

# GH CORU Model Solutions

## Spring 2018

### 1. Learning Objectives:

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

### Learning Outcomes:

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

### Sources:

Group Insurance, Skwire Chapter 18 and 19; Implications of Individual Subsidies

### Commentary on Question:

*Commentary listed underneath question component.*

### Solution:

- (a)
  - (i) Describe the consumers most likely to seek coverage on the individual exchange.
  - (ii) Identify the financial incentives for consumers to buy on the individual exchange.

### Commentary on Question:

*Candidates were generally successful in answering this part of the question. Other reasonable examples of consumers most likely to seek coverage were also accepted.*

Consumers most likely to seek coverage on the individual exchange include:

- Previously uninsured (e.g., due to having pre-existing conditions)
- Those who would benefit from premium or cost sharing reduction subsidies
- Those with unaffordable or no group health coverage

Financial incentives for consumers to buy on the individual exchange include:

- Premium subsidies: available for individuals between 100-400% FPL and amount of subsidy grades down as income increases
- Cost sharing reduction subsidies: available for individuals below 250% FPL and offers lower member cost sharing for silver plans

# 1. Continued

- (b) Describe elements of the exchanges that can vary at the state level.

**Commentary on Question:**

*Candidates who were most successful in answering this question were those who described aspects of the elements as opposed to simply listing. The most common responses were included in the model solution, but additional responses were also accepted.*

Elements that can vary at the state level include:

- State or Federal Exchange: states can opt to use the FFM or operate their own exchange
  - Participation: states can actively promote the exchange in an effort to maximize participation
  - Risk Pools: states can opt to merge the individual and small group markets
  - Standard Benefit Plans: states designate the benchmark plan for essential health benefits
- (c) Calculate whether the bronze plan will be premium free for these two age groups at the 150% FPL. Show your work. Justify your answer.

**Commentary on Question:**

*Most candidates were successful calculating the subsidy and comparing it to the 2<sup>nd</sup> lowest silver premium for each age to determine if the member will be required to contribute towards the premium or not. However, candidates commonly did not know the correct maximum premium contribution percentage. In these instances partial credit was still awarded in the event all other calculations were performed correctly.*

Given:

- 100% FPL = \$12,000
- 2<sup>nd</sup> lowest silver premium PMPM
  - Age 25: \$300
  - Age 60: \$900
- Bronze premium PMPM
  - Age 25: \$276
  - Age 60: \$828

Annual premium at 150% FPL =  $\$12,000 \times 150\% = \$18,000$

Maximum premium contribution at 150% FPL = 4%

Monthly maximum premium at 150% FPL =  $(\$18,000 \times 4\%) / 12 = \$720 / 12 = \$60$

## 1. Continued

Age 25:

- Subsidy:
  - = 2<sup>nd</sup> lowest silver PMPM – monthly maximum premium
  - =  $\$300 - \$60 = \$240$
- Premium:
  - = Bronze premium PMPM – subsidy
  - =  $\$276 - \$240 = \$36$

Age 60:

- Subsidy:
  - = 2<sup>nd</sup> lowest silver PMPM – monthly maximum premium
  - =  $\$900 - \$60 = \$840$
- Premium:
  - = Bronze premium PMPM – subsidy
  - =  $\$828 - \$840 = -\$12$

The bronze plan premium will NOT be free for age 25 since the subsidy is less than the bronze plan premium (i.e., a \$36 premium will be required); however, the bronze plan premium will be free for age 60 since the subsidy amount exceeds the bronze plan premium.

## 2. Learning Objectives:

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

### Learning Outcomes:

- (6a) Describe the regulatory and policy making process in the U.S.
- (6b) Describe the major applicable laws and regulations and evaluate their impact.
- (6c) Apply applicable standards of practice.

### Sources:

Group Insurance Ch. 28 and ASOP 26

### Commentary on Question:

*Commentary listed underneath question component.*

### Solution:

- (a) Describe the core components of the rate filing requirements that pertain to group Charlie.

#### Commentary on Question:

*The candidates were expected to see that Charlie was a small group, but was not grandfathered. Those who did generally did well on this part of the question.*

#### Part I – Unified Rate Review Template (URRT)

Excel spreadsheet that the carrier must provide showing summary values pertaining to the rate increase request

#### Part II – Written Explanation of the Rate Increase

For products with an average increase that equals or exceeds 10%, the carrier must provide a plain language narrative explaining the major reasons for the increase.

#### Part III – Actuarial Memorandum

The Part III Actuarial Memorandum provides descriptive detail of the URRT components, the need for the requested rate change, and support for assumptions made.

#### Unique Plan Design Supporting Documentation and Justification

If there are cases where the carrier's actuary needed to make a special actuarial adjustment to account for a unique plan design feature, the actuary must provide special documentation and certification.

## 2. Continued

- (b) For each group:
- (i) Calculate the minimum and maximum allowable rate increases. Show your work.
  - (ii) Evaluate the recommended rate increases and provide your own renewal recommendations. Justify your response.

### **Commentary on Question:**

*The candidates generally did not do well on this portion of the question. The calculations were discussed in the text, so the expectation was to take this information and apply it to a situation provided. Many candidates failed to recognize that Dog was a large group and therefore not subject to the same regulations as the other groups.*

- (i) Able: This is a grandfathered small group

The relevant within-class rate test of the NAIC Model Act limits rate increases applied to each group, to the sum of the following:

1. The percentage change in the new business rate;
2. 15% annually for the group's experience; and
3. Any adjustment due to change in coverage or case characteristics.

Percentage change in new business rate = 8%

15% annually for experience

Adjustment due to change in coverage or case characteristics = 1%

Sum =  $8\% + 15\% + 1\% = 24\%$

Relation to index rate is 1.2. Relation to index rate after rate increase cannot exceed +/- 25%.

Maximum increase is  $\min(1.25/1.2 - 1, 24\%) = 4.2\%$ ,

Minimum increase is  $.75/1.2 - 1 = -37.5\%$

Baker: This is a grandfathered small group

The relevant within-class rate test of the NAIC Model Act limits rate increases applied to each group, to the sum of the following:

1. The percentage change in the new business rate;
2. 15% annually for the group's experience; and
3. Any adjustment due to change in coverage or case characteristics.

Percentage change in new business rate = 8%

15% annually for experience

Adjustment due to change in coverage or case characteristics = -1%

## 2. Continued

$$\text{Sum} = 8\% + 15\% - 1\% = 22\%$$

Relation to index rate is .82. Relation to index rate after rate increase cannot exceed +/- 25%.

$$\text{Maximum increase is } \min(1.25/.82 - 1, 22\%) = 22\%,$$

$$\text{Minimum of increase is } .75/.82 - 1 = -8.5\%$$

Charlie: This is a non-grandfathered small group. The 15% flexibility for experience is not applicable, nor is the additive maximum rate increase.

$$\text{Minimum increase} = \text{Maximum increase} = (1.01) \times (1.07) - 1 = 8.07\%$$

Dog: This is not a small group, this is a large group.  
There is no minimum or maximum rate increase.

(ii)

Able: The 3% recommended rate increase is within the bounds calculated above. I recommend a 4% rate increase to try to account for the change in new business, but to stay below the maximum allowable rate increase.

Baker: The 8% recommended rate increase is within the bounds calculated above. I recommend a 7% rate increase to take into account both the change in new business and the change in age. This is between the minimum allowable increase and the maximum allowable increase.

Charlie: The 7% rate increase is not within the bounds calculated above. I recommend an 8.07% increase calculated above.

Dog: Since there is no minimum or maximum rate increase, the 8% rate increase recommended is not unacceptable. However, I would recommend a 12% rate increase to take into account the change in age and change in new business.

- (c) Describe the components of the Actuarial Certification of the small group business.

**Commentary on Question:**

*Many candidates received full credit on this part of the problem. Other candidates received partial credit by displaying knowledge from the ASOP in general.*

## **2. Continued**

- Certification whether all practices, as required by regulatory requirement to be included in the certification, are in compliance
- A listing of practices that are covered in the certification
- Identification of the time period covered by the certification
- Changes in rating methods and other practices that have occurred during the time period covered by the certification and that affect compliance

### 3. 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.
- (7c) Determine employer liabilities for retiree benefits under various accounting standards.
- (7d) Describe funding alternatives for retiree benefits.

#### Sources:

Group Insurance, Skwire, 7th Edition, 2016. Chapter 8, "Retiree Group Benefits"

Statement of Financial Accounting Standards No. 106, Appendix C, Illustration 4.

GHC-816-16: US Employers' Accounting of Postretirement Benefits Other Than Pensions Study Note

#### Commentary on Question:

*This question tested several aspects of employer-sponsored retiree medical programs, including design, coordination with government programs, and accounting. Candidates generally did well on the question, especially parts (a) and (b). Most candidates received much or all credit for the calculations in (b). Few candidates received full credit for part (c). For parts (d) and (e), candidates had to create both a "per employee" amortization schedule, as well as one based on average future service to get full credit.*

#### Solution:

- (a) ABC is considering changing how it coordinates with Medicare in an effort to reduce the costs of its retiree medical plan.
  - (i) (1 point) List and describe the common methods of Medicare coordination.
  - (ii) (4 points) One retiree in the plan had the following claims experience:

### 3. Continued

Claim Date	Allowed Amount	Claim Type
02/01/2016	\$900	Hospital
02/01/2016	\$200	Medical
04/01/2016	\$350	Medical
05/15/2016	\$1,200	Hospital
05/15/2016	\$100	Medical
08/01/2016	\$600	Hospital
08/01/2016	\$150	Medical

Calculate the savings for this retiree in changing from the current COB method to each of the other methods. Show your work.

#### Commentary on Question:

*Most candidates received full credit for (i). Full credit was given for describing the first three methods below; some candidates also described Medicare supplements. For (ii), very few candidates correctly applied that the Medicare Part A deductible applies per “benefit period”, which starts when a participant has not received any inpatient care for 60 days. However, candidates who incorrectly assumed that the Part A deductible is applied annually were still eligible for full credit. A common error for (ii) was to calculate the plan payments for standard COB and carve-out on an aggregate basis for the entire year, instead of claim by claim. This error results in an incorrect answer as the minimum of a sum is different from the sum of minimums. Those candidates were eligible for partial credit.*

Part (a)(i): Define **C** as covered expense, **M** as Medicare payment, and **%** as representative of the application of the employer’s benefit provisions.

1. Standard Coordination of Benefits: pays the lesser of the employer plan benefit in the absence of Medicare and the difference between covered expenses and Medicare plan benefit. Formula:  $\text{MIN}(\mathbf{C}*\%, \mathbf{C}-\mathbf{M})$
2. Exclusion: excludes the benefit paid by Medicare, then applies the provisions of the employer plan to pay the remainder. Formula:  $(\mathbf{C} - \mathbf{M})*\%$
3. Carve-out: applies the provisions of the employer plan in the absence of Medicare, then subtract the Medicare payment to pay the remainder (if any). Formula:  $\mathbf{C}*\% - \mathbf{M}$
4. Supplement: pays expenses for which the primary plan does not pay (copays, deductible, coinsurance)

### 3. Continued

Part (a)(ii): Version 1 (Assumes one Part A deductible for the year)

				<b>C</b>	<b>M</b>	<b>C-M</b>	<b>C*%</b>	<b>Standard</b>	<b>Exclusion</b>	<b>Carveout</b>
<b>Claim Date</b>	<b>Allowed Amount</b>	<b>Claim Type</b>	<b>Part</b>					<b>MIN(C*%, C-M)</b>	<b>(C - M)*%</b>	<b>C*% - M</b>
02/01/2016	\$900	Hospital	A	\$900	\$0	\$900	\$450	\$450	\$450	\$450
02/01/2016	\$200	Medical	B	\$200	\$40	\$160	\$180	\$160	\$144	\$140
04/01/2016	\$350	Medical	B	\$350	\$280	\$70	\$315	\$70	\$63	\$35
05/15/2016	\$1,200	Hospital	A	\$1,200	\$800	\$400	\$1,080	\$400	\$360	\$280
05/15/2016	\$100	Medical	B	\$100	\$80	\$20	\$90	\$20	\$18	\$10
08/01/2016	\$600	Hospital	A	\$600	\$600	\$0	\$540	\$0	\$0	\$0
08/01/2016	\$150	Medical	B	\$150	\$120	\$30	\$135	\$30	\$27	\$15
<b>Total</b>	<b>\$3,500</b>			<b>\$3,500</b>	<b>\$1,920</b>	<b>\$1,580</b>	<b>\$2,790</b>	<b>\$1,130</b>	<b>\$1,062</b>	<b>\$930</b>

Savings from Standard to Exclusion: \$68  
Savings from Standard to Carveout: \$200

Part (a)(ii): Version 2 (Assumes one Part A deductible per admission)

				<b>C</b>	<b>M</b>	<b>C-M</b>	<b>C*%</b>	<b>Standard</b>	<b>Exclusion</b>	<b>Carveout</b>
<b>Claim Date</b>	<b>Allowed Amount</b>	<b>Claim Type</b>	<b>Part</b>					<b>MIN(C*%, C-M)</b>	<b>(C - M)*%</b>	<b>C*% - M</b>
02/01/2016	\$900	Hospital	A	\$900	\$0	\$900	\$450	\$450	\$450	\$450
02/01/2016	\$200	Medical	B	\$200	\$40	\$160	\$180	\$160	\$144	\$140
04/01/2016	\$350	Medical	B	\$350	\$280	\$70	\$315	\$70	\$63	\$35
05/15/2016	\$1,200	Hospital	A	\$1,200	\$0	\$1,200	\$1,080	\$1,080	\$1,080	\$1,080
05/15/2016	\$100	Medical	B	\$100	\$80	\$20	\$90	\$20	\$18	\$10
08/01/2016	\$600	Hospital	A	\$600	\$0	\$600	\$540	\$540	\$540	\$540
08/01/2016	\$150	Medical	B	\$150	\$120	\$30	\$135	\$30	\$27	\$15
<b>Total</b>	<b>\$3,500</b>			<b>\$3,500</b>	<b>\$520</b>	<b>\$2,980</b>	<b>\$2,790</b>	<b>\$2,350</b>	<b>\$2,322</b>	<b>\$2,270</b>

Savings from Standard to Exclusion: \$28  
Savings from Standard to Carveout: \$80

- (b) Describe other options for providing prescription drug coverage for ABC's Medicare-eligible retirees.

### 3. Continued

**Commentary on Question:**

*Most candidates received full credit for this part. Some candidates described applying for the Retiree Drug Subsidy (RDS), which received no credit because it was the current (as opposed to other) option, and some suggested dropping RDS support, which also received no credit since it did not respond to the question and is typically a poor financial alternative. Credit was not given for the option to drop pharmacy altogether because, while a legitimate option, the question asked for options of “providing prescription drug coverage.”*

Most candidates received full credit for adequately describing 3-4 of the following alternatives:

Contract with a Medicare Prescription Drug Plan (PDP) carrier

Contract with a Medicare Advantage Prescription Drug Plan (MA-PD) carrier

Use EGWP 800 series alternative to use the services of a PDP carrier

Contract with CMS directly to become a PDP or MA-PD for employer’s own retirees

Provide a separate prescription drug plan that coordinates or supplements (wraps around) a PDP

Move to simply finance the retirees’ purchase of a PDP of their own choosing

- (c) Describe the effect that changing the benefit for current active employees to a fixed dollar subsidy would have on ABC’s Accumulated Postretirement Benefit Obligation (APBO) and Net Periodic Postretirement Benefit Costs (NPPBC).

**Commentary on Question:**

*Most candidates recognized that APBO and NPPBC would be reduced, since the change would remove medical trend from the calculations of each. Some candidates noted that the change does not affect current retirees (so has no impact on retiree portion of APBO) and that reduction in APBO is a prior service cost that is amortized over the future working lifetimes of the active employees. Few candidates commented on the fact that valuing a fixed-dollar subsidy would lead to more accurate measurements of APBO and NPPBC in the future as the volatility of medical trend is no longer a factor. Some candidates incorrectly referred to the change as a settlement or a curtailment.*

If ABC adopts this plan amendment, it will create a prior service cost that must be recognized in the APBO for the current year.

The impact to the NPPBC is amortized over the future service of each active employee expected to receive benefits under the plan. In future years, the prior service cost in the NPPBC will be recognized in equal payments over the amortization period calculated when it was measured.

Note that the plan amendment does not affect current retirees; therefore there is nothing to amortize over the future life expectancy of inactive members.

### 3. Continued

The prior service cost should be negative, as the intent of ABC is to reduce plan costs.

Future measurements of the APBO and the NPPBC will be reduced as the lower service costs, interest costs, and benefit payments occur. In addition, future measurements should be less volatile, as the impact of medical trend has been removed from the calculation.

- (d) Design an amortization schedule for the unrecognized prior service cost based on the expected remaining years of service prior to full eligibility for the participating employees. Show your work.

#### **Commentary on Question:**

*Description of full eligibility (“30 years of service”) was unclear if this referred to total service or “benefit” service (i.e., service after age 35). Depending on interpretation, Employee B could be eligible at age 60 (when total service = 30) or at age 65 (when benefit service = 30), and so either 20 or 25 years of future service were accepted as correct.*

*Most candidates incorrectly included Employee A in the calculation; the employee is not yet age 35 and thus not a plan participant. (“Future years of service of active employees who are not plan participants are excluded.” – Paragraph 451 in Illustration 4 of FAS 106.) Some also incorrectly included Employee E; the employee is already fully eligible. (“[P]rior service cost shall be amortized by assigning an equal amount to each remaining year of service to the full eligibility date of each plan participant active at the date of the amendment who was not yet fully eligible for benefits at that date.” – Paragraph 52 of FAS 106.)*

*Several candidates mistakenly calculated Employee D’s future service as 10 instead of 5 (since full eligibility for this employee is age 65).*

<b>EE ID</b>	<b>EE Age</b>	<b>Years of Service</b>	<b>Include?</b>	<b>#years</b>
A	30	5	no	n/a
B	40	10	yes	20
C	50	15	yes	15
D	60	20	yes	5
E	70	40	no	n/a

### 3. Continued

# years = min(30 - years of service, NRA - EE Age)

Note: A is under the age of 35, so they are not credited and E is already fully eligible, no service years are required.

Service Year	EE ID B	EE ID C	EE ID D	Total Service	Amortization Factor	Amortization Amount
1	1	1	1	3	0.075	7,500
2	1	1	1	3	0.075	7,500
3	1	1	1	3	0.075	7,500
4	1	1	1	3	0.075	7,500
5	1	1	1	3	0.075	7,500
6	1	1		2	0.05	5,000
7	1	1		2	0.05	5,000
8	1	1		2	0.05	5,000
9	1	1		2	0.05	5,000
10	1	1		2	0.05	5,000
11	1	1		2	0.05	5,000
12	1	1		2	0.05	5,000
13	1	1		2	0.05	5,000
14	1	1		2	0.05	5,000
15	1	1		2	0.05	5,000
16	1			1	0.025	2,500
17	1			1	0.025	2,500
18	1			1	0.025	2,500
19	1			1	0.025	2,500
20	1			1	0.025	2,500
				40	1	\$100,000

- (e) Design an alternative schedule, allowable under FAS 106 for the amortization of these unrecognized costs. Show your work.

**Commentary on Question:**

*The expected answer for (e) was to amortize the PSC in equal amounts over the average remaining future service to full eligibility of the three employees, as described in Paragraph 53 of FAS 106. (“To reduce the complexity and detail of the computations required, consistent use of an alternative amortization approach that more rapidly reduces unrecognized prior service cost is permitted. For example, a straight-line amortization of the cost over the average remaining years of service to full eligibility for benefits of the active plan participants is acceptable.”)*

*Full credit was given if the straight-line schedule was used in (d) and an alternate schedule by employee was used here, since the former is a much more common practice in the industry.*

### 3. Continued

*Shorter amortization schedules are allowed, per paragraph 53, but whatever method is chosen must be used consistently from period to period.*

Average future service of three participants =  $40 / 3 = 13.3333$ . Amortize over 14 years, with amortization factor =  $3 / 40 = 0.75$  (0.25 in year 14).

<b>Service Year</b>	<b>SL Amort. Factor</b>	<b>Amortization Amount</b>
1	0.075	7,500
2	0.075	7,500
3	0.075	7,500
4	0.075	7,500
5	0.075	7,500
6	0.075	7,500
7	0.075	7,500
8	0.075	7,500
9	0.075	7,500
10	0.075	7,500
11	0.075	7,500
12	0.075	7,500
13	0.075	7,500
14	0.025	2,500
	1	\$100,000

#### **4. Learning Objectives:**

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

#### **Learning Outcomes:**

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

#### **Sources:**

Group Insurance, Chapter 18, pages 298 – 304; Group Insurance, Chapter 4, pages 40 - 49

#### **Commentary on Question:**

*Commentary listed underneath question component.*

#### **Solution:**

- (a) Identify the provisions of the ACA related to public programs.

#### **Commentary on Question:**

*Candidates generally performed well with this question. Candidates needed to list aspects of both Medicaid and Medicare in order to receive full credit. Credit was not given for listing other ACA provisions not related to public programs.*

#### Medicaid:

- Expanded up to 133%/138% of FPL (Supreme Court Decision renders this state optional)
- Quality improvement.
- PCP payments increased to 100% of Medicare through federal funds
- New demonstrations such as health homes, bundled payments, global caps to safety net hospitals, pediatric ACOs, and emergency mental health services.
- Increased federal match to CHIP
- Increased drug rebates
- New fraud and abuse screening
- New dual eligible coordination office

#### Medicare

- Quality outcome payments (bonus stars program)
- National strategy to improve quality
- New patient care model development
- Medicare plan improvements
- Medicare sustainability
- Health care quality Improvements
- Prevention and wellness provisions
- Dual coordination
- Payment refinements

## 4. Continued

- (b) Critique each of the provisions in part (a) with respect to the elements of the Triple Aim.

### **Commentary on Question:**

*A variety of answers were acceptable for this question. Candidates were expected to provide explanation for how the Triple Aim related to the items in (a); full credit was not given for candidates who only identified the Triple Aim with which the item in (a) was associated without providing explanation (“critique”). Credit was given for identifying the Triple Aim.*

- Expansion of Medicaid eligibility: Ensures access to health care, therefore ensuring better care for individuals. Targets an entire population of people who tend to be less healthy, therefore promoting a healthier population. Does not lower per capita costs.
- Medicaid PCP payment increases: This increases per capita costs directly but promotes better population health by making more doctors willing to accept Medicaid patients.
- New fraud and abuse screening: This lowers per capita costs, by targeting dollars that should not be spent on healthcare. It could also promote better health for populations if it helps to deter abuse of medical treatments.
- Ensuring Medicare’s sustainability: Making sure that the program remains solvent and able to provide coverage to eligible participants for a long time; better care as ensures access. This helps both individuals and the population. Also helps to lower per capita costs.
- Coordination of care for dual eligibles: Coordinate care so that better care is provided without any waste of extra services. This ensures better care for individuals and lowers per capita costs.
- Establishing a national strategy for healthcare improvement: Directly promotes better care for the individual and the population. Does not address lower per capita costs.
- Linking Medicare Payments to Quality: Promotes better quality of healthcare provided, thereby promoting better care for individuals and lower per capita costs.
- *Corresponding justification for other items in (a) are also acceptable.*

## 5. Learning Objectives:

5. The candidate will understand how to prepare and interpret insurance company financial statements in accordance with U.S. Statutory Principles and GAAP.
6. Evaluate the impact of regulation and taxation on companies and plan sponsors in the U.S.

### Learning Outcomes:

- (5b) Interpret the results of both statutory and GAAP statements from the viewpoint of various stakeholders, including regulators, senior management, investors.
- (6b) Describe the major applicable laws and regulations and evaluate their impact.

### Sources:

GHC-103-13: The Challenges of Pricing Health Insurance for the 2014 Exchanges  
Analysis for Financial Management, Higgins, 11th Edition - Ch. 1 Interpreting Financial Statements

Group Insurance, Skwire, 7th Edition, 2016

Ch. 18 The Affordable Care Act

Ch. 19 Health Benefit Exchanges

Ch. 41 Analysis of Financial and Operational Performance

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

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

GHC-802-13: AAA Health Reform Implementation: Understanding the Terminology  
(background only)

GHC-808-15: Affordable Care Act Risk Adjustment: Overview, Context, and Challenges

GHC-810-15: Risk Transfer Formula for Individual and Small Group Markets Under the  
Affordable Care Act (pages E3-E16)

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

### Commentary on Question:

*Commentary listed underneath question component.*

### Solution:

- (a) Describe advantages of cash flow statements relative to income statements and balance sheets.

### Commentary on Question:

*Higgins discusses this in several places in Chapter 1. Many candidates reproduced a brief "list". Many candidates didn't sufficiently describe the advantages (generally related to cash rather than accrual accounting) and received less than full credit.*

## 5. Continued

CF includes all cash flows during the reporting period, and only those cash flows. IS and BS include accrual accounting items.

CF can be easier to understand due to only showing cash flows.

CF can be more reliable because accrual estimates are more easily manipulated.

CF can provide insight into cash use and firm solvency.

- (b) Define the components of cash flow from operating activities.

**Commentary on Question:**

*The question asked candidates to "define the components". Rather than the below formula (from Higgins), most candidates described components of net income and / or cash flows from operating activities. This could also receive partial or full credit.*

Cash flow from operations = Net income + noncash items (depreciation, amortization, etc.) +/- change in current assets and liabilities

- (c) Explain possible reasons for negative cash flows from each of the following, and whether such negative cash flows are necessarily bad.
- (i) Operations
  - (ii) Investing activities
  - (iii) Financing activities

**Commentary on Question:**

*Many candidates gave good partial answers, but needed more for full credit.*

*A similar question was the 1st exercise in Higgins, chapter 1, with an answer in the back of the book.*

*Some candidates confused the direction of cash flows that would occur with debt issuance (which would be a positive cash flow).*

- (i)

Operating income could be negative. Poor operational results are bad.

Negative operating income on a new product could be OK while a company grows market share.

## 5. Continued

(ii)

Can be good if the company is investing in assets that will lead to future profits.

Bad if it indicates losses on investments.

(iii)

Negative cash flow indicates more money going out to stock repurchases, dividends, and paying off debt than is received from debt and equity issuance.

This can be good when a mature company is returning excess cash to stockholders.

(d) Calculate the following financial measures for Quantum for 2013 and 2014.

(i) Return on equity

(ii) Administrative expense ratio

(iii) Health benefits ratio

(iv) Operating profit

(v) Operating profit margin

(vi) Net profit margin

Show your work.

### **Commentary on Question:**

*Most candidates earned most of the points on this part. Reasonable alternative calculations found in the materials or in common practice received credit.*

(i)

Return on equity = net income / Beginning-of-year shareholder's equity

BOY equity is not available - use EOY

2014:  $\$4,989 / \$20,519 = 24.3\%$

2013:  $\$2,389 / \$19,861 = 12.0\%$

## 5. Continued

(ii)

Administrative expense ratio = administrative expenses / total revenues

2014:  $(\$1,541 + \$9,534) / \$88,203 = 12.6\%$

2013:  $(\$757 + \$5,780) / \$55,193 = 11.8\%$

(iii)

Health benefits ratio = benefit expense / premium

2014:  $\$67,118 / \$85,130 = 78.8\%$

2013:  $\$43,401 / \$53,032 = 81.8\%$

(iv)

Operating profit = operating revenue – expenses not including interest and income taxes

2014:  $\$86,865 - \$80,648 = \$6,217$

2013:  $\$54,115 - \$51,575 = \$2,540$

(v)

Operating profit margin = operating profit / operating revenue

2014:  $\$6,217 / \$86,865 = 7.2\%$

2013:  $\$2,540 / \$54,115 = 4.7\%$

(vi)

Net profit margin = net income / total revenue

2014:  $\$4,989 / \$88,203 = 5.7\%$

2013:  $\$2,389 / \$55,193 = 4.3\%$

- (e) Interpret the 2013 to 2014 percentage changes in income statement values and changes in the financial measures calculated in part (d).

### **Commentary on Question:**

*The high point value indicates that significant explanation in the answers is required. Interpreting the changes requires providing not just the values, but also some insight into the drivers and implications.*

Income statement values:

All the important changes in financial results are large and favorable.

Rapid growth from 2013 to 2014. Premiums increased 61%.

Premium increase is due to large amount of new Small Group and Individual ACA-compliant (non-grandfathered) business.

Claims increased by 55%, a smaller increase than premiums, which is favorable.

Net effect of premium and claims increases is very large 109% increase in net income.

## 5. Continued

Financial measures:

Return on equity doubles due to large net income increase on near-constant equity base.

Administrative expense ratio increases only slightly, so the admin expenses are under control.

Health benefit ratio drops by 3%. Favorable as the company is spending less on claims. Could have to pay rebate due to LR < 80%.

Operating profit increases because the premium increase is larger than the increase in claims and expenses.

Operating and net profit margins increase, so a bigger proportion of the revenues is being realized as profit.

- (f) Explain how Quantum's participation in the exchanges beginning in 2014 may impact their income statement.

### **Commentary on Question:**

*The high point value indicates that a somewhat lengthy answer is expected. The question is broad, with many possible answers. Candidates who covered a variety of topics generally scored higher than those who wrote more extensively on fewer topics.*

In 2014 the most significant provisions of the ACA came into effect. ACA changes required many estimates, increasing financial statement uncertainty. Increase in membership, revenue, and claims due to new subsidized exchange population, many formerly uninsured.

Uncertain morbidity of new population. Potential pent-up demand from individuals formerly without coverage.

Risk adjustment program. Uncertain effect due to unknown risk scores and market share of own and other carriers.

Reinsurance program. Uncertainty in recoveries for IBNP claims. Not all recovery requests might be paid out.

Risk corridors. Intended to lessen uncertainty, but in reality they were not fully funded and paid out.

Health Insurer tax - there are revenue/expense mismatch timing issues.

ACA provisions - guaranteed issue, coverage mandate, no underwriting. These affect rating and membership, so will affect premium and claims.

## 6. Learning Objectives:

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

### Learning Outcomes:

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

### Sources:

GHC-811-16 Medicaid 101 MACPAC

Group Insurance, Skwire, 7th Edition, 2016 - Ch. 9 Government Health Plans in the United States

GHC-812-16 Medicaid A Primer (pp. 1-33)

### Commentary on Question:

*The majority of candidates did well on parts c and d. Many candidates did not provide enough detail on parts a and b for full credit, but most received partial credit.*

### Solution:

- (a) Describe the degree of flexibility allowed to state Medicaid programs in beneficiary categories, covered services and cost-sharing.

#### Commentary on Question:

*There were many opportunities for partial credit on part (a). The candidate needed to describe flexibility and/or lack of flexibility for each of the items listed in the question (beneficiary categories, covered services, and cost-sharing) for full credit. Examples include listing the core groups that are federally-mandated to be covered, mandated services and the optional services, benefit limits and restrictions, benchmark alternatives, types of cost-sharing, and waivers. Some candidates only listed and described the waivers, which was a small portion of the available credit.*

#### Beneficiary Categories

The federal core groups that states must cover to receive federal Medicaid matching funds are pregnant women, children, parents, elderly individuals, and individuals with disabilities, with income below specified minimum thresholds, such as 100% or 133% of the federal poverty level (FPL).

One group that historically has been excluded from the core groups is non-elderly adults without dependent children ("childless adults"). States can choose to extend Medicaid eligibility to people in the core groups who have income above the federal minimum thresholds and receive federal matching funds.

## 6. Continued

### Covered Services

Some Medicaid benefits are federally mandated and others are optional.

Mandated benefits include Physician, Hospital, Lab, Family Planning, Nurse Midwife Services, and Transportation services.

Optional benefits include Prescription Drugs, Dental, Prosthetic/DME, Rehab and other therapies, Personal Care Services, and Hospice Services.

### Cost Sharing

Some enrollees are exempt from cost sharing.

Some categories of services are exempt from cost sharing.

The aggregate amount paid by individuals subject to cost sharing must not exceed 5% of the family's income.

Significant cost sharing is prohibited by federal regulations.

- (b) Differentiate the state and federal components in financing Medicaid programs.

### **Commentary on Question:**

*There were many opportunities for partial credit on part (b) including how the federal reimbursement is determined, what changed with the ACA, how the state and federal spending are financed, and various statistics available to describe Medicaid's impact on the state budget and economic shortcomings of the program.*

Financing is a shared responsibility of the federal government and the states. Historically the federal government has paid about 57% of costs although that share has risen due to higher federal matching on the ACA expansion population. States receive federal reimbursement for a share of program costs. The federal share is determined by the Federal Medical Assistance Percentage (FMAP), which is based on a formula that provides higher reimbursement to states with lower per-capita incomes. By statute FMAPs range from 50% to 83%. Federal spending is financed by general revenues. The state share is financed by state general revenues, local governments, taxes, and other sources.

For the optional ACA expansion population there is an increased FMAP, initially 100% and phasing down to 90% in 2020 and beyond.

In spite of the federal match Medicaid costs are a significant portion of overall state budgets. Medicaid costs in 2014 were about 25% of state general funds.

Since Medicaid is an entitlement program, total financing requirements are driven by the number of recipients and the cost of services provided.

- (c) Calculate the projected 2018 claims per member per month (PMPM). Show your work.

## 6. Continued

### Commentary on Question:

*Many candidates got part C correct.*

	2018 Projection		
	Average Unit Cost	Utilization Per Thousand Members Per Year	PMPM
Hospital Inpatient	=2,299 * (1+0.5%)^2	=328 * (1-0.5%)^2	=2,322 * 325 / 12000
	\$ 2,322	\$ 325	\$ 62.91
Hospital Outpatient	\$ 451	\$ 2,050	\$ 77.07
Professional Services	\$ 73	\$ 10,150	\$ 61.40
Pharmacy - Retail Drugs	\$ 36	\$ 13,802	\$ 41.64
Other Services	\$ 447	\$ 542	\$ 20.17
Total			\$ 263.20

- (d) The state is instituting a program to reduce premature births by creating a multi-faceted prenatal benefit for expectant mothers, including nutritional supplements, remote blood pressure monitoring, nurse visits and peer support.
- (i) Explain how this program fulfills the Triple Aim of health care, by component.
  - (ii) Comment on the suitability of this program for this population.
  - (iii) Propose another program for the state to implement to fulfill the Triple Aim. Justify your proposal.

### Commentary on Question:

*Support on how the triple aims were satisfied were needed for full credit on part (i). Listing two reasons the program is suitable was needed for full credit on part (ii). A wide range of solutions got full credit on part (iii) as long as the new program was reasonably justified.*

- (i) Triple Aims: Improving the patient experience, Improving the health of populations, and Reducing the per capita cost of health care. The patient experience is improved because premature infants are stressful and at home support is reassuring. The health of the population is improved because there is better nutrition for the mother and fewer premature babies will improve the health of the total population. The per capita cost of health care is reduced when premies have shorter stays of care due to efficiency or when there are less premies.

## **6. Continued**

- (ii) The program is suitable since it focuses on impoverished mothers, which is a Medicaid beneficiary category. The program should also have a large outreach as it would cover a large portion of the births in the country.
- (iii) The state could cover dental services and dentures. This would improve the patient experience by providing care they may not otherwise have access to which could relieve pain and improve health. The overall health of population could improve not only through improved dental health, but also through other conditions that could be linked to dental issues. Finally, the per capita cost of health care could be reduced by addressing dental and medical issues in earlier stages when they are acute and less costly.

## 7. Learning Objectives:

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

### Learning Outcomes:

- (4a) Describe benefits and eligibility requirements for Medicare including Part D.

### Sources:

Rosenbloom - Chapter 21

### Commentary on Question:

*This question assesses the candidate's knowledge on Medicare Part D benefits.*

### Solution:

- (a) Describe the components of Medicare Part A and B that must integrate with Medicare Part D.

#### Commentary on Question:

*Most candidates did well on this part of the question.*

- Part A covers inpatient care
- Part B covers outpatient care and some drugs

- (b) Describe the different types of income eligible members and compare and contrast the components in the Part D program that apply to each.

#### Commentary on Question:

*In order to get the full credit for this question, candidates must list describe all eligibility groups and give details on the benefit structure of each. Partial credit was given if the candidate grouped the low-income eligibility Group 1-4 as 'low income'.*

- Non-Low Income
  - Deductible
  - 25% cost sharing before ICL
  - After ICL and before TrOOP: Coverage Gap/Donut Hole (100% cost share)
  - After TrOOP: Catastrophic phase/federal reinsurance: Greater of 5% / small copay after TrOOP
- Low Income Eligible
  - Group 1: Dual Eligibles
    - No deductible
    - No cost sharing if institutionalized
    - Small copays if not institutionalized
    - No cost sharing in catastrophic phase

## 7. Continued

- Group 2 (MSP (QMB, SLMB, QI) SSI w/ Medicare, w/o Medicaid) & Group 3 (Income < 135% FPL)
  - Same as non-institutionalized Group 1
- Group 4: Income < 150% FPL
  - Reduced deductible
  - 15% coinsurance before catastrophic phase
  - Small copays in catastrophic phase

(c) Verify Dan and Susy's cost sharing. Show your work.

### **Commentary on Question:**

*Most candidates did at least receive partial credit on this question. Some candidates complicated the question by using Part D cost share that was not in effect in 2010 as well as calculating Dan's cost share, which was \$0 because he was an institutionalized dual eligible member. Some candidates solved for an implied cost share based on the system result, while the question was looking for the candidate to test if the system was processing claims correctly or not.*

- Dan should have paid \$0 since he is dual eligible and institutionalized
- Susy should have paid \$1,685.00 and underpaid by \$310
  - Claim 1:  $\$357.50 = 310 + 25\% * (500 - 310)$
  - Claim 2:  $\$218.75 = 25\% * 875$
  - Claim 3:  $\$300 = 25\% * 1200$
  - Claim 4:  $\$408.75 = 25\% * (2830 - 2575) + (3175 - 2830)$
  - Claim 5: \$400 (member pays full drug amount in doughnut hole)

(d) Management is considering changing the plan deductible to \$100.

- (i) Calculate the impact of the proposed change to Dan and Susy in 2010. Show your work.
- (ii) Describe the considerations for the plan when changing cost sharing from the defined standard.

### **Commentary on Question:**

*Most candidates did well on (i). For part (ii), the candidate needed to touch the three different considerations to get full credit.*

- (i)
  - No impact to Dan since he is dual eligible and institutionalized
  - Susy's cost sharing is a reduction of \$157.50.
    - Cost difference =  $(\$310 - \$100) * (1 - 25\%) = \$157.50$

## 7. Continued

(ii)

- Can no longer have a defined standard plan and will have to change it to one of the other plan types
- Will need to increase premium if there are no other changes
- Will likely lose low income members due to increased premium and little/no benefit for them

## 8. Learning Objectives:

2. The candidate will calculate and recommend a manual rate for each of the coverages described in Learning Objective 1.
3. Evaluate and recommend an employee benefit strategy.

### Learning Outcomes:

- (2a) Identify and evaluate sources of data needed pricing, including the quality, appropriateness and limitations of each data source.
- (2b) Develop an experience analysis.
- (2c) Calculate and recommend assumptions.
- (2d) Calculate and recommend a manual rate.
- (2e) Identify critical metrics to evaluate actual vs. expected results.
- (3c) Recommend an employee benefit strategy in light of an employer's objectives.

### Sources:

Study Note: GHC-108-17

[http://www.rwjf.org/content/dam/farm/reports/issue\\_briefs/2015/rwjf423764](http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2015/rwjf423764)

*Group Insurance*, Skwire, Chapter 21

### Commentary on Question:

*This question tested the candidates' knowledge of small employer coverage options and required calculation of employer specific premium rates.*

### Solution:

- (a)
  - (i) Compare and contrast features of grandfathered and grandmothered plans.
  - (ii) Recommend and describe appropriate coverage financing options for Employer A and Employer B. Justify your response.

### Commentary on Question:

*Part (i): Most candidates wrote some of the features of grandfathered and grandmothered plans, however few were complete.*

*Part (ii): The candidates that understood what was being asked generally did well connecting the options to the risk tolerance of the employers. The word "financing" seemed to confuse some candidates. Responses involved employer and member contribution strategies or financial investment instruments (stocks, bonds, etc.).*

## 8. Continued

### Part (i)

- Both grandfathered and grandmothered plans are non-ACA-compliant/exempt from ACA
- Grandfathered plans were in existence before ACA was enacted in March 2010 while grandmothered plans were renewed in 2013 before ACA's primary benefit and rating reforms became effective
- Grandfathered plans are allowed to exist indefinitely, while grandmothered plans are allowed to exist until 2017 (or 2018 is acceptable- source Government Affairs Alert - February 23, 2017)
- To retain status, no material changes to plan design are allowed

### Part (ii)

- Coverage options recommended for Employer A: Fully insured or group purchasing arrangement (association health plan or multiple employer welfare arrangement)
- These options are appropriate for Employer A (risk averse) because insurer takes on the risk
- Coverage option recommended for Employer B: Self-funded/Self-insured, can include stop-loss and admin services
- Appropriate for Employer B (risk willing) because the employer takes on the risk instead of insurer

- (b) Your boss has asked you to calculate a Small Group premium rate for Employer A and for Employer B as they move to ACA compliant plans.
- (i) Recommend which historical claims data to use in calculating the manual base rate. Justify your response.
- (ii) Calculate the manual base rate for 2018 using a trend rate developed from your recommended historical claims data from (b)(i), assuming that the rating variables remain the same in the experience and projection periods. Show your work.
- (iii) Develop separate 2018 premium rates for Employer A and Employer B, assuming 15% retention. Show your work.
- (iv) Determine whether Employer A or Employer B is more profitable to SHI in 2018. Show your work and justify your response.

### **Commentary on Question:**

*Part (i): Most candidates correctly identified that the AnyState data should be used, but very few wrote the ACA requirement of using a single-risk pool within a state as the justification.*

## 8. Continued

*Parts (ii)/(iii): Most of the calculations are multiplicative, therefore order isn't too important. A common mistake was including gender and health status as rating factors even though the ACA doesn't allow them. Including a factor of 1.0 was an issue at times because candidates could get the correct answer even if the factor was incorrectly included.*

*Part (iv): Candidates often trended each employer's experience to project claims despite saying in Part a (ii) that it wasn't credible. Candidates did well if they mentioned the differences in claims factors that aren't allowed in rating (gender/health status). Some candidates included commentary on risk adjustment, which wasn't intended to be tested here.*

Part (i)

Use SHI AnyState Small Group Block experience for both. Under the ACA, estimated costs for an insurer's small group population must be calculated based on an insurer's entire book of small group business within a given state (that is, a "single-risk pool").

Part (ii)/(iii)

Normalize 2016 PMPM for Rating Variables (Gender and Morbidity not allowed by ACA)

$$=211,000,000/62,000/12= 283.60$$

$$=283.60/.98(\text{Age})/.99(\text{Area})/.98(\text{Benefit}) = 298.28$$

Calculate Trend as 2016 AnyState PMPM/2015 AnyState PMPM

$$=283.60/254.17 - 1 = 11.58\%$$

Trend normalized PMPM two years =  $298.28*(1.1158)^2 = 371.36$  Manual rate

Employer Specific Premium =  $371.36 \text{ Manual Rate} * \text{Age} * \text{Area} * \text{Benefit Plan} / \text{Retention}$

$$\text{Employer A} = 371.36*1.05*1.10*0.94/(1-0.15) = 474.34$$

$$\text{Employer B} = 371.36*1.02*1.11*0.97/(1-0.15) = 479.82$$

Part (iv)

To project claims, include all available factors.

Aggregate factor =  $\text{Age} * \text{Gender} * \text{Area} * \text{Benefit Plan} * \text{Health Status}$

$$\text{Employer A} = 1.05*0.98*1.10*0.94*1.20 = 1.28$$

$$\text{Employer B} = 1.02*1.02*1.11*0.97*1.10 = 1.23$$

Employer B is projected to be more profitable. The aggregate rating factor is lower for B, but the premium is higher due to neither accounting for health status/gender (non-allowable). So higher premium rate and lower projected claims result in more expected profit.

## 9. 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:

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

### Sources:

*Group Insurance, Skwire, Chapter 5*

### Commentary on Question:

*Commentary listed underneath question component.*

### Solution:

- (a) Describe the pros and cons of a straight discount off billed charges arrangement.

Pros:

- Simple and easy to understand and implement
- Applies to all services billed

Cons:

- No risk shared between insurer and provider
- No incentive to manage utilization
- Billed charges could be increased to offset discount

- (b) Describe the pros and cons of four forms of provider contracting (also referred to as provider cost sharing) other than the current arrangement.

1. Fee schedules and maximums

Pro: simple to implement

Con: provides no incentives to reduce utilization

2. Per diem reimbursements

Pro: Hospital takes on some risk of the plan

Con: provides no incentive to reduce lengths of hospital stay

3. Bonus pools based on utilization

Pro: provides incentive for a provider to control utilization

Con: raises ethical concerns about the potential for providers to withhold medical care to attain bonus levels.

## 9. Continued

### 4. Capitation

Pro: virtually all risk passed to provider

Con: raises ethical concerns about withholding medical care (similar to Bonus Pool arrangement)

(c)

- (i) Calculate the change in cost if Louise Inc. switches to the DRG schedule. Show your work.
- (ii) Calculate a per diem rate that would break even with the current provider contracting arrangement. Show your work.
- (iii) Calculate a capitation rate that would save 10% over the current costs. Show your work.

### Commentary on Question:

*Candidates generally did well on this question. Some of the more common misses were:*

- *Not removing the 25% discount from billed charges for Louise, Inc.'s current cost.*
- *Calculating separate per diem rates for each diagnosis. Per diems generally are intended to cover all conditions treated during an inpatient stay.*
- *Calculating capitation on a "per inpatient claim" basis instead of a "per enrolled member" basis, which is what a capitation contract covers.*
- *Failing to specify whether the calculated capitation was on a per month or per year basis (either is fine, however it should be specified).*

(c) (i)

Louise, Inc. Current Billed Amount = \$250,000 + \$750,000 + \$500,000 + \$100,000 = \$1,600,000

Louise, Inc. Current Cost = \$1,600,000 \* (1-25%) = \$1,200,000

Louise, Inc. Cost Under DRG Schedule = \$50,000\*4 + \$65,000\*10 + \$15,000 \* 15 + \$15,000 \* 15 = \$200,000 + \$650,000 + \$225,000 + \$225,000 = \$1,300,000

Change in Cost = \$1,300,000 - \$1,200,000 = **\$100,000 higher** under the DRG schedule versus a 25% discount from billed.

## 9. Continued

(c) (ii)

Break-even with current arrangement = \$1,200,000

Total number of Inpatient days = 20 + 15 + 50 + 57 = 142

Overall Per Diem for Break-even = \$1,200,000 / 142 = **\$8,450.70 per IP day**

(c) (iii)

Ten percent savings over current cost = \$1,200,000 \* (1-10%) = \$1,080,000

Capitation rate = \$1,080,000 / 12,000 members = \$90.00 Per Member Per Year,

or \$90.00 PMPY / 12 = **\$7.50 Per Member Per Month**

- (d) Recommend a new provider contracting strategy that will incentivize Hospital Moraine to reduce length of stay. Justify your response.

**Commentary on Question:**

*Full credits were given only if justification was provided. No credit was given when definition of provider arrangement was used as justification. Many candidates provided detailed descriptions of potential strategies with little justification on why it is recommended for reducing length of stay.*

I recommend using a capitated arrangement with Hospital Moraine to reduce length of stay. Since the hospital's income per patient is fixed under a capitated arrangement, there is no incentive to keep patients longer than necessary, or to over-utilize services during their stay. Efficiency of care is encouraged in order to reduce expenses and maximize profit. XYZ should consider that capitated arrangements, if not designed and implemented appropriately, can incentivize hospitals to withhold care from patients in order to maximize their profits. In order to address this concern, consider implementing quality standards that must be met for Hospital Moraine's contract to remain in force.

## 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
  
3. Evaluate and recommend an employee benefit strategy.

### Learning Outcomes:

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

*The Handbook of Employee Benefits*, Rosenbloom, Chapter 32  
*Group Insurance*, Skwire, Chapter 11

### Commentary on Question:

*This question tested the candidate's knowledge of small group health benefits in the presence of the Affordable Care Act. Candidates were generally able to develop a proper critique of the benefit offerings; however, there were times when a candidate's critique did not identify key elements of the benefit offering (for example, tax treatment of benefits.) The majority of candidates did not perform well on the calculation portion of the question. Many candidates failed to properly project the manual base rate for the expected claim cost.*

### Solution:

- (a) It is 2014. Since Ms. Moore is only able to offer low starting salaries, she wants to pay 100% of medical premiums for Guthrie Corp employees and their families.

Critique Ms. Moore's proposal.

### Commentary on Question:

*Candidates generally performed well on this portion of the question. The majority of candidates were able to provide a thorough critique and received full credit.*

## 10. Continued

1. In the current environment, most employees are accustomed to paying some level of contribution toward medical coverage costs.
  2. Contributions motivate employees to take advantage of coverage options elsewhere (both for themselves and for their dependents).
  3. It is much easier to set a precedent from the outset than to add employee contributions at a later date. Changing from a non-contributory to a contributory plan at a later date could create employee anxiety or ill-will.
  4. Employee contributions could help avoid legal problems.
- (b) It is now 2015. Ms. Moore pays 80% of medical premiums for Guthrie Corp employees and their families. She wants to know if Guthrie Corp will qualify for the ACA tax credit when the company files its 2015 taxes.

Describe the requirements for ACA tax credit qualification and determine whether Guthrie Corp meets each requirement for tax year 2015.

### **Commentary on Question:**

*The majority of candidates performed well on this question. Candidates were able to provide all the necessary requirements for the tax credit qualification and correctly identify Guthrie Corp's eligibility status.*

Guthrie Corp **does not qualify** for a tax credit. It meets only two of the three requirements:

1. Guthrie Corp must have no more than 25 employees. With 24 employees, this qualification is **met**.
  2. Guthrie Corp must have average annual wages of \$50,000 or less per employee. At \$60,000, Guthrie Corp this qualification is **not met**.
  3. Guthrie Corp must pay at least 50% of the insurance premiums. At 80%, this qualification is **met**.
- (c) Critique Ms. Moore's proposal from the point of view of an employee earning \$100,000 annually. Show your work.

### **Commentary on Question:**

*The majority of candidates were able to provide a basic critique of the benefit proposal. Very few candidates were able to identify all key elements of the benefit proposal, namely the tax treatment of the benefits for both life and LTD as well as alternate recommendations for benefit offerings where applicable.*

**Critique/Alternative Recommendation / Conclusion:** increase life insurance benefit, reduce LTD percentage of salary

## 10. Continued

### Pros:

Life – provides some coverage (better than no coverage); 50k level means no inputted income to employee

LTD – provides a high level of benefit and benefits paid are tax advantaged

### Cons:

Life – 50k replaces less than a year of salary. Most common multiple of earnings plan is one or two times salary, this plan is low.

LTD – The after tax LTD replacement income would be higher on claim than working because benefits would not be taxed. This would incentivize employees to stay on disability rather than come back to work. The situation could be further exacerbated by anti-selection since the LTD coverage is 100% employee paid.

For example: An employee who earns 100,000 a year pays 25% in federal taxes (*candidate does NOT need to know the tax bracket*), his after tax income is 75,000. This employee has a 75% replacement ratio. If an employee receives 90% of his pre-tax salary, or 90,000, he receives a higher salary when drawing disability insurance than when working. This offering provides no incentive to return to work.

**Other:** Since LTD is optional (employee paid), it is paid with after tax dollars and the benefits are not subject to federal income tax.

- (d) Calculate the actual-to-expected life claims cost ratio for Guthrie Corp for 2016 and 2017 combined. Show your work.

### Commentary on Question:

*Very few candidates correctly completed all the components of this calculation. Many candidates were able to receive partial credit by identifying key elements of the A/E calculation (for example, trend assumptions and claim cost assumptions). However, many candidates incorrectly identified the manual rate and improperly applied the trend year assumptions and removal of the retention from the manual rate. Many candidates were able to identify the actual claim costs, and received partial credit for the calculation of the A/E ratio.*

2%	<= claim and expense trend		\$50,000	<= life insurance benefit			
	Number of Employees	claim cost per \$1,000 covered salary	Available Benefit in Thousands	Expected 2015 CC with retention	Expected 2016 CC with retention	2-year expected CC with retention	2-year expected CC without retention
Females	55	0.63	\$2,750	\$1,732.50	\$ 1,767.15	\$3,499.65	\$2,974.70
Males	45	0.87	\$2,250	\$1,957.50	\$ 1,996.65	\$3,954.15	\$3,361.03
Total	100		\$5,000	\$3,690.00	\$ 3,763.80	\$7,453.80	\$6,335.73
						Actual	\$50,000.00
						Expected	\$6,335.73
						Actual / Expected	789%

## 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.
- (2d) Calculate and recommend a manual rate.

### Sources:

*Group Insurance*, Skwire, Daniel D., 7th Edition, Chapters 7 and 23

Study Note: GHC-105-17- Pricing Considerations for Drugs Covered under Pharmacy Benefit programs

### Commentary on Question:

*Commentary listed underneath question component.*

### Solution:

- (a)
- (i) Describe four pharmacy benchmarks.
  - (ii) Define four key relationships between pharmacy benchmarks.

### Commentary on Question:

*In order to receive full credit, candidates had to define any benchmark acronyms used and give a brief description. A simple list of acronyms did not receive credit since the question required candidates to “describe” in part (i). For part (ii) concerning benchmark relationships, credit was awarded for directional relationships, such as indicating that a certain benchmark would be greater than or equal to another.*

## 11. Continued

- (i) Pharmacy benchmarks include:
- AMP = Average Manufacturer Price: the price manufacturers sell to wholesalers
  - WAC = Wholesale Acquisition Cost: suggested list price for sale to wholesalers
  - AWP = Average Wholesale Price: WAC plus a markup, regularly published based on available data but not truly an average of prices paid by anyone
  - AAC = Actual Acquisition Cost: the price paid by retailers to wholesalers
  - U&C = Usual and Customary: the price retailers sell to customers
- (ii) Relationships for these benchmarks:
- $WAC = AWP / 1.2$  or  $WAC = 0.833 * AWP$
  - $AMP = AAC$  if retailers buy directly from manufacturers
  - $U\&C = AAC + \text{retailer markup}$
  - $U\&C > AWP$
- (b) Calculate the effective member coinsurance for all drugs in 2016 and 2018. Show your work.

### **Commentary on Question:**

*Most candidates correctly calculated the member coinsurance for 2016. The most common miss was forgetting to include the dispensing fee. To receive full credit, overall member coinsurance across all tiers of drugs had to be computed since that is what was asked in the question. Some candidates calculated the plan's coinsurance or an overall effective copayment but never converted that to coinsurance as requested.*

*For 2018, candidates needed to use the distribution of drugs, apply two years of trend, and find the new copay for each grouping of drugs, taking into account the proposed modification to pay the lesser of the copay or the cost of the drug. Several candidates skipped this step and assumed the same copay structure from 2016. Others forgot to trend the cost and utilization in their calculations.*

2016 Member Coinsurance Calculation:

## 11. Continued

Type	Scripts/k	AWP	Discount	Disp Fee	Allowed / Script	Cost share	Mbr Eff Copay	Eff Coins
Generic	4000	\$50	70%	\$2	\$17	\$10	\$10	
Brand	800	\$200	20%	\$2	\$162	\$50	\$50	
Specialty	100	\$3,000	5%	\$2	\$2,852	20%	\$570	
Total	4900	\$134.69			\$98.53		\$27.97	28%
<i>2016 Allowed = 2016 AWP * (1 - Discount) + Disp Fee</i>								

2016 Effective Coinsurance =  $\$27.97 / \$98.53 = 28.4\%$

Next, must determine 2018 copays using given distribution of drugs.

Generic				Brand			
% of Scripts	2016 AWP per Script	(a) Allowed/Script	(b) Eff Copay	% of Scripts	2016 AWP per Script	(a) Allowed/Script	(b) Eff Copay
45%	\$7	\$4.45	\$4.45	5%	\$6	\$7.60	\$7.60
25%	\$30	\$12.50	\$10.00	15%	\$35	\$34.66	\$34.66
15%	\$70	\$26.49	\$10.00	25%	\$75	\$71.98	\$50.00
10%	\$150	\$54.49	\$10.00	30%	\$169	\$159.70	\$50.00
5%	\$277	\$98.93	\$10.00	25%	\$500	\$468.56	\$50.00
100%	\$50	\$19.50	\$7.50	100%	\$200	\$188.62	\$45.58
<i>For (a), 2018 Allowed = 2016 AWP * (1 + Ing Cost Trend)^2 * (1 - Discount) + Disp Fee</i>							
<i>For (b), 2018 Effective Copay includes lesser of language.</i>							
<i>Generic 2018 copay = Min (Column A, \$10)</i>							
<i>Brand 2018 copay = Min (Column A, \$50)</i>							

Lastly, using calculations above, 2018 Member Coinsurance Calculation:

Type	Scripts/k	Allowed per Script	Mbr Eff Copay	Eff Coins
Generic	4,162	\$19.50	\$7.50	
Brand	832	\$188.62	\$45.58	
Specialty	104	\$3,326	\$665	
Total	5,098	\$114.59	\$27.14	24%
<i>2018 Scripts/k = 2016 Scripts/k * (1 + Util Trend)^2</i>				

## 11. Continued

$$2018 \text{ Effective Coinsurance} = \$27.14 / \$114.59 = 23.7\%$$

- (c) Calculate the 2018 premium rates for the South End Chemical prescription drug benefit plan. Show your work.

### Commentary on Question:

*Very few candidates correctly completed all the components in the calculation of the premium rate. Many neglected to account for the pharmacy rebate. Others incorrectly applied the single and family multipliers to determine the final premium rates. The final step required an assumption of family size, and any assumption was accepted. Partial credit was awarded along the way for correct application of retention or other portions of the calculation, even if the overall answer was incorrect.*

From Part B, 2018 total utilization is 5,098 per 1000 and allowed per script is \$114.59.

$$\text{Thus 2018 Allowed PMPM} = 5,098 * \$114.59 / 12,000 = \$48.68$$

From Part B, 2018 member cost share is \$27.14 per script.

$$2018 \text{ member cost share PMPM} = \$27.14 * 5,098 / 12,000 = \$11.53$$

Next, determine pharmacy rebate for brand drugs.

$$2018 \text{ WAC} = 2018 \text{ Brand AWP} / 1.2 \text{ and then Rebate} = 20\% * 2018 \text{ WAC}$$

$$2018 \text{ Rebate} = \$200 (1+8\%)^2 / 1.2 * 20\% = \$38.88 * 832/12000 = \$2.70 \text{ PMPM}$$

$$2018 \text{ Premium PMPM} = (\text{Allowed PMPM} - \text{Rebate PMPM} - \text{Cost Share PMPM}) / (1 - \text{Retention}) = (\$48.68 - \$2.70 - \$11.53) / (1 - 0.15) = \$40.53 \text{ PMPM}$$

Finally, need to determine single and family premium rates based on this overall PMPM. To complete this calculation, assume the average family size is 4.

Tier	Dist	Avg Contract Size	Prem PCPM	Rate Mult	Tiered Rate
Single	25%	1		1	\$62
Family	75%	4		2.5	\$155
Total	100%	3.25	\$131.72	2.125	
<i>Prem PCPM = PMPM * Average Contract Size = \$40.53 * 3.25 = \$131.72</i>					
<i>Single rate = \$131.72 / 2.125</i>					
<i>Family rate = 2.5 * Single rate</i>					

## 11. Continued

2018 Premium rates are \$62 for single and \$155 for family.

- (d) South End Chemical saw an increase in its 2016 medical claims due to low prescription adherence of diabetic members.

Recommend two different pharmacy plan strategies that could alleviate this problem. Justify your response.

### **Commentary on Question:**

*A variety of answers were accepted, as long as they could logically lead to increased adherence. Responses related to step therapy or quantitative limits were not given credit since those strategies would serve to restrict members from accessing drugs. Since the question asked candidates to justify their response, full credit was given when there was a description of each strategy's potential impact on adherence, and not if a candidate simply named a pharmacy benefit program or strategy. It was important that candidates recommended approaches that would impact the pharmacy plan as requested, not changes to the medical benefit.*

- Adjust the formulary - Formularies contain lists of preferred drugs. Whether a drug is on the list may affect member costing sharing or access to the drug
- Cost Sharing – Reduce cost sharing to the member for diabetic drugs to encourage prescription adherence for diabetic members. This could be done in different ways, such as \$0 cost sharing for diabetic drugs or implementing Value-Based Insurance Design (VBID)
  - VBID selectively decreases cost sharing on drugs and other medical treatments that are identified as being high value. High value drugs can save overall plan costs in the long run by encouraging medical adherence and avoiding the unnecessary cost of worsening chronic conditions
- Mail Order Programs – Typically provide three-month supply at 2x or 2.5x the monthly cost sharing at a retailer. This provides lower cost to participants, and can increase adherence by reducing the barrier to obtain the drug through mailing it right to the member

## 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.

### Sources:

*The Handbook of Employee Benefits*, Rosenbloom, Chapter 7  
GHC-106-16: Health Plan Payroll Contribution Strategies

### Commentary on Question:

*Commentary listed underneath question component.*

### Solution:

- (a) Describe four key features of CDHPs and explain how they align with the goals of the Chief HR Officer.

#### Commentary on Question:

*Candidates were generally successful in describing key features of CDHPs. Candidates did not receive full credit if they did not explain the alignment with the 2 goals of the Chief HR Officer – controlling unnecessary utilization and encouraging consumerism.*

1. CDHPs may feature an individual health account (e.g., HSA) that may be carried over from year to year to pay for health expenses not covered by the plan.
  - a. These accounts promote consumerism by encouraging plan members to budget and save for health care expenses.
2. CDHPs may provide information sources and tools to educate members on health issues or to help members find lower cost or higher quality providers.
  - a. These tools promote consumerism by enabling plan members to compare providers based on price and effectiveness.
3. The plan typically is introduced through a communications program that enhances employee understanding of the plan and encourages consumerism and health behaviors.
  - a. Communications program encourages consumerism and health behaviors.
4. CDHPs may offer access to a health coach or consultant to help plan participants obtain health information, answer questions about health issues, or provide guidance on using providers.
  - a. These services may decrease utilization by providing health advice without requiring an unnecessary office visit.

## 12. Continued

5. In cases of serious chronic conditions or illnesses, a proactive medical professional may contact plan members to coordinate care among the member and providers.
  - a. These services may decrease utilization, as care coordination can eliminate unnecessary office visits, tests, and diagnostic procedures.
- (b) Calculate the required single and family payroll contributions for the 2019 plan year. Show your work.

### Commentary on Question:

*Most candidates were successful in applying trends to 2018 premiums. Candidates did not receive full credit if they did not trend payroll contributions, did not combine Hall's and Oates' premiums for 2019, or only calculated the total premium that was needed for 2019 (not just the portion that needed to be charged to employees).*

### Solution:

Step 1 - Calculate premiums, payroll contributions, and net company cost before plan design and payroll contribution strategy changes.

Comp	Plan	Tier	Enrolled	2018 Premium	2018 Payroll Contrib (EE)	Trend Factor	2019 Premium	2019 Tot Prem	2019 Payroll Contrib (EE)	2019 Net Company Cost
							=2018 Prem * Trend	=2019 Prem * Enrolled	=2018 Contrib * Trend	=(2019 Prem - 2019 Contrib) * Enrolled
Hall	CDHP	EE	1,500	\$850	\$170	1.06	\$901.00	\$1,351,500	\$180.20	\$1,081,200
Hall	CDHP	E+F	6,000	\$1,870	\$374	1.06	\$1,982.20	\$11,893,200	\$396.44	\$9,514,560
Oates	PPO	EE	1,300	\$1,425	\$430	1.06	\$1,510.50	\$1,963,650	\$455.80	\$1,371,110
Oates	PPO	E+F	4,750	\$2,993	\$903	1.06	\$3,172.58	\$15,069,755	\$957.18	\$10,523,150
			13,550					\$30,278,105		<b>\$22,490,020</b>

Step 2 - Calculate targeted 2019 net company costs based on cost savings requirements.

Targeted net company cost = 2019 Net Company Cost (from Step 1) \* 95%

Targeted net company cost = \$22,490,020 \* 95% = \$21,365,519

Step 3 - Calculate 2019 total premiums after plan design changes.

Comp	Plan	Tier	Enrolled	2019 Premium (from Step 1)	Change Factor	2019 Premium w/ Change (=Enrolled * 2019 Premium * Change)
Hall	CDHP	EE	1,500	\$901.00	1	\$901.00 \$1,351,500
Hall	CDHP	E+F	6,000	\$1,982.20	1	\$1,982.20 \$11,893,200
Oates	PPO	EE	1,300	\$1,510.50	0.85	\$1,283.93 \$1,669,103
Oates	PPO	E+F	4,750	\$3,172.58	0.85	\$2,696.69 \$12,809,292
			13,550			<b>\$27,723,094</b>

## 12. Continued

Step 4 - Calculate payroll contributions that achieve targeted costs.

2019 Targeted Cost = 2019 Prem – (EE Enrolled \* EE Payroll) + (EE+F Enrolled \* 220% \* EE Payroll)

Target Cost =	\$21,365,519
Total Prem	\$27,723,094
- EE Enrolled * EE Payroll	(1,500 + 1,300) * EEP = 2,800 EEP
- E+F Enrolled * 220% * EE Payroll	(6,000 + 4,750) * 2.2 * EEP = 23,650 EEP

$$\text{EEP} = (27,723,094 - 21,365,519) / (2,800 + 23,650) \quad \text{\$240.36}$$

$$\text{EFP} = 220\% * \text{EEP} \quad \text{\$528.80}$$

### 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:

- (2a) Identify and evaluate sources of data needed pricing, including the quality, appropriateness and limitations of each data source.
- (2g) Apply actuarial standard of practice in evaluating and projecting claim data.

#### Sources:

ASOP 25, Credibility Procedures  
*Group Insurance*, Skwire, Chapter 22

#### Commentary on Question:

*This question tested the candidate's knowledge of ASOP 25, in addition it required the candidate to evaluate 2 insurance coverages, recognize the differences in claims frequency and severity between the two as it relates to credibility exposure, and make a recommendation for a new credibility standard.*

#### Solution:

Valley Insurance Company is going to launch a new group pharmacy product offered to retirees aged 65 and older

- (a) List criteria to consider when developing a credibility standard and characteristics you should consider when selecting relevant experience.

#### Commentary on Question:

*Candidates who were familiar with ASOP 25 did well on this question.*

#### Considerations

- Does the procedure produce reasonable results?
- Is the procedure appropriate for the intended purpose?
- Is the procedure practical to implement
- Does the procedure satisfy applicable laws?

#### Characteristics

- Homogeneity
- Demographics
- Coverages
- Frequency
- Severity
- Other risk characteristics the actuary expects to be similar to the subject material

### 13. Continued

- (b) Recommend a credibility threshold (N) for this new product. Justify your response.

**Commentary on Question:**

*This question required the candidate to recognize that transplant claims are low frequency, high severity; and that pharmacy claims are very high frequency with much less stable average cost. Hence the candidate should recommend lower exposure for the pharmacy coverage than required for transplant coverage.  $N < 10,000$ .*

I would recommend  $N=1,500$ . This is the threshold CMS uses for Part D coverage. In addition Rx claims have a much higher frequency (especially for retirees) and less variability in their severity than transplant claims. For insurance product that covers population age 65+, the underlying demographics are more homogeneous.