

INSTITUTE AND FACULTY OF ACTUARIES

EXAMINATION

20 April 2021 (am)

Subject SA1 – Health and Care Specialist Advanced

Time allowed: Three hours and fifteen minutes

<p>In addition to this paper you should have available the 2002 edition of the Formulae and Tables and your own electronic calculator.</p>
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If you encounter any issues during the examination please contact the Assessment Team on
T. 0044 (0) 1865 268 873.

- 1 Country A is a large, well-developed country. Medical services for citizens of Country A are generally provided through a range of modern, well-equipped private hospitals and medical practices.

The government of Country A pays for very limited medical services for its citizens and many citizens purchase Private Medical Insurance (PMI) to cover the costs of any medical treatment they need. Country A has a large number of private health and care insurance companies who provide PMI. PMI is generally purchased either by individuals or obtained as part of a group arrangement paid for by the individual's employer.

PMI products in Country A generally cover a wide range of healthcare treatments, and individuals usually have to go through detailed medical underwriting prior to obtaining cover.

The costs of many medical treatments in Country A have increased significantly in recent years.

The average age of the citizens of Country A has been increasing for the previous 10 years.

- (i) Assess the current approach for meeting the healthcare needs of the citizens of Country A. [10]

Following a general election in Country A, a new government has been elected. The new government promised during the election that it would improve the affordability and increase the coverage of PMI in Country A. The new government of Country A is considering three options to meet these aims.

Option 1 would require all health and care insurance companies to offer a low-cost Health and Care Plan (HCP) alternative to the full PMI product. The product will pay out pre-specified cash amounts on the occurrence of selected medical events.

- (ii) Discuss the advantages and disadvantages of Option 1 from the perspective of:
- (a) the citizens of Country A.
 - (b) the health and care insurance companies in Country A.

[6]

Option 2 is to change the basis on which health and care insurance companies can charge for PMI in Country A. Under Option 2, PMI premiums will only be allowed to vary by age, geographical location, marital status and smoker status. In addition:

- the extent to which premiums can vary by age will be limited such that the premium for the highest age cannot be more than three times the premium for the lowest age.
- gender can no longer be used as a rating factor.
- medical underwriting can no longer be used in the premium rating process.

- (iii) Discuss the implications of Option 2 from the perspective of the citizens of Country A. [5]
- (iv) Discuss the possible concerns that health and care insurance companies could have if Option 2 is introduced. [4]
- (v) Suggest possible actions the government of Country A could take to address the concerns in part (iv). [4]

Option 3 would be for the government of Country A to set up its own not-for-profit health and care insurance company that would sell low-cost PMI with minimal underwriting requirements.

- (vi) Discuss the factors that will need to be considered in determining the assumptions for statutory reserving and capital requirements for this insurance company. [14]
- [Total 43]

2 A large health and care insurance company operating in a developed country provides a range of Critical Illness (CI) products on both a stand-alone and accelerated basis.

A new disease has recently swept across the country and the expectation is that 10% to 15% of the population will fall ill from the disease. In the majority of cases, the symptoms experienced by individuals are mild and recovery occurs within a week. However, hospitalisation is typically required in cases where individuals already have serious underlying medical conditions. In these cases, the disease can result in either a permanent impairment to health or death.

The Marketing Manager has suggested that the disease should be added to the list of conditions covered under the company's CI products for new business.

- (i) Outline the advantages and disadvantages of the Marketing Manager's proposal. [10]
 - (ii) Describe how the disease could impact the pricing assumptions for the company's CI products. [11]
- [Total 21]

3 In Country B, a small, well-developed country, both state and private healthcare providers are available. A small number of insurers provide long-term care products that are offered on a pre-funded basis. One health and care insurance company, Company Z, dominates the market for pre-funded Long-Term Care Insurance (LTCI) products. The primary product it offers provides benefits on an indemnity basis in return for annual premiums payable until care is required.

- (i) Discuss the advantages and disadvantages for consumers in Country B of Company Z's domination of the pre-funded LTCI market. [4]

Company Z is currently conducting an experience analysis in order to review the premium rates of its pre-funded LTCI product.

- (ii) Describe the investigations the actuarial team should perform to understand the product performance. [10]

The review suggests a substantial increase in the premium rates will be required.

- (iii) Describe the factors that could have caused the experience to change over time. [10]

Company Z is concerned that the increase in LTCI premium rates will adversely impact its reputation and has proposed amending the product structure as an alternative. Two possible amendments have been suggested:

Option A: Introduce deductibles and co-insurance payments if private care is selected over state facilities.

Option B: Discontinue stand-alone long-term care and, instead, offer a life insurance product with long-term care benefits offered on an accelerated basis. Long-term care benefits claimed would reduce the life insurance sum assured and would only be paid up to the value of the life policy.

- (iv) Discuss, for each of the options above, the advantages and disadvantages from the perspective of:

- (a) Company Z.
- (b) the policyholder.
- (c) healthcare providers in Country B.

[12]

[Total 36]

END OF PAPER