

Exam GHADV

AFTERNOON SESSION

Date: Thursday, May 2, 2019

Time: 1:30 p.m. – 3:45 p.m.

INSTRUCTIONS TO CANDIDATES

General Instructions

1. This afternoon session consists of 6 questions numbered 9 through 14 for a total of 40 points. The points for each question are indicated at the beginning of the question. Questions 9 - 12 pertain to the Case Study, which is enclosed inside the front cover of this exam booklet.
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 GHADV.
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****

Afternoon Session
Beginning with Question 9

Questions 9-12 pertain to the Case Study.
Each question should be answered independently.

9. (7 points) You are the consulting actuary at Skyfall assigned to Moonraker.
- (a) (2 points)
- (i) Describe how each regulation applies to Moonraker.
- (ii) Identify provisions of US regulations Moonraker would no longer have to comply with if self insured.
- (b) (1 point) List advantages and disadvantages of self insurance for Moonraker.
- (c) (1 point) Recommend two strategies to manage the additional risk associated with self insurance. Justify your response.
- (d) (1 point) Compare and contrast the impacts on Moonraker of including the following features in the stop loss contract:
- (i) Lasers
- (ii) Aggregating specific deductible

Moonraker received three stop-loss proposals:

Proposal	Individual Deductible	Additional Feature
A	\$250,000	N/A
B	\$250,000	\$100,000 aggregating specific deductible
C	\$250,000	Full laser on claimants A & B

You are given:

- Exhibit 17
 - Claims were paid during the projected contract period
- (e) (2 points) Calculate the claims reimbursement expected for each of the proposals. Show your work.

*Questions 9-12 pertain to the Case Study.
Each question should be answered independently.*

- 10.** (4 points) Sir Frederick Gray, Moonraker's CFO, is concerned about the high risk cohort and has asked this cohort be rated separately from the low and medium risk cohorts combined.

You are given:

- $k_1=0.25$
- $k_2=0.01$
- $k_3=0.01$

- (a) (1 point) Calculate the credibility of the two cohorts. Show your work.
- (b) (1 point) Describe how factors, other than the number of members, could influence the credibility.
- (c) (2 points) Evaluate whether or not Moonraker should stratify the rating groups by risk. Justify your response.

*Questions 9-12 pertain to the Case Study.
Each question should be answered independently.*

11. (6 points) Spectre Accountable Care Organization (SACO) participates in the Medicare Shared Savings Program (MSSP). Madeleine Swann, SACO’s CFO, asked you to assess how the Medicare Access and CHIP Reauthorization Act (MACRA) will impact SACO.

(a) (1 point) Describe the Quality Payment Program under MACRA.

(b) (1 point) Define Alternative Payment Models (APMs) under MACRA.

Madeleine Swann provided the following projection for SACO:

Performance Year	2018	2019	2020	2021
Part B Payments through Track 1 MSSP ('000s)	\$152	\$0	\$0	\$0
Part B Payments through Track 3 MSSP ('000s)	\$0	\$310	\$340	\$540
Total Part B Payments ('000s)	\$577	\$690	\$700	\$710
Attributed Beneficiaries	30	60	65	100
Attribution-Eligible Beneficiaries	150	160	200	210

(c) (3 points) Determine whether or not SACO’s clinicians would be considered Qualifying APM Participants for each year. Show your work.

(d) (1 point) Design a strategy for SACO to increase its Threshold Score. Justify your response.

*Questions 9-12 pertain to the Case Study.
Each question should be answered independently.*

- 12.** (9 points) You are an actuary working for Skyfall, and are responsible for evaluating Quantum's reserves on their Legacy III – Individual plan.
- (a) (2 points) Describe considerations and limitations to your review of Quantum's data.
- (b) (2 points) Create a chart for the various types of claims liabilities and reserves that provides for each:
- Definition
 - Examples
 - Estimation methods

You are given:

- Exhibit 1
 - Claims are complete after six months of run out
 - Claims patterns are used for second half of 2018
 - Development method is used to quantify claims reserves
- (c) (3 points) Calculate the reserve as of December 31, 2018. Show your work.

The lead actuary at Quantum is concerned that your reserve estimate lacks sufficiency.

- (d) (1 point) Describe regulatory concerns regarding conservatism in reserve estimates.
- (e) (1 point) Recommend an action you could take in response to the lead actuary's concern. Justify your answer.

13. (7 points)

- (a) (1 point) List types of physician contracting situations.
- (b) (2 points) Describe the steps to construct an episode-based physician cost profile.

A physician is categorized into a low cost tier when:

- The cost profile score is below 1.0 and
- The reliability score is high

You are given:

Physician	Physician Error Standard Deviation	Cost Profile Score	Cost Tier
A	0.18	0.8	Low cost
B	0.05	1.2	High cost
C	0.32	0.9	High cost
D	0.19	0.9	High cost

- The physician-to-physician standard deviation is 0.36
- (c) (1 point) Calculate the reliability score for each physician. Show your work.
- (d) (1 point) Describe the strengths and limitations of episode-based profiling.

Physician D disputes his classification, stating that his cost is comparable to Physician A and he should be categorized into the low cost tier.

- (e) (1 point) Construct alternative classification criteria such that Physician D will be categorized as low cost. Justify your response.
- (f) (1 point) Evaluate whether or not Physician D's dispute is justified. Justify your response.

THIS PAGE INTENTIONALLY LEFT BLANK

14. (7 points) You have been asked to evaluate the effectiveness of two chronic disease management programs, including the expected savings and return on investment (ROI).

(a) (1 point) Describe factors that should be considered when comparing the baseline population to the intervention population to ensure equivalence.

Program A was aimed at reducing utilization for a subset of chronic members.

You are given the following for Program A:

	Units per 1,000	Unit Cost
Baseline	120	\$5,000
Year 1	116	\$5,500

Utilization Trend: 2% per year

Program Costs: \$1.50 per member per month (PMPM)

(b) (2 points)

(i) Calculate:

- Savings PMPM
- ROI

Show your work.

(ii) Evaluate the program effectiveness. Justify your response.

You are given the following for Program B.

	Baseline				Intervention Year
	Prevalence	Transition Probability High	Transition Probability Low	Cost	Cost
High Risk	20%	35%	65%	\$5,000	\$5,200
Low Risk	80%	15%	85%	\$500	\$500
Trend Adjustor	7%				

14. Continued

Program Costs: \$50 per member per year

(c) (2 points)

(i) Calculate:

- The risk adjusted savings
- ROI

Show your work.

(ii) Evaluate the program effectiveness. Justify your response.

Management would like to reduce the cost of these care management programs.

(d) (1 point) Recommend one of the programs to keep in the following year. Justify your recommendation.

Management proposes to use the savings from eliminating one program to expand the remaining program.

(e) (1 point) Critique management's proposal.

****END OF EXAMINATION****
Afternoon Session

USE THIS PAGE FOR YOUR SCRATCH WORK