

*Research paper for Medical Schemes
September 2014*

Drivers of change



Contents

<i>Introduction</i>	<i>1</i>
<i>The medical schemes environment is changing</i>	<i>2</i>
<i>Participant profile</i>	<i>5</i>
<i>Trends shaping the future of the industry</i>	
<i>Social</i>	<i>7</i>
<i>Technology</i>	<i>16</i>
<i>Environment</i>	<i>28</i>
<i>Economic</i>	<i>36</i>
<i>Socio-political</i>	<i>43</i>
<i>Contributors</i>	<i>49</i>
<i>Medical Scheme group contacts</i>	<i>52</i>

Introduction

Member behaviour is changing due to technological advances such as the introduction of mHealth, eHealth and telemedicine together with social networks like Facebook and Twitter. In this fast-paced world where ‘time is money’, members increasingly expect a seamless integrated service from their medical schemes.

In addition to the host of challenges and opportunities brought about by the digital revolution, medical schemes will also need expertise to respond to the risks created by urbanisation, lifestyle diseases and environmental changes. At the same time schemes will also have to contend with regulatory changes such as demarcation regulations and National Health Insurance (NHI).

Medical schemes should afford themselves time to bring the future into focus, as social, technological, environmental, economic and socio-political trends could have far-reaching impact on their operations and sustainability. The way many medical schemes operate in the future will be significantly different to how they operate today.

With a view to helping medical schemes plan for the future, PwC interviewed a number of principal officers across the industry. In this report, we considered the likely drivers of change in the industry over the coming years and identify those drivers that will impact the industry most.

The medical schemes environment is changing

Views from respondents:

78%



consider social media as strategic means to grow membership



Wellness programmes as well as disease- and lifestyle management initiatives will reduce costs for medical schemes

There is a place in the market for gap insurance cover

22%



have current eHealth records for their own members, but not fully integrated

Technology advancements have significantly impacted business over the last five years



One of the three biggest concerns was the increasing costs related to chronic conditions



89% would support telemedicine

50%

have seen option buy-downs increasing over the past year or two

90%

stated year-on-year premium increases for the next three years will be CPI plus 2-3%

NHI will not have a significant impact on membership base in next five years

Medical schemes need to realign their strategies as . . .



Cell phone use by adults in South Africa rose from 17% to 87% between 2000 to 2013, with usage increasing year on year amongst older age groups

57%

Only 57% of open schemes have Facebook accounts and



35%

open schemes have Twitter accounts



Life expectancy is on an upward trend, with a steady increase noted in the pensioner ratio of medical schemes

75%



of consumers expect healthcare entities to respond within 24 hours to request via social media

Chronic conditions are the leading causes of death and disability globally and mHealth has the potential to specifically target chronic disease patients to modify behaviour in an engaging and sustainable way

-18%

The number of medical schemes declined from 112 in 2008 to 92 mid-2014



6.2%

South Africa spend of its GDP on healthcare services to decrease from 8.3% to 6.2%

400%

Productivity losses associated with workers who have chronic diseases are as much as 400%

Climate change is regarded as the biggest threat to healthcare globally in the 21st Century



Participant profile

Background

This research paper is based on PwC research and interviews that were conducted with various principal officers in February and March 2014.

The questions

The questions were discussed with the principal officers touching on the following possible drivers of change the medical industry is faced with, including what is top of their agenda on:

- Social trends;
- Technology advancements;
- Environmental considerations;
- Economic impact; and
- Socio-political aspects.

The principal officers interviewed represent 47% of the South African medical scheme industry, based on principal membership at 31 December 2013. The interviews took approximately one hour to conduct and the research was completed between February and August 2014. The scheme specific information provided is considered proprietary and remains confidential.

	Respondents	Total industry	Representation
Average principal members	1,812,739	3,863,247	47%
Gross contributions (R'000)	62,814,680	129,788,790	48%
Gross relevant healthcare expenditure (R'000)	53,423,530	112,935,487	47%

Source: Council for Medical Schemes Annual Report 2013/2014

We would like to thank all the participants for their time and input.



Social

Social media is shaping healthcare strategies and communications

Social media has become part of the day-to-day lives of consumers, shaping the way in which people are planning, comparing and communicating all kinds of information. It is no surprise that the medical scheme industry is not far behind with social media utilisation, marketing, offerings and, in some instances, consumer scrutiny.

Social media is already present in the industry in various shapes and sizes. Some of these include:

- Online forums such as Patientslikeme.com and Hellopeter.com ('Hellopeter'), where queries, concerns, recommendations, comparisons and complaints are lodged and discussed across the larger consumer communities who have access to online media;
- Micro-blogging platforms such as Twitter, which are being used to send out up-to-date information, for example doctors tweeting live surgeries, and even methods for emergency treatment, such as Cardiopulmonary Resuscitation (CPR), being tweeted on a regular basis; and

- Dedicated social media pages on internet sites such as Facebook, where medical schemes can communicate with their members and members can also raise concerns.

The rise of social media in South Africa has been phenomenal. This has largely been powered by enormous growth in cell phone use. According to the *Mobile in South Africa 2014 All Media and Products Survey (AMPS) Report*, cell phone use by adults in South Africa rose from 17% to 87% between 2000 and 2013.

With this developing environment, medical schemes are compelled to consider the effect of social media on their market positioning and member communications.

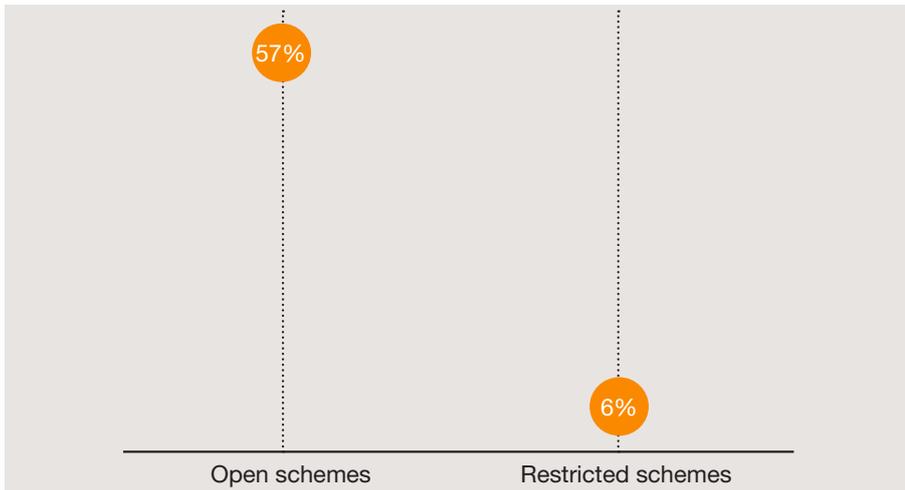
Some of the emerging developments which are changing the medical scheme landscape are:

- Social media interaction with members and the impact of member satisfaction on medical scheme strategies; and
- The impact of demarcation regulations, life expectancy and dependency ratios on medical schemes.

On 21 February 2012, surgeons at the Memorial Hermann Northwest Hospital in Houston performed the world's first live Tweeted open-heart surgery. Doctors provided 140-character updates throughout the procedure and answered questions submitted by followers of the hospital's Twitter account.

www.sciencerooll.com

Figure 1: Percentage of medical schemes that have Facebook accounts (open versus restricted schemes)



Source: www.facebook.com

More than 80% of the respondents indicated that they regard social media as an important part of their long-term strategies. We looked at the current use of social media by medical schemes in South Africa, assessing the use of two social media forums, namely Facebook and Twitter.

Figure 2: Percentage of medical schemes that have Twitter accounts (open versus restricted schemes)



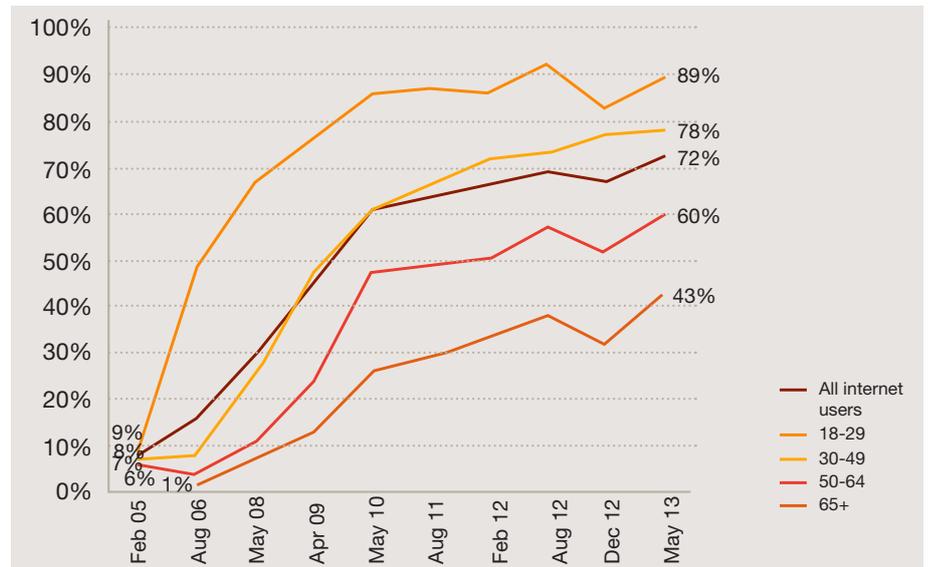
Sources: www.twitter.com and searches on medical scheme websites

It is evident, based on their usage of these two social media forums, that open schemes have a far greater drive towards a social media presence. This can be ascribed to the fact that open schemes have to market themselves and increase their market share to be viable in the long term. Responses mirrored this notion, as 78% of respondents indicated that they have considered social media as a strategic means for growing their membership.

Q: What do members communicate through social media and which members are using it?

It is a general misconception that only younger people are using social media networks and tools; in actual fact, usage is increasing year on year amongst the older age groups. According to data from the Pew Research Centre in the United States of America (USA), 72% of adults in the USA were using social networks in 2013. This is up 5% from 2012 and 64% from 2005, when Pew first started studying social media adoption.

Figure 3: Social networking site use by age group, 2005–2013
% of internet users in each age group who use social networking sites



Source: Pew Research Center's Internet & American Life Project tracking surveys 2005-2013

A similar increasing trend is expected in developing countries, where social media usage is continually increasing with the expansion in internet connectivity and availability. It is therefore important for medical schemes to monitor member communications in the online community, as social media is being utilised by all age groups.

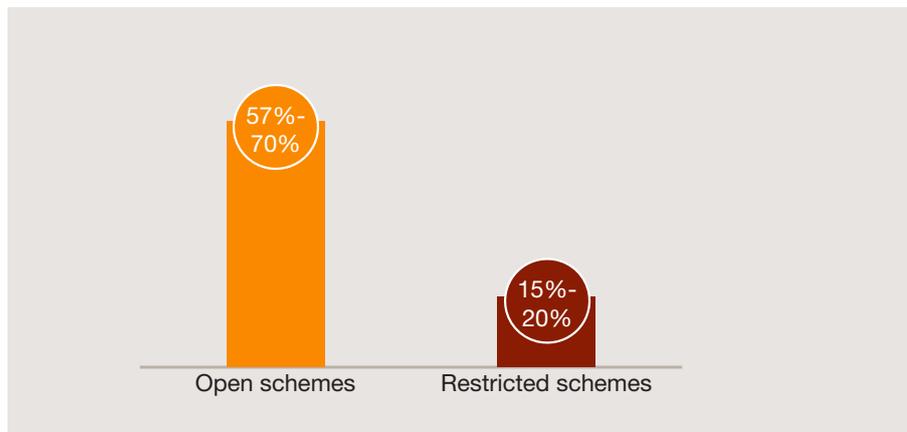
We have asked the respondents to indicate how they would rate member satisfaction with their medical schemes in totality (end-to-end service and value for money) on a scale from one to ten (one being poor and ten being excellent). The majority of respondents indicated that they currently measure member satisfaction through the use of surveys.

The respondents on average rated their members' satisfaction at eight (excluding respondents who did not indicate a rating). On average, this indicates very high member satisfaction. Taking into account online forums such as Patientslikeme.com and Hellopeter, it would be advisable for medical schemes to consider extending their member satisfaction measurement criteria outside of the traditional survey approach, by applying social listening as well.

Social listening is the process of monitoring digital media channels to devise a strategy that will better influence consumers. Taking information from places that consumers participate in online can be invaluable.

Hellopeter is an internet-based platform which consumers can use to report good or bad (usually bad) service, free of charge, from any service provider. Approximately 30% of the current registered medical schemes in South Africa are registered with Hellopeter, with the following percentages per restricted and open schemes:

Figure 4: Percentage range of medical schemes that are registered on Hellopeter.com (open versus restricted schemes)



Interestingly, the average member satisfaction rate noted by respondents above is inconsistent with the 'satisfactory' response rate noted on Hellopeter. The highest satisfaction rate for a medical scheme on Hellopeter is 52%, which is a further indication that medical schemes should consider social listening as an additional member satisfaction measurement tool. However, even though consumers can lodge their complaints free of charge, entities are charged a significant amount (in thousands) by the website for the right of reply, and this may be a deterrent for medical schemes to provide responses on this specific forum.



Member complaints and expectations, and the management thereof

Based on PwC health research conducted in 2012, more than 75% of the consumers surveyed expected healthcare companies to respond within a day or sooner to requests or queries via social media. The onus is therefore on healthcare providers to try and meet these member expectations.

From the above research, indications are that consumers across the healthcare industry are continually setting new expectations regarding acceptable response times. The challenge for medical schemes is to prepare themselves for these queries or complaints in order to provide sufficient responses and services. One way to do this is to identify the most commonly raised complaints and to ensure that sufficient response capability is in place, whether this be through appropriately experienced personnel, integrated service delivery or other means.

The respondents have indicated that the following three complaint themes are most often raised by their members:

- Complaints related to claim payments;
- Complaints related to the design of benefit options; and
- Complaints regarding the administrative processes applicable to prescribed minimum benefits (PMBs) in particular.

Even though membership expectations regarding response times to queries and complaints are increasing, 56% of the respondents do not think that their members are more empowered and aware of their rights as members through media

and regulatory communications. It seems there is still a gap in the members' understanding of their rights, as the top three complaints or queries relate to the claim and benefit process. Some of the respondents did, however, indicate that their members are more informed regarding PMBs, whilst others indicated that members only become aware of their rights once they are affected.

When asked to describe their approach to service, 78% of respondents indicated that they feel they have an integrated service offering, which in some instances includes a member-centric approach, predictive call centres and separate call centres for chronic disease and medication queries.

A good way to assess your business and its shortcomings is to ask yourself, what would my fiercest competitor look like? Here is what some of the medical scheme respondents had to say:

My fiercest competitor would be a competitor:

- *In the existing market with better skills, expertise, marketing capacity and benefit design;*
- *With a product range that can fit the growth trends of the market and at the same time is easy to use;*
- *With a technically savvy core function;*
- *Who has a younger range of membership; and*
- *In which the members have faith and trust.*

Medical schemes should assess themselves regularly on a similar basis as the above in order to distinguish their services from those of other competitors.

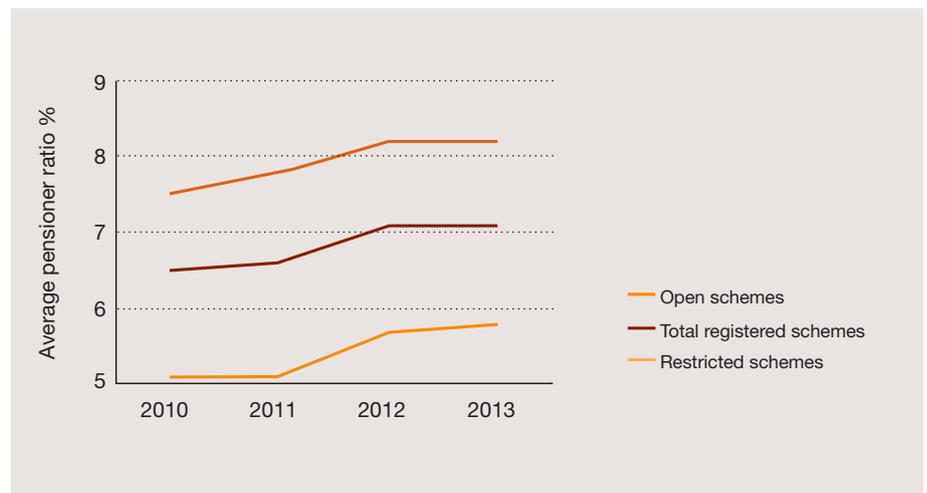
The effect of life expectancy, dependency ratios and demographic shifts on medical schemes

Life expectancy is on an upward trend, and this pattern is expected to continue. Based on the mid-year population estimates published in 2014 Stats SA, South Africans are living longer. The life expectancy rate has increased by over 17% (for males) and 13% (for females) over the last ten years.

The increase in life expectancy in the South African population has begun to reflect in the medical

schemes' pensioner ratios as well. There has been a steady increase in the pensioner ratio of medical schemes over the last few years, which is consistent with the increase in the life expectancy rates. The major health risk factors are prime causes of conditions such as diabetes, cancers, hypertension, heart diseases and strokes. The prevalence of these diseases has been on the rise, and the incidence rate is becoming greater in the older population.

Figure 5: Pensioner ratio



Source: Council for Medical Schemes Annual Reports 2011 – 2013

Based on the annual reports of the Council for Medical Schemes (CMS) for the period 2010 to 2013 and the input gleaned from respondents, the dependency ratio has remained fairly stable. The average number of dependants per member ranged from 1.2 to 1.4. The solvency margins for medical schemes have not been significantly impacted – a 1% decrease was noted in the above period. However, the gross relevant healthcare expenditure per member for medical schemes has increased by more than 25% over the same period.

These findings indicate possible changes in membership demographics in the near future. 60% of respondents indicated that they foresee changes in membership demographics due to life expectancy increases over the next three years. Consideration should therefore be given to whether medical schemes have planned appropriately for these changes, including the costing of benefit options and assessing reserve levels with proper age profile utilisation.

Demarcation and the impact thereof on medical schemes

On 2 March 2012, the National Treasury published draft regulations regarding differentiation between a medical scheme business and an insurance business. National Treasury has indicated that the purpose of the draft regulations is to ensure that health insurance products, including gap cover, do not infringe on the Medical Schemes Act, 131 of 1998 and the Regulations thereto (the Act) which governs medical schemes.

The explanatory comments released by the National Treasury differentiate between medical schemes and health insurance as follows:

Medical schemes:	Health insurance:
<ul style="list-style-type: none">• Not-for-profit organisations;	<ul style="list-style-type: none">• Commercially driven for-profit companies;
<ul style="list-style-type: none">• Provide access to private healthcare;	<ul style="list-style-type: none">• Premium usually driven by insurer's assessment of policyholder's state of health;
<ul style="list-style-type: none">• Community ratings, whereby members are subject to the same contribution rates per benefit options selected; and	<ul style="list-style-type: none">• Older members usually pay more and might even be refused cover; and
<ul style="list-style-type: none">• Cross-subsidisation by spreading healthcare cost between the young/healthy and the old/sickly.	<ul style="list-style-type: none">• Health insurers are owned by shareholders.

The main issue which National Treasury is attempting to assess and address is whether health insurance policies regulated under the Long-Term Insurance Act and Short-Term Insurance Act impact on the sustainability of medical schemes.

Some of the products identified as possible 'health policies' include:

- Lump-sum or income-replacement policies paid out for a health event;
- Employer group cover for both employees and their dependants for HIV treatment;
- Cover for the actual expenses of emergency evacuation or transport;
- Gap-cover policies; and
- Cover for medical expenses incurred by a third party.

The focus for medical schemes will mainly be on younger and healthier members who might opt to buy down (select cheaper benefit options) within the medical scheme and supplement their medical cost shortfall with gap cover or health insurance policies. For older members with pre-existing health conditions this might not be the case, as their premiums to join health insurance companies could be more expensive (as risk assessment is performed at a policyholder level) than opting for more comprehensive benefit options within medical schemes. However, if medical schemes are to lose the majority of their cross-subsidisation income from younger members it could impact on the overall sustainability and longevity of medical schemes as a whole.

The respondents have indicated that they think there is a place in the market for gap cover. However, consideration should be given to underwriting and regulating gap cover. Certain respondents even suggested that medical schemes be allowed to issue gap cover for members.

The majority of open scheme respondents have indicated that buy-down of cover due to financial pressures on members over the past five years has resulted in significant changes in benefit options. The majority of restricted scheme respondents have indicated that they have experienced no changes in benefit options as a result of this and that they do not perceive this to be a risk.

The majority of open scheme respondents have indicated that they are attempting to manage their buy-down risk as follows:

- Actively targeting younger members;
- Designing options to cater specifically for the needs of the younger members; and
- Considering merging with another medical scheme which has a higher ratio of younger members.

Medical schemes should consider their benefit option design in order to attract members in younger age brackets.

The underlying difficulty is the ever-increasing healthcare expenditures faced by medical schemes in South Africa. The CMS's annual reports for the past five years indicate that healthcare expenditure has risen by more than 25% per annum. Annual inflationary increases, coupled with increasing life expectancy and economic conditions within South Africa, paint a bleak picture and outline the difficulties faced by medical schemes in curbing costs.

Based on the CMS's 2013/2014 annual report, benefits paid out have increased by more than 8% from 2012 to 2013. Some of the health risk factors the country is currently faced with include sexually transmitted infections (STIs), high body mass indexes (BMIs), high blood pressure, diabetes and cholesterol-related conditions. The majority of respondents indicated that they have not yet seen a reduction in the health risk factors of their members over the past year. This indicates that there is still room for improvement in preventative care and wellness programme utilisation by medical schemes in South Africa.

90% of medical schemes believe that wellness programmes as well as disease- and lifestyle-management initiatives will reduce costs for medical schemes.

Strategic and Emerging Issues in the Medical Scheme Industry – PwC publication July 2012

Wellness is an active process through which people become aware of, and make choices toward, a more successful and healthy existence.

Preventative services such as health risk assessments, biometric screenings and the management of chronic conditions can contribute to a reduction in costs for medical schemes. Medical schemes should ensure that their approach to and implementation of wellness programmes are holistic and inclusive, with clear objectives and health outcome effects.



Technology

Technologically savvy medical schemes will be able to obtain and retain membership

Life is fast-paced in today's world, and when it comes to the consumer's finances, the phrase 'time is money' is becoming ever more imperative. With almost as many cellular phone subscriptions as there are people on the planet, technology has taken a new direction in personal finance management, and consumers now make use of cellular phones, iPads, tablets and many other communication devices.

It is conceivable that, moving forward, those service providers who are able to provide consumers with high-quality services at a fraction of the time or price through more convenient product offerings will be the providers who excel in the industry.

The communication tools used by members are already shaping the way in which medical schemes communicate with their members. Statements and claims are received by email or SMS rather than post, and various other technological developments are shaping the manner in which healthcare is being administered.

Locally and abroad, some of the latest technological advancements with regard to member treatment and diagnosis include:

- Electronic health records which can be shared across different healthcare settings: data being shared may include demographics, medical history, medication and allergies, immunisation status, laboratory test results, radiological images, vital signs, personal statistics such as age and weight, and billing information;
- Members can subscribe to an online site, such as Hellodoctor.com at a monthly fee. Queries are logged on the site and the member will receive a response from a contracted doctor via telephone or other means.
- Diabetes-related applications which help affected members manage their sugar-level readings and medication intervals;
- Physical and psychological treatments at a distance, including monitoring of patients' functions through telecommunication; and
- Ever-developing applications such as the 'wearable health record', which in a recent Reuters article was described as an application that allows physicians using Google Glass to store patient data on a cloud-based storage and collaboration site.

'The ubiquity of mobile technology offers tremendous opportunities for the healthcare industry to address one of the most pressing global challenges: making healthcare more accessible, faster, better and cheaper.'

PwC's Emerging Health: Paths for Growth

Medical tools and applications can only be used to the advantage of the members if correctly utilised by medical schemes, though. There are already developments within the industry whereby chronic diseases can be managed and monitored by both the member and the medical scheme through the use of electronic applications.

Some of the emerging developments and issues which are shaping the way in which healthcare is provided are:

- The emergence of ‘mHealth’, ‘eHealth’ and Telemedicine. Medical schemes which are able to provide these offerings to their members in an effective manner; and
- Data analysis and the management of chronic diseases via technology-driven tools to reduce costs and improve healthcare.

In PwC’s *Emerging mHealth: Paths of Growth* survey, mentions that mobile health will in all probability have a greater effect on how care is delivered, for three reasons:

- Mobile devices are ubiquitous and personal;
- Competition will continue to drive lower pricing and increase functionality; and
- Mobility, by its very nature, implies that users are always part of a network, which radically increases the variety, velocity, volume and value of information they send and receive.

All respondents agreed that members would be inclined to move towards a more technologically savvy medical scheme. Some respondents have indicated that one of the benefits is easy and efficient communication with members, especially when it comes to benefit enquiries. With the requirements regarding Personal Medical Savings Accounts (PMSAs), a ‘live’ electronic communication platform is an efficient method of maintaining and communicating PMSA balances to members as required.

In contrast to healthcare access, mobile access is becoming almost ubiquitous worldwide. Virtually all developed markets already have mobile penetration greater than 100%, and increasingly powerful mobile technology has the potential to address long-standing challenges in healthcare provision.

In assessing the need, use and availability of these developments and issues, we have posed certain questions to our respondents in order to gain further insight.

One of the most difficult challenges in moving a business model towards a technologically driven platform is to inspire this change in the consumer. Consumers, in general, are hesitant to change. Even when the implied change is to their benefit, the provider will still have to demonstrate the benefits of this platform. PwC’s *Emerging mHealth: Paths of Growth* survey shows that patients will adopt mHealth if it improves access, lowers cost and increases control.

A recent US trial demonstrated the impact mobile phone-based coaching and online decision support can have on diabetes patients.

Chronic conditions are the leading causes of death and disability globally, putting an enormous and increasing burden on most healthcare systems. Prevention and early intervention are a big step towards the ultimate aim of making populations healthier through better lifestyles and increased compliance with their suggested care regimens. mHealth has the potential to specifically target chronic disease patients, with customised sensors, devices, services and tools to modify behaviour in an engaging and sustainable way.

WellDoc Inc., a healthcare behavioural science and technology company, has created a system of instant and longitudinal feedback and coaching driven by clinical, evidence-based guidelines and behaviour science.



Figure 6: Top drivers for patients to consider beginning to use or increasing use of mHealth applications/services



Source: Economist Intelligence Unit, 2012

If medical schemes are able to offer their members cost-saving incentives, combined with better access to mobile information and communication regarding service offerings and member records, they will be able to change their members' perception of mobile health and the advantages thereof.

50% of respondents indicated that they do not have incentive strategies in place for the adoption of technological solutions. Medical schemes which have these strategies offer:

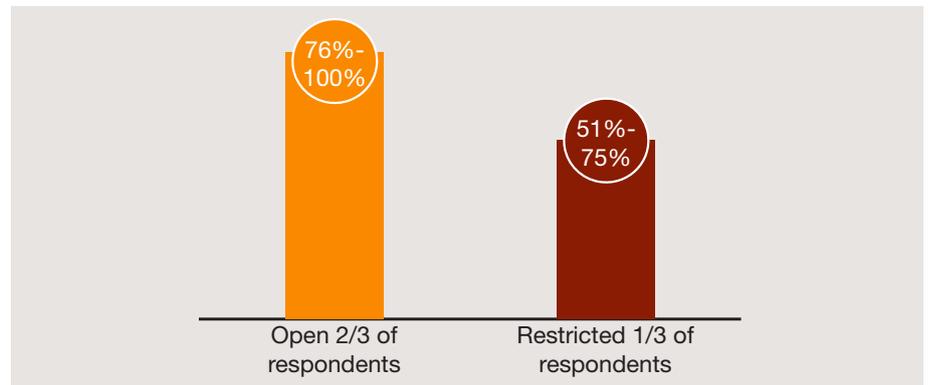
- Rewards aimed at employer groups; and
- Loyalty programmes for members.

Care in the future will be customised to the individual, as performance metrics, payment, outcomes, incentives, services and treatments address differences in the needs and preferences of individuals.

The majority of medical schemes still need to develop their incentive strategies.

Refer to Figure 7 where respondents have indicated their estimation percentage of members which have easy access to electronic equipment as a means of communication.

Figure 7: Percentage of members who have easy access to electronic equipment as a means of communication



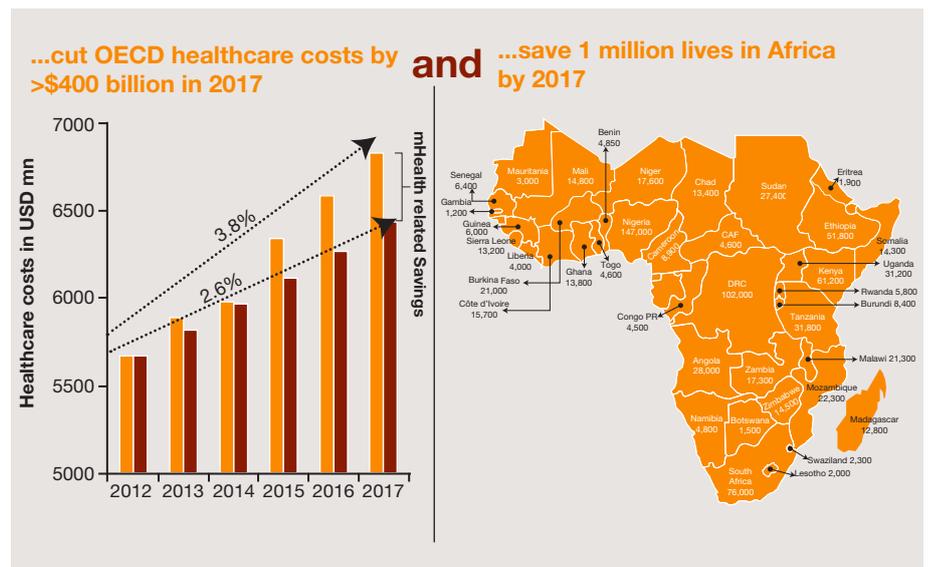
Source: PwC analysis

The results as detailed above indicate that there is a definite market for mobile and electronic technological solutions. During a recent PwC presentation on the 'Progress of mXtension', research was said to show that in both developing and developed countries, mHealth could help as follows:

- Cut Organisation for Economic Cooperation and Development (OECD) healthcare costs by \$400 billion in 2017; and
- Save 1 million lives in Africa by 2017.

Figure 8 indicates that mHealth in particular has the potential to help address the challenges of saving costs and delivering an improved healthcare service.

Figure 8: Potential impact of mHealth on healthcare costs and mortality



Source: PwC Progress of mXtension presentation

Competitive advantage of having technology objectives

In moving forward with technology, medical schemes will have to set objectives and milestones to benchmark their development and performance. Technological innovations can have important strategic implications for medical schemes, and can greatly influence the industry as a whole. It is evident from other industries, such as retail for example, that there is a definite competitive advantage in moving business models towards online and mobile platforms. Medical schemes need to leverage technology in a competitive manner, while ensuring that the member's experience of an integrated offering remains in place.

PwC research has found that mHealth solutions have begun to embrace the following six principles:

- **Interoperability** – interoperable with sensors and other mobile/non-mobile devices to share vast amounts of data with other applications, such as electronic health records and existing healthcare plans.
- **Integration** – integrated into existing activities and workflows of providers and patients to provide the support needed for new behaviour.
- **Intelligence** – offer problem-solving ability to provide real-time, qualitative solutions based on existing data in order to realise productivity gains.
- **Socialisation** – act as a hub by sharing information across a broad community to provide support, coaching, recommendations and other forms of assistance.
- **Outcomes** – provide a return on investment in terms of cost, access and quality of care based on healthcare objectives.
- **Engagement** – enable patient involvement and the provision of ubiquitous and instant feedback in order to realise new behaviours and/or sustain desired performance.

89% of respondents indicated that they already have certain technological objectives in place. These include:

- Continuous availability: 365 days of the year and 24 hours a day;
- Providing members with a self-help function; and
- Remaining at the forefront of quality applications to improve the members' experience.

As medical schemes in the industry all offer similar products and pricing, a determining factor for a member may be the ease and innovation of the preferred medical scheme's technological platform, and this could result in a significant competitive advantage.

Q: How have technological advancements over the last five years impacted on the ability of medical schemes to deliver a faster and better service to members?

During the last five years, PwC has noted that medical schemes and administrators are streamlining their processes to ensure that claims are processed and paid quicker and cheaper, member queries resolved timeously and non-healthcare costs limited. The industry has moved away from using paper claims, and the majority of claims are received electronically via various methods of switching and electronic data files.

Medical schemes are therefore able to monitor and follow up on claims faster and more easily, and validation procedures are built into the claims engine to assist in the assessment process. Medical schemes also have the benefit of historical data to perform trend analyses to more accurately price options.

Respondents have largely agreed that technological advancements have significantly impacted their business processes over the last five years. Some processes impacted include:

- Easier submission of claims – members are able to scan and submit claims through the use of mobile applications;
- The fact that the claims process is easier and faster for the members;
- Faster claims processing and monitoring of the process by members via SMS;
- Efficiency and accessibility benefits for members;
- Quicker and more complete service offerings at a fraction of the cost; and
- The fact that medical schemes are able to differentiate their strategies regarding the claims process.

Technological advancements will continue to impact medical schemes in the coming years, and one of the competitive objectives of medical schemes will be to continue to deliver a faster and better service to members.

Q: Do you foresee that over the next five years members will be able to access medical services via electronic data applications and tools (electronic diagnosis, self-diagnosis, etc.)?

Private users around the world have the option of using online services, medical diaries and websites to perform self-diagnosis and to treat their symptoms in the comfort of their own homes. This information is easily accessible, but does contain certain pitfalls, which include:

- Potential misdiagnosis;
- Delays in obtaining urgent treatment; and
- Incorrect information provided by the source of information.

78% of respondents are of the opinion that members will be able to access medical services via electronic data applications and tools over the next five years, and see a potential for these advanced online services. Further assessment will still be required to overcome the pitfalls mentioned above.

Possible impact of telemedicine in the future

Telemedicine is a rapidly developing application of clinical medicine where medical information is transferred using a smart phone or the internet, and sometimes other networks, for the purpose of consulting or sometimes undertaking remote medical procedures or examinations. Telemedicine may be as simple as two health professionals discussing a case over the telephone, or as complex as using satellite technology and video-conferencing equipment to conduct a real-time consultation between medical specialists in two different countries.

A World Health Organisation survey on eHealth identified the following opportunities for developing countries:

- Increased access to healthcare;
- Providing populations in under-served countries with access to healthcare to help meet previously unmet needs and positively impact health services;
- Successfully improving the quality and accessibility of medical care by allowing distant providers to evaluate, diagnose, treat, and provide follow-up care to patients in less-economically-developed countries;
- Providing efficient means for accessing tertiary care advice in under-served areas;
- Increasing accessibility of telemedicine to enable patients to seek treatment earlier and adhere better to their prescribed treatments; and
- Improving the quality of life for patients with chronic conditions.

67% of respondents do not think that a national eHealth record for the private sector will be a reality within the next 10 years in South Africa. Only 22% of respondents indicated that they currently have eHealth records for their own members, and even these are not yet fully integrated.

The concept of telemedicine within South Africa is still relatively new. In implementing telemedicine as a regular consultation platform for members, there are various obstacles in the way:

- Laws and a set code of rules and ethics;
- Services and payments to professionals; and
- Accessibility and costs of data.

The majority of respondents were indifferent about the use of telemedicine as an offering to members in the next two to five years. Of them, 89% indicated that they would support telemedicine. It was noted from several respondents that the use of telemedicine would only be successful if used in the correct setting, where access and quality of care are two of the current limiting factors for a community.

Improvements in data warehousing

One of the core processes in a medical scheme with regard to data retention, trend analysis and risk management is the ability to have an effective data-warehousing platform in place. With developments in technology it is conceivable that the data-warehousing platforms should be improving in line with the latest available software, faster and broader wireless connectivity and new initiatives such as cloud technology. The question of data ownership and confidentiality is, however, a major challenge and only 67% of respondents felt that their data warehousing was improving at the same rate at which we are seeing technological advances.

There are, of course, also regulatory challenges when trying to develop data warehousing for the foreseeable future, especially with the looming implementation of the Protection of Personal Information (PoPI) Act.

The PoPI Act was signed into law by the president on 26 November 2013. The commencement date and appointment of an Information Regulator to oversee its application are expected to happen towards the end of 2014. From the commencement date, both public- and private-sector organisations will have 12 months to become compliant with the PoPI Act. The Deputy Minister of Justice has indicated that extensions are not likely to be given.

The requirements of PoPI will have to be considered by medical schemes in developing their data-warehousing software and accessibility moving forward.

PoPI establishes principles regarding the collection, use, sharing, retention, security, breach, and quality of, and notification with regard to, personal information, and requires that medical schemes:

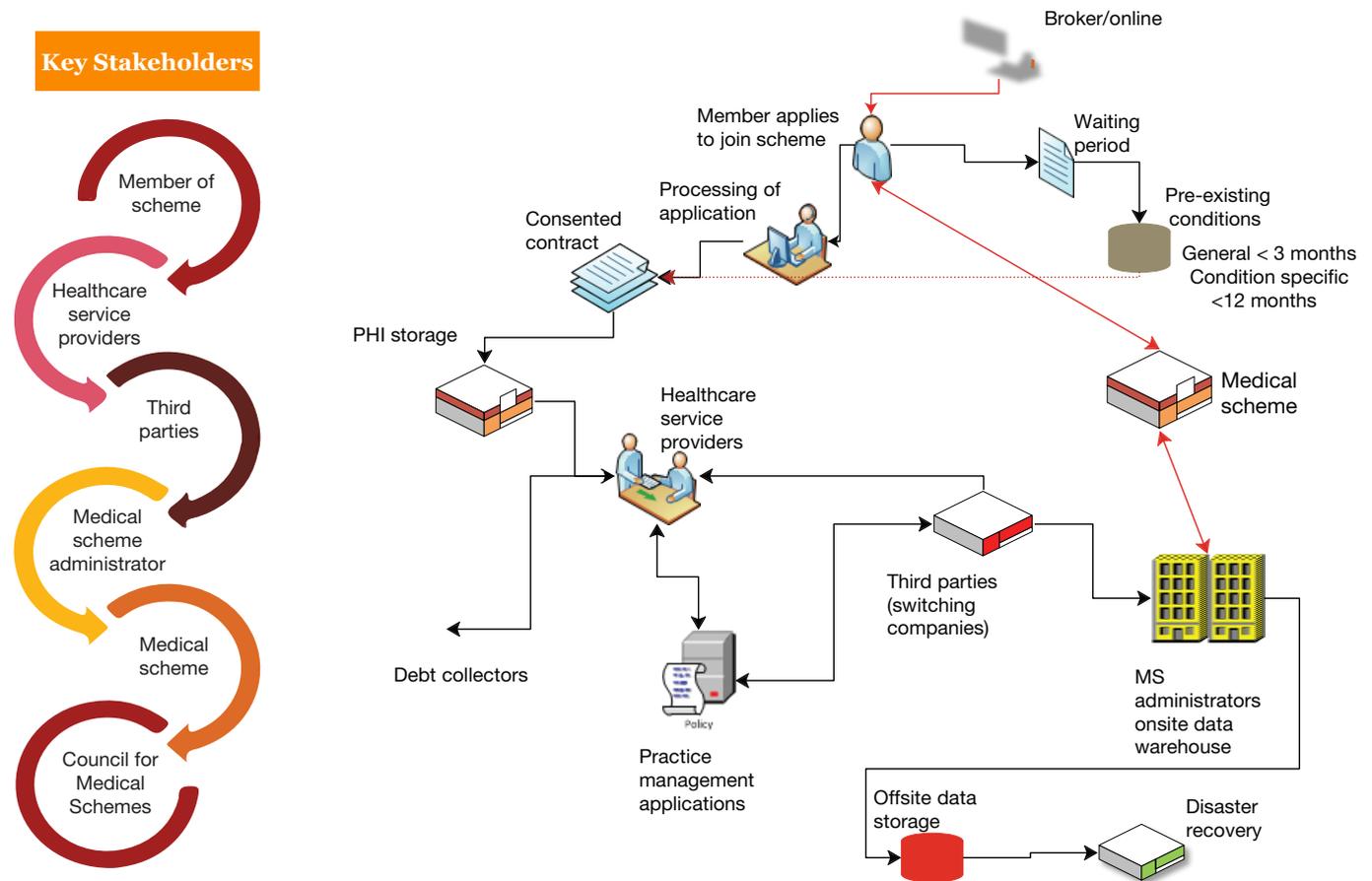
- Know or determine what personal information they have and/or collect in hard copy and electronically;
- Use personal information for a specific purpose only — and then only the minimum amount of information that is necessary for such a purpose. Once the purpose is served, the information must be securely deleted or destroyed, unless there is a legal or business reason to keep it;
- Secure personal information during the whole information life cycle and notify security compromises to the information regulator (and any employees, customers or suppliers involved, if their identities are known);
- Have written contracts with all their service providers, which must cater for privacy and security of personal information;
- Have procedures in place to cater for employees, customers and suppliers who require access to, or correction or deletion of their personal information;
- Not send personal information outside South Africa unless certain conditions are met; and
- Only market to existing and potential customers within the boundaries of the PoPI Act.

“Personal Information” is defined in the PoPI Act, and covers a very wide spectrum of data (including photographs, biometrics and opinions of other people) from which an individual or entity can be identified.

Special Personal Information (e.g. information relating to health, race, gender, children, political affiliation, trade union membership etc.) attracts stricter requirements pertaining to collection, use and sharing.

The following pictorial diagram illustrates the key stakeholders in, and the impact on, medical schemes specifically.

Figure 9: Data map – Personal health information



Source: PwC PoPI presentation

The Information Regulator will have the power to impose hefty fines on organisations that do not comply with PoPI. It is therefore important that medical schemes become familiar with PoPI and its requirements, and assess the impact it has (or may have) on their processes.

Improvement of risk management with the availability of more accurate data

The availability of accurate data within the medical scheme environment has various benefits:

- Analysis of claim patterns is a useful tool when developing business strategies and option pricing;
- Disease-specific disaggregation;
- Effective product pricing; and
- An accurate source of information to develop effective preventative care.

Medical schemes can no longer rely on a curative approach to treating patients. The continuous evaluation, monitoring and re-evaluation of an integrated continuum of care, which is focused on prevention, lifestyle change and self-assessment, is required. Medical schemes need to reduce the drain on their reserves and stem the spiralling costs associated with treating the growing number of people who are chronically ill.

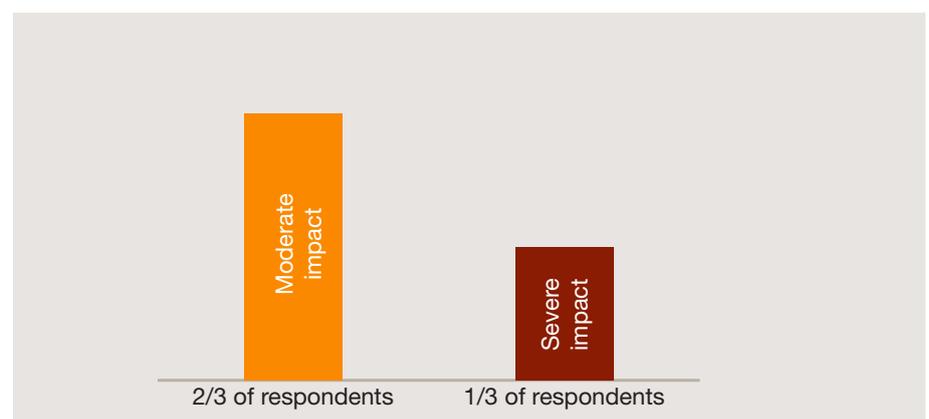
PwC research found that productivity losses associated with workers who have chronic disease are as much as 400% — more than the cost of treating the chronic diseases themselves. Chronic disease is responsible for more than half of all deaths in the world today, and is projected to account for two-thirds of all deaths globally in the next 25 years.

Many employers and medical schemes are investigating ways to control escalating costs. For an employer, a reduction in unproductive days has a direct impact on its financial position,

while the medical scheme wants to minimise annual contribution increases. It is commonplace for the efforts of these two stakeholders to be conducted in isolation, resulting in a duplication of efforts.

We believe that in order to achieve positive results, stakeholders need to understand the health risk of their employees, the drivers of these risks, and strategies to mitigate them. In addition, new techniques can be adopted whereby this data can be used to help in preventative care — one of these being genome mapping, whereby the members' genome mapping can be used to predict and manage hereditary diseases.

Figure 10: Impact that genome mapping will have in preventative care in the next 10 years according to the respondents



Source: PwC analysis

The majority of respondents feel that they have been able to improve risk management with the availability of more accurate data. Some of the improvements noted within the medical schemes are:

- Actual claims and fraud forecasting; and
- The fact that health categorisation has improved.

Care in the future will be customised to the individual, as performance metrics, payment, outcomes, incentives, services and treatments address differences in the needs and preferences of individuals.





Environment

Medical schemes and the environment

Today, more than ever, it is becoming necessary to communicate effectively on environmental matters and to provide reliable and forthright answers on environmental issues. Environmental concerns are no longer just the responsibility of healthcare providers; there is an increasing demand for environmental accountability by medical schemes and administrators and their members.

The traditional function of medical schemes is being challenged. Their role in ensuring that the healthcare providers with whom they interact have sound disaster-recovery plans and environmentally friendly initiatives is becoming more prevalent in the industry. The healthcare sector is facing tighter and stricter regulation with regard to pollution and the disposal of medical waste, and medical schemes can play a vital role in ensuring that their providers comply with these regulations.

Stricter regulations are setting new standards for the healthcare industry to adhere to in terms of being environmentally conscious. But more than that, the effects of climate change in themselves are starting to pose a threat to medical schemes' reserves, as lifestyle diseases increasingly become the new pandemics faced by healthcare providers. Growing urbanisation is leading to a growing economy and better healthcare services; however,

this also breeds a new regime of 'silent pandemics' in the form of a catalogue of lifestyle-related diseases.

Medical schemes have traditionally factored into their reserves considerations of natural disasters and pandemics, but the looming threat of higher claims due to climate change and its effect on claims patterns have become a driver of change in these reserves. It has become imperative for medical schemes to perform more rigorous stress tests to determine the adequacy of their reserves, given the changes in claims patterns. The industry is shying away from the statutory solvency requirement of 25%, and gravitating towards a more 'risk-based capital' approach. Medical schemes are recognising the need to perform stress testing and thereby ensure that the reserves they hold are adequate to address the risk of an epidemic outbreak.

In the context of the economic climate and the effect it has on healthcare expenditure, we considered the following drivers of change:

- Increased healthcare expenditure due to urbanisation and changes in the economic climate;
- An increased pandemic of lifestyle-related diseases; and
- The change in considerations regarding medical scheme solvency.

...the effects of climate change in themselves are starting to pose a threat to medical schemes' reserves, as lifestyle diseases increasingly become the new pandemics faced by healthcare providers.

Increased healthcare expenditure due to urbanisation changes in the economic climate

Q: Have you noted any changes in the claim expense seasonality due to climate changes?

Changes in temperature may bring some marginal improvements to health, such as the contraction of malarial zones in parts of Africa and fewer cold-weather deaths in regions such as the United Kingdom. However, the overall impact of climate change on health will be negative. In fact, climate change has been cited by some as the biggest global health threat of the 21st century, jeopardising the lives and wellbeing of billions of people. Extreme weather and heat waves will have a direct impact on morbidity and mortality. Meanwhile, an indirect effect of climate change on health will be the growing difficulty for many regions to access sufficient food, clean water and sanitation. Issues such as climate-induced migration will further add to the health burden and complexities of understanding social demographics.

increased in all three tiers of government. A national climate change and health adaptation policy has been finalised. At least two provinces, the Western Cape and KwaZulu-Natal, have climate change strategy documents, and the City of Cape Town and eThekweni municipalities have specific climate change and health adaptation policies.

As the Southern African region becomes hotter and drier, climate-sensitive aspects of the burden of disease are being identified. The analysis of disease trends and the linkage of climate scenarios to future health impacts allow predictions according to which health systems responses can be planned. The climate readiness of health and related facilities and emergency responses is starting to be audited by government.

...endorse initiatives aimed at reducing global greenhouse-gas emissions.

In the past 20 years, South Africa has experienced growth in populations around developing cities and towns, especially metropolitan areas such as Johannesburg, Cape Town and Durban. Although the increase in urbanisation has resulted in better provision of healthcare services, it has also contributed towards an increase in pollution and medical waste which impact the climate and adversely impact the health conditions of those same people.

But just as climate change is changing the landscape of healthcare expenditure, there has been more development of policies to combat the scourge of this expenditure. In South Africa in particular, since the Conference of the Parties (COP17) meeting in Durban in 2011, climate-change policy developments have

At the 2011 Global Climate and Health Summit organised by Health Care Without Harm, a global call was made on all stakeholders in the healthcare sector to endorse initiatives aimed at reducing global greenhouse-gas emissions and increasing the focus on the carbon footprint of healthcare. The Sustainable Development Unit of the United Kingdom's National Health System (NHS) has developed valuable guidance materials relevant for South Africa for reducing carbon emissions arising from healthcare. 'Greening' the health sector is an increasingly articulated goal worldwide, and Health Care Without Harm has set up a global 'green' hospital network with a detailed global agenda for action that is pertinent to the South African health sector.

Q: What are the responsibilities of medical schemes and their related service providers?

...medical schemes should play a more active role in holding their providers accountable in terms of ensuring that they introduce more environmentally friendly initiatives in their operations.

According to PwC's research, climate change has impacted healthcare expenditure over the past few years, and medical schemes are beginning to experience an erosion of reserves due to this increased expenditure.

Given the impact of climate change on healthcare expenditure, 30% of respondents said they considered the active participation of their healthcare providers in environmentally friendly or 'going green' initiatives. Half said that although they are considering such initiatives, they have not been formally included in service level agreements. Medical schemes are starting to show awareness of the importance of conservation and reduced contribution to pollution; more and more committees are opting to use electronic devices to share information instead of printing paper documents; and internal policies are being drafted to encourage employees to be more conservative in the work

space to save electricity and consider the environment before printing. In our view, medical schemes should play a more active role in holding their providers accountable in terms of ensuring that they introduce more environmentally friendly initiatives in their operations, that they use less toxic chemicals, and that they dispose of medical waste in a manner that has minimal impact on the environment.

The responsibility for alleviating pollution and decreasing the carbon footprint lies not only with providers; medical schemes have the influence to ensure that they hold their providers accountable.

An increased pandemic of lifestyle-related diseases

Q: Have you considered an epidemiological risk analysis, i.e. have you considered the implications a pandemic would have for a medical scheme?

A study was carried out in September 2013 by the National Institution of Health in the USA to estimate the associations between tobacco use, excessive alcohol consumption and obesity, and healthcare expenditure and chronic diseases. South Africans were included in this study.

The study was performed in the form of a cross-sectional analysis of this health survey and medical claims data for 70 000 South Africans. The data used related back to 2010.

Table 1: Impact on annual medical expenditure

Smoker/Non-smoker	Obesity level	Average annual medical expenditure
Smoker (40–50-year-olds)	Moderate	R 2 300
Non-smoker (40–50-year-olds)	Moderate	R 2 072
Non-smoker (40–50-year-olds)	Severe	R 4 400
Smoker (54–69-year-olds)	Not obese	R 6 200
Non-smoker (54–69-year-olds)	Not obese	R 5 167
Smoker (54–69-year-olds)	Moderate	R 6 600
Smoker (54–69-year-olds)	Severe	R15 800

Source: Study carried out in September 2013 by the National Institution of Health in the USA

90% of respondents indicated that regular epidemiological risk analyses are performed to determine the impact on the medical scheme's reserves, should a pandemic break out. In their risk analyses, medical schemes rank disease breakouts arising from catastrophic events such as natural disasters and pandemics as high-risk factors. Less emphasis is given to trending lifestyle diseases such as obesity- and tobacco-related illnesses.

Advancements in medical research have resulted in breakthroughs with regard to managing diseases such as HIV/Aids and cancer. Risks associated with expenditure on these diseases have been factored into the medical schemes' risk analyses. But the increases in urbanisation and climate change have bred different pandemics, affecting communities which are not necessarily areas of focus for medical schemes. Today's society is faced with lifestyle-related illnesses such as obesity and occupational-health-related illnesses and injuries.

...increases in urbanisation and climate change have bred different pandemics.

Medical schemes need to re-engineer their risk analyses to incorporate the rise in the 'silent pandemics' relating to these lifestyle diseases. It is the responsibility of the medical schemes to educate their members on increased risk relating to lifestyle choices, and to factor in the impact of these on their reserves.

Q: Is your disaster recovery plan sound and does it incorporate your providers' disaster recovery plans?

The primary function of a disaster recovery plan (DRP) is to rebuild the information technology (IT) and operational infrastructure in the event of a natural or man-made disaster. Most medical schemes have solid DRPs in place, which factor in the risk of a catastrophic event or a pandemic breakout occurring. Yet climate change and an increase in natural disasters call for a greater focus to be given to the need for rigorous DRPs in the healthcare industry.

non-existent, or which fail to provide a comprehensive solution that allows them to resume business processes and recover data in the event of a disaster.

Medical schemes are tasked with ensuring that they have adequate and up-to-date DRPs which are aligned to their providers' DRPs, and that these are tailored to operate under current environmental conditions.

30% of respondents consider environmentally friendly or 'green' initiatives in their considerations when they choose service providers. These considerations should be extended to the DRPs. Medical schemes should incorporate green initiatives in their DRP sites, consider building sites from recycled material, and consider whether their DRP includes the impact on the environment.

...consider whether DRPs include the impact on the environment.

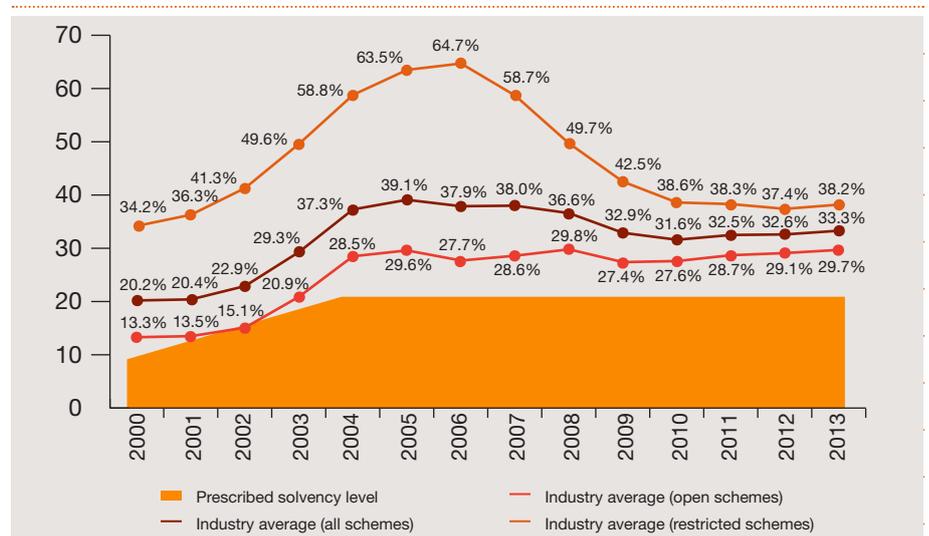
Disaster recovery has long been the 'last line' item for healthcare IT budgets from a medical scheme and administrator perspective. Budget constraints have made it difficult to invest in redundant data centres with little return on investment or direct impact on patient care. Many healthcare providers with DRPs have plans that are either outdated or

The change in considerations regarding medical scheme solvency

Q: Are your reserves adequate and have you considered stress testing?

Medical schemes are required to maintain a statutory solvency level of 25%. Most smaller medical schemes have a solvency level well above the statutory requirement, while larger medical schemes hover just below the threshold.

Figure 11: Industry solvency for all schemes, 2000-2013



Source: Council for Medical Schemes Annual report 2013/2014

But as the world evolves and new or different factors impact on the provision and costs of healthcare, solvency requirements are coming under scrutiny in terms of appropriateness of the calculation. Internationally, solvency requirements are principle-based rather than rule-based, as they are locally.

In recent years, the Financial Services Board (FSB) has been exploring a more risk-based capital (RBC) approach for insurers, which takes into account factors such as demographic changes, claims volatility, business risk, insurance risk and investment risks. Recent studies have indicated that if a more risk-based approach was followed for medical schemes, there would be lower solvency requirements for traditionally larger medical schemes (between 12.5% and 15%); requirements for medium-sized medical schemes would be in line with the current 25%; and some smaller medical schemes could require more than 25%.

The rise in claims patterns over the last few years has indicated a greater need for the consideration of a risk-based approach to determining solvency requirements. Increases in healthcare expenditure due to the impacts of environmental factors have increased members' claims to medical schemes, and perhaps also raise a pertinent issue that the current solvency requirements may not be adequate to combat the changes in claims patterns.

75% of respondents have not considered changes in claims seasonality due to climate changes. Although the claims patterns are gradually changing, it is evident that little consideration has been given to the long-term impacts of these on medical scheme reserves.

In our view, the impact of climate change on claims seasonality should be further assessed, and case scenario stress testing should be performed to assess the impact thereof on medical scheme reserves.

Stress testing and scenario analysis are common methods used in the insurance and banking industries to understand the adequacy of an entity's capital in stressed conditions. Stress testing can also provide an understanding of the main risk drivers, and show how vulnerable an entity's solvency and performance are to movements in these risk drivers. It underpins good risk management and supports definition of the risk profile, exposures and risk appetite, and can inform mitigation strategies and recovery planning.

Stress testing will allow a medical scheme to determine the levels of capital required to reduce the chance of insolvency to an acceptable level under different scenarios, for example those of a pandemic or market crash.

At a minimum, stress scenarios should consider the following:

- Economy and the market;
- Claims variability;
- Non-healthcare expenses;
- Liquidity risk;
- Credit risk; and
- Operational risks.

The need for a risk-based capital regime has been debated by the medical scheme industry, but there is no clear indication that this will be implemented in the near future. Nevertheless, medical schemes should still perform investigations which can provide the trustees and members with reassurance that the reserves the medical scheme holds is sufficient.

Climate change has brought a new element to the role of medical schemes in the healthcare industry. The increase in pollution and waste has necessitated that medical schemes be more proactive in ensuring that their providers adopt policies to implement adequate waste management systems and decrease their carbon footprint. The urbanisation of society has led to better healthcare in communities, but has also had an adverse effect in that it has contributed to poor health conditions in our society, and has bred costly silent pandemics in the form of lifestyle diseases.

A revision needs to be performed of the current solvency requirements to determine whether they factor in the impact of environmental changes on current and future claims patterns. It is imperative that medical schemes understand and adopt stress-testing strategies to better manage their risk relating to claims in the event of a catastrophic event. Consideration should be given to whether a more risk-based approach would be better able to ensure that medical schemes have adequate reserves to 'weather the storm', should they one day need to.

Sources:

- *South African Health review 2012/13.*
- *Climate change and health: Framing the issue. GSK, Accenture and the Smith School of Enterprise and the Environment study.*
- *PwC Luxembourg: Life-cycle analysis: Environmental Impact Assessment.*
- *BHF Global – Medical Scheme Solvency Requirements (Christoff Raath).*

The need for a risk-based capital regime has been debated by the medical scheme industry, but there is no clear indication that this will be implemented in the near future.



Economic

A news article in *Times Live* of 7 March 2014, attributed to BankservAfrica's Regulated Products CEO, Brad Gillis, proclaimed that 'the increase in disposable income will once again be slower than inflation for the rest of the year. This simply means higher prices, with less money to pay the bills – most certainly unwelcome news, especially for the 70% of the workforce who take home less than R12 000 per month'. In addition to this, the World Bank cut South Africa's economic growth forecast for the remainder of 2014 from 2.3 to 2%. All these factors influence consumers already under financial pressure, and encourage medical scheme members to review their benefit selection, based primarily on premium payments and anticipated increases.

This PwC research was aimed at understanding the challenges that principal officers and trustees are facing to ensure that benefit cover is appropriate and compliant with the regulations, and that annual premium increases are kept within an acceptable range. 90% of respondents stated that they anticipate that their year-on-year premium increases for the next three years will be CPI plus 2–3%. We asked them what the main factors are which keep ensuring that medical scheme premiums are higher than CPI.

The response was as follows:

- Increases in medical innovation and technological advancements;
- Increased demand for coverage and services;
- Increased demand arising from increased supply of healthcare services;
- Changes in the risk profiles of medical scheme members;
- Fraudulent claims resulting in excessive cost to the system; and
- Changes in risk profiles, which in turn are driven in large part by anti-selection.

80% of respondents identified the following factors as the biggest threats to their medical scheme's strategy over the next three to five years:

- Unpredictable cost increases and escalations;
- Membership movements, an ageing risk profile and sicker members who impact negatively on the medical scheme;
- Deteriorating benefit option loss ratios;
- Potential negative impact of proposed new tariff-bargaining process; and
- The fact that product and price are not related.

An ageing population, linked with unpredictable cost increases, was found to be the biggest threat to medical schemes' growth strategies for the next five years.

These risk factors highlight the impact that economic and financial factors are having on the industry, and the concerns they raise with the trustees of medical schemes. Almost 85% of respondents indicated that their biggest competitive threat in the industry would be a new product offering which was able to demonstrate better value for money to members through a creative and non-traditional benefit design targeted at young and healthy individuals. Our research highlighted the following four main areas in the economic landscape which we consider will be drivers of change in the next few years:

- The risk of ageing members, buy-downs and spiralling costs;
- Capitation options and non-healthcare expenses on managed-care initiatives;
- The restrictions and complexities involved in attracting younger, healthier members; and
- Healthcare costs.

The risk of ageing members, buy-downs and spiralling costs

The principles of social solidarity and mutual benefit require a benefit pool that allows for the young and healthy to subsidise the elderly and less healthy. The increasing trend of medical scheme members living longer and draining the resources of a medical scheme is one of the main concerns raised by the respondents. Our research reflected the degree of concern in the industry: more than 90% of respondents stated that their medical scheme was actively focused on targeting younger members to try and mitigate the risk posed by the ageing chronic population. Most of these respondents also mentioned

that the medical scheme was not only targeting younger members, but also designing benefit options and other loyalty programmes with their administrators which are specifically targeted at younger members.

Whilst almost all medical schemes are targeting younger members, the risk associated with this is the increased buy-down trend related to the pressure on household expenditure faced by many young members. Almost 50% of respondents stated that they have seen buy-downs increasing over the past year or two. This buy-down risk is a key concern for the industry, and the risk to the solvency ratios and membership base of medical schemes could be significant. Several respondents mentioned that the primary strategy of their medical scheme is focused on retaining young members on their current benefit options, and encouraging new ones to join the medical scheme. The root cause that has forced the industry to focus on this approach is the spiralling healthcare costs, specifically for chronic conditions and PMBs.

Almost all the respondents stated that the increasing costs related to chronic conditions prevailing in the industry was one of their three biggest concerns. While several interventions and medicine-management techniques and tools have been implemented successfully, the uncertainty in terms of the reimbursement of PMBs and the ever-increasing incidence of new 'chronic' members are driving the costs.

In 2012, PwC's *Strategic and Emerging Issues in the Medical Scheme Industry Survey* indicated that 90% of respondents in the industry felt that implementing effective wellness programmes would mitigate the risk and increasing trend of spiralling healthcare costs.

Despite this, the uptake of integrated wellness programmes as a tool to ensure that costs are contained remains scattered throughout the industry, with varying degrees of success. Almost all respondents indicated that a screening benefit as part of a wellness initiative had been implemented; however, an analysis of the results and proactive engagement with members to ensure an integrated wellness approach were not being enforced in the majority of medical schemes interviewed.

Capitation options and non-healthcare expenses on managed-care initiatives

Capitation is traditionally where providers focus on healthcare from a departure point of preventative rather than curative, as there is greater financial reward in the prevention of illness than in treatment of the ill. Medical schemes aim to divert providers from the use of expensive, newly developed treatment options that may be less effective or have only a marginally higher success rate than alternatives. In South Africa, the use of capitated and risk-sharing agreements has been popular in recent years, specifically since the advent of PMBs in 2004. Although the use of designated service providers (DSP) with clear capitation and risk-sharing agreements has its merits, the monitoring of quality of care, accessibility and appropriate treatment was raised as a concern by 60% of respondents.

This concern stems from the fact that data analytics and detailed scrutiny of quality of care are both complex and resource-intensive. Almost all medical schemes have embarked on programmes to monitor and evaluate the performance of capitated service providers. In discussions with the medical schemes, several administrators have indicated that they have investigated pay-for-performance initiatives, but agreement among service providers in terms of the methodology and evaluation criteria to be used is one of the biggest hurdles to implementing such measures.

80% of respondents indicated that they felt that capitated agreements in the private sector would not see a huge increase over the next five years. Respondents all said the main reason they were not convinced about the increase in capitated agreements was, firstly, the effort required to monitor and measure the outcomes, and secondly obtaining consensus among service providers on a fair risk-sharing model that everyone might use successfully.

Directly linked to the use of capitation models is the monitoring and measurement of the efforts, outcomes and effects that managed-care interventions have on the chronic membership base of medical schemes. We asked respondents how often their schemes performed a cost analysis of the managed care. This was done to determine if the medical schemes analyse the managed-care spend in light of the return on investment obtained through reduced hospitalisation, chronic condition prevention and early screening of risk factors.

60% of respondents identified measurement of quality outcomes, accessibility and appropriateness of care as a serious concern.

Only half of respondents believed that merging with another medical scheme was a viable option to improve solvency and reduce the average age of the members.

The respondents' answers to this question varied dramatically. Some of the respondents mentioned that they actively monitor and measure the activity of the managed-care programme on a weekly basis, whilst many said that a thorough analysis was only done once a year, at the point of price negotiations. With the increase of chronic patients and the average age of these patients becoming lower, it is imperative that medical schemes begin to actively measure and monitor the outcomes of the managed-care programmes being purchased from managed-care organisations (MCOs) and DSPs. The process of measuring and evaluating the quality of care and the reduced expenditure as a result of managed-care interventions is complex, and there are varying opinions in terms of the methodology.

The respondents all agreed that this would be a huge driver of change in the next five years, as the spiralling costs of care are driving higher premiums and increased buy-downs. The difficulty in rolling this out as a medical scheme is that it is resource-intensive. Some sort of collaboration between the medical schemes and the administrators will have to happen; however, clear guidelines and agreement on how to measure the benefits and return on investment (ROI) of managed-care programmes should be agreed upon and clarified by all relevant stakeholders, under the guidance of the CMS.

The restrictions and complexities involved in attracting younger, healthier members

The main focus of all respondents interviewed was to ensure that younger members were brought into the medical scheme. The respondents differed in terms of the best approach to use in order to achieve this.

Only 50% of the respondents said they believe merging with another medical scheme is the best way to approach the issue. One major concern raised was that the medical schemes with the largest ageing and chronically ill population seemed to be the ones who were the most aggressive in terms of seeking to merge. We posed the question in terms of what the most impactful growth strategy would be for the medical scheme; 90% of respondents believed that organic growth within the medical scheme, and targeted and focused marketing campaigns aimed at certain cross-sections of the general population would be the best approach to ensuring a younger, healthier membership base.

Whilst discussing the challenges faced by medical schemes to grow a younger and healthier membership base, a common concern among all respondents was the fact that they believed the task was not made easier by the complex regulatory environment, as well as the limited ability of the medical schemes to implement loyalty and rewards programmes. All respondents mentioned that the ideal target market (young and healthy members) was attracted to medical schemes based on loyalty, rewards and incentives, and had very little

knowledge or understanding of benefit design and exclusions. 80% of respondents had implemented, or were planning to implement, a loyalty or rewards programme through an outsourced third party. Often this was done through the administrator and other independent service providers.

Our research also revealed a lack of synergy and integration between loyalty programmes and wellness initiatives. Although all respondents agreed that loyalty and rewards programmes should be integrated and aligned with the wellness initiatives of medical schemes, most said that the practical complexities and focused attention required to make this happen had not yet been put in place. Respondents felt unanimously that this would be a driver of change in the next three to five years. The medical schemes which are able to integrate and link rewards with desired behaviour and health outcomes will be able to attract and retain a desired membership base, while ensuring on-going cost containment and positive health outcomes through effective measurement tools.

Healthcare costs

The medical scheme industry is constantly faced with the challenge of inadequate resources. Consolidation within the industry seeks to address this through the creation of economies of scale.

PwC's *Strategic and Emerging Issues in the Medical Scheme Industry Survey* of June 2012 revealed that the most pressing issue facing medical schemes remained healthcare costs. This links to the challenge of expensive treatment regimes with minimally improved outcomes.



Looking at the South African healthcare services sector as a whole shows that it comprises a public and private sector. The public sector is generally not well designed and managed, with the result that health outcomes are poor. The private sector services its customers well, but at prices which essentially mean that only a minority of the population can afford adequate coverage. The private sector must address the price escalation that threatens the long-term viability of the sector, and limits access to private healthcare.

The Competitions Commission of South Africa has embarked upon a first of its kind market inquiry into the private healthcare sector in South Africa. This was due to amendments to the Competitions Act coming into effect on the 1 April 2013 whereby an industry in its entirety can be investigated. The inquiry is focused on determining whether the private healthcare sector is functioning optimally or not. This would include, but not restricted to, investigating the likely causes of price increases and expenditure that is considerably higher than inflation. The inquiry will make recommendations on appropriate policy and regulatory mechanisms to support accessible, affordable and quality private healthcare. Investigations and recommendations into the price setting mechanisms, the setting of inflation increases and possible anti-competitive behaviour will be included. The industry will no doubt be in the spotlight due to this and the impact in terms of how a medical scheme, private hospital or even a private physician conducts business will be up for scrutiny. The long term

implications of the recommendations made by the inquiry will have impacts across the 5 areas highlighted in our landscape analysis. From a financial and a socio-political perspective the impact would seem to be the highest due to the possible adjustments to price regulations and the governance of healthcare organisations. Creative and transparent working relationships, price adjustments and collaborations need to be of such a nature that the benefit is seen by the ultimate consumer as a quality service with an appropriate and fair price attached.

Specific initiatives for more efficient delivery and payment models and management practices are needed. Industry players need scale to drive these initiatives. Moving away from fee-for-service payment models, whereby hospitals and physicians are paid based primarily on the amount and type of care they provide, while making for more flexibility, can lead to over-servicing.

On the other hand, moving towards new delivery and reimbursement systems which favour quality over quantity and encourage providers to deliver more cost-effective care through financial incentives such as a managed-care model, for example, will help to contain cost increases. Managed-care plans integrate provider and insurer functions using a capitation or per diem basis. The insurer negotiates prices with healthcare providers in the network, and has varying degrees of control over the usage of services.

New models of care are being designed, as governments acknowledge the importance of preventative methods over curative action. In addition, outcomes-based financial incentives for providers will help improve the quality over quantity of services provided. The use of deductibles, co-insurance and co-payments will promote cost-conscious use of medical services, which will also help to contain costs.

An ageing population with increased buy-downs and spiralling healthcare costs is a concern for the industry, and will seriously impact its size, sustainability and growth. It is encouraging to note that all the principal officers interviewed had recognised this, and had started in one way or another to implement a strategy to address these issues and ensure that their medical scheme's solvency and membership do not shrink.

The drivers of change identified are not new to the industry on a global level; these concerns are common in the American healthcare market, where managed-care organisations have long been seen as the tool for reducing healthcare costs. In South Africa we must ensure that we do not repeat the errors made in other countries where a fragmented approach to solving the problems at hand was taken. A concerted effort is required by all stakeholders to use integrated quality of care, rewards and desired healthcare behaviour as a tool to attract younger members, as well as guarantee the on-going sustainability of the medical schemes.



Socio-political

... reform is needed around both primary and preventative healthcare and within public- and private-sector healthcare providers.

An important broad principle concerning healthcare is contained in the Constitution of South Africa. *Section 27(1)* states that ‘everyone has the right to have access to healthcare services, including reproductive health care’; *Section 27(3)* says that no one may be refused emergency medical treatment; and *Section 28(1)* states that ‘every child has the right to ... basic healthcare services’. The right to have access incorporates both logistical access as well as affordability.

According to a National Health Insurance (NHI) Green Paper, South Africa spends 8.3% of its gross domestic product (GDP) on healthcare services – 4.2% of which is spent in the public sector and 4.1% in the private sector. The World Health Organisation (WHO) recommends that countries spend at least 5% of their GDP on health, and average expenditure for middle-income countries is 5.8%. Despite South Africa’s relatively high expenditure, our health outcomes compare poorly with those of countries with a similar national income and healthcare expenditure. The government’s objective is for the country’s healthcare expenditure to fall from 8.3% of GDP to 6.2%. According to the Centre for Development and Enterprise (‘CDE’) Research no. 18 published November 2011.

To achieve this, reform is needed around both primary and preventative healthcare and within public- and private-sector healthcare providers. The generally poor quality of public healthcare services in South Africa is well documented.

In the context of this environment, PwC considered three drivers of change:

- The use of public-private partnerships (PPPs) the introduction of NHI and mandatory minimum benefits (MMBs);
- Consolidation in the medical schemes industry; and
- The role of the CMS.

Use of PPPs and the introduction of NHI and MMBs

South Africa has the biggest and most advanced private healthcare insurance sector in sub-Saharan Africa. However, the Department of Health (DoH) is still defining and developing an ambitious NHI system to combat unequal access to healthcare among socio-economic groups. Capacity needs to be created where there is none, and upgraded where it is needed to provide better quality services.

PPPs in which private-sector players contract with government entities, typically to share resources and invest in infrastructure to provide services, are widely recognised across both the developed and developing worlds as key instruments in making rational and efficient use of scarce resources and in spreading financial and operating risk. Our research respondents were in favour of exploring PPPs with one of the BRIC countries to provide healthcare infrastructures in South Africa.

Looking at who will provide the partnerships, South Africa is currently ranked third among the high-tuberculosis-burden countries, outranked only by India and China. Another issue common to these countries is increasing access to healthcare in rural areas. As China and India are dealing with similar healthcare issues to South Africa and have come up with some innovative ways to address these, PPPs with these countries would allow South Africa to leverage off this experience.

In August 2013, a ministerial forum on Sino-African health development was held in Beijing. Ministers signed the Beijing Declaration of the Ministerial Forum on China-Africa Health Development, which sets out a vision for a continued partnership in addressing a number of pressing health issues affecting South Africa and other African countries disproportionately. This will add renewed impetus to the PPPs with China.

PPPs should be explored further — particularly in facilitating the NHI roll-out. Care needs to be exercised in ensuring that the design of the solution and the funding thereof are appropriate to balance the interests of all stakeholders.

The NHI Green Paper launched in August 2011 is essentially a financing mechanism for public healthcare services. As a first step, improvement of the public health sector is a necessary condition for the success of the NHI. The annual performance plan also lists other key preparatory steps being taken in anticipation of the NHI roll-out.

Based on the principles of social solidarity, equity and fairness, the NHI is a vehicle which is intended to bring about much-needed change in South Africa's health system, and is expected to have a significant impact on the health of all South Africans. Key areas identified for successful implementation include:

- Management reforms;
- Hospital reimbursement reforms;
- Establishment of an office for health standards compliance;
- Undertaking of a national health facility audit;
- Quality improvement and certification; and
- The strengthening of district health authorities.

Providing universal access to quality healthcare in a highly unequal society with low rates of participation in the economy and high levels of poverty and disease is challenging. Progress towards and finally achieving universal access to quality healthcare in South Africa will require the strategic use of all existing resources, which means reform and expansion of both the private and public sectors.

All but one of the respondents were of the opinion that the NHI project would not have a significant impact on their member base in the next five years. Implicit in the Green Paper's projection is a partial shift over time





of some medical scheme coverage to NHI. The next stage, the White Paper, was expected to be launched in 2013, and is eagerly anticipated. After its launch, there will be further consultations and completion of a final NHI policy document. At this point the NHI legislative process will commence.

As NHI becomes fully functional and citizens begin to gain trust in the system and the broadening of its coverage to include the purchase of some private services, more people and employers are expected to use these facilities. Whilst this is unlikely to be significant within the next five years, it is nevertheless expected that there will be a gradual change, with members buying down on medical schemes as they increase their utilisation of healthcare services now provided within the NHI.

As the government works on the public sector to support the NHI project, in the private sector a move toward NHI is being facilitated through access to certain minimum health services. This was ensured through the introduction of PMBs, as contained in the Act, in terms of which medical schemes have to cover the cost of diagnosis, treatment and care of any emergency medical condition, a set of 270 other medical conditions, and 25 chronic conditions.

A new *Section 32J* was included in the Medical Schemes Amendment Bill published in the Government Gazette on 2 June 2008 to provide for MMBs. The change in name is proposed in order to align with the internationally used term, and the benefits will be implemented in line with international standards on these benefits. The new section also incorporates *Sections s29(o)* and *Section (p)* and Regulation 8, albeit unchanged. It provides more

flexibility to update the benefit definitions, guidelines and algorithms after a consultation process.

The proposed changes are not substantive in themselves or sweeping enough to result in an impact on medical schemes. However, the international alignment of terminology and implementation of benefits will further increase consumer awareness of their rights to payment of these basic benefits by their medical scheme. This, in turn, will contribute to further increases in benefits paid and a renewed focus on containing costs in the private sector. The eventual outcome could be for these MMBs to be provided by the public sector under NHI, while the private sector provides top-up cover. Responses from respondents were split 50:50 on whether or not the change from PMBs to MMBs would impact on their medical scheme.

Consolidation within the medical schemes industry

From 2008 to mid-2014 the number of medical schemes in the industry declined from 112 to 92.

While the number of medical schemes has reduced, membership has grown. Total beneficiaries have grown from 7.8m in 2008 to 8.8m in 2013 (open: from 4.9m to 4.8m; restricted: from 3m to 4m). Further analysis reveals that two medical schemes account for the bulk of the increase in membership, with the Government Employee Medical Scheme (GEMS) growing its beneficiaries from 0.8m to 1.8m over the period, and Discovery Health Medical Scheme growing its member base from 2.4m to 2.5m over the same period according to the CMS Annual Reports. Of the respondents, restricted schemes were

of the view that the growing number of amalgamations did not impact on their membership, whereas the open schemes mainly responded that it did.

There are a number of challenges medical schemes may face if they want to merge:

- Pensioner ratios;
- Age of membership;
- Depleted reserves;
- Incompatible benefit options; and
- Resistance from the Board of Trustees (BOT) and/or principal officer (PO).

All of these are valid in different situations. Age of membership can be a challenge where the medical scheme's membership age is higher than average, with resulting higher claims ratios. Depleted reserves would be a big challenge for any medical scheme, as the addition of new members without reserves puts strain on the solvency margin of the merged medical scheme. Incompatible benefit options present a challenge when migrating the members onto a common membership database; however, as benefit design is changed on an annual basis and there is no restriction, as such, on the number of options a medical scheme may have, this is relatively easy to resolve. BOT/PO resistance may well present a challenge, particularly where the BOT/PO has evidence that the members would be disadvantaged by the change, or where they resist as a result of self-preservation interests. Other challenges may also exist, such as regulatory hurdles, which need to be overcome in order to obtain

approval for the merger.

With healthy reserves available, any medical scheme is going to be able to overcome most challenges arising from seeking a merger with another. In general, depleted reserves are likely to be the biggest challenge for a medical scheme wanting to merge. We asked respondents what they think is the biggest challenge a medical scheme faces if it wants to amalgamate. Responses were equal in respect of age of membership and depleted reserves being the two biggest challenges faced if a medical scheme wants to amalgamate, with BOT/PO resistance a close challenger in third position.

The role of the CMS

According to the CMS website, the stated vision and mission of the regulator are as follows:

Vision

We strive to be a fair custodian of equitable access to medical schemes in order to support the improvement of universal access to healthcare.

Mission

Council regulates the medical schemes industry in a fair and transparent manner, and achieves this by:

- Protecting the public and informing them about their rights, obligations, and other matters in respect of medical schemes;
- Ensuring that complaints raised by members of the public are handled appropriately and speedily;
- Ensuring that all entities conducting the business of medical schemes, and other regulated entities, comply with the Act;
- Ensuring the improved

management and governance of medical schemes; and

- Advising the Minister of Health of appropriate regulatory and policy interventions that will assist in attaining national health policy objectives.

On the basis of the above, CMS encompasses a number of roles:

- Responsibility for protecting the interests of medical scheme members;
- Acting as a regulator of medical schemes to ensure the financial stability of the industry;
- Being the government body responsible for monitoring activities in the private healthcare sector; or
- All of the above.

We asked respondents which of these suggestions best described CMS's role in the industry, based on their experience. Responses indicate the perception in the industry is that the primary role of the CMS is 'being responsible for protecting the interests of medical scheme members' and, as such, their response to medical schemes is between neutral and obstructive.

We specifically looked at one of the activities performed by CMS in meeting its objectives, i.e. the analysis of the number of complaints against medical schemes. In the CMS Annual Report for 2013/2014, the top ten medical schemes against whom complaints were lodged are analysed and their performance and responses over the period compared with those of 2012/2013. From this information it is evident that there was generally a small up-tick in complaints against these medical schemes. We considered whether the

Consumer Protection Act (CPA) may have contributed to this trend and concluded that it is unlikely, as the Act already provides for consumer protection to a large extent, and members in any case have recourse to the CMS to resolve issues arising. This is supported by the respondents, only two of whom answered 'Yes' to the question of whether or not the CPA had a significant effect on the number of complaints received.

From a socio-political perspective there are two overriding sources of pressure on the healthcare industry. These are, firstly, the need to increase access to quality healthcare, and secondly, the need to contain healthcare costs. A number of initiatives have been put in place to produce the required outcomes in both the public and private sectors. It is evident that these sectors need to work together in order to address the needs of the national healthcare sector.

As the public sector is redefining itself in the context of the NHI roll-out, participants in the private sector also seek to redefine their business models. It is likely that for open schemes, the focus will be 'merge and grow'. Consolidation continues apace, and the number of medical schemes is expected to nearly halve by 2025 (based on the CMS's forecasting model), while open schemes will need to achieve scale in order to remain sustainable. For restricted schemes the focus is more likely 'differentiate our brand', as restricted schemes will need to become niche players with differentiated brands in order to remain sustainable.

From our research conducted, it is evident that there are a number of drivers of change that will cause medical schemes to rethink how they do business.

... the primary role of the CMS is 'being responsible for protecting the interests of medical scheme members'.



Contributors



Ilse French
Medical Schemes Leader for Africa

+27 (0) 11 797 4094
+27 (0) 83 271 1735
ilse.french@za.pwc.com



Linda Pieterse
Associate Director

+27 (12) 429 0303
+27 (0) 82 775 7191
linda.pieterse@za.pwc.com



Deborah Flannery
Associate Director

+27 (0) 21 529 2662
+27 (0) 83 293 8878
deborah.flannery@za.pwc.com



Etienne Dreyer
Associate Director

+27 (0) 11 797 4072
+27 (0) 83 357 7156
etienne.dreyer@za.pwc.com



Nkateko Ramoba
Senior Manager

+27 (0) 11 287 0720
+27 (0) 71 851 2262
nkateko.ramoba@za.pwc.com



Itumeleng Dlamini
Senior Manager

+27 (0) 11 797 4962
+27 (0) 79 553 4671
itumeleng.dlamini@za.pwc.com



Henk de Wet
Manager

+27 (0) 12 429 0964
+27 (0) 83 709 8046
henk.de.wet@za.pwc.com



Susan de Klerk
Knowledge Manager

+27 (0) 11 797 5148
+27 (0) 82 370 3409
susanna.de-klerk@za.pwc.com



Carolyn Clarke
Senior Manager

+27 (0) 12 529 2634
+27 (0) 84 580 1833
carolyn.clarke@za.pwc.com



Medical Scheme group contacts



Ilse French
Medical Schemes Leader for Africa

+27 (0) 11 797 4094
+27 (0) 83 271 1735
ilse.french@za.pwc.com



Corlia Volschenk
Medical Schemes Assurance Leader

+27 (0) 11 797 5484
+27 (0) 82 880 7050
corlia.volschenk@za.pwc.com



Mark Claassen
Actuarial Risk and Quants Leader for Africa

+27 (0) 21 529 2521
+27 (0) 83 302 2367
mark.claassen@za.pwc.com



Martin Hopkins
Taxation rewards services

+27 (0) 11 797 5535
+27 (0) 82 459 4168
martin.e.hopkins@za.pwc.com



Etienne Dreyer
Health Systems specialist

+27 (0) 11 797 4072
+27 (0) 83 357 7156
etienne.dreyer@za.pwc.com



Alexander Muller
Risk Assurance: Internal audit

+27 (0) 11 797 4548
+27 (0) 82 903 5928
alexandra.muller@za.pwc.com



Hennie Jansen van Rensburg
Risk Assurance: Systems
Process Assurance

+27 (0) 11 797 5728
+27 (0) 83 269 6525
hendrik.jansen.van.rensburg@za.pwc.com



Josette Sheria
Forensic Specialist

+27 (0) 11 797 4111
+27 (0) 82 778 0278
josette.sheria@za.pwc.com

This paper makes a number of predictions and presents PwC's vision of the future environment for the medical scheme industry. They are, of course, just that – predictions. These predictions of the future environment for the medical scheme industry address matters that are, to different degrees, uncertain and may turn out to be materially different from the views expressed in this paper. The information provided in this paper is not a substitute for legal and other professional advice. If any reader requires legal advice or other professional assistance, they should consult their own legal or other professional advisors and discuss their own specific facts and circumstances.

© 2014 PricewaterhouseCoopers ("PwC"), a South African firm, PwC is part of the PricewaterhouseCoopers International Limited ("PwCIL") network that consists of separate and independent legal entities that do not act as agents of PwCIL or any other member firm, nor is PwCIL or the separate firms responsible or liable for the acts or omissions of each other in any way. No portion of this document may be reproduced by any process without the written permission of PwC. (14-15615)

