A FRAMEWORK FOR BENEFIT OPTION STANDARDISATION

An Analysis on Market Structure
&
A Proposed Benefit Options Standardisation Framework

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EXECUTIVE SUMMARY

Accountability and transparency should be integrated with a simpler benefit design regime, allowing consumers to rationalise their purchasing allocation in an efficient and optimal manner — which should improve the efficiency of competition in the private health sector.

A mixed policy bag of regulatory standards and regulatory economic principles will be needed to support the standardisation of benefit designs. These will need to be carefully sequenced to avoid unintended policy outcomes.

The lessons learned from the reviewed literature point to policy remedies that constitute an integrated mixed policy bag of solutions. The identified regulatory standards, and economic policy principles are listed as follows:

i) There is a need for administrators and managed care and health delivery networks to demonstrate shared cost efficiencies across benefit options.

ii) Transparency and accountability can be demonstrated by reporting standards and publication of performance results such as in the Netherlands (The Dutch Health Care Performance Reports).

iii) Much like the regulating authority in the Netherlands is tasked with encouraging large insurers to innovate and implement market initiatives that stimulate the procurement market, the Council for Medical Schemes (CMS) should position itself to do so in support of benefit standardisation, and choice optimisation.

iv) The development of healthcare performance indicators should be a multi-stakeholder consultative process and be underpinned by participatory governance; i.e. engaging beneficiaries through forums and consumer advocacy groups.

v) Healthcare performance indicators should be constructs of beneficiaries’ self-reported experiences and outcomes.

vi) Healthcare performance indicators should cover the following dimensions of performance:

- Access to health delivery networks or providers;
- Affordability; and
- Quality.

vii) The essential and supplementary benefit structure that is recommended by the Health Market Inquiry (HMI); seems to mimic that of the Netherlands’ health funding sector, save for the fact that its benefit structure provides for a stand-alone bundle of services specific to long-term care (e.g. chronic conditions and frail care). This could
be something for South African private health insurance industry to consider. In these instances, the long-term care component is subsidised by the state.

vii) The CMS generic structure partially concurs with the three different platforms of care. The Netherlands benefit structure involves three layers:

- Mandatory cover for long-term diseases and frail care;
- Essential cover for catastrophic and acute care; and
- Unstandardized cover that is subject to free market pricing (no community rating).

ix) Efforts poured into health policy interventions to improve beneficiaries' benefit option decisions, are better exercised when considering what can be learned from behavioural economics. Market segmentation and cluster analysis are methods that could be used to understand beneficiaries' choice preferences, resulting in benefit design groupings that speak more easily to beneficiaries' needs. Choice preferences could be standardised and presented in consumption bundles that are easier to differentiate.

x) Hyperbolic discounting (young people procrastinating the purchase of health insurance) should be considered when seeking to alter the choice behaviour of beneficiaries through a transparent benefit design framework.

xi) Shared collective bargaining with shared bidding platforms for different clusters of benefit designs.

xii) The innovative networks for health delivery will have to demonstrate shared cost efficiencies.

xiii) Managed care interventions should demonstrate cost effectiveness if they are to be allowed differentiated reimbursement for covering comprehensive supplementary benefits.

xiv) The proposed Health Market Inquiry (HMI) collective bargaining process should enable medical schemes to sequentially learn the true efficiency of provider network arrangements, so that the required efficiencies for migrating ambulatory care to the essential benefit package are achieved.
CONTENTS

1. INTRODUCTION .......................................................................................................................................................... 1
   1.1 Policy Principles & Issues ........................................................................................................................................ 1
   1.2 Document Structure ................................................................................................................................................. 1

2. SITUATIONAL ANALYSIS ON MARKET STRUCTURE ................................................................................................. 3
   2.1 Situational Analysis: Discussion ................................................................................................................................. 3
      2.1.1 Trajectory of Industry Growth .......................................................................................................................... 3
      2.1.2 Industry Growth Rates ........................................................................................................................................ 4
      2.1.3 Market Concentration ........................................................................................................................................ 7
      2.1.4 Option Proliferation ........................................................................................................................................... 9
      2.1.5 Market Penetration ............................................................................................................................................. 13
   2.2 Impact of Market Concentration by Benefit Design ............................................................................................... 16
   2.3 Situational Analysis: Summary .............................................................................................................................. 18
      2.3.1 Market Structure: Market Consolidation Issue ............................................................................................... 19
      2.3.2 Market Structure: Countervailing Power Issue ............................................................................................... 19
      2.3.3 Market Structure: Market Concentration Issue ............................................................................................... 19
      2.3.4 Market Structure: Option Proliferation Issue ............................................................................................... 19
      2.3.5 Market Structure: Market Penetration ............................................................................................................. 20

3. HYPOTHESES: POLICY DESIGN, TRANSPARENCY & ACCOUNTABILITY ................................................................. 21
   3.1 Policy Design, Transparency & Accountability: Qualitative Analysis ........................................................................ 21
      3.1.1 The Reviewed Literature ................................................................................................................................. 21
      3.1.2 Stakeholder Perspectives on Option Standardisation .................................................................................... 25
      3.1.3 Emerging Hypotheses ....................................................................................................................................... 25
      3.1.4 Hypotheses Statements ....................................................................................................................................... 28
   3.2 Policy Design, Transparency & Accountability: Quantitative Analysis ........................................................................ 28

4. CRITERIA FOR BENEFIT OPTION STANDARDISATION FRAMEWORK ...................................................................... 37
   4.1 Objectives of Benefit Option Standardisation ........................................................................................................ 37
   4.2 Framework for Option Classification ....................................................................................................................... 38

5. PRELIMINARY CLUSTER ANALYSIS .......................................................................................................................... 40

6. PROPOSED POLICY MIX ........................................................................................................................................ 41

7. REFERENCES ............................................................................................................................................................. 43

8. APPENDIX .................................................................................................................................................................. 44
   Appendix 8.1: Classification Criteria of Benefit Designs ............................................................................................. 44
   Appendix 8.2: Proposed Data Collection Tool ............................................................................................................. 45
LIST OF TABLES

Table 1: Market power thresholds .................................................................................. 8
Table 2: Option stratification: 2017 ............................................................................... 13
Table 3: Open schemes: classification matrix .................................................................. 34
Table 4: Classification of benefit designs ......................................................................... 44
1. INTRODUCTION

1.1 Policy Principles & Issues

Medical schemes’ beneficiaries buy consumption bundles of supplementary healthcare services. These consumption bundles are unstandardized and thus difficult to compare across benefit options. An added complication is the high proliferation of benefit options, which complicates the beneficiaries’ choices.

The Health Market Inquiry’s (HMI) report’s preliminary finding is that the regulator is responsible for the market failure, as opposed to regulatory failure. Regulators provide policy certainty by making time consistent decisions that are derived from the information supplied by regulated entities such as medical schemes.

The industry needs to provide valid and reliable information on submitting rule changes, so the same regulatory decision made today is sensible and provides certainty tomorrow. Beneficiaries need to be supported with information to make benefit option differences perceptible, and decisions simpler. In this way, beneficiaries will not be found behaving in a morally hazardous manner. Perceptible information will transmit signals to induce appropriate profiles to select benefit options that were for intended for them.

Beneficiaries’ interests, and their choices should be justified by performance indicators that monitor the performance of benefit options. These indicators should factor in their beneficiaries’ perspectives in terms of service outcomes and experiences, from the funding sector to healthcare delivery. The indicators should measure the factors that are of value to beneficiaries.

The Council for Medical Schemes (CMS) has been working on a framework for classifying benefit options, and standardising health service consumption bundles. Further to this, we seek the audience of the industry to engage the CMS in a process of participatory governance, so we are collectively accountable to the beneficiaries we represent and serve.

1.2 Document Structure

The first section of the document provides a situational analysis that paints the landscape of the health financing sector. The intention is draw out some of the salient market structural issues that play on the incentives of market participants. It will then anticipate which types of benefit designs are the winners and losers, in terms of regulatory guidelines pertaining to medical scheme and option size.
The second section of the document provides the perspective of market structure to the consolidation and benefit design discussion. It does this by providing an overview that weighs in on the following themes:

- A trajectory of growth in benefit options;
- Industry growth rates for 2002 to 2012;
- Market concentration;
- Benefit option proliferation; and
- Benefit design market penetration.

The third section of the document sets out the rationale for benefit option standardisation and explains why transparency, and accountability will help beneficiaries to make benefit options distinguishable. The discussion is carried out by presenting a qualitative and quantitative analysis of the issue at hand.

The fourth section of the document presents the criteria for benefit option standardisation.

The fifth section of the document presents the results of a preliminary cluster analysis.

The document then closes by suggesting a policy mix to support the process of benefit option standardisation.

We have appended a benefit option data collection template to the document. We hope that this template provides a good baseline for medical schemes and the Council for Medical Schemes (CMS) to collaborate in a process to establish standardised consumption bundles. These standardised options can then be used as regulatory standards and guidelines for electronic rule submissions to the CMS.
2. SITUATIONAL ANALYSIS ON MARKET STRUCTURE

This second section of the document provides the perspective of market structure to the consolidation and benefit design discussion. It does this by providing an overview that weighs in on the following themes:

- A trajectory of growth in benefit options;
- Industry growth rates for 2002 to 2012;
- Market concentration;
- Benefit option proliferation; and
- Benefit design market penetration.

2.1 Situational Analysis: Discussion

2.1.1 Trajectory of industry growth

In terms of the Health Market Inquiry (HMI) provisional recommendations, there is a need to reduce the number of benefit options in the market. The industry cannot continue operating on the path dependency and trajectory it is currently on. Figure 1 shows that if the current policy trajectory is maintained:

- in 2023 there will be 244 benefit options; and
- the annualised growth rate will only be -5.8% (2019-2023).

![Figure 1: Trajectory of number of benefit options in medical schemes industry](image)
Method: Holt double exponential smoothing
The impact of the consolidation agenda will mostly likely affect benefit options with less than 2,500 members. In open schemes, in 2014, there were 20 options with less than 2,500 members (CMS, 2019, p. 6). In restricted schemes, there were 40 options with less than 2,500 members.

The severity (community rate) of the risk profiles will need to be carefully considered in providing guidance on what perfect merger fits might look like. What is critical here, particularly for restricted schemes, is that most of the affected options may have been genuinely providing effective cover to people who normally might be dumped onto the public healthcare system.

2.1.2 Industry growth rates

This section provides an overview of industry growth rates. It compares the growth at medical schemes level to that at benefit option level. Collectively, these growth rates provide a high-level perspective of the nature of consolidation that has occurred for the period of 2002 to 2018. The comparative assessment looks at whether the consolidation for the period at scheme level has been accompanied by a similar experience at benefit option level. The analysis excludes efficiency discount options (EDOs).

**Growth rates at industry level**

The comparative growth rates at medical scheme and benefit option level show that the rate of consolidation is much faster at scheme level than at option level. The comparative annualised rates have the same comparative result. At this level of analysis, benefit options have not kept up with the rate of consolidation at medical scheme level. This is a concern for solidarity, and thus the level fragmentation and community rating.

In comparing the industry annualised rates for the period of 2002 to 2018, the following applies:

- The number of benefit options grew at a negative rate of -3.4%; and
- The number of medical schemes grew at a negative rate of -4.2%.

In comparing the industry growth rates at medical scheme and benefit option level for the whole period of 2002 to 2018, the observations are as follows:

- The number of options grew at a negative rate of -19.8%; and
- The number of medical schemes grew at a negative rate of -24.6%.
Growth rates in open schemes

The comparative growth rates at medical scheme and benefit option level show that the rate of consolidation is much faster at scheme level than at option level. The comparative annualised rates have the same comparative interpretation. At this level of analysis, benefit options have not kept up with the rate of consolidation at medical scheme level. This a concern for solidarity, and thus the level fragmentation and community rating.

In comparing the open schemes’ annualised rates for the period 2002 to 2018, the following applies:

- The number of benefit options grew at a negative rate of -4.7%
- The number of medical schemes grew at a negative rate of -6.4%

In comparing the open schemes’ growth rates at medical scheme and benefit option level for the whole period of 2002 to 2018, the observations are as follows:

- The number of benefit options grew at a negative rate of -28.1%; and
- The number of medical schemes grew at a negative rate of -38.4%.
Figure 3: Open schemes – scheme vs. benefit option growth rates (2002-2018)

Growth rates in restricted schemes

The comparative growth rates at medical scheme and benefit option level show that the rate of consolidation is much faster at scheme level than at option level. The comparative annualised rates have the same comparative result. At this level of analysis, benefit options have not kept up with the rate of consolidation at medical scheme level. This a concern for solidarity, and thus the level fragmentation and community rating.

In comparing the restricted schemes’ annualised rates for the period 2002 to 2018, the following applies:
The number of benefit options grew at a negative rate of -1.8%; and
The number of medical schemes grew at a negative rate of -3.2%.

In comparing the restricted schemes’ growth rates at medical scheme and benefit option level for the whole period of 2002 to 2018, the observations are as follows:

- The number of benefit options grew at a negative rate of -9.5%; and
- The number of medical schemes grew at a negative rate of -18.7%.
2.1.3 Market concentration

In this section we use the Herfindahl-Hirschman Index (HHI) to quantify market concentration in the medical schemes industry. We include market concentration thresholds in the analysis. These thresholds are derived from antitrust law benchmarks or generally accepted practice.

These thresholds are compared to the South African Competition Act’s prescription on market power, so that we can have comparable discussion on the degree of harm that can be interpreted into the market concentration in the South African medical schemes industry.

The HHI calculation is from the perspective that:
- All schemes contract in their individual capacity with the provider market;
- Market concentration calculations are derived from the forward-backward integration perspective to take into consideration ‘countervailing power’ dynamics;
- Countervailing power has been mentioned as the theory behind power relations in contracting power;
- Ultimately, it is envisaged by the Health Market Inquiry (HMI) that economies scale by large market participants should be encouraged to share cost savings across their product mix; thus
- Also demonstrating the value of a benefit option from a performance perspective.

The market segments are classified by sorting and ranking medical schemes using HHI calculated with scheme risk contribution income. We found that risk contribution income HHI is highly correlated with the number of beneficiaries per scheme.
Table 1 shows HHI index thresholds in terms of the international standard. The thresholds have been converted to market power percentages to be comparable with the South African prescription. The South African market power prescription has been converted to HHI for comparability. The market segments are based on percentiles in the distribution of HHI in the scheme dataset.

<table>
<thead>
<tr>
<th>Standard</th>
<th>Moderate level of concern</th>
<th>High level of concern</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HHI</td>
<td>%</td>
</tr>
<tr>
<td>International standard</td>
<td>1000</td>
<td>32</td>
</tr>
<tr>
<td>South African Competition Act</td>
<td>1225</td>
<td>35</td>
</tr>
</tbody>
</table>

Figure 5 shows market concentration by market segment for all schemes in 2014. The market concentration is at a moderate level for very large schemes. This level of concentration occurs at Market Segment 8.

When comparing market concentration between open and restricted schemes (figures 6 and 7), the market concentration is twice as high in the open schemes relative to the restricted schemes. This is evident when comparing market segment 8 in open and restricted schemes.
The level of concentration for all schemes is at the moderate level. However, large schemes could be encouraged to use their large size to promote contracts that enhance benefit option performance from an outcomes perspective. Specifically, they could be encouraged to contract and manage health delivery outcomes that show value to consumers.

### 2.1.4 Option proliferation

This section discusses the issue of product proliferation by benefit design. Then it looks at the relational patterns between the number of benefit designs, solidarity by benefit option, and severity by benefit option. The section then looks at what types of benefit designs dominate specific market segments in open and restricted schemes. The criteria used for classifying benefit designs are in appendix 8.1.
Figures 8 to 10 explain the following relational dynamics in open schemes:

- New Generation 1 Plans have a relatively high level of solidarity and a low level of severity. New Generation 1 Plans have 59% (13/22 options) of the number of options in Network 1 Plans (22 options). The New Generation 1 Plans are far less fragmented than Network 1 Plans.

- Threshold 2 Plans have a relatively high level of solidarity and a low level of severity. Threshold 2 Plans have 27% (6/22 options) of the number of options in Network 1 Plans (22 options). The Threshold 2 Plans are far less fragmented than Network 1 Plans.

- Traditional 1 Plans have a relatively low level of solidarity and a high level of severity. Traditional 1 Plans have 82% (18/22 options) of the number of options in Network 1 Plans (22 options). The Traditional 1 Plans are almost as fragmented as Network 1 Plans.

- Threshold 1 Plans have a relatively low level of solidarity and a high level of severity. Threshold 1 Plans have 72% (16/22 options) of the number of options in Network 1 Plans (22 options). The Threshold 1 Plans are almost as fragmented as Network 1 Plans.
Figures 11 to 13 explain the following relational dynamics in restricted schemes:

- **New Generation 1 Plans** have a relatively high level of solidarity and a low level of severity. New Generation 1 Plans have 24% (9/38 options) of the number of options in Traditional 1 Plans (38 options). The New Generation 1 Plans are far less fragmented than Traditional 1 Plans.

- **New Generation 2 Plans** have a relatively high level of solidarity and a low level of severity. New Generation 2 Plans have 21% (8/38 options) of the number of options in Traditional 1 options (38 options). The New Generation 2 Plans are far less fragmented than Traditional 1 Plans.

- **Network 2 Plans** have a relatively low level of solidarity and a high level of severity. Network 2 Plans have 30% (10/33 options) of the number of options in Traditional 1 options (33 options). The Network 2 Plans are far less fragmented than Traditional 1 Plans.
Traditional 1 Plans have a relatively low level of solidarity and a high level of severity. Traditional 1 Plans are the most fragmented benefit options (33 options).
2.1.5 Market penetration

This section analyses the market penetration of benefit options by market segment and by scheme size. The scheme sizes are classified using the number of members by schemes. The classifications are very large options, large options, medium sized options, and small options.

Table 2 depicts option stratification by scheme types. The results reveal that open schemes have at most 17 benefit options, excluding efficiency discount options. One of the open schemes had the highest number of benefit options, at 17 options. A total number of 8 schemes that had more than six benefit options accounted for 86% of open schemes and almost half of the medical schemes industry, at 48%. This data shows that there could be benefit design complexity in the open medical schemes sector.

Table 2: Option Stratification: 2017

<table>
<thead>
<tr>
<th>Options stratification</th>
<th>Number of schemes</th>
<th>% of Beneficiaries</th>
<th>Min number of options</th>
<th>Max number of options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open schemes</td>
<td>21</td>
<td>56%</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>&lt;6 Options</td>
<td>13</td>
<td>8%</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>6+ Options</td>
<td>8</td>
<td>48%</td>
<td>7</td>
<td>17</td>
</tr>
<tr>
<td>Restricted</td>
<td>59</td>
<td>44%</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>&lt;6 Options</td>
<td>59</td>
<td>44%</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>100%</td>
<td>1</td>
<td>17</td>
</tr>
</tbody>
</table>

Figure 14 describes market penetration by membership size on scheme options, and by market segment, in open schemes for 2014. The salient observations are:

- There are 20 small options, and 12 medium sized options in market segment 1;
- There are 11 small options, and 25 medium sized options in market segment 5; and
- There are 7 large options, and 5 very large options in market segment 8.
Figure 14: Open schemes – size of scheme options by market segment (2014)
Note: Very Large = Members ≥ 105,500
      Large = 31,100 ≤ Members < 105,500
      Medium = 6,000 ≤ Members < 31,100
      Small = Members < 2,500

Figure 15 describes market penetration by membership size on scheme options, and by market segment, in restricted schemes for 2014. The salient observations are:

- There are 40 small options, and 20 medium sized options in market segment 1; and
- There are 3 large options, and 1 very large option in market segment 8.
Figure 16 reports the market share of options by benefit design, and the market share of beneficiaries by benefit design in market segment 1. The market positioning of benefit designs is also represented for option and restricted schemes (fig. 16).

The following can be said about figure 16:

- The restricted schemes sector’s most prevalent benefit design is richer in benefit content than the most prevalent option in the open schemes sector;
- 35% of restricted scheme beneficiaries are on the richest benefit option (Traditional 1 Plans), comparatively; and
- Only 8% of all beneficiaries in the open scheme sector are on Traditional 1 Plans.

Figure 16: Benefit designs in market segment 1 (2014)

Figure 17 reports the market share of options by benefit design, and the market share of beneficiaries by benefit design in market segment 1. The market positioning of benefit designs is also represented for option and restricted schemes (fig. 17).
The following can be said about figure 17:

- The restricted schemes sector’s most prevalent benefit design is richer in benefit content than the most prevalent option in the open schemes sector;
- Specifically, most prevalent in Open schemes = Hospital Plans, Traditional 1 Plans in restricted schemes;
- 83% of restricted scheme beneficiaries are on the richest benefit option (Traditional 1 Plans), comparatively; and
- Only 10% of all beneficiaries in the open scheme sector are on Traditional 1 Plans.

Figure 17: Benefit designs in market segment 8 (2014)

2.2 Impact of Market Concentration by Benefit Design

This section tries to provide an appreciation for the types of benefit designs and risk profiles that would most likely be affected by the consolidation process.
Figures 18 and 19 provide an analysis of where the burden of market concentration will lie in the open schemes sector, using 2014 data. The most vulnerable risk profiles in open schemes are:

- New Generation 3 Plans;
- Traditional 1 Plans; and
- Traditional 2 Plans.

Figures 20 and 21 provide an analysis of where the burden of market concentration will lie in the restricted schemes sector, using 2014 data. The most vulnerable profiles in restricted schemes are on the following benefit designs:

- Traditional 1 Plans;
- Traditional 2 Plans; and
- PMB Exempt.
What this section advises is that scheme consolidation should be sensitive regarding severity (community rate) of group profiles across benefit designs. In most instances, one may find that it is precisely these schemes that have been providing services to people that would ordinarily be dumped onto the public health system.

### 2.3 Situational Analysis: Summary

The observations on market concentration point to important policy considerations. These should be considered along with the sequencing of policy mix that will support the scheme and option consolidation process. The details are spelt out in the paragraphs that follow.
2.3.1 Market structure: market consolidation issue

The rate of growth has reduced at a higher rate for medical schemes than for benefit options, for the period of 2002 to 2018. This means that the solidarity gained from scheme consolidation has been diluted by the growth rate of benefit options.

2.3.2 Market structure: countervailing power issue

The market concentration in the consolidated medical schemes industry is at moderate levels of market concentration. We suspect that the market concentration for the hospital provider sector is much higher. This doesn't augur well for the countervailing power of medical schemes.

Considering this from a market upstream and downstream perspective, there would have to be a clear arms-length contracting arrangement between medical scheme and administrators. More specifically, the funder market's vertically integrated power that can be factored in from administrator directed contracting arrangements.

These structural arrangements must allow optimal accountability by medical schemes and cost savings for beneficiaries. Otherwise, medical schemes would not be able to exercise countervailing power from an upstream market position in a vertically integrated contracting environment.

2.3.3 Market structure: market concentration issue

It is apparent that in the imperfectly competitive market of the medical schemes industry, there are small schemes with little market concentration. This is evident in the Herfindahl-Hirschman Index (HHI) in the first through to the seventh market segments. Interventions to improve benefit option knowledge are pertinent to maintain market stability. This will secure optimal option movements as members from small options search for schemes with larger risk pools. In this way, the scheme and option consolidation process will attain beneficial market outcomes.

2.3.4 Market structure: option proliferation issue

The situational analysis shows that there is an inverse relationship between the number of benefit options per benefit design, and the community rates by benefit design. The solidarity level, proxied by average beneficiaries per benefit design, also shares an inverse relation with the number of options per benefit design. Therefore, the proliferation of benefit options has a negative impact on community rating and solidarity for specific benefit designs. It is likely that underperforming benefit options are the ones with the richest benefits. This must be considered in the wake of market consolidation interventions.
2.3.5 Market structure: market penetration

Most of the smallest options have only been able to penetrate the first and smallest market segment, in terms of Herfindahl-Hirschman Index (HHI) market share and concentration. This is true in terms of the market penetration of small options in both open and restricted schemes.

Another significant observation pertains to the market penetration of benefit designs in the open and restricted schemes. The richest type of benefit design (Traditional 1 Plans) is most prevalent in the restricted schemes environment. Traditional I Plans in the restricted schemes also have the highest share of beneficiaries enrolled in market segments 1 and 8. In terms of the open schemes environment, the base network type plans and Hospital Plans are more prevalent than Traditional 1 Plans.
3. HYPOTHESES: POLICY DESIGN, TRANSPARENCY & ACCOUNTABILITY

This section of the document sets out the rationale for benefit option standardisation and explains why transparency and accountability will help beneficiaries to make benefit options distinguishable. The discussion is carried out by presenting a qualitative and quantitative analysis of the issue at hand.

3.1 Policy Design, Transparency & Accountability: Qualitative analysis

3.1.1 The reviewed literature

Theme: optimal market outcomes

Bator (1958) set out to define what market failure is. He said that it occurs when market institutions fail to achieve desirable social welfare outcomes. These desirable social welfare outcomes are attained when consumer preferences and supplier incentives are maximised within an existing state of technology. The socially desirable outcome takes on the condition that none of the market agents are made worse-off by the opportunistic act of another market agent. His said that this state of Welfare is a Pareto optimal outcome (Bator 1958).

But such outcomes are not achievable in the existence of information asymmetry (Bator 1958). The inability of beneficiaries to maximize their utility gained from their benefit option choices, must surely result in their preferences not being optimally met. This must be the disadvantageous impact that imperfect information has on the ability to optimise beneficiaries' utility preferences. The lack of information regarding the performance outcomes that medical schemes attain from the technology applied in subcontracted agreements, is an impediment to attaining optimal social welfare allocations.

Theme: option standardisation

Marquise et al. (2007) conducted an analysis on how to establish the extent that benefit design, benefit option offerings, premiums, and out-of-pocket payments (OOP) have on beneficiaries' decision to purchase health insurance. The study used household survey data in the United States.

Their study found that reductions in OOP increased enrolment very marginally (Marquise et al. 2007). Members were sensitive to premium changes, and the beneficiaries were able to make switches between health plans if health plan premiums didn’t move in the same direction as general premium levels. That said, members needed to have a good understanding of product differences and similarities across the health insurance market.
There wasn't an instance that increases in benefit offerings increased overall enrolment rates (Marquise et al. 2007). Marquise et al. found that in non-employer insurance markets, there were non-price barriers (e.g. information costs caused information asymmetry). These hindered the ability of members to react to market changes. The authors also advise that subsidies would be a more effective tool to encourage new enrolments than merely reducing co-payments or OOP. They also see a role for consumer education in increasing medical scheme enrolment (Marquise et al. 2007).

Marquise (1983) set out to understand the level of knowledge that consumers had about their benefit options. She extended her analysis to assess whether benefit designs that are easier to comprehend can help to improve consumer knowledge and decisions to purchase benefit options (Marquise 1983). She compared what survey respondents said about their benefit options, with the information that medical schemes provided to the health insurance regulator.

She found that the less complicated the financing mechanism for accessing benefits was, the more correct respondents were about their benefit option (Marquise 1983). However, the more complicated the financing mechanism, the more difficult it was for respondents to understand the structure of their benefit options (Marquise 1983). Ultimately, she made two pertinent recommendations: that policy interventions that seek to improve health insurance markets should focus on: i) simplifying benefit options; and ii) providing beneficiaries with as much information support as possible (Marquise 1983).

Barnes et al. (2015) set out to identify factors that improve or impede the ability of medical scheme enrolees to choose a benefit option. The factors were used to assess the likelihood of a beneficiary to choose an option among the cheapest available, taking health needs into account. The identified factors were: i) the ability of beneficiaries to conduct an information search pursuant to making a purchasing decision; ii) the number of options to choose from; iii) consistency between what respondents said was important to them purchasing a benefit option, and whether it in fact was what was purchased; and iv) an ability with numbers or “numeracy” level (Barnes et al., 2015).

Barnes et al (2015) found the following: i) the more options to choose from, the more expensive the choice; ii) the better the ability to search for insurance, the lower the premium; iii) the more consistency between stated choice preferences and what was purchased, the lower the premium, and iv) the better the numeracy, the cheaper the decision. They concluded that the more information available, and the simpler the structure of benefit options, the better the market outcomes will be for beneficiaries (Barnes et al. 2015).

Therefore, policy interventions that seek to encourage enrolment need to be supported by a policy mix of interventions. Marquis et al. (2007) suggest that information exchanges need to be supported by some sort of subsidisation mechanism in order to be effective.
Koch and Alaba (2010) conducted an analysis on the South African Household Expenditure and Income Survey, to assess the impact that mandatory contribution would have on the uninsured. The analysis was done to provide some insight into the level of cross subsidisation or subsidies that would be required to increase medical scheme enrolment if some sort of universal health cover program was implemented. The study found that subsidies of up to 33% relative to top income thresholds would be required for lower income groups to afford health insurance (Koch & Alaba 2010).

Baicker et al. (2012) postulate that traditional economic models that explain rational behaviour as a relationship between the goods and prices are not adequate in explaining why people don’t purchase low-cost health insurance when it is available. They feel that behavioural economics is better suited at explaining the consumers’ decision processes that inform consumer behaviour. The authors feel that behavioural economics can inform health policy design, such that enrolment increases (Baicker et al. 2012).

Like Marquise et al. (2007) and Barnes et al. (2015), Baicker et al. believe that there are non-price barriers to accessing health insurance. To be clear, the latter authors focus on what can be learned from behavioural economics.

Liu and Chen (2009) apply clustering on segment healthcare insurance markets by using demographic data and benefit design preferences. They find that the technique is rarely used in health insurance for the purpose of better understanding healthcare preferences, and mining data on beneficiary health funding and health delivery experiences.

Strulik and Trimborn (2018) put forward the theory of hyperbolic discounting, from a health insurance purchasing perspective. They agree that young people are likely to procrastinate purchasing health insurance if they value consuming in other things in the present. This means that they discount the benefit of health care at a super-high discount rate. Their money consumed now is more highly valued than investing in healthcare in the present.

The authors extend the traditional theory of hyperbolic discounting by stating that people are likely to invest less in healthcare once they have reached a targeted old age. Strulik and Trimborn (2018) say that hyperbolic discounting is the cause of time inconsistent behaviour. Time inconsistent behaviour means that a person doesn’t behave in the current period in the manner they had planned in previous time periods.

Time inconsistent behaviour is a concern when planning to extend healthcare access for young people. Strulik and Trimborn (2018) say that time discounting rates are not constant but change over time. So, a person could end up buying-up a medical schemes’ product mix when they signalled that they were quite happy with the benefits they
received in the previous period. This may raise concerns about moral hazard, when it’s simply a demonstration that health purchasing follows a lifecycle pattern.

**Theme: transparency & accountability as a supporting policy intervention**

This makes the regulatory standards that are applied by the Dutch health insurance authority (2011) critical for ensuring that savings from network arrangements and managed care arrangements benefit beneficiaries. The Dutch health insurance authority requires that health insurance companies report the performance indicators of entities from which they procure health services. This information is put in the public domain to inform consumers when making health insurance purchasing decisions.

Van den Berg et al. (2014) explain that the Dutch Health Care Performance Report describes three dimensions. These performance dimensions are quality, access, and affordability. There are 125 performance indicators underlying the performance dimensions. The performance indicators support the policy principles of transparency and accountability.

The Health Market Inquiry (HMI) (2018) has made similar recommendations and requires the CMS to publish such information, for the benefit of medical scheme beneficiaries. The HMI (2018) has found that there needs to be transparency for beneficiaries, and more accountability by medical schemes and administrators. The HMI (2018) has also considered the implementation of bargaining councils, where schemes and providers are able to bid on health delivery contracts. Having regular reporting on provider and managed care network performance, will assist in assessing the true efficiency of entities that contract with medical schemes.

The Royal Swedish Academy of Sciences (2014) awarded Tirole a Nobel Prize for the contribution made in applying contract theory to market power problems. This model introduced the notion of the Principal-Agent problem to a regulator’s decision problem — such as what sort of cost reimbursements to allow agents that are charged with implementing a redistributive program. For example, what sort of administrative fees to allow administrators when they contract on behalf of a medical scheme. The concern of course is that an efficient agent could pretend to be inefficient, and thus claim higher than normal reimbursement for their efforts. The reason this is likely to happen is that the agent knows far better than the medical scheme what its true efficiencies are.

Consistent performance monitoring, and allowing beneficiaries and schemes to bid on services based on this learned information, is a good way to learn the true efficiency of service providers and administrators.
3.1.2 Stakeholder perspectives on option standardisation

This section will provide a high-level overview of the stakeholder comments collected on the published Circular 42 of 2018 on the consolidation framework. The discussion covers comments of benefit option standardisation.

The emerging issues were:

i) The proliferation of benefit options creates confusion on entitlement, not only for beneficiaries, but also for all market agents that engage with the beneficiaries during service delivery processes. In this instance, the example was that providers might not be sure what the benefit entitlements are.

ii) The standardisation process should result in clear regulatory standards and provide guidelines for reporting on benefit design. The process should speak to the standardisation of health service benefits.

iii) Option fragmentation leads to cherry picking.

iv) Option fragmentation means there is no cost sharing on overheads such as administrative fees.

v) The Medical Schemes Amendment Bill needs to be more specific regarding option standardisation.

vi) The standardisation framework must take benefit content and premiums into account, along with quality outcomes.

vii) The standardisation framework should take access to health service networks into consideration.

viii) The CMS should conduct a market segmentation analysis for restricted and open schemes, the results of which should be shared with industry.

3.1.3 Emerging hypotheses

A market efficient outcome without social solidarity is not the ultimate Pareto optimal efficient outcome. In other words, the satisfaction of the group needs to be achieved through the sum of individual rational choices. We must assess whether all beneficiaries are equally able to satisfy their health financing needs.

This requires the following:

- An agreed upon framework for standardising benefit options;
- An ability to provide beneficiaries with information to make optimal decisions when choosing benefit options; and
• Making a benefit analyser available on an information exchange. However, if this level of transparency is found to be unpalatable, then it should only provide information on what consumption bundles are available in a standardised method.

Health insurance consumers need to be empowered to make optimal healthcare insurance purchasing choices. Research finds that consumer knowledge and education, and benefit simplification, are critical for improving and enabling optimal decisions by health insurance consumers.

Responsive regulatory behaviour will include:

• Conducting surveys on the knowledge that beneficiaries have on their health insurance cover; and
• Conducting market segmentation studies to assess beneficiary preferences.

A survey to assess the extent of consumer knowledge about their benefits is required. By comparing survey responses with registered benefit options rules, one would be able to assess if a knowledge gap exists.

Doing a market segmentation survey will allow the regulator to distinguish between benefit options. The regulator will be able to engage medical schemes on product complexity, using an evidence-based approach. Market segmentation and cluster analysis are methods that the regulator could use to identify beneficiaries' preferences and understand psycho-social underpinnings to beneficiary behaviour. This kind of analysis could help to validate schemes' aspirational or strategic plans when making benefit option submissions.

The feasibility of policy interventions will also be based on the regulator making policy announcements that foster market certainty. Policy decisions are only as good as the information used to make them. Therefore, the structure of the benefit standardisation framework should be able to detect instances in which a beneficiary may make a time inconsistent choice. For example, a beneficiary makes a different preferences choice from the one made before, even though circumstances and information made available have not changed.

The foregoing paragraph is central to the efforts being applied to expanding the scope and depth of the essential benefit package. Preventive, routine, and acute health services that are to be migrated to the reviewed Prescribed Minimum Benefits (PMBs) will need to be standardised. These standardised benefit packages should be provided to beneficiaries with the information necessary to communicate urgency. The urgency should be communicated to behavioural predispositions of those who would ordinarily opt to procrastinate the purchasing of essential healthcare.

Potential young enrollees should be educated about the benefits of purchasing healthcare now, rather than later. Thus, consumer education that reduces the effect of hyperbolic discounting (purchasing insurance later, rather than now) needs to be implemented. This type of information could be used to educate consumer decisions. This could be
done on a health insurance market information exchange. The information exchange may have an inbuilt benefit analyser to demonstrate feasible outcomes that optimise the beneficiaries’ utility. The proposed benefit analyser should enable decision analysis on an intra- and inter-temporal optimisation basis.

Transparency is required for dealing effectively with the information asymmetry. Unequal distribution of information makes optimal decision making difficult for the consumer. Another policy intervention to support benefit option standardisation would be to collect health care delivery performance data. Implementing both interventions will assist beneficiaries to perceive product differences and to assess the value associated with product choices.

In addition to assessing product design simplicity and understandability, other criteria should speak to socially optimal welfare. Therefore, among other things, the Health Market Inquiry (HMI) has investigated whether market coordination outcomes may be able to encourage fairer market outcomes, particularly in instances where the market is not adequately incentivised to meet socially optimal outcomes.

The reviewed literature builds the case for transparency and accountability in health insurance environments, so that the market is beneficial to all by providing more, rather than fewer, appropriately sized risk pools for relatively more vulnerable risk pools.

The Netherlands achieved fewer fragmented risk pools through regulating and reporting on market performance and insisting on the accountability of health funders. These principles support the viability of the private health financing industry in the Netherlands.

As has been elaborated in the literature review, hyperbolic discounting occurs when a beneficiary procrastinates and does not buy the health insurance they need. Principles of hyperbolic discounting will need to be taken into consideration within the future benefit analyser framework, especially if the essential benefit package needs to be expanded with current out-of-hospital services.

Monitoring the performance of managed care interventions will also need to be part of the mixed policy tool to aid community rating through option standardisation. This will also help to demonstrate shared costs through managed care contracting on an inter- and intra-scheme basis.

Efficiencies will have to be the keyword behind such market coordination practices, to demonstrate the feasibility of policy interventions relative to competition regulations. What this means is that large schemes could justify their size through the economies of scale attained through appropriate contracting that shares costs across their product mix.

Regulatory standards need to assist in identifying Principal-Agent Problems; i.e. networks options and Efficiency Discounted Options (EDOs) pretending to be inefficient, when they are in fact efficient. Monitoring initiatives will need
to be implemented to learn efficiency behaviour — particularly if income cross-subsidies and network subsidies are to be implemented for making services more cost-effective and thus increasing the depth of the essential benefit package over time. Monitoring initiatives at the Council for Medical Schemes (CMS) and the proposed Supply-Side regulator will have to feed into collective bargaining processes.

3.1.4 Hypotheses statements

If accountability and transparency are integrated with a simpler benefit design regime, consumers will rationalise their purchasing allocation in an efficient and optimal manner, which should improve the efficient function of competition in the private health sector.

A mixed policy bag of regulatory standards and regulatory economic principles will be needed to support the standardisation of benefit designs. These will need to be carefully sequenced to avoid unintended policy outcomes.

3.2 Policy Design, Transparency & Accountability: Quantitative analysis

There are non-price barriers to fair and equitable access to health insurance and healthcare. The qualitative section presented a theoretical account of these non-price barriers. It argued that accountability and transparency are paramount to increasing participatory governance and informed decisions by beneficiaries. This section provides a quantitative descriptive analysis that hopes to support the foregoing qualitative analysis.

There are x-efficiencies (competitive edge in scale and technical efficiencies) that large medical schemes have, which make it difficult for smaller schemes to compete at the same level. An example would be in-hospital experience and outcome performance reports. Large schemes should be encouraged to carry out these innovative strategies, to improve consumer value. That said, these initiatives need to be supported by collective bargaining councils. This is so that beneficiaries from small medical schemes can benefit from positive externalities, and thereby reduce the impact of non-price barriers reducing access to effective healthcare interventions.

There are negative externalities (unaccounted costs) that increase the impact of non-price barriers to effective health insurance. Among others these are: i) the cost of seeking advice to navigate a healthcare insurance market with 324 benefit options to choose from; and ii) the unperceived opportunity cost of naïve decisions by the relatively young today who will fall ill tomorrow.

Additional negative externalities may occur if Efficiency Discounted Options (EDOs) create free-rider (e.g. not paying the true cost of care on a benefit option) opportunities — specifically EDOs that don’t create opportunities for shared cost efficiencies between young and relatively older risk profiles, within common benefit design platforms.
These externalities need to be dealt with through:

- Product design that is discernible from the beneficiary’s perspective;
- Transparency in beneficiary reported outcomes and experiences of value along the private healthcare delivery chain; and
- Accountability regarding beneficiary reported experiences on medical scheme and administrator services.

If the foregoing isn’t done, then vulnerable groups may not be able to benefit from:

- Innovations in network coordination and health delivery systems;
- Improved performance on EDOs;
- Improved performance in managed care interventions that outperform others, which are also able to demonstrate cost-sharing across similar designs and pools; and
- The eventual redundancy of hospital plans, as cost efficiencies allow the expanded depth of the essential benefit package.

Figure 22 shows that, while anti-selection or cherry-picking may exist at relatively low ages, the marginal impact of age on healthcare costs dissipates. This is illustrated by a comparison of Partial Cover Plans and Hospital Plans.

![Figure 22: Hospital vs. Partial Cover Plans – Fitted regression age vs cost](image)

Output generated in STATA 13
Figures 22 and 23 corroborate with the preceding comparative observations between Partial Cover and Hospital Plans. In terms of the community rates:

- There are differences associated with anti-selection or cherry-picking differences, in the two risk profiles (intercepts);
- That said, the predictive margin is constant when factoring ambulatory care differences between hospital and supplementary benefits. This fixed difference is probably easier to price into an essential benefit package than predictive margins that grow at rates that are not constant;
- The figures also corroborate with the Health Market Inquiry (HMI) preliminary recommendation on making hospital plans redundant, through migrating standardised supplementary benefits to the essential benefit health service package (fig. 22 and 24). The marginal effects of age decrease per unit. This means as age increases, its effect on healthcare decreases. The marginal effects of community rate are constant. This means the sicker the profiles on Partial Cover and Hospital, the more constant and less risky it is to estimate expected healthcare expenditure pbpm (fig. 23 and 25).
Figures 26 to 28 report the health-related expenses pbpm, the average age pb, and community rate of open scheme options, respectively. The graphs collectively show that there are very marginal differences in averages between Partial Cover and Hospital Plans. Comprehensive Plans are clearly endowed with higher averages in the compared characteristics.

This implies a lot more work will need to be done in making supplementary benefits for Comprehensive Plans comparable with a more comprehensive essential benefits package, when compared with the Partial Cover Plans. A mixed policy bag of interventions will need to be rolled out. More importantly, there seems to be an argument for the
Health Market Inquiry (HMI) recommendation regarding the slow redundancy of Hospital Plans. This is evident in the very marginal differences between Hospital and partial Cover Plans.

Figure 26: Open schemes – Health expenditure pbpm by benefit design (2014)

Figure 27: Open schemes – Average age benefit design (2014)

Figure 28: Open schemes – community rate by benefit design (2014)
The Council for Medical Schemes (CMS) conducted a supervised discriminant analysis on benefit options in the open and restricted sectors. The results suggest that there are large differences in the revenue and claims behaviour between, and within, similar benefit design classifications. These differences could be caused by the same non-price barriers that Marquis (2007) mentions, and more specifically — the inability of beneficiaries to perceive differences between benefit designs.

The reasons that have been identified in the research literature are:

- There are too many options to choose from, making it difficult to make an optimal choice and thus not choosing the most minimally priced choice;
- Beneficiaries have predetermined preferences for the benefits they seek. However, on close analysis of the actual benefit brochures, it becomes clear that these preferences have not been optimised. The reviewed literature has attributed this to: i) the search costs or search work required to optimise preferences, and ii) not enough information being available to support the beneficiaries’ decisions; and
- Plainly that benefit designs are not designed simply enough, particularly in instances where the financing structure to access benefits becomes too involved or complicated.

Figure 28 is an output of a discriminant analysis conducted on open medical schemes’ benefit options, using 2014 financial, demographic, and benefit option rules. The analysis is based on trimmed data. The data are trimmed below the 25th and above 75th percentiles, so they represent a subsample of the full dataset. We include it here as a representative example of whether financial and demographic data can form distinct groups driven by benefit design. The scheme options were placed into benefit design classifications, and we asked the model to predict a fit based on selected claims and demographic criteria. This is merely for example purposes, and not a guideline on benefit option design.

Figure 28 shows:

- That the model can identify Hospital Plans, Partial Cover Plans and Comprehensive Cover Plans;
- Large intragroup variance – although distinct groups are forming on the left, middle, and right side of the plot, there is an elongated dispersion of observations; and
- Small intergroup variance – the groups are closely positioned to each other.

The results suggest that there are decision complexity issues at play; i.e. it’s difficult to make decisions — strongly corroborating the reviewed literature. One would expect that the groups will begin to form remotely from each other and be more compact as differences between benefit designs become more discernible for beneficiaries.
Table 2 is a classification matrix. The vertical column is based on human classification of benefit options, and the horizontal row is based on the model’s prediction or classification of benefit options. The matrix shows that:

- 77% of the options we said are Comprehensive Cover Plans, are correctly classified;
- 88% of the options we said are Hospital Plans, are correctly classified;
- 64% of the options we said are partial Cover Plans are correctly classified; and
- The level of error in the model is 24%. It must be stated that the fewer the classifications, the lower the error becomes.

Table 3: Open schemes: classification matrix

<table>
<thead>
<tr>
<th>From Benefit</th>
<th>Comprehensive</th>
<th>Hospital Plan</th>
<th>Partial Cover</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehensive</td>
<td>23</td>
<td>6.67</td>
<td>6.67</td>
<td>30</td>
</tr>
<tr>
<td>Hospital Plan</td>
<td>0</td>
<td>15</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>Partial Cover</td>
<td>6</td>
<td>2</td>
<td>14</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td>19</td>
<td>21</td>
<td>69</td>
</tr>
<tr>
<td>Priors</td>
<td>0.3333</td>
<td>0.3333</td>
<td>0.3333</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Error Count Estimates for Benefit designs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>0.2333</td>
</tr>
<tr>
<td>Priors</td>
</tr>
</tbody>
</table>
The analysis includes a discussion on fairness (section 24(e)) and equity/efficiency (section 33(2)), by attempting to explain healthcare expenditure between health plans, in terms of, the intergroup characteristics of covered beneficiaries. The model we will apply will give the characteristics of the enrollees on a benefit option (let’s call the option ‘design A’), to the enrollees of let’s say option ‘design B’. This will be done to explain the difference between the health care claims of option design A and option design B. If any differences in healthcare expenses are not explained by observed differences in the characteristics of covered profiles, this must be attributable to some degree of product choice complexity. The assumption is that, if beneficiaries have self-selected themselves optimally, the differences in the claims experienced between the two benefit designs should dissipate or become zero.

Figure 30 shows the community rate, average age, and health expenses pbpm for enrollees on Comprehensive Cover and Hospital Plans, in open schemes in 2014. The analysis we are going to undertake is to see if we gave the Comprehensive Plans the community rate and average age of Hospital, would the difference in health expenditure pbpm ($2,120 - 750 = 1,350$) be explained?

We ran a Blinder decomposition model to give us the results related to our question. Figure 31 provides results of the decomposition. The decomposition is based on the explained portion and the unexplained portion.
Figure 31 gives the results as follows:

- Age and community rate explain 32% of the difference between health expenses on Hospital and Comprehensive Cover Plans; and
- 67% of the difference in health expenses pbpm is not explained by age or community rate.

The results are consistent with the findings in the reviewed literature. There are non-price barriers which are creating a situation where there are a lot more other factors that are confusing the match between preferences and benefit design decisions. This is also consistent with the preliminary Health Market Inquiry (HMI) recommendations, which state people are merely buying what they can afford. The decision to buy is also resting on an assumption that expensive options offer superior quality.

A policy solution may be to increase transparency by way of regulatory reporting standards on performance of healthcare inventions across the demand and supply-side value chain. Interventions such as these are necessary to not only increase transparency, but also improve the accountability of the healthcare purchaser to medical scheme beneficiaries.
4. CRITERIA FOR BENEFIT OPTION STANDARDISATION FRAMEWORK

This section of the report sets out to do the following specific tasks:

- To articulate the objectives of the benefit option standardisation process;
- To describe the criteria for classifying benefit options, pursuant to having standardised health service consumption bundles that are comparable between options;
- To describe a benefit structure framework that links prescribed benefits and supplementary benefits to health service consumption bundles; and
- To specify the financing mechanisms associated with each health service consumption bundle.

4.1 Objectives of Benefit Option Standardisation

The objectives of the benefit option standardisation process are:

- To standardise benefits by health service consumption bundles, so that they are comparable between and within medical schemes;
- The benefit structures should compare favourably to the expected claims and premium. Therefore, the standardised benefit option structures should be valid, reliable, and behave as expected;
- To allow for standardised model rules or guidelines, that assist marketing material activities to speak to salient features that are of value to beneficiaries;
- To support the rules submission process by introducing more consistency and standardisation in the way rules are submitted for registration;
- To facilitate the process of migrating standardised health service consumption bundles to essential health services;
- To develop a framework to track combinations of consumption bundles selected by beneficiaries, for benchmarking optimal choice configurations;
- To allow for optimisation of time preferences; i.e. consumption on acute and long-term care;
- To establish the criteria and parameters to develop a benefit analyser which the Council for Medical Schemes (CMS) could use to analyse scheme rule submissions;
- To establish a framework which medical schemes can comment on, and participate in the developmental process of; and
- To make benefit options more transparent and easier to discern.
4.2 Framework for Option Classification

Figure 32 illustrates a generic benefit design framework that links the benefit option prescribed and supplementary benefits to consumption bundles that contain specific health services. The list of health services in the consumption bundles were developed based on the following process and rationale:

- Medical scheme rules for 2014 were reviewed to develop a list of health services that could be allocated to prescribed and supplementary health services;
- The list was put together to reflect the most common and most essential health services that are currently available on benefit options. This was a baseline list to be developed after initial analysis and modelling processes;
- The list was validated with the Clinical Unit analysts at the Council for Medical Schemes (CMS); and
- The intention is to use this list to conduct cluster and discriminant analyses by health service consumption bundles, to develop clusters based on consumption bundles that are purchased by members.

Figure 32: Health service consumption bundles for prescribed and supplementary benefits
Figure 33 incorporates an intention to make the framework amenable to:

- Allow the maximisation of beneficiary choice preferences from the level of health service consumption bundle, chosen as options for constructing a suitable benefit design to a beneficiary's fancy;
- Allow choice maximisation to take a long-term view, particularly for beneficiaries with chronic conditions; and
- To map the incremental migration of health service consumption bundles to the essential health service base benefit.

Figure 33: Preference and choice optimisation
5. **PRELIMINARY CLUSTER ANALYSIS**

**Purpose**

The intention of the exercise was to do a high-level analysis that might give an idea of how many clusters of benefit options could be identified. This is a preliminary analysis alone, and perhaps a baseline that may be used to start a discourse with medical schemes, on what a reasonable number of benefit designs could be. It is not meant to be a definitive exercise.

**Data management**

This section provides a preliminary market segmentation analysis using cluster analysis. The analysis is conducted using income statement and demographic variables, at benefit option level. The analysis uses 2014 data. A principal component is used to deal with the multicollinearity in the variables. Seventy-five percent of the variation in the data was used to conduct the analysis.

**Results**

The analysis had different results based on the clustering method used. These were the dominating scenarios after numerous iterations:

- At times 2 to 3 clusters appeared to be a common answer; and
- Results based on mixture models suggest that the correct number of clusters is likely around 5 to 7.
6. PROPOSED POLICY MIX

The lessons learned point to policy remedies that constitute an integrated mixed policy bag of solutions. The identified regulatory standards and economic policy principles are listed as follows:

i) There is a need for administrators and managed care and health delivery networks to demonstrate shared cost efficiencies across benefit options.

ii) Transparency and accountability: reporting standards and publication of performance results like in the Netherlands.

iii) Like the regulating authority in the Netherlands is tasked with encouraging large insurers to innovate and implement market initiatives that stimulate the procurement market, the Council for Medical Schemes (CMS) should position itself to do so in support of benefit standardisation and choice optimisation.

iv) The development of healthcare performance indicators should be a multi-stakeholder consultative process and be underpinned by participatory governance; i.e. engaging beneficiaries through forums and consumer advocacy groups.

v) Healthcare performance indicators should be constructs of beneficiaries' self-reported experiences and outcomes.

vi) Healthcare performance indicators should cover the following dimensions of performance:

- Access to health delivery networks or providers;
- Affordability; and
- Quality.

vii) The essential and supplementary benefit structure that is recommended by the Health Market Inquiry (HMI) seems to mimic that of the Netherlands health funding sector, save for the long-term care component. That said, it is an option for South Africa. The CMS generic structure also concurs with the three different platforms of care. The Netherlands benefit structure involves three layers:

- mandatory cover for long-term diseases and frail care;
- essential cover for catastrophic and acute care; and
- unstandardized cover that is subject to free market pricing (no community rating).
viii) Efforts poured into health policy interventions to improve beneficiaries benefit option decisions are better exercised when considering what can be learned from behavioural economics.

ix) Market segmentation and cluster analysis are methods that could be used to understand beneficiaries’ choice preferences, resulting in benefit design groupings that speak more easily to beneficiaries’ needs. Choice preferences could be standardised and presented in consumption bundles that are easier to differentiate.

x) Hyperbolic discounting should be considered when seeking to alter the choice behaviour of beneficiaries through a transparent benefit design framework.

xi) Shared collective bargaining with shared bidding platforms for different clusters of benefit designs.

xii) The innovative networks for health delivery will have to demonstrate shared cost efficiencies.

xiii) Managed care interventions should demonstrate cost effectiveness if they are to be allowed differentiated reimbursement for covering comprehensive supplementary benefits.

xiv) The collective bargaining process should enable medical schemes to sequentially learn the true efficiency of provider network arrangements, so that the required efficiencies for migrating ambulatory care to the essential benefit package are achieved.
7. REFERENCES


8. **APPENDIX**

Appendix 8.1: Classification criteria of benefit designs

Table 4 explains the classification criteria used to classify the benefit designs in the market structure discussion.

<table>
<thead>
<tr>
<th>Benefit design codes</th>
<th>Benefit design name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No PMB Benefits</td>
<td>Exempt from PMBs</td>
</tr>
<tr>
<td>1</td>
<td>PMB Plans</td>
<td>Only PMBs &amp; CDLs; no OOH benefits</td>
</tr>
<tr>
<td>2</td>
<td>Hospital Plans</td>
<td>Supplementary in hospital benefits relative to PMB; no OOH benefits</td>
</tr>
<tr>
<td>3</td>
<td>Traditional Plan 1</td>
<td>Comprehensive cover of OOH benefits; all risk cover</td>
</tr>
<tr>
<td>4</td>
<td>Traditional Plan 2</td>
<td>Partial cover of OOH benefits; all risk cover</td>
</tr>
<tr>
<td>5</td>
<td>Network Plan 1</td>
<td>Partial cover of OOH benefits at DSP; all risk cover</td>
</tr>
<tr>
<td>6</td>
<td>Network Plan 2</td>
<td>Comprehensive cover of OOH benefits at DSP; all risk cover</td>
</tr>
<tr>
<td>7</td>
<td>New Generation Plan 1</td>
<td>No cover for OOH benefits; savings account and no ATB</td>
</tr>
<tr>
<td>8</td>
<td>New Generation Plan 2</td>
<td>Partial cover for OOH benefits from risk; savings account and no ATB</td>
</tr>
<tr>
<td>9</td>
<td>New Generation Plan 3</td>
<td>Comprehensive cover for OOH benefits from risk; savings account and no ATB</td>
</tr>
<tr>
<td>10</td>
<td>Threshold Plan 1</td>
<td>Cover of OOH benefits from risk after Threshold; risk ceiling after ATB</td>
</tr>
<tr>
<td>11</td>
<td>Threshold Plan 2</td>
<td>Cover of OOH benefits from risk after Threshold; no risk ceiling after ATB</td>
</tr>
<tr>
<td>12</td>
<td>EDOs</td>
<td>Efficiency discount options</td>
</tr>
</tbody>
</table>
Appendix 8.2: Proposed Data Collection Tool

The appendix provides tables for standardising benefit option information. It is hoped that medical schemes could start populating information related to their rule submissions in this standardised format. This will help the regulator to develop and publish common guidelines for benefit options that have similar benefit designs.
### Supplementary Non-POS Hospital Services

#### Conferences, Unattached Theatres & Day Admissions

<table>
<thead>
<tr>
<th>Conference</th>
<th>No benefit</th>
<th>Risk</th>
<th>Risk (co-payment)</th>
<th>Savings</th>
<th>Threshold</th>
<th>Applicable Limit</th>
<th>Risk Limit</th>
<th>Limit Above Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT scans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>P</td>
<td>A</td>
</tr>
<tr>
<td>MRI scans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Surgical procedures</td>
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<td></td>
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<td></td>
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<tr>
<td>Medical admissions</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Day clinics</td>
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<td>Basic radiology</td>
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<td>Sub-units facilities</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cesarean section (elective services)</td>
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**Notes**

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### Supplementary Non-POS Out of Hospital Services

#### Primary Healthcare

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**Notes**

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### Supplementary Non-PHPIF: Out-of-Hospital Services

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### Notes

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#### Acute Medicine

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### Notes

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Acknowledgements

The principle investigator for this work was Phakamile Nkomo, who is the Senior Policy Analyst in the Research and Monitoring Unit. Prof. Steven Koch, who is the Head of the Economics and Pretoria University, provided technical comments. The research was sponsored by the Michael Willie, the Head of Research and Monitoring. The benefit templates were developed with the assistance of Joanita Dambisya.