DP-GH Model Solutions
Spring 2012

1. **Learning Objectives:**

8. Evaluate the process and be able to develop a medical manual rate for government programs, ASO and insured business.

Learning Outcomes:

(8h) Modify manual rates to reflect specific plan values including benefits for which little or no data is available.

Sources:

GH-D114-07: Actuarial Issues in FFS/Prepaid Medical Group (Sutton)

Bluhm, Group Insurance, 5th Edition, Underwriting Small Groups, Chapter 25

Commentary on Question:

The goal was to demonstrate an understanding community rating as the principles will be central in health care as part of Health Care Reform.

Solution:

(a) Describe the services offered by an external marketing firm to an insurance company.

Commentary on Question:

There were two sources that could have been used to answer this question; the GH-D114-07 SN and the Group Insurance text. There were minor differences in the answers from both sources; however credit was given to either approach. Some students retrieved the list of Rating Structures outlined in the book Group Insurance, 5th Edition, Bluhm, pp 526, credit was not given to this list as it was not addressing the Premium Rating Structures specifically under community rating. The list under this section generally addressed rating structures for small groups.

- Single/Composite Rate
  - Employee (And all eligible dependents)
- Two-Tier
  - Employee Only
  - Employee and One or more Dependent / Family

1. Continued

- Three Tier
  - Employee Only
  - Employee and One Dependent
  - Employee and Two or more Dependents / Family
- Four Tier
  - Employee Only
  - Employee and Spouse / Employee and One Dependent
  - Employee and Dependent Child(ren) / Employee and Children
  - Employee and Spouse and Dependent Child(ren) / Family
- Four Tier (Alternative) / Five Tier
  - Employee Only
  - Employee and One Dependent / Employee and Spouse
  - Employee and Two or Three Dependents / Employee with Child
  - Employee and Four or More Dependents / Employee with Children
  - / Family

(b) Development of Three-Tier Premium rates.

Commentary on Question:
Most students scored well on this section of the question. For those students that missed this section, calculating and correctly applying the Conversion Factor was the biggest problem. Partial credit was given if an incorrect conversion factor was calculated, but used correctly.

Step 1:

Calculate the conversion Factor:
= (0.5*1 + 0.2*2 + 0.3*3.2) / (0.5*1 + 0.2*2 + 0.3*3)
= 1.0333

Step 2:

Calculate the premium rates for each rating tier:

Single Premium Rate = Capitation Rate * Conversion Factor
= 1.0333 * $308.21
= $318.48

Two-Person Premium Rate = Single Premium Rate * 2
= $318.48 * 2
= $636.96

Family Premium Rate = Single Premium Rate * 3
= $318.48 * 3
= $955.45

1. Continued

(c) Compositing of Rates: Three-Tier to Two-Tier

Commentary on Question:
Most students scored well on this question. Some students developed new conversion factors as illustrated in part (b) to develop the new Family Premium Rate for which full credit was given.

Single Premium Rate (Two-Tier) = Single Premium Rate (Three-Tier)
= $318.48

Family Premium Rate
= ($636.96 * 0.2 + $955.45 * 0.3) / (0.2 + 0.3)
= $828.05

2. Learning Objectives:

5. Apply U.S. and Canadian nation-specific regulation to product design and pricing.

Learning Outcomes:

(5a) Determine if given policy provision is compliant with the regulation.

(5c) Evaluate the potential financial and moral risk associated with the legislation.

Sources:

Health Reform — Premium Setting in the Individual Market

Commentary on Question:

This question tested a candidate's understanding of actuarial value, and the effect that deductible leveraging plays in actuarial value over time. Furthermore, it tested the candidate's ability to make reasonable suggestions to improve a proposed policy. The cognitive levels of this question include comprehension and knowledge utilization.

Solution:

(a) Calculate actuarial values for the following…

Commentary on Question:

This is a comprehension section. In general, candidates performed well in this section. When a mistake was made, a common error was misapplication of the Out-of-Pocket Maximum when applying the benefit design parameters to the claims.

Plan A today

	Claims	Deductible	Coinsurance	Member Share	Plan Share
Person 1	$25,000	$500	$1,500	$2,000	$23,000
Person 2	$1,500	$500	$200	$700	$800
Person 3	$800	$500	$60	$560	$240
Person 4	$500	$500	$0	$500	$0
Person 5	$400	$400	$0	$400	$0
Total	$28,200	$2,400	$1,760	$4,160	$24,040

Actuarial value = plan spending as % of total = $24,040 / $$28,200 = .852

2. Continued

Plan A in 2 years (trend claims at 10% for two years)

	Claims	Deductible	Coinsurance	Member Share	Plan Share
Person 1	$30,250	$500	$1,500	$2,000	$28,250
Person 2	$1,815	$500	$263	$763	$1,052
Person 3	$968	$500	$94	$594	$374
Person 4	$605	$500	$21	$521	$84
Person 5	$484	$484	$0	$484	$0
Total	$34,122	$2,484	$1,878	$4,362	$29,760

Actuarial value = plan spending as % of total = $29,760 / $$34,122 = .872

Plan B in 2 years (trend claims at 10% for two years)

	Claims	Deductible	Coinsurance	Member Share	Plan Share
Person 1	$30,250	$3,000	$3,000	$6,000	$24,250
Person 2	$1,815	$1,815	$0	$1,815	$0
Person 3	$968	$968	$0	$968	$0
Person 4	$605	$605	$0	$605	$0
Person 5	$484	$484	$0	$484	$0
Total	$34,122	$6,872	$3,000	$9,872	$24,250

Actuarial value = plan spending as % of total = $24,250 / $$34,122 = .711

(b) Determine the implications of the 2% range on your ability to continue to continue offering a plan, and suggest changes to improve the rule.

Commentary on Question:
This section was knowledge utilization. In general, candidates performed better on section (a) than in this section. A few points that were commonly missed include:

- Not identifying deductible leveraging as the cause for the increase in actuarial value;
- Not identifying that deductible leveraging impacts lean plans to a greater degree than rich plans;
- Candidates often limited themselves to one suggestion as to how to improve the rule, which did not allow them to maximize their points.

2. Continued

Implications

- Actuarial value will increase over time due to deductible leveraging effect, whereby paid claims will rise at a greater rate then allowed claims due to the fixed dollar cost-sharing features.
- The impact of deductible leveraging will be greater on less rich benefit plans.
- Plan A actuarial value goes from .852 to .872, thus the plan would need to be terminated in 2 years (note: credit given if candidate rounded to .87 and declared that Plan A was still within the range and could still be offered).
- Plan B actuarial value goes from .67 to .711, thus the plan would need to be terminated.

Suggestions

- Range is too narrow and could be expanded to +/- 5% (for instance).
- Don't change a plan's status after the initial determination.
- Remove the limit on the top end of the range.
- Have a smaller range for richer benefit plans, and a wider range for less rich plans.

3. Learning Objectives:

1. Understand and evaluate the effectiveness of the various types of Single Employer group coverage typically offered under:
   - Group health plan, including Consumer driven plans, etc.
   - Prescription Drug
   - Group dental plan
   - STD or LTD plan (incl. mention of coverage within other plans)
   - Group life plan
   - Other miscellaneous benefits
   - Multi-employer groups (Taft-Hartley, etc)

8. Evaluate the process and be able to develop a medical manual rate for government programs, ASO and insured business.

9. Applies principles of pricing, benefit design and funding to an underwriting situation.

Learning Outcomes:

(1a) Describe the various coverages, including typical benefit provisions, eligibility requirements, cost-sharing provisions, limits and funding mechanisms.

(8a) Identify and evaluate sources of data needed for pricing and underwriting including the quality, appropriateness, and limitations of each data source.

(8b) Identify and evaluate the rating parameters needed to evaluate and manage a book-of-business.

(8c) Develop experience analysis (claims cost and expenses):
   (i) Construct the appropriate models
   (ii) Develop the appropriate assumptions, including trend, anti-selection, etc.

(8d) Recommend appropriate actions following the study including:
   (i) Areas for further study
   (ii) Changes in coverage, eligibility requirements or funding strategy

(8h) Modify manual rates to reflect specific plan values including benefits for which little or no data is available.

(9a) Understand the risks and opportunities associated with a given coverage, eligibility requirement or funding mechanism.

(9c) Recommends strategies for minimizing or properly pricing for risks.

(9d) Describe basic approaches to credibility theory.

(9e) Apply the credibility theory to a given underwriting situation.

3. Continued

Sources:
GH-D101-07: Group Disability Insurance, Sections 1, 8, 10, and 11

GH-D101-07: Group Disability Insurance, Sections 2, 4, and 7

GH-D101-07: Group Disability Insurance, Section 6

Commentary on Question:
Part (a) was a retrieval-type question, but in order to maximize the points, candidates were required to compare and contrast the benefit provisions of STD and LTD plans. Part (b) was a pricing exercise that required candidates to calculate an experience rate, manual rate and establish the final rate based on credibility. Part (c) required candidates to demonstrate an understanding of the variables that contribute to more accurate rating. Part (d) required a recommendation on how the client could reduce disability claims costs, which was drawn from two areas in the course material.

Overall candidates responded well in part (a). In part (c) and (d), it is important for candidates to explain how each item noted relates to question. In addition, it is important that candidates had sufficient rationale to support the recommendations.

In part (b), we recommend that candidates should show appropriate work to receive full credit. Candidates should keep in mind that while the answer is important on the exam, what's even more important is showing an understanding of the process to reach the answer. Many candidates struggled with the experience rating portion of the question. A common error with the manual rate calculation was applying a benefit offset incorrectly. A common error with the credibility calculation was not taking the life years into account.

Solution:
(a) Compare and contrast STD and LTD benefit provisions.

	Comparison	
Benefit Provision	STD	LTD
Benefit Amount	% of income replaced applied to weekly salary	% of income replaced applied to monthly or annual salary
Maximum Benefits	Max amount per week	Max amount per month
Elimination Periods	EP generally split between accident and sickness	Generally a single EP
	Shorter timeframe (e.g. 5 days)	Longer timeframe (e.g. 30/60/90 days)
Maximum Benefit Duration	Limited # of weeks (dovetail with LTD)	Generally continue till age 65

3. Continued

	Comparison	
Benefit Provision	STD	LTD
Definition of Disability	Generally exclusively own occ definition used	Varies depending on plan own occ and any occ
- Partial Benefits	Increasingly popular	The norm
- Occ and Non-Occ	Typically covers only non-occupational disabilities	Covers both occupational and non-occupational disabilities
Integration	Limited integration with other benefits (eg. State dis or salary continuance)	Integrate with other sources of earnings (direct, all sources)
COLA	Optional, but unlikely to be significant	Mitigate effect of inflation on monthly benefits
Survivor Benefits		Generally only found in LTD
Minimum Benefit	Minimum amount payable regardless of other income, likely in both LTD and STD	
Pension Contribution Benefit		Generally only found in LTD
Eligibility	Likely in both LTD and STD	
Conversion	Optional in both LTD and STD	
Exclusion and Limitations	Do not normally have E&L in employee paid plans	Generally have PEC and limited Mental/Nervous conditions

(b) Calculate the 2011 STD claims rate for this group. State your assumptions and show your work.

Experience Rate:
2008 experience rate = (0.4 x 3/1000 + 0.6 x 6/1000) x 9 = 0.0432
2009 experience rate = (0.4 x 3.5/1000 + 0.6 x 6.5/1000) x 7 = 0.0371
2010 experience rate = (0.4 x 4/1000 + 0.6 x 7/1000) x 8 = 0.0464
3 years average experience rate = (0.0432+0.0371+0.0464)/3 = 0.04223
Experience weekly rate (per $10) = 0.04223 x 10 = 0.4223
Experience monthly rate (per $10) = 0.4223 / 12 = 0.0352

Manual Rate = Manual basic rate x Adjustment factors = (blended basic rate between male and female) x (industry factor x regional factor) = (0.4 x 0.022 + 0.6 x 0.042) x (1.05 x 1.1) = 0.0393
Credibility Factor = N/(N+K) = (350x3) / (350x3+250) = 0.8077

3. Continued

Final Rate = Blended rate between Experience Rate and Manual Rate = Credibility Factor x Experience Rate + (1 - Credibility Factor) x Manual Rate = (0.8077) x (0.0352) + (1-0.8077) x (0.0393) = **0.036**

Benefit $ per employee per week:
Salary in 2001 per week = $46,650 x (1+3%) / 52 = $924
After apply coverage % = $924 x 66.7% = $616
After apply offset factor = $616 x (1-10%) = $554
Apply Max: $554 is below max of $600
Benefit $ per employee per week is **$554**

(c) Identify additional information required to provide a more precise claims rate for this group, and explain how this would improve your analysis.

- Improved understanding of the group characteristics to improve the manual rate selected
  - How well the manual rate parameters fit the group
    - Could refine the manual rate used in the premium calculation
  - Industry
  - Nature of occupations covered
    - For example is there a range of jobs or are they all similar
  - Age distribution
    - Claim rates are influenced by age of workforce
  - Gender distribution
  - Employment status
    - What is mix of full-time, part-time, seasonal
  - Individual salaries instead of average

- Improved understanding of the group to evaluate the data provided by employer
  - Ease of qualifying for disability in past may not be same with an insured plan
  - Any employment insecurity
  - Company and industry's financial outlook could increase claim rates
  - Employee culture with work environment, safety, etc. can impact claim rate
  - Integrity/validity of data provided by employer
  - Previous program was “self managed” so may have holes, errors, etc.

- Plan Design
  - Benefit taxability impacts after tax ratio, which may impact desire to return to work

3. Continued

(d) Recommend actions that could be taken to reduce the client's disability claims costs. Justify your recommendation.

1. Changes could be made to Plan Design
   a. Definition of disability could be tightened to lower the number of claims approved
      i. For example, any occ instead of own occ
   b. Reduction in benefit level
      i. Maximum level reduced or percentage of income lowered
   c. Pre-existing conditions
      i. Ensure PEC is in place and enforced
   d. Removal of any additional benefits
      i. Pension supplement
      ii. Conversion
      iii. Survivor benefits
   e. Offsets
      i. Could be added into plan if not already there

2. Improvement in Disability Claims Management
   a. Review to ensure claimant satisfies definition of disability
      i. What is own occupation (how narrowly or broadly defined)
   b. Maximize offsets
      i. Ensure all available sources of other income are applied for (e.g. Social Security)
   c. Reevaluation of disability timeframe
      i. Process to review to determine if there were any changes to disablement status
   d. Rehabilitation plans
      i. Ensure this process is in place
   e. Settlement process
   f. Fraud investigation
      i. Review documentation to minimize fraudulent claims

3. Wellness/prevention

4. Learning Objectives:

1. Understand and evaluate the effectiveness of the various types of Single Employer group coverage typically offered under:
   - Group health plan, including Consumer driven plans, etc.
   - Prescription Drug
   - Group dental plan
   - STD or LTD plan (incl. mention of coverage within other plans)
   - Group life plan
   - Other miscellaneous benefits
   - Multi-employer groups (Taft-Hartley, etc)

Learning Outcomes:

(1a) Describe the various coverages, including typical benefit provisions, eligibility requirements, cost-sharing provisions, limits and funding mechanisms.

Sources:

Health Watch, May 2009, Design and Pricing of Tiered Network Health Plans

Commentary on Question:

Question 4 is testing the candidates understanding of placing providers into different tiers in a network. Candidate responses were allowed to vary as long as appropriate thought and justification were provided.

Solution:

(a) Describe the potential pitfalls of designing a tiered network and how each pitfall would apply to the providers.

Potential pitfalls for the providers can be the following:

- Additional regulations to ensure the network is legal.
- Provider reactions to being tiered, they may not appreciate being tiered into a lower network if they feel they should be ranked higher.
- It may be difficult to maintain low cost providers basing your decision on quality, as the best quality providers may be more expensive.

Candidates offered other acceptable responses.

(b) Determine which hospitals would be excluded from the network if it were designed by the following stakeholders:

(i) Actuarial

(ii) Healthcare Services

(iii) Marketing

4. Continued

Commentary on Question:
Candidates were allowed to give different reasoning for each of the different stakeholders, as long as they followed the expectations laid out in the question. For example, marketing could create the largest network based on quality because they would feel this would be easily sellable.

Actuarial will want to exclude the most expensive providers; some providers are reimbursed by different methods so they are not comparable with the information given.
Healthcare services does not want questionable quality, so the network will not include the highest possible quality provider for each service category.
Marketing will want to create the largest network possible that will sell.

(c) Define each term in the Tiered Network Health Plan (TNHP) formula and explain the purpose of each term.

The TNHP savings formula is N % * [M % + Shift x (P % - M %)]

P=Price Differential Cost differential tier providers 1 - ratio of average preferred cost per unit to average non-preferred cost per unit
M % Member liability differential - change in the actuarial value of benefits of non-preferred due to additional member liability
N = % of claims controlled by the tier claims under control of the non-preferred providers
Shift = Member shift assumed percentage of the non-preferred customers reacting to increased member liability by switching

(d)

(i) Design a behavioral health tiered network, assuming price is the only consideration.

If price is the only consideration then you want the cheapest providers in the network. Those providers are Silver Acres as the preferred provider and the Oasis is the non-preferred provider.

4. Continued

(ii) Determine if the proposed network satisfies each stakeholder's requirement. Justify your response.

Commentary on Question:
Deciding if the Health Care Services and Marketing stakeholders were satisfied could have differing answers. It was important that any answers provided by candidates in section (d) followed the rationale that was laid out in section (b).

Actuarial is ok because of the lower cost, but is leery of the quality.
Health Care Services is not happy because the preferred provider is not A quality.
Marketing is perhaps neutral. They would prefer to have both providers in the network, but would like a value priced product as well.

5. Learning Objectives:

5. Apply U.S. and Canadian nation-specific regulation to product design and pricing.

Learning Outcomes:

(5a) Determine if given policy provision is compliant with the regulation.

(5b) Describe key provisions of major legislation.

Sources:

Bluhm, Group Insurance, 5th Edition, Small Group Rate Filings and Certifications, Chapter 21

Bluhm, Group Insurance, 5th Edition, Underwriting Small Groups, Chapter 25

Commentary on Question:

Candidates generally did well on part (a) with identifying the allowable case characteristics, the class rate increase test, and rate variation both within a class and between classes of business. A few candidates listed the reasons for establishing separate classes of business and made general statements regarding applying case characteristics consistently across all small groups, which indicated very good papers. Very few candidates made the distinction between allowable case characteristics and the 'risk characteristics' of health status, experience, duration, etc. The variation from index rate and the 15% annual increase limit are related only to the risk characteristics, and the case characteristics should be excluded from those calculations.

Most candidates struggled to apply this information to the case study in parts (b) and (c). Common mistakes on part (b) included not checking each characteristic against the applicable allowed range if there was one and not clearly pointing out specifically which, if any, case characteristics were non-compliant. Many candidates either skipped part (c) entirely or did not correctly identify what the class rate increase test was and which portions of the rate increase needed to be included in the calculation. Only the duration wear-off factors and the increase in rates due to experience were to be included in the test. Some candidates did calculations but then did not state at the end if this met the class rate increase test or not, thus failing to answer the question that was asked. Some candidates stated that they could not answer the question based on their interpretation of the information because they did not have the prior year's rates. Credit was given for this if they correctly expressed what information they would need.

Solution:

(a) Describe rating requirements with which GEIC must comply.

An insurer subject to the "Small Employer Health Insurance Availability Model Act" is subject to the following:

5. Continued

1. Can classify its business into nine classes
   - Classes must reflect substantial differences in expected claim experience or administrative costs, for example:
     - Acquiring a small group block of business
     - Covering members of an association
     - Different distribution systems

2. Can rate by certain allowable case characteristics
   - Age, some states may limit range to 2:1 or 3:1
   - Gender
   - Geography
   - Family composition
   - Industry, limited to a spread of 15% between the highest and lowest industry factors
   - Group size, limited to a spread of 20% between the highest and lowest group size factors

     Claims experience, duration, health status, etc. are not included in the case characteristics

3. Index Rates are regulated
   - The index rate is the arithmetic average of the base premium rate and the highest premium rate in a class
   - Calculated after rates are adjusted for allowable case characteristics
   - Within a class, rates cannot vary from the index rate by more than +/- 25%
     - Allows a 67% difference = (1+.25)/(1-.25) – 1 = 0.67
   - The index rate of difference classes is limited to 20% between the lowest to highest class index rates

4. Rate Increases at renewal are limited to the sum of:
   - Change in new business rates from the prior to new rating period
   - 15% annually for experience
   - Any adjustments due to change in coverage or case characteristics

5. Other
   - Should apply all rating factors objectively and consistently

(b) Evaluate whether the GEIC small group rate filing Exhibits 1. a.-e. satisfy small employer rating requirements.

- Review the development of Exhibit 1. a. to make sure health status is not inherently reflected in the experience
  - Some of the rates between product types do not make sense

5. Continued

  - If each product type is its own class, this exhibit is OK since there are less than 9 classes and the spread between "do nothing" premium rates is < 20%
    - $417.19 / $359.37 -1 = 16.31% < 20% so OK
- Exhibit 1.b. has wear-off factors, which are not a case characteristic so would go toward the +/- 25% variation from index
  - Range of 0.67 to 1.0 is a 49.3% spread < 67% so OK
- Exhibit 1. c. has age-sex factors, should check the range from highest to lowest to make sure it meets allowed range in your state, if limited
- Exhibit 1. d . has area factors, check the range if range is limited
- Exhibit 1. e. has group size factors, which is limited to a 20% range
  - 1.2074 / 0.869 −1 = 38.9% > 20%
  - This does not satisfy small employer rating requirements and the range must be condensed
- Industry factors are not listed, but if used, must check against the allowed 15% spread

(c) Determine whether the rating in Exhibits 3. a.-c. and 4. a.-b. meets the class rate increase test.

The class rate increase test limits the rate increase to the sum of:
- Change in new business rates from the prior to new rating period
- Any adjustments due to change in coverage or case characteristics
- 15% annually for experience

Changes to rating factors that are case characteristics are captured in the change in new business rate so it is not necessary to test the age-sex factors, group size factors, or area factors. There is no specified limit in these amounts. Often these are subject to filing approval.

It is necessary to include the wear-off factor and the increase for experience in applying the test for the limited 15% annual increase. The combination of these two factors would be subject to the 15% limit.

The increase in wear-off factor = 0.82 / 0.78 – 1 = 5.1%

To find the increase due to experience, one would need to compare the prior year total premium to the current year total premium and then back out the known factor changes, such as the wear-off factor. The prior year total premium is not provided. This comparison cannot be done.

6. Learning Objectives:

3. Evaluates employer strategies for designing and funding benefit plans for:
   (i) Active employees
   (ii) Dependents
   (iii) Pre-65 retirees
   (iv) Post-65 retirees
   (v) Disabled (short and long-term)

9. Applies principles of pricing, benefit design and funding to an underwriting situation.

Learning Outcomes:

(3a) Describe typical strategies used by employers to fund and design benefit plans, including contribution strategies.

(9c) Recommends strategies for minimizing or properly pricing for risks.

Sources:

Rosenbloom, Handbook of Employee Benefits, 6th Edition, A Functional Approach to Designing and Evaluating Employee Benefits, Chapter 2

Health Watch: Effective Contracting With Pharmacy Benefit Managers

Commentary on Question:

Candidates needed to demonstrate an understanding of the Functional Approach for Employee Benefits. They also needed to demonstrate knowledge of prescription drug pricing, including how to price drug plans under various PBM arrangements.

Solution:

(a) Define the functional approach for employee benefits and outline the steps to apply it.

Definition of the Functional Approach:

- An organized system for classifying and analyzing the risks and needs of active employees and their dependents into logical categories of exposures to loss and employee needs.
- A method of analyzing the entire employee benefits package.
- A systematic approach to ensure that benefits are integrated with other benefits.
- It evaluates the program as a whole to assess its effectiveness at covering employee risks and exposures and addressing overlaps and gaps in coverage.

Steps of the Functional Approach:

- Classify employee needs and objectives in logical categories.
- Classify the types of persons the employer wants to protect through the benefit plans.

6. Continued

- For example, current employees, dependents, past employees, etc.
- Analyze current plan benefits in terms of the functional categories and who is being protected.
- Determine any gaps or overlapping benefits in the plan.
- Estimate the costs or savings from the changes described above.
- Evaluate alternative methods of financing or securing new benefits and existing benefits.
- Consider other cost-saving strategies in connection with the plan's proposed or existing benefits.
- Decide upon the appropriate benefits, methods of financing, and sources of delivery based on this analysis.
- Implement the changes.
- Communicate benefit changes to employees.
- Periodically reevaluate the employee benefit plan.

(b) Calculate the aggregate annual premium that Dombey would expect for each plan design under each pharmacy benefits manager (PBM). Show your work.

Current Plan Pricing
Formulas/Steps for Solving the Problem
Discounted Drug Cost Per Script = Average Tier AWP per Script x (1 - AWP Discount)
Net Drug Cost Per Script = Discounted Drug Cost per Script - Tier Copay
Average Tier Monthly Cost Per Employee = Net Drug Cost Per Script x Average Annual Prescriptions per Employee / 12
Total Plan Monthly Cost Per Employee = Tier I Monthly Cost Per Employee + Tier I Monthly Cost Per Employee + Tier I Monthly Cost Per Employee
Monthly Plan Premium Per Employee = (Total Monthly Plan Cost per Employee + Total PBM Fee Per Employee Per Month) / (1 - Great Expectations Retention)

Pricing for Union and Non-Union Plans Under Tale Scripts

Current Plan Pricing

Tale Scripts

Union Employees

Drug Tier	Average Tier AWP per Script	AWP Discount	Discounted Drug Cost per Script	Copay	Net Drug Cost Per Script	Average Annual Prescriptions per Employee	Average Tier Monthly Cost Per Employee
I	$100	70%	$30.00	$5	$25	4.00	$8.33
II	$275	20%	$220.00	$20	$200	2.00	$33.33
III	$350	15%	$297.50	$30	$268	1.00	$22.29

6. Continued

Total Plan Monthly Cost Per Employee:	$63.96
Load Great Expectations Retention:	÷ (1 -15%)
Monthly Plan Premium Per Employee:	$75.25

Non-Union Employees

Drug Tier	Average Tier AWP per Script	AWP Discount	Discounted Drug Cost per Script	Copay	Average Tier AWP	Average Annual Prescriptions per Employee	Discounted Drug Cost per Script
I	$100	70%	$30.00	$10	$20	3.00	$5.00
II	$250	20%	$200.00	$30	$170	2.00	$28.33
III	$300	15%	$255.00	$45	$210	0.50	$8.75

Total Plan Monthly Cost Per Employee:	$42.08
Load Great Expectations Retention:	÷ (1 -15%)
Monthly Plan Premium Per Employee:	$49.51

Total Union Employees:	1,000
Total Non-Union Employees:	500
Total Annual Aggregate Cost to Dombey and Sons:	$1,200,000.00

Two Cities Rx

Union Employees

Drug Tier	Average Tier AWP per Script	AWP Discount	Discounted Drug Cost per Script	Copay	Net Drug Cost Per Script	Average Annual Prescriptions per Employee	Average Tier Monthly Cost Per Employee
I	$100	80%	$20.00	$5	$15	4.00	$5.00
II	$275	15%	$233.75	$20	$214	2.00	$35.63
III	$350	10%	$315.00	$30	$285	1.00	$23.75

Total Plan Monthly Cost Per Employee:	$64.38
Load Great Expectations Retention:	÷ (1 -15%)
Monthly Plan Premium Per Employee:	$75.74

6. Continued

Non-Union Employees

Drug Tier	Average Tier AWP per Script	AWP Discount	Discounted Drug Cost per Script	Copay	Average Tier AWP	Average Annual Prescriptions per Employee	Discounted Drug Cost per Script
I	$100	80%	$20.00	$10	$10	3.00	$2.50
II	$250	15%	$212.50	$30	$183	2.00	$30.42
III	$300	10%	$270.00	$45	$225	0.50	$9.38

Total Plan Monthly Cost Per Employee:	$42.29
Load Great Expectations Retention:	÷ (1 -15%)
Monthly Plan Premium Per Employee:	$49.75
Total Union Employees:	1,000
Total Non-Union Employees:	500
Total Annual Aggregate Cost to Dombey and Sons:	$1,207,352.94

Alternative Plan Pricing
Tale Scripts

Union Employees

Drug Tier	Average Tier AWP per Script	AWP Discount	Discounted Drug Cost per Script	Copay	Net Drug Cost Per Script	Average Annual Prescriptions per Employee	Average Tier Monthly Cost Per Employee
I	$100	70%	$30.00	$5	$25	4.00	$8.33
II	$275	20%	$220.00	$30	$190	2.00	$31.67
III	$350	15%	$297.50	$50	$248	1.00	$20.63

Total Plan Monthly Cost Per Employee:	$60.63
Load Great Expectations Retention:	÷ (1 -15%)
Monthly Plan Premium Per Employee:	$71.32

6. Continued

Non-Union Employees

Drug Tier	Average Tier AWP per Script	AWP Discount	Discounted Drug Cost per Script	Copay	Average Tier AWP	Average Annual Prescriptions per Employee	Discounted Drug Cost per Script
I	$100	70%	$30.00	$10	$20	3.00	$5.00
II	$250	20%	$200.00	$35	$165	2.00	$27.50
III	$300	15%	$255.00	$60	$195	0.50	$8.13

Total Plan Monthly Cost Per Employee:	$40.63
Load Great Expectations Retention:	÷ (1 -15%)
Monthly Plan Premium Per Employee:	$47.79

Total Union Employees:	1,000
Total Non-Union Employees:	500
Total Annual Aggregate Cost to Dombey and Sons:	$1,142,647.06

Two Cities Rx

Alternative Plan Design Utilization Shift

It is given that Two Cities Rx believes it can cause a change in utilization that shifts 30% of Tier II and Tier III drugs into Tier 1 drugs that are on average 20% more expensive than current Tier I drugs.

Union Employees

Drug Tier	Current Average Annual Prescriptions per Employee	Average Tier AWP per Script	Revised Average Annual Prescriptions per Employee
I	4.00	$100	4.00
I - Shifts		$120	0.90
II	2.00	$275	1.40
III	1.00	$350	0.70

6. Continued

Non-Union Employees

Drug Tier	Current Average Annual Prescriptions per Employee	Average Tier AWP per Script	Revised Average Annual Prescriptions per Employee
I	3.00	$100	3.00
I - Shifts		$120	0.75
II	2.00	$250	1.40
III	0.50	$300	0.35

Union Employees

Drug Tier	Average Tier AWP per Script	AWP Discount	Discounted Drug Cost per Script	Copay	Net Drug Cost Per Script	Average Annual Prescriptions per Employee	Average Tier Monthly Cost Per Employee
I	$104	80%	$20.73	$5	$16	4.90	$6.43
II	$275	15%	$233.75	$30	$204	1.40	$23.77
III	$350	10%	$315.00	$50	$265	0.70	$15.46

Total Plan Monthly Cost Per Employee:	$45.65
Load Great Expectations Retention:	÷ (1 -15%)
Monthly Plan Premium Per Employee:	$53.71

Non-Union Employees

Drug Tier	Average Tier AWP per Script	AWP Discount	Discounted Drug Cost per Script	Copay	Average Tier AWP	Average Annual Prescriptions per Employee	Discounted Drug Cost per Script
I	$104	80%	$20.80	$10	$11	3.75	$3.38
II	$250	15%	$212.50	$35	$178	1.40	$20.71
III	$300	10%	$270.00	$60	$210	0.35	$6.13

Total Plan Monthly Cost Per Employee:	$30.21
Load Great Expectations Retention:	÷ (1 -15%)
Monthly Plan Premium Per Employee:	$35.54

Total Union Employees:	1,000
Total Non-Union Employees:	500
Total Annual Aggregate Cost to Dombey and Sons:	$857,764.71

6. Continued

(c) Recommend the PBM and plan design that Dombey should choose. Justify your recommendation.

Tale Scripts is the less expensive option if the current benefit plan is continued, but if the new benefit plan is chosen Two Cities Rx is the better deal. This is due to the shift in utilization that can be achieved under the Two Cities Rx formulary with the new benefit design. It is my recommendation that Dombey and Sons switch to the new plan design under Two Cities Rx since Dombey's primary concern is the cost of the benefit plan.

7. Learning Objectives:

1. Understand and evaluate the effectiveness of the various types of Single Employer group coverage typically offered under:
   - Group health plan, including Consumer driven plans, etc.
   - Prescription Drug
   - Group dental plan
   - STD or LTD plan (incl. mention of coverage within other plans)
   - Group life plan
   - Other miscellaneous benefits
   - Multi-employer groups (Taft-Hartley, etc)

3. Evaluates employer strategies for designing and funding benefit plans for:
   (i) Active employees
   (ii) Dependents
   (iii) Pre-65 retirees
   (iv) Post-65 retirees
   (v) Disabled (short and long-term)

Learning Outcomes:

(1h) Evaluates several coverage scenarios as alternatives to a given scenario.

(3e) Describe opportunities to encourage employees to be more health and cost conscious and to return to work early.

Sources:

Managing and Evaluating Healthcare Intervention Programs, Introduction to Wellness and Integrated Programs, Chapter 13

Case Study

Commentary on Question:

This question tested a candidate's ability to handle a multi-faceted wellness program, including ROI calculations.
The cognitive levels of this question include retrieval, analysis and knowledge utilization.
To receive full credit, candidates needed to show their work in (b) and to fully justify their recommendation in (d). Candidates performed well on (a), but struggled with (b), (c), and (d)

Solution:

(a) For employee wellness programs, list:

(i) Critical success components.

(ii) Benchmarks for successful implementation.

7. Continued

Commentary on Question:
This was a retrieval question. Candidates performed well.

(i) Senior management support
- Sophisticated programming
- Positive, upbeat image
- Well-designed, balanced, well-paced programming
- Effective use of incentives

(ii) Creating a cohesive wellness team
- Collecting data to drive health efforts
- Creating an operating plan
- Choosing appropriate interventions
- Creating a supporting environment
- Consistently evaluating outcomes

(b) Calculate LDKC's net after-tax ROI in Year 1 and Year 2 if:

(i) No incentives are offered.

(ii) Incentives are offered.

Commentary on Question:
Candidates had difficulty identifying the two sources of savings: number of people in each category (obese, overweight, and healthy) and the medical/absenteeism costs of being in those categories. Most candidates did not correctly factor in participation and completion rates. Some candidates did not apply memorabilia costs only to participants completing the program. Due to what appeared to be time constraints in completing this problem, many candidates didn't present a logical flow to their work.

No Incentives
Year 1 Annual Savings:

Category	Medical Cost	Absenteeism	Employees	Completion %	Total Savings
Obese	(600-200)*12 = $4,800	50,000 * (10% - 5%) = $2,500	45	0.2 * 0.4 = 8%	(4,800 + 2,500) *(45)*(8%) = **$26,280**
Overweight	(200-50)*12 = $1,800	50,000 * (5% - 2%) = $1,500	30	0.04 * 0.3 = 1.2%	(1,800 + 1,500) *(30) * (1.2%) = **$1,188**
Healthy	(50)* 12 = $600	50,000 * (2%) = $1,000	25	0%	$0
Total					**$27,468**

7. Continued

Year 2 Annual Savings:

Category	Medical Cost	Absenteeism	Employees	Completion	Total Savings
Obese	(600-200) * 1.1 * 12 = $5,280	50,000 * 1.03 * (10% - 5%) = $2,575	45 + 3 = 48	20% * 40% = 8%	(5,280 + 2,575) *(48)*(8%) = **$30,163**
Overweight	(200-50)* 1.1 * 12 = $1,980	50,000 * 1.03 * (5% - 2%) = $1,545	30 + 2 = 32	4% * 30% = 1.2%	(1,980 + 1,545) *(32) * (1.2%) = **$1,354**
Healthy	(50)* 1.1 *12 = $660	50,000 * 1.03 * (2%) = $1,030	25 – 5 = 20	0%	$0
Total					**$31,517**

Expected Year 1 ROI:
Costs = $10 PEPM * 100 * 12 = $12,000
Tax Deduction = $12,000 * 30% = $3,600
Savings = $27,468
After Tax ROI = ($27,468 + $3,600) / 12,000 = **2.6 : 1**

Expected Year 2 ROI:
After Tax ROI = ($31,517 + $3,600)/ 12,000 = **2.9 : 1**

With incentives
Year 1 Annual Savings:

Category	Completion %	Total Savings
Obese	0.8 * 0.4 = 32%	(4,800 + 2,500) *(45)*(32%) = **$105,120**
Overweight	0.6 * 0.3 = 18%	(1,800 + 1,500) *(30) * (18%) = **$17,820**
Healthy	0%	$0
Total		**$122,940**

Year 2 Annual Savings:

Category	Total Savings
Obese	(5,280 + 2,575) *(48)*(32%) = **$120,653**
Overweight	(1,980 + 1,545) *(32) * (18%) = **$20,304**
Healthy	$0
Total	**$140,957**

Expected Year 1 ROI:
Program Costs = $12,000
Memorabilia = $50 * (45 * 0.4 * 0.8 + 30 * 0.3 * 0.6) = $990
Tax Deduction = (12,000 + 990) * 30% = $3,897
Savings = $122,940 + $3,897 = $126,837
After Tax ROI = $126,837 / ($12,000 + $990) = **9.8 : 1**

7. Continued

Expected Year 2 ROI:
Memorabilia = $50 * (48 * 0.4 * 0.8 + 32 * 0.3 * 0.6) = $1,056
Tax Deduction = ($12,000 + 1,056) * 30% = $3,917
After Tax ROI = ($140,957 + 3,917) / ($12,000 + $1,056) = **11.1 : 1**

(c) Assess the reasonability of the assumptions used to calculate the ROI.

Commentary on Question:
Comments regarding the reasonability of assumptions in isolation (e.g. cost trend) were largely noted and valid. However, candidates failed to make any connections between their source (i.e. vendor) and their reasonableness and did not comment on assumptions as a whole.

With incentives, the ROI's are very large. A review of the assumptions shows that:

- Members participating are high
- Completion rates for those participating are high
- Aggressive shifting assumptions
- Medical costs, trend, salaries, tax rates, etc. appear to be reasonable
  - Since some of these items came from a vendor selling services, some of the assumptions should be questioned. The actual experience may not produce those kinds of savings.

(d) Recommend how LDKC should proceed with respect to the Weight Loss Coaching Program. Justify your recommendation.

Commentary on Question:
Candidates did a good job of providing a recommendation. However, the reasoning behind the recommendation was not well justified in many cases.

Without incentives, the ROI is under the 5:1 requirement.

With incentives, the ROI is very high…much greater than the 5:1 requirement.

I do not recommend that LDKC go forward with the program. The ROI's with incentives are unreasonably high in comparison to without incentives and the cut-off requirement.

8. Learning Objectives:

8. Evaluate the process and be able to develop a medical manual rate for government programs, ASO and insured business.

Learning Outcomes:

(8g) Integrate utilization management data into pricing.

Sources:

Commentary on Question:

Commentary listed underneath each question component.

Solution:

(a) List factors that influence utilization trend.

Commentary on Question:

Most candidates correctly listed several factors that influence utilization trend.

Intensity of services
Supply of services
Regulations
Changes in medical practice
Defensive medicine
Introduction of rules such as minimum LOS
Aging population
Technological advances

(b) Explain the sentinel effect.

Commentary on Question:

Very few candidates wrote the correct definition of sentinel effect.

Rigorous care management programs may cause providers to perform and submit fewer services, or impact the types of services performed.

(c) Explain the difference between disease management and acute case management, and explain how the sentinel effect applies to each.

Commentary on Question:

Many candidates listed key characteristics of disease management and acute case management programs.

Disease management is a coordinated system of intervention and communication to chronic patients. The goal is to reduce the probability of severe adverse events. Sentinel effect doesn't apply to DM since it doesn't involve managing care submitted by providers and the programs encourage some routine.

8. Continued

Acute case management is generally performed on specific cases through utilization review or utilization management. Goal is to ensure timely delivery of appropriate care by a qualified provider in an efficient setting. Sentinel effect applies here: providers may not perform services that are likely to be deemed unnecessary by MCO, or they may perform service in a cheaper setting.

(d) Calculate the projected trend after this program is implemented. Show your work.

Commentary on Question:
Most candidates correctly determined the impact to trend.

	2010 Claims	Apply Trend	Before Program 2011 Claims	Impact of Program	Cost After Program
IP	133,880	1.095	146,599	0.96	140,735
OP	153,962	1.095	168,588		168,588
Physician	267,760	1.095	293,197		293,197
RX	113,798	1.095	124,609		124,609
Total	**669,400**		**732,993**		**727,129**
					8.6%

Expected trend after program is 8.6%

(e) Calculate the ROI for the program, and assess the reasonability of the results. Show your work.

Commentary on Question:
Most candidates calculated the correct ROI.

Savings from program is 5,864,000 = (146,599 – 140,735) * 1000
Cost of program is 1,150,000

ROI = 5.1:1

ROI is very high, but not unreasonable. Each case manager would have to work on 288 cases.

9. Learning Objectives:

1. Understand and evaluate the effectiveness of the various types of Single Employer group coverage typically offered under:
   - Group health plan, including Consumer driven plans, etc.
   - Prescription Drug
   - Group dental plan
   - STD or LTD plan (incl. mention of coverage within other plans)
   - Group life plan
   - Other miscellaneous benefits
   - Multi-employer groups (Taft-Hartley, etc)

3. Evaluates employer strategies for designing and funding benefit plans for:
   (i) Active employees
   (ii) Dependents
   (iii) Pre-65 retirees
   (iv) Post-65 retirees
   (v) Disabled (short and long-term)

Learning Outcomes:

(1a) Describe the various coverages, including typical benefit provisions, eligibility requirements, cost-sharing provisions, limits and funding mechanisms.

(3b) Evaluate potential financial, legal, moral risks associated with each strategy.

Sources:

Bluhm, Group Insurance, 5th Edition, Estimating Claim Costs for Life Benefits, Chapter 29

GH-D102-07: Group Life Insurance, Intro., Sections 1-3

Commentary on Question:

Part (a) tests the simple concept of determining group life manual rates with the additional issue of factor adjustment. In order to receive full credit, the candidate should do the following:

(1) Outline the formulas that must be used to determine the geographic-adjusted claims rates for each demographic subset, followed by some calculations to show a full understanding of the formula.

(2) Continue with the normal calculation of the manual claim rate, following the text's explanation and example. In this case, writing the formula for the monthly claim cost for a generic demographic/geographic block, showing some calculations with that formula, and demonstrating a complete understanding of the process by calculating the average manual claims rate for the entire block.

9. Continued

Parts (b) and (c) are retrieval questions on topics related to the life insurance pricing issues raised in (a). Part (b) requires the candidate to recall other factors that could affect the manual rates, in addition to geography that was already in (a). Part (c) requires the candidate to be aware of risk issues related to life insurance that are presented elsewhere in the syllabus, but are nonetheless related to parts (a) and (b).

Overall, candidates seemed to understand the mathematical portions of the question in part (a). Where many candidates had trouble was calculating a numerical solution for a series of calculations without showing any of the interim work. If the candidate had the numerical value exactly correct, points could be given for the work, but if it is was incorrect it was very difficult to give any credit as demonstrating an understanding of the component steps had not been shown.

In parts (b) and (c) candidates scores were effectively determined by their knowledge of the specific reading in the source material that pertained to the items asked. Candidates should be vigilant in making sure when they write down a list of issues or an explanation that they are pulling from source material appropriate to the line of business being asked about. Some candidates had a tendency to put down information pertinent to other lines of business rather than the group life products asked about in the question.

Solution:

(a) Calculate the monthly manual claims rate to be applied to the new group.

Manual claims rates for each group must be adjusted for their geographic area.

- Geographic – Adjusted Claims Rate / 1,000 = Base Claim Rate / 1,000 + Geographic Adjustment
- M/25-30/San Juan Rate = 0.06 + 0.07 = 0.13
- F/25-30/Elsewhere Rate = 0.04 - 0.01 = 0.03
- Monthly Claim Cost = # of Members in Block x Geographic Adjusted Claim Rate x Average Coverage/1,000
- M/25-30/San Juan Total Monthly Claim Cost = 200 x 0.13 x 21,000/1,000 = $546.00
- F/25-30/Elsewhere Total Monthly Claim Cost = 150 x 0.03 x 22,000/1,000 = $99.00
- M/30-35/San Juan Total Monthly Claim Cost = 90 x 0.14 x 30,000/1,000 = $378.00
- Final Manual Claim Rate = (546.00 + 99.00 + 378.00 + 960.00 + 1,016.80 + 2,236.00) / [(200 x 21,000 + 150 x 22,000 + 90 x 30,000 + 250 x 32,000 + 310 x 41,000 + 470 x 43,000) / 1,000]
- =8,254.40 / (51,112,000 / 1,000) = $0.161

9. Continued

(b) Identify potential adjustments to the manual rate to better reflect the group's specific characteristics.

Disability Factors

- Manual claims tables usually assumes standard waiver of premium.
- Plans with an extended death benefit have better experience than waiver of premium plans.
- If the average effective rate of a policy is not July 1, it must be adjusted for the age of the population compared to the manual table.
- Different industries reflect different mortality patterns.
- Generally multiply claim rates by a factor.
- Statistics show regional differences in mortality patterns.

Lifestyle Factors

- A few companies have adopted differences between smokers and non-smokers.
- Experience can be influenced by the source of the business.
- Captive agencies may produce better business.
- Typically insurers require 75% or more participation.
- Many group life plans have adjustments for case size, premium volume, or both.
- Premium volume adjustments are made to account for the lower expenses associated with larger cases.
- Plans with a single option tend to have more favorable experience than those with multiple options.
- Plans that permit frequent changes without proof of insurability will experience higher claims.
- Plans that feature individual underwiting experience lower mortality costs.

(c) The addition of this group would increase your block of business in Puerto Rico by 50%. Identify potential ways to mitigate this risk.

Potential Solutions to Manage Risk

- Obtain catastrophic reinsurance a highly specialized reinsurance that provides coverage from the loss of multiple lives in a single event.
- Losses arising from nuclear, biological, and chemical causes are generally excluded.
- Primary insurer determines a maximum amount it wants to pay per life.
- The remaining risk is ceded to a reinsurer.
- Pool members share each other's covered claims.
- If an insurer feels it is already sufficiently exposed to risks in a single location, it may decline to quote on new opportunities in that area.

10. Learning Objectives:

2. Understand and evaluate the effectiveness of the various types of Individual and Multi-Life coverage typically offered under:
   - Individual Health Plan
   - LTC (including group and individual)
   - Individual DI Plan
   - Medicare Supplement

Learning Outcomes:

(2a) Describe the various coverages, including typical qualifications for benefits, coverage eligibility, cost-sharing provisions, limits, and funding mechanisms.

(2b) Identify the potential gaps in needed or desired coverages.

(2c) Identifies which insureds would find each coverage a valued benefit and why.

(2d) Evaluate potential financial, legal and moral risks associated with each coverage.

Sources:

GH-D105-07: Direct Marketing (Hickman)

Commentary on Question:

The goal of the question is to have the candidate demonstrate an understanding of direct marketing strategy from list recollection up through knowledge utilization and application.

The candidate must move beyond list retrieval and show comprehension and utilization of the knowledge by providing correct calculations and appropriate conclusions. Successful candidates will also show all calculations required to develop a final answer.

Solution:

(a) Describe the services offered by an external marketing firm to an insurance company.

Commentary on Question:

The study note addressed this question in several different sections. Many students responded from just one or two sections. Partial credit was given where as appropriate.

- Economies of scale can be achieved since a large number of potential customers can be reached.
- Statistical techniques to model segmentation of purchase data.
- Monitoring and measuring response rates.
- Various approaches should be used: e.g., direct mail, TV, telephone and internet.
- Affiliation with other financial service providers.

10. Continued

(b) List statistical techniques a marketing firm may use for segmentation and selection purposes.

Commentary on Question:
Since the question asked for a list of techniques, many students did well on this question by providing a bullet point list of techniques from the study note. Descriptions of the techniques were not needed to receive points in this part.

- Linear regression
- Logistic and discriminate analysis
- CHAID
- Factor and cluster analysis
- Neural nets
- Chaos theory

(c) Calculate the maximum amount per policy you could pay the direct marketing firm to market the product. Show all work.

Commentary on Question:
The question asked for the maximum amount per policy, but many students provided the maximum cost of soliciting an individual as $5.80 per person ($145 * 0.04 response rate). Students who provided this answer received most of the grading points even if they did not show the correct answer of $145.

Profit = PV premium – PV claims – PV expenses – Mkt
= $550 – $300 – $50 – Mkt
= $200 – Mkt

Profit margin goal = 10% = X / PV premium, so need 10% x $550 = $55 in profits

So $200 profit – $55 profit goal = $145 that can be paid to market the product per policy.

(d) Old Breed offers two types of marketing methods, one which generates more responses but lower persistency, and a second which generates fewer responses but higher persistency. Outline considerations for evaluating these marketing methods.

Commentary on Question:
The required reading stressed the importance of persistency for recouping expenses. Students who mentioned the importance of persistency's impact in recovering initial expenses did well on this part.

10. Continued

- Need low lapse rates (high persistency) to pay back initial expenses over policy life.
- Poor persistency may not allow profits to cover expenses.
- Monitor lapse rates regularly to determine which method is preferable.

(e) Determine if this mailing design is orthogonal and balanced. Calculate the mean response and the main effects. Show your work.

Commentary on Question:
Students tended to do well on this question. Some students who seemed to understand this material well did not mention whether the design was orthogonal and balanced, so they received fewer points as a consequence.

Mailing Group	Penny (1)	Benefit Level (2)	(1) x (2)
1	+	+	+
2	+	–	–
3	–	+	–
4	–	–	+

Design is orthogonal and balanced since there are the same number of +'s and –'s in each column, and multiplying the two gives an equal number of +'s and –'s as well.

Mean response = (9% + 5% + 3% + 1%) / 4 = 4.5%

Main effects:

- Copper Penny: (9% + 5% - 3% - 1 %) / 4 = 2.5%
- High Benefit: (9% - 5% + 3% - 1%) / 4 = 1.5%

Copper Penny increases results by 5% (from –2.5% to +2.5%).

High Benefit increases results by 3% (from –1.5% to +1.5%).

11. Learning Objectives:

1. Understand and evaluate the effectiveness of the various types of Single Employer group coverage typically offered under:
   - Group health plan, including Consumer driven plans, etc.
   - Prescription Drug
   - Group dental plan
   - STD or LTD plan (incl. mention of coverage within other plans)
   - Group life plan
   - Other miscellaneous benefits
   - Multi-employer groups (Taft-Hartley, etc)

9. Applies principles of pricing, benefit design and funding to an underwriting situation.

Learning Outcomes:

(1a) Describe the various coverages, including typical benefit provisions, eligibility requirements, cost-sharing provisions, limits and funding mechanisms.

(9c) Recommends strategies for minimizing or properly pricing for risks.

Sources:

Rosenbloom, Handbook of Employee Benefits, 6th Edition, Understanding Managed Care Health Plans: The Managed Care Spectrum, Chapter 6

Rosenbloom, Handbook of Employee Benefits, 6th Edition, Understanding Managed Care Health Plans, Chapter 7

Bluhm, Group Insurance, 5th Edition, Underwriting Large Groups, Chapter 24

McKay Canadian Handbook of Flexible Benefits, 3rd Edition, Adverse Selection, Chapter 16

Commentary on Question:

Candidate is presented with a large group underwriting situation and is expected to 1) demonstrate an understanding of characteristics of managed care programs and how they impact price; 2) describe ways to account for adverse selection in pricing; and 3) quantify the effect of adverse selection in a multi-option scenario.

Solution:

(a) The sales representative is challenging why the Closed Panel PPO plan is priced closer to the existing PPO plan than the HMO plan.

Commentary on Question:

This is a key learning objective. Everyone that takes this exam should have gotten the most credit for this question.

11. Continued

(i) Compare key features of managed care plans under a PPO, a Closed Panel PPO, and an HMO.

Key features of managed care plans that control cost
1. Choice of Provider
2. Degree of Steerage
3. Claims Handling
4. Utilization Management
5. Referral Management
6. Provider Reimbursement
7. Balance Billing
8. Rating / Financial Methods

(ii) Explain why the Closed Panel PPO plan is appropriately priced.

Close panel PPO only differs from PPO on item #1, otherwise the cost structure is the same. Assuming impact of provider choice does not outweigh the other items, closed panel PPO should be closer to PPO than HMO.

(b) The group is now considering two alternatives: a full replacement HMO or a dual option with the HMO offered alongside the existing PPO. Describe possible ways to adjust the premium rates in anticipation of adverse selection under a dual option design.

Commentary on Question:
Overall, this was a good sub question. Several candidates came up with other creative ways to adjust the premium rates that may have worked, but no credit was given.

Option 1: Load price of HMO rates
- This would diminish the incentive to choose this option
- May result in more employees remaining in PPO

Option 2: Load price of PPO rates
- Employees need to pay more to remain in PPO
- More incentive to move to HMO

Option 3: Load rates evenly

(c) Calculate the annual claim savings under each alternative described in (b). Show your work.

First, calculate expected claim cost for a single option PPO:
(i) Expected claim per employee = 633.75*.88 = 557.7
(ii) Total cost = 557.7 * 300 * 12 = 2,007,720

11. Continued

Then calculate the expected claim cost for a single option HMO:
(i) Expected claim per employee = 583.05*.88 = 513.08
(ii) Total cost = 513.08 * 300 * 12 = 1,847,102

Savings for full replacement: 160,618
Finally, calculate the expected claim cost under dual option:
(i) PPO cost per employee = 557.7 * 1.1 = 613.47
(ii) Total PPO cost = 613.47 * 200 * 12 = 1,472,328
(iii) HMO cost per employee = 513.08 * .85 = 436.12
(iv) Total HMO cost = ~~613.47 * 200~~ 436.12 * 100 * 12 = 523,346
(v) Total cost under multi-option scenario = 1,995,674

Savings under dual option = 12,046

A full replacement will save 148,571 more than offering multiple options

12. Learning Objectives:

5. Apply U.S. and Canadian nation-specific regulation to product design and pricing.

8. Evaluate the process and be able to develop a medical manual rate for government programs, ASO and insured business.

Learning Outcomes:

(5a) Determine if given policy provision is compliant with the regulation.

(5b) Describe key provisions of major legislation.

(8a) Identify and evaluate sources of data needed for pricing and underwriting including the quality, appropriateness, and limitations of each data source.

(8b) Identify and evaluate the rating parameters needed to evaluate and manage a book-of-business.

(8c) Develop experience analysis (claims cost and expenses):
- (i) Construct the appropriate models
- (ii) Develop the appropriate assumptions, including trend, anti-selection, etc.

(8i) Construct a rating model to be used for rating individual customers or plan designs.

Sources:

Group Insurance, Bluhm, Fifth Edition, 2007, Ch. 30, Estimating Medical Claim Costs

Individual Health Insurance, Bluhm, 2007, Ch. 5, Setting Premium Rates

GH-D121-11: Health Insurers Need to Quickly Assess Operational Costs for Medical Services Under Health Care Reform, Milliman

Commentary on Question:

This question was testing the candidate's knowledge about pricing a benefit plan design using a Claims Probability Distribution Table. Also, it was testing how to gross net claims costs to premium, components of the MLR requirements under Health Care Reform, as well as which components can be added to the numerator of the MLR.
Some parts of the question had a cognitive level of retrieval, although it also expected the candidate to have comprehension and knowledge utilization as well.
Candidates had to give a valid reason for normalizing historical experience data including variables used. For the premium calculation, candidates needed to show their work and explain how to multiply frequency by claims costs. Also, the candidate needed to use the appropriate retention amount to get the premium rate. Candidates were able to identify which expenses were allowed to count in the numerator when doing the MLR calculation as well as knew the MLR for Large Groups.

12. Continued

Candidates didn't give a good reason why you should normalize historical data. For the premium rate calculation some candidates didn't show their work. Also, they used the incorrect retention to build up the premium rate. Not many candidates could explain the complexities associated with identification of costs associated with allowable medical expenses. A fair number of candidates used inappropriate amounts in the numerator and denominator of the loss ratio calculation, mainly the reinsurance amount.

Solution:

(a) Describe the reasons for normalizing historical experience data and identify variables used in this process.

Reasons for normalizing historical experience

- The data should reflect the characteristics of the population and benefits being covered.
  - Historical data may reflect a different population / benefits
    - Generally doesn't change from year to year

Variables used in the process

- Geographic area - claims can vary significantly in broad geographic areas
- Age and Gender - to adjust for the demographics of the population
- Benefit plan - different plans are likely to have different utilization patterns
  - Typically variations in deductibles, coinsurance, OOP max
- Group characteristics
  - Industries typically with above average costs include those with physical labor (mining, construction) or those that are highly aware of benefits (educational institutions and health care providers)
- Utilization management efforts - assesses necessity of treatment or appropriateness of setting
- Provider reimbursement arrangements
  - Comes in a wide variety such as per diem, case rates, and capitation

(b) Calculate the premium rate.

Range	**Member**	**Net**
$0	$0	$0
$0 .01 – $500	$200	$0
$500.01 – $1,000	$500 + ($700 – $500) * 20% = $540	$700 – $540 = $160
$1,000.01 – $8,000	$500 + ($4,000 – $500) * 20% = $1,200	$4,000 – $1,200 = $2,800
$8,000.01 – $50,000	$500 + ($20,000 – $500) * 20% = $4,400 ==> $2,000 (hit OOP Max)	$20,000 – $2,000 = $18,000
>$50,000	$2,000 (hit OOP Max)	$70,000 - $2,000 = $68,000

12. Continued

Net Paid = 30% * $0 + 25% * $0 + 15% * $160 + 15% * $2800 + 13% * $18,000 + 2% * $68,000 = $4,144

Monthly net paid = $4,144 / 12 = $345

Premium rate = net paid + expenses = $345 + $70 = $415

(c) Identify NAIC recommendations on what insurer expenses are considered allowable as medical expense for MLR requirements. Describe complexities that insurers may face in identifying costs associated with each of these expenses.

Insurer expenses that may be allowable as medical expenses for purposes of determining compliance with MLR requirements:

- Direct interaction to improve patient outcomes
- Preventing hospital readmission
- Improving patient safety and reducing medical errors
- Wellness and health promotion
- IT expense for medical care quality initiatives

Complexities that insurers may face in identifying costs associated with expenses:

- Information prior to health care reform may not have been needed at this level of granularity so it may not be readily available
- Plan may need to disentangle costs allowed for these expenses from broader programs
- Initial guidelines and regulations may lack sufficient clarity

(d) Determine whether the loss ratio meets the minimum loss ratio (MLR) requirements for large groups under health care reform. If not, describe the steps you would take to remedy the situation.

- Loss ratio = monthly paid claims / premium rate= $345 / $415 = 83%
- Minimum Loss Ratio under reform is 85% so plan does not comply since 83% < 85%

Steps used to remedy the situation:

- Go back and check if it's possible to reduce or reallocate the expenses
- The Wellness & Disease Management Program component of the expenses can be considered medical cost
- Adding the cost for the Wellness & Disease Management to the numerator, the claims cost would be $365 for a new loss ratio of $365 / $415, or 88%, which exceeds the MLR requirement of 85%

13. Learning Objectives:

9. Applies principles of pricing, benefit design and funding to an underwriting situation.

Learning Outcomes:

(9a) Understand the risks and opportunities associated with a given coverage, eligibility requirement or funding mechanism.

(9b) Evaluates the criteria for classifying risks.

(9c) Recommends strategies for minimizing or properly pricing for risks.

Sources:

Bluhm, Group Insurance, 5th Edition, 30, Estimating Medical Claim Costs

Bluhm, Individual Health Insurance, 5, Setting Premium Rates

Commentary on Question:

For part (a), most candidates were able to describe the key considerations including cost, quality, and member satisfaction with minimal supporting details. However, a number of candidates appeared to be thinking of a different source and listed items related to market share, number of members, trade-off between size and efficiency, etc. which did not receive points.

For part (b), many candidates correctly identified the company's existing products as an appropriate source of pricing data, with a number of the appropriate factors which must be considered when using existing data for a new purpose.

For part (c), most candidates were successful at calculating the correct PMPM. Common mistakes included forgetting to divide by 12 and adjusting the high-performance primary care and specialist PMPMs by the network utilization of 3%.

Solution:

(a) Describe considerations when evaluating a high-performance network

Cost performance, quality and member satisfaction need to be considered when identifying a high performance network.

In terms of cost, price level measures (fee schedules, discount from billed, etc.), utilization level measures (utilization rates per 1000 per month per service, hospital inpatient average length of stay, etc.), and claim cost measures (PMPM or claim cost per episode) should be evaluated.

Quality should be a top priority when cost is trying to be reduced. Structure, process and outcome should be evaluated. This could include administrative and clinical examples as well as NCQA accreditation, JCAHO certification, and HEDIS measures.

Member satisfaction should be evaluated in terms of access, perceived quality, surveys, disenrollment rates, and opinions about the providers.

13. Continued

(b) Identify a data source for pricing this new product, and list adjustments that may need to be taken into account to make this data source appropriate for pricing this new individual product.

The current group PPO same product experience could be used or experience from an individual product with different in and out of network cost sharing.

Adjustments to this data might include:

- Changes in demographics
- Changes in duration/underwriting
- Changes in benefits/member cost sharing
- Changes in overall claim costs including utilization and unit cost
- Changes in trend
- Changes in marketing or administration

(c) Assuming no change in total utilization, calculate the professional PMPM net cost to the plan based on a utilization distribution of 3% for high-performance provider office visits, 92% in-network office visits and 5% out-of-network office visits. Show your work.

Professional PMPM net cost = utilization per 1000 * net cost per service / 12,000

Net cost per service = charge – copay

High performance primary care cost PMPM = 63 * (75 - 10) / 12,000 = $0.34
High performance specialist care cost PMPM = 27 * (175 - 20) / 12,000 = $0.35
Non-High performance in-network professional cost PMPM = (3,000 * 92% * 200) / 12,000 = $46
Non-High performance out-of-network professional cost PMPM = (3,000 * 5% * 325) / 12,000 = $4.06

Total cost = $0.34 + $0.35 +$46 + $4.06 = $50.75

14. Learning Objectives:

3. Evaluates employer strategies for designing and funding benefit plans for:
   (i) Active employees
   (ii) Dependents
   (iii) Pre-65 retirees
   (iv) Post-65 retirees
   (v) Disabled (short and long-term)

4. Evaluate the various types of coverages typically offered under a government health plan (e.g., Medicare, Medicaid, Canadian health plan, Social Security Disability Income, states' Temporary Disability Income programs, Workers Compensation, etc.).

Learning Outcomes:

(3a) Describe typical strategies used by employers to fund and design benefit plans, including contribution strategies.

(4a) Describe the various coverages, including typical qualifications for benefits, coverage eligibility, cost-sharing provisions, limits, taxation and funding mechanisms.

Sources:

Group Insurance; Ch. 7

Fundamentals of Retiree Group Benefits; Ch. 4

Canadian Handbook of Flexible Benefits; Ch. 4

Commentary on Question:

This question tests candidate's Canadian health care benefit knowledge, Flex plan comprehension, and Flex plan/retiree benefit synthesis.

Solution:

(a) List benefits typically provided through provincial Medicare plans.

Commentary on Question:

This is a straight-forward retrieval question.

1. Hospital services
   - Room and board in a public ward
     - Nursing
2. Physicians services
3. Other professionals
   - Chiropractors
4. Prescription drugs for social assistance recipients and residents > 65
5. Other diagnostic services

14. Continued

6. Dental care:
7. Out of province coverage

(b) State reasons for and against offering company-sponsored retiree benefits.

Commentary on Question:
This is discussed in Yamamoto. Even though it is a U.S. based text, most of the advantages discussed are applicable in this situation. Therefore, students were expected to utilize and modify this information accordingly. Hence, the enhanced point value relative to (a). Also, distinctly identifying the reasons as being for or against is required for credit to be awarded.

Reasons for:
- Tax advantageous means of compensation (to employers)
- Employees and retirees perceive these benefits as valuable
- Social responsibility by ER
- Unions demand it

Reasons against:
- ERs do not receive full tax credit
- Valuable to a minority of workers; more valuable as nearing retirement
- Lack of loyalty to ERs - Sense of providing retiree health as social responsibility is evaporating
- Unions are trading for benefits more valuable to current workers

(c) Identify potential reasons why CHOIX:

(i) Has not offered flex options to its retirees.

(ii) Is considering flex options for retirees.

Commentary on Question:
This is a retrieval question coming directly from the McKay text.

<u>Has not offered flex options to its retirees:</u>
- There exists a belief that retirees are more homogenous than active workers
- Retirees can be difficult to communicate with
- Adverse selection concern

14. Continued

Is considering flex options for retirees:

- Increasing cost of retiree benefits encourages ERs to adopt a DC funding approach
- Need for choice increases as ERs cut back on contributions to retiree health care
- Allows employer to reward employees for long service

(d) Assess the various flex plan structures based on their characteristics and the needs of employers and recommend a retiree flex plan for CHOIX. Justify your recommendation.

Commentary on Question:
This is knowledge utilization question. Candidates are expected to provide sufficient detail for each type of flex plan. A sufficiently justified recommendation is required to receive full credit here.

Traditional Plan

- No Choice
- For Small Employers

Simplified Flex

- HSA Only

Full Flex

- More choice and tax advantages

Financial Security

- View retirement and group benefits as one integrated program

Total Compensation

Recommend Simplified Flex

- Good entry point to flex plans

15. Learning Objectives:

1. Understand and evaluate the effectiveness of the various types of Single Employer group coverage typically offered under:
   - Group health plan, including Consumer driven plans, etc.
   - Prescription Drug
   - Group dental plan
   - STD or LTD plan (incl. mention of coverage within other plans)
   - Group life plan
   - Other miscellaneous benefits
   - Multi-employer groups (Taft-Hartley, etc)

2. Understand and evaluate the effectiveness of the various types of Individual and Multi-Life coverage typically offered under:
   - Individual Health Plan
   - LTC (including group and individual)
   - Individual DI Plan
   - Medicare Supplement

5. Apply U.S. and Canadian nation-specific regulation to product design and pricing.

8. Evaluate the process and be able to develop a medical manual rate for government programs, ASO and insured business.

Learning Outcomes:

(1g) Assess the advantages and disadvantages to a participant of offering a given coverage/benefit.

(2a) Describe the various coverages, including typical qualifications for benefits, coverage eligibility, cost-sharing provisions, limits, and funding mechanisms.

(5b) Describe key provisions of major legislation.

(8d) Recommend appropriate actions following the study including:
   (i) Areas for further study
   (ii) Changes in coverage, eligibility requirements or funding strategy

Sources:

Critical Issues in Health Reform, Minimum Loss Ratios

Critical Issues in Health Reform, Market Reform Principles

AAA Issue Brief, Value-Based Insurance Design

Health Watch, May 2008, Timing's Everything: The Impact of Benefit Rush

15. Continued

AAA Monograph, Emerging Data on Consumer Driven Healthcare AAA Task Force Report on CDH (May 2009)

Commentary on Question:
Question 15 attempts to assess the candidate's ability to respond to a variety of small group pricing concerns and synthesize information from across the syllabus to demonstrate command of the relevant material. Areas include: Market Reform Principles, Minimum Loss Ratios, and impact of benefit design changes on trend over time.
Candidates should provide thorough responses that demonstrate understanding of benefit offerings and their impact on rating at implementation and over time, as well as compliance with regulations. A strong response will provide practical guidance and reasoning, not mere recitation of lists.

Solution:
(a) Explain reasons why minimum loss ratios differ by group size.

Commentary on Question:
Candidates did well in identifying that small group loss ratios are less than large group loss ratios and recognizing higher risk and higher per member administrative costs as key causes. Candidates were less likely to comment on higher selling costs for small groups or make any reference to loss ratios in the individual market.

Most candidates were able to identify claims fluctuation/volatility and admin expense being the drivers but failed to give more details such as itemizing different components of admin expense. In general, candidates scored well on this question.

Loss ratios naturally fall in different ranges, with individual markets typically falling below small groups, which typically fall below large groups.
The reasons include the following:

1. Compensation for bearing risk. Individual and small group have higher volatility, and thus higher risk. This requires higher returns by the insurers to be willing to offer products, with higher risk resulting in lower loss ratios.
2. Administrative Expenses, such as selling (higher for indiv and SG), claims processing as percentage of claims cost (leaner benefits means this is higher percentage), underwriting (higher for smaller groups), and any per policy cost.

15. Continued

(b) Assess whether moving to a large group plan would be beneficial.

Commentary on Question:
Candidates typically identified this as a bad idea but often had other reasons besides the fact that the loss ratio would not change dramatically by virtue of increasing from 49 to 51 contracts. Candidates often cited other business issues as a reason for not hiring additional people.

Most candidates struggled on this one. Not many answered this question from the perspective of MLR impact due to small change in membership. Candidates cited other business reasons for not hiring more people. In addition, a lot of people really thought the minimum loss ratio rule would apply at the client level.

This would probably not be beneficial with respect to saving on the LR differential. The reasons for this are that within LG, the LR will likely differ by group size, such that groups in the 50-75 contracts will have lower LR than those in the 250-500. In other words, the LR will not take a stair-step from 80% to 85%, just by virtue of having 51 instead of 49 contracts.

(c) Outline your response.

Commentary on Question:
Candidates who took a position did well in identifying the need for a level playing field and how this would create adverse selection issues. Less successful candidates did not take a position and merely gave pros and cons, often suggesting that it would increase competition.

Also, the majority of candidates were able to point out the issue/concern resulting from different state mandates/regulations.

Market competition requires a level playing field, which suggests that selling across state lines creates opportunity for adverse selection, which ultimately would result in fewer options available in the market. For example, high-risk individuals will purchase plans from states with strict regulations, and low-risk will purchase from states with loose regulations. This anti-selection may cause pricing spirals and ultimately price some plans out of the market.

15. Continued

(d) Explain why this benefit strategy may not work for all employers.

Commentary on Question:
Most candidates identified that this employer's population was young and healthy and that this plan design would not work in other industries/companies. A small number of candidates commented on the issue of avoiding preventive care and almost no one commented on communications issues.

Most recognized the different needs/cultures of employers or employees. A lot of candidates expressed the concern from employee retention and morale perspective. Nobody received the grading points on the communication issue.

This strategy may not work for myriad of reasons. Some possible reasons include:

1. This employer's population is young and healthy, and not representative of many industries.
2. Some industries/companies have unions or more familial cultures which prefer to offer rich benefit designs.
3. Having exceptionally lean benefits may cause some members to avoid preventive or routine care, resulting in much higher costs at a later date.
4. Substantial changes in benefit design require significant communications efforts and time to transition.

(e) Assess how this benefit strategy aligns with Value Based Insurance Design.

Commentary on Question:
Most candidates gave at least a short description of VBID. Some candidates failed to comment on how the high deductible plan was not consistent with VBID or they suggested that it actually was consistent with VBID.

This strategy does not align with VBIC for the following reasons:

1. The design has a very high deductible, no matter the service.
2. The design uses a one size fits all approach.
3. Some members may forego needed services due to high cost, and the design does not lower the financial barriers to high-value treatments (i.e., those with evidence of clinical benefit).

15. Continued

(f) Predict how switching to this lean benefits strategy will impact trend for each of the next three years for an employer currently offering a rich benefit design.

Commentary on Question:
There was some confusion over which three years were the "next three years." Candidates that started with the benefit rush in the current year generally did well. Some candidates focused more on the impact of leveraging on future trends rather than comment about the rush/hush pattern.

The ones who could identify the rush/hush/crush scenario did well on this part. Many answered this question for the three years period after the implementation of lean benefits. A number of people commented on cost and/or utilization changes but did not address the trend movement. Some failed to distinguish between trends and costs.

This is a perfect example of setting up a "Benefit Rush." Trend the first year, before changing design, will be higher, particularly in Q4, due to the "rush." Trend in second year will be suppressed (the trend "hush"), partly due to the rush, and partly due to leaner benefits. Trend the third year will be much higher as cost levels return to a more normal range (i.e., the "hush" is worn off).

16. Learning Objectives:

3. Evaluates employer strategies for designing and funding benefit plans for:
   - (i) Active employees
   - (ii) Dependents
   - (iii) Pre-65 retirees
   - (iv) Post-65 retirees
   - (v) Disabled (short and long-term)

Learning Outcomes:

(3c) Recommend benefit, eligibility, or funding provisions to minimize each of the risks identified above.

(3d) Evaluate integration strategies with government programs (e.g., Parts A,B, and D of Medicare).

Sources:

Yamamoto, Fundamentals of Retiree Group Benefits, Retiree Benefit Design, Chapter 4

Commentary on Question:

Test: Integration with Medicare parts – eligibility and financial impacts. Other ways to cap subsidies.

To earn points needed to explain details of lists, show work, use solutions to state answer to question (graders can expand upon seeing results…)

Solution:

(a) Define the methods of integrating benefits with Medicare.

Commentary on Question:

This is a recall question. Most candidates did well on this part, and were able to list the proper methods and formulas.

Where C = Covered Expenses, M = Medicare Payment, and % = Employer's Benefit provisions,
Standard Coordination of Benefits = Lesser of C * % or C – M
Exclusion COB Method = (C - M) * %
Carveout COB Method = (C * %) – M

(b) Calculate the 2010 savings that would have resulted from changing to:

(i) the exclusion method; and

(ii) the carve-out method.

16. Continued

Commentary on Question:
Candidates did very poorly on this section. Most candidates tried to "integrate" drug benefits on a medical-only coordination of benefits. Most candidates missed how to determine the Medicare payment.

Of those who did calculations, several recognized that the work should have been done in part (d) of this question.

The Exclusion Method
Need to determine amount plan paid under Standard COB to find savings from other methods.

C * % = (covered charges – deductible) * coinsurance
= ($4,500 – $500) * 0.8
= $3,200

Find M (Medicare payment) from Exclusion method
M = C – {(plan payment / coinsurance) + deductible}
= $4,500 – {$400/0.8) + $500}
= $3,500

C – M = $4,500 - $3,500
= $1,000
Standard COB = lesser ($3,200, $1,000) = $1,000
Savings from Exclusion = $1,000 - $400 = $600

The Carve-Out Method
C * % = $3,200 (from (i))
M = $3,500 (from (i))
Carveout COB = Minimum ($3,200 - $3,500, $0) = $0
Savings from Carveout = $1,000

(c) Explain the types of caps employers place on retiree medical plan subsidies and their uses and considerations.

Commentary on Question:
Candidates did very poorly in this section. Most candidates gave general (but not relevant) responses on saving managing the employer-portion of medical costs (but not addressing the susbisies).

1. Fixed Dollar Subsidy Cap
   - Places fixed dollar limit on employer subsidy
   - For those with caps, most have already met

16. Continued

2. Total Expenditure Cap
   - The limit is a set amount the employer is willing to pay
   - Often, X% of current payment
   - Since total dollars, individual subsidies will vary by number covered
3. Defined Contribution Cap
   - Fixed amount per person
   - Savings from large reduction in FAS 106 cost
   - Retirees pay all cost increases above cap
4. Account Balance Plan
   - Employer subsidy set as an amount per year of service
   - Amount can be withdrawn as needed
   - Similar to flex spending account, can be used for claims or premiums
   - Can be converted to an annuity

(d) Explain the tests to determine eligibility for the retiree drug subsidy and determine whether Smalls' plan meets the requirements to receive the retiree drug subsidy.

Commentary on Question:
Most candidates attempted answering the question, understood that there were two tests to calculate. Mistakes were made in the calculations. The majority failed to make a recommendation.

For each test, employer Rx plan must be at least actuarially equivalent to Part D standard benefit to receive subsidy.

Gross Value Test:
- Compares total employer plan value against the total value of standard benefit
- Used actual employer claims paid and actuarial estimate of Medicare Part D costs

Net Value Test:
- Performed by subtracting the retiree contribution from gross value of the plan

Gross Value Test:
Gross Value of Current Plan = % Members in each claim level * Value at that level

For Current Employer Benefit:
Deductible = $300
Coinsurance = 30%
Current value at each claim level = Max {(Allowed PMPY - Deductible) * (1 - Coinsurance), 0}

16. Continued

Value to $300 = $0
Value $301 - $3,000 = Max {($2,700 - $300) * (1 - 0.3), 0 } = $1,680
Value $3,001 - $6,500 = Max {($4,100 - $300) * (1 - 0.3), 0 } = $2,660
Value $6,500+ = Max {($8,700 - $300) * (1 - 0.3), 0 } = $5,880
Gross Value of Current Plan = 5% * $0 + 55% * $1,680 + 30% * $2,660 + 10% * $5,880
= $2,310

For Standard Part D benefit:
Value to $300 = $0
Value $301 - $3,000 = Max {($2,700 - $300) * (1 - 0.25), 0 } = $1,800
Value $3,001 - $6,500 = Max {($3,000 - $300) * (1 - 0.25), 0 } = $2,025
Value $6,500+ = (Value $3,001 - $6,500) + (Allowed - $6,500) * (1 - Coins)
= $2,025 + ($8,700 - $6,500) * (1 - 0.25) = $4,115
Gross Value of Part D Plan = 5% * $0 + 55% * $1,800 + 30% * $2,050 + 10% * $4,115
= $2,009

Current Plan Passes Gross Value Test since greater gross value than Part D benefit

Net Value Test:
Net Value = Gross Value – Retiree Contribution
For Current Plan: Premium = $25 * 12 = $300, so
Net Value = $2,310 - $300 = $2,010

For Part D Plan:
Member Contributions – 25.5% of average gross cost
Net Value = $2,009 - $2,009 * 0.255 = $1,496.71

Current Plan Passes Net Value Test since greater net value than Part D benefit

Smalls' plan meets the requirements to receive the retiree drug subsidy.

17. Learning Objectives:

9. Applies principles of pricing, benefit design and funding to an underwriting situation.

Learning Outcomes:

Sources:

GH-D112-07: Monitoring and Projecting Pricing Trends in a Managed Care Environment (Ullsperger)

Commentary on Question:

Overall, this problem tested basic principles and the majority of candidates received full credit. Almost all were able to define the allowable and the net PMPM correctly. The candidates were successful at explaining and calculating allowable and net PMPMs and trends.

Solution:

(a) Define both Allowable PMPM and Net PMPM.

Allowable PMPM cost is the sum of the amounts for which the insurer and the member are liable per member per month and takes into account the negotiated discounts with the provider.

Net PMPM cost is the PMPM after adjusting for member cost sharing. Member copayments and member deductibles are subtracted from Allowed to get to Net cost.

(b) Calculate the CY 2011 Total Net trend for all services assuming the cost sharing arrangements have not changed from 2010 and the allowable trend is solely cost driven.

Net Trend = Net PMPM 2011 / Net PMPM 2010 – 1

2010 Net Physician PMPM = \$120 – 15 = \$105
2011 Net Physician PMPM = (\$120 * 1.15) – 15 = \$123

2010 Net Facility PMPM = \$180 * 80% = \$144
2011 Net Facility PMPM = (\$180 * 1.15) * 80% = \$165.60

Net Trend = (\$123 + \$165.60) / (\$105 + \$144) – 1 = 15.9%

17. Continued

(c) Explain why Net PMPM trends differently than Allowed PMPM. Illustrate this concept using Facility and Physician trends.

The difference in Net and Allowed trends is due to the effect of leveraging. The fixed physician copay does not increase from 2010 to 2011 and therefore, the net physician PMPM cost increases faster than the allowable PMPM cost.

The facility coinsurance increases with projected trend and therefore, the net facility trend equals the allowable facility trend. This concept can be illustrated by the following:

Net facility trend is equal to Allowed:
($165.50 – ($180 * 80%)) / ($180 * 80%)
= 15%

Net Physician trend is different:
($123 – ($120 - $15)) / ($105)
= 17.1%

Leveraging effect is 2.1% on physician.

18. Learning Objectives:

1. Understand and evaluate the effectiveness of the various types of Single Employer group coverage typically offered under:
   - Group health plan, including Consumer driven plans, etc.
   - Prescription Drug
   - Group dental plan
   - STD or LTD plan (incl. mention of coverage within other plans)
   - Group life plan
   - Other miscellaneous benefits
   - Multi-employer groups (Taft-Hartley, etc)

3. Evaluates employer strategies for designing and funding benefit plans for:
   (i) Active employees
   (ii) Dependents
   (iii) Pre-65 retirees
   (iv) Post-65 retirees
   (v) Disabled (short and long-term)

Learning Outcomes:

(1h) Evaluates several coverage scenarios as alternatives to a given scenario.

(3e) Describe opportunities to encourage employees to be more health and cost conscious and to return to work early.

Sources:

The Handbooke of Employee Benefits, Rosenbloom, Seventh Edition, 2011

- Chapter 6, pgs 130, 137-140
- Chapter 7, pgs 157-166 and 178
- Chapter 12, pgs 315-318

Managing and Evaluating Healthcare Interventional Programs, Duncan, 2008

- Chapter 13, Introduction to Wellness and Integrated Programs, pgs 246-252

Commentary on Question:

Solution:

(a) Describe the managed care spectrum for MH/SA benefits with regards to provider reimbursement and effectiveness in controlling MH/SA costs.

1. Indemnity has the lowest degree of cost control
   a. Typically limits the benefits, this is the only cost control
   b. May result in higher long term costs because of not addressing the underlying issue

18. Continued

2. EAP
   a. Provides free short-term counseling for personal problems intervention
   b. Basic EAP and EAP Gate Plan
3. MH/SA Network
   a. Negotiated prices for services rendered at the facilities
   b. Set up like a PPO
4. MH/SA network with EAP gate combines early MH/SA access with experience rating and preferred network pricing

(b) Identify common inpatient facility reimbursement arrangements and assess their effectiveness in controlling MH/SA costs.

1. Discount off of billed charges, Fee for Service (FFS)
   a. Does not provide effective manage utilization
2. Diagnostic Related Group (DRG)
   a. Pays a negotiated amount for the total cost of a specific treatment
3. Case Rates
   a. Flat negotiated reimbursements
4. Per Diem
   a. Fixed daily rate in broad service categories
5. Global Rates
   a. Pays defined fee for all services of a specific episode of care

(c) Describe typical utilization management techniques and identify the techniques appropriate for MH/SA claims.

1. Referral Management - Members access care through PCPs, and need a referral to go to specialist within the network
   a. Relevant for MH/SA
2. Outpatient Precertification - Prior authorization from managed care company for outpatient procedures
   a. Relevant for MH/SA
3. Managed Second Surgical Opinion - Managed care company evaluates the need for surgery
4. On-site Concurrent Review - Reviewed by on-site nurses to ascertain the need for continued care
   a. Relevant for MH/SA
5. Centers of Excellence - Networks of nationally recognized facilities that have negotiated preferred rates
6. Prenatal/Maternity Management - Identifies woman having high risk for delivering unhealthy babies

18. Continued

(d) Describe the tools and data that may be used to develop a workplace wellness program and explain how they reduce MH/SA and related disability claims.

1. Need to identify and prevent conditions such as chronic depression
    a. Risk can be modified through worksite wellness
2. Determine health risk status via self-reporting behavior and biometric measures specific to MH/SA
    a. If self-reported measurement of risk includes:
        i. Alcohol use
        ii. Stress

Tools:

1. Activities revolving quality of worklife (lunch and learn) but with low cost savings
2. Traditional wellness using Health Risk Assessments (HRAs) with modest cost savings
    a. Can lower sick leave and workman's comp
    b. Can improve absenteeism and presenteeism
3. Health and productivity programs have highest cost savings and behavioral changes
    a. If using a HRA, there may be incentives to encourage employees to participate
4. Integrated programs because of the increase in disability claims
    a. Can combine workplace safety, job injuries/illness, non-occupational illness/injury/disability, EAP