

Exam GHCORU

MORNING SESSION

Date: Wednesday, May 1, 2019

Time: 8:30 a.m. – 11:45 a.m.

INSTRUCTIONS TO CANDIDATES

General Instructions

1. This examination has a total of 100 points. It consists of a morning session (worth 60 points) and an afternoon session (worth 40 points).
 - a) The morning session consists of 8 questions numbered 1 through 8
 - b) The afternoon session consists of 6 questions numbered 9 through 14.

The points for each question are indicated at the beginning of the question. Questions 5 and 10 pertain to the Case Study.

2. Failure to stop writing after time is called will result in the disqualification of your answers or further disciplinary action.
3. While every attempt is made to avoid defective questions, sometimes they do occur. If you believe a question is defective, the supervisor or proctor cannot give you any guidance beyond the instructions on the exam booklet.

Written-Answer Instructions

1. Write your candidate number at the top of each sheet. Your name must not appear.
2. Write on only one side of a sheet. Start each question on a fresh sheet. On each sheet, write the number of the question that you are answering. Do not answer more than one question on a single sheet.
3. The answer should be confined to the question as set.
4. When you are asked to calculate, show all your work including any applicable formulas.
5. When you finish, insert all your written-answer sheets into the Essay Answer Envelope. Be sure to hand in all your answer sheets because they cannot be accepted later. Seal the envelope and write your candidate number in the space provided on the outside of the envelope. Check the appropriate box to indicate morning or afternoon session for Exam GHCORU.
6. Be sure your written-answer envelope is signed because if it is not, your examination will not be graded.

Recognized by the Canadian Institute of Actuaries.

Tournez le cahier d'examen pour la version française.

CASE STUDY INSTRUCTIONS

The case study will be used as a basis for some examination questions. Be sure to answer the question asked by referring to the case study. For example, when asked for advantages of a particular plan design to a company referenced in the case study, your response should be limited to that company. Other advantages should not be listed, as they are extraneous to the question and will result in no additional credit. Further, if they conflict with the applicable advantages, no credit will be given.

****BEGINNING OF EXAMINATION****
Morning Session

1. (5 points) Affordable Health Plan (AHP) offers Medicare Part D benefits. You are given the following information regarding its most popular plan:

- AHP submitted a bid to the Centers for Medicare and Medicaid Services (CMS) amounting to \$90 per member per month (PMPM) in 2018. This is a standardized amount.
- The national average monthly bid amount in 2018 = \$60 PMPM.
- Projected average reinsurance payments to Part D plans = \$40 PMPM.
- Expected total payments received by prescription drug plans = \$75 PMPM.
- Assume that the plan's allowable cost per capita is the same as the standardized bid amount.
- AHP uses CMS' Hierarchical Condition Category (CMS-HCC) risk score model to predict the relative costs of its beneficiaries.

(a) (1 point) Calculate the monthly premium that a beneficiary would pay for this plan in 2018. Show your work.

It is now 2018 and AHP's actual cost for their most popular plan is \$70 PMPM.

(b) (2 points) Calculate the risk corridor payments, on a PMPM basis, made between AHP and CMS for the 2018 plan year. Show your work.

(c) (2 points)

- (i) Describe the limitations of the CMS-HCC model in predicting medical costs.
- (ii) Recommend, with justification, some ways in which AHP can address each limitation.

2. (12 points) You are a consultant for a client concerned about how the Affordable Care Act (ACA) will affect their retiree plans.

(a) (4 points) Describe how provisions of the ACA affect retiree plan costs.

The client has questions about your choice of assumptions for the Accumulated Post-Retirement Benefit Obligation (APBO).

(b) (1 point) Describe factors influencing the choice of best estimate assumptions.

(c) (2 points) Explain elements of each of the two main groups of assumptions about future events.

(d) (1 points) Describe the categories of projections assumptions set forth in professional standards.

(e) (2 points) Explain considerations set forth in professional standards regarding the use of prescribed assumptions set by another party.

You are given the following:

Year	Time = t	Projected Benefit Payments = Bt	Spot Rate = Rt
0	0.5	800	1.25%
1	1.5	900	2.00%
2	2.5	1200	3.00%

The single weighted rate $i = 2.55\%$

(f) (2 points)

(i) Calculate the modified duration. Show your work.

(ii) Explain what the modified duration tells you about the relationship between the APBO and the discount rate.

3. (7 points) Other Half Insurance Company (OHIC) is making benefit decisions for the following year. Information about OHIC is provided below:

- Average salary: \$24,000
- Current health insurance coverage: Employer provided health insurance purchased through Small Business Health Options Program (SHOP)
- 0% Market trend
- Assume the ACA excise tax becomes effective next year.

Tier	Number of Employees	Value of Current Year Health Coverage
Employee Only	3	\$15,000
Family	7	\$30,000

(a) (1 points) Calculate the excise tax impact to OHIC of offering identical health coverage next year. Show your work.

OHIC acquires a company with 100 employees with no covered dependents, on January 1 of next year. The combined Company, still named OHIC, wants to explore offering a cash bonus where all employees would receive a \$5,000 after tax bonus annually, for use at employee discretion, instead of offering health insurance.

- (b) (2 points) Calculate the financial impact to OHIC of no longer offering health insurance to their employees. Show your work.
- (c) (1 point) Describe the tax implications to all parties of OHIC of offering cash instead of health insurance benefits.
- (d) (1 point) Recommend whether OHIC should eliminate their health insurance plan in favor of a \$5,000 cash bonus to employees. Justify your answer.
- (e) (2 point) List and describe the allowable rating factors which employees would now be subject to if purchasing health insurance in the Individual Marketplace.

4. (6 points)

(a) (3 points)

- (i) (2 point) Compare and contrast 1115 waivers to 1332 waivers
- (ii) (1 points) Explain the financial impacts each waiver type could have on state financing.

You are an actuary for the State and have been asked to find ways to reduce the costs of the Medicaid program. Two options under consideration have the following federal and state financing arrangements and per beneficiary per month (PBPM) costs:

Plan Cost	Plan A = \$250 PBPM	Plan B = \$200 PBPM
Financing	90% State/ 10% Federal	70% State/ 30% Federal
Potential 1332 State Savings	10% of state costs PBPY	8% of state costs PBPY
Potential 1332 Federal Savings	No change in federal cost	Eliminates federal costs

(b) (3 points) For the 1332 waiver application:

- (i) Calculate the expected per beneficiary per year (PBPY) financial impacts to the state of a 1332 waiver on both Plan A and Plan B. Show your work.
- (ii) Recommend a plan for the 1332 waiver application. Justify your recommendation.
- (iii) Calculate the premium required to achieve a PBPY net cost that is equivalent to the potential state savings for your recommended plan in part b(ii) above. Show your work

Question 5 pertains to the case study.

- 5.** (11 points) The 2015 GAAP financial statements of your client Royale Health are being audited by the firm of Ernst & Blofeld. Royale Health has designated you as the responding actuary.

Two segments of Royale's business were inadvertently omitted from the financial statements.

The first segment is an individual single-premium 20-year annuity product launched in January 2015. You are given the following information for this segment:

Premium due in 2015	\$2,000,000
Acquisition costs as a percentage of premium (commissions)	10%
Annual maintenance expenses for policies sold in 2015	\$20,000
Claims paid during 2015	\$110,000
Liability for future policy benefits as of 12/31/2015	\$1,400,000
Net investment income	\$55,000
Net realized gains on investments	\$15,000
Net unrealized gains on investments	\$10,000
Corporate income tax rate	35%

The second segment is composed of large group fully-insured medical contracts. All contracts provide coverage for January 1 to December 31.

- Non-claim expense percentages for the segment are as given in Exhibit 1 of the case study, except that the ACA Health Insurer Tax is 0%.
- Corporate income tax on this segment is 35%.

You are given the following information for this segment:

Premium for 2014 contracts, collected during 2015	\$190,000
Premium for 2015 contracts, collected during 2015	\$2,800,000
Premium for 2016 contracts, collected during 2015	\$250,000
Premium for 2015 contracts, not yet collected as of 12/31/2015	\$200,000
Claims paid during 2015, for prior contract years	\$600,000
Claims paid during 2015, for the 2015 contract year	\$1,800,000
Liability for unpaid claims as of 12/31/2014	\$500,000
Liability for unpaid claims as of 12/31/2015	\$650,000
2015 reinsurance premiums ceded	\$100,000
2015 reinsurance recoveries projected	\$80,000

5. Continued

- (a) (1 point) List major types of group insurance financial reporting.
- (b) (3 points) Describe the accounting treatment prescribed by FAS 60 for each item in the table for the first omitted segment above.
- (c) (6 points) Create an updated 2015 income statement for Royale Health that reflects the information provided above for the two omitted segments. Show your work.
- (d) (1 point) List your responsibilities as a responding actuary under ASOP 21.

6. (7 points) You are a pricing actuary for Interboro Health Insurance Company (IHIC), a company that sells Medicare Advantage (MA) products including products with Part D (MAPD). You are working on the 2020 per member per month (PMPM) pricing, also known as the MAPD bid, for one of ABC’s plans. The plan is not in a double bonus county. The Centers for Medicare and Medicaid Services (CMS) provides a benchmark for the bid.

After you calculated the bid you realized there was an error in the assumptions. You are provided the following information:

Assumptions	Prior Bid Assumptions	Revised Bid Assumptions
Normalized CMS Benchmark	\$950 PMPM	\$950 PMPM
Risk Score	1.25	1.25
Star Rating	4.0	3.0
Non-Normalized MAPD Bid	\$1,050 PMPM	\$1,050 PMPM

- (a) (1 point) Calculate the change in revenue PMPM due to these updated assumptions. Show your work.
- (b) (4 points) Identify the financial responsibility for each of the blank entries in the following table:

Event	Medicare Supplement Plan F			Medicare Advantage			FFS Medicare		
	Plan	Government	Beneficiary	Plan	Government	Beneficiary	Plan	Government	Beneficiary
First Inpatient Admission							N/A	Pays everything except deductible and coinsurance	Pays deductible and coinsurance
Screening Mammogram									
Flu Shot									
First Retail Pharmacy Prescription Drug Fill									
Emergency Room Visit									

6. Continued

You are given the following information regarding coverage prices.

Coverage Type	PMPM Cost
Traditional Medicare A & B	\$134
MA-PD Plan	\$0
Standalone PDP	\$25
Medicare Supplement Plan	\$400

Three individuals are turning 65:

- Jane, who is on a fixed income and wants medical and drug coverage along with coverage for extra benefits such as dental coverage.
 - Joe, who wants to be able to see any doctor he chooses and wants medical and drug coverage.
 - Mary, who has high discretionary income and wants predictable medical and drug costs.
- (c) (2 points) Recommend an option for each of these individuals. Justify your recommendation.

7. (6 points) You are an actuary in charge of ensuring that your organization's health insurance financial statements comply with U.S. Federal Laws and Regulations.
- (a) (1 point) Explain the new risk programs introduced by the Affordable Care Act (ACA).
 - (b) (2 points) Assess whether each new risk program applies to the following:
 - (i) 2015 Qualified Health Plans on the individual market
 - (ii) 2016 Medicaid Managed Care Plan Rate Certification
 - (iii) 2017 Individual Commercial Market PlansJustify your response.
 - (c) (2 points) Describe the subsidies originally created by the ACA and the populations qualifying for each type.
 - (d) (1 points) Explain the fees that were introduced by the ACA and the challenges related to reflecting these fees in financial statements.

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8. (6 points) Eric purchases insurance on the state-run individual exchange. His state exchange offers a variety of options, shown in the plan below. Both Silver plans have an expected actuarial value of exactly 70%.

You are given the following information to price an individual premium for Eric. Assume the information includes all adjustments necessary for Eric's demographic and smoking status.

	Allowed Amount Per Member Per Month (PMPM)	Profit %	Taxes PMPM	Fixed Administrative Expense PMPM	Variable Administrative Expenses
Bronze A	\$200	5%	\$20	\$15	5%
Bronze B	\$245	5%	\$15	\$5	5%
Silver A	\$300	3%	\$35	\$15	4%
Silver B	\$330	4%	\$30	\$25	5%
Gold A	\$540	10%	\$45	\$15	4%
Gold B	\$620	10%	\$50	\$25	5%

- (a) (2 points) Calculate Eric's PMPM premium for the two Silver plans before premium subsidy. Show your work.

Eric's income is at 175% Federal Poverty Level (FPL). Assume the FPL amount is \$12,060 for an individual. The premium subsidy table is provided below.

Premium Subsidy Table- Max Premium Contribution

FPL Level	Max % of Income
100 - 133%	2.00%
133%	3.00%
150%	4.00%
200%	6.30%
250%	8.05%
300-400%	9.50%

- (b) (3 points) Calculate the monthly net premium Eric has to pay for Silver A. Show your work.

8. Continued

Eric also qualifies for a cost sharing subsidy. The cost sharing subsidy table is provided below.

Cost Sharing Subsidy Table

FPL Level	Adjusted Actuarial Value
200 - 250%	73%
150 - 200%	87%
100 - 150%	94%

- (c) (1 point) Calculate Eric's expected total annual expenditure for Silver A. Show your work.

****END OF EXAMINATION****
Morning Session

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