GH CORU Model Solutions
Fall 2018

1. **Learning Objectives:**

7. The candidate will understand and evaluate Retiree Group and Life Benefits in the United States.

Learning Outcomes:

(7b) Determine appropriate baseline assumptions for benefits and population.

(7c) Determine employer liabilities for retiree benefits under US GAAP.

Sources:

Study Note GHC-816-16 and Group Insurance Chapter 8

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Describe ways in which administering plan benefits for working employees may be different than for retirees.

Commentary on Question:

To receive full credit, candidates had to describe some of the differences between these populations rather than create a list alone. Most candidates did well on this section and explained several key differences in administering plan benefits. Many other reasonable answers were accepted for this question.

Retirees are different from active employees in several ways:

- Communication: More difficult because retirees do not come to work and some may have moved away.
- Many post-65 retirees will require coordination with Medicare.

(b) Calculate Sixpoint's accumulated postretirement benefit obligation. Show your work.

1. Continued

Commentary on Question:
Candidates generally understood the concept of calculating APBO. Partial credit was given for candidates that did not get the correct answer but had components correct. A few examples of pitfalls that candidates should be careful of: using the wrong trend or discount rate; trending or discounting to the wrong point in time; failing to convert the EPBO to APBO for Employee X. Candidates could save time on the calculations by realizing that a large portion of the calculation for Employee X was the same as for Employee W.

Full credit was given where the candidate calculated the correct trend or modified the trend table at times 7 and 8 for use in the problem. Candidates received partial credit if they used the trend values in the table at times 7 and 8.

Question states that trend decreases by 0.5% until 5% per annum, so the values in the table must be modified at times 7 and 8 when the trend decreases below 5%.

Values for cumulative trend:
Time 7 = 1.5535 * 1.05 = 1.6312
Time 8 = 1.6312 * 1.05 = 1.7127

Employee W: Fully vested due to service length. APBO = EPBO

EPBO = APBO = $2,500(1.08)(1.075)(1.07)(1.065)(1.06)/1.04^5 +
$2,500(1.08)(1.075)(1.07)(1.065)(1.06)(1.055)/1.04^6 +
$2,500(1.08)(1.075)(1.07)(1.065)(1.06)(1.055)(1.05)/1.04^7 +
$2,500(1.08)(1.075)(1.07)(1.065)(1.06)(1.055)(1.05)^2/1.04^8 +
$2,500(1.08)(1.075)(1.07)(1.065)(1.06)(1.055)(1.05)^3/1.04^9

= $2500 (1.4024*0.8219 + 1.4795*0.7903 + 1.5535*0.7599 +
1.6312*0.7307 + 1.7127*0.7026) = $14,744

Employee X: Retires upon reaching 20 years of service at age 63, so 2 years of pre-65 medical cost and 5 years of post-65 medical cost.

EPBO =$9,000(1.08)(1.075)(1.07)/1.04^3 +
$9,000(1.08)(1.075)(1.07)(1.065)/1.04^4 +
$2,500(1.08)(1.075)(1.07)(1.065)(1.06)/1.04^5 +
$2,500(1.08)(1.075)(1.07)(1.065)(1.06)(1.055)/1.04^6 +
$2,500(1.08)(1.075)(1.07)(1.065)(1.06)(1.055)(1.05)/1.04^7 +
$2,500(1.08)(1.075)(1.07)(1.065)(1.06)(1.055)(1.05)^2/1.04^8 +
$2,500(1.08)(1.075)(1.07)(1.065)(1.06)(1.055)(1.05)^3/1.04^9
(note: the final five terms highlighted in red is equal to the EPBO for Employee W. Candidates could simply reference back to prior calculation for this portion)

1. Continued

= $9000 (1.2423*0.8890+1.3230*0.8548) +
$2500 (1.4024*0.8219 + 1.4795*0.7903 + 1.5535*0.7599 +
1.6312*0.7307 + 1.7127*0.7026) = $34,862

EPBO = $34,862
But only 18 of the 20 service years have been accrued.
APBO = $34,862 * 18/20 = $31,376

Employee Y: Since retired, EPBO = APBO.

EPBO = APBO =$2,500 + $2,500(1.08)/(1.04) + $2,500(1.08)(1.075)/(1.04)^2 +
$2,500(1.08)(1.075)(1.07)/(1.04)^3 + $2,500(1.08)(1.075)(1.07)(1.065)/(1.04)^4

= $2500 (1.0000*1.0000 + 1.0800*0.9615 + 1.1610*0.9246 + 1.2423*0.8890 +
1.3230*0.8548) = $13,368

Employee Z: Since retired, EPBO = APBO.

EPBO = APBO = $2,500 + $2,500(1.08)/(1.04)
= $2500 (1.0000*1.0000 + 1.0800*0.9615) = $5,096

Total APBO = $14,744 + $31,376 + $13,368 + $5,096 = $64,584

2. Learning Objectives:

5. The candidate will understand how to prepare and be able to interpret insurance company financial statements in accordance with U.S. Statutory Principles and GAAP.

Learning Outcomes:

(5b) Interpret the results of both statutory and GAAP statements from the viewpoint of various stakeholders, including regulators, senior management, investors.

(5c) Apply applicable standards of practice.

Sources:

ASOP 28

USLO5 New2 Health Actuarial Opinion Practice Note

Commentary on Question:

This question tested the candidate's knowledge of the classification of actuarial opinions on the health annual statement, as well as possible exemptions from actuarial opinion requirements. While this information is somewhat complex, it comes directly from the syllabus material.

Solution:

(a) Describe the types of Statements of Actuarial Opinion for health insurance liabilities and assets you may prepare according to applicable standards of practice, and when an actuary may issue each type.

Commentary on Question:

Most candidates listed the 4 types. While many descriptions of the types were vague or incomplete, partial credit was awarded where knowledge was demonstrated.

From ASOP 28:

- Unqualified opinion – The reserve amounts make good and sufficient provision for the liabilities over the considered time period, including under moderately adverse conditions.
- Adverse opinion – the reserves are inadequate. The liabilities are outside a reasonable range for the specified purpose.
- Qualified opinion – The reserves are good and sufficient, except for certain item(s) that are likely to be material but can't be reasonably estimated.
- Inconclusive opinion – The actuary can't reach a conclusion due to limitations in the data, analysis, or assumptions. The reasons for the inconclusive opinion should be described in the statement.

2. Continued

(b) Explain whether each situation above may exempt an actuary from the actuarial opinion requirements set forth in the standards of practice.

1) Yes – in the practice note this is a specific exemption for small companies.
2) No – the exemption applies if the cost is greater than 3% of direct plus assumed written premiums.
3) No – see scope of ASOP 28, but ASOP 6 will apply.
4) No – see scope of ASOP 28.

3. Learning Objectives:

5. The candidate will understand how to prepare and be able to interpret insurance company financial statements in accordance with U.S. Statutory Principles and GAAP.

Learning Outcomes:

(5a) Prepare a financial statement in accordance with generally accepted accounting principles.

(5b) Interpret the results of both statutory and GAAP statements from the viewpoint of various stakeholders, including regulators, senior management, investors.

(5c) Apply applicable standards of practice.

Sources:

Group Insurance Chap 35 & 41, FAS 60 in learning objective 5

Commentary on Question:

Candidates recognized the inconsistency between the case study where they were given years 2012 and 2013 while the question asked about 2015. While the question meant to ask about the same year given in the case study, credit was given no matter what year the candidate assumed.

Solution:

(a) Recommend a reasonable GAAP unpaid claims reserve amount. Justify your answer.

Commentary on Question:

In general, most candidates performed well on this question recognizing that the GAAP unpaid claim reserve is the actuarial best estimate with a provision for adverse deviations (PAD). The most common mistake was for a candidate to set GAAP equal to the best estimate of $15.423M as stated in the question.

In order to get the full credit, the candidates were to make a reasonable assumption on the PAD and provide a numeric answer between the best-estimate with no conservatism ($15.423 M) and the statutory reserves in the case study, $16.956M (or 10% PAD), recognizing the relationship between best estimate < GAAP < Stat. Most commonly, candidates chose a 5% PAD, $16.194 M

3. Continued

(b) Revise the GIC year-end 2015 financial statements, based on the GAAP claims unpaid reserves recommendation from (a). Show your work.

Commentary on Question:
Most candidates assumed that 2013 and 2015 statements were the same while some candidates trended the 2013 statements to 2015. Credit was given equally for either approach. Candidates generally were successful with updating the balance sheet. However, most candidates missed updating the income statement.

- In the balance sheet:
  - Liabilities - Claims Unpaid gets updated to equal the recommendation from Part (a)
  - Equity – given a change in reserve estimate should be reflected as earnings, Retained Earnings gets updated to reflect the difference in Claims Unpaid between the revised and original. If Claims Unpaid decreases, then the Retained Earnings will increase. Assets must equal to the sum of Liabilities and Equity.
  - See Balance Sheet below

- In the income statement:
  - Expenses - Benefit Expense gets adjusted to reflect the difference in Claims Unpaid between the revised and original. If Claims Unpaid decreases, then the Benefit Expense also decreases
  - Income before Income Tax Expense is adjusted by the change in Benefit Expense
  - Income Tax Expense is updated since Income before Income Tax Expense changed
  - Net Income changes since Income before Income Tax Expense and the Income Tax Expense both changed.
  - See Income Statement below

3. Continued

Exhibit 9 - Income Statement

	Case Study	Model Answer	Difference
Total revenue	$ 203,083	$ 203,083	$ -
EXPENSES			
Benefit expense	$ 168,112	$ 167,341	$ (771)
Medicare Advantage	149,481	148,754	(727)
Medicare Part D	9,027	8,983	(44)
Total MAPD	*158,508*	*157,737*	*(771)*
Dual-Eligible Demonstration	9,604	9,604	-
Commissions	3,543	3,543	-
General administrative expense	17,786	17,786	-
Premium taxes	3,787	3,787	-
Interest expense	961	961	-
Amortization of other intangible assets	311	311	-
Total expense	$ 194,500	$ 193,729	$ (771)
Income before income tax expense	8,583	9,354	771
Income tax expense	3,090	3,368	278
effective tax rate (line 31/30)	*36%*		
Net Income	$ 5,493	$ 5,986	$ 493

Exhibit 9 - Balance Sheet

Total Assets	**$ 129,340**	**$ 129,340**	**$ -**
Liabilities			
Policy liabilities:			
Claims unpaid	$ 16,965	$ 16,194	$ (771)
Reserves for future policy benefits	321	321	-
Other policyholder liabilities	4,789	4,789	-
Total policy liabilities	*$ 22,075*	*$ 21,304*	*$ (771)*
UEP ... Payable for securities	56,932	56,932	-
Total liabilities	**$ 79,007**	**$ 78,236**	**$ (771)**
Shareholder's Equity			
Common capital stock	$ 25,521	$ 25,521	$ -
Retained earnings	24,812	25,583	771
Total shareholder's equity	**$ 50,333**	**$ 51,104**	**$ 771**
Total liabilities and owner's equity	**$ 129,340**	**$ 129,340**	**$ -**

(c) Describe the four factors building to Return on Equity (ROE) per the DuPont Formula.

Commentary on Question:
Most candidates did very well on Part (c). Common mistakes included excluding ROA, simply turning formulas to words instead of actually describing or listing items like Revenue, Equity and Assets as the factors.

- Total Asset Turnover: How much total investment is needed to meet the requirements of the business.
- Net Profit Margin: How profitable each customer? In other words, for every dollar of sales, what percent does the enterprise earn as profits.
- Return on Assets: What is the level of profits, expressed as a percent, that can be earned on the assets of the enterprise as a whole?
- Total Leverage Ratio: To what degree can the enterprise be operated using other people's money? That is, by how much can trade and other creditors' money be employed to magnify ROA for the benefit of shareholders.

(d) Assess the impact of reserve restatement on GIC's 2015 ROE. Show your work.

Commentary on Question:
Generally candidates scored well on Part (d). All points were given to a candidate who correctly calculated ROE for both the original and Part (b) revised financial statements, and commented on the change in ROE. Partial credit was given when equity from the prior period was used, or if the candidate was able to successfully describe expected ROE change verbally, making logical statements about how the net income and shareholder's equity would change.

- Original ROE = Net Income / Shareholder Equity = $5,493/$50,333 = 10.91%
- Revised ROE = Revised Net Income/ Revised Shareholder Equity
  = $5,986/ $51,104 = 11.71%
- The revision to the financial statements caused the ROE to increase by 0.8%

4. Learning Objectives:

6. The candidate will understand how to evaluate the impact of regulation and taxation on insurance companies and plan sponsors in the United States.

Learning Outcomes:

(6a) Describe the regulatory and policy making process in the United States.

(6b) Describe the major applicable laws and regulations and evaluate their impact.

(6c) Apply applicable standards of practice.

Sources:

USLO6 New3 - Recent Policy Changes: ACA

ASOP 50

Commentary on Question:

In general, the candidates answered this question as intended. The only caveat would be that many candidates didn't respond for part (a) (i) with the purpose of each component. Rather, they described, sometimes very thoroughly, the components but didn't mention the purpose.

Solution:

(a)

(i) Describe the initial purpose of each component.

(ii) Describe any changes that affected each component between enactment of the ACA and adoption of regulations by December 2017.

Commentary on Question:

Many candidates didn't respond for part (a) (i) with the purpose of each component. Rather, they described, sometimes very thoroughly, the components but didn't mention the purpose.

(i)

Cost Sharing Reduction – to provide financial support via lower deductibles, coinsurance, OOP Max and/or Copays to those under 250% of the FPL
Risk Corridor – to limit underwriting losses for payers in the ACA markets, for which predicting UW risk was not feasible
Risk Adjustment – to transfer money between carriers to reflect cost expectations attributable to enrollee's health
Federal Reinsurance – to reimburse carriers for high cost claimants in the ACA markets, intended to keep premiums affordable until healthier, lower cost people entered and remained in the market
Metal Level Actuarial Corridors – to allow consumers to more easily compare the value of various plan options within a given metallic level

4. Continued

Silver and Gold Plan Mandate – forcing carriers to offer Silver and Gold plans if they offered a bronze ensures a carrier does not ONLY enroll healthiest members
Contraception Coverage Waivers – to restrict the employers who would not cover contraception only to religious organizations
Federal Small Group Exchange – to provide an online exchange platform, supported by the federal government, through which small groups could purchase insurance, similar to that of the individual exchange

(ii)
Cost Sharing Reduction – Federal Government no longer reimbursing health plans for enhanced plan design as of Fall 2017
Risk Corridor – Promised payments, totaling $12.6 Billion, by the federal government have not been made
Risk Adjustment
• High cost pharmaceuticals now influence risk scores,
• lower % of premiums are now transferred (weights changed),
• Short duration members adjustment factors are used,
• states have leeway to lower % of premiums transferred,
• reinsurance for high cost claimants is now included,
• risk scores have been updated
Federal Reinsurance - no changes
Metal Level Actuarial Corridors – Corridors widened starting in 2018 to allow for greater plan design flexibility
Silver and Gold Plan Mandate – Carriers must sell silver and gold plans, thus restricting carriers who ONLY wanted to sell silver, if they intend to participate in an exchange
Contraception Coverage Waivers – any employer can exclude contraception from coverage by demonstrating a sincerely held moral belief inconsistent with covering any/all types of contraception
Federal Small Group Exchange – The federal government will no longer:
• Determine employee and employer eligibility
• Perform Premium aggregation
• Provide employers or carriers with enrollment and premium reporting
• Provide governance over employee appeals
• Charge a user fee

(b) For both the Minimum Value Calculator and the Actuarial Value Calculator:

(i) Describe the intended use for each calculator.

(ii) Describe the non-standard plan design exception calculation options.

4. Continued

Commentary on Question:
It was very clear that candidates who read the material were able to get full credit for this one. Candidates were not able to back into points with rambling about things that were related to the subject.

(i)
Appropriate use MVC – to determine if an employer sponsored health plan meets minimum coverage requirements
Appropriate use of AVC – to be used in determining the metal levels of a given plan design in Small Group or Individual

(ii)
-Adjust the inputs to the AVC/MVC in such a way that the results are consistent with the actual coverage being provided (estimate the fit of a plan into the model)
- Use the AVC to determine the AVC-AV for the plan provisions that are consistent with the calculator's parameters and then make appropriate adjustments

5. Learning Objectives:

4. The candidate will understand how to describe and evaluate Government Programs providing Health and Disability Benefits in the United States.

Learning Outcomes:

(4a) Describe Medicare benefits and evaluate price and filing.

Sources:

GHC 800-15, Rosenbloom Ch 21, pages 537-540

Commentary on Question:

There were three main problems outlined in the study note.

Solution:

(a)

(i) Describe the financing challenges facing the Medicare program.

(ii) Identify potential solutions.

Commentary on Question:

There were three main problems outlined in the study note. There were a wide range of solutions to the problem. The most common were listed below.

(i)

1) Income to the HI trust fund is not adequate to fund the HI portion of Medicare benefits
   - HI trust fund pays for hospital services
   - Funded through earmarked payroll taxes
   - HI expenditures exceed HI revenues

2) Increases in SMI costs increase pressure on the beneficiary household budgets and the federal budget
   - SMI trust fund includes accounts for Part B and D
   - 25% funded through beneficiary premiums; 75% funded by federal general tax revenues
   - Financing reset each year through beneficiary premium increases which ensures the program remains solvent
   - Cost sharing increases add additional pressure on beneficiaries.

3) Increases in total MCR spending threaten sustainability
   - MCR share of GDP increasing each year
   - Greater shares of economy will be devoted to MCR and smaller shares will be available for other priorities.

5. Continued

(ii)

1) Raise taxes
2) Reduce benefits
3) Increase the eligibility age
4) Reduce provider payments

(b) Explain the benefits of an EGWP compared to these two options:

- Directly contracting with CMS
- Keeping the current plan

  - Benefits to Direct Contracting
    - Sponsor performs admin and financial functions, not employer and union
    - Employer isn't directly contracted with CMS
    - Low premium results in greater cost savings
    - Custom plan designs
    - PD sponsor bears the total risk
    - PD sponsor familiar with CMS regulatory requirements

  - Benefits over existing RDS plan
    - Cost savings19-35% compared to 15-20% for RDS
    - Risk avoidance – risk shifted to sponsor
    - Minimal disruption – can maintain current Rx plan design
    - Tax savings – tax obligations are treated equally with taxable entities
    - Direct monthly subsidy received from CMS
    - GASB statement 43/45 liability reduced
    - Admin functions handled by third party sponsor
    - PD provides catastrophic coverage

(c)

(i) Calculate the 2019 RDS. Show your work.

(ii) Evaluate whether or not the switch to the EGWP will be worth the additional administrative cost. Show your work.

Commentary on Question:
Many candidates tried to calculate the employer's cost in the corridor which was provided. Partial credit was provided if the candidate didn't know the 28% or if they miscalculated the cost in the corridor.

5. Continued

(i)

- Under the RDS, the plan sponsor receives a check for 28% of the cost in the corridor
- Apply % to e'er cost in the corridor
- Correct Math: 0.28 * 2,000,000 = 560,000
- Rebates received are subtracted from the subsidy if any

(ii)

- A 10% increase in savings = 56,000
- This more than covers the 40,000 one-time costs for changing
- Since the costs are one time there is opportunity for future savings

6. Learning Objectives:

6. The candidate will understand how to evaluate the impact of regulation and taxation on insurance companies and plan sponsors in the United States.

Learning Outcomes:

(6b) Describe the major applicable laws and regulations and evaluate their impact.

(6c) Apply applicable standards of practice.

Sources:

GHC-815-16: Kaiser Foundation: Examining Health Care Reform: Medical Loss Ratio

ASOP 8, Regulatory Filings for Health Plan Entities (excl appendix)

Commentary on Question:

This question was testing the candidate's ability to accurately calculate Minimum Loss Ratios (MLRs) in the pre/post ACA environment. To receive full credit, candidates needed to accurately calculate all elements of the loss ratios as well as correctly identify the ASOP applicable to small group rate filings. Overall, candidates did not perform well on the question.

Solution:

(a) Calculate the ACA Medical Loss Ratio (MLR) and the Traditional MLR for each line of business. Assume new business is not a significant portion of any line of business. Show your work.

Commentary on Question:

Generally speaking, candidates did not perform well on this question. Candidates were able to properly document the pre/post ACA MLR formulas. Many candidates failed to combine the two small group lines of business when calculating MLRs. The majority of candidates noted that premiums should not be adjusted for commissions and that the commissions should continue to be included in the premium values provided. Very few candidates properly identified the correct Quality Initiatives (QI). Including all the Quality Initiative costs provided resulted in partial credit. Additionally, the QI values included PMPM and PMPY costs; therefore, the provided member months needed to be converted to members, where applicable. Many of the candidates noted this and properly calculated the membership levels. Many candidates calculated the loss ratios for the self-insured group, even those these were not applicable, and were penalized as a result. To receive full credit on the MLR calculations, candidates needed to properly calculate all components of the ratios, not just calculate a percentage using incorrect values. In the event a candidate did not calculate a component of the MLR correctly, they were still able to receive partial credit. Overall, very few candidates correctly calculated the MLRs requested.

6. Continued

Loss Ratio Calculations:	SG - ACA (a)	SG - GF (b)	SG [(a) + (b)]	LG (FI LG)
Claims (c)	$37,042,000	$16,807,000	$53,849,000	$5,553,000
QI Expenses (d)			$656,000	$56,100
Premiums (e)	$56,988,000	$28,012,000	$85,000,000	$7,405,000
Taxes (f)	$6,269,000	$3,081,000	$9,350,000	$814,000
MLR (ACA) [(c) + (d)] / [(e) - (f)]			72.0%	85.1%
MLR (Traditional) [(c) / (e)]			63.4%	75.0%

QI Expense Calculation	QI Expense:	SG - ACA (a)	SG - GF (b)	SG [(a) + (b)]	LG
Patient overpayment protection	No				
Maternity Health Improvement	Yes	$84,750	$38,250	$123,000	$12,750
Reduce Readmissions	Yes	$226,000	$102,000	$328,000	$34,000
Smoking Cessation	Yes	$0	$0	$0	$5,100
Over-billing fraud detection	No				
Diabetic outreach program	Yes	$0	$0	$0	$0
Electronic Health Record Dr. to Dr. sharing technology	Yes	$113,000	$51,000	$164,000	$0
Mental Health awareness and outreach program	Yes	$28,250	$12,750	$41,000	$4,250
Total QI Expenses				$656,000	$56,100

(b) Calculate the total MLR payment to be made to members from each line of business. Assume no deductible adjustments and linear interpolation for credibility. Show your work.

Commentary on Question:
The majority of candidates did not calculate the correct answer. Candidates were required to use the MLR from the results in Part A to calculate the rebate payment. Many of the candidates began with the incorrect MLRs, however, candidates were not penalized for this, assuming they calculated all remaining components of the rebate correctly. The majority of candidates were able to properly identify the small and large group thresholds. However, very few candidates were able to accurately calculate the remaining pieces of the rebate calculation. Many of the common mistakes included not combining the small groups when calculating the credibility values, improperly interpolating between the two life-year bounds when calculating credibility, and adjusting the MLRs using a multiplicative adjustment rather than additive. Many candidates were able to identify that fully insured large group did not have to make a payment.

	SG	LG
Members (a)	13,667	1,417
Membership Range - Low (b)	10,000	1,000
Membership Range - High (c)	25,000	2,500
Credibility Range - High (d)	2.6%	8.3%
Credibility Range - Low (e)	1.6%	5.2%
Credibility Factor (f) =[[(a) - (b)] * (e) + [(c) - (a)] * (d)]] / [(c)	2.4%	7.4%
MLR (ACA) [from Part A] (g)	72.0%	85.1%
Credibility Adjusted MLR [(h) = (f) + (g)]	74.4%	92.5%
Threshhold (i)	80.0%	85.0%
Payment [(i) - (h)] * (Premium)	4,756,205	0

6. Continued

(c) List and describe the recommended practices for a filing actuary to demonstrate compliance with the applicable laws for Small Group Rate Filing.

Commentary on Question:
Candidates performed poorly on this question. Many candidates identified the incorrect ASOP. Partial credit was awarded for instances where the practices listed overlapped with the proper ASOP. Many candidates listed "documenting assumptions" as a recommended practice in small group rate filings. Merely listing an ASOP number did not result in credit being awarded.

1) Purpose of the filing – A statement of purpose including the law intended to comply with
2) Assumptions - Including but not limited to premium levels, enrollment projections, expenses, commissions, taxes, applicable trends
3) Use of business Plans to Project Future Results – Consider as a part of filing methodology and assumption setting
4) Use of past experience to project future results – Including but not limited to selection of risks, demographic and risk changes, policy provisions, business operations, premiums, claims, expenses, and taxes. Should use actuarial judgment where applicable.
5) Recognition of plan provisions – Consider all plan documents, contracts, and established administrative procedures
6) New plans or benefits – Use of a model that is reasonable and consistent with other similar benefit or plan coverage if possible
7) Projection of future capital and surplus – Based on reasonable assumptions, internal and external actions, and actuarial judgment
8) Regulatory benchmark – Should be based on appropriate and relevant information for applicable line of business
9) Reasonableness of assumptions – Should be considered both in aggregate and individually

7. Learning Objectives:

7. The candidate will understand and evaluate Retiree Group and Life Benefits in the United States.

Learning Outcomes:

(7b) Determine appropriate baseline assumptions for benefits and population.

(7e) Apply actuarial standards of practice to retiree benefit plans.

Sources:

GHC-816-16 US Employers Accounting of Postretirement Benefits Other Than Pensions SN

ASOP 6

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Explain the relationship between the APBO and Expected Postretirement Benefit Obligation (EPBO).

Commentary on Question:

Full credit was given to candidates who provided an explanation of what APBO and EPBO are and how they are related. Candidates who only provided a formula for APBO in terms of EPBO were given partial credit.

- The EPBO is the actuarial present value as of a particular date of expected future benefit payments to be paid for an employee under the terms of the benefit plan.
- The APBO is the actuarial present value of the benefits attributed to employee service rendered to a particular date.
- The APBO is the portion of the EPBO that is attributed to past service.

You are given the following data and assumptions:

Employee Category	Number of Employees
Active: Under 60	900
Active: 60 - 64	100
Retired: 65+	100

- Current APBO = $10,000,000
- Current Annual Claims Cost Per Capita - $2,000
- Age 60 Annuity Factor – 15
- Age 65 Annuity Factor – 10

7. Continued

(b)

(i) Explain how the addition of early retirement benefits impacts the APBO.

(ii) Calculate the impact to the APBO for FIC resulting from adding the early retirement program benefits. Show your work

Commentary on Question:
Most candidates recognized that the addition of early retirement benefits would increase the APBO. On the other hand, most candidates did poorly in calculating the impact of making such a change in part (ii) of the question.

(i) Older employees will be generating additional cost to the employer plan instead of delaying that care cost to the start of Medicare eligibility. This will cause the APBO to increase.

(ii)

Before changing to early retirement system:
Current Total APBO = Retiree APBO + Active APBO
Retiree APBO = 100*2,000*10 =$2,000,000
Active APBO = $10,000,000 – $2,000,000 = $8,000,000

Active APBO per member = $8,000,000/1000 = $8,000

After changing to early retirement system
Additional Retiree Group APBO = 100*2,000*15 = $3,000,000
(Applying the 60-64 Annuity Factor)

New Active APBO = $8,000*900 = $7,200,000
(Calculate APBO of remaining members)
New Total APBO = $2 M + $3 M + $7.2 M = $12.2 M

Therefore, the impact to the APBO is:
12.2 M – 10 M = 2.2 M increase

(c) Describe considerations when modeling the covered population according to relevant practice standards.

Commentary on Question:
This question was taken directly from material in ASOP 6. Some candidates recognized that but many did not recognize "covered population" tied the question to ASOP 6. Those that did not, provided general considerations for modeling rather than focusing on the "covered population" aspect.

7. Continued

- Census Data – Was the census data sufficient and reasonable to estimate the obligation?
- Employees Not Currently Accruing Benefits – Are any employees not currently accruing service toward the retiree group benefits?
- Contingent Participants – Are there any employees not participating today who may reasonably do so in the future?
- Dependents and Surviving Dependents of Participants – Are there any dependents or survivors of dependents who may accrue benefits?

8. Learning Objectives:

4. The candidate will understand how to describe Government Programs providing Health and Disability Benefits in the U.S.

6. Evaluate the impact of regulation and taxation on companies and plan sponsors in the U.S.

Learning Outcomes:

(4c) Describe benefits and eligibility requirements for Medicaid and Children's Health Insurance Program (CHIP).

(6b) Describe the major applicable laws and regulations and evaluate their impact.

Sources:

Employer Guide For Compliance with the Mental Health Parity Act,
Medicaid 101, Financial Reporting Implications Under the Affordable Care Act, Risk Adjustment in State Medicaid Programs

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Outline differences between benefits in Medicaid plans compared to typical private insurance plans.

Commentary on Question:

Generally, candidates were successful in listing this differences but very few provided detail around what the programs were, why they were offered and why they were different.

- Early and Periodic Screening, Diagnostic, and Treatment (EPSDT).
  - Typically not covered by private insurance.
  - Mandated for enrollees under 21
  - Covers screening, preventative and early intervention.
  - EPSDT covers diagnostic services and treatment necessary to correct or ameliorate children's acute and chronic physical and mental health conditions.
  - EPSDT covers services that are particularly important, often on an ongoing basis, for children with disabilities, such as physical therapy, personal care, and durable medical equipment.
  - Private insurance often limits or excludes these services

8. Continued

- Long Term Services and Supports (LTSS)
  - Include services provided in nursing facilities and ICF/ID, as well as a wide range of services and supports needed by people, young and old, to live independently in the community
  - Home health care, personal care, durable medical equipment and supplies, rehabilitative services, case management, home and community-based services, and other services.
  - Most private insurance companies limit or exclude these services.
  - States can impose premiums and cost-sharing in Medicaid subject to specific federal limitations, exemptions, and an aggregate cap.
- Limited Cost-sharing
  - Premiums are prohibited for children and adults with income at or below 150% FPL, but states have limited flexibility to charge Medicaid premiums for people at higher income levels.
  - Cost-sharing is largely prohibited for mandatory children and limited to nominal amounts (specified in regulations) for adults below 100% FPL.
  - Several services are exempt from cost-sharing. Certain groups are also exempt, such as terminally ill individuals and individuals living in institutions.
  - For all Medicaid beneficiaries, aggregate premiums and cost-sharing are capped at 5% of quarterly or monthly family income.

(b) Compare and contrast the following components of risk adjustment models under Medicaid, Medicare and ACA Individual:

(i) Membership stability

(ii) Factor development

Commentary on Question:
Many candidates were able list and discus membership stability and factor development but failed to tie it back to the impact on the risk adjustment models.

Although the syllabus source material calls the Medicare Risk Adjustment program a retrospective model, full credit could have been earned by using "prospective" terminology instead, provided that the term was defined.

8. Continued

-Unlike the ACA and Medicaid programs – the Medicare risk adjustment program has a high level of stability. There are limited reasons for a Medicare member enter or leave the pool: age in and death. Dissimilarly, there are many reasons why a member may be move in and out of an ACA or Medicaid program. Medicare programs are expected to have high level of stability as membership changes occur for two reasons: age in and death.

-ACA – there is a larger likelihood of migration between large group and Medicaid insurance markets. Inability to predict membership limits the ability to predict risk adjustment amounts appropriately.

-For Medicaid, in both the individual and aggregate approaches risk scores follow beneficiaries through the system. In an aggregate model, where average risk score for enrollees during the experience is assumed to represent the average risk of enrollees during the rating period, new enrollees are assigned a claims based risk score. This is in contrast to the ACA risk adjustment model – which relies on insured members claims in that policy period/insurer to calculate a member's risks core.
-In Medicaid, many states require at least six months of eligibility exposure in the experience period to be included in the risk adjustment calculations. Adjustments for exposure are considered in the ACA risk adjustment model as well.

-An additional consideration for member stability is the level at which the calculations are completed. Medicaid and the ACA risk adjustment calculations are calculated at similar levels or granularity – the state level. This is different from the Medicare risk adjustment which happens at a national level. Because the calculation happens at a higher level – the pool is more stable as members are not moving in and out of a risk adjustment market.

-Both the ACA and Medicaid programs (typically) use concurrent data. However, the difference is in how that data is applied. The ACA applies concurrent data retrospectively – benefit year claims and demographic information is used to predict plan liability for the benefit year. The Medicaid program uses the concurrent data to adjust next year's capitation rates, not to adjust the current year's capitation rates.

-The Medicare program is different in that it uses a retrospective model applied to calculate the current year risk scores. Most of the data for the Medicare risk adjustment mechanism is known prior to the close of the experience calendar year.

8. Continued

(c) Describe the two main types of managed care in Medicaid.

Commentary on Question:
Many candidates were only able to list or describe the two types of managed care. Some common mistakes were listing types of networks or types of Medicaid waivers.

Managed care organizations: they are paid a monthly premium for each enrolled beneficiary in exchange for assuming the financial risk for providing comprehensive Medicaid benefits or a defined set of benefits

Primary Care Case Management : Medicaid pays contracted primary care providers (PCP) a small monthly per-enrollee fee to provide case management services to Medicaid beneficiaries assigned to them, including coordination and monitoring of primary health services and referrals for specialist care

(d) Compare the general parity requirement for a Medicaid plan and a commercially insured plan under the Mental Health Parity and Addiction Equity Act (MHPAEA).

Commentary on Question:
Candidates successfully listed the parity requirements but many times were unable to discuss when the act applied.

MHPAEA and the Final Rules set forth a general parity requirement, which prohibits health plans and health insurance issuers from:

a) applying any financial requirement or treatment limitation to MH/SUD benefits in any benefits classification that is more restrictive than the predominant financial requirement or treatment limitation applied to substantially all medical/surgical benefits in the same benefits classification; and
b) imposing separate financial requirements or treatment limitations that are applicable only with respect to MH/SUD benefits.

The act does not require health plans to provide mental health benefits, but if they do they must follow the requirements in MHPAEA.

The ACA extended parity protections to the small group and individual marketplaces. Qualified health plans offered inside and outside of the exchange, for small group and individual, are required to offer an Essential Health benefit package. Mental Health and substance use disorder services are included in the EHBs.

8. Continued

For Medicaid, most newly eligible adults will receive Medicaid benefit packages based on or equivalent to the benchmark plans. All benchmark plans, for both new eligible and the traditional population must include the ten essential health benefits. The ACA also requires Medicaid benchmark plans to meet mental health parity requirements. Any benchmark equivalent plans must include prescription drugs and mental health services.

(e) A group health plan has the following levels of copayments for outpatient medical surgical benefits and Mental Health/Substance Use Disorder (MH/SUD) benefits.

Benefit Type	In-Network	In-Network	In-Network	In-Network	Out-of-Network	Out-of-Network
Copayment Amount	$ -	$ 35.00	$ 50.00	$ 75.00	$ 100.00	$ 200.00
Projected Allowed	$ 360.00	$ 460.00	$ 460.00	$ 320.00	$ 200.00	$ 200.00

(i) Assess if the plan meets the general parity rules for the substantially all test for Mental Health/Substance Use Disorder (MH/SUD) benefits.

(ii) Recommend the copayment amounts for the MH/SUD benefits. Justify your response.

Commentary on Question:
Many candidates were able complete the math and perform the substantially all test. The most common mistake was combining the in-network and out of network math.

8. Continued

Inpatient, Subject to Copays	$1,240.00
Total Expected Allowed:	$1,600.00
Subject to Copay	77.5%
Substantially All test is met for In-Network	
Out of Network:	
Inpatient, Subject to Copays	$400.00
Total Expected Allowed:	$400.00
Substantially All test is met for Out-of-Network	

(ii) Recommend any changes to the benefit
There is no single level of copayments that applies to more than half of the medical/surgical benefits in a classification that is subject to copayments.

The plan can combine any level of copayments to determine that predominant level

$75.00	26%
$50.00	63%

The plan may not impose any copayment that is more restrictive than the least restrictive copayment in the combination, the $50 copay.

Out of Network: Each copay level is one half.

Therefore the plan may not impose any copay more restrictive than the least restrictive copay, $100

9. Learning Objectives:

2. The candidate will understand and recommend a manual rate for each of the coverages described in Learning Objective 1.

Learning Outcomes:

(2d) Calculate and recommend a manual rate.

(2g) Apply actuarial standard of practice in evaluating and projecting claim data.

Sources:

Individual Health Insurance, Leida, 2nd Edition, 2015, Ch 5

ASOP 23-Data Quality

ASOP 25-Credibility Procedures

ASOP 41-Actuarial Communications

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) List and describe major considerations in the rate setting process.

Commentary on Question:

While some candidates listed major considerations for group rate setting this question was specifically looking for the guidance provided by Leida, Chapter 5. Those that were familiar with the text did very well.

The Market-competitors price, limits insurers pricing options
Existing Products-Expectations by producers and the market will have an impact
Distribution System-Structure, compensation, level of Company control
Regulatory Situation-Federal and state changes can influence pricing and scrutiny
Strategic Plans and Profit Goals-needs to reflect and contribute to achieving company's strategic goals

(b) Describe durational influences on claim costs that should be considered in the rate setting process.

Commentary on Question:

The answer to this was actually in the tables provided for the rate calculation and specifically called out in Leida Chapter 5. Many candidates mentioned "underwriting wear off" which was good. These are important concepts in Individual Insurance. The question was looking for thorough understanding of the concepts.

9. Continued

Underwriting Selection - initial underwriting causes policyholders at time zero (time of issue) to be relatively healthy. Initial underwriting can cause first years claims to be as much as 60% less than average claims over the life of the policy. Underwriting selection is usually assumed to wear off over several-year depending on the type of coverage.

Cumulative Anti-Selection - Once underwriting wears off durational deterioration takes over due to the inability of the policyholder to obtain other insurance coverage

(c) Calculate net premium for a 55-year old. Show your work.

Commentary on Question:
Most Candidates were able to get some partial credit for this even if they did not do well on the first two questions. Application of UW and Anti Selection factors were the weak areas.

Attined Age	Incidence Rate	Average Annual Claim	UW Selection/Cum Anti Selection	Lives	PV	PV Cost
55	22.5%	$ 325.00	60%	1	0.952381	$ 41.79
56	25.0%	$ 350.00	80%	0.7	0.907029	$ 44.44
57	27.5%	$ 375.00	100%	0.56	0.863838	$ 49.89
						136.12

(d) Describe when and how each of ASOPs 23, 25 and 41 apply to your rate-making and rate filing process.

Commentary on Question:
Most candidates were able to identify and describe all ASOP's which got them half the credit for this question. The candidate needed to apply each ASOP to this particular situation to get full credit.

9. Continued

ASOP 23-Data Quaility

When:
During pricing/assumption setting

How:
Provides Guidance on
-Selecting the data that underlies the actuarial work product
-Relying on data supplied by others
-Reviewing data
-Using data
-Preparing data to be used by other actuaries
-Making appropriate disclosures with regard to data quality

ASOP 25-Cedibility Procedures

When:
During pricing/assumption setting

How:
Provides Guidance on using credibility to
-Evaluate experience for use in assumption setting
-Improve estimates of expected values

ASOP 41-Actuarial Communications

When:
Communicating results to principal
Rate filings with state regulators

How:
-Guidance for preparing actuarial communications, including those that may be required by the Qualification Standards or by other ASOPs

10. Learning Objectives:

1. The candidate will understand how to describe plan provisions typically offered under:
   a. Group and individual medical, dental and pharmacy plans
   b. Group and individual long-term disability plans
   c. Group short-term disability plans
   d. Supplementary plans, like Medicare Supplement
   e. Group and Individual Long Term Care Insurance

2. The candidate will understand and recommend a manual rate for each of the coverages described in Learning Objective 1.

Learning Outcomes:

(1b) Describe each of the coverages listed above.

(2d) Calculate and recommend a manual rate.

Sources:

Group Insurance, Skwire, 7th Edition, 2016.

- Ch. 11 Group Life Insurance Benefits
- Ch. 24 Estimating Life Claim Costs

Group Disability Insurance (Study Note GHC 101-13)

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Dr. No asks for your help clarifying requirements and options for group term life products.

(i) List the eligibility provisions for most basic group term life policies.

(ii) Describe a viatical assignment and why Dr. No's employees may want to participate in one.

Commentary on Question:

Many candidates received partial or full credit on part (i), just by listing the two items below, while some listed other aspects of group term life insurance (benefit provisions, etc.). Most candidates were not familiar with viatical settlements.

10. Continued

(i) Common eligibility provisions include:

- Full time employees (working more than a minimum number of hours, typically 20 per week)
- Actively-at-work requirement (performing all the usual duties of his or her job at the normal place of employment, before the life insurance becomes effective)

(ii) The certificate holder sells ("assigns") all of their incidents of ownership in the group coverage to a third party (viatical settlement provider). The viatical settlement provider pays the certificate holder a lump sum determined as an actuarially discounted value of the specified face amount.

Employees may want to participate in this in order to get cash now to pay for some form of illness or end of life costs prior to dying.

(b) Calculate the claims cost as a percentage of premium for each quote using Thunderball's claim rate found in exhibit 6 and Dr. No's 2014 employee census. Show your work.

Commentary on Question:
Most candidates understood how to set up the calculations for the claims cost, and several candidates got the correct answer exactly. One common problem was comparing monthly costs to annual premium, resulting in a very low loss ratio that did not make sense.

Current Dr. No's employee census, per page 40 of case study:

Sex	Age	# of Ees	Salary	Sex	Age	# of Ees	Salary
M	<25	1	$22,000	F	<25	0	N/A
M	25-29	0	N/A	F	25-29	2	$28,500
M	30-34	5	$33,000	F	30-34	5	$33,000
M	35-39	6	$37,000	F	35-39	7	$37,500
M	40-44	6	$46,750	F	40-44	3	$48,400
M	45-49	1	$55,400	F	45-49	2	$55,900
M	50-54	2	$67,600	F	50-54	1	$66,700
M	55-59	1	$78,250	F	55-59	1	$79,300
M	60-64	1	$90,500	F	60-64	1	$91,700

10. Continued

Monthly manual claims rate per $1,000 of coverage, per page 36 of case study:

Age	Male	Female
<25	0.61	0.32
25-29	0.78	0.35
30-34	0.87	0.45
35-39	0.98	0.63
40-44	1.39	0.90
45-49	2.16	1.25
50-54	3.64	1.95
55-59	6.41	3.46
60-64	11.65	6.80

(Note that age bands do not line up exactly. Full credit was given if candidate assumed the ranges were the same, or if reasonable adjustments were made to correct for the discrepancy.)

Company A claims cost = $60,000 * number of employees * claims cost / $1,000

Sex	Age	Claims Cost	Sex	Age	Claims Cost
M	<25	$439.20	F	<25	$0.00
M	25-29	$0.00	F	25-29	$504.00
M	30-34	$3,132.00	F	30-34	$1,620.00
M	35-39	$4,233.60	F	35-39	$3,175.20
M	40-44	$6,004.80	F	40-44	$1,944.00
M	45-49	$1,555.20	F	45-49	$1,800.00
M	50-54	$5,241.60	F	50-54	$1,404.00
M	55-59	$4,615.20	F	55-59	$2,491.20
M	60-64	$8,388.00	F	60-64	$4,896.00
M	Total	$33,609.60	F	Total	$17,834.40
Grand Total		$51,444.00			

10. Continued

Company B claims cost = Salary * number of employees * claims cost / $1,000

Sex	Age	Claims Cost	Sex	Age	Claims Cost
M	<25	$161.04	F	<25	$0.00
M	25-29	$0.00	F	25-29	$239.40
M	30-34	$1,722.60	F	30-34	$891.00
M	35-39	$2,610.72	F	35-39	$1,984.50
M	40-44	$4,678.74	F	40-44	$1,568.16
M	45-49	$1,435.97	F	45-49	$1,677.00
M	50-54	$5,905.54	F	50-54	$1,560.78
M	55-59	$6,018.99	F	55-59	$3,292.54
M	60-64	$12,651.90	F	60-64	$7,482.72
M	Total	$35,185.49	F	Total	$18,696.10
Grand Total		$53,881.59			

Claims Cost as a Percentage of Premium:
Company A: $51,444 / $64,000 = 80.38%
Company B: $53,882 / $66,000 = 81.64%

(c)

(i) Describe total and permanent disability coverage.

(ii) Calculate Dr. No's monthly cost to provide this benefit to Mike. Show your work.

Commentary on Question:
Part (i) was intended to ask about a total and permanent disability provision of a life insurance benefit. Part (ii) concerned a disability income plan. Very few candidates calculated the correct answer to (ii), with the most common mistake being the lack of an incidence rate in the calculation. Many candidates arrived at a monthly cost that was too high and did not make sense relative to the amount of the benefit.

(i) When an insured becomes totally and permanently disabled, this provision typically provides a benefit on a monthly installment basis, equal to all or a portion of the life insurance benefit. On death, the original death benefit would be reduced by any disability installments made.

(ii) Plan 2 policy is an 80% of salary benefit with a maximum monthly benefit of $5,000, 3-month elimination period, 3% COLA, 80% employer paid, per page 37 of the case study. Mike is in male 30-39 age band for claims incidence and reserve amounts.

10. Continued

Maximum monthly benefit = Min [$5,000, 80% * ($84,000 / 12)] = $5,000

Premium Cost = Incidence Rate * Reserve Amount * Maximum Monthly Benefit
Incidence Rate = 1.4 per 1,000, per page 31 of case study
Reserve Amount = $18 per $2 of coverage, given in problem
Maximum Monthly Benefit = $5,000, from above
Premium Cost = (1.4 / 1000) * (18/2) * $5,000 = $63 per month

Employer Cost = Premium Cost * Employer Cost Sharing
= $63 * 80% = $50.40 per month

11. Learning Objectives:

1. The candidate will understand how to describe plan provisions typically offered under:
   a. Group and individual medical, dental and pharmacy plans
   b. Group and individual long-term disability plans
   c. Group short-term disability plans
   d. Supplementary plans, like Medicare Supplement
   e. Group and Individual Long Term Care Insurance

Learning Outcomes:
(1b) Describe each of the coverages listed above.

Sources:
Group Insurance Chapter 7 and 23

GHC 105 17 Pricing Considerations for Drugs Covered under Pharmacy Benefit Programs

Commentary on Question:
This question is attempting to test candidates knowledge on the Step Therapy practice used by many insurance companies & PBM's. Many candidates did very well on parts (a.) through (d.), while parts (e.) and (f.) were the real differentiators of those who were fully prepared.

Solution:
(a) Describe the stages of the Prescription Drug Lifecycle.

Commentary on Question:
Candidates were expected to not only list the stages of the prescription drug lifecycle, but give some commentary on what happens in each stage. The vast majority of candidates got full credit for this question.

1. Research and Development – includes initial drug discovery, preclinical testing, clinical trials, and review by the FDA
2. Brand Patent Protection Period – After a new drug is FDA approved the manufacturer is granted exclusive right to manufacture the drug. This period typically lasts 12 years and is intended to give the manufacturer time to offset R&D costs
3. Generic Exclusivity Period – This period typically lasts six months and often immediately follows the brand patent protection period. During this period the brand name manufacturer and one additional manufacturer are allowed to manufacture the generic equivalent. The intent of the generic exclusivity period is to reward the generic manufacturer that incurs significant legal costs to end the brand patent period.

11. Continued

4. Generic Drug Life Span – After the Generic Exclusivity Period all pharmaceutical manufacturers can sell and produce the drug. New competitive market forces contribute to lower generic prices.

(b) Calculate the net plan cost for one 35 days supply, assuming this was Ruth's first claim of the year. Show your work.

Commentary on Question:
Generally, candidates did well on this question. The most common fault was the failure to recognize that after applying the coinsurance, Ruth hits her OOP max, so the plan must cover the remainder of the cost.

Allowed Amount = AWP*(1-Discount Rate) + Dispensing fee
Ruth's Liability = Min(Allowed, Max out of pocket)
Plan Liability = Allowed - Member paid

Allowed Amount: $10,000*(1-.25) + $2 = $7,502
Ruth's Liability: Min($7,502*.5, $3,000) = $3,000
Plan Liability: $7,502 - $3,000 = $4,502

(c)

(i) Define step therapy.

(ii) Describe the rationale for adding step therapy for an expensive drug.

Commentary on Question:
Again, candidates did very well on this question. Some candidates combined parts (i.) and (ii.) into a single answer, which was acceptable. One key factor that was sometimes missed was that step therapy must retain the <u>effectiveness</u> of the original drug. Candidates lost points if they only referred to the cost savings objectives and did not factor in the effectiveness of using the alternative drugs.

(i) Members are required to try and document failure of a certain preferred drug or set of drugs prior to gaining coverage for the more expensive drug.

(ii) Step Therapy should minimize costs and while maintaining effectiveness.

(d) Calculate the cost change from adding step therapy for both the insurance company and for Ruth.

Commentary on Question:
Candidates did well on this question as well. The biggest mistake candidates made was to calculate the revised cost for both Ruth and the plan, but then did not subtract this from the original cost to determine the <u>savings.</u>

11. Continued

Allowed Amount: $30*(1-.25) + $2 = $24.50
Ruth's Liability: $5 copay >> Change in cost is $3,000 - $5 = $2,995 decrease
Plan Liability: $24.50 - $5 = $19.50 >> Change in cost is $4,502 – $19.50 = $4,482.50 decrease

(e) Describe another formulary management strategy that could be used in this case to control cost.

Commentary on Question:
This question was the real differentiator amongst candidates that knew the material very well and those that are very good at memorizing note cards. Candidates were expected to recommend an alternative method to derive cost savings. Due to the wording of the question, a wide variety of answers were accepted, but candidates were expected to think through their answer, not just reword the purpose of step therapy. Additionally, candidates were expected to tie their answer back to the problem at hand – if they did not, they did not receive full credit.

In Ruth's case, the Insurer should consider only approving only a 30 day prescription and not allow refills until after 25 days. Extra approval should be needed for early refills or refills of larger quantities.

(f) Compare and contrast US and Canadian prescription drug pricing benchmarks, regulation, and contracting.

Commentary on Question:
Candidates did not do well on this section. Some were able to recognize differences in benchmarks, but in general credit was quite sparse.

	U.S.	Canada
Benchmarks	AWP / AMP (Average Wholesale Price / Average Manufacturer's Price)	Manufacturer's List Price
Regulation	US government is not involved in setting prices	Subject to review by the Patent Medicine Prices Review Board (PMPRB)
Contracting	Typically (AWP – discount), rebates negotiated between manufacturer's and PBM's for favorable placement on PBM's formulary	Private payers negotiate directly with manufacturers for rebates on brand drugs in exchange for their drug being listed on the formulary

12. Learning Objectives:

1. The candidate will understand how to describe plan provisions typically offered under:
   a. Group and individual medical, dental and pharmacy plans
   b. Group and individual long-term disability plans
   c. Group short-term disability plans
   d. Supplementary plans, like Medicare Supplement
   e. Group and Individual Long Term Care Insurance

2. The candidate will understand and recommend a manual rate for each of the coverages described in Learning Objective 1.

Learning Outcomes:

(1b) Describe each of the coverages listed above.

(2a) Identify and evaluate sources of data needed pricing, including the quality, appropriateness and limitations of each data source.

(2f) .Describe the product development process including risks and opportunities to be considered during the process.

Sources:

Group Insurance, Skwire, 7th Edition, 2016
Chapter 6 Dental Benefits in the United States
Chapter 22 Estimating Dental Claim Costs

Commentary on Question:

Most candidates did well on this question overall, especially with respect to parts a and d. However, many struggled with the identification and mitigation of risks in part c – aside from antiselection – that AnyState faces in pricing dental and entering the dental PPO market. Additionally, a surprising number of candidates did not apply the co-payment and/or deductible correctly in part f. Candidates are reminded to state their assumptions when unsure in order to maximize exam points awarded.

Solution:

(a) Describe the type of dental products available in the market.

Commentary on Question:

Most candidates were able to list out the various dental products and provided a short description for each. Usually when a candidate missed points, it was because descriptions were not provided or one of the product types was not listed.

12. Continued

There are 4 major types of dental plans in the market today:

1. Dental Indemnity Plans
    - Fee for service reimbursement type of plan
    - Member may see any provider they choose
    - Insurance company pays up to a scheduled fee per service and members is responsible for the additional charged amount above the fee schedule.
2. Dental HMO Plans
    - Insurance company generally reimburses providers on prepaid/capitated basis
    - Requires members to use in-network providers. Out-of-network providers are not covered
3. Dental Preferred Provider Organization (PPO) plans
    - Network of contracted providers at discounted rate
    - Discounted rate is all the provider can charge. Provider cannot balance bill.
    - Could offer different coinsurance rate for in network providers to help incentivize members to use in-network providers.
4. Discounted Dental Plan
    - These plans simply give members access to contracted provider discounts
    - Member is responsible for the total cost of the service

(b) Describe why a dental Preferred Provider Organization ("PPO") is a good initial product offering for Mutual of AnyState. Justify your response.

Commentary on Question:
Overall students largely were able to identify broad patient access as a reason for a PPO, but many were unable to provide additional justification.

Because Mutual of AnyState is new at the dental insurance market, I recommend us to start with a PPO plan for the following reasons:

- PPO's offer broader patient access as it has both in and out of network providers, allowing members to choose any provider they prefer while offering discounted rates for in-network providers.

- PPO's offer lower out of pocket rates for members when they utilize in-network providers.

12. Continued

- PPO's are typically more expensive than HMO's. But due to the low dollar amount of premium compare to medical insurance, I believe it will not be a huge barrier to the membership. PPO's are also less expensive than indemnity plans.

- PPO's offer plan design feature options such as deductibles, co-payments, coinsurance and annual or lifetime maximums to help with utilization management.

- Effective PPO provider-contracting ensures the providers have undergone an extensive credentialing process and meet quality requirements.

(c) Describe risks for Mutual of AnyState and recommend risk mitigation techniques with respect to the following:

(i) Pricing dental insurance products.

(ii) Entering the dental insurance market.

Commentary on Question:
Most candidates focused on antiselection risks and mitigation techniques, but failed to provide more issues other than that. Additionally, while candidates were not penalized, it was clear that many had a difficult time distinguishing the risks of pricing of dental products versus the risks of entering the dental insurance market.

Risks and mitigation strategies associated with pricing dental insurance products include:

1. Risks:
    a. Where are we going to obtain baseline data to calculate our premium rate for the first time?
    b. What if the baseline data we obtain is not an apples-to-apples comparison to our actual membership?
    c. How do we verify the appropriateness of our trend rate?
    d. How will a small group size impact us?
    e. How can we avoid low participation and the high antiselection that could come with that?
2. Mitigation strategies:
    a. We could buy data from a consulting company to help develop the premium rate.
    b. We could use our internal medical insurance data to estimate population characteristics.
    c. We could hire a consultant to opine on the trend rate.
    d. We could require a minimum group size.
    e. We could make our plan non-contributory to incite full participation.

12. Continued

Risks and mitigation strategies associated with entering the dental insurance market include:

1. Risks:
    a. Do we have the talent and experience within our company to bring this product to the market?
    b. How are we going to deal with the pent-up demand of the membership that is common with dental insurance?
    c. What if we cannot negotiate favorable pricing/discounts with our network providers?
    d. What if our network providers are low-quality?
2. Mitigation strategies:
    a. Hire people with dental insurance pricing and underwriting experience if not already available within the company.
    b. Include plan design features like waiting periods, incentive coinsurance, pre-existing condition clauses, etc., to reduce the impact of the pent-up demand.
    c. Ensure the plan design will steer members towards in-network providers, or consider renting a network for a limited time.
    d. Employ a robust credentialing process to ensure our network providers are high quality.

(d)

(i) Describe the coverage for each class of dental benefits including service examples.

(ii) Recommend four changes to the PPO plan that would help with any or all of the following: lower utilization, lower cost, reduce anti-selection risk, and reduce underwriting risk. Justify your response.

Commentary on Question:
Candidates generally did very well on this question, but are reminded to include justification for their responses. For example, "adding deductibles" was not awarded full points as an appropriate response for part (ii). However, "adding a deductible of $50 or $100 on Class II services to reduce plan costs and lower utilization," is appropriate.

The four classes of dental benefits include:

1. Class I – Preventive and Diagnostic Procedures. These services are intended to maintain good oral health and prevent future complications, which can be costly. Service examples include oral exams, cleaning and fluoride treatment, etc.
2. Class II – Basic Procedures. These services correct dental problems and treat dental disease. Service examples include fillings, extractions, root canal and other oral surgery.

12. Continued

3. Class III – Major Procedures. These services are intended to treat severe cases, some of which could have been prevented with regular preventative care and good personal care. Service examples include inlays, onlays, crowns, bridge and dentures.
4. Class IV – Orthodontic Procedures. These services are not always covered by dental plans due to their cosmetic nature. Service examples include braces.

To help lower any of utilization, cost, anti-selection risk and underwriting risk. The company could consider change the following plan designs:

1. Based on the plan design presented, I recommend the following changes to help lower any of utilization, costs, anti-selection risk and underwriting risk:
   a. Reduce the Class I copay to $0, in order to incentivize members to regularly obtain preventative care and avoid higher Class II, III and IV claims down the line.
   b. Add a deductible for Class II of $50 or $100 per year in order to reduce plans costs and lower utilization.
   c. Increase the spread in the in-network vs. out-of-network coinsurance levels in order to encourage more members to seek in-network services, lowering plan costs and member costs.
   d. Other: Lower lifetime maximums, introduce incentive coinsurance for Classes II and III, etc.

2. Additionally, AnyState could review the following plan design features:
   a. Frequency limitations to ensure members are not over-utilizing preventative services. For example, two dental cleanings per year.
   b. Pre-existing condition clauses to address the initial spike in costs due to pent-up demand, or – at the very least – review waiting periods for Class III and IV services.
   c. Other examples as appropriate.

(e) Describe the impact the Affordable Care Act has had on the dental insurance market.

Commentary on Question:
Most candidates correctly identified that ACA included pediatric dental as an "essential health benefit", but nothing further – nor did candidates include a description of the impact the ACA has had.

12. Continued

The Affordable Care Act impacted the market in the following ways:

1. Identified a set of "essential health benefits", and pediatric dental is part of it. Because of this, child-only policies are now developed, leading to additional antiselection considerations.
2. No annual or lifetime limits are permitted and there is a required annual out-of-pocket maximum. Out-of-pocket maximums were generally not seen in the dental insurance industry, and insurers had to determine the impact of this new feature.
3. The ACA provided expansion for Medicaid eligibility. However, dental provider shortages in some areas may limit the ability of patients to receive care, even if benefits are available.
4. Because the actuarial value (AV) for stand-alone dental plan must be at either 70% or 85%. Because AV calculators created for medical plans are not able to separate out pediatric dental services, stand-alone dental products must develop their own AV calculator and it must be certified by a member of the American Academy of Actuaries.

(f) Calculate the cost for both the member and for Mutual of AnyState for the policy year, based on the PPO plan proposed by the sales department, assuming the member:

(i) Went to only in-network providers

(ii) Went to only out-of-network providers

Show your work.

Commentary on Question:
The most common issues for candidates were identifying the appropriate Class for the services and not removing copayments and deductibles before applying coinsurance levels to determine the AnyState share of costs.

12. Continued

AnyState Amount = ((Allowed – Copay) – Deductible) * Coinsurance
Member Amount = Allowed – Company Amount

Service	Total Allowed Amount	In-Network	Out-of-Network
X-Rays: Class I	$80	AnyState: ($80 – $10) * 100% = **$70** Member: $80 – $70 = **$10**	AnyState: ($80 – $10) * 90% = **$63** Member: $80 – $63 = **$17**
Fillings: Class II	$450	AnyState: ($450 – $50) * 80% = **$320** Member: $450 – $320 = **$130**	AnyState: ($450 – $50) * 70% = **$280** Member: $450 – $280 = **$170**
Root Canal: Class II	$500	AnyState: ($500 – $50) * 80% = **$360** Member: $500 – $360 = **$140**	AnyState: ($500 – $50) * 70% = **$315** Member: $500 – $315 = **$185**
Partial Denture: Class III	$900	AnyState: (($900 – $100) - $100) * 50% = **$350** Member = $900 - $350 = **$550**	AnyState: (($900 – $100) - $100) * 40% = **$280** Member = $900 - $280 = **$620**
Total		**AnyState = $1,100** **Member = $830**	**AnyState = $938** **Member = $992**

13. Learning Objectives:

3. Evaluate and recommend an employee benefit strategy.

Learning Outcomes:

(3b) Describe elements of flexible benefit design and management.

(3c) Recommend an employee benefit strategy in light of an employer's objectives.

Sources:

Canadian Handbook of Flexible Benefits

The Essentials of Managed Healthcare

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Calculate the average impact of adverse selection (%) on net claims across the three options. Show your work.

Commentary on Question:

To receive full credit, candidates needed to show their work on calculating expected and actual net claims for each option and total 3 options to measure the adverse selection for the combined 3 options. PMPM calculations listed in the answer were not required. Some candidates used per thousand or annual dollar amounts to calculate the results, which were also acceptable. Common mistakes included simply weighing the A/E ratio using headcount enrollments instead of using $$ claim experience, confusing expected costs with actual when applying A/E ratio,, and finishing with a total dollar average impact in lieu of a % as asked in the question.

Option A: IP Expected Net Claim Cost PMPM = 300 x $5,000 / 12000 = $125.00
Option A: OP Expected Net Claim Cost PMPM = (900 x $1,500 / 12000) - (810 x $20 / 12000) = $111.15
Option A: PCP Expected Net Claim Cost PMPM = (4,000 x $200 / 12000) - (3,700 x $10 / 12000) = $63.58
Option B: IP Expected Net Claim Cost PMPM = 250 x $5,000 / 12000 = $104.17
Option B: OP Expected Net Claim Cost PMPM = (900 x $1,500 / 12000) - (595 x $40 / 12000) = $110.52
Option B: PCP Expected Net Claim Cost PMPM = (3,000 x $200 / 12000) - (2,760 x $20 / 12000) = $45.40
Option C: IP Expected Net Claim Cost PMPM = 100 x $5,000 / 12000 = $41.67
Option C: OP Expected Net Claim Cost PMPM = (400 x $1,500 / 12000) - (360 x $50 / 12000) = $48.50
Option C: PCP Expected Net Claim Cost PMPM = (2,000 x $200 / 12000) - (1,800 x $20 / 12000) = $30.33

13. Continued

Option A: Total Expected Net Claim Cost PMPM = $125.00 + $111.15 + $63.58 = $299.73
Option B: Total Expected Net Claim Cost PMPM = $104.17 + $110.52 + $45.40 = $260.09
Option C: Total Expected Net Claim Cost PMPM = $41.67 + $48.50 + $30.33 = $120.50
Option A: Actual Net Claim Cost PMPM = $299.73 x 1.2 = $359.68
Option B: Actual Net Claim Cost PMPM = $260.09 x 0.8 = $208.07
Option C: Actual Net Claim Cost PMPM = $120.50 x 1.5 = $180.75
Average actual net claim cost PMPM =
[($359.68 x 5,000) + ($208.07 x 2,500) + ($180.75 x 2,500)]/10,000 = $277.05
Average expected net claim cost PMPM =
[($299.73 x 5,000) + ($260.09 x 2,500) + ($120.50 x 2,500)] / 10,000 = $245.01
Average impact of adverse selection = ($277.05 / $245.01) - 1 = 13.1%

(b) LC is interested in mitigating the impact of adverse selection.

(i) List design approaches that LC can use to mitigate adverse selection.

(ii) Describe pricing approaches that LC can use to mitigate adverse selection.

Commentary on Question:
The intent of the question was to distinguish between design approaches versus pricing approaches. Some candidates incorrectly listed pricing approaches in responding to part (i). To receive full credit on part (i), candidates only had to list a maximum of 4 design approaches. For part (ii), descriptions were necessary to receive full credit.

Design Approaches:
- Limit frequency of choice
- Limit degree of change
- Level the spread between options
- Require proof of insurability
- Delay full payment
- Test program with employees
- Offer health spending account

13. Continued

Pricing Approaches:

- Risk-based pricing – price the options to reflect the expected risk or cost of the benefit.
- Employer subsidization – subsidize the cost to encourage participation and
- spread risk of adverse selection.
- Anticipating adverse selection in pricing
  - Load the prices of the lower-valued options in order to reduce the reward to employees for opting down.
  - Load all of the cost of expected adverse selection into the highest-valued option and keep the prices for the other options at the same level.
  - Spread the cost of the expected adverse selection over the price of all the options.

14. Learning Objectives:

3. Evaluate and recommend an employee benefit strategy.

Learning Outcomes:

(3a) Describe structure of employee benefit plans and products offered and the rationale for offering these structures.

(3c) Recommend an employee benefit strategy in light of an employer's objectives.

Sources:

A Practical Guide to Private Exchanges;

Rosenbloom Ch 32, page 874

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Explain considerations for Kings Company when determining its defined contribution approach for offering its plans on a private exchange.

Commentary on Question:

Recall-type question. Candidates were generally able to receive part marks.

- Current funding approach - what is the employer's current philosophy regarding subsidies and how does it compare to a defined contribution approach?
- Variation by coverage tier - does the employer want to subsidize dependents at a different level than the employee?
- Member Impact - How does this impact the member payroll contributions and what level of dissatisfaction may arise?
- Financial Goals - Does this change meet the employer's financial goals?
- Competitive pressures - how does the subsidy compare to the benefits provided by other companies for similar employees?

(b) Calculate the monthly employer subsidy PMPM and new monthly employee payroll contributions PMPM if the current plans move to the private exchange. Show your work.

Commentary on Question:

Candidates generally did very well on this portion of the question.

Employer subsidy PMPM = (($525*.63*41)+(350*.63*41))/(41+41)
Average Employer subsidy PMPM for both plans = $275.63
Employee contribution PMPM for Plan 1 =($600-$275.63)=$324.37
Employee contribution PMPM for Plan 2 =($300-$275.63)=$24.37

14. Continued

(c) Explain why employee contributions would change for Kings Company if the current plans move to the private exchange.

Commentary on Question:
Candidates generally identified the change in subsidy methodology, however, needed to comment on pricing within the Exchange for full credit.

- Each plan must stand on its own in the Exchanges - there can be no cross subsidization between plans – which means that the full impact of member selection (net of risk adjustment, if applicable) must be included in the total premium rates – whereas traditional pricing may subsidize selection.
- The employer contribution in the exchange is same $ amount regardless of plan, causing employees to have to pay the full incremental cost of the high option whereas previously the contribution was the same % of premium.

(d) Explain whether projected enrollment would change after moving to the private exchange.

Candidates generally were able to receive part marks identifying change in enrollment within options, but required to comment on total enrollment impact to receive full credit.

- Enrollment will shift to Plan 2 because the resulting gap in employee contribution for Plan 2 and Plan 1 has increased.
- Overall enrollment could *(any rational response below would receive credit)*:
  - increase if one of the premium options becomes free or very low cost and people who previously didn't enroll will
  - remain the same in aggregate if the cheaper option seems decent
  - decrease if the cheaper options doesn't seem decent (people then seek coverage through spouse or go bare)

(e) Explain potential implications of having a non-contributory health plan option.

Commentary on Question:
Most of the candidates knew non-contribution plan's effect includes anti-selection, that it would be difficult to introduce employee contribution later, and the legal issues with identifying who is covered.

- Under a non-contributory plan, the employee will not have any payroll deduction for Plan 2 and therefore even more employees may shift from Plan 1 to Plan 2 as a result.

14. Continued

- This additional shift will need to be reflected in the pricing of the two options [which may lead to even higher differential between the Plan 1 and Plan 2 rates (more selection)]

- Employees who currently don't enroll may enroll in Plan 2 may enroll once free option exists, which will increase overall costs

- Adding a premium to the $0 option in the future will be seen as a benefit reduction and can create employee anxiety and ill will, therefore it may be best to avoid setting a $0 option as precedent

- Letting employees opt out of $0 options can create legal issues if a medical provider tries to seek payment from the employer therefore it may be best to have to a premium to avoid the situation