

# **Actuarial Society of South Africa**

## **EXAMINATION**

19 October 2021

### **Subject F201 – Health and Care**

### **Fellowship Applications**

*Time allowed:*        *Three hours and fifteen minutes, plus an additional five minutes to allow for uploading your file in the ASSA Exam Platform*

*Total marks:*        *100*

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

- 1. Ensure that you are logged in and authenticated through Examiity before you attempt the examination.*
- 2. Ensure that you have your candidate number handy to input as part of the examination.*
- 3. Questions are only available in the ASSA Exam Platform and may not be printed. Copy/paste of questions or parts thereof is only allowed between the Exam Platform and the Word answer document.*
- 4. You will be provided with a Word template to access and use to complete your questions. You may only use the file provided to you. No other file from your PC may be accessed.*
- 5. Ensure that your Candidate number appears in the Header of your Word template. [Select “Insert”, then “Header”, input your candidate number on blank header template and select “Close Header”]. DO NOT USE YOUR NAME OR MEMBER NUMBER ON YOUR ANSWER SCRIPT.*
- 6. You may not use any other computer program (e.g. Email or Excel), nor open any other browser during the examination.*
- 7. You may not make use of a Formulae and Tables book during the examination. Any such information that may be required will be provided to you within the examination.*
- 8. You are strongly encouraged to use the first 15 minutes as reading time only, however, you may commence answering the paper whenever you are ready.*
- 9. Mark allocations are shown in brackets.*
- 10. Attempt all questions.*
- 11. Show calculations where this is appropriate. You may use blank paper to carry out rough work calculations. You may use a calculator from the approved list only.*
- 12. Upload your answer file into the ASSA Exam Platform BEFORE the examination time expires.*

13. *Once you have added your file, you MUST click on FINISH ATTEMPT to save your file. You will still be allowed to go back and make changes (REVIEW ATTEMPT) if you have time.*
14. *Once you are satisfied with your uploaded file, click **FINISH ATTEMPT and FINISH ALL AND SUBMIT** whereafter you will not be able to make more changes. Take this into account when finishing early - once you have submitted, you will not be able to make any more changes to your answers.*
15. *It is the candidate's responsibility to ensure that all work is submitted BEFORE the end of the examination time. Take this into account when planning your review and submission. There will be no time announcements.*
16. *An option to opt out of the exam will become available 1 hour after the official exam start time. If you select the Opt-Out option, you agree and understand that your entire script/answers will be deleted and cannot be retrieved at a later stage and that your script or part thereof will not be put forward for marking.*

**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.**

***END OF INSTRUCTIONS***

**QUESTION 1**

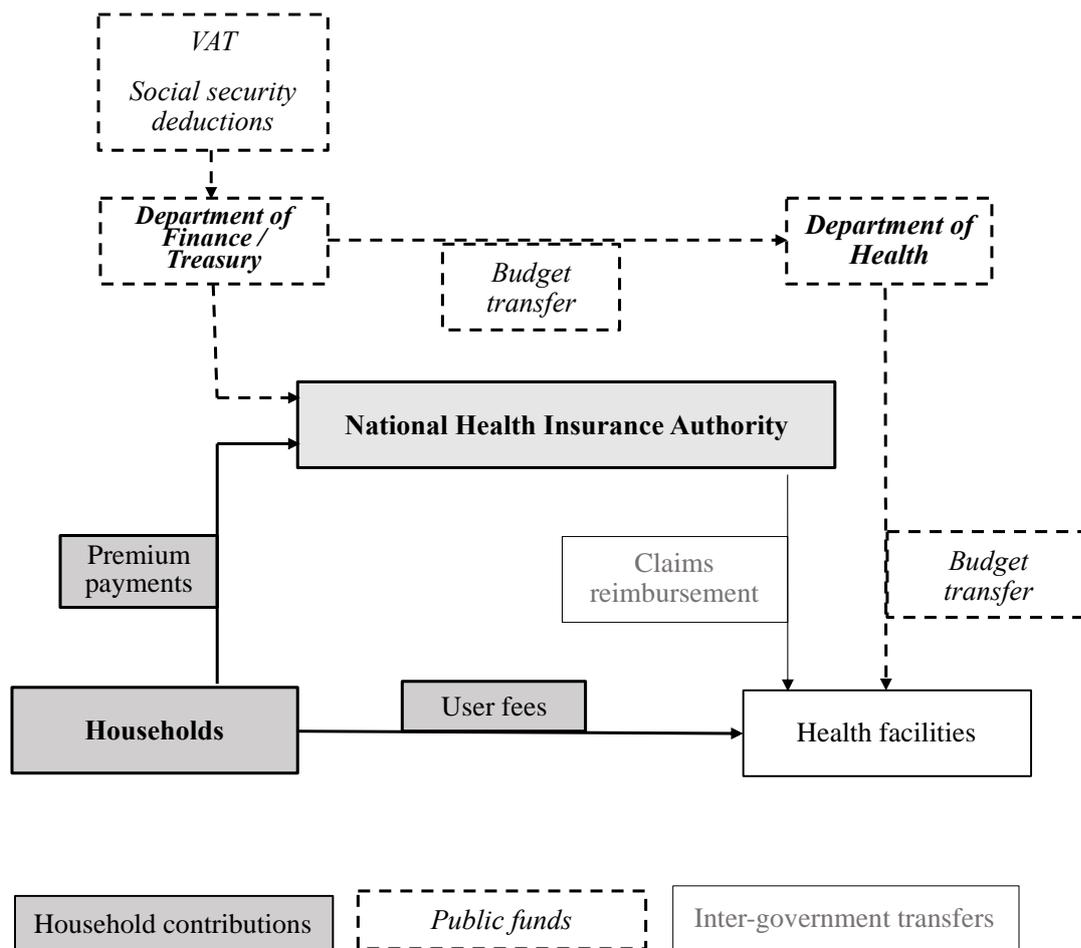
- i. Explain the term Universal Health Coverage (UHC). [5]

A new proposal has been given for National Health Insurance (NHI) funding and implementation for South Africa which you have been asked to analyse. The proposal sets out ways to assist South Africa to continue to strive towards achieving UHC. The proposal suggests a restructuring of healthcare financing sources to comprise a dedicated 2.5% Value Added Tax (VAT) levied on selected goods and services, a flat NHI levy paid by all tax paying households, social security deductions paid by employers and user fees at the point of care. User fees are payable at the point of care regardless of income or asset levels and are waived for individuals registered for NHI services.

Individuals are required to register in order to access services. Upon registration, a NHI card is granted which is valid for a fixed term but subject to annual renewals by payment of premiums and/or registration fees. All employer contributors are exempt from paying premiums but are required to pay a registration fee for the card.

The NHI Authority is proposed as the body responsible for implementing, operating and managing the NHI Fund, including granting accreditation to healthcare service providers and facilities that provide healthcare services to members of the NHI Fund.

The flow of funding is proposed as follows:



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The roles of the private sector and medical schemes have not been included in the proposal.

ii. Identify benefits and drawbacks of using VAT as one of the revenue sources for funding healthcare expenditure. [3]

iii. Discuss the implications of charging South Africans (who do not register for NHI benefits) user fees to access healthcare under this proposal. [4]

The proposed benefits package covers 95% of diagnosed conditions, has a defined list of exclusions and no cost-sharing requirements. It includes benefits for in-hospital and out-of-hospital services. All emergency conditions are covered.

Healthcare providers were initially paid only on a fee-for-service (FFS) basis, but over time the payment system has evolved to encompass diagnosis-related-groups (DRG) for all in-patient costs. Capitation is being implemented in specific regions for primary care reimbursement. Providers are required to be accredited by the NHI Authority to service NHI members.

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

vi. Outline possible complexities with receiving claims data from healthcare service providers both generally and specifically when moving from fee-for-service to alternative reimbursement methods. [5]

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

viii. Propose a set of criterion for the National Health Insurance Authority to use to accredit healthcare service providers, giving reasons for each proposed criteria. [8]

[Total 50]

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## QUESTION 2

- i. Define the following term: “business of a medical scheme”. [4]

You are an actuary working for a South African healthcare company who intends to launch a new product in the South African healthcare market: a General Practitioner (GP) voucher.

This voucher gives access to a single, pre-funded, face-to-face consultation with a GP. The product gives access to a consultation only (for minor illnesses and medical advice), while the cost of any special investigations, consumables, procedures, injectables and medication are excluded.

The consumer can purchase this voucher on the company’s website and redeem the voucher at any time between the purchase date and expiry date with a network GP when the healthcare need arises. The consumer is not restricted to use the voucher for him- or herself.

The company’s legal team has provided you with their opinion that this product is not deemed to be doing the business of a medical scheme, nor doing any kind of health insurance business. Your company intends to sell these GP vouchers to diversify their business, and aims to improve the lives of South Africans, particularly those that are uninsured, through enhanced access to quality private healthcare.

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

- iii. Outline factors to consider in determining a marketable price for this GP voucher. [10]

Your company’s Executive Committee wants to launch another more comprehensive GP voucher to expand its product range. The committee recommends that the second GP voucher includes a medication benefit to fund any medication that the GP might prescribe for the consumer during the consultation.

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

Subsequent to the launch of the GP vouchers, the Council for Medical Schemes (CMS) issues a press release in which they request your company not to sell these products and make arrangements to refund consumers who have purchased these vouchers.

- v. Explain possible reasons why the CMS could take this approach. [4]

The Executive Committee of your company asked you to provide arguments from an actuarial perspective to motivate for the continuation of these GP vouchers.

- vi. Outline the actuarial arguments you would put forward to the legal team to include in the company’s response to the CMS. [7]

[Total 50]

[Grand Total 100]

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**END OF EXAMINATION**