Important Exam Information:

Exam Date and Time A read-through time will be given prior to the start of the exam-15

minutes in the morning session and 15 minutes in the afternoon session.

Exam Registration Candidates may register online or with an application.

Order Study Notes Study notes are part of the required syllabus and are not available

electronically but may be purchased through the online store.

Introductory Study Note The Introductory Study Note has a complete listing of all study notes as

well as errata and other important information.

Case Study A copy of the case study will be provided with the examinations.

Candidates will not be allowed to bring their copy of the case study into

the examination room.

Past Exams from 2000-present are available on SOA website.

Updates Candidates should be sure to check the Updates page on the exam home

page periodically for additional corrections or notices.

Exam Group/Health CSP

Learning Objectives

1. Analyze medical quality measures and their importance to companies, plan sponsors and members

Learning Outcomes

The candidate will be able to:

- a) Describe impact of quality measures and how used by the stakeholders
- b) Identify performance indicators that would be considered meaningful in developing or evaluating the performance of a health plan
- c) Provide guidance on methodologies to use in developing or evaluating these reports, including statistical credibility of the underlying data, and the methodology inherent in the calculations as well as the method of displaying and the reliability of the results
- d) Compare the role of comparative effectiveness research and evidence based medicine in the quality of medicine

Syllabus Resources

- The Handbook of Employee Benefits, Rosenbloom, J.S., Seventh Edition, 2011,
 - Chapter 9, Health Care Quality: Are We Getting Our Money's Worth
- GH-C30-10: SOA Session Materials, 2009 Health Spring Meeting, Session 45 PD, Quality and Efficiency II, "Government Sponsored Research and Initiatives"
- Measurement of Healthcare Quality and Efficiency: Resources for Healthcare Professionals

 –Update, including Appendices A and B only

http://www.soa.org/research/research-projects/health/research-quality-report.aspx

Exam	Group/Health CSP

Learning Objectives

2. Typical markets: Understands customer segments and how products are marketed to each.

Learning Outcomes

The candidate will be able to:

- a) Compare group vs. individual product vs. government financed markets
- b) Describe common marketing channel to each major customer segment.
- c) Describe the effect of the distribution channel on pricing and underwriting
- d) Compare the relationship between different marketing channels and the underlying needs of the consumers.

- Individual Health Insurance, Bluhm, W.F., 2007, Chapter 10, Other Insurance Functions, pp 295 301 only
- Group Insurance, Bluhm, W.F., Fifth Edition, 2007, Chapter 1, The Group Insurance Marketplace
- Handbook of Employee Benefits, Rosenbloom, 7th Edition, Ch. 24, Strategic Plan Management
- GH-C135-13: Essentials of Managed Health Care, Kongstvedt, P.R., Sixth Edition 2013, Ch. 16

Exam Group/Health CSP

Learning Objectives

3. Evaluate techniques for claims and disease management

Learning Outcomes

The candidate will be able to:

- a) Compare techniques used to manage claims utilization
- b) Apply principles of intervention outcomes measurement
- c) Apply principles of study design to the measurement of intervention outcomes to specific situations
- d) Describe operational issues in the development of a study including acceptable methods for dealing with the issues
- e) Perform a literature review about program evaluation
- f) Estimate savings, utilization rate changes and return on investments
- g) Describe value chain analysis as it applies to the planning and management of disease management and other intervention analysis
- h) Apply the actuarially adjusted historical control methodology
- i) Calculate chronic and non-chronic trends in a manner that reflects patient risk
- j) Apply methodologies to reduce random fluctuation and maintain validity for disease management effectiveness studies
- k) Compare methodologies for calculating chronic and non-chronic trends
- 1) Test actuarial methods for evaluating disease management savings outcomes
- m) Analyze and use predictive models

- Group Insurance, Bluhm, W.F., Fifth Edition, 2007, Ch 27 Claim Administration and Management
- Healthcare Risk Adjustment and Predictive Modeling, Duncan, 2011
 - o Chapter 1, Introduction to Health Risk
 - o Chapter 2, Models for Predicting Health Risks
 - o Chapter 3, Data: The Raw Material of Modeling (exclude appendix)
 - o Chapter 4, Clinical Identification Algorithm
 - o Chapter 5, Grouper Models
 - o Chapter 6, Development and Construction of DRGs, DCGs and ETGs
 - o Chapter 7, Introduction to Modeling
 - o Chapter 14, Risk Adjustment in Medicare
 - o Chapter 15, Risk Adjustment and Health Care Reform: The Example of Massachusetts
- *Individual Health Insurance*, Bluhm, W.F., 2007, Chapter 10, pages 302 310
- Managing and Evaluating Healthcare Intervention Programs, Duncan, 2008
 - o Ch. 1, Introduction
 - o Ch. 2, Care Management Programs and Interventions
 - o Ch. 3, Actuarial Issues in Care Management Evaluations
 - o Ch. 4, Estimating Savings, Utilization Rate Changes and Return on Investment A Selective Review of the Literature on Program Evaluation, Exclude Appendix 4.2

- o Ch. 5, The Use of the Value Chain in Disease Management Program Planning
- o Ch. 6, Understanding the Economics of Disease Management Programs
- o Ch. 7, Measuring Disease Management Savings Outcomes
- o Ch. 8, An Actuarial Method for Evaluating Disease Management Outcomes
- o Ch. 9, Understanding Patient Risk and Its Impact on Chronic and on-Chronic Trends
- Ch. 10, Random Fluctuations and Validity in Measuring Disease Management Effectiveness for Small Populations
- Ch. 11, Comparative Analysis of Chronic and Non-Chronic Insured Commercial Member Cost Trends
- o Ch. 12, Testing Actuarial Methods for Evaluating Disease Management Outcomes
- GH-C134-12: *Managed Health Care Handbook*, Kongstvedt, Fourth Edition, 2001,Ch. 64, Legal Liability Related to Medical Management Activities

Exam Group/Health CSP

Learning Objectives

4. Formulate and evaluate insurer claim reserving techniques

Learning Outcomes

The candidate will be able to:

- a) Describe the types of claim reserves (e.g., due and unpaid, ICOS, IBNR, LAE, PVANYD)
- b) Explain the limitations and applications of the various valuation methods:
 - Lag methods
 - Tabular methods
 - Case reserves
 - Projection methods
 - Loss ratio methods
- c) Calculate appropriate claim reserves given data
- d) Identify adjustments to IBNR (margins, trend, seasonality, claims processing changes, etc.)
- e) Evaluate data resources and appropriateness for calculating reserves
- f) Test adequacy of the reserves vs. actual claims experience

- Group Insurance, Bluhm, W.F., Fifth Edition, 2007
 - Chapter 40, Short-Term Reserves
 - Chapter 41, Claim Reserves for Long Term Benefits
- U.S. GAAP for Life Insurers, Herget, T., Second Edition, 2006
 - Ch. 10 Individual Health Insurance, Section 10.9 Claim Reserves;
 - Ch. 12 Group Insurance Section 12.1.4 Claim Reserves
- GH-C30-10: SOA Session materials, 2009 SOA Spring Meeting, Session 78, "The Art of Reserving"
- GH-C30-10: SOA Session materials ,2009 Spring Meeting, Session 17 Claims Payment Issues
- GH-C30-10: SOA Session Materials, 2006 Valuation Actuary Symposium, "LTC Reserves," #13PD
- GH-C102-07: Health Reserves
- GH-C130-12:Canadian Standards of practice 2130, 2140 up to and including .26, 2300 (excluding 2320.35 to 2320.39, 2340 and 2350.19 to 2350.30) 2500 excluding 2530.13
- Health Section Issues New IBNR Study by Cabe Chadick and Steve Siegal, HealthWatch, February 2010, page 16.
 - http://www.soa.org/library/newsletters/health-watch-newsletter/2010/february/hsn-2010-iss63.pdf
- LTC News, 9/2009 "Claims Reserves Model: How Actuaries Rely Upon the Claim Data they Use" http://www.soa.org/library/newsletters/long-term-care/2008/september/ltc-2008-iss21.pdf
- CIA Educational Note, Valuation of Group Life and Health Policy Liabilities http://www.actuaries.ca/members/publications/2010/210034e.pdf
 - Chapter 6, Implications of CICA Asset Liability Method
 - Chapter 7, Term of the Liability
 - Appendix B, Data Issues,
- ASOP 5 Incurred Health and Disability Claims http://www.actuarialstandardsboard.org/pdf/asops/asop005_076.pdf
- ASOP 23 Data Quality http://www.actuarialstandardsboard.org/pdf/asops/asop023 097.pdf

Exam Group/Health CSP

Learning Objectives

5. Formulate and evaluate insurer reserving techniques for other liabilities

Learning Outcomes

The candidate will be able to:

- a) Describe different types of reserves and explain when each is required
 - Deficiency reserves,
 - Active life reserves,
 - Premium reserves,
 - Deferred acquisition costs
 - Claim administration expense reserves,
 - Calculate the reserves given data
- b) Demonstrate adequacy of the reserve
 - Gross premium valuation
 - Asset adequacy analysis
 - Recast analysis

Syllabus Resources

- Individual Health Insurance, Bluhm, W.F., 2007
 - Chapter 6, Reserves and Liabilities, including applicable CD files
 - Appendix D
- U.S. GAAP for Life Insurers, Herget, T., Second Edition, 2006
 - Chapter 10 (Individual Health Insurance)
 - Chapter 12 (Group Insurance) Sections 12.1.2, 12.1.3, 12.1.5, 12.1.6, 12.1.7, 12.1.8
- GH-C102-07 Health Reserves
- GH-C30-10:SOA Session Materials, 2008 Valuation Actuary Session 30 PD, Premium Deficiency Reserves for Health Insurance
- CIA Educational Note, Valuation of Group Life and Health Policy Liabilities
 - Chapter 9, Administrative Services Only
 - Chapter 10, Stop-loss
 - Chapter 11, DAC
 - Chapter 12, Tax Considerations
 - Appendix B, Data Issues
 - Appendix C, Liabilities for Future Experience Rating Refunds
 - Appendix D, LTD Claim Liability Adequacy Test Example

http://www.actuaries.ca/members/publications/2010/210034e.pdf

- ASOP 7 Analysis of Life, Health, or Property/Casualty Insurer Cash Flows http://www.actuarialstandardsboard.org/pdf/asops/asop007 089.pdf
- ASOP 18 Long Term Care Insurance

http://www.actuarialstandardsboard.org/pdf/asops/asop018 064.pdf

- ASOP 22 Statements of Opinion Based on Asset Adequacy Analysis by Actuaries for Life or Health Insurers http://www.actuarialstandardsboard.org/pdf/asops/asop022 083.pdf
- Asset Adequacy Practice Note, December 2004. (pp 1-7,10-17,62-66) http://actuary.org/pdf/practnotes/life_asset.pdf
- AAA Premium Deficiency Reserves Discussion Report, March 2007 http://www.actuary.org/pdf/health/pdr_march07.pdf
- ASOP 42. Determining Health and Disability Liabilities Other Than Liabilities for Incurred Claims http://www.actuarialstandardsboard.org/pdf/asops/asop042 091.pdf

Exam	Group/Health CSP
Learning Objectives	
6. Evaluate financial performance measures for insurers for both short-term and long-term products	

Learning Outcomes

The candidate will be able to:

- a) Assess key financial measures used by various entities (insurers, HMOs, provider-owned plans)
- b) Project financial outcomes and recommend strategy to management to achieve financial goals
- c) Compare key differences and similarities in measures by accounting basis (statutory, tax, GAAP)
- d) Compare measures for long-term and short-term products

Syllabus Resources

- Analysis for Financial Management, Higgins, Tenth Edition, 2012
 - Chapter 1, Interpreting Financial Statements
 - Chapter 2, Evaluating Financial Performance
 - Chapter 3, Planning Future Financial Performance
 - Chapter 4, Managing Growth
 - Chapter 8, Risk Analysis in Investment Decisions

Candidates may also use Analysis for Financial Management, 9th Edition. The same chapter references apply.

- Group Insurance, Bluhm, W.F., Fifth Edition, 2007
 - Chapter 17, Group Insurance Financial Reporting: US
 - Chapter 18, Group Insurance Financial Reporting: Canada
 - Chapter 37, Forecasting
 - Chapter 43, Analysis of Financial and Operational Performance
 - Chapter 45, Planning and Control
- U.S. GAAP for Life Insurers, Herget, T., Second Edition, 2006
 - Chapter 1 Overview
 - Chapter 2 Authorities
 - Chapter 3, Expense and Capitalization
 - Chapter 19. Annual Statement Presentation, Sections 19.1, 19.2, 19.3 and 19.4.9.
- GH-C30-10: SOA Session Materials: 2007 Health Spring Meeting, Session 17 "Communication of Financial Results"
- CIA Educational Note, Valuation of Group Life and Health Policy Liabilities
 Chapter 8, Methods and Assumptions for Developing Cash Flows
 http://www.actuaries.ca/members/publications/2010/210034e.pdf
- ASOP 7, Analysis of Life, Health or Property/Casualty Insurer Cash Flows http://www.actuarialstandardsboard.org/pdf/asops/asop007 089.pdf
- ASOP 8, Regulatory Filings for Rates and Financial Projections for Health Plans http://www.actuarialstandardsboard.org/pdf/asops/asop008 100.pdf

Exam	Group/Health CSP
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Learning Objectives

7. Integrate reinsurance arrangements with overall financial strategy of company plan / sponsor

Learning Outcomes

The candidate will be able to:

- a) Analyze the key risks that reinsurance will stabilize for a company's given line of business
- b) Recommend a type of reinsurance for a given scenario
- Assess the financial impact reinsurance has on the ceding company and reinsurance company in a given scenario
- d) Propose key considerations for a self-funded employer considering stop-loss coverage on a group health plan

- The Handbook of Employee Benefits, Rosenbloom, J.S., Seventh Edition, 2011
 - Chapter 29, Funding Health Benefit Plans: Insured Arrangements
 - Chapter 30, Funding Health Benefits: Self-Funded and Captive Arrangements
- GH-C30-10: SOA Session Materials: Spring Meeting 2009, Session 44, Update on Employer Stop-loss
- GH-C110-07: Reinsurance for Group Accident & Health Insurance

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Learning Objectives

8. Evaluate the impact of taxation on company / plan sponsor financial management

Learning Outcomes

The candidate will be able to:

- a) Assess the tax implications of benefit offerings from a plan sponsor perspective
- b) Explain malformations of the market generated by tax policies

- Group Insurance, Bluhm, W.F., Fifth Edition, 2007, Chapter 16, Regulation in Canada, pp 325 327 only
- The Handbook of Employee Benefits, Rosenbloom, J.S., Seventh Edition, 2011
 - Chapter 25, Cafeteria Plan design and Administration, pp. 709-716 only
 - Chapter 30, Tax Exempt Trust (ASO), pp 836 838 only
 - Chapter 32, Cafeteria Plans (FI), pp 886 889 only
- GH-C106-07: US Health Insurance Taxation
- GH-C124-12: CIA Study Note Taxation of Employee Benefits (Group Insurance) in Canada
- GH-C126-12:Mercer, September 2010 Communiqué, "Employee Life and Health Trust: Modified Draft Legislation
- GH-C127-12: Canadian Handbook of Flexible Benefits, Section 12.4
- GH-C132-12: Chapter 48 of Managed Health Care Handbook, Fourth Edition, (exclude Appendices)

Exam	Group/Health CSP
Learning Objectives	
9. Evaluate the impact of regulation on company / plan sponsor financial management	
Learning Outcomes	
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The candidate will be able to:

- a) Evaluate the interrelationship of state versus federal regulation on company financial management and marketing
- b) Compare the primary federal regulations with which an employer must comply when offering benefit plans

- Group Insurance, Bluhm, W.F., Fifth Edition, 2007
 - Chapter 14, Principles of Health Insurance Regulation
 - Chapter 15, Regulation in the United States
 - Chapter 16, Regulation in Canada
- The Handbook of Employee Benefits, Rosenbloom, J.S., Seventh Edition, 2011
 - Chapter 26, Fiduciary Liability Issues under ERISA
- GH-C101-07: NAIC Model Regulation I-40-1 Advertisements of Accident and Sickness Insurance Model Regulation
- GH-C125-12: Canadian Handbook of Flexible Benefits, Ch. 13
- GH-C133-12: *Managed Health Care Handbook*, Kongstvedt, P.R. Fourth Edition, Chapter 68, Health Plan Corporate Compliance Programs
- GH-C136-13: Essentials of Managed Health Care, Kongstvedt, P.R., Sixth Edition, Ch. 30, The Patient Protection and Affordable Care Act

Learning Objectives

10. Evaluate the risks associated with health insurance

Learning Outcomes

The candidate will be able to:

- a) Evaluate the risk associated with a specific product, including
 - Identify risks inherent in the product
 - Describe the types of analysis used to measure the risk
 - Discuss methods for mitigating the risks
- b) Evaluate an enterprise risk management (ERM) system, including
 - Describe the components on an ERM program
 - Describe ERM-type risks
 - Describe the types of analysis used to measure the risk
 - Discuss methods for mitigating the risks
- c) Complete a capital needs assessment
 - Calculate capital needs for a given insurer
 - Assess capital needs against assets
 - Determine actions needed to address issues identified by assessment
 - Understand key elements of NAIC and Canadian RBC models

Syllabus Resources

- Enterprise Risk Management: From Incentives to Controls, Lam, 2003
 - Chapter 4, What is Enterprise Risk Management
 - Chapter 8, Risk Transfer
 - Chapter 9, Risk Analysis
 - Chapter 15, Business Applications
- Group Insurance, Bluhm, Fifth Edition, 2007
 - Chapter 19, Risk-Based Capital Formulas
- GH-C30-10: SOA Session Materials, 2006 Spring Meeting, 48 PD Risk Management for Individual Medical Insurance
- GH-C112-07: DFCA Handbook, Ch. 2 and 6. (Ch.1 for background only)
- GH-C113-07: Mapping of Health Company Risks
- GH-C114-07: 3rd Annual ERM Symposium "Economics Capital Recent Trends in Implementation
- GH-C131-12: Chapter 46 of Managed Health Care Handbook, Fourth Edition
- ERM Practice as Applied to Health Insurers, etc http://www.soa.org/files/pdf/research-erm-pract-health.pdf
- CIA Educational Note on Dynamic Adequacy Testing,
 - Sections 1, 2, 3, 4 and Appendix A, excluding sections 3, 4, 6, 10, 11

http://www.actuaries.ca/members/publications/2007/207108e.pdf

Exam	Group/Health CSP

Learning Objectives

11. Prepare a Statement of Actuarial Opinion (SAO) for selected health matters

Learning Outcomes

The candidate will be able to:

- Describe the U.S. Qualifications Standards and Statements of Actuarial Opinion (SAOs) as outlined in the Standard
- b) Discuss specific issues with respect to these classes of SAOs
 - Valuation report for an employer report of retiree medical under FAS 106
 - Certification of health reserves
- c) Develop documentation for an SAO
- d) Discuss approaches to deal with obstacles to producing an unqualified SAO
- e) Describe common situations where insurance regulations or Medicare laws call for a signed SAO by a qualified actuary
- f) Describe the continuing education credits for signing SAOs

- GH-C30-10: SOA Session Materials: 2009 SOA Health Spring Meeting, Session 89, US Qualification Standards
- GH-C30-10: SOA Session Materials: 2009 SOA Health Spring Meeting, Session 69, The Code of Professional Conduct
- ASOP 23, Data Quality
 - http://www.actuarialstandardsboard.org/pdf/asops/asop023 097.pdf
- ASOP 25, Credibility Procedures Applicable to Accident and Health, Group Term Life and Property/Casualty Coverages, pp. 1-5
 - http://www.actuarialstandardsboard.org/pdf/asops/asop025 051.pdf
- ASOP 41, Actuarial Communicationsata Quality http://www.actuarialstandardsboard.org/pdf/asops/asop041_120.pdf
- Health Section News, 10/2004, Read, Write, Think http://www.soa.org/library/newsletters/health-section-news/2004/october/hsn-2004-iss48-DobsonSnook.pdf
- Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States, effective January 1, 2008, including the FAQs
 - http://www.actuary.org/qualstandards/qual.pdf
 - http://actuary.org/qualstandards/qualfaqs.asp
- The Revised Code of Conduct (2001), including Memorandum from the Joint Committee http://www.soa.org/about/membership/about-code-of-professional-conduct.aspx
- Practice Note on the Revised Actuarial Statement of Opinion Instructions for the NAIC Health Annual Statement effective December, 31 2009
 - http://www.actuary.org/pdf/practnotes/sao_sept09.pdf

Exam	Group/Health CSP
Learning Objectives	
12. Understand an actuarial appraisal	
Learning Outcomes	

The candidate will be able to:

- a) Describe applicable ASOP's and other guidelines
- b) Describe components of an actuarial appraisal
- c) Describe an approach for preparing and actuarial appraisal
- d) Describe risks associated with interpreting an actuarial appraisal

- GH-C103-07: The Actuary and Health Insurance Mergers and Acquisitions
- GH-C104-07: Mergers and Acquisitions, Toole and Herget
 - Chapter 4, Valuation Techniques
- GH-C105-07: Components of Insurance Firm Value and the Present Value of Liabilities
- ASOP 23, Data Quality http://www.actuarialstandardsboard.org/pdf/asops/asop023 097.pdf
- RSA, Vol. 19, No 1.a. Appraisals of blocks of health business http://www.soa.org/library/proceedings/record-of-the-society-of-actuaries/1990-99/1993/january/RSA93V19N1A11.PDF
- RSA, Vol. 30, No. 2 Session 15 PD, Actuarial Appraisals Process and Issues http://www.soa.org/library/proceedings/record-of-the-society-of-actuaries/2000-09/2004/june/rsa04v30n215pd.pdf

Exam	Group/Health CSP

Learning Objectives

13. Demonstrate an understanding of the accounting requirements and methodology regarding retiree life and health benefits

Learning Outcomes

The candidate will be able to:

- a) Determine appropriate baseline assumptions for benefits and population
- b) Project future retiree benefit costs
- c) Describe principles outlined in ASOP #6
- d) Describe funding alternatives for retiree benefits

- Fundamentals of Retiree Group Benefits, Yamamoto, 2006
 - Chapter 7, U.S. Accounting
 - Chapter 8, Other Accounting
 - Chapter 9 Actuarial Methods and Assumptions
 - Appendix F
- GH-C128-12: Deloitte Summaries on IAS 19
- GH-C129-12:CIA Standards of Practice
- AAA Practice Note, Actuarial Equivalence for Prescription Drug Plans and Medicare Advantage Prescription
 Drug Plans under the Medicare Drug Programs, March 2008
 http://www.actuary.org/pdf/practnotes/health-partd-mar08.pdf
- ASOP 6, Measurement of Retiree Group Liabilities http://www.actuarialstandardsboard.org/pdf/asops/asop006_084.pdf