through what we refer to as a multilateral forum.

113. For practitioners in particular, the multilateral forum is essential because bilateral negotiations between all funders and all practitioners are not logistically feasible. There are thousands of practitioners in solo or small group practices and it would not be practical for each practice to meet and negotiate tariffs with each funder timeously before the start of a new benefit year.

114. The MF will be managed by the SSRH and will comprise representatives of registered service providers, funders, government and members of civil society.

115. The SSRH will have powers to call for and receive relevant information from stakeholders timeously in order to establish prices for the private health sector. The SSRH will proactively set and communicate terms of reference, guidelines and the legal framework within which participants will present their proposals. Participating stakeholders, working under the direction of the SSRH, will be expected to interact freely in response to presentations made

by any other participant. Ultimately, stakeholder representatives will lodge binding written submissions in support of their proposed fees.

116. After due consideration of all stakeholder representations and its own research, the SSRH will determine and publish tariffs for the new benefit year.

117. FFS tariffs for what we currently refer to as PMBs will be binding on all stakeholders without any balance-billing or co-payments allowed. In other words, this process will set the maximum PMB tariffs that can be charged by service providers.

118. All other (non-PMB) FFS tariffs, will have the status of reference tariffs. These tariffs may only be exceeded if the patient's informed consent has been secured by the practitioner, or if the higher tariffs are an outcome of negotiations between funders and practitioners.

119. There should be formal co-operation between the SSRH and regulators like the HPCSA to set and publish clear guidelines on what may constitute unethical billing practices.

Mandatory deadlock breaking mechanism

120. In the event any stakeholder wishes to dispute the tariffs determined by the SSRH, the matter may be referred to an independent arbitrator to facilitate timely conclusion of the process ahead of a new benefit year. The fee structure for utilisation of the arbitrator's services should discourage abuse but also not be punitive.

121. Stakeholders will not be allowed to bring any new information before the arbitrator. That is, they may not change or supplement the information they have already provided to the multilateral forum. This will curtail abuse of the multilateral process and compel stakeholders to submit their best available supporting data and motivations during the engagements at the MF.

122. The decision of the arbitrator will be binding on all parties.

Proposal 2: Multilateral Tariff Negotiation

123. negotiation forum shares some features with the regulated option, the fundamental difference is that the stakeholders are encouraged to bargain and reach agreement within a framework set by the regulator (the SSRH). If they fail, the regulator will refer the dispute to the independent arbitrator for final decision.

Multilateral Tariff Negotiation Forum (MNF)

124. The multilateral forum will be constituted of the same stakeholders as above; that is, providers, funders, government and civil society. Instead of presenting their tariff proposals to the regulator for tariff determination as in option 1 above; the stakeholders will prepare individual proposals and present them simultaneously within the forum. Stakeholders will then negotiate FFS tariffs within a multilateral negotiating forum accommodated and governed by the SSRH.

125. The tariff negotiations will be governed by a framework developed by the SSRH. The SSRH will be duly mandated by law to organise, lead and govern the MNF. The SSRH will issue guidelines for the negotiations, specifying rules and condition for the negotiations process, including the information sharing regime.

126. The terms of reference will set the conditions against which the outcomes of the multilateral negotiations will be assessed. The conditions will, ex ante, specify the outcomes that will be deemed compatible with the public interest and public policy objectives, including NHI. Conditions may include the maximum average tariff increase, the maximum acceptable increase in expenditure, or even expenditure per speciality. It may also include metrics such as acceptable levels of utilisation and admission growth, a trade-off between tariffs and volumes, and specific commitments to quality or outcomes improvements.

127. In addition to the information provided by stakeholders, the SSRH may call for additional relevant information from

stakeholders or other parties in support of the tariff negotiation process. The legal framework within which it calls for and shares information will be consistent with competition law principles and the public interest.

128. Similar to Option 1, the tariffs for PMBs will be binding with no balance billing allowed. Other FFS tariffs will be considered reference prices. Once the stakeholders reach agreement, the outcomes of negotiations will be submitted to the SSRH. The SSRH will validate and publish these outcomes.

129. If stakeholders cannot reach agreement, or if the SSRH rules that the tariffs do not conform to the legal framework, the matter will be referred to an arbitrator for final determination. Similar to option 1, the determination of the arbitrator will be binding on all parties.

130. Final PMB and reference tariffs must be published by the SSRH, the CMS, and funders. Service providers must do the same at each site of patient contact (e.g. consulting rooms and hospital reception areas) in a manner that is accessible to consumers.

BILATERAL NEGOTIATIONS

131. Price-only determination as envisaged under both options above are essential to eliminate price uncertainty and overcome logistical bottlenecks. However, if the private sector is restricted to price-only contracts, this would preclude critical elements of strategic purchasing and stifle much needed innovation. Importantly, that would delay the shift from FFS to ARMs and the incorporation of other efficiency and quality enhancing interventions.

132. Bilateral negotiations between providers and funders are wholly supported by the HMI. All stakeholders should strive to migrate from FFS to alternative, performance-based contracts with meaningful risk transfer to mitigate against over-utilisation of resources. This ideal can only be achieved through bilateral negotiations.

133. Bilateral negotiation is currently the negotiation format of choice between funders and corporate entities (such as facilities and pathologists). We initially considered radiologists to belong to this group but the HMI has since accepted the argument put forward by the Radiological Society (RSSA) that there exists approximately 135 billing entities in radiology in the private sector.[14] It would therefore not be logistically feasible to expect the same corporate provider conditions to apply to radiology groups with respect to bilateral negotiations as the primary means of determining prices.

134. Our reasons for recommending the continuation of bilateral negotiations between funders and corporate providers are the following:

134.1. Pathology practices are few in number and current experience proves that most, if not all pathology groups can negotiate with all funders; and

134.2. There are only a small number of facility groups. Bilateral negotiations are currently the main method of tariff negotiations between facilities and funders.

135. In summary, the set of pricing recommendations set out above have been made with the following key considerations in mind:

135.1. Reversion to the collective bargaining format in place prior to 2004 is not an option;

135.2. Stakeholder submissions and analyses conducted by the HMI have shown that expenditure is high and continues to rise, while consumers continue to face higher premiums, out of pocket payments and gradually reducing scheme benefits; and

135.3. There is reasonable justification for regulatory intervention if the industry is to remain sustainable.

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14. See RSSA submission dated 24 October 2017, p1

136. However, the HMI further recognizes the following:

136.1. Stakeholder-led negotiations have not yielded outcomes with a positive impact on expenditure and remains a possibility that sector participants may continue to settle for mutually beneficial pricing levels at the expense of the consumer;

136.2. Unilateral determination of prices for healthcare services by a regulator risks missing pertinent information from stakeholders, hence the emphasis on meaningful engagement within the legal competition framework;

136.3. The regulator should not be the player and the referee. This is why we propose an independent arbitrator as deadlock-breaking mechanism.

Establishment of an independent supply-side regulator for healthcare (SSRH)

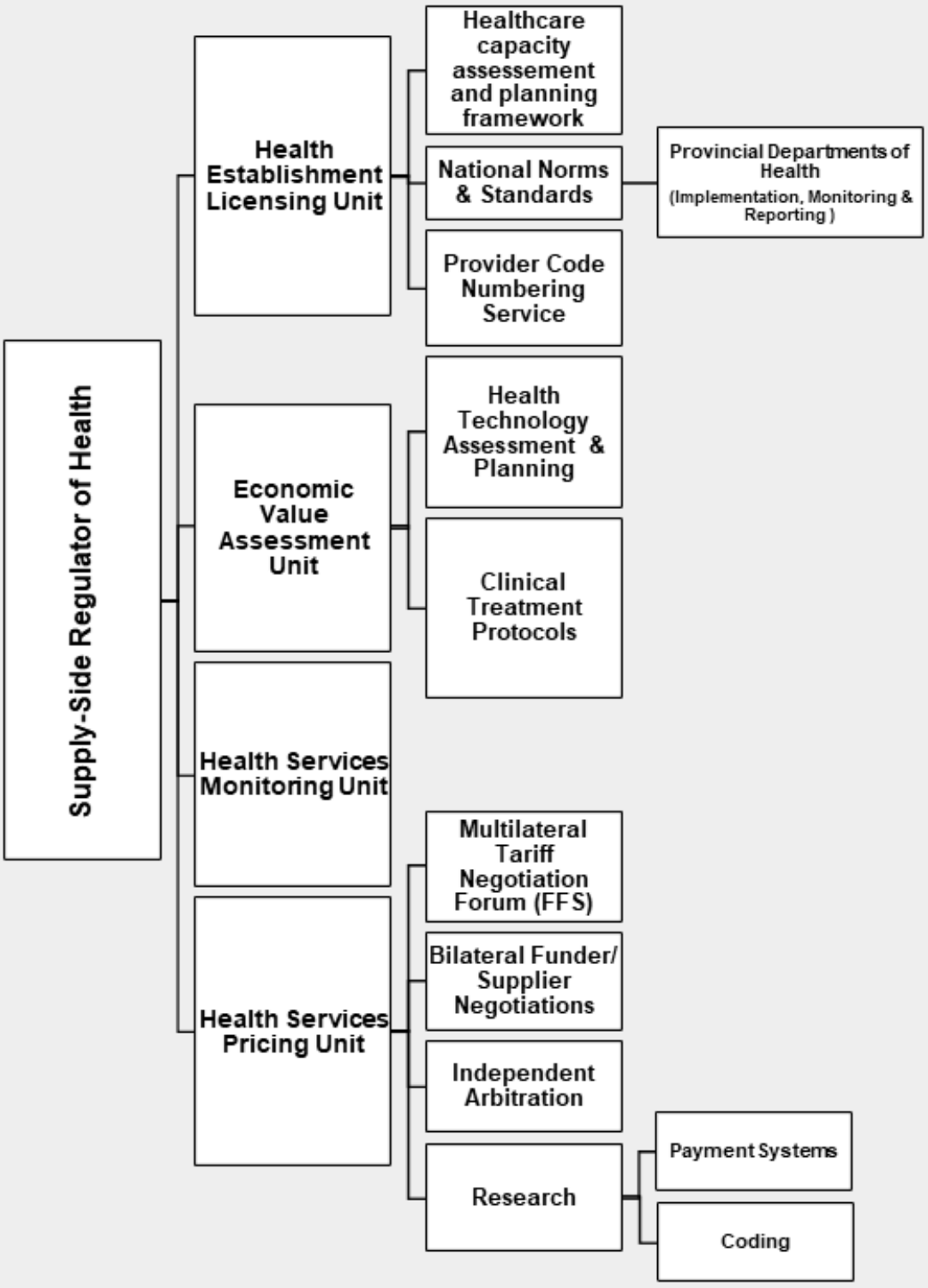
137. As indicated above, the Inquiry recommends that an independent supply-side regulator be established to oversee and manage functions related to healthcare capacity planning, economic value assessments, the determination and implementation of appropriate payment mechanisms (including the determination of fees via the MNF), and outcome measurement, registration, and reporting. Locating these functions within a single supply-side regulator will ensure coherence in policy development and implementation.

138. The SSRH can be established through the National Health Act which gives the Minister wide ranging powers. The SSRH should be an independent public entity, with its own executive and a board appointed by the Minister following a transparent, public nomination process. It is recommended that work to set up the SSRH begins immediately with the objective of getting to regulatory body functional within five years of publication of the final Inquiry report.

139. It is important to emphasise that the SSRH should be an independent public entity and that its independence be explicitly affirmed in its founding legislation. Other mechanisms that should be considered to ensure the independence of the institution include being clear on the role and functions; specifying that though the governing body is appointed by the Minister it should have sole powers to appoint its accounting officer and other senior staff members without interference; that it has financial autonomy, and that the long-term strategy, and key performance areas of the regulator be independently determined.

140. The proposed structure of the SSRH is presented diagrammatically below (Figure 10.1). It will be comprised of four units responsible for the key areas of supply-side regulation set out above.

FIGURE 10.1: PROPOSED ORGANISATIONAL STRUCTURE FOR SUPPLY-SIDE REGULATOR FOR HEALTHCARE



PRACTITIONER PAYMENT MODELS AND CODING SYSTEMS

PRACTITIONER PAYMENT MODELS

141. FFS models of remuneration currently dominate the industry. This means that funders and patients bear the entire financial risk, which is clearly is not sustainable.

142. The HMI has found that ARMs have not been widely adopted and, where adopted, not much effect on utilization and the transfer of risks have been shown.[15]

143. It is important that the sector adopts alternative payment models that promote financial risk sharing and contain costs and volumes, while preserving or increasing quality of care.

144. Our position resonates with that of the National Commission on Physician Payment Reform in the USA which, in 2013, stated, "Our nation cannot control runaway medical spending without fundamentally changing how physicians are paid". They find that FFS is inherently inefficient and generates 'problematic' financial incentives. Accordingly, it recommends a phased transition from 'price-only' FFS to reimbursement models that reward physicians and facilities for value and quality.

145. The HMI strongly supports a transition from FFS to alternative reimbursement models but is not in a position to prescribe how this should happen. There will always be a place for FFS in particular in trauma care. The Inquiry has hopes to encourage a variety of alternative forms of practice and methods of payment and would like to promote stakeholders to engage in effective ARMs with real risk-sharing and a commitment to providing better value for money.

146. However, the Inquiry is also aware that merely urging providers and funders to implement ARMs is not enough. Various recommendations we have made which include; a change scheme governance to align scheme interests more closely with members; the recommendation that schemes report on what they have done to promote value-based contracting, address supply-induced demand and contain non-healthcare expenditure; the review of the HPCSA ethical rules to allow for multidisciplinary practices and global fees; the encouragement of geographic based new entrants into the market. These all provide avenues that should encourage a move away from fee for service.

CODING SYSTEMS

147. We recommend that coding systems across the sector be standardised to facilitate meaningful sharing of information. This is particularly important in relation to monitoring of quality of care, provider payment, maintenance of coding systems in line with evolving developments in medical care, introduction of new technology, and to prevent unilateral manipulation of codes to adjust tariffs.

148. Coding systems are integral to adoption of provider payment systems. They are essential to a well-functioning healthcare system, and potentially affect all stakeholders' financial and clinical interests in different ways. A coding system, therefore, is essentially a public good that needs to be developed and maintained as such.

149. For this reason, we recommend that management of coding systems should reside within the same SSRH unit that is responsible for pricing of healthcare services. The SSRH will similarly co-ordinate the process by engaging stakeholders in executing its research function in this regard. Given that this is a highly specialized area, the SSRH should have the mandate to outsource certain parts of its work to independent experts (e.g. academics). However, the SSRH, as a public institution, must remain accountable for the final output and integrity of the process.

15. See: WTW Report on Analysis of Medical Schemes claims data – a focus on facilities

150. The SSRH should be responsible for the adoption and standardization of actual alphanumeric codes, descriptors and relative value units. We recommend that motivation for new codes or modification of existing ones be submitted to the SSRH coding unit for consideration and final determination. Rules for introducing new codes or modification of existing ones is the responsibility of the SSRH coding unit, must be done by a multidisciplinary team and be developed in consultation with stakeholders and published.

151. Presently, the healthcare sector uses Current Procedural Terminology (CPT) codes, among others. It is our understanding that SAMA is the custodian of these codes owing to its longstanding arrangement with the American Medical Association. SAMA has submitted that it should remain the custodian of the coding system. We do not agree that coding should be the exclusive property of only one group of stakeholders. Standardisation of coding systems, including DRGs, can promote competition and must be in the public domain. However, if the sector decides that the CPT system remains the preferred one, SAMA may need to be compensated fairly for its intellectual property rights in this regard.

PROVIDER NETWORKS

152. 15We have concluded that provider networks in general have a net positive impact on competition and should continue to be an option in the sector's drive to provide quality care based on value. The benefits of preferred- or designated provider networks to consumers include that consumers can receive more favourable pricing and certainty that they will receive treatment without facing balance billing.

153. Networks are also beneficial to providers because they ensure that providers will receive direct payment, they can expect that members will be preferentially directed or steered to their facilities, and they have defined rights around disputing claims and payments.

154. Provider networks are thus one of the most effective tools that can be deployed to drive competition, especially among corporate service providers.

155. However, there are some concerns associated with provider networks. These include the potential exclusionary nature of networks and a reduction in consumer choice. To ensure that networks are beneficial to consumers, the inquiry recommends the following:

155.1. The structure of network agreements must promote transparency regarding pricing, health outcomes, and location of practitioners and facilities;

155.2. Reasonable patient access to service providers must be a key consideration in development of provider networks,

155.3. Network arrangements should not restrict service providers from charging fees that are lower than those negotiated even by their own network managers;

155.4. Network contracts should contain an element of sustainable risk transfer;

155.5. Network contracts should be designed to ensure that they measure, monitor and reward delivery of quality care;

155.6. Any provider who can match network FFS prices set up by any medical scheme network should be allowed to provide services to the same scheme population. However, selective contracting on patient volumes, price and quality must be allowed for ARM agreements to be effective;

155.7. Network arrangements must progressively reduce fragmentation of service delivery and promote integrated delivery among clinicians, without introducing incentives for supplier induced demand.

155.8. Network arrangements must promote competition among health care product suppliers, i.e. avoid product exclusivity without selected network suppliers having been involved in competitive bidding;

155.9. Arrangements must promote local funder/provider contracting;

155.10. No penalties must be levied on consumers for emergencies and poorly accessible network providers; and

155.11. No balance billing for services provided by approved network providers must be allowed.

156. Facility and pathology DSP arrangements, in particular, should be far more competitive than they are at present. Some of the recommendations that are worth considering include the following:

156.1. DSP partners should only be appointed after an open tender process and results of the process must be lodged with the SSRH and published.

156.2. Tenders should be advertised broadly through popular media in addition to websites of the SSRH, CMS, affected medical schemes and administrators. Advertisements should remain open for at least one calendar month.

156.3. DSP contract arrangements should not be longer than two years. We make this recommendation to eliminate evergreen contracts while leaving the door open for new entrants to compete. Testing the market regularly in an open manner will have a positive effect on competition as well as expenditure in the long run.

OUTCOMES MEASUREMENT REPORTING SYSTEM

157. One of the key competition challenges we identified is that there is no reliable information available on health outcomes in the private healthcare sector. This information would allow patients to better care and providers. It would also improve the ability of healthcare funders to meaningfully compare costs and quality on value for money when contracting with providers. Further, providers would be able to use these data to track and compare performance and make necessary changes where outcomes fall below industry benchmarks.

158. The lack of outcomes information seriously impairs competition and consumer choice in South Africa and also limits providers' ability to continually improve the service they provide. Radically improving the availability of information on quality of care will allow doctors to compare results and improve treatments. It will also provide funders the information they need to improve contracting.

159. There are several key requirements for putting a reliable outcomes measurement system in place. It requires defining quality indicators, collecting standardised data through a central IT-platform, auditing the data, performing necessary risk-adjustment of the data, measuring quality using the indicators and disseminating the results to providers and ultimately to the general public and funding sector. Fortunately the process does not have to start from scratch as there are international exemplars to inform and kick-start this process.

160. 1The Inquiry recommends that the primary objective, in the initial period, should be to build capacity to measure and report on patient-centred outcome indicators. Other facets of quality such as structure, process, and patient experience indicators are less pressing and can be added at a later stage.

161. A nationwide system of measuring and reporting relevant outcomes information addresses our main findings that:

161.1. there is no information available to the public in South Africa to choose doctors and facilities, the appropriateness of treatments, and to compare the quality of providers that funders contract ,

161.2. funders themselves generally lack sufficient outcome information to contract with providers on the basis of value for money

161.3. the individual provider model of care operational in South Africa results in fragmented knowledge about the health status of a patient making health outcome difficult to ascertain,

161.4. GP's lack information to direct clients and patients to the best possible treatment in terms of costs and expected outcomes,

161.5. the NHI and OHSC, who carry a nationwide responsibility for the quality of care provided, also generally lack basic information on outcomes of care – both public and private.

162. Implementing a national system of outcome measurement cannot take a top-down approach. It requires broad and active participation of the entire clinical community. International experience has shown that clinicians are the critical success factor in developing useful outcome registries.

163. The participation of patients and their representatives is also paramount to ensure that the system is valuable and reports on metrics that improve patients' health outcomes and delivers better value for money.

164. The HMI recommends that the outcomes measurement reporting system be implemented in a staged process with two phases.

164.1. The first phase should be a voluntary phase that should be completed within 3 – 4 years from the publication of the HMI's final recommendations. During this phase the participation of doctors and facilities is critical: they must take the lead to form a collaborative body to oversee a voluntary outcomes measurement and reporting system. The body should define standards for South Africa and could draw from existing registries and freely available and tested indicators (such as ICHOM). Funders, patients' organisations and regulators must also be encouraged to participate in this first voluntary phase.

164.2. Providers and funders should take responsibility for financing this first phase of voluntary participation. Initiatives for co-funding formulas in the Netherlands and Scandinavia may serve as a model.

165. The HMI proposes that the data collected in the first phase be released only to participating providers in individual feedback cycles aimed at improving the outcomes measurement and reporting system. Results and experiences from this first phase should then be used as an input towards developing the OMRO in the second phase.

166. In the second phase, an appropriate statutory entity must be established to oversee the outcomes measurement and reporting process. A working title for this entity is the Outcome Measurement and Reporting Organisation ('OMRO'). The National Department of Health, in consultation with relevant stakeholders, must take the lead in drafting the enabling legislation for the OMRO. The industry should aim for OMRO to be fully functional within 6 years of the conclusion of this inquiry.

167. During the second phase Government's involvement is more critical – both in finding a sustainable funding mechanism for OMRO, and in establishing a truly independent governance structure which is crucial to ensure that doctors, patients and funders trust the information generated. Information collected in the second phase must also serve to empower the consumer to choose the provider, treatment, scheme and plan that serves the consumer best. Through the empowerment of the consumer, competition between providers and funders will be enhanced.

168. During our engagements with stakeholders it became clear that the OMRO must be strictly independent from government and the private sector for it to have credibility amongst providers, patients and funders. This is essential. It became also clear that the majority of respondents opt for a new and dedicated organisation, and not one of the existing organisations.

169. OMRO should have board members that are appointed by the Minister of Health following a public nomination process. Its board must consist of members reflecting the interests of doctors, patients, facilities and funders, and may comprise representatives of government, academia and regulating institutions. But it is emphasized that the OMRO itself is not a regulator; it must be organisationally separate from government, private or public providers and regulatory institutions.

170. In order to give effect to mandatory provision of data, the OMRO will depend on the legislated legal powers of the SSRH, which will allow it to collect outcomes data from providers. Mandatory provision should start applying in the second phase.

171. The preferred funding model for the OMRO is a hybrid model with levies from schemes being the primary source of funding, complemented by government and voluntary funding. However, a large portion of its funding should come from healthcare related levies. The exact mechanics of how the model would work should be determined by the stakeholders, in consultation with the DoH and the National Treasury. What is essential is that the funding model should guarantee organisational independence and continuity of resources.

RECOMMENDATIONS TO ADDRESS OVER-SERVICING AND SID

172. We identified over-servicing and SID as a feature in the private facilities market that may undermine competition and consequently harm consumers. In this respect, the HMI recommends to the CMS to include metrics of SID in its published reports. The CMS need not conduct the analysis themselves but must publish information on what schemes/ administrators are doing to cut back on supply induced demand.

173. To facilitate effective management of SID and to improve availability of data more generally, the Inquiry recommends the collection of anonymised data as was done for the HMI. The relevant regulatory authority (in this case, the CMS) must, in collaboration with stakeholders, define the format in which data should be submitted and how frequently it should be done. The CMS must also specify penalties for non-compliance and rules for secure storage and access to the data.

RECOMMENDATIONS TO INCREASE SYNERGIES BETWEEN PUBLIC AND PRIVATE FACILITIES

174. In Chapter 6 on Facilities, we have found that there are a number of local markets where limited public sector capacity can be augmented by existing private bed capacity. It is not clear to the Inquiry why government has not already engaged in strategic purchasing in these markets. Nevertheless, the Inquiry recommends that strategic purchasing of available private capacity to supplement capacity in the public sector need not wait for the NHI. Government could, and should, already contract with the private sector where it needs capacity.

REVIEW OF REGULATORY ENVIRONMENT GOVERNING PRACTITIONERS

Review of HPCSA Ethical Rules

175. The HPCSA must undertake a review of its ethical rules with a view to:

175.1. Reviewing all rules from a competition perspective.

175.2. Re-phrasing rules to be more permissive or enabling in nature, including that:

175.3. Encouraging group practices;

175.4. Promoting the use of global fees.

176. In particular, the Inquiry makes the following recommendation:

176.1. Sub-rules 7(4) and (5) should be clarified and should allow for ARMs such as global fees, subject to certain conditions. Rule 7 should not be considered an all-out prohibition of innovative models. The HMI recommends changes to the wording of this ethical rule in order allow for fee sharing under appropriate circumstances.

176.2. Rules 8 and 8A should be crafted in a manner that allows multi-disciplinary practices and partnerships, and provide clear guidelines on the grounds that will lead to a ban or prohibition by the HPCSA. The HPCSA should also request the full details of these arrangements in order to determine whether there are any concerns that arise from them, and to remedy those where appropriate.

176.3. Rule 18 should be written in a permissive manner and should not be interpreted as a blanket ban on the employment of practitioners. There are cases where the employment of doctors would support value-based contracting and these should be considered on the merits. The inquiry considers that

the alignment of medical practitioners and hospital interests is too close there and is coincidental benefit of increased utilisation of facilities that accrue to both medical practitioners and hospitals. At this point, the Inquiry does not advocate unrestricted and unmonitored employment of doctors. In the current market, unrestricted employment of doctors could have serious unintended consequences for consumers and the industry as a whole. The Inquiry recommends that employment of doctors should not be prohibited, but employment of doctors should be conditional. There are other forms of employment of doctors outside of employment by for-profit private hospitals. Where such employment can demonstrate that it is pro-competitive and adds value and that benefits accrue to consumers, it should not be encouraged. The HMI would welcome well-motivated proposals where employment of specified categories of doctors by the private sector would be a net positive for the sector as a whole.

176.4. With regard to Rule 23A, the HMI recommends more effective monitoring of practitioners' financial interest in facilities. Practitioners who own shares in facilities should declare this information to the HPCSA on an annual basis and this information should be published by the HPCSA on its website and all facilities where affected practitioners work.

176.5. At the very least, the following information should be clearly declared to the patient:

176.5.1. Cost of medical care: specifically, if practitioners charge more than any prevailing reference prices not approved by funders, informed consent should be backed up by signed documentation;

176.5.2. Ownership of shares (Rule 23A) at the facility where the doctor provides services. Shares acquired through the open market (stock exchanges) should be exempt from declaration;

176.5.3. Financial interests in any product used (e.g. prostheses), dispensed or prescribed by practitioners (e.g. medicines).

177. The Inquiry also recommends that the HPCSA review its requirements for approval of training institutions such that training includes:

177.1. an understanding of medical coding of procedures;

177.2. the cost and value implications of health care; and

177.3. an understanding of the purpose of HTA-like bodies and their methods.

178. These modules should also be included in continuing medical education so that post graduate providers also gain this knowledge.

NOTES

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