

Exam GHSPC

Date: Thursday, April 30, 2020

Time: 2:00 p.m. – 4:15 p.m.

INSTRUCTIONS TO CANDIDATES

General Instructions

1. This examination has a total of 40 points.

This exam consists of 6 questions, numbered 1 through 6.

The points for each question are indicated at the beginning of the question.

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 Exam GHSPC.
6. Be sure your written-answer envelope is signed because if it is not, your examination will not be graded.

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Tournez le cahier d'examen pour la version française.

****BEGINNING OF EXAMINATION****

1. (4 points)

(a) (2 points)

(i) Describe three models used in care management program planning.

(ii) Identify drawbacks of each model.

(b) (2 points) Describe steps for conducting a focused review of literature about successful care management programs.

2. (7 points) You are given the following information representing the utilization of a population in a disease management (DM) program:

Year	Units per 1000
Baseline	100
Intervention	97

- Unit cost for the baseline year is \$7,000.
- Utilization trend from the baseline year to the intervention year is 3%.
- Unit cost trend from the baseline year to the intervention year is 8%.

- (a) (2 points) Calculate the per member per month (PMPM) effect of the DM program. Show your work.

You are given the following information on a different population.

Risk Cohort	Baseline Prevalence	Baseline Cost per member per year (PMPY)
Low Risk	80%	\$600
High Risk	20%	\$6,000

33% of the high-risk members remain as high-risk members in the next (intervention) year, while the rest of the high-risk members transition into low-risk status.

85% of the low-risk members remain as low-risk members into the next (intervention) year, while the rest of the low-risk members transition into high-risk status.

- (b) (2 points) Calculate the PMPY cost trend. Show your work.

You are given the following information:

Baseline Cost PMPM	\$100
Trend (unadjusted)	6%
Baseline Risk Score	1.01
Trend (adjusted for change in population risk)	4%

- (c) (1 point) Calculate the risk score trend. Show your work.

2. Continued

- (d) (2 points) Critique the following statements. Justify your responses.
- (i) Reduction in units per 1,000 helps convince DM program purchasers of the efficiency of the program, and satisfies the needs of most clients who need savings.
 - (ii) Equivalence requires stability in the underlying number of members between periods, and is a basic necessity for evaluating a disease management program.
 - (iii) If there is a change not due to the DM intervention in the chronic population, one can use risk adjustment to separate the effect of the intervention from other chronic population changes.
 - (iv) The trend used to adjust from the baseline year to the intervention year for a chronic population should be net of the effect of any population changes.

3. (8 points)

(a) (2 points)

- (i) Describe four non-life insurance risks.
- (ii) Explain how incidence and intensity affect non-life insurance premium and reserve calculations differently than life insurance.

(b) (1 point) Describe factors affecting the Margin for Additional Risk in an Internal Capital Model.

(c) (2 points) Describe stages in designing an Economic Capital Model.

A new business line has increased the total capital requirement. The Chief Enterprise Risk Management Officer believes the fairest approach for allocating the new capital requirement is to leave the capital requirement the same for the existing lines of business and allocate the increase to the new business line.

(d) (3 points)

- (i) Critique the recommendation. Justify your response.
- (ii) Compare and contrast alternative approaches that could be taken to allocate the new capital requirement to each line of business.
- (iii) Recommend an approach for allocating the new capital requirement. Justify your response.

4. (7 points) You are an actuary working for XYZ Health Insurance Company with an Authorized Control Level (ACL) Risk Based Capital (RBC) Ratio of 300%.

You are given the following information.

Products	Premiums	Loss Ratio	Underwriting Risk Factor
Comprehensive	\$100 million	85%	9%
Medicare Supplement	\$60 million	80%	7%
Dental	\$40 million	75%	8%

- (a) (1 point) Describe the components of the ACL RBC formula.
- (b) (2 points)
- (i) Describe the “back of the envelope” method to estimate the ACL RBC.
 - (ii) Calculate the ACL RBC for XYZ Health Insurance Company using the “back of the envelope” method. Show your work.

Senior management is proposing to double the Comprehensive premiums.

- (c) (4 points)
- (i) Calculate the new ACL RBC Ratio for XYZ Health Insurance Company assuming the Comprehensive premium doubles with no other changes. Show your work.
 - (ii) Explain the ramifications of the new ACL RBC Ratio for XYZ Health Insurance Company.
 - (iii) Recommend changes to senior management to adjust the ACL RBC Ratio. Justify your response.

5. (9 points)

(a) (1 point) Compare and contrast Medicare Advantage and Traditional Medicare from the perspective of the member in these areas:

- Plan provisions
- Provider selection
- Medical Cost Management

(b) (2 points)

- (i) State the goal of Medicare risk adjustment.
- (ii) Describe the impact of Medicare risk adjustment on Medicare Advantage Organizations (MAOs).

(c) (2 points) Describe considerations, according to ASOP 12, for establishing risk classes for a financial or personal security system.

A Medicare Advantage Plan has three members in the base year used for pricing:

Member	Age and Gender	Status	Months in Plan Base Period	Diagnoses
A	72 Male	Community, non-dual, aged	12	Diabetes without complications and multiple sclerosis
B	72 Female	Community, non-dual, aged	12	Two different diabetes diagnoses (without complications and neuropathy) and multiple sclerosis
C	65 Male	Non-Medicaid, Not Originally Disabled	6	None

5. Continued

You are given the following additional information:

Age/Gender Risk Factors

Gender	Age Group	New to Medicare	Community Members
Male	65-69	0.5	0.3
Male	70-74	0.6	0.5
Female	65-69	0.6	0.4
Female	70-74	0.7	0.6

Disease Related Risk Adjustment

Disease	HCC	HCC Factors
Diabetes without complications	HCC 19	0.1
Diabetes with acute complications	HCC 17	0.3
Multiple sclerosis	HCC 77	0.4

- Base year is 2019 and bid (pricing) year is 2021.
- Annualized risk score trend is 1.4%.
- Annualized population change factor is 0.5%.
- The adjustment for the CMS normalization factor is 1/1.01.
- The CMS MA Coding Adjustment from the base year to the bid year is 0.98.

(d) (4 points)

- (3 points) Calculate the 2019 average Part C population risk score. Show your work.
- (1 point) Calculate the 2021 average Part C population risk score. Show your work.

6. (5 points)

- (a) (2 points) Describe benefits and concerns of including prescription drugs in a diagnosis-based risk adjustment model.
- (b) (1 point) List and describe criteria used to evaluate a diagnosis-based risk adjustment model which includes prescription drugs.
- (c) (2 points) Describe considerations, according to ASOP 45, when selecting and implementing a risk adjustment model.

****END OF EXAMINATION****

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