Annexure A

Response to the Health Professionals Council of South Africa's request for comments on proposed guideline

Prepared on instruction of Webber Wentzel

31 March 2013

Document Reference: Final Report

Date: 31 March 2013

Contact Information

Genesis Analytics (Pty) Ltd

Office 3, 50 Sixth Road
Hyde Park, 2196, Johannesburg
South Africa

Post to: PO Box 413431, Craighall, 2024
Johannesburg, South Africa

Tel: +2711 994 7000
Fax: +2711 994 7099

www.genesis-analytics.com

Authors

Stephan Malherbe, Viresh Ranchod and Arabo Ewinyu

Contact Person

Stephan Malherbe

Table of Contents

EXECUTIVE SUMMARY V

1. INTRODUCTION 1

2. THE GUIDELINE NEEDS TO BE COST BASED 2

3. THE 2006 NHRPL DOES NOT REFLECT COSTS AND HENCE CANNOT BE USED 3

3.1. The evolution of the 2006 NHRPL 3

3.1.1. The development of the 2006 NHRPL 3

3.1.2. The link between the 2006 NHRPL and the rejected 2009 RPL 3

3.2. Assessment of the 2006 NHRPL as a basis for the guideline 4

4. CPI IS AN INAPPROPRIATE MEASURE FOR INTERIM INFLATION ADJUSTMENTS 4

4.1. Is CPI an appropriate measure? 5

4.2. Are other measures of healthcare inflation appropriate? 8

4.3. Proposal on intra-period inflationary adjustments 9

5. A DISPERSION FACTOR NEEDS TO BE INCLUDED 9

5.1. The median cost estimate cannot by itself be the guideline 9

5.2. Understanding standard deviations 13

5.3. Using standard deviations to define an appropriate dispersion factor 13

5.4. A proposal for determining the dispersion factor 14

6. A 'LEGITIMATE COST DEFENCE' IS REQUIRED 14

6.1. The approach to determining the guideline 15

6.2. The need for flexibility in the guideline determination process 15

6.3. Proposal to address exceptional circumstances 16

7. THE NEED FOR THE GUIDELINE TO ACT AS A SAFE HARBOUR 17

List of Figures

Figure 1: Average annual headline and medical inflation in South Africa - 2001 to 2012 7
Figure 2: A normally distributed curve indicating the dispersion of medical practitioner costs 10
Figure 3: A normally distributed curve indicating standard deviation 13

List of Tables

Table 1: CPI basket of goods and services – excerpt of medical products and services 6

EXECUTIVE SUMMARY

One of the functions of the Health Professionals Council of South Africa ("HPCSA") is "*to serve and protect the public in matters involving the rendering of health services by persons practicing a health profession*"[1].

In this regard, the professional boards affiliated to the HPCSA are empowered to determine the fees that should have been charged by a medical practitioner upon receipt of an application by the patient involved[2]. Section 53(d) of the Health Professionals Act[3] empowers such boards to "determine and publish the fees used by the professional board as a norm for the determination of complaints of overcharging".

The Medical and Dental Professions Board intends[4] to embark on a new process to determine such a set of "guidelines" for medical practitioners. The Board expresses the purpose of the tariffs as thus:

> *Once determined and published, the guideline tariffs will be used as a norm for the determination, upon application by a patient for such a determination as contemplated in section 53(3)(a) of the Act., of amounts which in the opinion of the professional board should have been charged by the practitioner to which the application relates to professional services rendered by such practitioner to the patient concerned*.[5]

The Board has invited[6] representations on, amongst others:

- The process and methods that the Board and its Tariff Committee . . . should follow to determine the guideline tariff;
- The appropriateness of using the 2006 National Health Reference Price List as a basis for the guideline tariff, and
- The appropriateness of using the Consumer Price Index as an inflator.

Our findings can be summarised in the following seven statements.

First, how the guideline ought to be determined flows from its purpose.

It is useful first to clarify what the guideline is <u>not</u> for. The guideline is not intended to set medical fees, as medical practitioners will be free to deviate from the guideline where justified. Neither is it intended to set reimbursement rates of medical schemes to medical practitioners – it is now understood that these vary significantly for the same procedure.

Instead, the guideline contemplated in Section 53(d) of the Act is intended to act as a norm for use in the process of determining whether patients have been overcharged in particular cases. In this report it is envisaged that the guideline will be used in two ways:

by the Board when it receives a complaint about an account; and

[1] Section 3(j) of the Health Professions Act 56 of 1974.
[2] Section 53(3) of the Health Professions Act 56 of 1974.
[3] Health Professionals Act 54 of 1974
[4] Board Notice 198 of 2012.
[5] Board Notice 198 of 2012.
[6] Board Notice 198 of 2012.

by medical practitioners as an indicator of a safe harbour (or safe ceiling) for charging, below which they will not be investigated.

Second, the guideline for a particular procedure and field of medicine needs to be linked to the median costs of that procedure.

A guideline estimate that does not cover the appropriate costs incurred by the medical practitioner cannot be used as a guideline for assessing complaints of overcharging. A guideline that doesn't cover median costs would put in jeopardy a large number of medical practitioners who had been charging at or even below cost. Similarly, a guideline not based on cost may be too high, 'protecting' medical practitioners who are over-charging. Therefore the guideline should be linked to an appropriate cost build-up – for example of the kind contemplated for the determination of the National Health Reference Price List (if never fully implemented) and the subsequent reference price list, using rand conversion factors for defined procedures.

Third, as the 2006 National Health Reference Price List ("2006 NHRPL") does not reliably reflect costs, it cannot be used as a basis for the guideline.

It is important to note that the 2006 NHRPL is not based on either current or 2006 costs. Instead, it is based on the 2003 Board of Health Funders scale of benefits that are now a decade out of date, and is of uncertain methodology even at the time. It was subsequently adjusted for general inflation in the three years that followed with no additional updates made to medical practitioner costs.

The 2006 NHRPL also suffers from some of the same deficiencies as the 2009 Reference Price List that was rejected by the High Court. These include the lack of a cost basis, use of out-dated medical codes and the lack of fee differentiation to account for differences in the length of consultation.[7]

Fourth, as the Consumer Price Index does not principally track either the drivers of healthcare costs nor tracks healthcare prices, it cannot be relied on to provide an estimate of current costs even when applied to accurate past costs.

The Consumer Price Index ("CPI") is a weighted price measure of a basket of all goods and services including a small weighting for healthcare prices in the South African economy. It therefore includes a range of other prices like Food, Clothing and Housing. Furthermore, the healthcare-related prices do not comprehensively reflect healthcare products and services, and hold a very minor weighting in overall CPI.

Therefore, we propose the following option in terms of the appropriate inflator: A dual index for all medical practitioners divided into: (i) surgical and (ii) consulting specialities based on weighted baskets of the most prominent input costs. We propose that the median cost estimates for the guideline be determined every three years with the inflationary adjustments applying only for the two years following each in-depth determination.

Fifth, a dispersion factor needs to be applied to the estimated median costs of a procedure to yield a guideline.

There is a wide dispersion of fees that could legitimately be charged by medical practitioners for the same type of procedure. The dispersion of defensible fees arises from:

[7] Refer to submission by Healthman on behalf of SAPPF for further details of the deficiencies of the 2006 NHRPL.

the location of the medical practice under review;

the use of specialised medical equipment within the medical practice;

whether the medical practitioner is a sole practitioner or in a partnership;

the level of skill and experience of the medical practitioner;

whether the fee under review was provided to a patient that visited a doctor outside of their medical scheme's designated service provider network; and

the patient's specific needs.

The median costs represent an assessment of the costs of a median medical practitioner under 'median' conditions. By construction, half of all medical practitioners will have costs below this level, and half of medical practitioners will have defensible costs above the level. Therefore using the median cost of a procedure as the benchmark will result in half of all service providers potentially being brought before the Professional Board for grounds that will ultimately not hold. Further, it strains the ordinary meaning of words to claim that any charge even slightly above costs would be unethical. As a practical matter and given limited resources, unethical charges would only be brought against those who are charging both (i) above their own costs and (ii) charging non-trivially above the median costs.

To eliminate this problem, it is necessary to add a dispersion factor to the median cost for determining a guideline that has the purpose set out in Section 53(d) of the Act. This is somewhat similar to the calculation of the 'ethical tariff' prior to 2008, but ought to be done in more disciplined and rational way. We proposed the following approach: that the guideline is set one standard deviation above the cost median. Standard deviation is measure of the dispersion of observations around an average value, generally the mean. Assuming that costs of various suppliers have a normal distribution, setting the guideline one standard deviation above would mean that the tariff would cover or exceed the costs of 84.2% of medical practitioners, but still be below the *costs* of 15.8% of medical practitioners.

It may be that the appropriate level of the dispersion factor is slightly higher or slightly lower than one standard deviation. However, the principle that setting the guideline for overcharging at the mean is inappropriate and that a dispersion factor is required is important. Once this principle is accepted, if insufficient data is available to precisely calculate the value of a standard deviation, a simple rule of thumb increase (expressed as an appropriately set percentage) could suffice.

Sixth, recognising that costs and tariff appropriateness are context specific, a 'defence of legitimate costs' needs to be recognised.

It is self-evident that no fee which is at or below the legitimate costs of a medical practitioner could be considered excessive. Therefore a medical practitioner who can demonstrate that their fees are reasonably related to its true and legitimate costs, should have a valid defence. This ought to include appropriate adjustments to salary and other components for skill, experience and innovation.

To reduce the costs of adjudication for both the Professional Board and the medical practitioner, an alternative to the provider-specific cost defence should be provided in the form of 'enumerated and identified exceptional circumstances' – in effect standardised recognition

for cost additions that occur with sufficient certainty and regularity for the additional cost to be given a standard estimate.

Possible examples of identified additional costs are:

> *Super-specialisation* by medical practitioners as in the case of, for example, neo-natal paediatricians;
>
> *Patient-driven factors* such as of co-morbidity and complexity resulting in increased time, effort and risk on the part of medical practitioners, and
>
> *Emergency services* which generally require a medical practitioner to be available after normal working hours.

A set cost adjustment for each exceptional circumstance would be added to the mean cost estimate inclusive of a dispersion factor for the standard procedure. We envisage that the Board, and professional groups interacting with the Board, would over time develop lists of regularly observed exceptional circumstances, with the incremental cost per procedure estimated. The exceptional circumstances lists and increments would be updated at the same time that the underlying cost estimates are updated. This mechanism would allow both Tariff Committee and respondent to readily estimate at least some context-relevant costs without the effort of a full customised cost analysis.

Seventh, the guideline should indicate a safe harbour for medical practitioners.

It is critical that a level of certainty be provided for medical practitioners by providing an indication of a cost level at or below which no action would be taken. We believe that it would be appropriate to set the safe harbour at the guideline.

1. INTRODUCTION

1. Genesis Analytics has been retained by Webber Wentzel attorneys on behalf of the South African Private Practitioners Forum ("SAPPF") to provide analysis of the proposal issued by the Health Professionals Council of South Africa ("HPCSA") and the Medical and Dental Professional Board ("the Board" or "the Professional Board") with respect to proposed tariffs for medical practitioners and dentists ("medical practitioners"). These tariffs are intended to operate in terms of Section 53(d) of the Health Professionals Act, 54 of 1974 ("Health Professionals Act"), i.e. for evaluation of claimed overcharging by medical practitioners.

2. The HPCSA through the Professional Board is empowered by Section 53(3)(d) of the Health Professions Act of 1974[8] to:

   "*determine and publish the fees*" used by the professional board as a norm for the determination of complaints of overcharging.

3. Terminology in this area is often confusing, so for the purpose of this report we draw these distinctions:

   3.1. We refer to the 2006 National Health Reference Price List ("2006 NHRPL") issued by the Council of Medical Schemes ("CMS") as a **reference price list**.

   3.2. If the Professional Board found it necessary for the purpose of developing a guideline to use an estimate of a cost-based tariff akin to the reference price list, we would refer to that estimate as a **median cost estimate**.

   3.3. Following the HPCSA and the Professional Board, the tariff levels that will be used as a trigger for overcharging enquiries and as the principal benchmark for determining cases of overcharging will be referred to as the **guideline**. In the past, the guideline was sometimes expressed as a multiple of the underlying reference price list (that is, the general tariff used as a guide for reimbursement rates) – we propose that in future the guideline will continue to be based on a median cost estimate plus a dispersion factor, rather than a multiple of the reference price list.

4. This report is structured as follows:

   4.1. We begin by focusing on the importance of using a cost-based median estimate in the determination of the guideline. More specifically, we assess whether the 2006 NHRPL can play that role. We find that the 2006 NHRPL is flawed in many respects, culminating in the fatal lack of a cost basis. In addressing this flaw, we find that a guideline should be linked to a median cost estimate that involves a cost build-up akin to the methodology set out by the Council for Medical Schemes for the determination of the 2007 NHRPL.

   4.2. We then explore the appropriateness of CPI as an inflationary adjustment measure. We find that the use of CPI is inappropriate as it is likely to distort the actual trends in pricing and cost of medical services. In order to appropriately account for these trends, we find that a dual index for all medical practitioners based on the most prominent input costs divided into: (i) surgical and (ii) consulting specialities

[8] South Africa. 9 October 1974. Government Gazette. Health Professions Act 56 of 1974. Pretoria

represents the most sound option. This index should be used as an adjustment factor for inflation during intervening periods between the determination of the medical cost estimates for the guideline.

4.3. The analysis proceeds to focus on the appropriate level at which the guideline should be set. In doing so, we find that the natural variation in the medical services industry effectively means that a dispersion factor needs to be added to a median cost estimate for any particular service. The standard deviation methodology provides a sound basis on which this can be reliably executed and this is outlined in detail (as a proxy, a percentage increment could also be added).

4.4. We then outline the need for flexibility in the guideline determination process to fully account for circumstances in which defensible medical practitioner costs vary significantly from a median cost estimate inclusive of a dispersion factor.

4.5. We further find that the guideline ought to serve as a safe harbour for medical practitioners below which there is no risk of being found to have overcharged.

2. THE GUIDELINE NEEDS TO BE COST BASED

5. The guideline needs to account for medical practitioner costs. Whilst it is imperative that patients' interests are protected, that implies that the medical practitioner is able to run a sustainable business based on their respective costs.

6. Consistent with this approach, the Council for Medical Schemes ("CMS")[9] has in the past attempted to use a cost-based model to determine the NHRPL. More specifically:

6.1. The formula for the reference item price equalled item cost plus return on investment;

6.2. Item cost was further accounted for by (i) direct labour costs[10], (ii) direct material costs[11], and (iii) allocated overhead costs[12].

7. In the absence of a sound consideration of medical practitioner costs, the guideline would likely be set at the wrong level – either too high or too low. If the guideline is set too low, the burden on both the HPCSA through the Professional Board and compliant medical practitioners increases significantly from additional transaction costs related to assessing cases of overcharging patients. Conversely, where the guideline that is set too high, it may be open to abuse by medical practitioners who may be charging patients excessively high fees.

8. Hence we propose that the guideline be linked to the median cost estimate that involves a cost build-up akin to the methodology set out by the CMS for the determination of the 2007 NHRPL. The underlying methodology and actual median cost estimates are explored fully in the Healthman submission on behalf of the SAPPF.

---

[9] CMS (2006).Circular 69 of 2005.
[10] This is the cost of labour that can be directly and conveniently traced to the provision of the service represented by the particular fee item.
[11] Significant materials used in providing the service that can be conveniently traced to it.
[12] All of the remaining costs associated with providing the total set of services rendered by the healthcare practice that do not fall within direct labour and direct material costs.

3. THE 2006 NHRPL DOES NOT REFLECT COSTS AND HENCE CANNOT BE USED

9. It is evident that the Board is considering the use of the 2006 NHRPL as a basis for the guideline[13]. It is therefore important to understand the evolution and validity of the 2006 NHRPL.

3.1. THE EVOLUTION OF THE 2006 NHRPL

3.1.1. The development of the 2006 NHRPL

10. Prior to 2003, the South African Medical Association ("SAMA"), the Board of Health Funders ("BHF") and the Hospital Association of South Africa ("HASA") engaged in collective bargaining to determine tariffs payable for healthcare services. Thereafter, BHF published a scale of benefits to be used by medical schemes as a reference for determining benefits payable to members. In addition, SAMA published a set of guidelines on professional fees supplied by medical practitioners to patients. A 2003 ruling by the Competition Commission found the publication of these tariffs to be akin to price fixing by competitors, and hence in contravention of Section 4(1)(b) of the Competition Act[14].

11. Thereafter, the CMS, acting as a single entity, published a health pricing guideline for medical schemes and practitioners referred to as the national health reference price list ("NHRPL"). The first one, published in 2004, was essentially an inflationary increase on the 2003 BHF scale of benefits. The CMS published subsequent reference price lists in 2005 and 2006 with the 2006 NHRPL being an increase of the 2005 NHRPL plus a Consumer Price Index ("CPI") increase.

3.1.2. The link between the 2006 NHRPL and the rejected 2009 RPL

12. In 2005, the CMS invited submissions relating to the 2007 NHRPL that would be jointly published by the CMS and the Department of Health ("DOH"). These guidelines state that the cost of providing the (medical) service should be explicitly stated, this cost should form the basis for the calculation of the Reference Price List ("RPL"). During this period, the CMS sought to test the cost responsiveness of some of the fees listed in the NHRPL. Owing to time constraints, only six disciplines made submissions, namely psychiatry, anaesthesiology, audiology, speech therapy, physiotherapy and emergency services. The CMS seemingly acknowledged these costing models by adjusting their NHRPL tariffs for these disciplines by an average of 35% in the 2005/6 period acknowledging that further increases would be phased in over time.

13. However, prior to the completion of this process, the DOH assumed responsibility for the publication of the NHRPL, publishing a draft schedule for 2007. This version was subsequently challenged by various medical professional bodies and eventually withdrawn. This costing exercise was eventually abandoned and in consideration of the 2007 NHRPL the CMS advised that, the 2007 NHRPL should include a 4.9% inflationary increase above the 2006 NHRPL that applied equally to all medical specialties.

---

[13] Refer to Board Notice 198 of 2012, HPCSA, Proposed Guideline Tariffs for medical practitioners and dentists, (b) and (c).
[14] The Competition Act no.89 of 1998 (as amended).

14. The DOH subsequently published the 2008 RPL on the 16th of November 2007 simply providing for an inflationary increase of 5.4% on the 2007 NHRPL, without consulting with stakeholders and obtaining relevant comments. The 2009 RPL was also published by the DOH on the 24th December 2008, providing for a 10.7% across the board increase on the 2008 RPL. This 2009 RPL was subsequently declared illegal on procedural grounds and set aside by the Northern Gauteng High Court in a 2010 ruling.

3.2. ASSESSMENT OF THE 2006 NHRPL AS A BASIS FOR THE GUIDELINE

15. As the 2006 NHRPL was fully based on the 2004 NHRPL, which in turn was based on the 2003 negotiated schedule of benefits published by the BHF, it was from the start not cost-based – a defect that cannot be remedied by applying across-the-board inflation adjustments.

16. Furthermore, to the extent that the illegal 2009 RPL was based on the 2006 NHRPL[15], the latter suffers from the same shortcomings, namely:

    16.1. The 2004 NHRPL, used as the ultimate basis for all subsequent reference price lists, was not cost-reflective but resulted from joint negotiation between hospitals, medical aid schemes and practitioners;

    16.2. The coding structure of the RPL had remained largely unchanged since 2004[16]; and

    16.3. With the exception of very few specialties, the 2009 RPL did not provide for time-based tiered consultations; instead it specified the same fee (per discipline) regardless of the length of the consultation.

17. The 2006 NHRPL's lack of a cost basis and other ancillary flaws render it wholly inappropriate as the basis for a guideline. For a detailed analysis of the deficiencies of 2006 NHRPL as a basis for the guideline please refer to the Healthman submission on behalf of the SAPPF. We propose instead that a guideline be derived from median cost estimates inclusive of a dispersion factor. This would be the most appropriate choice for adoption by the Board as a norm as intended by the Act.

4. CPI IS AN INAPPROPRIATE MEASURE FOR INTERIM INFLATION ADJUSTMENTS

18. A key objective underpinning inflationary adjustments to a guideline is ensuring that tariffs allow medical practitioners to cover their increasing costs while earning a reasonable return. The measure of inflation is crucial for this purpose. This section deals with the appropriateness of using the CPI to this end.

[15] In fact, the 2008 RPL is based on the 2007 NHRPL (that included a 4.9% inflationary increase on the 2006 NHRPL) simply providing for an inflationary increase of 5.4%.
[16] We understand that this situation has not been rectified and approximately 1,033 procedures are still not coded. This is dealt with elsewhere in the report.

4.1. IS CPI AN APPROPRIATE MEASURE?

19. CPI is essentially a price measure and not a cost measure. CPI is the official measure of inflation in South Africa. The CPI minus mortgage costs ("CPIX") is a derivative of the CPI. The CPIX basket of goods and services is similar to that for CPI except for mortgage interest rates and is only calculated for metropolitan and urban areas. The CPIX is employed by the South African Reserve Bank when making monetary policy decisions.

20. The CPI, sometimes referred to as "headline inflation", measures the change over time in the general price level of a fixed basket of goods and services consumed by households. Each item in the basket has a weight reflecting its relative contribution to the overall index. The weighted sum of changes in the price of specific products and services in the CPI provides the rate of inflation[17]. Statistics South Africa ("StatsSA") is the public entity that collects pricing data and publishes the inflation rate.

21. CPI takes into account the effect of changes in the pricing levels on the consumer in terms of various items such as (i) food, (ii) clothing, (iii) housing, (iv) healthcare and (v) education. In terms of healthcare, CPI accounts for the pricing effects in respect of: (i) medical products (that covers pharmaceutical products) and (ii) medical services; the latter includes out-patient services (including medical and dental services) and hospital services.

22. Overall, health has a total weighting of 1.39% of the overall CPI index published, with out-patient services accounting for 0.66%[18].

23. In 2012, the average annual medical inflation rate was estimated by StatsSA at 5.3% with price increases of medical products at 3.5% and price increases of medical services set at 6.4%. The table below details the basket of goods that are contained in the healthcare expenditure weighting of the CPI basket of goods and services.

[17] Whereas the prices are updated on a monthly, quarterly or annual basis, the weights are normally updated only every five years.
[18] StatsSA (2013). *Statistical Release P0141.5 – CPI Total Weights (Total Country).*

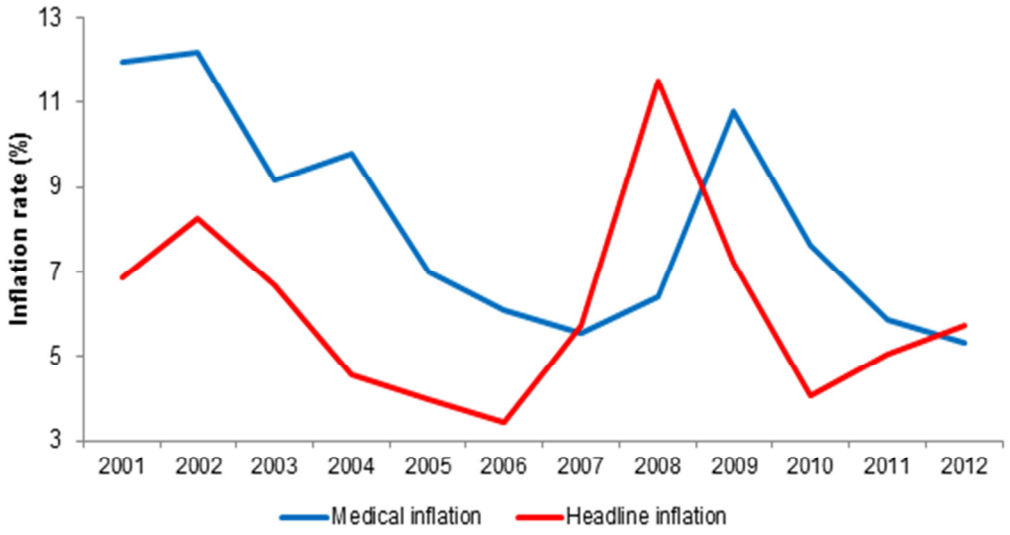
Table 1: CPI basket of goods and services – excerpt of medical products and services

Product Code	Product description	Indicator product
Pharmaceutical products		
06111001	Pharmaceutical products	Pain killers
06111002	Pharmaceutical products	Cough mixture
06111003	Pharmaceutical products	Vitamin and mineral supplement
06111004	Pharmaceutical products	Sinus medication
06111005	Pharmaceutical products	Fungal medication (foot and hand)
06111006	Pharmaceutical products	Cold and flu medication
06111007	Pharmaceutical products	Heartburn medication
06111008	Pharmaceutical products	Muscle pain relief gel
06111009	Pharmaceutical products	Sore throat lozenges
06111010	Pharmaceutical products	Laxative
Out-patient services		
06211001	General Practitioners	Consultation fee – Patients with medical aid
		Consultation fee – Private patients
06211002	Obstetricians and Gynaecologists	Consultation fee – Patients with medical aid
		Consultation fee – Private patients
		Ultrasound obstetrics – Patients with medical aid
		Ultrasound obstetrics – Private patients
06211003	Physicians	Consultation fee – Patients with medical aid
		Consultation fee – Private patients
06211004	Paediatricians	Consultation fee – Patients with medical aid
		Consultation fee – Private patients
06221001	Dentists	Oral examination – Patients with medical aid
		Oral examination – Private patients
		Amalgam restorations – Patients with medical aid
		Amalgam restorations – private patients
Hospital services		
06311001	Hospital services	Ward fees
06311002	Hospital services	Theatre fees
06311003	Hospital services	Consumables

Source:StatsSA (2009)."The South African CPI Sources and Methods Manual" Appendix 1. Pretoria.

24. A comparison of medical and consumer inflation indicates that the former has typically been in excess with a slight exception of the period between 2007 and 2009 during the global recession where South Africa experienced rising prices of food and other commodities such as oil. On average, medical inflation exceeded consumer inflation by 2.1% over the annual periods from 2001 to 2012 as illustrated in the figure below.

Figure 1: Average annual headline and medical inflation in South Africa - 2001 to 2012



Source: Econex based on StatsSA data

25. We find that it is inappropriate to apply CPI as the sole inflationary measure for the following reasons:

    25.1. Based on the relative weighting of health broadly and out-patient services in particular relative to overall CPI, it is evident that inflationary adjustments in health and out-patient services account for a minute proportion of total CPI.

    25.2. It is clear that CPI does not fully track the drivers of healthcare costs and only partially tracks the drivers of healthcare prices.

        25.2.1. Within the category of out-patient services, medical pricing is obtained from general practitioners and four other fields of medicine, namely: (i) obstetrics and gynaecology, (ii) physicians, (iii) paediatricians and (iv) dentists. Inflationary estimates do not account for a number of other categories of medical specialists including ophthalmologists and surgeons. It is inappropriate to enforce regulation of the fees on these medical practitioners without putting in place adjustments that take into account their cost drivers.

        25.2.2. Further, clinical procedure fees for some medical specialists like surgeons and gastroenterologists reflect a significant proportion of their fees and should be accounted for.

26. So it is apparent that CPI itself suffers from a number of deficiencies that result in its sole use to counteract the effects of inflation being flawed. For a detailed analysis on the deficiencies of CPI as a relevant measure of inflation please refer to the Econex submission on behalf of the SAPPF.

4.2. ARE OTHER MEASURES OF HEALTHCARE INFLATION APPROPRIATE?

27. In examining other alternatives for an inflationary measure there are two possible options based on the Table 1 provided earlier: (i) The healthcare component of CPI which consists of medical products and services which we refer to as **medical inflation**, and (ii) out-patient services which we refer to as **medical services inflation**. We explore both options below.

    27.1. Although the medical inflation captures the effect of higher input costs[19], it is an inappropriate measure by which to inflate guideline for the following reasons:

        27.1.1. Firstly, both medical products[20] (pharmaceuticals) and hospital services generally do not form of part medical practitioner's cost base. This measure also excludes medical products that are relevant for medical practitioner costs. This measure therefore includes a significant number of non-medical practitioner costs and fails include a significant number medical practitioner costs;

        27.1.2. Secondly, hospital services, more specifically increased ward and theatre fees (based on increasing nurses salaries) through which hospital services are captured in CPI, do not directly affect the input costs of doctors; and

        27.1.3. Finally, the recent inclusion of Public Sector in medical inflation further limits the appropriateness of the medical inflation as medical practitioners in the Public Sector have a different cost structure and are not free to determine their own fees[21].

    27.2. Medical services inflation is itself inappropriate as an inflationary measure for the following reasons:

        27.2.1. With the exception of ultrasound obstetrics and amalgam restorations there are no other clinical procedure fees included and therefore it is not representative of the significant proportion of clinical procedures performed by medical practitioners; and

        27.2.2. Whilst medical services inflation consists of some consultation fees not all medical specialists are represented and it is therefore not representative a significant proportion of medical practitioners.

28. In this context, another option could be the development of a new index that incorporates both consultation and clinical procedure fees in all fields of medicine. However, one of the critical assumptions underpinning this approach would be that medical practitioners would price independently of the guideline such they will charge fees both above and below the guideline. However, this assumption may not hold in reality as medical practitioners

[19] We expect that doctors incorporate raising input costs into their fee structure, and add a rate of return which they deem appropriate.
[20] Pharmaceuticals appear to be the only medical products included in the CPI basket. The basket does not include medical equipment. We assume that this is because medical equipment would not form part of the expenditure of a typical household.
[21] Refer to submission by Econex on behalf of SAPPF for greater details on the inappropriateness of using medical inflation to inflate the guideline tariffs.

discover that the more they increase their fees the greater the increase in the guideline the following year[22].

4.3. PROPOSAL ON INTRA-PERIOD INFLATIONARY ADJUSTMENTS

29. It is important to appreciate that any inflationary measure should be designed to compensate medical practitioners for changes in input costs and to ensure that they maintain their rate of return notwithstanding any increases in headline inflation and other rising costs. The costs of running a medical practice differ significantly within and across the various fields of medicine. With this in mind, together with the complexity in terms of size and cost of developing an individual cost index for each field of medicine, we propose the following:

    29.1. The fields of medicine should be divided into two groupings: (i) surgical and (ii) consulting specialities based on relatively similar labour and capital input components;

    29.2. An input cost index can be developed for each of the two foregoing categories on the basis that there is sufficient similarity within each grouping from a cost perspective in terms of the relative proportions of capital and labour; and

    29.3. This approach will provide a cost-effective way to minimise any inaccuracies in the changes in input costs for the different fields of medicine.

30. The complete set of the various fields of medicines to be included in the surgical and consulting specialties together with the exact mechanics of this proposal are fully explored in the Econex submission on behalf of the SAPPF.

31. Ultimately, we propose that the guideline be estimated every three years with the foregoing cost index adjustments applying in the intervening period of two years.

5. A DISPERSION FACTOR NEEDS TO BE INCLUDED

32. This section focuses on the appropriate level at which the guideline should be set. A key consideration is the need to account for the natural variation in the fees levied per procedure.

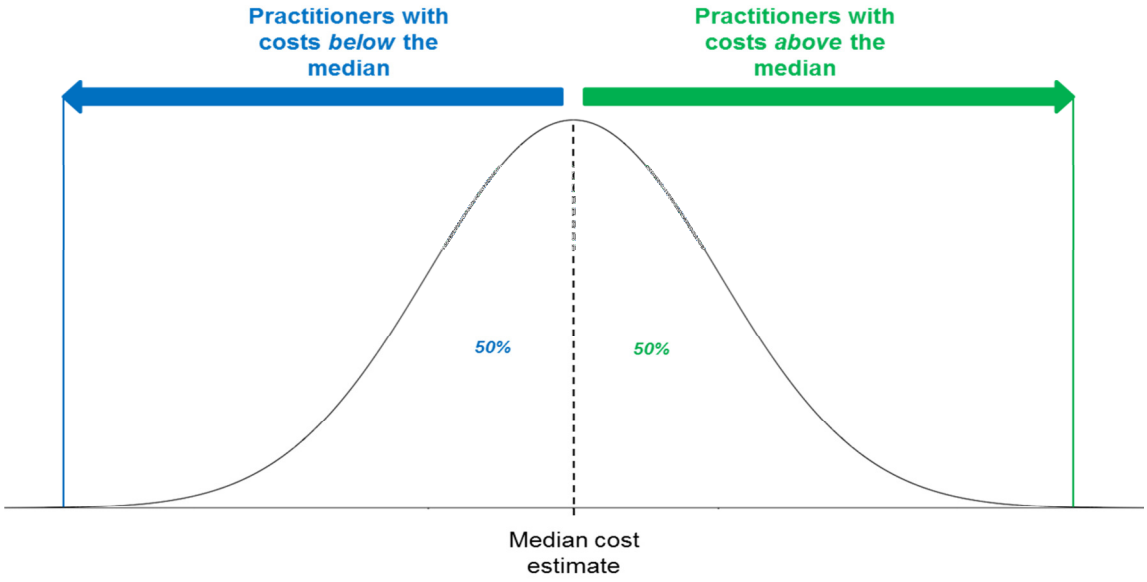
5.1. THE MEDIAN COST ESTIMATE CANNOT BY ITSELF BE THE GUIDELINE

33. If the costs of medical practitioners are normally distributed, then the median cost estimate will by design exceed the true costs for half of practitioners whilst understating the cost for the remaining half. The figure below illustrates this dispersion of medical

[22] Refer to submission by Econex on behalf of SAPPF for a complete discussion on assumptions and inappropriateness of using a complete measure of medical services inflation.

practitioner costs around the median cost estimate based a normal distribution. The distribution of costs per procedure reflects the natural variation in the costs and business operations of medical practitioners.

Figure 2: A normally distributed curve indicating the dispersion of medical practitioner costs



Source: Genesis

34. The following are key drivers of variation in provider costs per procedure:

34.1. Differences in the overall costs of running a medical practice in terms of material costs, standard equipment costs, and indirect costs (including rental):

34.1.1. Material cost refers to the cost of all materials used by a medical practitioner in providing a service to a patient for example, syringe and cotton swabs. This primarily depends on the diagnosis of medical practitioners and condition of the patient.

34.1.2. Standard equipment in general comprises furniture, fittings, computers, medical equipment and instruments. The varying cost of medical equipment amongst both general practitioners and medical specialists is also a driver of differences in costs. In certain fields of such as ophthalmology and cardiology, there is a wide choice between equipment with competing merits at different cost levels. For example, according to the 2006 NHRPL, it was estimated that the cost of equipment for ultrasound examination varied from R 200,000 to R1.1 million.

34.1.3. Property rentals for premises within and between cities are also likely to vary significantly. This may inter alia be due to differing arrangements such as subsidised rentals, market-related rentals and direct ownership.

34.1.4. Further differentiation factors include:

34.1.4.1. Differing locations, for example it is quite reasonable to expect that the costs of running a medical practice in Sandton would be significantly higher than in Klerksdorp.

34.1.4.2. These differences can also be driven by the number of practitioners in a practice. For example, the costs for medical practitioners in a partnership of two or more are shared between each partner unlike the case of a sole medical practitioner who bears all the costs of running his or her practice.

34.1.4.3. There may also be differences in costs arising from a sole medical practitioner running more than one practice in different locations. This becomes even more complex when one considers multiple practices run by more than one medical practitioner.

34.2. Differences in other associated costs:

34.2.1. Indirect labour costs. This component refers to the supplementary employees employed within the medical practice. For specialist practices, the number of staff is limited to two administrative employees and one office maintenance staff member. The indirect labour component further varies between specialists owing to differences in the use of nursing assistants in some practices and not in others. By way of example, the administrative salary bill at a sole ophthalmology practice is estimated at R 450,000 (increasing by a further R 100,000 in a busier practice) compared to R 200,000 paid by a psychiatrist.

34.2.2. Provisions for bad debt. Medical practitioners must provide for the potential of partial payment or non-payment from medicals schemes and private patients. This can differ sharply depending on patient profile and other factors.

34.2.3. Transportation costs. These may differ according to context of the practice.

34.3. Differences in the fees charged by medical practitioners due to increased levels of skill and experience.

34.3.1. A newly qualified medical practitioner is unlikely to charge fees at the same levels of a medical practitioner with 10 years or more experience within the same field of practice. This is consistent with economic principles whereby a new entrant would take time to establish themselves in a particular location, but more importantly, in terms of patients establishing a good reputation with respect to the quality of service offered. This applies even more to specialists like surgeons whose particular skill in performing various types of surgical procedures differ significantly with experience.

34.4. Difference in the fees charged by medical practitioners due to them being part of designated service provider networks.

34.4.1. For a given medical practice, practitioner fees may vary due to a fixed rate being charged to a member of particular medical scheme and differing rates being charged to members of other medial schemes and uninsured patients. For example, medical practitioners that are part of the Discovery Health Network will follow the Discovery Health reimbursement rate, but are likely to charge higher fees to other medical schemes and insured patients. This natural variation in fees within a given medical practice may incorrectly lead a patient to a view of overcharging and may not be fully captured by a median cost estimate.

34.5. Differences in the medical needs of patients.

34.5.1. In applying the same procedure to patients, medical practitioners spend relatively more or less time depending on the needs of specific patients. For example, treating an obese[23] patient may require greater risk in performing a given procedure. In addition, if a patient has complications from previous treatment, this would require specific treatment.

35. To summarise the following aspects are drivers of the natural dispersion in costs, even for the same procedure.

35.1. The location of medical practice under review,

35.2. The use of specialised medical equipment with the medical practice;

35.3. Whether the medical practitioner is a sole practitioner or in a partnership;

35.4. The level of skill and experience of the medical practitioner;

35.5. Whether the fee under review was provided to a patient that visited a doctor outside of their medical scheme's designated service provider network;

35.6. The medical needs of the patient; and

35.7. Any other relevant factors that could reasonably account for differences in the tariff charged by the medical practitioner and the cost-based guideline.

36. Given the natural and significant dispersion in costs of delivering any particular service, the median cost estimate cannot be the guideline, as it would catch half of all instances. This is likely to increase the administrative burden for the HPCSA and the professional board, and jeopardy for ethical doctors.

37. We therefore believe that it is highly appropriate that a dispersion factor be included in the determination of the guideline. In doing so, there are a number of factors that should be considered by the HPCSA. These are outlined in the following section.

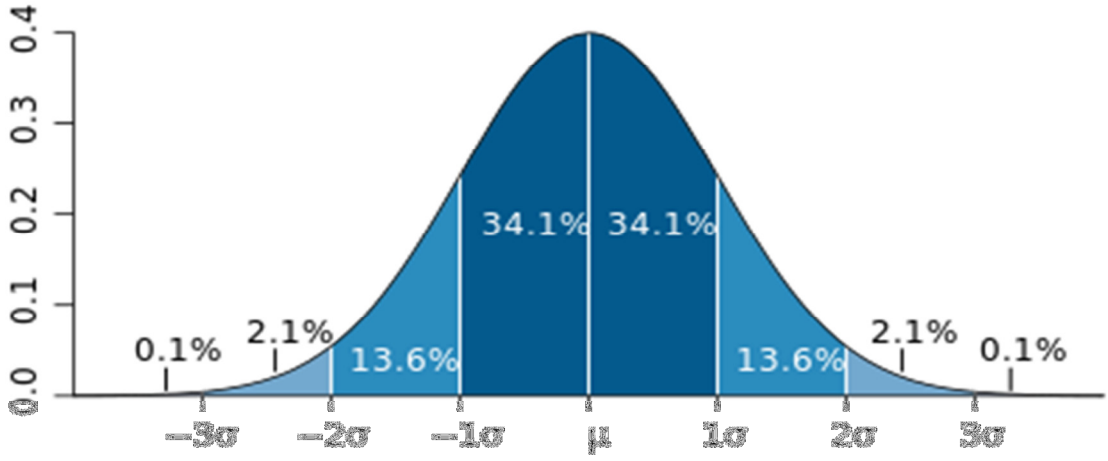
38. Before proceeding to provide a proposal for accurately determining this deviation in fees, we outline below a summary of the important features of standard deviations commonly used as a measure of dispersion in statistical analysis.

[23] An obese patient is defined by SAMA as an individual with a body mass index (BMI) that is greater than 35.

5.2. UNDERSTANDING STANDARD DEVIATIONS

39. Standard deviation is a statistical measure that is used to determine the spread or dispersion of observations around an average value, generally the mean. In particular, it illustrates the clustering of values around the average value. A normally distributed curve refers to a sample whose characteristics closely resemble the average selected and therefore a greater level of clustering is observed around the mean. Generally, the higher the standard deviation the greater variation present in the data.

Figure 3: A normally distributed curve indicating standard deviation



Source: Jeremy Kemp (2005)

Note: (i) μ refers to the samples average value;

(ii) σ is a measure of standard deviations from the average value.

40. In terms of the figure provided above, the 'number of standard deviations' (σ) refers to the grouping of observations away from the mean, or average, μ. Note that it customary to identify the following standard deviations: one (1σ and -1σ), two (2σ and -2σ) or three (3σ and -3σ). The greater the number of standard deviations from the average value the greater the number of observations that will be captured. In particular, for a normal distribution one standard deviation represents 68.2% of the entire population sampled, while two standard deviations include 95.4% of the entire population.

5.3. USING STANDARD DEVIATIONS TO DEFINE AN APPROPRIATE DISPERSION FACTOR

41. In practice, a Rand Conversion Factor ("RCF") will be calculated in order to generate a guideline for medical services. This RCF 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 Relative Value Unit ("RVU")[24] of each concept by the RCF. This RCF represents the

[24] The relative value of each of the concepts, which has been prescribed to be based upon the average time taken to perform the health care intervention associated with the concept. The average duration may be weighted by a responsibility factor that will cause concepts, which, for example, have a higher complexity or require more skill to have a higher relative value.

median value per field of medicine for the performance of all general procedures. It is on the basis of the RCFs that a standard deviation be calculated per field of medicine in order to determine a representative dispersion or deviation. In the context of the medical services industry, this standard deviation will therefore represent the proportion of the total sample of medical practitioners whose RCF's are included.

5.4. A PROPOSAL FOR DETERMINING THE DISPERSION FACTOR

42. We propose the use of a fixed standard deviation above the median cost estimate. More specifically, we propose the adoption of one standard deviation to establish the upper limit of fees to be charged. This level of the guideline would cover or exceed the costs of 84.2% of medical practitioners, but still be below the legitimate costs of 15.8% of medical practitioners. In the event that the sample selected is not normally distributed, we propose that a value higher than one standard deviation be considered in order to be fully representative of a significant proportion of the medical practitioners within that particular field of medicine. This is to ensure that a representative sample is selected and outliers in terms of the maximum deviations are fully accounted for.

43. The underlying basis for the standard deviation approach is that as a result of the foregoing drivers of the dispersion factor medical practitioners can charge a wide range of fees both above and below the median cost estimate. Applying the standard deviation approach to the median cost estimate results in an accurate portrayal of the natural variations within a particular field of medicine for all general procedures.

44. This methodology is based on real-world data. This exercise can be performed at the same time as the determination of the median cost estimate and is therefore less burdensome in terms of collecting additional data and information. Failing sufficient data, a set percentage increase above median costs could be used in lieu of the standard deviation approach.

6. A 'LEGITIMATE COST DEFENCE' IS REQUIRED

45. Having assessed the appropriate relationship between the median cost estimate and the guideline, we now proceed to outline the process that should by applied by the Professional Board and its Tariff Committee in applying the guideline. The guideline is a guide, and where a tariff – even above the guideline – represents legitimate costs, it should be allowed.

46. The Professional Board and its Tariff Committee can achieve this in two ways: firstly allow for a defence that cites the actual and (in the view of the Tariff Committee) legitimate costs of medical practitioners; and, alternatively, allowing for the identification of certain exceptional circumstances meriting a supplementary fee to the median fee inclusive of a dispersion factor.

6.1. THE APPROACH TO DETERMINING THE GUIDELINE

47. We proposed the following approach to determining the guideline:

    47.1. Step 1: Identification of the field of medicine and the relevant procedure for which the guideline applies. For example is it for a consultation done by a general practitioner or a medical specialist.

    47.2. Step 2: Determination of the guideline based on the median cost estimate derived from the appropriate reference price list plus the appropriate standard deviation. More specifically, using the RCFs per field of medicine, standard deviations can be used to adjust the median cost estimates upwards by an appropriate dispersion factor for all general procedures. These figures should be calculated simultaneously with the median cost estimate to ensure that consistent data is used for both the median cost estimate and the guideline.

6.2. THE NEED FOR FLEXIBILITY IN THE GUIDELINE DETERMINATION PROCESS

48. It follows that when the Board actually determines the fee that ought to be charged (having received a complaint) it should be cognizant of factors that may legitimately take the costs of a provider above the mean level. These would include:

    48.1. *Super-specialisation by medical practitioners*. Medical practitioners spend a considerable amount of time and effort in attaining high levels of specialisation. For example, within the paediatric field, there are doctors that specialise in neo-natal care for infants that weigh less than 1000g. It is clearly inappropriate to use a median cost estimate with a dispersion factor in order to determine a guideline for such medical practitioners. Additionally, it is difficult to resolve the level of fees that should be charged, for example, by a multidisciplinary general surgeon in Cape Town running a Centre of Excellence with two surgeons and two general practitioners and owns a mammography and an ultra sound. Such medical practitioners must be rewarded for their increased level of specialisation which not only required more time and effort but also places them at a level significantly above the standard in their field of medicine.

    48.2. *Special patient-driven needs*. There are some instances in which the special needs of the patient may require that the medical practitioner spends more time and effort and incurs greater risk to perform a typical procedure. There instances can be broadly divided into (i) co-morbidity and (ii) complex procedures. In terms of co-morbidity, patients presenting with more than one of the following conditions will require greater time and effort: (i) obesity, (ii) hypertension and (iii) diabetes. Additionally, where a patient has failed previous treatment or presents with an incidence of polytrauma with multiple pathologies or has had surgery and/or radiotherapy, these three scenarios increase the complexity of the treatment provided relative to a typical procedure. In these exceptional circumstances, medical practitioners are likely to charge more than a fee that is higher than the median cost estimate inclusive of a dispersion factor based on the additional time and effort required in diagnosing and treating the patient.

48.3. *Emergency services*. When emergency medical treatment is necessary for a patient outside of normal working hours, whether in a hospital or at home, these are exceptional circumstances in which a medical practitioner has to make, themselves available. For example, a plausible situation could arise wherein a general practitioner working in a trauma centre facility treats critically ill patients outside of normal working hours for instance at 2 AM. The fee that the general practitioner charges for this consultation is likely to above that which is charged during normal working hours. Furthermore, this fee differential between normal working hours and exceptional periods applies in various other skilled and semi-skilled professions like plumbing and locksmiths, and duly represents the leisure time being forgone by that particular professional.

48.4. *Other exceptional circumstances.* There may be other exception circumstances that should be considered by the Board by further consultation with respective associations representing each of fields of medicine together with those associations that represent general practitioners. By way of further example, a radiographer practicing in a remote area of South Africa like Upington with the only specialised ultrasound equipment within a 600km radius is likely to charge a level above the median cost estimate inclusive of a dispersion factor like one standard deviation, due to the fact that whilst he or she faces similar costs for their equipment, the lower patient volumes would result in legitimate higher fees being levied to patients.

6.3. PROPOSAL TO ADDRESS EXCEPTIONAL CIRCUMSTANCES

49. Under the foregoing exceptional circumstances it is appropriate that when the Board applies the guideline it should legitimately allow for some further upward flexibility. We therefore propose the following options in terms of addressing these exceptional circumstances:

49.1. Firstly, we propose the application of a general 'legitimate costs' defence. This essentially means that a medical practitioner should be provided with an opportunity to clearly demonstrate that fees under review are reasonably related to that medical practitioner's true and legitimate costs. In providing details of underlying costs, the medical practitioner should include appropriate adjustments for skill, experience and innovation. This significantly reduces the risk that a median cost estimate inclusive of one deviation may not account for the specific costs faced by a particular practitioner, including those that could apply in exceptional circumstances.

49.2. Secondly, we propose that a list of exceptional circumstances be developed that would allow for standardised additions to the guideline. This requires further input from both the Board and each of the affiliated associations represented.

49.2.1.1. This methodology should be based on surveys conducted by: (i) the respective association or by (ii) independent consultants for the HPCSA. Once identified, appropriate cost uplifts can be allocated to each of the exceptional circumstances.

49.2.1.2. This provides an appropriate legitimate cost defence without having to do a survey of the costs of the individual practitioner.

7. THE NEED FOR THE GUIDELINE TO ACT AS A SAFE HARBOUR

50. In the determination of the guideline, the foregoing analysis has stressed the importance of an underlying cost-basis as well as the provision of a dispersion factor in order to account for natural variations within a field of medicine and across the various fields of medicine. Based on this approach, we believe that the guideline needs to provide medical practitioners with an indication of a cost level at or below which no action would be taken by the Board.

51. Ideally, the guideline itself should constitute that safe harbour indicator.
