

Group and Health Design & Pricing Fall 2008

Important Information

The examination for this course will be given on Thursday, October 30, 8:30am–11:45am and 1:30pm–4:45pm and will consist of six hours of written-answer questions. 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. Information regarding registering for exams is available on the [Exam Registration](#) page.

Study notes are part of the required Course of Reading and are not available electronically. The [Introductory Study Note](#) has a complete listing of all study notes. Candidates must order the study notes from the Society of Actuaries using the [Study Note Order Form](#). There are no Revisions for Fall 2008. Past exams are available on the Exam Archives page of the SOA web site under [Multiple Choice/Essay Examinations](#).

Candidates should be sure to check the [Updates](#) page of the web site periodically for additional corrections or notices.

The candidate should be very familiar with the Learning Objectives as described in the Basic Education Catalog. These Learning Objectives are the first ingredient in developing the syllabus and also guide the examination committee when writing questions. The Learning Objectives set out the cognitive level needed to pass this exam. You will notice that the candidates are expected to “analyze,” “explain,” “calculate,” “describe,” “apply,” etc. While studying the syllabus material, candidates

Exam	Group/Health Design & Pricing
Learning Objectives	
<p>1. Understand and evaluate the effectiveness of the various types of Single Employer group coverage typically offered under:</p> <ul style="list-style-type: none"> - Group health plan, including Consumer driven plans, etc. - Prescription Drug - Group dental plan - STD or LTD plan (incl. mention of coverage within other plans) - Group life plan - Post ret coverages 	
Learning Outcomes	
<p>The candidate will be able to:</p> <ol style="list-style-type: none"> a) Describe the various coverages, including typical benefit provisions, eligibility requirements, cost-sharing provisions, limits and funding mechanisms b) Identify the potential gaps in needed or desired coverages c) Identify which participants would find each coverage a valued benefit and why d) Assess the advantages and disadvantages to an sponsor of offering a given coverage/benefit e) Evaluate potential financial, legal and moral risks associated with each coverage f) Recommend policy provisions to minimize the risks identified above g) Assess the advantages and disadvantages to an participant of offering a given coverage/benefit h) Evaluates several coverage scenarios as alternatives to a given scenario 	
Syllabus Resources	
<ul style="list-style-type: none"> • <i>The Handbook of Employee Benefits</i>, Rosenbloom, Sixth Edition, 2005 <ul style="list-style-type: none"> ○ Ch. 6, Understanding Managed Care Health Plans: The Managed Care Spectrum ○ Ch. 11, Alternative Prescription Drug Plans and Their Impact on Employers ○ Ch. 12, Understanding Managed Behavioral Health Care Benefits 	

- Ch. 46, Preventive Health Care Strategies: An Overview for Employers
- *Group Insurance*, Bluhm, Fifth Edition, 2007
 - Ch. 11, Miscellaneous Benefits
- *Managed Healthcare Handbook*, Kongstvedt, Fourth Edition, 2001
 - Ch. 60, Managed Care Dental Benefits
- GH-D100-07 Specialty Accident and Health Products
- GH-D101-07 Group Disability Insurance (**sections 1, 8, 10, 11**)
- GH-D102-07 Group Life Insurance **Introduction, Sections 1–3**
- GH-D103-07 Pricing Long Term Care, **pp. 1-9**

Exam	Group/Health Design & Pricing
Learning Objectives	
<p>2. Understand and evaluate the effectiveness of the various types of Individual and multi-life coverage typically offered under:</p> <ul style="list-style-type: none"> - Individual health plan - LTC or - Individual DI plan - Medicare Supplement 	
Learning Outcomes	
<p>The candidate will be able to:</p> <ul style="list-style-type: none"> a) Describe the various coverages, including typical qualifications for benefits, coverage eligibility, cost-sharing provisions, limits, and funding mechanisms b) Identify the potential gaps in needed or desired coverages c) Identifies which insureds would find each coverage a valued benefit and why d) Evaluate potential financial, legal and moral risks associated with each coverage e) Recommend policy provisions to minimize the risks identified above f) Evaluates several coverage scenarios as alternatives to a given scenario 	
Syllabus Resources	
<ul style="list-style-type: none"> • <i>Individual Health Insurance</i> , Bluhm, 2007 <ul style="list-style-type: none"> o Ch. 2, The Products • GH-D104-07 Pricing Medicare Supplement Benefits, Sections I & II • GH-D105-07 Direct Marketing 	

Exam	Group/Health Design & Pricing
Learning Objectives	
<p>3. Understand and evaluate the effectiveness of the various types of coverage offered through other group vehicles: Multiemployer; Taft-Hartley; Group Credit; trade associations; professional associations; discretionary groups, etc.</p>	
Learning Outcomes	
<p>The candidate will be able to:</p> <ul style="list-style-type: none"> a) Describe the entity and the qualifications and legal constraints on the definition and operation of the entity b) Describe the typical coverages, including qualifications for benefits, coverage eligibility, cost-sharing provisions, limits, and funding mechanisms c) Contrast these products with single employer group products, with regards to design, underwriting and pricing d) Contrast these products with individual products, with regards to design, underwriting and pricing 	
Syllabus Resources	
<ul style="list-style-type: none"> • GH-D106-07 <i>EBRI Fundamentals of Employee Benefit Programs</i> <ul style="list-style-type: none"> ○ Ch. 14, Multi-Employer Plans • GH-D107-07 Actuarial Aspects of Taft-Hartley Welfare Plans, Reserves, Claim Forecasts, and Setting Contribution Levels 	

Exam	Group/Health Design & Pricing
Learning Objectives	
<p>4. Evaluates employer strategies for designing and funding benefit plans for:</p> <ul style="list-style-type: none"> i) Active employees ii) Dependents iii) Pre-65 retirees iv) Post-65 retirees v) Disabled (short and long-term) 	
Learning Outcomes	
<p>The candidate will be able to:</p> <ul style="list-style-type: none"> a) Describe typical strategies used by employers to fund and design benefit plans, including contribution strategies b) Evaluate potential financial, legal, moral risks associated with each strategy c) Recommend benefit, eligibility, or funding provisions to minimize each of the risks identified above d) Evaluate integration strategies with government programs (e.g., Parts A,B, and D of Medicare) e) Describe opportunities to encourage employees to be more health and cost conscious and to return to work early 	
Syllabus Resources	
<ul style="list-style-type: none"> • <i>Canadian Handbook of Flexible Benefits</i>, McKay, Third Edition, 2007 <ul style="list-style-type: none"> ○ Ch. 3, Starting and Maintaining a Flexible Program ○ Ch. 7, Flexible Expense Accounts – Health Spending, Personal and Perquisite ○ Ch. 23, Case Studies • <i>The Handbook of Employee Benefits</i>, Rosenbloom, Sixth Edition, 2005 <ul style="list-style-type: none"> ○ Ch. 1, The Environment of Employee Benefit Plans ○ Ch. 2, Functional Approach to Designing & Evaluating Employee Benefits ○ Ch. 3, Risk Concepts and Employee Benefit Planning ○ Ch. 7, Understanding Managed Care Health Plans: Understanding Costs and Evaluating Plans • <i>Fundamentals of Retiree Group Benefits</i>, Yamamoto, 2006 <ul style="list-style-type: none"> ○ Ch. 1, Introduction ○ Ch. 2, Erosion of Retiree Health Benefits ○ Ch. 4, Retiree Benefit Design ○ Ch. 5, Funding 	

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Learning Objectives	
<p>5. Evaluate the various types of coverages typically offered under a government health plan (e.g., Medicare, Medicaid, Canadian health plan, Social Security Disability Income, states' Temporary Disability Income programs, Workers Compensation, etc.)</p>	
Learning Outcomes	
<p>The candidate will be able to:</p> <ul style="list-style-type: none"> a) Describe the various coverages, including typical qualifications for benefits, coverage eligibility, cost-sharing provisions, limits, taxation and funding mechanisms b) Identify the potential gaps in needed or desired coverages c) Assess the social good and risks associated with each coverage 	
Syllabus Resources	
<ul style="list-style-type: none"> • <i>Canadian Handbook of Flexible Benefits</i>, McKay, Third Edition, 2007 <ul style="list-style-type: none"> ○ Ch.4, Plan Structure and Eligibility ○ Ch. 5, Health Care (section 5.12, Provincial Health Insurance Plans only) • <i>The Handbook of Employee Benefits</i>, Rosenbloom, Sixth Edition, 2005 <ul style="list-style-type: none"> ○ Ch. 22, Social Security and Medicare (pp. 529-549 and 559-565 only (Social Security)) • <i>Group Insurance</i>, Bluhm, Fifth Edition, 2007 <ul style="list-style-type: none"> ○ Ch. 7, Health Benefits in Canada ○ Ch. 12, Government Old-Age, Survivors, and Disability Plans in the U.S. ○ Ch. 13, Government Health Care Plans in the U.S. (Medicaid Section only pp. 237-243) • <i>Managed Health Care Handbook</i>, Kongstvedt, Fourth Edition, 2001 <ul style="list-style-type: none"> ○ Ch. 55, Medicare and Managed Care ○ Ch. 56, Medicare+Choice: The Health Plan's View ○ Ch. 57, Medicaid Managed Care ○ Ch. 61, Workers' Compensation Managed Care: The Search for Integration • <i>Fundamentals of Retiree Group Benefits</i>, Yamamoto, 2006 <ul style="list-style-type: none"> ○ Ch. 3, Medicare 	

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Learning Objectives	
6. Apply U.S. and Canadian nation-specific regulation to product design and pricing	
Learning Outcomes	
<p>The candidate will be able to:</p> <ul style="list-style-type: none"> a) Determine if given policy provision is compliant with the regulation b) Describe key provisions of major legislation c) Evaluate the potential financial and moral risk associated with the legislation d) Determine the potential impact on the cost of complying with the regulation 	
Syllabus Resources	
<ul style="list-style-type: none"> • <i>Group Insurance</i>, Bluhm, Fifth Edition, 2007 <ul style="list-style-type: none"> ○ Ch. 21, Small Group Rate Filings and Certifications • <i>Individual Health Insurance</i>, Bluhm, 2007 <ul style="list-style-type: none"> ○ Ch. 1, Introduction ○ Ch. 3, Policy Forms ○ Ch. 9, Regulation ○ Appendix A, Section 52.7 of New York Regulation 62 • <i>Managed Health Care Handbook</i>, Kongstvedt, Fourth Edition, 2001 <ul style="list-style-type: none"> ○ Ch. 2, Managed Care's Regulatory Evolution: Driving Change in the New Century • GH-D101-07 Group Disability Insurance (section 5 only) • GH-D104-07 Pricing Medicare Supplement Benefits, Section III & Appendix A • GH-D108-07 EBRI Issue Brief 273 – Health Savings Accounts and Other Account- Based Products 	

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Learning Objectives	
7. Apply U.S. and Canadian taxation rules to employer and individual health plan	
Learning Outcomes	
<p>The candidate will be able to:</p> <ul style="list-style-type: none"> a) Recommend strategy for legally minimizing taxes for both employer and employee b) Describe key provisions of major regulation c) Assess pricing impact of taxation on employer, employee or policy holder 	
Syllabus Resources	
<ul style="list-style-type: none"> • <i>Canadian Handbook of Flexible Benefit</i>, McKay, Third Edition, 2007 <ul style="list-style-type: none"> ○ Ch. 12, Taxation of Flexible Benefits ○ Ch. 13, Discrimination Issues • <i>The Handbook of Employee Benefits</i>, Rosenbloom, Sixth Edition, 2005 <ul style="list-style-type: none"> ○ Ch. 37, Cafeteria Plan Design and Administration • GH-D102-07 Group Life Insurance Section 4 • GH-D103-07 Pricing Long-Term Care, page 5 	

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Learning Objectives	
8. Understand techniques for utilization and claims management	
Learning Outcomes	
<p>The candidate will be able to:</p> <ul style="list-style-type: none"> a) Describe the techniques used for utilization management b) Compare the advantages and disadvantages of each technique 	
Syllabus Resources	
<ul style="list-style-type: none"> • <i>Group Insurance</i>, Bluhm, Fifth Edition, 2007 <ul style="list-style-type: none"> ○ Ch 27, Claim Administration and Management • <i>Managed Health Care Handbook</i>, Kongstvedt, Fourth Edition, 2001 <ul style="list-style-type: none"> ○ Ch. 64, Legal Liability Related to Medical Management Activities • Understanding the Economics of Disease Management Programs, Health Section News, Aug 2003 http://www.soa.org/library/newsletters/health-section-news/2003/august/hsn0308.pdf • An Introduction to Care Management Interventions & their Implications for Actuaries: <ul style="list-style-type: none"> ○ Paper 1: Programs & Interventions, Dove/Duncan http://www.soa.org/research/files/pdf/Paper1-Programs-Interventions.pdf ○ Paper 2: Actuarial Issues in Care Management Evaluations, Dove/Duncan http://www.soa.org/research/files/pdf/Paper2-Actuarial-Issues-Care-Mgmt-Eval.pdf ○ Paper 3: Estimating Savings, Utilization Rate Changes, and ROI from Care Management Interventions, Dove/Duncan (exclude appendix) http://www.soa.org/research/files/pdf/Paper3-Literature-Review.pdf ○ Paper 4: Understanding the Economics of Disease Management Programs, Duncan http://www.soa.org/research/files/pdf/Paper4-Economics-of-DM-Programs.pdf ○ Paper 5: Evaluating Disease Management Savings Outcomes, Duncan http://www.soa.org/research/files/pdf/Savings_Methodologies_20051005(Paper%205)_final.pdf ○ Paper 6: An Actuarial Method for Evaluating Disease Management Outcomes, Duncan http://www.soa.org/research/files/pdf/Paper6-Actuarial-Methodology-for-Evaluating-DM.pdf 	

Exam	Group/Health Design & Pricing
Learning Objectives	
9. Understand predictive modeling techniques	
Learning Outcomes	
<p>The candidate will be able to:</p> <ul style="list-style-type: none"> a) Describe how predictive modeling techniques are used in underwriting, pricing and claims management b) Describe typical predictive modeling techniques c) Evaluate the advantages and disadvantages of each technique 	
Syllabus Resources	
<ul style="list-style-type: none"> • GH-D110-07 An Introduction to Predictive Modeling for Disease Risk Stratification • GH-D111-07 Predictive Modeling and Finding and Intervening with the High-Cost Healthcare Consumer, Haelan Group Whitepaper • Assessing Predictive Modeling Tools for Pricing and Underwriting, <i>Health Watch</i>, Jan, 2006 http://www.soa.org/library/newsletters/health-watch-newsletter/2006/january/hsn0601.pdf • Predictive Modeling Applications , <i>RSA 31</i>, #2, session 3PD http://www.soa.org/library/proceedings/record-of-the-society-of-actuaries/2000-09/2005/june/rsa05v31n23pd.pdf • Predictive Modeling: Considerations for Care Management Applications, <i>Health Section News</i>, 4/2004 http://www.soa.org/library/unclassified/hsn0404.pdf 	

Exam	Group/Health Design & Pricing
Learning Objectives	
10. Evaluate the process and be able to develop a medical manual rate for both ASO and insured business	
Learning Outcomes	
<p>The candidate will be able to:</p> <ol style="list-style-type: none"> a) Identify and evaluate sources of data needed for pricing and underwriting including the quality, appropriateness, and limitations of each data source b) Identify and evaluate the rating parameters needed to evaluate and manage a book-of-business c) Develop experience analysis (claims cost and expenses) <ol style="list-style-type: none"> i) Construct the appropriate models ii) Develop the appropriate assumption, including trend, anti-selection, etc. d) Recommend appropriate actions following the study including <ol style="list-style-type: none"> i) Areas for further study ii) Changes in coverage, eligibility requirements or funding strategy e) Evaluate the impact of changing economic conditions on pricing f) Evaluate provider compensation model, including capitation, and its impact on projected claim costs. g) Integrate utilization management data into pricing h) Modify manual rates to reflect specific plan values including benefits for which little or no data is available i) Construct a rating model to be used for rating individual customers or plan designs 	
Syllabus Resources	
<ul style="list-style-type: none"> • <i>Group Insurance</i>, Bluhm, Fifth Edition, 2007 <ul style="list-style-type: none"> ○ Ch. 29, Estimating Claim Costs for Life Benefits ○ Ch. 30, Estimating Medical Claim Costs ○ Ch. 31, Estimating Claim Costs for Disability Benefits ○ Ch. 32, Estimating Dental Claim Costs ○ Ch. 34, Calculating Gross Premiums ○ Ch. 36, Medical Claim Cost Trend Analysis ○ Ch. 38, Applied Statistics ○ Ch. 39, Data Sources and Structures ○ Ch. 46, Management of Provider Networks • <i>Individual Health Insurance</i>, Bluhm, 2007 <ul style="list-style-type: none"> ○ Ch. 5, Setting Premium Rates ○ Ch. 8, Forecasting and Modeling • <i>Managed Health Care Handbook</i>, Kongstvedt, Fourth Edition, 2001 <ul style="list-style-type: none"> ○ Ch. 51, Actuarial Services in an Integrated Delivery System • GH-D101-07 Group Disability Insurance (sections 2, 4 and 7 only) • GH-D102-07 Group Life Insurance, Section 6 • GH-D103-07 Pricing Long-Term Care pp.9–34 • GH-D104-07 Pricing Medicare Supplement Benefits, Sections IV & V • GH-D112-07 Monitoring and Projecting Pricing Trends in a Managed Care Environment • GH-D113-07 Group Long Term Disability – Improving Actuarial Analysis through Understanding the Benefits Process • GH-D114-07 Actuarial Issues in Fee-For-Service/Prepaid Medical Group, Sutton & Sorbo • Paper 7: A Comparative Analysis of Chronic and Non-Chronic Insured Commercial Member Cost Trends, Bachler/Duncan/Juster http://www.soa.org/research/files/pdf/Paper7_Duncan%20Paper_FINAL.pdf 	

Exam	Group/Health Design & Pricing
Learning Objectives	
11. Understands and applies the concept of credibility theory–	
Learning Outcomes	
<ul style="list-style-type: none"> a) Describe basic approaches to credibility theory b) Choose the appropriate theory to be used in a given situation c) Apply the theory to a given situation 	
Syllabus Resources	
<ul style="list-style-type: none"> • GH-D115-07, An Examination of Credibility Concepts • Show Me the Utility: Practical Applications of Credibility, <i>RSA Vol. 28, #2</i> http://new.soa.org/library/proceedings/record-of-the-society-of-actuaries/2000-09/2002/january/rso02v28n242pd.pdf • An Empirical Approach to the Determination of Credibility Factors, <i>TSA Vol. XXI, Part 1</i> http://www.soa.org/library/research/transactions-of-society-of-actuaries/1969/january/tsa69v21pt1n59ab2.pdf • Comparing credibility estimates of health insurance claims costs., <i>NAAJ</i>, Vol. 9, #1 http://www.soa.org/library/journals/north-american-actuarial-journal/2005/january/naaj0501-1.pdf • Credibility Theory for the Health Actuary: The Need for an Inter-Company Experience Study, <i>Health Section News</i>, 4/2000 http://www.soa.org/library/newsletters/health-section-news/2000/april/hsn0004.pdf • Credibility – The Health Actuary’s Nemesis or Friend? <i>Health Section News</i>, 6/1998 http://www.soa.org/library/newsletters/health-section-news/1998/june/hsn9806.pdf 	

Exam	Group/Health Design & Pricing
Learning Objectives	
12. Applies principles of pricing, benefit design and funding to an underwriting situation	
Learning Outcomes	
<p>The candidate will be able to:</p> <ul style="list-style-type: none"> a) Understand the risks and opportunities associated with a given coverage, eligibility requirement or funding mechanism b) Evaluates the criteria for classifying risks c) Recommends strategies for minimizing or properly pricing for risks 	
Syllabus Resources	
<ul style="list-style-type: none"> • <i>Group Insurance</i>, Bluhm, Fifth Edition, 2007 <ul style="list-style-type: none"> ○ Ch. 24, Underwriting Large Groups ○ Ch. 25, Underwriting Small Groups ○ Ch. 35, Experience Rating and Funding Methods ○ Ch. 42, Underwriting Gain and Loss Cycles ○ Ch. 44, Product Development • <i>Individual Health Insurance</i>, Bluhm, 2007 <ul style="list-style-type: none"> ○ Ch. 4, Managing Anti-Selection ○ Ch. 11, Managing the Business, pp. 311-319 and 322-334 • <i>Managed Health Care Handbook</i>, Kongstvedt, Fourth Edition, 2001 <ul style="list-style-type: none"> ○ Ch. 49, Underwriting and Rating Functions Common to Most Markets ○ Ch. 50, Underwriting and Rating Functions by Market • GH-D101-07 Group Disability Insurance (section 6 only) • GH-D102-07 Group Life Insurance Sections 5 & 7 • GH-D104-07 Pricing Medicare Supplement Benefits, Section VI • GH-D109-07 Medical Underwriting: Approaches and Regulatory Restrictions (Shreve-Milliman Research Report) • GH-D116-07 Economic Incentives in the Sale and Use of Health Insurance • GH-D117-07 Variation by Duration in Small Group Medical Insurance Claims • Optimal Small Group Renewal Methods, <i>Health Section News</i>, 8/2005 http://www.soa.org/library/newsletters/health-section-news/2005/august/hsn0508.pdf • Cumulative Anti-Selection Theory, <i>TSA Vol. XXXIV</i> http://www.soa.org/library/research/transactions-of-society-of-actuaries/1982/january/tsa82v3411.pdf 	