

Exam GHDP A

Date: Friday, November 6, 2020

INSTRUCTIONS TO CANDIDATES

General Instructions

1. This examination has 9 questions numbered 1 through 9 with a total of 60 points.

The points for each question are indicated at the beginning of the question. Questions 4 and 5 pertain to the Case Study.

2. 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 provided in this document.

Written-Answer Instructions

1. Each question part or subpart should be answered either in the Word document or the Excel file as directed. Graders will only look at work in the indicated file.
 - a) In the Word document, answers should be entered in the box marked ANSWER. The box will expand as lines of text are added. There is no need to use special characters or subscripts (though they may be used). For example, β_1 can be typed as beta_1 (and ^ used to indicate a superscript).
 - b) In the Excel document formulas should be entered. Performing calculations on scratch paper or with a calculator and then entering the answer in the cell will not earn full credit. Formatting of cells or rounding is not required for credit.
 - c) Individual exams may provide additional directions that apply throughout the exam or to individual items.
2. The answer should be confined to the question as set.
3. The Word and Excel files that contain your answers must be uploaded before time expires.

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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.

1. (5 points) You are evaluating a small group medical market. Insurers A and B are the only two carriers in the market.

(a) (2 points) Describe criteria used in risk classification schemes.

ANSWER:

You are given the following experience:

Risk Class	Insurer A			Insurer B		
	Members	Average Claim Cost	Risk Factor	Members	Average Claim Cost	Risk Factor
Low	400	\$100	0.70	200	\$100	0.65
Average	500	\$150	0.90	250	\$150	0.95
High	100	\$500	1.10	50	\$500	1.20

(b) (1 point) Calculate relative risk factors for Insurers A and B. Show your work.

ANSWER:

(c) (1 point) Describe the need for health risk adjustment.

ANSWER:

(d) (1 point) Recommend whether or not to implement health risk adjustment. Justify your response.

ANSWER:

2. (7 points) You are a consulting actuary who has been engaged by XYZ provider group to assist with evaluating an opportunity between XYZ and Insurance Company ABC to bundle hip replacement payments.

(a) (1 point) List reasons why providers may choose to participate in bundled payment contracts.

ANSWER:

ABC provided the following summary of its fee for service (FFS) claims experience for services related to hip replacement surgery within the defined time period for the episode, but which were not provided by XYZ:

Claim Category	Average Unit Price	Utilization per 1,000 Patients
Emergency Department	\$1,500	225
Inpatient Acute Stay	\$20,000	100
Skilled Nursing Facility	\$16,000	200
Long-Term Care Facility	\$85,000	10

XYZ's average price for a hip replacement surgery is \$35,000.

(b) (1 point) Calculate a bundled payment rate for hip replacement surgery that would reduce ABC's average cost by 10%. Show your work.

ANSWER:

(c) (1 point) Calculate the percentage reduction in utilization of related services implied by the proposed bundled payment rate. State your assumptions. Show your work.

ANSWER:

2. Continued

XYZ rejected ABC's bundled payment proposal. In order to continue negotiations, ABC is offering a one-sided shared savings agreement with XYZ that would pay XYZ 50% of any savings compared to a benchmark. You are given:

- The benchmark is calculated as the three-year weighted average of XYZ's historical FFS claims
- The shared savings agreement will last three years and will start in 2021
- The calculated benchmark will not change during the three-year agreement
- There are no anticipated changes to utilization, unit cost, membership, or risk during the three-year agreement period

XYZ's historical total FFS claims and the associated benchmark weights are:

Year	Benchmark Weight	Annual Spending (000's)
2018	0.05	\$1,000
2019	0.35	\$1,050
2020	0.60	\$1,025

- (d) (3 points) Calculate the cumulative marginal revenue that will result from XYZ performing one additional hip replacement surgery in 2020 at a unit cost of \$35,000. Show your work.

ANSWER:

- (e) (1 point) Critique the proposed shared savings agreement.

ANSWER:

3. (5 points) You are evaluating experience for a block of short-term disability policies.

(a) (1 point) Describe rating factors used in a short-term disability renewal rate development.

ANSWER:

You are given:

Pricing Retention Factors
(% of Premium)

Administration	13.0%
Premium Taxes	2.0%
Risk & Profit	5.0%

2019 Experience ('000s)

Premiums	\$10,000
Claims	\$7,500
Administration	\$1,100
Premium Taxes	\$200

Age/Gender Premium Adjustments

Males under 25	0.50
Males 25-39	0.75
Males 40 and over	1.50
Females under 25	0.50
Females 25-39	1.75
Females 40 and over	1.25

2019 Experience by Age/Gender ('000s)

Age/Gender	Premiums	Claims
Males under 25	\$1,500	\$1,125
Males 25-39	\$1,500	\$1,125
Males 40 and over	\$1,500	\$1,125
Females under 25	\$2,000	\$1,500
Females 25-39	\$2,000	\$1,500
Females 40 and over	\$1,500	\$1,125

Area Adjustments

Northeast	1.10
Southeast	0.90
Midwest	0.90
West	1.10
Southwest	1.00

2019 Experience by Area ('000s)

Area	Premiums	Claims
Northeast	\$2,000	\$1,500
Southeast	\$2,000	\$1,600
Midwest	\$2,000	\$1,500
West	\$2,000	\$1,400
Southwest	\$2,000	\$1,500

(b) (1 point) Compare the actual 2019 profit results to the assumed 2019 profit. Show your work.

The response for this part is to be provided in the Excel spreadsheet.

3. Continued

To develop the 2021 premium, you apply 50% weight to the prior rating factors and 50% weight to the 2019 experience.

(c) (3 points) Recommend factors for 2021 for:

- (i) Retention
- (ii) Base rate increase
- (iii) Age/gender and area factors

Show your work. Justify your response.

The response for this part is to be provided in the Excel spreadsheet.

Question 4 pertains to the Case Study.

4. (7 points)

- (a) (2 points) Compare and contrast the impact of population utilization changes to provider profits under the following payment models:
- (i) Fee-for-service
 - (ii) Global capitation
 - (iii) Bundled payments

ANSWER:

- (b) (2 points) Compare and contrast the shared savings tracks available to accountable care organizations (ACOs) under the Medicare Access and CHIP Reauthorization Act (MACRA).

ANSWER:

4. Continued

Madeleine Swann asks you to help reconcile conflicting views within SACO on the amount of the recent Year 3 performance payment.

You are given:

- 2020 is Performance Year 3
- SACO Email 1
- Benchmark Year 3 CMS-HCC Risk Score is 1.25
- Performance Year Risk Score is 1.15
- Office of the Actuary (OACT) National Expenditure Trend Factor is 1.0
- Quality Performance Sharing Rate is 50%
- Quality Score Adjustment is 80%
- Minimum Savings Rate is 3.0%
- Performance Year Person-Years is 10,500
- Performance Year per Capita Expenditures is \$11,100
- Benchmark years receive equal weight

- (c) (3 points) Calculate the earned performance payment to SACO. Show your work.

ANSWER:

Question 5 pertains to the Case Study.

5. (9 points) You are the consulting actuary at Skyfall assigned to Royale Health.

Le Chiffre asks you to review the current general administration fee assumption.

(a) (1 point) List the steps involved in revising this assumption.

ANSWER:

(b) (2 points)

(i) List the administration activities you should consider based on the business structure of Royale Health.

ANSWER:

(ii) Describe considerations for each of these activities.

ANSWER:

(c) (2 points) Describe the categories of corporate and overhead expenses that should be considered in your expense study.

ANSWER:

5. Continued

Abeesee Company is fully insured with Royale Health. You have been asked to revise the pricing of its plan.

You are given:

- General administration fees are assumed to be 7.2% of premium
- Royale Health Email 2
- The 2018 experience is fully credible

(d) (3 points) Calculate the renewal rate for January 1, 2020 to December 31, 2020. Show your work.

ANSWER:

(e) (1 point) Recommend whether or not Abeesee should move to a self-insured plan. Justify your response.

ANSWER:

6. (10 points) You are a Medicare Advantage (MA) pricing actuary for Seniors First Health Plan (SFHP), a wholly-owned subsidiary of Plan Your Health (PYH). SFHP contracts with two distinct organizations to provide primary care services to its enrollees: Physicians First and Dynamic Doctors. Physicians First is a wholly-owned subsidiary of PYH.

- (a) (1 point) List reasons why a health plan would enter into a contract with physician groups.

ANSWER:

- (b) (2 points) Describe types of physicians with which a health plan contracts.

ANSWER:

6. Continued

You are given:

- SFHP has three in-network only MA plans: A, B and C
- Plan B is a narrow network plan that only covers primary care via Physicians First
- SFHP is changing the primary care provider (PCP) visit copay structure to steer primary care visits to Physicians First
- All plans have a PCP copay of \$15 in 2020
- The following copays are proposed for 2021:

Plan	Physicians First	Dynamic Doctors
A	\$10	\$15
B	\$0	N/A
C	\$15	\$15

- Annual utilization trend is 1%
- There is no induced utilization

Plan	Projected 2021 Average Enrollment	2019 Utilization per 1,000 Members	Annual Unit Cost Trend	Utilization % at Physicians First	
				2019	2021
A	30,000	4,800	1%	45%	55%
B	20,000	5,500	1%	100%	100%
C	10,000	5,000	0%	50%	50%

- (c) (3 points) Calculate the per member per month (PMPM) financial impact of the benefit change to SFHP from 2020 to 2021. Show your work.

<i>The response for this part is to be provided in the Excel spreadsheet.</i>

6. Continued

Given its market dominance, Dynamic Doctors negotiates a 3% fee schedule rate increase (to 103% of Medicare) beginning January 1, 2021. The PYH executive team asks Physicians First to accept a rate reduction to maintain budget neutrality for SFHP. Physicians First agrees under the premise that the move is good for PYH and that the copay reductions will generate more services at Physicians First.

You are given:

- SFHP has historically paid its network physician groups 100% of the Medicare fee schedule rate
- No changes to the mix and severity of primary care related services are expected
- Members only utilize one of Physicians First or Dynamic Doctors
- The contracting changes are the only expected impacts to unit cost from 2019 to 2021
- 2019 net paid cost per visit:

Plan	Physicians First	Dynamic Doctors
A	\$85	\$90
B	\$80	\$85
C	\$75	\$82

- (d) (3 points) Calculate the percentage fee schedule change required for Physicians First such that SFHP remains financially neutral. Show your work.

The response for this part is to be provided in the Excel spreadsheet.

- (e) (1 point) Recommend actions Physicians First could take to mitigate the impact of the contract change. Justify your response.

ANSWER:

7. (8 points) You are the pricing actuary for an individual health line of business.

- (a) (2 points) Compare and contrast the Cumulative Antiselection (CAST) Model with the Minnesota Antiselection (MNAM) Model.

ANSWER:

- (b) (2 points) Describe how the CAST model has improved over time.

ANSWER:

You are given the following for a closed block of individual health policies:

Insured Population	Number of lives	Annual Rate Increase	Annual Trend	Elasticity Factor
Healthy lives	223	7.0%	5.0%	1.3
Impaired lives	777	22.0%	5.0%	0.8

- (c) (2 points) Calculate the expected number of lives remaining after the rate increase. Show your work.

ANSWER:

Your company has decided to maintain the overall rate increase.

- (d) (2 points) Propose a rate increase scenario that minimizes lapses. Show your work. Justify your response.

ANSWER:

8. (5 points)

- (a) (1 point) List the ways Accountable Care Organizations (ACOs) are expected to generate savings.

ANSWER:

- (b) (2 points) Compare and contrast disease management programs and ACO savings programs.

ANSWER:

- (c) (1 point) Describe the updates to the ACO gain share calculation from the final rules published in 2015 and 2016.

ANSWER:

- (d) (1 point) Describe how the updated final rules address unintended consequences of the ACO gain share calculation in place prior to the update.

ANSWER:

9. (4 points) You are evaluating experience for a block of long-term disability (LTD) policies.

(a) (1 point) Describe the 2012 GLTD valuation standard.

ANSWER:

You are given:

LTD Claim Duration	Selected Variance Factor
4 to 24 months	4.0
25 to 120 months	2.5
More than 120 months	2.0

The actual experience is 250 terminations within durations 4 to 24 months.

(b) (1 point)

(i) Calculate the number of expected terminations required for LTD claims within durations 4 to 24 months to be considered fully credible. Show your work.

ANSWER:

(ii) Calculate the partial credibility factor for this experience. Show your work.

ANSWER:

(c) (2 points) List and describe four challenges in applying credibility in LTD.

ANSWER:

****END OF EXAMINATION****