

# EXAMINATION

*27 May 2013 (am)*

## **Subject F201 — Health and Care Specialist Applications**

*Time allowed: Three hours*

### ***INSTRUCTIONS TO THE CANDIDATE***

- 1. Candidates will be issued with instructions to log-in using a password (which you will be provided with at the exam center).*
- 2. Candidates are required to submit their answers in Word format only using the template provided.*
- 3. Save your work continuously throughout the exam, on your computers' hard drive that you have been provided.*
- 4. You have 15 minutes at the start of the examination in which to read the questions. You are strongly encouraged to use this time for reading only, but notes may be made. You then have three hours to complete the paper.*
- 5. You must not start typing your answers until instructed to do so by the invigilator/supervisor.*
- 6. Mark allocations are shown in brackets on exam papers.*
- 7. Attempt all questions, beginning your answer to each question on a new page.*
- 8. Candidates should show calculations where this is appropriate.*

**Note: The Actuarial Society of South Africa will not be held responsible for loss of data where candidates have not followed instructions as set out above.**

### ***AT THE END OF THE EXAMINATION***

***Save your answers on the hard drive.***

<p><i>In addition to this paper you should have available the 2002 edition of the Formulae and Tables and your own electronic calculator from the approved list.</i></p>
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## Question 1

You are an actuary recently appointed to provide consulting and advisory services to a medical scheme called ProPlan.

Approximately nine months ago, in October 2012, ProPlan appointed an accredited managed care organisation called CapDent to manage its dental benefits through a large network of contracted dentists, in return for a capitated fee. Since this appointment, the management accounts of the medical scheme create the impression that the capitated fee presently being paid is significantly higher than the fee-for-service dentistry claims historically paid by ProPlan.

- i) Describe the analyses that you would perform, and the data that you would require, to establish whether the capitation fee is reasonably priced and how ProPlan has been impacted by its decision to capitate dental benefits. (11)

Your analysis reveals that the capitation fee is approximately 25% higher than the expected fee-for-service dental costs of the medical scheme. Prompted by this investigation, ProPlan invites CapDent to a meeting to discuss the reasons for the higher fee. CapDent concedes that the fee is higher than ProPlan's historic fee-for-service claims, and offers the following points to explain why the higher capitation fee is, in their view, justifiable.

1. The capitation agreement was effective from October 2012. According to CapDent, members tend to increase utilisation of dentistry benefits towards the end of a year (to ensure full utilisation of available benefits). The capitation fee was inflated to reflect this anticipated higher utilisation.
2. CapDent points out that the capitation agreement does not relate only to out-of-hospital dentistry expenses, but also includes all in-hospital dentistry costs. Whenever a beneficiary of ProPlan is hospitalised, for *any* admission related to dentistry, CapDent would cover not only the full hospital bill for that admission but also all professional fees – including anaesthetist costs. CapDent points out that this also includes maxillofacial surgery (which, according to CapDent, can be extremely expensive).
3. CapDent increased capitation fees by an explicit R20 per member per month to make provision for Prescribed Minimum Benefit (PMB) expenditure, which, according to them, cannot be controlled and exposes them to significant risk.
4. CapDent further increased their capitation fee by an explicit R12.50 per member per month as a “reserve building levy”. This was done because CapDent is cognisant of the fact that regulators may, in time, impose capital requirements on risk-taking managed care organisations. CapDent therefore believes it is obliged to start building reserves to prepare themselves for this.

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5. The CapDent business model focuses on preventative healthcare. As such, CapDent encourages members and providers to increase utilisation of basic dentistry. CapDent argues that, although this will increase costs in short term (as is evidenced by the higher capitation fee), ProPlan will reap the rewards of this in the longer term.
6. CapDent reimburses dentists through their own administration system. CapDent says that they inflated the capitation fee to recover their administrative expenditure. CapDent therefore argues that it would be inappropriate to directly compare past fee-for-service claims with the capitation fee.

ii) Discuss the merits of each of these points. Where applicable, you should also describe which analyses or investigations you would perform to test the validity of each point.

(32)

iii) Describe the regulatory requirements and processes that a scheme needs adhere to before it can enter into

a. A contract with a reinsurer

b. A contract with a managed care organisation

(7)

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## Question 2

- (i) Provide the following definitions
1. A “health policy” as defined in the Long Term Insurance Act
  2. An “accident and health policy” as defined in the Short Term Insurance Act
  3. The “business of a medical scheme” as defined in the Medical Schemes Act
- (10)

You are an independent healthcare consulting actuary. One of your clients is a restricted scheme, CloseMed, which is associated with a large employer named X-Corp. CloseMed is in relatively good financial health with a solvency ratio of 78%. The average CloseMed contributions amount to R1500 per month for adults and R400 per month for children.

X-Corp pays 75% of CloseMed contributions for active employees. This subsidy ceases upon retirement, although a small group of pensioners receive a post-retirement subsidy of their contributions for historic reasons.

The Principal Officer of CloseMed has forwarded you an e-mail which he received from X-Corp’s Financial Director. The e-mail contains the brochure for a recently launched product called Allure Health. The Financial Director of X-Corp questions why the employer should continue to subsidise CloseMed given that the costs of Allure Health are significantly lower than even the lowest income band on CloseMed’s least comprehensive option.

The Allure Health product brochure is summarised below.

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*The cost of the product is as follows:*

<i>Level of cover</i>	<i>Member</i>	<i>Spouse</i>	<i>Child</i>	<i>Other adult dependents aged 50 to 65</i>
<i>Option 1: Day to day</i>	<i>R300</i>	<i>R200</i>	<i>R100</i>	<i>R400</i>
<i>Option 2: Hospital cover</i>	<i>R400</i>	<i>R350</i>	<i>R50</i>	<i>N/A</i>
<i>Option 3: Day to day and hospital cover</i>	<i>R600</i>	<i>R550</i>	<i>R150</i>	<i>N/A</i>

*Hospital cover is not available to individuals aged older than 50. Day to day cover ceases at age 65.*

*The day-to-day benefits are summarised as follows:*

- *Members must access benefits through a network of GPs. Provided that members use the network there are no co-payments and the number of visits allowed is unlimited. Three out-of-area or emergency (after hours) GP consultations per annum are allowed. Members will*

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*not be required to pay out of their own pockets since Allure Health pays the doctors in advance.*

- *A single specialist visit per beneficiary per annum is allowed provided that the patient is referred by his/her GP.*
- *The product allows for unlimited chronic and acute medication dispensed by the GP or obtained from a network pharmacy. However a six month waiting period applies to chronic medication and all medicine must be prescribed by a network GP according to a formulary.*
- *Other benefits include:*
  - *Basic dentistry from a network of dentists;*
  - *Unlimited radiology and pathology subject to referral by a GP and the test being included in the pre-approved list of codes.*
  - *Optometry including one eye examination and one set of new lenses per annum as well as one pair of frames every 2 years. This benefit is subject to a 12 month waiting period.*

***The hospital benefits are summarised as follows:***

- *Upon admission to a hospital the product will pay out R10 000 for the first day in hospital and R5 000 per day thereafter. A maximum of 90 days in hospital is covered.*
  - *If the admission is due to an accident the product will pay an additional R150 000 per event, with an annual limit of R400 000 per family per annum.*
  - *Upon death an amount of R30 000 for adults and children over the age of 15 and R10 000 for children under the age of 15.*
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The Financial Director proposes that CloseMed should enter into voluntary liquidation and the reserves distributed to the members. X-Corp will then give employees freedom of choice of medical cover. The maximum subsidy provided by X-Corp will subsequently be reduced to the cost of Allure Health. He argues that this will generate significant savings for the employer, whilst the reserves distributed to members will assist them to fund any shortfalls in cover such as waiting periods or exclusions.

The Principal Officer has asked you to assist him in formulating an appropriate response to the employer.

- (ii) Discuss the nature of this product from a regulatory point of view. Where necessary, refer to specific product features of Allure Health's product to support your views. (5)
- (iii) Discuss the impact of the Financial Director's proposal on the employer and the members of the scheme. Your answer must also consider how the Allure Health product compares to the cover that members presently enjoy. (14)

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- (iv) State, with reasons, whether you agree with the Financial Director's statement that the distributed reserves will be sufficient to pay for any shortfalls in cover. Show any calculations and assumptions used to support your conclusion. (3)

The Principal Officer is of the opinion that the cost of the Allure Health product is far too low and will generate substantial losses for Allure Health and/or its network providers if CloseMed members were to migrate. He has asked you to perform a detailed modelling exercise to determine the likelihood of Allure Health's offering being profitable by applying Allure Health's benefit structure to CloseMed's own claims data.

- (v) Explain how you would perform this exercise. (11)

You have been appointed to serve as a medical schemes industry representative on a Ministerial Task Team that has been convened to consider the issues surrounding the demarcation between medical schemes and health insurance. At the first meeting of the task team the short-term insurance actuary expresses the opinion that medical schemes are being unfairly protected at the cost of insurers and that all demarcation should be scrapped. After some debate you agree to draft a short note summarising the medical scheme industry's point of view.

- (vi) Discuss the systemic risks that could arise if these two environments were not properly demarcated. (7)

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