GH CORU Model Solutions
Spring 2019

1. **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:

Essentials of Managed Health Care, 6th Edition – Chapter 24

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Calculate the monthly premium that a beneficiary would pay for this plan in 2018. Show your work.

Commentary on Question:

Most candidates were able to use the given information to correctly calculate the monthly plan premium. Some candidates only calculated the Base Beneficiary Premium and did not continue with the remainder of the calculations. Partial credit was awarded for this.

Base Beneficiary Premium (BBP) = National Average Monthly Bid Amount (NAMBA) * 0.255 / [1 – (projected average reinsurance payments to PD plans / total payments received by PDP's)]
= $60 *0.255 / [1-($40/$75)] = $32.79 PMPM

Direct Subsidy (DS) = NAMBA – BBP = $60 - $32.79 = $27.21 PMPM

Monthly plan premium = Standardized Part D bid – DS = $90 - $27.21 = $62.79

(b) Calculate the risk corridor payments, on a PMPM basis, made between AHP and CMS for the 2018 plan year. Show your work.

1. Continued

Commentary on Question:
There were two common mistakes on this section. Many candidates incorrectly applied the ACA individual market risk corridors rather than the Medicare Part D risk corridors. Other candidates incorrectly identified the expected claims amount in the calculation. For candidates who used the correct risk corridor parameters, the calculation was straightforward.

AHP has to pay CMS 50% of the amount by which actual costs are less than 5% of the expected cost and 80% of the amount by which actual costs are less than 10% of the expected cost.

Expected cost PMPM = $90
95% of expected cost = 0.95 * $90 = $85.50 PMPM
90% of expected cost = 0.9 * $90 = $81.00 PMPM
Actual cost = $70

Therefore, risk corridor payment made by the plan to CMS
= 0.5 * ($85.50 - $81.00) + 0.8 * ($81 - $70) = $11.05 PMPM

AHP makes payment to CMS since actual cost ($70) is less than expected ($90).

(c)

(i) Describe the limitations of the CMS-HCC model in predicting medical costs.

(ii) Recommend, with justification, some ways in which AHP can address each limitation.

Commentary on Question:
The intent of this section was to test candidates' understanding of the CMS-HCC model. The candidate was expected to explain a limitation of the model and then also needed to provide a recommendation for dealing with the limitation. Some candidates described limitations of the model but did not provide a recommended solution. There were various acceptable answers and examples of satisfactory answers are given below.

Limitation 1:
- CMS-HCC model only explains about 10% of the variation in medical costs among Medicare beneficiaries.

1. Continued

Recommendation 1:
- AHP can use a model with better explanatory power. An example of this would be to consider a model with Rx data or considering all diagnosis codes rather than relying on a hierarchy.

Limitation 2:
- Currently, there is little incentive for a provider to be accurate on claims submitted to Medicare because, apart from inpatient DRGs, payments to providers aren't made based on diagnoses.

Recommendation 2:
- AHP can incentivize its providers to code a beneficiary's diagnoses more accurately, perhaps through a revenue sharing agreement.

Limitation 3:
- Risk scores are based on prior year data, so low persistency from year to year hinders the predictive power of the model.

Recommendation 3:
- AHP can use more current data in its predictions rather than the ones implied by the HCC model.

2.

Learning Objectives:

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

Learning Outcomes:

(7a) Describe why employers offer retiree group and life benefits.

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

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

Sources:

Group Insurance: Chapter 8

ASOP 6

SN Group Health Core 816-16

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Describe how provisions of the ACA affect retiree plan costs.

Commentary on Question:

Candidates generally did well and were able to list items. More marks were given for describing the provisions. If candidates didn't score well, it was because they listed some provisions of the ACA that were not applicable to retirees.

- The loss of tax deductibility of the Retiree Drug Subsidy. Plan sponsors may reconsider whether to seek the subsidy as opposed to other alternatives, such as offer PDPs.
- The excise tax on high-cost plans becomes effective in 2018 and is a non-deductible tax of 40 percent of the excess of the value of health coverage over specified dollar thresholds. Due to the high cost of retiree coverage, this tax is more likely to affect these plans.
- The Early Retiree Reinsurance Program ("ERRP") provides $5 billion in federal subsidies for the continuation of employer-based retiree medical coverage for pre-65 retirees
- "Closing the Donut hole": Additional funding of Medicare Part D standard benefits that gradually closes the coverage gap by 2020. Both generic and brand-name drugs costs will be paid, so that the total benefit is 75% (for brand named drugs, the federal subsidy will pay for 25% of the costs, and for generic drugs, it will pay 75%).

2. Continued

(b) Describe factors influencing the choice of best estimate assumptions.

Commentary on Question:
Candidates generally performed well on this part of the question.

- Expectations about the financial market
- Expectations about changes in government legislation that directly or indirectly affect the plan
- Characteristics of the current and past employees and the entity itself
- When members will retire

(c) Explain elements of each of the two main groups of assumptions about future events.

Commentary on Question:
General listing of assumptions were awarded points on this part of the question, but more points were given for mentioning the two major groupings of assumptions.

The two main groups of assumptions about future events are Long term assumptions and healthcare assumptions.

- Long term assumptions include discount, mortality, salary escalation, and termination.
- Healthcare assumptions include medical trend, inflation, administrative costs, and participation.

(d) Describe the categories of projections assumptions set forth in professional standards.

Commentary on Question:
Many candidates struggled with this part of the question, missing the connection that the ASOP grouping of assumptions differs from the grouping of assumptions in other source material. The considerations in the ASOP are different and broader than those specific assumptions outlined in the study note. Points were given for candidates that grouped assumptions.

2. Continued

- Economic assumptions include healthcare cost trend, participant contribution, and adverse selection.
- Demographic assumptions include disability rates, retirement rates, and mortality.
- Participation and dependent coverage assumptions include participation affected by lapse, contribution and eligibility for dependent coverage options, and ages of dependents.
- Design change assumptions should be considered such as changes in plans offered or benefits covered.

(e) Explain considerations set forth in professional standards regarding the use of prescribed assumptions set by another party.

Commentary on Question:
Candidates generally performed well on this part of the question. Many candidates mentioned agreeing or disagreeing with an assumption, but didn't necessarily specify the need to evaluate an assumption. Some candidates described standards related to the use of data provided by others rather than the use of assumptions prescribed by others.

An actuarial communication should identify the party responsible for each material assumption.
If an assumption was set/prescribed by another party, then the actuary should evaluate whether a prescribed assumption set by another party is reasonable for the purpose of the measurement.
When evaluating a prescribed assumption set by another party, the actuary should determine whether the prescribed assumption significantly conflicts with what, in the actuary's professional judgment, would be reasonable for the purpose of the measurement. If, in the actuary's professional judgment, there is a significant conflict, the actuary should disclose this conflict.
If the actuary is unable to evaluate a prescribed assumption set by another party without performing a substantial amount of additional work beyond the scope of the assignment, the actuary should disclose this.

(f)

(i) Calculate the modified duration. Show your work.

(ii) Explain what the modified duration tells you about the relationship between the APBO and the discount rate.

2. Continued

Commentary on Question:
Part (i) seemed to present more of a challenge for candidates. If the general approach and formula were recalled, then typical mistakes included, forgetting to divide by (1+i) once the numerator and denominator were determined, and using the different spot rates to discount back to year 0.
For part (ii) many candidates were able to comment on how a 1% change in the discount rate affects the APBO.

Year	Time = t	Projected Benefit Payments = B_t	Spot Rate = R_t	Vt	t x Bt x Vt	Bt x Vt
0	0.5	800	1.25%	0.99	398	795
1	1.5	900	2.00%	0.97	1,310	874
2	2.5	1200	3.00%	0.93	2,786	1,115

(i) Modified duration = 1/(1+i) x Sum(t x Bt x Vt)/ Sum(Bt x Vt)
= 1/(1.0255) x (4494/2783)
= 1.57

(ii) This indicates that every 1% change in the discount rate, the APBO will vary by 1.57%.

3. 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.

Sources:

Group Insurance, Chapters 16 and 18

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Calculate the excise tax impact to OHIC of offering identical health coverage next year. Show your work.

Commentary on Question:

Most candidates did poorly on this part of the question. They were not able to distinguish between the health insurer provider fee and the excise tax (Cadillac tax). Those that did attempt the excise tax calculation didn't know the tax percent or the tax threshold.

Excise tax, if any, is assessed for high cost plans.

For OHIC: 40% * (3*($15,000 - $10,200)+7*($30,000-$27,500)) = $12,760

(b) Calculate the financial impact to OHIC of no longer offering health insurance to their employees. Show your work.

Commentary on Question:

Most candidates did not correctly identify the correct pieces to perform the analysis. Some candidates did not include the additional members after the acquisition.

OHIC No longer has to pay for health insurance
*-(103 * (15,000) + 7 * (30,000)) = -$1,755,000*

Has to pay all employees a $5,000 bonus
*110 * $5,000 = $550,000*

$5,000 bonus will be taxed (assume tax rate is 35%)
($550,000/(1-35%)-$550,000 = $296,150

3. Continued

Have to pay employer mandate
*$2,000 * (110 -30) = $160,000*

Financial Impact of no longer offering insurance: -$1,755,000 + $550,000 + $296,150 + $160,000 = -748,850
Savings of $748,850

(c) Describe the tax implications to all parties of OHIC of offering cash instead of health insurance benefits.

- Bonus is cash, which is subject to FICA for OHIC and taxed to the employee. Health insurance contributions are tax deductible for the employer and the employee doesn't get taxed for contributions.

(d) Recommend whether OHIC should eliminate their health insurance plan in favor of a $5,000 cash bonus to employees. Justify your answer.

Commentary on Question:
Either supporting the elimination of coverage in lieu of a cash bonus, or supporting maintaining coverage is acceptable, as long as only one is chosen and justified. Overall, the candidates did poorly on this part of the question because they didn't calculate the savings correctly in part (b) or they did not provide enough justification.

Yes, eliminate coverage and provide bonus
- OHIC saves a material amount of money
- Cash bonus may attract younger employees
- OHIC employees have lower salary, so $5,000 is a meaningful bonus
- Many employees may qualify for subsidies on the public health plan exchange

No, do not eliminate coverage
- Competitors may be providing benefits, and OHIC can lose out on talent
- Employee retention and loyalty may be negatively impacted by eliminating coverage
- Certain populations (ex: older employees, family tier, sicker employees, etc.) may need more coverage than the cash bonus may provide.
- Social responsibility of the company to provide benefits

3. Continued

(e) List and describe the allowable rating factors which employees would now be subject to if purchasing health insurance in the Individual Marketplace.

Commentary on Question:
Candidates need to provide description for each rating factor noted. Overall, most candidates did very well.

Age: Maximum band of factors is 3:1
Tobacco Use: Load for tobacco use of up to 50% is allowed
Family Composition: Up to 3 dependents are allowed to be considered in developing rates by tier.
Geographical Area: Areas are pre-determined by states. Factors are developed by insurance provider.
Benefit Design: Metal tier are fixed around pre-determined ranges of actuarial values. Lower member cost sharing results in higher actuarial value.
Network: Provider network relativities, which reflects discounts and management of services.

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.

Sources:

Understanding ACA Section 1332 Waivers

Medicaid 101

1115 Waivers

Commentary on Question:

The question was testing the candidates' knowledge of two types of waivers used to modify regulations. They were then asked to calculate potential savings to a state using the available pass through payment.

Solution:

(i)

- Secretary of HHS can allow states to waive certain Medicaid and CHIP provisions for "experimental, pilot, or demonstration project" that "is likely to assist in promoting the objectives of the program."
- Waivers must be budget neutral for the federal government
- Transparency, public input and evaluation are required
- Many states have Delivery System Reform waivers approved
- MLTSS, Behavioral Health, and ACA expansion have all be covered through an 1115 waiver in some states

Section 1332 waivers

- Waivers for ACA regulations
- If a state's 1332 waiver reduces the federal premium tax credits, cost-sharing reductions, or small business tax credits a state's residents qualify for, the state may receive "pass-through" funding equaling the financial assistance its residents would have received.
- The state can use those funds to implement its waiver plan.
- Federal guidance specifies that the waiver application must provide information needed to estimate the pass through funding amount, including:
    - data on enrollment
    - premiums
    - amount of financial assistance state residents would have received, based on age, income, and type of health plan

4. Continued

- 1332 “Guiderails”
  - Coverage must be comprehensive
  - Coverage must be affordable
  - Comparable number of people must have coverage
  - Waiver must not increase federal deficit

(ii)

- For 1115 waivers, the main point is the budget neutrality requirement: that expansion and renewal require certification that federal costs will not increase under the waiver. This could result in higher or lower state costs, but the federal costs cannot increase.
- For 1332 waivers, a pass through payment is available to state, which increases state funding where there is federal cost reduction. In addition to the requirements on federal deficit, there is a direct opportunity to increase state financing.

(b) For the 1332 waiver application:

(i) Calculate the expected per beneficiary per year (PBPY) financial impacts to the state of a 1332 waiver on both Plan A and Plan B. Show your work.

(ii) Recommend a plan for the 1332 waiver application. Justify your recommendation.

(iii) Calculate the premium required to achieve a PBPY net cost that is equivalent to the potential state savings for your recommended plan in part b(ii) above. Show your work

Commentary on Question:
Candidates generally did well on the calculations in part (i) other than missing the pass through payment to the state. Most candidates recommended a plan in (ii) and included some explanation. Very few received points for (iii) due to not calculating based on the state’s share or including pass through payments.

(i)
Plan A:= $250 PBPM
Federal financing = 10% of $250 = $25
State financing = $250 – 25 = $225
State’s savings = 10% of $225 = $22.5
There is no pass through money from the federal government
New Plan A cost to State = $225 – 22.5 = $202.5
PBPY for Plan A = $2430

4. Continued

Plan B: $200 PBPM
Federal financing = 30% of $200 = $60
State financing = $200 – 60 = $140
State's savings = 8% of $140 = $11.20
Pass through payment potential = $60
New Plan B cost to State = $140 – 60 – 11.20 = $68.8
PBPY for Plan B = $825.60

(ii)
Plan B should be chosen. It results in an overall lower state financial commitment, as well as a $60 PBPM of a net pass through. With the pass through, the State only finances $825.60 PBPY. Whereas Plan A leaves the State financial commitment at an annual cost of $2,430 PBPY.

(iii)
The Plan B cost of 68.8 PBPM would require an equivalent reduction of the total plan cost of Savings/State Share = 68.8/70% = 98.3

In order to achieve the same net impact to the state's financing, the new Plan B cost must = 200 – 98.3 = 101.7 PBPM. And the PBPY for Plan B would be $1,221.

5. 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.

(5c) Apply applicable standards of practice.

Sources:

Statement of Financial Accounting Standards No. 60 (excl. Appendix B)

ASOP 21, Responding to or Assisting Auditors or Examiners in Connection with Financial Statements for All Practice Areas

Group Insurance, Chapter. 35 and 41

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) List major types of group insurance financial reporting.

- Statutory
- GAAP (Generally Accepted Accounting Principles)
- Tax
- Managerial
- Policyholder Financial Reporting
- Provider Reporting

(b) Describe the accounting treatment prescribed by FAS 60 for each item in the table for the first omitted segment above.

Commentary on Question:

Candidates generally did well. It was important to note not only where each item belonged in the financial statement but also why it was recognized in the treatment prescribed by FAS 60.

SFAS 60 Section 15 - Premiums from long-duration contracts shall be recognized as revenue when due from policyholders.

Sec 29 - Acquisition costs shall be capitalized and charged to expense in proportion to premium revenue recognized.

5. **Continued**

Sec 27 - Costs incurred during the period, such as those relating to investments, general administration, and policy maintenance, that do not vary with and are not primarily related to the acquisition of new and renewal insurance contracts shall be charged to expense as incurred.

Sec 18 - Changes in estimates of claim costs resulting from the continuous review process and differences between estimates and payments for claims shall be recognized in income of the period in which the estimates are changed or payments are made.

Sec 21 - "A liability for future policy benefits relating to long-duration contracts other than title insurance contracts (paragraph 17) shall be accrued when premium revenue is recognized."

Sec 50 - Realized gains and losses on all investments shall be reported in the income statement below operating income and net of applicable income taxes.

Sec 50 - Unrealized investment gains and losses, net of applicable income taxes, shall be reported as a separate component of stockholders' (policyholders') equity.

50 - Except as discussed in paragraph 51, unrealized gains or losses on common stocks, preferred stocks, or publicly traded bonds shall not be recognized in income until the sale, maturity, or other disposition of the investment.

(c) Create an updated 2015 income statement for Royale Health that reflects the information provided above for the two omitted segments. Show your work.

Income Statement	**For the Year Ending December 31, 2015**			
(in thousands)		Long Duration		
Revenue		**Seg 1**	**Calc**	**FAS 60 Section**
	Premiums	$ 2,000		15
	Administrative Fees Income	$ -		
	Other revenue	$ -		
	Total operating revenue	*$ 2,000*		
	Net investment income	$ 55		50

	Net realized gains (losses) on investments	$ 15		50
	Total Revenues	**$ 2,070**		
Expenses				
	Benefit expense (claims paid + liability for fut ben)	$ 1,510	= $110,000 + $1,400,000	18, 21
	Commissions	$ 200	= ($2,000,000) * 10.0%	29
	General and administrative expense	$ 20		27
	Premium taxes	$ -		
	Interest Expense	$ -		
	Amortization of other intangible assets	$ -		
	Total Expenses	**$ 1,730**		
	Income before income tax expense	$ 340		
	Income tax expense	$ 119	= ($340,000) * 35.0%	
Net Income		**$ 221**		

Income Statement	**For the Year Ending December 31, 2015**			
(in thousands)		**Short Duration**		
Revenue		**Seg 2**	**Calc**	**FAS 60 Section**
	2015 contract prem (coll and uncoll) - 2015 ceded	$ 2,900	= $2,800,000 + $200,000 - $100,000	13, 38
	Administrative Fees Income	$ -		
	Other revenue	$ -		
	Total operating revenue	*$ 2,900*		
	Net investment income	$ -		
	Net realized gains (losses) on investments	$ -		
	Total Revenues	**$ 2,900**		
Expenses				
	Benefit expense - Claims paid during 2015+ change liability for unpaid claims - reins recov proj	$ 2,470	= $600,000 + $1,800,000 + $650,000 - $500,000 - $80,000	18, 38

	Commissions	$ 45	= ($2,800,000 + $200,000) * 1.5%	27
	General and administrative expense	$ 216	= ($2,800,000 + $200,000) * 7.2%	27
	Premium taxes	$ 54	= ($2,800,000 + $200,000) * 1.8%	27
	Interest Expense	$ -		
	Amortization of other intangible assets	$ -		
	Total Expenses	**$ 2,785**		
	Income before income tax expense	$ 115		
	Income tax expense	$ 40	= ($115,000) * 35.0%	
Net Income		**$ 75**		

Total					
Revenue		**Original**	**Seg 2**	**Seg 1**	**Revised**
	Premiums	$ 66,599	$ 2,900	$ 2,000	$ 71,499
	Administrative Fees Income	$ 5,050	$ -	$ -	$ 5,050
	Other revenue	$ 45	$ -	$ -	$ 45
	Total operating revenue	*$ 71,694*	*$ 2,900*	*$ 2,000*	*$76,594*
	Net investment income	$ 749	$ -	$ 55	$ 804
	Net realized gains (losses) on investments	$ 321	$ -	$ 15	$ 336
	Total Revenues	**$ 72,764**	**$ 2,900**	**$ 2,070**	**$77,734**
Expenses					
	Benefit expense	$ 57,230	$ 2,470	$ 1,510	$61,210
	Commissions	$ 1,541	$ 45	$ 200	$ 1,786
	General and administrative expense	$ 9,246	$ 216	$ 20	$ 9,482
	Premium taxes	$ 1,332	$ 54	$ -	$ 1,386
	Interest Expense	$ 752	$ -	$ -	$ 752
	Amortization of other intangible assets	$ 298	$ -	$ -	$ 298
	Total Expenses	**$ 70,399**	**$ 2,785**	**$ 1,730**	**$74,914**
	Income before income tax expense	$ 2,365	$ 115	$ 340	$ 2,820
	Income tax expense	$ 1,251	$ 40	$ 119	$ 1,410
Net Income		**$1,114**	**$ 75**	**$ 221**	**$ 1,410**

5. Continued

(d) List your responsibilities as a responding actuary under ASOP 21.

3.5 Cooperate with the reviewing actuary and the auditor/examiner in the compilation of the needed information
3.5.2 Be appropriately responsive to the auditor's reasonable requests for information including alternative info, scope and time conflicts.
3.5.4 Be prepared to discuss the data, prescribed and non-prescribed assumptions, and methods used.
3.5.5 Be prepared to discuss environmental considerations that had a significant effect. Such as: changes in the operating environment; trends in experience; product / plan / demographic changes; changes in methods, policies, or procedures; changes in statutory valuation bases; compliance with new or revised rules, laws, and regulations.
3.5.6 Be aware that audit may give rise to exchange of confidential information
3.6 May produce independent documentation
3.6.2 Should consider documenting info provided to the auditor/examiner

6. 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:

Essentials of Managed Healthcare – Chapter 24
Group Insurance – Chapter 9

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Calculate the change in revenue PMPM due to these updated assumptions. Show your work.

Commentary on Question:
The key here was identifying both aspects of the impact of the change in star rating (4 to 3) on the MAPD revenue calculation. Candidates were generally able to identify the impact of the change in star rating on the rebate received by the MAPD plan under the revenue formula, but very few included the 5% bonus payment the MAPD plan would receive for achieving 4 stars in their calculation.

Revenue Formula = MAPD Bid + Risk Score * (Benchmark – Normalized Bid) * Rebate + Bonus * Benchmark

Prior Bid (4 Star Rating):

- Plan receives 65% rebate (percentage of difference between the Benchmark and Normalized Bid)
- Plan receives 5% bonus (percentage of Benchmark)

Revenue (Prior) = $1,050 + 1.25 * (950 – 1,050/1.25) * 0.65 + 0.05 * 950 = $1,187

Revised Bid (3 Star Rating):

- Plan receives 50% rebate (percentage of difference between the Benchmark and Normalized Bid)
- Plan <u>does not</u> receive 5% bonus (percentage of Benchmark)

Revenue (Revised) = $1,050 + 1.25 * (950 – 1,050/1.25) * 0.5= $1,119

Change in Revenue = Revised Bid Revenue – Prior Bid Revenue
Change in Revenue = $1,119 - $1,187 = -$68 PMPM

6. **Continued**

(b) Identify the financial responsibility for each of the blank entries in the following table:

	Medicare Supplement Plan F			Medicare Advantage			FFS Medicare		
Event	Plan	Government	Beneficiary	Plan	Government	Beneficiary	Plan	Government	Beneficiary
First Inpatient Admission							N/A	Pays everything except deductible and coinsurance	Pays deductible and coinsurance
Screening Mammogram									
Flu Shot									
First Retail Pharmacy Prescription Drug Fill									
Emergency Room Visit									

Commentary on Question:
Performance was mixed on this question. Candidates generally had more success identifying first and remaining dollar liability under Medicare Advantage and FFS Medicare relative to Medicare Supplement. Another differentiator in performance was identifying that as preventive services, mammograms and flu shots would be covered 100% by the plan (Medicare Advantage) or the government (FFS). Most candidates were able to earn at least partial mark with well-prepared candidates earning full mark.

6. Continued

	Medicare Supplement Plan F			Medicare Advantage			FFS Medicare		
Event	Plan	Government	Beneficiary	Plan	Government	Beneficiary	Plan	Government	Beneficiary
First Inpatient Admission	Pays Member Cost Share	Pays the Remainder after Cost Share (Part A)	Pays Nothing	Pays the Remainder after Cost Share	N/A	Pays Cost Share (Subject to Plan Provisions)	N/A	Given: Pays everything except deductible and coinsurance	Given: Pays deductible and coinsurance
Screening Mammogram	Pays Nothing	Pays the Entirety (Part B)	Pays Nothing	Pays the Entirety	N/A	Pays Nothing	N/A	Pays the Entirety (Part B)	Pays Nothing
Flu Shot	Pays Nothing	Pays the Entirety (Part B)	Pays Nothing	Pays the Entirety	N/A	Pays Nothing	N/A	Pays the Entirety (Part B)	Pays Nothing
First Retail Pharmacy Prescription Drug Fill	Pays Nothing	Pays Nothing	Pays Entirety (Unless Member has Part D)	No Part D: Pays Nothing Part D: Pays the Remainder after Cost Share	N/A	No Part D: Pays Entirety Part D: Pays Cost Share (Subject to Plan Provisions)	N/A	Pays Nothing	Pays Entirety (Unless Member has Part D)
Emergency Room Visit	Pays Member Cost Share	Pays the Remainder after Cost Share (Part B)	Pays Nothing	Pays the Remainder after Cost Share	N/A	Pays Cost Share (Subject to Plan Provisions)	N/A	Pays the Remainder after Cost Share (Part B)	Pays Cost Share

(c) Three individuals are turning 65:

- Jane, who is on a fixed income and wants medical and drug coverage along with coverage for extra benefits such as dental coverage.
- Joe, who wants to be able to see any doctor he chooses and wants medical and drug coverage.
- Mary, who has high discretionary income and wants predictable medical and drug costs.

Recommend an option for each of these individuals. Justify your recommendation.

6. Continued

Commentary on Question:
Candidates generally did well on this question making reasonable recommendations for each individual with proper justification. The key was identifying each individual's chief need in the context of the various Medicare offerings and their cost of coverage. One common mistake was trying to pair Medicare Supplement with an MA-PD plan. Medicare Supplement plans can only be paired with traditional Medicare Part A & B, and they do not include prescription drug coverage.

Jane:
- Recommend MA-PD plan
- She is on a fixed income and the MA-PD will offer her affordable medical and drug coverage
- MA-PD plans also often offer supplemental benefits such as dental coverage at no additional cost
- Although Medicare Supplement would potentially reduce her member cost share, the premium is probably too costly given her fixed income

Joe:
- Recommend Traditional Medicare A & B and PDP plan
- Traditional Medicare will allow Joe to see any participating Medicare provider
- A PDP plan will provide Joe with drug coverage
- An MA-PD plan would likely have a managed network that would limit Joe's flexibility in choosing a provider

Mary:
- Recommend Traditional Medicare A & B, PDP plan, and Medicare Supplement Plan
- Mary's high discretionary income will allow her to afford the premium for the richer coverage offered by Medicare Supplement
- A PDP plan will provide Mary with drug coverage
- Unlike Traditional Medicare alone or an MA-PD plan where cost share could vary, pairing traditional coverage with Medicare Supplement will help to cover and limit Mary's out-of-pocket costs, therefore fulfilling her desire for predictable cost

7. 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:

Milliman ACA's impact on financial statements

GHC-806-15 Financial Reporting Implications Under the Affordable Care Act

Commentary on Question:

Overall candidates performed well on this question. Candidates were able to successfully explain risk programs introduced by the Affordable Care Act in part (a). In part (b), candidates were able to reason a solution but often time failed to justify their response. In part (c), candidates sometimes failed to explain the population that qualified for each subsidy. For part (d), candidates successfully listed fees associated with the ACA but often failed to describe those fees or failed to explain challenges related to the financial statements. Some candidates confused the fees associated with the program with the program administration itself and failed to correctly identify the financial statement impact of the fees.

Solution:

(a) Explain the new risk programs introduced by the Affordable Care Act (ACA).

- Risk Adjustment:
  - A complex and permanent program to even out risk of the insured population
  - HHS (or State) compiles a score for the market and insurers compared their risk to that score
  - Above average insurers receive HHS compensation and below average insurers pay HHS

7. Continued

- Reinsurance:
    - A more straight-forward transitional (through CY2016) program to reimburse plans for high cost individuals in the commercial market
    - U.S. Government reimbursed insurers for 80% of claims for any single member in amount between $45,000 and $250,000 in 2014
    - Under GAAP, entire projected reimbursement was recorded as a receivable
    - Under STAT, receivables for paid claims were an asset while receivables related to unpaid or unreported claims were an offset to unpaid claim liabilities
- Risk Corridors:
    - A complex transitional program designed to protect QHP insurers against high claims (through CY 2016)
    - Claims 3% above target are shared 50/50 with Federal Government, who pays 80% for claims beyond 8% variation
    - Symmetrical sharing for claims below target

(b) Assess whether each new risk program applies to the following:

(i) 2015 Qualified Health Plans on the individual market

(ii) 2016 Medicaid Managed Care Plan Rate Certification

(iii) 2017 Individual Commercial Market Plans

Justify your response.

Commentary on Question:
Candidate should justify whether the plan is subject to the ACA risk program either due to the timing or design of the plan. Answers can vary where well explained.

Do these programs apply to the following plans?			
	Risk Adj.	Reins.	Risk Corridor
(i) 2015 Qualified Health Plans on the individual market	Yes	Yes	Yes
(ii) 2016 Medicaid Managed Care Plan Rate Certification	No	No	Maybe
(iii) 2017 Individual Commercial Market Plans	Yes	No	No

7. Continued

(c) Describe the subsidies originally created by the ACA and the populations qualifying for each type.

Premium Subsidies:

- Legislated as permanently available to individuals and families 100% to 400% of FPL.
- Premium subsidy reconciliation with the Exchange and payment transfers will occur on a monthly basis in advance of the start of a coverage month
- Subsidies received by the insurer prior to the start of coverage should be recorded as an unearned premium, becoming "earned" when the coverage becomes effective

Cost Sharing Reductions (CSR) Subsidies:

- Reduces deductibles, copayments, and coinsurance for individuals and families 100% and 250% of FPL
- Only silver plans qualify
  cost-sharing subsidy may be in addition to the premium subsidy

(d) Explain the fees that were introduced by the ACA and the challenges related to reflecting these fees in financial statements.

- Health Insurance Provider Fee
  - A permanent excise tax on insurers that is not deductible from taxable income and based on the insurer's share of premiums nationwide
  - Timing and Standards present a challenge:
    - Timing of the fee based on prior year experience will vary in GAAP and STAT accounting
    - GAAP recognizes the intangible asset of the fee where in STAT the intangible asset is non-admitted
    - Unlike the risk programs, final 2014 financial statements should have included the actual fee amount (since this fee was payable by Fall of 2014)

- Reinsurance Fee
  - Temporary fund for the reinsurance risk program
  - Charged $5.25 PMPM in 2014 with an aim of $12 billion nationally
  - Reconciliation of fee presents a challenge:
    - Funds collected prior to distribution back to insurers covering high-cost members in the individual market
    - Fee calculated on nine months of data annualized to represent twelve months of enrollment

7. Continued

- Additional Fees:
  - PCORI: is a per-member federal tax that applies to plan years ending between Oct. 1, 2012, and Sept. 30, 2019. The PMPY is $1 for the first year, $2 for the second and increases that match inflation
  - Risk Adjustment User Fee: a per-member fee that will apply to issuers of plans to which the ACA risk-adjustment program applies. It is intended to fund the administrative costs of the risk-adjustment program.
  - Federally facilitated exchange user fee: Will apply to issuers of plans offered through a federally facilitated exchange. Similar fees may apply to issuers of plans offered through state-operated exchanges.
  - Financial statement challenges:
    - Do not generate significant issues for financial statements.

8. 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.

Sources:

Implications of Individual Subsidies in the Affordable Care Act – What Stakeholders Need to Understand, Healthwatch, May, 2014

GHC-815-16 Explaining Health Care Reform – Medical Loss Ratio (MLR) - KFF

Commentary on Question:

This question tested the candidates' understanding of how to calculate premiums for insurance purchased on state run exchanges, including max contributions for participants and subsidies. The question required a number of calculations with the results of one part of the question being used in a later part of the question. Therefore, candidates could receive partial credit for carrying forward an incorrect answer and using it correctly in a later formula.

Solution:

(a) Calculate Eric's PMPM premium for the two Silver plans before premium subsidy. Show your work.

Commentary on Question:

Most candidates got the structure of the premium formula correct but many candidates used the Allowed Amount straight from the given table instead of the Plan Cost Share when calculating the premium. Multiple premium formulas were deemed acceptable if they included all the necessary components.

$$\text{PMPM Premium} = \frac{(\text{Plan Cost Share} + \text{Fixed Exp} + \text{Taxes})}{(1 - \text{Var Exp\%} - \text{Profit\%})}$$

Plan Cost Share Silver A = \$300 x 70% = \$210

PMPM Prem Silver A = (210 + 15 + 35) / (1 - .04 - .03) = \$279.57

Plan Cost Share Silver B = \$330 x 70% = \$231

PMPM Prem Silver B = (231 + 30 + 25) / (1 - .05 - .04) = \$314.29

8. Continued

(b) Calculate the monthly net premium Eric has to pay for Silver A. Show your work.

Commentary on Question:
This part required a number of simple calculations which many candidates were able to perform. Some common mistakes were not interpolating to get the Max % of Income and calling the Premium Subsidy the Net Premium. Overall, candidates knew to use the Second Lowest Silver Premium in the subsidy calculation.

Eric's Income = 12,060 x 175% = $21,105

Eric is at 175% FPL so interpolation is needed to determine Max % of Income:
175% is midpoint of 150% and 200% so Max % is (4% + 6.3)/2 = 5.15%

Max Monthly Contribution = 5.15% x 21,105 / 12 = $90.58

Premium Subsidy is based on second lowest Silver premium which in this case is Silver B = $314.29

Premium Subsidy = 314.29 – 90.58 = 223.71

This subsidy can also be used for Silver A so the Net Premium for Silver A is:
279.57 – 223.71 = $55.86

(c) Calculate Eric's expected total annual expenditure for Silver A. Show your work.

Revised Actuarial Value for Silver A is 87%

Cost Share = Allowed Amount x (1– 87%) = 300 x 13% = $39/mo.

Total Cost = Net Premium + Cost Share = 55.86 + 39 = $94.86

Annual Total Cost = 94.86 x 12 = $1,138.32

9. 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.

(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 – Ch. 7

Handbook of Employee Benefits – Ch. 7

Commentary on Question:

Overall, candidates needed to better understand the differences between the accounts available in Canada vs. the US.

Solution:

(a) Describe the advantages to both the employer and employee of each type of flexible spending account in Canada.

Commentary on Question:

Some candidates failed to attribute advantages to specific types of flexible spending accounts.

- Health-related spending account advantages:
  - Employer
    - Tax effective way to deliver compensation
    - Encourage employees to self-insure predictable expenses
  - Employee
    - Softens the impact of higher employee cost sharing
    - Helps maximize value from health benefits for a Quebec employee
- Personal account advantages:
  - Employee
    - Allows fund to be used for a variety of eligible expenses such as wellness, mental health expenses, CPR courses and individual life insurance premiums depending on employer restrictions
    - Unused balances at the end of the year can be rolled over indefinitely
    - Unused balances can be cashed out by the employee upon termination of employment

9. Continued

- Executive perquisite account advantages:
  - Employer
    - The employer's cost is limited to a fixed dollar amount
    - Administration can be reduced compared to a traditional perquisite program, since each executive makes his or her own arrangements and submits expenses to the company for reimbursement
  - Employee
    - Each executive can choose the perquisites of most value to him or her;
    - Executives can maximize the tax-effectiveness of perquisites by choosing how to spend the money in the account (the tax treatment of the perquisite account dollars spent depends on the type of perquisite chosen);
- All accounts advantages:
  - Employer
    - Expand the types of benefits offered to employees with little or no additional employer cost (for example, orthodontia, laser eye surgery, and health clubs)
    - Add a new benefit without subsidizing an expensive coverage area
    - Offer a benefit that might appeal to only a small segment of the employee population
    - Contain costs by establishing a defined company contribution toward benefits, while providing employees with flexibility over how the funds are spent
    - Test the appeal of flexible benefits without committing to a broad-based, full-choice program
  - Employee
    - Expand the types of benefits offered

(b) A US based employer wants to offer a health plan with a $200 deductible and a health care account that allows for employee contributions up to $2,500 annually.

(i) List types of health care accounts available in the US.

(ii) Recommend a health care account for the US employer described above. Justify your response.

Commentary on Question:
Candidates needed to fully name the accounts rather than just listing acronyms. Many candidates did not know the full names of these 3 accounts. A common error was to label the HSA as a Health Spending Account.

9. Continued

(i) Health Savings Account (HSA)
Health Reimbursement Account (HRA)
Flexible Spending Account (FSA)

(ii) I recommend a Flexible Spending Account (FSA)
Justification:
HSAs are not allowed due to deductible level
HRAs do not allow employee contributions

(c) Compare and contrast Canadian Health Spending Account plans and US Health Savings Account plans in terms of requirements and provisions.

Commentary on Question:
Many candidates did well on this section, however, most did not mention that Canadian HSA's can be used to pay healthcare premiums while US HSA's cannot.

Common characteristics between Canadian and US HSAs are:
- Both accounts rely on pre-tax funding
- Employee's election to allocate funds to the account must be made in advance of the plan year
- Both types of accounts are used to pay for health-related expenses
  Both types of accounts have some sort of roll-over provision

Differences between Canadian and US HSAs include:
- Canadian HSAs can be used to pay for health insurance premiums while US HSAs cannot
- US HSAs do not have any annual or lifetime limits on the amounts that can be carried over or accumulated. Canadian HSAs restrict the amount that can be carried over by using either a one-year roll over of unused balances or a one-year roll over of unpaid claims

(d)

(i) Calculate Pat's 2018 beginning balance under a Canadian Health Spending Account. Show your work.

(ii) Calculate Pat's 2018 beginning balance under a US Health Savings Account. Show your work.

9. Continued

Commentary on Question:
Many candidates did not recognize that the difference between the two accounts was that premiums could not be reimbursed from a US HSA.

Candidates who assumed that the rollover of unused claims method had been selected in Canada, were not penalized provided they came up with a 2018 beginning of year balance of $1,460.

Assumed that member elected rollover of unused credits method for Canada.

	(i) Canada			(ii) US		
	2016	2017	2018	2016	2017	2018
BOY Balance	$1,500	$1,790	$1,750	$1,500	$2,020	$2,220
Qualified Spending	$1,210	$1,540		$980	$1,300	
EOY Balance	$290	$250		$520	$720	

10. **Learning Objectives:**

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

Learning Outcomes:

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

(2d) Calculate and recommend a manual rate.

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

Sources:
Group Insurance, Skwire Ch 6, 20 ,21, 24 and 25.

ASOP 23

ASOP 41

Commentary on Question:
Commentary listed underneath question component.

Solution:

(a) Calculate the expected total premium revenue over the next two years following the approach from the finance team for the following:

(i) The new Group Life product

(ii) The new Group Disability product

Show your work.

Commentary on Question:
In general, candidates did well on this question. Most were able to identify the correct metrics/assumptions to use in the calculation. However, those that did not receive full marks typically made errors with incorrect employee counts, expenses or confusing daily/monthly/annual figures. Also, most did better on the Life calculation compared to the LTD calculation.

(i)
<u>Calculate monthly manual rates</u>
Male = manual claim rate for male 46-50 * face value / (1-expense load)
Year 1 = [2.16 x 40,000/1,000]/ (1 – 0.5) = $172.80
Year 2: $172.80 x 1.02 (salary increases) = $176.26

10. **Continued**

Female = manual claim rate for female 46-50 * face value / (1-expense load)
Year 1 = [1.25 x 40,000/1,000]/ (1 – 0.5) = $100.00
Year 2: $100.00 * 1.02= $102.00

<u>Calculate number of covered lives from Moonraker census</u>
Males = 47+237+1,068+1,425+1,900+1,425+593+356+20 =7,071 insured lives
Females = 11,875 – 7,071 = 4,804 insured lives

<u>Calculate total premium</u>
Premium = Covered lives * months covered * average rate for the two years for males
+ Covered lives * months covered * average rate for the two years for females
=7,071 * 24 * (172.80+176.26)/2 for males + 4,804 * 24 * (100.00+102.00)/2 for females
=7,071*24 * 174.53 + 4,804 * 24 * 101.00
=29,618,439.12 + 11,644,896.00
= 41,263,335.12 =41.263 million (rounded)

(ii)
<u>Calculate disability manual rates</u>
Male Plan 2 = [139.77 x 2000/100)] / (1 -0.4) = $4,659 / month

Female Plan 2 = [177.86 x 2000/100] / (1 – 0.4) = $5,929 / month

<u>Calculate premium</u>
Premium =number of covered lives * months * average manual rate for males
=7,071* 24* 4,659
=790,650,936

+ number of covered lives * months * average manual rate for females
=4,804* 24 * 5929
= 683,589,984

=790,650,936 + 683,589,984
=1,474,240,920

(b)

(i) Assess the pricing approach and data used by the finance team.

(ii) Recommend alternatives to the pricing approach and data used by the finance team. Justify your response.

10. **Continued**

Commentary on Question:
The majority of candidates were able to achieve part or full marks on both part (i) and part (ii). Those that received part marks typically didn't provide enough information for each section. The below represents examples of what could be included but is not exhaustive. Also, all the responses below were not required to achieve full marks.

(i) Use of employer group rates for non-employer group pricing is a concern

(i) Using employer group demographic data for target market of non-employers is a concern

(i) Use of data obtained inappropriately obtained from competitor (Thunderball) is a concern
(ii) Look for other data (public or internal) or hire a consultant to provide date

(i) Support for expense rates is lacking and loads seem high

(ii) Have finance provided detailed support to validate the reasonability of the expense loads and research any minimum loss ratio requirement

(i) Is premium tax included in expense assumption?

(ii) If not should there be some adjustment

(i) Is risk or profit charge included in expense assumption?

(ii) If not should there be some adjustment

(i) Is expense assumption net of investment income?

(ii) If not, shouldn't we adjust.

(i) Using LTC claim costs for disability claim costs is a concern

(ii) Locate disability data or hire consultant to provide data

(i) Assuming everyone is one age for disability or on one age range for life is not right
(ii) Use a distribution of insureds that is more reasonable to develop the rates

10. **Continued**

(i) Underlying demographic data used to model market is only 11K lives so may not be credible
(ii) See out alternative data or confirm the 11K is adequate

(i) 2% salary increase could be ok
(ii) Probably want to look for public or internal data to confirm reasonability

(i) The voluntary nature of this product means using Thunderball's rates is a concern since we would expect different lapse, selection on a voluntary product

(ii) Locate different public or internal data or hire a consultant to provide data

(c) Describe how your actuarial memorandum would need to address the use of the finance team's methodology, assumptions, and data, if you comply with the CFO's request.

Commentary on Question:
Most candidates were able to identify the ASOP's that should be referenced when creating an actuarial memorandum. However, to achieve full marks, more detail was needed to describe the details of the memorandum. Below captures the key elements that should be addressed.

An actuary who makes an actuarial communication assumes responsibility for it, except to the extent the actuary disclaims responsibility by stating reliance on others for data or information.

The actuary is responsible for all assumptions and methods utilized in the preparation of a communication unless the actuary discloses otherwise within the communication by including appropriate disclosures.

An actuarial communication making use of any such reliance should define the extent of reliance, for example by stating whether or not checks as to reasonableness have been applied.

Reliance is ok except where limited or prohibited by applicable standards of practice or law or regulation.

For any assumption or method that did not conflict significantly with my professional judgement, I did not need to say anything.

10. Continued

If the assumption or method significantly conflicts with my professional judgment, I must disclose that fact and be reasonable for the purpose of the assignment and the following items: (1) the assumption or method that was set by another party, (2) the party who set the assumption, (3) the reason that the party and not the actuary has set the assumptions, and (4) statement that assumption or method conflicts with my judgement or I can’t judge their reasonableness.

If I am unable to judge the reasonableness of the assumption or method without performing a substantial amount of additional work beyond the scope of the assignment, or if I am not qualified to judge the reasonableness of the assumption, the actuary should disclose that fact.

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

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.

(1c) Evaluate the potential financial, legal and moral risks associated with each coverage.

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

Sources:

Combo Long-term Care Products: A Solution to Address Market Needs, The Actuary, October / November 2013

Group Insurance, Skwire, 7th Edition, 2016, Chapter 26

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a)

(i) List six solutions believed to provide coverage for Long Term Care ("LTC") in the US.

(ii) Describe whether the solutions in (i) provide coverage for LTC, and the conditions under which funding for each solution is provided.

Commentary on Question:

Most candidates received partial marks for this part. For part (ii), candidates were expected to describe whether the solutions provided coverage for LTC, not state the sources of funding for each solution.

11. Continued

(i)

- Medicare
- Medicaid
- Employer-provided retiree healthcare
- Community living assistance services and supports (CLASS) act
- State partnerships
- Private insurance

(ii)

- Medicare – doesn't cover LTC
- Medicaid – only covers LTC if the beneficiary is deemed impoverished (defined as having assets of less than $2,000 in most states)
- Employer-provided retiree healthcare – doesn't cover LTC
- CLASS Act – doesn't cover because it was repealed
- State partnerships – covers LTC and allows beneficiaries to shield assets from the Medicare "impoverishment" rules
- Private insurance – covers LTC

(b) Assess whether a 39% rate increase is justified under the LTC Model Regulation. Show your work and justify your response.

Commentary on Question:
Candidates were required to apply the model regulation that was stated in the question. Candidates that understood this model regulation did well on this part.

- Future premium after rate increase = 0.39 x premium = 6.24 M
- 58% times (present value of past initial premium plus present value of future initial premium) plus 85% times (present value of prior premium rate schedule increases plus present value of future premium for current rate increase that is not part of the initial earned premium) must be less than the sum of the present value of past claims plus present value of future claims for the rate increase to be justified.
- Test whether 58% * (800,000 + 16,000,000) + 85% * 6,240,000 is less than 120,000 + 18,000,000
- It is, therefore, the rate increase is justified

11. Continued

(c)

(i) Assess whether a 39% rate increase is justified under the LTC Model Regulation for the product issued in 2013. Show your work and justify your response.

(ii) Calculate the expected future loss ratio if the rate increase is approved. Show your work.

Commentary on Question:
Part (i) of Part C tested candidates on how to justify an exceptional rate increase. It was also required for the candidates to recognize which model law was in place for the state in the question. Most candidates did not do well on this section, but many candidates received partial credit.

Part (ii) of part c tested on the calculation of a future loss ratio. Common mistakes include applying the increase to past premium and including the past claims and past premium to calculate the future loss ratio.

(i)

- 70% replaces 85% in the test.
- Test whether 58% * (800,000 + 16,000,000) + 70% * 6,240,000 is less than 120,000 + 18,000,000
- It is, therefore, the rate increase is justified

(ii)

- Formula for future loss ratio = 18,000,000 / (16,000,000+6,240,000)
- Future loss ratio =80.9%

(d) A new executive has joined XYZ and would like to offer a LTC product with a better risk profile than the current stand-alone LTC product.

Recommend a product. Justify your response.

Commentary on Question:
Candidates needed to recognize that a combo product needed to be recommended instead of a stand-alone product, as well as recognizing what a better risk profile meant from XYZ's view. Many candidates did well on this part.

I recommend an LTC Combo product, such as Annuity and LTC combo, or Life and LTC combo.

11. Continued

Justification - An SOA study conducted stress tests for the financial results of standalone LTC, Life and LTC Combos, and Annuity and LTC Combos in relation to:

- LTC incidence
- Active life mortality
- Investment earnings
- LTC Claim termination rates
- Persistency

Both Life and Annuity LTC combo products had dramatically lower sensitivity to the above noted assumptions, than standalone LTC.

12. 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:

GHC-108-17: Post-Affordable Care Act Trends in Health Coverage for Small Business: Views from the Market

Group Insurance, Chapter 19

Group Insurance, Chapter 20

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Critique the Human Resources director's statement. Justify your response.

Commentary on Question:
Generally, candidates correctly identified that this plan was not grandfathered based on the change to cost sharing. However, very few candidates took the next step in identifying the plan as meeting the grandmothered/transitional qualifications.

The plan has been around long enough to qualify, as it was in existence before the ACA enactment in 2010. However, because the plan has increased cost sharing since that time, it cannot be considered a grandfathered plan.

However, this plan does satisfy the requirements of being a grandmothered/transitional plan. To qualify for this status, health plans must satisfy the following:

1. In existence before implementation of ACA reforms in 2014
2. Plan subject to approval by states
3. Benefits and cost-sharing may change if allowed by states

12. Continued

(b) Explain how this hiring decision affects the following aspects of Holston’s health coverage offering:

(i) Risk pool

(ii) Rating factors

(iii) The employer mandate

(iv) Any federal small business health care tax credits

Commentary on Question:
Candidates did fairly well on this part of the question. The common mistakes were stating that Holston moved to a large-group risk pool (part i), and stating that the small business tax credit was for under 50 employees (part iv).

(i) Moving above 50 employees allows Holston to avoid the small group state risk pool, which is for groups with less than 50 employees. The group may find better rates and more coverage, as they can now be rated based on their own experience.

(ii) Moving above 50 employees means rating will not be limited to the ACA rating factor restrictions (age, family size, geography, and tobacco use). They may now be subject to rating based on health status/prior claims history, gender, and occupation.

(iii) With greater than 50 employees, Holston will now be subject to the Employer Mandate, which means they will face financial penalties if at least one full-time employee receives a federal subsidy for an individual policy.

(iv) Holston’s eligibility would not be impacted based on this expansion, as the Federal Small Business Tax Credit is only available to employers with less than 25 employees. Holston already did not qualify.

(c) Describe options for providing health care coverage to Holston’s employees for each of the following scenarios:

(i) Holston maintains its current employee count of 48

(ii) Holston expands its employee count to 52

12. Continued

Commentary on Question:
Candidates did fairly well on this question. Self-funded and Fully Insured were the most popular responses. A few other options for both part (i) (keep current grandmothered plan or go to SHOP) and part (ii) (drop coverage and pay the ER mandate penalty) were also accepted.

(i) – Move to self-funded health plan/arrangement
- Pursue any one of the group-purchasing arrangements
- Terminate coverage (optionally, with an increase in wages to assist employees' purchase of individual coverage)
- Maintain grandmothered/transitional plan
- Go to SHOP

(ii) – Seek a new fully insured plan
- Move to self-funded health plan/arrangement
- Pursue any one of the group-purchasing arrangements
- Terminate coverage and pay ER Mandate penalty

(d) Explain required changes to Northern Insurance's rate factors and manual rates to become ACA-compliant.

Commentary on Question:
Candidates did well on this part, with most candidates receiving most of the credit.

- The maximum difference in rates due to age is 3:1 ratio. The current ratio exceeds that limit, so they would need to reduce the age 64 factor to 1.83 (age 21 factor x 3 = 0.61 x 3 = 1.83).
- Tobacco users may only be charged more than non-tobacco users by a 1.5:1 ratio. The current tobacco factor needs to be lowered.
- Premium rates must be based on the combined risk pool that includes all of an insurer's small group insureds.
- Premium rate can't differentiate based on industry factor.
- Gender rating is not allowed, that that factor needs to be removed.

(e) Calculate whether or not Stone LLC should change to an ACA-compliant plan based on the monthly financial costs. Show your work and justify your response.

Commentary on Question:
Candidates did fairly well on this question. Most knew what they were being asked to calculate, and then stated their recommendation based on that calculation. The biggest mistake was mixing up some of the rating factors and not using the correct manual rate in part of the calculation.

12. Continued

Formula: Final Premium = Manual x Age factor x Gender factor x Tobacco factor

Calculation of non-ACA compliant premium:

Age	Gender	Tobacco User	Age Factor	Gender Factor	Tobacco Factor	Total	Manual	Premium
21	M	Yes	0.500	1.000	2.000	1.000	250	$250.00
64	F	No	2.070	0.900	1.000	1.863	250	$465.75
								$715,75
								/2
							=	$357.88

Calculation of ACA compliant premium:

Age	Gender	Tobacco User	Age Factor	Gender Factor	Tobacco Factor	Total	Manual	Premium
21	M	Yes	0.610	1.000	1.500	0.915	300	$274.50
64	F	No	1.830	1.000	1.000	1.830	300	$549.00
								$823.50
								/2
							=	$411.75

They should not switch to the ACA compliant plan, because the premium rates would be higher than they are under the non-ACA compliant plan.

13. Learning Objectives:

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

Learning Outcomes:

(2b) Develop an experience analysis.

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

Sources:

Group Insurance, Chapter 7, 23

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Identify key factors that determine a PBM's leverage in negotiating rebate contracts with pharmaceutical manufacturers.

Commentary on Question:
Most candidates did well on this section.

Key factors that determine negotiating leverage with manufacturers are
(1) number of lives represented,
(2) control of market share, or ability to move market share to preferred products in a drug class, and
(3) consistency of behavior, meaning the degree of predictability of the plan's response to a manufacturer's actions.
(4) preferred placement of the manufacturer's drug on the PBM's formulary

(b) Recommend the scenario with the best financial outcome for RXHP in 2018. Show your work. Justify your answer.

Commentary on Question:
Candidates generally did well on this section. Candidates were required to identify the components in the net plan liability calculation (Allowed $s, Member Cost Share, and Rebates) and calculate liability for each drug based on provided 2017 experience data, discounts, cost share, and rebate.

Full credit was given when candidates correctly applied utilization and unit cost trend, added in market share shift component where necessary, using coinsurance for non-preferred drug in scenario 2, and evaluated new rebate deals based on net plan liability. Partial credit was given if there was an error in the calculation but candidate still recommended the scenario with the lowest plan liability.

13. Continued

Drug Y Calculation (Same for both Scenarios):
Y = 30,000 Scripts*(1+3% utz trend)*($600,000 AWP/30,000 Scripts)*(1+2% cost trend)*(1-75% discount) + 30,000 Scripts*(1+3% utz trend)*$1.50 Dispense Fee - 30,000 Scripts*(1+3% utz trend)*$5 Copay=
$49,440

Scenario 1 Drug X Calculation:
X = 10,000 Scripts*(1-2% utz trend)*($750,000 AWP/10,000 Scripts)*(1+10% cost trend)*(1-15% discount) + 10,000 Scripts*(1-2% utz trend)*$1.50 Dispense Fee - 10,000 Scripts*(1-2% utz trend)*$30 Copay - 10,000 Scripts*(1-2% utz trend)*($750,000 AWP/10,000 Scripts)*(1+10% cost trend)*33% Rebate=
$141,120.00

Scenario 1 Drug Z Calculation:
Z = 5,000 Scripts*(1-2% utz trend)*($750,000 AWP/5,000 Scripts)*(1+10% cost trend)*(1-15% discount) + 5,000 Scripts*(1-2% utz trend)*$1.50 Dispense Fee - 5,000 Scripts*(1-2% utz trend)*$30 Copay - 5,000 Scripts*(1-2% utz trend)*($750,000 AWP/5,000 Scripts)*(1+10% cost trend)*15% Rebate =
$426,300.00

Scenario 2 Drug X Calculation (1) and Result (1):
X = (10,000 Scripts*(1-75% loss of market share)*(1-2% utz trend)*($750,000 AWP/10,000 Scripts)*(1+10% cost trend)*(1-15% discount) + 10,000 Scripts*(1-75% loss of market share)*(1-2% utz trend)*$1.50 Dispense Fee)*(1-20% member cost share) =
$140,385.00

Scenario 2 Drug Z Calculation (1) and Result (1):
Z = (5,000 Scripts + 75%*10,000 Drug X Scripts)*(1-2% utz trend)*($750,000 AWP/5,000 Scripts)*(1+10% cost trend)*(1-15% discount) + (5,000 Scripts + 75%*10,000 Drug X Scripts)*(1-2% utz trend)*$1.50 Dispense Fee - 5,000 Scripts*(1-2% utz trend)*$30 Copay - (5,000 Scripts + 75%*10,000 Drug X Scripts)*(1-2% utz trend)*($750,000 AWP/5,000 Scripts)*(1+10% cost trend)*50% Rebate =
$358,312.50

Scenario 1 Net Plan Liability = X + Y + Z = $616,860.00

Scenario 2 Net Plan Liability = X + Y + Z = $548,137.50

Scenario 2 Net Plan Liability < Scenario 1 Net Plan Liability so Scenario 2 is best

13. **Continued**

(c)

(i) (*1 point*) Describe the concept of price protection as a negotiation strategy and how it might help reduce the impact of price increases.

(ii) (*2 points*) Calculate the impact of price protection on net plan liability for Drug P after July 1, 2019, on a per prescription basis. Show your work.

Commentary on Question:
This section tested the candidate's knowledge on price protection and candidates with a good understanding of the material generally received full credit on both parts.

Common omission from part (i) was not mentioning the additional rebate to the health plan if price exceeds the price protection threshold.

Computation errors would be consistent with errors found in part b.

(i) Mentions that

(1) Price protection is a negotiation between the manufacturer and health plan or PBM
(2) Price protection can help control price increases in the cost of a drug
(3) Price protection negotiation relies on setting a threshold or set level for price
(4) Health plan receives additional rebate if price exceeds threshold

(ii) Use knowledge of price protection arrangement to calculate impact on net plan liability

Calculate Drug P Per Script Net Plan Liability without Price Protection:
= ($1,500,000 AWP/2,500 Scripts * (1+15% cost trend) * (1-15% Discount) + $1.50 Dispense Fee) * (1 - 10% Mbr Coinsurance) - ($1,500,000 AWP/2,500 Scripts * (1+15% cost trend) * 25% Rebate) = $356.70

Calculate Drug P Per Script Net Plan Liability with Price Protection:
= ($660 AWP/Script * (1-15% Discount) + $1.50 Dispense Fee) * (1 - 10% Mbr Coinsurance) - ($660 AWP/Scripts * 25% Rebate) = $341.25

Calculate Impact of Price Protection by Comparing:
Net Plan Liability per Script (No Price Protection) - Net Plan Liability per Script (Price Protection) = $356.70 - $341.25 = $15.45

13. Continued

(d) Calculate the change in member liability for Drug P on a per prescription basis under the proposed POS rebate arrangement relative to the current rebate structure. Show your work.

Commentary on Question:
Candidates either did very well or very poorly on this section depending on the candidate's knowledge on POS rebates.

Common minor mistake was not calculating the liability on a per prescription basis.

Calculate impact of rebate when used to reduce member liability rather than plan liability

POS formula must subtract rebate prior to cost share application: Member Liability = (AWP/Scripts * (1- Discount %) + Dispense Fee - (AWP/Script * Rebate)) * (10% coinsurance)

Drug P Per Script Member Liability without POS Rebates
= ($1,500,000 AWP/2,500 Scripts * (1-15% Discount) + $1.50 Dispense Fee) * (10% coinsurance) =$51.15

Drug P Per Script Member Liability with POS Rebates
= ($1,500,000 AWP/2,500 Scripts * (1-15% Discount) + $1.50 Dispense Fee - ($1,500,000 AWP/2,500 Scripts * 25% Rebate)) * (10% coinsurance) = $36.15

Impact of POS Rebates = Drug P (No POS) - Drug P (POS) = $51 - $36 = $15

14. 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:

(1c) Evaluate the potential financial, legal and moral risks associated with each coverage.

(2c) Calculate and recommend assumptions.

Sources:

Group Insurance, Chapter 20

Commentary on Question:

Candidates should be able to identify the risks pertaining to fully insured and self-funded groups, small and large groups.

Candidates should be able to calculate the pre-tax profit margin percentage to in the rate calculation.

Candidates should be able to recommend changes to the target surplus assumptions. Increasing the fully insured and decreasing the self-funded.

Solution:

(a) Compare and contrast the risks for the two new products to the risks of the current product from the perspective of Squares.

Commentary on Question:

The majority of candidates compared the products instead of comparing the risks associated with the products. Thus, only a few risks were identified by each candidate.

14. Continued

Risks	Current Product Fully Insured 250-500 Employees	New Product 1 Self-Funded 250-500 Employees	New Product 2 Fully-Insured 2-50 Employees
Squares is not at risk for the claims because the employer is.		X	
Squares is at risk for claims.	X		X
Squares is at risk the admin fees may not cover its costs.	X	X	X
Squares is at risk that it might not process claims properly which could result in lawsuits.	X	X	X
Squares is at risk that the employer may fail to meet its financial obligations for claims and if this occurs the employer, the employees, or the regulator may look to Squares for financial support.		X	
Risk in projecting the group's own claims accurately.	X		
The risk of underestimating claims in the pricing of the pool.			X
Small group rate and benefit regulations introduce additional risks that premiums may not be sufficient.			X
Risks resulting from new benefit mandates.	X		X
Risks resulting from regulations that restrict underwriting flexibility.	X		X
Rate regulation may restrict rate increases so that premiums cannot be increased sufficiently to cover costs.	X		X

14. Continued

Risks associated with a new product launch including the risk that the initial expenses might not be recovered.		X	X
Risk of entering into a new marketplace.		X	X

(b) Calculate the pre-tax profit margin percentage to include in the rate calculation for each of the three products using the table provided by the product team. Show your work.

Commentary on Question:
Few candidates included the target surplus in their calculation.

Formula: Pre-tax margin/revenue = surplus/revenue x rate of return / (1-tax rate)

Current fully insured large group
=0.125 x 0.15 / (1-25%) = 2.5%

New self-funded large group
=0.225 x 0.15 / (1-25%) = 4.5%

New fully insured individual
=0.055 x 0.15 / (1-25%) = 1.1%

(c) Recommend changes to the target surplus assumptions provided by the product team. Justify your response.

Commentary on Question:
Most candidates identified the appropriate recommendations and included justifications.

I recommend increasing the target surplus for the small group product to something higher than for the large group fully insured product. One rationale is that the small group fully insured business has more regulatory constraints than large group fully insured business which makes it more risky.

I recommend decreasing the target surplus for the self-funded product to something lower than for the large group product. One rationale is that Squares does not have claims risk for the self-funded business but does for the large group fully insured business.