Actuarial Society of South Africa

MARKING SCHEDULE

19 October 2021

Subject F201- Health and Care

Specialist Applications

QUESTION 1

This question tested fundamentals of health systems, particularly financing, benefit design and service provision in the context of achieving universal health coverage for South Africa. The question brought in ideas from national health insurance structures from other countries and considered them in the South African setting – the purpose of this was to test the principles rather than specific knowledge of the NHI proposals and developments in South Africa.

(i) Explain the term Universal Health Coverage (UHC) [5]

Most candidates scored well for this question giving suitable definitions or explanations. The mark allocation guided candidates to give a fairly detailed or in-depth definition of UHC, showing their understanding of the objectives and how it may apply in practice, examples were useful ways to explain.

Under UHC, all people and communities can access the health services they need…

… of sufficient quality to be effective,

… while also ensuring that the use of these services does not expose them to financial hardship.

Rather than dictating a health system's structure, UHC provides us with a set of goals…

…this recognizes that the approach to organizing a health system in one country will not necessarily work in another, even though both may be working toward the same objective.

This definition of UHC embodies three related objectives:

- Equity in access to health services - everyone who needs services should get them, not only those who can pay for them;
- The quality of health services should be good enough to improve the health of those receiving services; and
- People should be protected against financial-risk, ensuring that the cost of using services does not put people at risk of financial harm

Universal Health Care is thus not simply about the provision or financing of medical services but also depends on a number of socio-economic factors (such as the role of women and education levels) and the infrastructure (the quality of roads to get from clinics to district hospitals), telephones (to call an ambulance) and electricity (to keep certain drugs refrigerated at a clinic).

[Total 5]

(ii) Identify benefits and drawbacks of using VAT to fund healthcare expenditure. [3]

Part (ii) *was a short question asking candidates to discuss the benefits and drawbacks of using VAT to partially fund the health system. Candidates performed well in this question highlighting that VAT is collected from a broad base and increases with economic growth, while noting that VAT could be regressive and not necessarily match costs of healthcare demand.*

Benefits

The use of VAT to fund health expenditure ensures that NHI revenues automatically keep pace with economic growth (when the economy is growing)

And it keeps the relative funding level stable as a share of total government spending as it is a relatively stable form of tax revenue.

Using VAT to finance healthcare also creates an implicit cross-subsidy for basic care where people who can afford to spend more contribute more VAT. It also provides a basis for pooling risks and costs at the national level (which would be the case for any tax).

Infrastructure already exists for collecting VAT, so minimal cost / changes would be needed to divert a specific element of VAT towards healthcare spend.

Drawbacks

VAT revenue could reduce if the economy is in a recession and therefore may not keep pace with healthcare costs.

VAT revenue does not increase as coverage of the NHI expands.

The effects of increasing VAT could be regressive in that lower income households would be more negatively impacted, depending on which items attract the additional VAT and which items remain zero-rated.

Increasing VAT could also be inflationary in the short term leading to a further increases in the costs of applicable goods and services beyond normal inflationary increases.

[Total 3]

(iii) Discuss the implications of charging user fees to access healthcare [4]

The question states that user fees are regardless of income or asset levels, therefore candidates are expected to identify that means testing is not applicable in this particular scenario and are therefore expected to assess the situation where the same user fees are charged to all. The user fees are only payable by those who do not register for NHI benefits.

Candidates were expected to understand the impacts of charging user fees and how this affects access as well as demonstrate how this particular model could be regressive and result in financial hardship. Better candidates discussed the interplay with registration fees and how rational consumers may evaluate these against each other.

A user fee policy known as the "cash and carry system" or a "pay as you go" requires direct payment for health services at the point of care.

User fees can result in catastrophic health care expenditures and reduced access to health care services particularly for the poor and vulnerable households.

It goes against the principle and practice of pooling risk and financial resources to remove financial barriers for equitable access to healthcare for all citizens.

There is no or limited risk sharing when user fees are required.

User fees are to encourage people to register for the NHI programme – if there were no user fees, citizens may continue to use facilities without registering which reduces access to healthcare services.

People may weigh the cost of the registration card for NHI benefits against the user fees and not register if the user fees are lower than the registration fees (and other costs that they may have to pay).

The basis of the user fee needs to be clear and measurable at point of service otherwise it could result in additional complications and barriers to entry, for example how they relate to the services rendered.

User fees could result in those needing access to healthcare services delaying them resulting in worsening of the condition or even death.

Although the potential additional revenue collected from user fees could benefit the financing of the overall health system (or a section of it), the resulting barriers to access are likely to be a more significant issue.

Poorer people would typically be the main benefactors where user fees are removed.

Flat fees are likely to disproportionately affect the poor resulting in inequity.

[Total 4]

1(iv) Outline the merits of using diagnosis-related groups (DRG) for healthcare analysis. [7]

Generally candidates had some knowledge of what DRGs are but a limited understanding of why they would be used and how they work, thus being unable to generate sufficiently distinct and coherent points about the benefits of using DRGs in this context. This question was answered poorly.

Hospital admissions with similar clinical characteristics and similar healthcare interventions are assigned to a Diagnosis Related Group (DRG).

DRGs are typically used to group data from hospital cases into smaller, more homogenous groups.

DRGs are assigned by a "grouper" programme or algorithm(s) based on ICD-10 (International Classification of Diseases) diagnoses…

…as well as other factors which may include surgical procedures, age, gender, birth-weight and the presence of complications or comorbidities (again using ICD-10 coded data).

Each of the distinct groupings is considered to be "medically meaningful," that is, all patients in the same DRG are expected to display a set of clinical responses which will, on statistical average, result in similar use of hospital resources.

DRGs are used to measure hospital case mix. A case weight per DRG needs to be determined in order to calculate case mix…

…often these weights are calibrated for a country's specific experience, but where no data exists, estimates may be drawn from other countries' experiences.

Each DRG is linked to a fixed payment amount based on the average treatment cost of patients in the group.

Within this reimbursement mechanism the insurer pays the hospital provider for an admission type determined by the DRG, rather than the number of days of stay in hospital or the level of acuity.

This reimbursement arrangement can lead to reductions in hospital days and growth in the number of minor surgical procedures done on an outpatient basis as funders look for more cost-effective ways of funding the same clinical outcome.

Hospitals provide DRG information on their insurance claim, and the funder uses this information to decide how much the hospitals should be paid.

It therefore requires hospitals to submit invoices with correct clinical coding so that it is possible to determine whether the DRG is appropriate and these claims expenditures are eligible for reimbursement.

DRGs can be used to identify the most common conditions among the population hospitalised and can assist with resource planning and funding.

DRGs can form the basis for alternative reimbursement arrangements for hospital claims, thereby incentivising the hospital provider to render a more cost-effective service for the particular disease or condition.

The actual underlying hospital costs can be benchmarked against the DRG reimbursement to ascertain how well they are delivering against these reimbursements and where there are opportunities for improvements or requirements to engage on adjusting cost weights.

Therefore, DRGs can also serve as a useful measure in profiling hospitals or providers.

The DRG system is widely considered to promote quality of care as an active process focusing on quickly addressing the diagnosis and management of the patient with rapid mobilization of treatment and return home.

DRGs are updated annually and are calculated as a base rate, multiplied by a relative weight that adjusts the payment for the severity of the disease relative to other conditions.

Many countries distribute hospital budgets according to the underlying demand of patients in districts measured by DRGs as they are a common way of risk adjusting hospital costs.

DRGs may be grouped into Major Disease Categories (MDCs) which are mutually exclusive diagnosis areas or body systems.

Severity levels (usually 3 per DRG) can be incorporated enabling allowances for complications and comorbidities.

[Total 7]

(v) Compare and contrast fee-for-service (FFS) and capitation as reimbursement mechanisms. Comment on the advantages of using capitation for primary care benefits. [8]

Part (v) tested candidates understanding of well-known reimbursement structures namely fee for service and capitation. The question required comparison and contrast of these structures so that candidates could show they understood both and how they are similar and different. Candidates tended to score well in this straightforward question.

The second part of the question was missed by a few candidates which required an application of capitation to the primary care setting. This part of the question was not answered well even when it was tackled.

Capitation is the payment of a fixed amount per beneficiary or per member/family assigned to the particular doctor or provider in return for the rendering of a particular service, whether the beneficiary uses the service or not.

A fee for service arrangement refers to the healthcare funder paying an amount based on each of the healthcare goods and services invoiced by the healthcare provider. Generally, the more services are provided the greater the healthcare funder's reimbursement to the provider.

The fee-for-service invoice would be a function of the number and types of goods / services utilised, the cost of providing each good / service as well as a margin to cover fixed costs and provide profit.

For example, in a fee for service arrangement, the funder would be required to pay the invoice at face value for each service and item used, i.e. as submitted by the service provider.

The funder could effectively be required to reimburse the member / service provider for more claims than expected resulting in higher claims expenditure (in the absence of other risk management structures).

For a capitation arrangement, the funder may contract with a group of primary care providers to provide a range of primary care services. In terms of the contract, the funder will pay the provider a capitation fee of R100 each month in respect of a particular user, regardless of whether the user makes use of the services in that month.

Therefore the capitation arrangement effectively caps the liability for the funder, however in the case of a medical scheme, they would still be responsible for the payment of any benefits carved out of the capitation structure.

A capitation arrangement transfers the risk of providing the healthcare service to the provider. Risks transferred are:

- price risk
- intensity risk
- severity risk
- frequency risk.

The provider now takes the risk of more people making use of the service than expected.

In a primary care setting, frequency can be affected by an epidemic or a particularly cold winter. It is less common to find hospital events capitated but it is possible to predict frequencies for certain types of operations, for example, the rate of tonsillectomies among children of particular ages.

Capitation is often used where risk is taken across a large variety of services and with a large risk pool however this does not always need to be the case, for example emergency services and optometry.

The use of capitation in managed care effectively transfers rationing of care to manage insatiable demand from the scheme to the contracted healthcare practitioners.

In a fee-for-service structure rationing is done more by benefit design, benefit limits and cost sharing mechanisms such as co-payments rather than by the healthcare practitioners as they can pass on all costs directly to the funder.

Note that capitation arrangements in one area of medical benefits may impact on other benefit areas, especially if not monitored and managed correctly by the scheme. For example, a capitated primary care arrangement could, without proper management, result in a greater degree of referral to secondary and tertiary healthcare providers and hence higher major medical claims.

While a fee for service structure can encourage (or incentivise) providers to over-service, a capitation structure can encourage providers to under-service their patients or assigned population.

The insurer can view capitation amounts as fixed monetary amounts per user which assists with budgeting. Fee for service outgo can be variable and more unpredictable making it more difficult to budget, particularly in extreme circumstances such as during a pandemic.

The level of the capitation fee should be reviewed against the underlying fee for service claims data to ensure that the level of the capitation fee is fair for the funder and the provider. These claims data should reflect the appropriate tariff for services rendered.

The capitation rates should allow for differences in the risk profiles of the beneficiaries allocated to different healthcare providers as the demand for primary health care services may differ significantly between different provider’s assigned populations.

The method of allocating beneficiaries to a primary care provider needs to be clear and allow for changes due to beneficiaries moving locations (this may be home or work related).

The frequency of negotiation of the capitation fee is important as variations in costs and utilisation need to be taken into account.

The various components of the capitation fee should be understood, for example which services are included in and excluded from the capitation fee, administration expenses, profit margin, etc.

Capitation can provide greater predictability of costs for primary care benefits and allow for easier budgeting.

Capitation transfers risks to the healthcare service providers (frequency, severity and price risk) so that service providers have more incentive to manage costs, however they could under-service the population which is a risk that would need to be monitored and managed.

[Total 8]

(vi) Outline possible complexities with claims data received from healthcare service providers. [5]

Part (vi) was about data in the context of providers in the national health insurance system. Candidates were expected to use the information in the question to assist them with generating fairly granular insights into potential issues or complexities around data. Candidates who gave generic lists about data from earlier subjects did not score marks. Some candidates recognised the potential data issues with moving from fee for service to capitation or DRGs. Candidates generally did not show sufficient knowledge and application of macro claims data issues or of complexities of dealing with many service providers.

Some fee for service claims are submitted via paper claims.

Submission of claims on paper rather than electronically would result in claim submission and payment delays…

… as well as manual capturing of service provider and claims information which could result in data errors.

It would also be more expensive to process paper claims compared to electronically submitted claims.

Claims would need to have valid service provider information such as a healthcare identification number (or practice number)…

… as well as an accreditation number to indicate that the service provider has been accredited.

Without the correct practice number and accreditation number, the claim would not be able to be processed.

Healthcare service providers involved in providing capitation benefits would need to be monitored so that these providers are not double paid (or overpaid) for services rendered. Similarly, monitoring would need to ensure that no fee for service claims are paid to the provider and that services not covered under the capitation arrangement are paid appropriately.

For DRG related claims, the claim submission will need to have accurate clinical codes so that the claims can be allocated to the correct DRG.

It will be necessary to check the clinical codes and revert back to service providers for complete information or corrections which could be a time-consuming process…

… and require ongoing engagement with service providers to educate and inform them about the importance of accurate coding.

The amount claimed may not necessarily be based on an underlying agreed tariff so these amounts would need to be confirmed and adjusted where necessary to reflect agreed pricing with service providers.

The correct identification of the individual claiming could be complex if the register of the population is not accurate or up to date or linked to the administration of the NHI programme. A unique identifier allocated to every registered user would assist with matching the beneficiaries to their claims and capitation costs.

Fraudulent use of benefits by beneficiaries not registered on the NHI would need to be checked, so data would be required to indicate who is claiming and underlying proof would need to be processed.

With reference to fee-for-service and capitation reimbursement methods, claims data from the healthcare service provider would be detailed in a fee-for-service basis, however, claims data might not be accessible on a capitated basis.

Similarly, the claims data for hospitals on the details of the use of various hospital resources including length of stay in hospital would not be available on the DRG information provided and would need to be negotiated to be included in claims.

[Total 5]

(vii) Discuss the role of the benefit design and structure for achieving UHC for the population. [10]

Part (vii) was very poorly answered with a few candidates scoring zero for the question. The question required candidates to utilise the information given in the question about the benefits package and consider how this might assist the country to achieve UHC. Many candidates ignored the benefits package information and wrote general ideas about benefits. Too many candidates considered aspects outside of benefit design which were irrelevant for the question such as tax, legal issues, contributions, etc. Only a handful of candidates worked through each part of the benefits package and analysed how it could work and what would need to be considered.

The attractiveness and usefulness of benefits would depend on the population who have registered to receive access to benefits.

Should individuals be of the view that they do not need the benefits package, they are unlikely to register, especially if they are required to pay the premium or registration fee.

Or if they have private healthcare coverage and do not need access to non-private healthcare facilities and services.

Therefore it is likely that those who register require or want access to the specified benefits.

However individuals and families could also join and leave and join again anti-selectively as they require services.

The benefits cover a comprehensive list of both in-patient and out-patient services…

… enabling individuals to have access to primary care as well as tertiary care should the need arise.

The use of primary care could act as a gate keeper to higher levels of care so that access and costs can be managed more effectively enabling more people to have access to healthcare services.

The use of a capitation reimbursement model for primary care would simplify the management of primary care benefits and claims for the NHI, reducing costs of providing care and giving more individuals access to primary care.

However primary care practitioners receiving capitation payments may be incentivised to under-service members or provide them with poor quality care.

This could be mitigated to some extent with value based capitation contracts which would incorporate quality metrics of some kind.

This may assist with cost containment compared to a fee for service environment, however there is no guarantee.

The use of DRGs for in-hospital care could be useful to identify the most common reasons for hospital admissions and assist to understand the costs of such cases.

In-hospital care also seems to be relatively comprehensive giving individuals comfort that serious health needs requiring hospital will be covered (unless explicitly excluded)…

However the quality of such services may not be very good if the facilities are under-funded or poorly managed…

The list of exclusions provides clarity on the items not covered through the NHI benefit structure…

Although individuals would need to be aware of these exclusions so that they don't expect the NHI to cover them…

… and be able to make arrangements to access such services elsewhere should the need arise.

The inclusion of oral health and eye care means that individuals can gain access to additional essential services (that if unattended could have negative long term health consequences).

Even under UHC there needs to be some cost management mechanisms and as such not everything can be covered.

The 5% of diagnosed conditions not covered by the NHI benefit structure are not specified, therefore it is not clear how the exclusion impacts people, and how these conditions would be dealt with.

Presumably the excluded diagnosed conditions have a low incidence and/or severity so it should not impact many people.

However it would be useful to have those diagnosed conditions clarified so that people could be aware of them.

The inclusion of emergency medical services is an important safety-net for individuals who may be involved in an accident or experience issues requiring urgent and critical care.

The State may need to consider ways of rationing access to benefits so that those who require them can access them efficiently and timeously. This may include waiting lists for elective procedures and triage for emergencies.

Rationing could be considered such as clinical entry criteria for some treatments.

[Total 10]

(vii) Propose a set of criteria for service providers to obtain NHI accreditation. [8]

Given the mark allocation, candidates were expected to give a comprehensive outline of criteria for obtaining NHI accreditation that reflect the performance of a healthcare organisation holistically. This extends past healthcare quality and outcomes measures to the actual business of running a healthcare organisation. Candidates should be familiar with many of these concepts from the F201 syllabus sections dealing with administration and managed care services.

This higher order question required an understanding of the healthcare service provider market by asking for ideas around the accreditation aspect of the national health insurance set up. This was very poorly answered with candidates showing very little insight into these aspects or giving very generic answers.

Accreditation of service providers usually deals with the requirement for the achievement of specific quality goals and continuous improvement, these include structural, process and outcome based measures of quality.

It is therefore more onerous than compliance with minimum standards or regulatory requirements.

Accreditation is intended to help reduce the information asymmetries between patients and providers which make it difficult for patients to determine the quality of care provided. Patients can have a level of comfort that the level and quality of healthcare services they would get at an accredited facility should be 'approved'.

It is also intended to hold healthcare facilities more accountable to another body for their service delivery quality.

There are various models with one such being that this 'other body' could be an independent accreditation authority that applies consistent standards across the country for both the private and public sectors.

Criteria for obtaining accreditation with the National Health Insurance Authority, could include various aspects covering the business operations, health quality delivery and outcomes.

These are elaborated below.

It will be important that these criteria can be measured in an objective way and that there are clear guidelines to be followed to obtain such criteria.

Similarly, as accreditation suggests the need for ongoing evaluation and attaining particular criteria, these standards need to updated and reviewed to ensure that they are relevant and effective in maintaining a fair set of performance requirements.

Structure criteria

Given that these service providers are focused on providing healthcare services, there are several aspects of their business operation and infrastructure that should be reviewed to ensure that they are able to deliver services.

These could include aspects such as:

- Design and state of repair of the (hospital or clinic) building, is it falling apart, is it easily accessible, does it have the necessary facilities inside, is there adequate ventilation, etc

- The availability of personal protective equipment for staff such as gloves, soap, masks

- The availability of medical equipment

- The availability of medical and surgical supplies

Other aspects can be considered including the human resource capacity and capability to ensure that there are sufficiently qualified staff employed by the facility to deliver their services.

This may be particularly applicable for nursing staff and medical practitioners, particularly if the hospital employs the medical practitioners.

In the case of a hospital, the structure may also be assessed in terms of number of beds, types of wards, number and types of theatre, infection control measures and other hygiene requirements.

For a clinic, these criteria may relate to the availability of a decent waiting room, bed, medical equipment and surgical items, sufficient ventilation and possibly the availability of medicines.

Process criteria

These criteria would focus on the activities it undertakes to deliver services to patients on a day to day basis.

These criteria may include aspects such as:

- Patient assessment and admittance
- Medication administration
- Equipment maintenance
- Staff supervision and performance review process
- Cleaning processes
- Financial management

The process of treating various conditions could be compared to medical guidelines and adherence with these guidelines, outside of exceptional cases, should be monitored. For example, the treatment and monitoring of a diabetic patient should include regular testing of glycaemic control and management of medication to achieve this control. This could include the prescription of changes in diet and exercise.

Healthcare outcomes criteria

An important aspect of accreditation is the outcomes of patients treated in the facility, ensuring that quality of care is also considered.

There is a chicken and egg problem for process and outcomes based accreditation – the service provider would need to be treating patients to show process and outcomes, but they are unable to treat patients until accredited – so there would need to be a period of time to enable service providers to demonstrate their results.

These criteria may include aspects such as:

- Patient mortality
- Rate of infections (and resolution)
- Maternal and infant mortality rates
- Complication rates
- Re-admission rates
- Disease progression rates / recovery rates

The healthcare outcomes could also vary by type of healthcare facility, with the above being more applicable for hospitals.

Clinics may be more focused on the delivery of primary and preventative care against benchmark indicators, such as the percentage of babies immunised, the percentage of the adult population (over a certain age perhaps) having a routine medical check-up, the percentage of children visiting the dentist, etc.

[Total 8]

QUESTION 2

This question was about product development for GP vouchers in the South African market, covering material on product development and benefit design. It also tested candidates' knowledge and understanding of the definition of the business of a medical scheme.

Some candidates applied themselves reasonably well, showing a decent grasp of the overall product structure, nature of risk and working their way through the benefit design aspects quite well. Candidates scored poorly when required to apply the definition of a business of a medical scheme to this product. Candidates were given the opportunity to give comments in support of and against this product doing the business of a medical scheme to test their understanding and application ability rather than to test any kind of legal knowledge or position.

2(i) Define the following term: "business of a medical scheme". [4]

This first part asked candidates to define the term "business of a medical scheme" as per the Medical Schemes Act. While candidates were not expected to produce a verbatim version of the legal definition, many candidates had done so, having learnt the definition by heart. Marks were given for those whose explanations showed they were knowledgeable about the fact the definition deals with a premium or contribution in return for undertaking a liability, and then went on to explain the nature of the liability. Marks were not given for aspects covered by the regulations. Candidates scored reasonably well in this bookwork question.

According to the Medical Schemes Act…

…the "business of a medical scheme" means the business of undertaking, in return for a premium or contribution…

…the liability associated with one or more of the following activities:

…providing for the obtaining of any relevant health services;

…granting assistance in defraying expenditure incurred in connection with the rendering of any relevant health service; or

…rendering a relevant health service…

…either by the medical scheme itself, or…

…by any supplier or group of suppliers of a relevant health service or by any person, in association with or in terms of an agreement with a medical scheme.

The Financial Services Laws General Amendment Bill (29 of 2012) introduced amendments to the definition.

The Medical Schemes Act also states that no person is allowed to carry on the business of a medical scheme unless the person is registered as a medical scheme in terms of the Act.

[Total 4]

2(ii) Contrast the benefit design principles and features of this GP voucher with that of a typical medical scheme. [16]

Similarly to the benefit design sub-question in question 1, many candidates covered ground that was not relevant to benefit design, wasting time. Stronger candidates could identify the benefit design features of the GP voucher and compared these to a typical medical scheme on a per item basis, i.e. not just list the features of the one product and then separately list the features of the other, but compare each item between the GP voucher and medical scheme. It was important that candidates could show understanding of the feature and then how it is similar or different to gain marks. Marks were not given for simply repeating the information from the question.

There were 16 marks available indicating that there were many possible aspects of benefit design to consider. Unfortunately candidates scored very poorly in this question by either considering too few aspects or diverging into irrelevant aspects, or not providing meaningful comparisons.

Benefits

Medical scheme benefits are generally based on the principles of indemnity cover…

… which covers the actual medical costs incurred. Some benefit options may use capitation arrangements with providers instead of indemnifying fee for service.

The extent of coverage will depend on the definition of benefits in the benefit options.

While the GP voucher is a fixed benefit based on a pre-determined stated sum which has been agreed in advance with the network of GPs.

A GP voucher entitles the consumer to one GP consultation, and no other benefits.

If a consumer wants to have access to more than one GP consultation, the consumer can purchase as many GP vouchers as is required.

A medical scheme member cannot belong to more than one medical scheme, and therefore if his/her benefits have been depleted he/she cannot rely on another medical scheme for continuation of cover and additional benefits.

However, a medical scheme member who has depleted his/her GP consultations benefit, can purchase a GP voucher as top-up/complementary cover. This is effectively the same as paying for the GP consultation out-of-pocket but prefunded for when it is needed in the future similar to prepaid mobile airtime or electricity.

This GP voucher can be used by someone else, while only registered members or dependants on a medical scheme can claim for healthcare benefits. This makes it possible to buy vouchers for family members, friends or employees who may not be able to afford medical scheme coverage.

Claims processing

A GP voucher settles the bill with the service provider at the point of service as and when the voucher is redeemed. The originator would settle the financial amount with the provider and cancel the voucher, releasing the originator from further financial liability.

Medical scheme claims are submitted by the member (after they have been settled with the medical service provider) or by the service provider.

The claim will be paid in accordance with the scheme rules and the prescribed minimum benefits. Both would require the reason for the consultation in the form of a diagnosis code from the provider. The voucher would not require any medical information for it to be settled.

Product range

Medical scheme benefits (under different benefit options) will differ according to benefit limits, co-payments, provision for personal medical savings, tariff scale used for reimbursement, etc.

A GP voucher does not offer the same range of benefits, but one benefit only: a GP consultation.

A GP voucher does not typically contain any benefit limits or co-payments.

Target market

A GP voucher is ideal for students, employees and those without a medical scheme membership.

A GP voucher is also suited for those with medical scheme membership whose benefits have been depleted and want certainty of coverage when their monthly income may not be guaranteed in future months.

A GP voucher is also suited for those who are altruistic and just want to donate to others.

A GP voucher also ensures that employers who purchase these for employees, particularly in the informal employment sector, are providing for some healthcare benefits explicitly for their employees.

However, although the product is catered for a target market, everyone living in South Africa could purchase this product which gives access to quality private healthcare.

Medical schemes service only 9 million beneficiaries – approximately 15% of the country's population.

Higher-income individuals usually select the medical scheme option that meets their benefit needs, while middle and lower-income members choose the option that they can afford, and aim to optimise affordability and the benefits that they require.

Some contribution tables are income-based, which means that higher-income individuals will pay higher contributions compared to a lower income individual for the same benefits.

The cost of the GP voucher is fixed or pre-determined at point of sale.

A capitation arrangement in a medical scheme could provide the GP consultations at a cheaper cost due to the principle of pooling risks. However, the benefit option would also need to provide for Prescribed Minimum Benefits which would significantly increase the costs if only primary care cover is required. A Low Cost Benefit Option may provide an alternative where this requirement is met at a lower cost.

Underwriting

There is no underwriting applied at point of sale or at point of voucher redemption.

A GP voucher can be accessed by anyone of any age living in South Africa, but minors should be accompanied by an adult when receiving healthcare services.

Open medical schemes are required to accept all membership applications and restricted membership medical schemes must accept all applications that meet their eligibility requirements.

Some restrictions may be placed on membership depending on:

- the extent of prior coverage
- whether the medical scheme change arises from a change in employment
- the length of any break in coverage
- the age at entry.

The maximum limitations (under specific circumstances) are defined in the Regulations and include:

- a three month waiting period
- a twelve month exclusion on pre-existing conditions
- a late joiner penalty

The underwriting process may increase the costs of providing GP cover in a medical scheme.

Providers

Contracting with GPs at significantly discounted prices would be key to ensure affordability.

GPs would be assuming more risk as they are unable to assess the potential purchasers and users of these vouchers, yet the cost is fixed. Increases in the volume of patients may, however,

make this attractive to providers as long as the voucher amount provides some profit, albeit lower than private patients paying out-of-pocket or paid for by medical schemes.

The healthcare company (or voucher provider) is able to offer these vouchers through a partnership with a national network of selected healthcare providers.

Sufficient geographical spread of the contracted GPs. The location of these GPs may differ from most medical scheme networks depending on the target markets for the voucher.

The voucher can only be used with a contracted GP that accepts the vouchers. The consumer may not necessarily have the same freedom of choice of GP as they would in a non-network option (or even a network option depending on the size and geographic spread of the GPs).

Validity

A voucher is valid for a longer period from the date of purchase (at least 3 years according to the Consumer Protection Act)…

Candidates are not required or expected to know that the Consumer Protection Act requires vouchers to be valid for at least three years.

…compared to medical scheme benefits. Medical scheme benefits are accessible with an active membership at the date of service for that particular benefit year. Benefits (apart from personal medical savings) cannot accrue to a following benefit year - the "use it or lose it" concept.

Depending on the length of time taken from date of purchase to date of redemption, the GP may be taking on more inflation risk if this hasn't been priced in or factored into the purchase price or redemption value (for example if the voucher is redeemed 3 years after purchase, the GP could potentially lose out on 3 years worth of price adjustments).

Affordability

A GP voucher should be much more affordable compared to the full contribution to belong to a medical scheme, enabling more people to afford access to a private GP.

By being able to purchase only this benefit, consumers can more easily predict and control the costs of a GP consultation.

Cost control is the single most important issue facing medical schemes and their members today. Medical scheme contributions have increased at levels in excess of consumer price inflation over the long term.

Product or cash voucher

If the voucher takes the form of a cash voucher, consumers can reserve available funds in his/her prepaid balance for future healthcare use. Similar to a personal medical savings account. This may offer greater freedom of choice in terms of which GPs to see but result in variable out-of-pocket payments.

If the voucher takes the form of a product voucher, the consumer has peace of mind that the service is covered in full.

Other features

There is no limit to the number of vouchers consumers can buy, while an individual can only belong to one medical scheme at a time and only one benefit option.

If the voucher takes the form of a cash voucher, then consumers can top up their prepaid balance.

Minor procedures carried out by the GP are not included in the voucher fee and are for the consumer's account. Medical schemes typically provide comprehensive cover for procedures, although the level of cover would differ by benefit option.

If the consumer requires additional healthcare treatments or medicine that the doctor cannot provide, the costs are for the consumer's account. Medical schemes can provide comprehensive cover for treatments and medicine, depending on the benefit option.

The vouchers can't be used at hospitals or emergency rooms. The vouchers are for primary healthcare consultations at a GP only. Medical schemes provide comprehensive cover for costs incurred at hospitals and emergency rooms.

[Total 16]

2(iii) Outline the various considerations to determine a marketable price for this GP voucher. [10]

In contrast to part (ii), this question was well answered with candidates showing a good understanding of how to determine a marketable price for the GP voucher including the base or theoretical cost and then market considerations, particularly given it is a new product in the market.

Healthcare cost

The GP voucher's price should, most importantly, be sufficient to pay an agreed tariff to the GP for the consultation.

No historic healthcare data is required to estimate the GP consultation tariff for inclusion in the GP voucher price. Practice cost studies may be involved to assist to set a price.

An affordable GP consultation tariff is required that needs to be negotiated.

The GP consultation tariff needs to be negotiated such that the final tariff is at a discount relative to the tariffs typically paid in the medical scheme industry, and is acceptable to the doctor and affordable to the member…

…given that these products are targeted to those who cannot afford medical scheme membership

And who may find the cost of a "walk-in" fee for a consultation expensive or unpredictable or both.

The consultation fee would be based on a fee-for-service basis.

Utilisation

The GP voucher's price should incorporate the likely utilisation or redemption of the voucher, i.e. some consumers may purchase a voucher but not use it.

A low utilisation assumption could translate into a lower price for the voucher, while a higher utilisation assumption could translate into a higher price.

The voucher will most likely be utilised by all purchasers as vouchers are valid for a longer period, which increases the likelihood of redemption.

Therefore, it would be the best estimate to assume that all vouchers will be utilised especially since you lose the benefit of a GP consult if you don't use it. A person may go to the GP for check-up and screening even if they don't have any conditions or symptoms to treat similar to the utilisation seen in traditional medical scheme benefit options.

But it is possible that vouchers can expire after the expiry date if not redeemed at that point, translating into an additional source of profit for the healthcare company (or voucher provider) equivalent of the GP's tariff.

Non-healthcare cost

The GP voucher's price should incorporate the cost of the in-house or third party administrator of this product.

As well as:

- Website costs
- Operational costs (towards the finance, actuarial, marketing departments)
- Banking fees
- Value added tax (VAT)

The form of each expense (whether fixed or proportional) should be allowed for appropriately.

If there are various distribution channels with different commission structures, then the pricing should allow for a likely mix between distribution channels and the relevant weightings applied to the different broker commission structures.

Profit Margin

The GP voucher's price should incorporate the healthcare company's desired profit margin based on the company's strategic and profit objectives.

However, the profit margin should not be too excessive such that it becomes unaffordable for the targeted low income market.

Competition

Given that this is a new, innovative product, it is unlikely that there are similar or comparable products in the South African market to benchmark the voucher price.

However, the healthcare company should be flexible and quick to respond when other competitors launch similar products.

Rounding

Once the pricing exercise for the GP voucher is finalised, the final price may need to be rounded – perhaps to nearest or next R10.

Investment income

The GP voucher's price should allow for the expected income earned on the company's assets which is likely to reduce the price.

The investment income estimate should consider the distribution of the company's assets between various asset classes.

Consider linking the investment period to the validity period of the voucher – or the anticipated duration. For example, 90% of vouchers could be used within a month running off over time, allowing majority of funds to be invested for one month.

Sensitivity testing

The actuary should identify key assumptions of the GP Voucher price which are subject to variation.

Other

The GP voucher's price does not have to allow for the following:

- Underwriting costs.
- Reinsurance.
- Managed care.
- Membership distribution or profile or movements.

[Total 10]

2(iv) Describe the additional pricing considerations when the design of the GP voucher includes a medication benefit. [9]

Part (iv) was reasonably well answered. Candidates showed good insight into factors to consider for an additional medicine benefit, the potential complications with this type of benefit and how it interacts with the base product for the target market.

Type of Medication

Consider the likely risk profile of lives who may be purchasing the product to determine the potential uptake for acute versus chronic medication.

The medication should be for minor acute illnesses to ensure the price of the voucher remains affordable.

The likely medication price would be more predictable if the covered (or excluded) acute illnesses are defined in a list/formulary.

Chronic medications have a wide range in price (which makes an average price difficult to peg) and can be expensive which might result in a voucher price that is unaffordable and highly variable costs requiring a margin.

Chronic medication also requires longer-term care which is not appropriate for a pay as you go product.

Should it transpire that a patient requires chronic medicine, the doctor could prescribe these for collection at a nearby pharmacy, for the patient's own account.

Dispensing GPs vs Non-dispensing GPs

If the GP network only comprised dispensing GPs, it would facilitate a smooth customer journey as consumers would receive their required acute medication directly from the dispensing GP during their GP consultation.

However, a potential disadvantage is that the dispensing GP might have limited medication stocked which the price needs to be based upon.

A network of dispensing GPs only also opens up the opportunity to negotiate an average medication rate and/or the dispensing fee for a basket or formulary of acute medication.

If the GP network would also comprise non-dispensing GPs, the consumer would need to collect the medication from a pharmacy which may not charge the same level of dispensing fee. This could be mitigated by also having a network of contracted pharmacies with agreed dispensing fees for the formulary list of medications.

Voucher price for medication

The voucher price for the medication needs to be based on an average of likely acute medication to be dispensed.

A strict formulary would be necessary to reduce volatility of medication claims.

Any residual volatility in medication claims could be countered with an additional margin on top of the average acute medication price.

Dealing with the volatility in the medical claim amount

The actual medication cost could be less than the voucher amount, resulting in a profit.

The GP could accept this profit, or the profit could revert to the healthcare company (or voucher provider). This would, however, be seen as reimbursement of medical expenses and doing the business of a medical scheme.

However, the actual medication cost could also be more than the voucher amount, resulting in a loss.

This loss could be accepted by the GP – if the GP can also accept the profits.

Or the patient could accept the loss, and pay in the difference.

Or the healthcare company (or voucher provider) could accept the loss by reimbursing the difference to the GP…

…But this would also err on the principle of indemnity, which is the business of a medical scheme…

A consumer could buy a GP voucher with the medication benefit, but during the GP consultation the GP sees no need to prescribe or dispense medication. How would the non-utilised medication benefit be treated – either by refunding the customer, or by accepting a profit. The aggregate cost of medicine actually claims or not would then feature in the voucher price.

[Total 9]

2(v) Explain possible reasons why CMS could take this approach [4]

Candidates were expected to partly rely on the theory tested in Question 2(i) to answer this question. The question however was poorly answered. Candidates had not read through or think through the nature of the premium and liability sufficiently to answer the question. The question gave candidates the opportunity to consider reasons why the Regulator may want to intervene in the launch of this product. This took account of the role of the CMS as the regulator for medical schemes and the definition of the business of a medical scheme requiring all entities doing this business to be registered.

The CMS wants to **protect the members of the public** by taking enforcement action against the healthcare company.

The CMS believes that the healthcare company is **conducting the business of a medical scheme** by selling these GP vouchers.

The CMS believes that the vouchers allow members of the public to pay for healthcare services that they may need in the future. The healthcare services include GP consultations and/or dispensing of medicine, which meets the definition of relevant healthcare services.

The CMS believes that this relates to the healthcare company (or voucher provider) making provision for the obtaining of relevant healthcare services and to grant the assistance in defraying expenditure incurred.

The CMS believes that the healthcare company (or voucher provider) has entered into contractual arrangements with service providers to provide relevant healthcare services to voucher holders.

In this instance, the healthcare company (or voucher provider) **receives a contribution from customers**…

…in the form of a **once-off contribution for the voucher**…

…which in turn allows consumers to **access healthcare services**…

…and in return **they assume liability or risk** to ensure that the customer receive the service.

The CMS may anticipate that medical scheme members may opt out of medical scheme membership as members might incorrectly believe these GP vouchers offer more affordable, but offer similar healthcare cover, particularly in the absence of Low Cost Benefit Options.

[Total 4]

2(vi) Outline the arguments you would put forward in response to the CMS. [7]

This question was very poorly answered. Many candidates left out this question – it was not clear if this was due to time pressure as it was the last question of the exam, or due to perceived difficulty. This question was couched in a corporate setting and gave candidates the opportunity to consider actuarial reasons that the company could include in its motivation. Many candidates gave marketing answers and not necessarily technical answers which were not given marks.

The main argument to put forward is to state that the healthcare company (or voucher provider) does not conduct the business of a medical scheme.

Furthermore, the GP voucher product is also not an insurance-based product.

The GP voucher is a pre-payment for a pay as you go service to be rendered in the future, similar to pre-paid mobile airtime or electricity as opposed to a benefit that is risk-pooled.

The vouchers enable members of the public to use their own funds, loaded on the voucher, to purchase healthcare services – and is, thus, similar to the payment of cash in exchange for the relevant healthcare services.

The voucher is similar to a patient paying cash in exchange for a healthcare service and is thus entirely distinct from the medical scheme environment where the payment of an ongoing premium is a prerequisite to the provision of a healthcare service.

The holder of the voucher, therefore, pays the fee-for-service levied by a healthcare provider albeit in advance and at a known tariff rate.

The voucher is purchased, in the ordinary course and outside of any insurance contract, on a once-off basis. Repeat purchases are allowed and optional.

The vouchers are available for purchase by members of the public in defined and predetermined denominations and with no reference to the costs or types of healthcare services (including medicines, if desired) that the holder of the voucher may elect, or not elect, to use.

The consumer, in turn, uses (or redeems) the voucher to pay for the services he or she selects to use – the two transactions (i.e. purchase and redemption) are distinct and separate.

The voucher does not entitle the holder of the voucher to access healthcare services to which he or she would not otherwise be able to access but for an inability to afford such services. This is distinct from the business of medical scheme where the payment of the premium gives rise to a liability to provide for access to defined relevant health services in terms of a particular medical scheme benefit option where the premium has a direct bearing on a set of defined relevant health services a member or beneficiary may access and for which the medical scheme has a liability to provide.

The healthcare company (or voucher provider) does not collect amounts from the holder of the voucher on an on-going basis as is the case with a medical scheme product as contemplated in the definition of "business of a medical scheme" of the MSA.

Therefore, no premium, in the context of an insurance contract, is levied by the healthcare company (or voucher provider) on the holder of the voucher.

The voucher is used primarily to ensure that the holder makes use of the value of the voucher to purchase needed healthcare-related services and not to purchase other goods or services to the detriment of the health of the holder of the voucher or his or her dependants.

This element of the voucher-based product further enhances access to healthcare services amongst those not able to afford medical scheme products as the voucher provider may negotiate lower prices in a GP network than an individual could achieve.

The aim of these product solutions is to address the real and growing need to make healthcare more accessible to the broader South African market, particularly those who are employed but uninsured, at an affordable cost.

The private healthcare sector services only 9 million members – approximately 15% of the country's population. Growth in medical scheme membership is stagnating because, in the absence of any legislated requirement for all employed individuals to join a scheme, the traditional membership pool has reached saturation point.

There is some growth potential in South Africa is the low-income market – and a GP voucher is a product that can provide access to the private sector at a low cost until Low Cost Benefit Options are available under an agreed framework and exempt from PMBs.

Another purpose of this GP voucher is to provide **certainty of cost** to the uninsured market and experience to clients.

This product helps participating GPs increase access to new markets and improve retention of existing patients.

Furthermore, this product enables GPs to continue their doctor-patient relationship with existing patients, who often self-medicate when their medical scheme benefits are exhausted.

Also include that while the appeal is in progress, the GP vouchers will remain available for purchasing and any purchased vouchers that have not been used yet will remain valid according to the terms of purchase.

[Total 7]