

Exam GHRM

Date: Friday, November 1, 2024

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.

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.

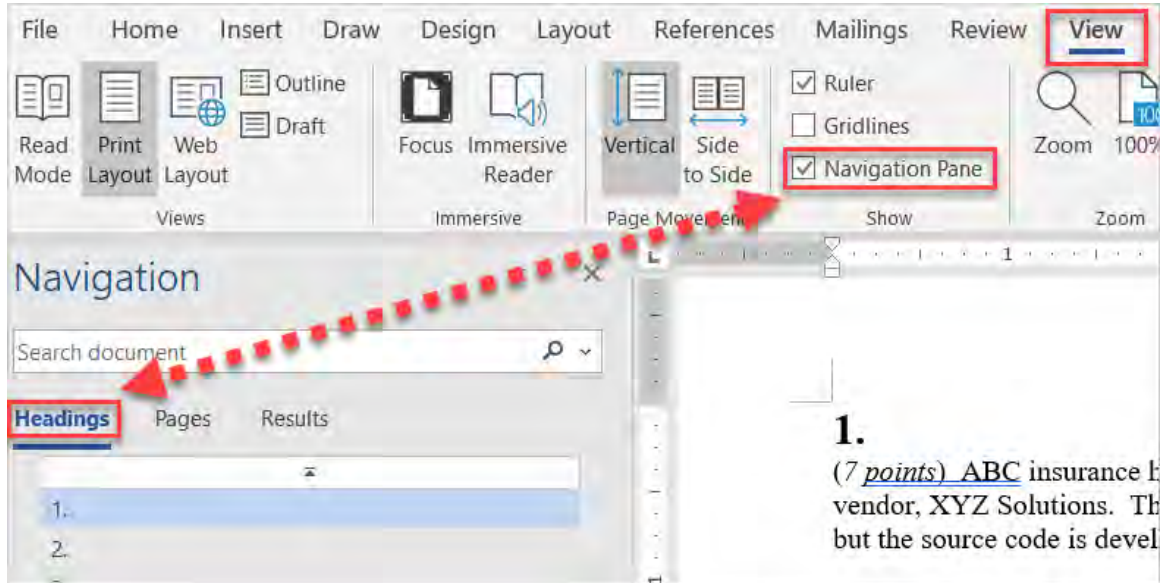
Written-Answer Instructions

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. Prior to uploading your Word and Excel files, each file should be saved and renamed with your unique candidate number in the filename.
4. The Word and Excel files that contain your answers must be uploaded before the five-minute upload period expires.

Navigation Instructions

Open the Navigation Pane to jump to questions.

Press Ctrl+F, or click View > Navigation Pane:



1.

(4 points) You are an employee benefits actuary.

- (a) (2 points) Describe strategy considerations related to payroll contributions.

ANSWER:

- (b) (2 points) Contrast defined benefit and defined contribution approaches for an employee benefits program.

ANSWER:

2.

(5 points)

- (a) (1 point) Describe common features of medical management interventions aimed at patients and providers.

ANSWER:

- (b) (2 points)

- (i) Explain challenges with demonstrating the link between quality and cost improvement.

ANSWER:

- (ii) Describe factors to resolve these challenges.

ANSWER:

- (c) (2 points) Contrast:

- (i) care management and utilization management.

ANSWER:

- (ii) pre-authorization and concurrent review.

ANSWER:

3.

(7 points) You are an actuary for an Accountable Care Organization (ACO) that participates in the Medicare Shared Savings Program (MSSP).

- The ACO is participating in a two-sided model with a 60% share on savings.
- 2022 is Year 2 of the ACO's first contract period in the MSSP.
- The ACO's 2022 baseline spending is projected to be \$3,000,000.
- The ACO's quality score is 1.0.

An unanticipated surgery costing \$60,000 needs to be scheduled at the ACO between December 15, 2022 and January 15, 2023.

(a) (4 points) Calculate the cumulative marginal revenue over the two MSSP contract period (2021 through 2026) under the following scenarios. Show your work.

(i) The surgery occurs in 2022

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

(ii) The surgery occurs in 2023

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

(b) (2 points) Propose weights to use in determining the benchmark such that the cumulative marginal revenue does not exceed net payments for the surgery.

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

(c) (1 point) Recommend other changes to the MSSP structure to ensure the ACO and Centers for Medicare and Medicaid Services (CMS) both realize savings. Justify your response.

ANSWER:

4.

(6 points)

(a) (1 point)

- (i) Describe the functional approach in designing and evaluating employee benefits.

ANSWER:

- (ii) List the usefulness of the functional approach in designing and evaluating employee benefits.

ANSWER:

Company ABC is a large, well-established employer in a mature industry and is considering the benefits offered to its employees. The company has not updated benefits since it was founded 15 years ago.

ABC's current approach is to measure its benefit offerings relative to those provided by growth companies and developing industrial firms.

(b) (1 point) Evaluate ABC's current approach.

ANSWER:

(c) (2 points) Summarize how ABC would analyze their current employee benefits against the objectives and current criteria under the functional approach.

ANSWER:

(d) (2 points) Compare and contrast the compensation/service-oriented benefit philosophy and the benefit-or-needs-oriented philosophy.

ANSWER:

5.

(10 points)

- (a) (1 point) Describe the intention, aim, and design of risk adjustment as it pertains to the ACA marketplace.

ANSWER:

- (b) (2 points)

- (i) Describe the “indifference ideal.”

ANSWER:

- (ii) Describe how the “indifference ideal” is supported by ACA risk adjustment.

ANSWER:

You are given the following information for two adult populations in State X:

Enrollment		
Demographics	Insurer A	Insurer B
Young Adult	10,000	5,000
Older Adult	10,000	10,000

- Adequate monthly premiums are \$100 for Young Adults and \$600 for Older Adults.
- No enrollment changes.

5. Continued

- (c) (4 points) Calculate the allowed premiums and equitable risk transfer payments and receipts for Insurer A and Insurer B under each of the following scenarios. Show your work.

- (i) Without age rating.

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

- (ii) With age rating and premiums three times higher for Older Adults than Young Adults.

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

- (d) (1 point) Describe reasons why ACA metal level premium relationships are disparate across the country.

ANSWER:

- (e) (2 points) List differences between the ideal ACA environment and the alternative environment.

ANSWER:

6.

(7 points)

(a) (2 points) Verify the accuracy of the following statements. Justify your response.

(i) Propensity score matching (PSM) is a technique for estimating what would happen to a population if a program was implemented.

ANSWER:

(ii) PSM reduces a large number of variables into a few key scores that allow for more effective matching.

ANSWER:

(iii) PSM should consider the variables themselves when matching and not just rely on PSM scoring alone.

ANSWER:

(iv) PSM has many advantages including matching on both observed and unobserved variables.

ANSWER:

(b) (2 points)

(i) Describe methods used for PSM.

ANSWER:

(ii) List important considerations for matching.

ANSWER:

6. Continued

You are given the following results examining the effects of member cost sharing on the utilization of Diabetes Self-Management Education/Training (DSME/T). It is hypothesized that patients with lower cost sharing are more likely to utilize DSME/T services, adhere to diabetes medication regimes, and experience reduced diabetes-related hospital admissions and costs.

Total Population	From Unmatched Study				From Propensity Matched Study			
Variable Descriptions	Low Cost-sharing	High Cost-sharing	Grand Total	P-Value	Low Cost-Sharing	High Cost-sharing	Grand Total	P-Value
Admit/1000	170	161	166	0.1095	159	163	161	0.4665
Cost per admit	\$11,962.00	\$12,714.00	\$12,329.00	0.0003	\$11,921.00	\$12,930.00	\$12,431.00	<.0001
Diabetes Admit/1,000	113	111	112	0.6267	105	113	109	0.0574
Cost per diabetes admit	\$10,472.00	\$12,081.00	\$11,270.00	<.0001	\$10,513.00	\$12,233.00	\$11,402.00	<.0001
Education/1000	51	40	46	<.0001	49	43	46	0.0549
Compliance, antidiabetics	52%	49%	51%	<.0001	52%	51%	51%	0.0458
Claims Paid PMPM								
Total	\$849	\$727	\$788	<.0001	\$815	\$746	\$781	<.0001
Inpatient	\$169.00	\$171.00	\$170.00	0.8501	\$158.00	\$175.00	\$167.00	0.0392
Professional	\$239.00	\$190.00	\$213.00	<.0001	\$227.00	\$194.00	\$211.00	<.0001
Outpatient	\$200.00	\$177.00	\$189.00	<.0001	\$192.00	\$183.00	\$187.00	<.0001
Outpatient pharmacy	\$244.00	\$189.00	\$217.00	<.0001	\$237.00	\$194.00	\$216.00	<.0001
Member cost sharing total	\$70.00	\$114.00	\$92.00	<.0001	\$70.00	\$112.00	\$91.00	<.0001
Member cost-sharing Medical	\$25.00	\$60.00	\$43.00	<.0001	\$26.00	\$59.00	\$42.00	<.0001
Member Cost-Sharing RX	\$44.00	\$54.00	\$49.00	<.0001	\$44.00	\$53.00	\$49.00	<.0001

6. Continued

- (c) (2 points) Compare and contrast results from the matched and unmatched studies, with respect to the hypotheses.

ANSWER:

- (d) (1 point) Describe considerations for testing the results of a PSM model.

ANSWER:

The Excel spreadsheet has additional data and information applicable to this question.

7.
(11 points)

- (a) (1 point) Describe how a provider group-based accountable care organization (ACO) can generate savings.

ANSWER:

You are given the following information for four beneficiaries:

Beneficiary	A	B	C	D
Residence	Puerto Rico	Japan	New York	Guam
Medicare enrollment	15 days in both Part A and Part B	1 year in Medicare group (private) health plan	6 months in Part A only	1 month in both Part A and Part B
Total allowed charges for primary care services				
Entity 1: An ACO Entity	\$375	\$800	\$200	\$100
Entity 2: A Federally Qualified Health Center (FQHC) where a physician's National Provider Identifier (NPI) is listed on the ACO Participant List	\$50	\$0	\$100	\$400
Entity 3: A non-ACO Entity	\$100	\$0	\$400	\$75

7. Continued

(b) (2 points)

- (i) Explain whether each beneficiary meets the assignment criteria established by the Medicare Shared Savings Program. Justify your response.

ANSWER:

- (ii) Identify the entity to which the beneficiary is assigned, assuming each beneficiary meets the necessary criteria. Justify your response.

ANSWER:

In the Excel spreadsheet, you are given information for a different ACO, XYZ.

(c) (3 points)

- (i) Calculate the historical benchmark per capita. Show your work.

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

- (ii) Calculate the updated benchmark per capita. Show your work.

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

You are given the following information on the actual performance for XYZ in its first year:

- XYZ participates in a one-sided gainsharing model.
- Assume no reduction in shared savings for sequestration.

Assigned beneficiaries in performance year	30,000 person-years
Performance year expenditures	\$650,000,000
Quality performance sharing rate	40%
Quality score	55% for its quality metrics
Shared savings cap limit	10%

7. Continued

Minimum Savings Rate (MSR) for gainsharing (one-sided model):

Number of Assigned Beneficiaries	MSR Low	MSR High
10,000 - 14,999	3.0%	2.7%
15,000 - 19,999	2.7%	2.5%
20,000 - 49,999	2.5%	2.2%
50,000 - 59,999	2.2%	2.0%
60,000+	2.0%	2.0%

(d) (3 points)

- (i) Explain how XYZ meets the requirements to share savings with Centers for Medicare & Medicaid Services (CMS). Justify your response.

ANSWER:

- (ii) Calculate the shared savings to XYZ. Show your work.

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

(e) (2 points) Contrast an ACO shared savings reimbursement model and a fee-for-service (FFS) model for the following risks:

- (i) Technical

ANSWER:

- (ii) Insurance

ANSWER:

8.

(5 points)

- (a) (2 points) Describe care management programs that could be implemented by a health plan.

ANSWER:

- (b) (2 points) Describe variables that should be considered when measuring the medical cost savings of a care management program on different populations.

ANSWER:

A pharmacy-driven care management program has been implemented. A Medicare member has had the following prescriptions filled for a drug during the year:

- Day 1: 30-day supply
- Day 31: 60-day supply
- Day 91: 30-day supply
- Day 151: 90-day supply

- (c) (1 point)

- (i) Calculate the Medication Possession Ratio (MPR) and the Proportion of days covered (PDC) for this member. Show your work.

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

- (ii) Evaluate whether the Medicare STAR measure of 80% adherence has been met. Show your work. Justify your response.

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

9.

(5 points)

- (a) (3 points) Explain the impact of the following changes to the CMS risk adjustment program between 2017 and 2019, on profitability and stability of the Individual Health Insurance market.

- Durational impact
- Administrative load
- Pharmacy data
- Risk adjustment weights
- Claims pooling

ANSWER:

- (b) (2 points) Describe considerations for the consistency of input data used in the application of risk adjustment methodologies, according to ASOP 45.

ANSWER:

****END OF EXAMINATION****