

**Subject SA1
Health and Care
Specialist Applications**

Syllabus

for the 2008 Examinations

1 June 2007

**The Faculty of Actuaries and
Institute of Actuaries**

Subject SA1 — Health and Care Specialist Applications Syllabus

Aim

The aim of the Health and Care Specialist Applications subject is to instil in the successful candidates the ability to apply knowledge of the United Kingdom health and care environment and the principles of the actuarial practice the provision of health and care benefits in the United Kingdom.

Links to other subjects

Subject ST1 — Health and Care Specialist Technical: provides the underlying principles of health and care upon which this subject is based. It is assumed that candidates have a good understanding of this material.

Candidates can expect to be examined in aspects of general principles developed in Subject ST1 — Health and Care Specialist Technical as well as the further aspects of general principles, and also the United Kingdom specific aspects, developed in this subject.

Subject P1 — Health and Care UK Practice Module Specialist: the knowledge required to pass Subject P1 is contained in this subject.

Objectives

On completion of this subject the newly-qualified actuary will be able to:

- (a) Define the principal terms used in health and care provision in the United Kingdom.
- (b) Analyse the main types of United Kingdom health and care insurance products in terms of:
 - higher order customer need considerations
 - interplay with State provision
 - higher order insurer risk considerations
 - demographic issues
 - salesman suggests the following contract
 - equity with balance of portfolio
 - cross-selling
 - potential issues in a Stakeholder environment
 - bundling and unbundling
 - impact of unit-linked wrappers on disability products
 - capitalising income-based claim payments

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- (c) Understand the key operating issues for a UK health and care insurer in the 21st century.
- Is it bought or sold?
 - methods of sale in the UK
 - use of medical underwriting versus pre-existing condition clauses
 - assessment of credit and counterparty risks
 - external influences e.g. emergence of new diseases, improvements in medical science
 - genetic testing possibilities and constraints
 - impact of continual monitoring of PRE
 - Misselling in health and care?
- (d) Understand the legal, taxation and regulatory framework as applicable to UK health and care insurance.
- taxation of UK health and care products: premiums, benefits, profits
 - taxation of mutuals, proprietaries and providents
 - FSA supervision of valuation of:
 - assets and liabilities
 - annual or quarterly returns
 - transfers to shareholders
 - margins of solvency
 - FSA's conduct of business rules
 - fair valuation accounting implications for health and care
 - designing remuneration to suit regulatory framework
- (e) Describe the requirements of the professional guidance relevant to actuaries practising in or advising UK health and care operations.
- guidance notes
 - financial condition reports

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- (f) Understand how to design and price health and care insurance products to be sold by UK insurers, having regard to:
- the choice of policy conditions, their definition and their relative importance
 - capital requirements and return on capital
 - management of the risks
 - underwriting guidelines
 - reinsurance requirements
 - investment policy
 - policy conditions such as self retention limits
 - the renewal process and options
 - expenses
 - legal restrictions on underwriting
- (g) Understand the principles and practices in specific areas of valuations and evaluations.
- assessing the market for launch of health and care product or company
 - assessing a health and care company or portfolio for takeover
 - assessing impact of disability results on with-profits distribution
 - assessing health and care delivery systems in other territories for product sales
 - finding appropriate data/information for the above analyses
 - embedded value analysis and contributions to surplus
 - projecting solvency
 - managing capital
- (h) Evaluate the uses and benefits of reinsurance support in health and care insurance.
- control of individual risks
 - control of aggregation of risks
 - control of portfolio risk
 - financing of new business strain
 - financing of free asset margins
 - financing of takeovers
 - technical assistance in product development and data provision
 - technical assistance in overseas developments
 - risk management assistance (medical and financial underwriting, claims assessment, group scheme pricing)
 - IT software (pricing, underwriting and claims)
 - Reinsurance impact on insurer profitability — zero sum game or arbitrage opportunity?
 - badging

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- (i) Analyse the asset-liability matching requirements of a UK health and care insurer and develop appropriate strategies.
- stochastic modelling
- (j) With reference to the Actuarial Control Cycle, carry out an analysis of the experience of a health and care insurer in the following areas:
- claims and exposure
 - analysis of movements
 - expenses
 - persistency and profitability by source
 - effect of early claims, non-disclosure and anti-selection
 - impact of economic conditions on claims experience
- (k) Develop appropriate recommendations for the strategies phase of the Actuarial Control Cycle.
- implications of abandoning product
 - changing policy conditions for existing contracts
 - changing policy premium terms
 - changing policy benefits
 - improving risk environment (e.g. changing employer attitudes to health of workforce)
 - analysing degree of change in actuarial assumptions
 - changing remuneration structures
 - changing underwriting information and procedures
 - changing claims information and procedures
 - changing investment policy and / or managers
 - changing IT structures
 - changing office personnel and competence balance
 - introducing new products
 - tax and legal implications of the above
 - reinsurance implications of the above

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(l) Understand the practical and cultural implications of wider health and care provision in the UK.

- the UK healthcare market place
- changing industry recommendations e.g. ABI guidelines or best practice
- future role of the State in healthcare provision
- role of the employers in provision of health and care benefits
- the role of the appointed actuary
- medical advances — their implications
- growing claims consciousness
- means testing emphasising need for insurance
- outcome measures for successful healthcare delivery
- lessons from abroad in State systems and insurance innovation
- QALYs (quality adjusted life years)
- genetics
- Disability Discrimination Acts

(m) Solve complex problems and analyse complex issues associated with:

- product design
- product pricing
- multi-state decrements
- reserving for outstanding claims
- valuation of assets and liabilities
- reinsurance arrangements
- investment policy
- asset adequacy
- long term financial control
- pricing with data scarcity

and hence draw reasoned conclusions in relation to:

- risks undertaken
- the requirement for capital
- the return on capital

End of Syllabus