SOCIETY OF ACTUARIES
Group and Health – Advanced

Exam GHADV

MORNING SESSION

Date: Thursday, October 30, 2014
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 7 questions numbered 9 through 15.

   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 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.

Tournez le cahier d'examen pour la version française.

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Exam GHADV

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

1. (*4 points*)

(a) (*1 point*) List managed care behavioral health treatment methods.

(b) (*2 points*) Create a visual representation of the elements of a patient-centered medical home for a member with a substance abuse diagnosis.

(c) (*1 point*) List the key success factors of an Accountable Care Organization (ACO) vs. a medical home.

2. (*6 points*) Lakes Region Health Plan (LRHP) has hired you to evaluate the responses to a Request For Proposal (RFP) issued by LRHP to change its Pharmacy Benefit Manager (PBM) to lower pharmacy costs and to improve outcomes. Two PBMs, River Run (RR) and Summit Peak (SP), respond to the RFP.

LRHP pharmacy experience by formulary tier is:

	Generic	Brand
Average Cost per Script	$20.00	$200.00
Dispensing Fee per Script	$1.00	$1.00
Number of Scripts PMPM	0.80	0.15

The following describes the contractual guarantees put forth by each PBM:

River Run PBM

- 10% lower cost for each formulary tier
- Shift in utilization resulting from formulary enhancements

Metric	Generic	Brand
Number of Scripts PMPM	0.85	0.10

- $1.00 PBM fee per script

Summit Peak PBM

- 15% lower cost for generic drugs
- 50% reduction in dispensing fees for generic/brand formulary tiers
- Introduction of a Specialty Tier with the following provisions:
  - 10% of scripts currently in the brand tier would be classified as specialty drugs
  - No drugs in the generic class will be reclassified as specialty drugs
  - The dispensing fee for specialty drugs will be $5 per script
  - Specialty drugs currently cost $1,500 per script. Summit will reduce unit cost by 25% for specialty drugs

(a) (*4 points*) Calculate the savings, if any, for each PBM's contractual guarantees. Show your work.

(b) (*2 points*) Recommend which PBM that LRHP should select for a long term relationship, considering factors in addition to the calculated savings in part (a).

3. (*7 points*)

(a) (*1 point*)

(i) Define an Asset Adequacy Analysis.

(ii) Define a Cash Flow Analysis.

(b) (*3 points*) Describe considerations an Actuary should make when completing the projection of Asset Cash Flows in a Cash Flow Test.

The Individual Medical Division Actuary is responsible for a poorly performing closed block of guaranteed renewable Major Medical policies acquired from other companies. The block is expected to lose money indefinitely due to an assumption that adequate rates will not be approved. In addition, it is assumed that the Affordable Care Act (ACA) will incent healthier policy holders to cancel and purchase new individual policies.

(c) (*1 point*)

(i) List reasons for completing a Cash Flow Testing as identified by ASOP #7: Analysis of Life, Health, or Property/Casualty Insurer Cash Flows.

(ii) Evaluate whether these reasons apply to the Individual Medical Actuary in this situation.

(d) (*2 points*)

(i) Identify conditions an Actuary should use in determining if the Asset Adequacy Analysis was satisfactory.

(ii) Evaluate whether these conditions apply to the Individual Medical Actuary in this situation.

4. (*12 points*)

(a) (*1 point*)

(i) Describe the misalignment of incentives in the Fee-For-Service (FFS) payment structure.

(ii) Explain how the FFS payment structure violates various components of the Institute of Medicine's definition of quality.

(b) (*1 point*) List the advantages and disadvantages of FFS payment structures between health plans and provider groups.

Intercity Urban Docs (IUD), a physician provider group, has contracted with City Health Insurance (CHI) to provide primary care services.

Assume the following:

- 4 doctors are employed
- FFS contractual payment arrangement is used.
- CHI operates a gatekeeper model with each beneficiary assigned to one doctor.
- The doctors bill as follows:

Procedure Code	Description	Billed Amount
99212	Low Severity Office Visit	$25
99215	High Severity Office Visit	$100

Per member per month (PMPM) utilization statistics for each doctor:

	Doctor A	Doctor B	Doctor C	Doctor D	Total
Patients	1,000	1,500	750	500	3,750
Visits PMPM	2.80	3.40	1.40	4.20	2.95
99212 Visits PMPM	1.40	2.00	0.40	1.20	1.36
99215 Visits PMPM	1.40	1.40	1.00	3.00	1.59
Average Payment per Visit	$62.50	$55.88	$78.57	$85.71	$65.38

(c) (*2 points*) Deduce which disadvantages of FFS payment structures are demonstrated by IUD's utilization patterns.

4. Continued

(d) (*2 points*) Describe each of the following types of provider payment arrangements:

(i) Global Capitation

(ii) Contact Capitation

(iii) Pay for Performance (P4P)

(iv) Withhold

(e) (*3 points*) Distinguish the implementation requirements and challenges involved with the use of each of the following provider payment arrangements:

(i) Global Capitation

(ii) Contact Capitation

(iii) Pay for Performance (P4P)

(iv) Withhold

(f) (*3 points*) CHI desires to enter into a capitation contractual payment arrangement with IUD for the next calendar year with the intent to save 10% on primary care services.

(i) Calculate the capitation amount to be paid to IUD for the next calendar year. Show your work.

(ii) List and define the categories of risk IUD will be exposed to upon entering the capitation arrangement.

(iii) Explain additional actions that IUD could take in order to limit their exposure to an inadequate capitation amount.

5. (*6 points*) Your Health Company is projecting membership will double in Individual products in 2014. You have been tasked to evaluate the staffing of the Customer Service Representatives.

(a) (*1 point*) Explain the issues and their causes that you would expect these members to contact the company about during 2014.

(b) (*1 point*) Describe the items that need to be considered regarding the set up and staffing of the Call Center.

You are given the following call center metrics:

	2013	2014 (Projected)
Plan Membership	325,000	650,000
Customer Service Reps	10	
Calls/Day	474	1,083
Minutes/Call	9	8
Average Speed to Answer (seconds)	70	
Service Level Percentage	65%	
Abandon Rate	9%	

(c) (*3 points*)

(i) Define how Average Speed to Answer, Service Level Percentage, and Abandon Rates are measured.

(ii) Recommend the number of Customer Service Reps your company should employ in 2014. Justify your answer.

(iii) Describe other means you could use to monitor customer service reps.

(d) (*1 point*) Explain how customer service staffing requirements impact the pricing of the Individual health products.

6. (*7 points*) You work for a managed care organization.

(a) (*1 point*) Explain how the characteristics of the employer sponsored and individual market segments affect sales and marketing.

(b) (*2 points*) Describe the different ways sales and marketing success may be measured, and the strengths and weaknesses of each.

(c) (*3 points*) Compare and contrast the enrollment process for:

(i) Employer sponsored insurance vs. individual insurance.

(ii) Medicare Advantage vs. Medicaid

(d) (*1 point*) Describe how enrollment errors can affect your organization.

7. (*14 points*) You are the Valuation Actuary for Dramatically Over Simplified Insurance Company (DOS). Your Individual Long Term Care (LTC) business was written between the years of 1993 and 1998. Sales were stopped due to the Company's decision to concentrate on the sale of less complex products. All premiums are deducted automatically on the premium due date except for policy TX0001 and policy TX0783. All policies are guaranteed renewable and were issued on a level issue-age basis.

Policy TX0001 has an annual premium of $1200 due on 12/1/2014. The premium has yet to be paid.

Policy TX0783 has an annual premium of $600 due on 2/1/2015. The premium was collected in December 2014.

(a) (*1 point*) Describe and determine premium reserves for policies TX0001 and TX0783 as of 12/31/2014. Show your work.

(b) (*2 points*) Describe methods to calculate claim reserves on the Individual LTC business.

You are given the following:

- 0% discount rate

Year	Paid Premium	Paid Claims	Expenses
1994	$600	$100	$600
1995	$600	$200	$75
1996	$600	$400	$50
1997	$600	$600	$20
1998	$600	$900	$10
1999	$0	$0	$0

(c) (*5 points*)

(i) Calculate the Statutory Net Gain including Active Life Reserves (ALR) and Deferred Acquisition Cost (DAC) asset as of January 1st each year from 1994 – 1998. Show your work.

(ii) Calculate the GAAP Net Gain including ALR and DAC asset as of each year from 1994 – 1998. Show your work.

7. Continued

(d) (*1 point*) Describe other types of analysis that should be done prior to signing an actuarial opinion for the Individual LTC reserves.

(e) (*3 points*) Evaluate assumptions required in the calculation of a Premium Deficiency Reserve (PDR) for DOS's Individual LTC block of business.

You are given the following:

- 0% discount rate

Year	Premiums	Paid Claims	Expenses	Claim Reserves at Start of Year	Policy Reserves at Start of Year
2014	$600	$600	$100	$975	$125
2015	$450	$600	$80	$850	$100
2016	$350	$500	$65	$600	$80
2017	$200	$400	$50	$500	$40
2018	$100	$300	$30	$250	$20
2019	$0	$0	$0	$0	$0

(f) (*2 points*)

(i) Calculate the statutory net gain for the years 2015 – 2019. Show your work.

(ii) Calculate the PDR as of 1/1/2015. Show your work.

8. (*4 points*)

(a) Describe items that are included in active life reserves (ALR).

(b) Explain the distinction between the terms "reserves" and "liabilities" as applied within the statutory balance sheet.

(c) Suggest checks and balances to ensure that an actuary is calculating reserves that are consistent with the entries reflected by the accounting and finance departments.

(d) Describe considerations an actuary should make when determining how to categorize medical conversion policies for premium defiency reserve purposes.

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

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