

GH ADV Model Solutions

Fall 2013

1. Learning Objectives:

3. The candidate will understand how to evaluate techniques for claims utilization and disease management.

Learning Outcomes:

- (3d) Perform a literature review about program evaluation.

Sources:

Managing and Evaluating Healthcare Intervention Programs, Duncan

- Chapter 4 Estimating Savings, Utilization Rate Changes and Return on Investment – A Selective Review of the Literature on Program Evaluation, Exclude Appendix 4.2, pages 41 – 44 and 57 - 58

Commentary on Question:

This question was intended to test a candidate's knowledge on how to do research on intervention techniques with the best return for a company. This question addresses the methodology, selection criteria and complications for a literature review on financial outcomes of care intervention programs.

To earn full credit for part (a), candidates had to be able to describe the factors that would complicate the evaluation and comparison of the financial savings literature. For part (b), candidates had to sufficiently list and describe the methodology for a literature review. In part (c), candidates had to describe the search criteria and methodology for selecting articles for the literature review.

Solution:

- (a) Describe the factors that complicate the evaluation and comparison of the financial savings literature.

Commentary on Question:

Many candidates described the factors. However, some candidates were incomplete in their answers, and some listed the factors without describing.

One factor that complicates the evaluation and comparison of the financial savings literature is that the term “savings” is often not clearly defined. Savings usually cannot be measured directly and are inferred or estimated from other observations. A robust study design is crucial to the derivation of the observations that are used in the savings calculation.

1. Continued

One factor that complicates the evaluation and comparison of the financial savings literature is that the term “savings” is often not clearly defined. Savings usually cannot be measured directly and are inferred or estimated from other observations. A robust study design is crucial to the derivation of the observations that are used in the savings calculation.

Other factors include:

- Different Research Designs – Designs range from randomized controlled trials, before-and-after designs, and cohort studies without any reference population other than the population being evaluated.
- Basis of Savings Calculations – Some studies report savings for the specific (diseased) population only, and others report results for a larger population (from which the target population is drawn). When the reported statistic is a percentage, or a rate of return on investment, it is difficult to relate the results to a basis that enables comparison between studies. Many studies do not provide information about the cost of the intervention program. The lack of comparability between studies is one of the greatest shortcomings that the industry must overcome.
- Timing - Health care costs increase with time, often rapidly (trend), and a patient whose services cost \$100 in 1990 might well have cost a health plan \$250 for the same bundle of services in 2000.
- Difference in Sample Size and Study Duration - The size of the study population, and duration of the study vary enormously. Academic studies tend to be smaller and briefer in duration. The competitive nature of managed care and financial pressures on publicly traded firms limit the type of study, and increases the potential for con- founding as firms constantly implement new initiatives and business processes.
- Clinical Focus of Published Studies - Some of the most comprehensive articles are research reviews and meta-analysis (survey article that has combined data from other comparable studies), to enable the generation of sufficient amounts of data for statistical analysis. The typical focus of a considerable amount of the literature is clinical, rather than financial outcomes. However, the variables, risk factors, and interventions underlying studies are so different, making comparisons particularly difficult. Preferably, information would be required on subsets of data (age, sex, risk, geography, etc.) to enable appropriate adjustments to be made for comparison purposes

- (b) List and describe the methodology for a literature review.

Commentary on Question:

Few candidates were able to fully answer part (b). Some candidates described the methods of care management and intervention, rather than the methodology for a literature review on program evaluation.

1. Continued

A four-stage method is used to identify articles in the medical literature that address financial outcomes of care management interventions. First, adopt broad search criteria that located a very large number of articles dealing with care interventions. Next, review each article's abstract and eliminate articles with no discussion or analysis of financial and/or utilization outcomes. In Stage 3, obtain the full-text version of review articles or meta-analyses that led to other "candidate articles." Finally, review the remaining candidate articles to compile a list of those in which financial outcomes was an important component. This process was subsequently supplemented by the addition of articles that were included in the CBO report that were not identified by the search process, primarily because the CBO report includes articles about clinical as well as financial outcomes.

A detailed analysis of each article's methodology and corresponding implications should be conducted since methodological differences can produce varying financial results. More detailed information includes: intervention type, disease or conditions targeted, length of the intervention or study, sample size, research/study design and financial results (savings, utilization reduction, ROI, etc.).

It may give more confidence to use results obtained from randomized control trials, than to use those obtained from pre-post or cohort studies.

Estimates of return on investment in the literature are generally rare, because ROI involves a calculation based on the one-time/startup costs of the intervention, estimated savings and the annual operating costs of the program.

When reviewing results, it is important to understand the difference between "gross of cost" basis and the "net of cost" basis used in estimating ROI.

Be aware of the publication bias. Negative or zero results from an intervention tend not to be published, whereas studies with favorable or positive results are published.

- (c) Describe how you would discriminate amongst articles you select for inclusion in your literature review.

Commentary on Question:

Again, many candidates described how to evaluate the care management programs themselves, rather than how to evaluate the articles included in the literature review. Some candidates did describe the criteria used to select articles, although few gave the complete answer.

1. Continued

The source of articles can be found via PubMed, the DMAA database (LitFinder) and Google Scholar search.

Conduct eight separate searches using PubMed, with one run using each of the eight MeSH terms: care management, disease management, utilization review, economic evaluation, utilization management, case management, predictive modeling, and cost control.

Limit the initial search to articles published in 1990 or later, and in peer-reviewed journals. Exceptions can be made on a limited basis when there isn't enough literature or when an article is referenced by another. Any article with no clearly identified author will be eliminated from further consideration. Articles without an abstract will be removed unless the article's title suggested an emphasis on financial outcomes.

Obtain the full-text versions of three types of articles: articles focusing on the *evaluation* of an intervention; "review" articles summarizing previous research on a particular intervention; and meta-analyses. Identify other candidate articles.

Filter articles to include those directly or indirectly report the effect of various managed care interventions on medical costs, utilization, and return on investment. Categorize each article by type of intervention.

Next, extract data from the article and summarize by disease, length of study, sample size, medical cost changes, utilization changes, program costs and ROI.

No literature search in this field can possibly be comprehensive. PubMed results are sensitive to the MeSH terms that are chosen. The MeSH terms that are assigned in PubMed by NLM indexers determine whether an article met (or did not meet) the criteria used in the review process.

2. Learning Objectives:

3. The candidate will understand how to evaluate techniques for claims utilization and disease management.

Learning Outcomes:

- (3b) Estimate savings, utilization rate changes and return on investment as it applies to program evaluation.
- (3c) Describe operational issues in the development of a study including acceptable methods for dealing with the issues.
- (3g) Calculate chronic and non-chronic trends in a manner that reflects patient risk.

Sources:

Managing and Evaluating Healthcare Intervention Programs, Duncan

- Chapter 3 Actuarial Issue in Care Management Evaluations, pages 25 – 30 and 37 - 38
- Chapter 11 Comparative Analysis of Chronic and Non-Chronic Insured Commercial Member Cost Trends, pages 205 and 214 - 215

Commentary on Question:

Candidates generally performed well on this question. Knowing the material and understanding how to perform the calculations was sufficient for a candidate to receive full credit.

Solution:

- (a) List the measurement issues specific to chronic populations.

Commentary on Question:

This question asked the candidate for a list. As such, full credit is received for listing the issues without detailed commentary. However, detail was helpful in receiving full credit if the terminology used by the candidate differed from that in the source material.

- Regression to the mean
 - Patients as their own control
- Identifying patients
- Establishing uniform risk measures for credibility
- Patient selection bias
- Patient drop outs
- General versus specific population

- (b) List the operational measures that should be reported for any DM program.

2. Continued

Commentary on Question:

Many candidates provided lists of financial measures rather than operational measures. The thrust of this question was to identify operational statistics that should be reported for comparative purposes to facilitate evaluation of different DM programs.

- Number of eligible members
 - Number of chronic patients identified, and timing of the identification
 - A statement indicating how sensitivity (number of patients identified) vs. specificity (presence of false positives) has been handled
 - Number of chronic patients available/contactable
 - Number of chronic patients contacted
 - Number of chronic enrollees in DM program
 - Length of time member is involved in the intervention
 - A definition of graduation, along with member graduation rates
 - Specification of the methodology applied to compare the reference population to the intervention population
 - Staffing requirements and cost of DM program, including staffing levels
- (c) Calculate the 2012 risk-adjusted trend for the following. Show your work.
- (i) Chronic population
- (ii) Non-chronic population

Commentary on Question:

The vast majority of candidates received full credit for this question. Some candidates who glossed over a portion of the calculation received less credit than those who laid out each part of the calculation explicitly. Note that the requirement to “show your work” indicates that formulas should be explicitly written out.

PMPM = Total Claims Cost / Member Months

<u>Chronic</u>	(a) <u>PMPM</u>	(b) <u>Risk Score</u>	(c) = a/b <u>PMPM w/risk score adj</u>
2011	\$33,880,000/2,000 = \$16,940	1.50	\$11,293
2012	\$34,520,000/2,000 = \$17,260	1.52	\$11,355

$$\begin{aligned}
 \text{Risk-adjusted trend} &= 2012 \text{ risk-adjusted PMPM} / 2011 \text{ risk-adjusted PMPM} - 1 \\
 &= \$11,355 / \$11,293 - 1 \\
 &= 0.55\%
 \end{aligned}$$

2. Continued

<u>Chronic</u>	(a) <u>PMPM</u>	(b) <u>Risk Score</u>	(c) = a/b <u>PMPM w/risk score adj</u>
2011	$\$35,700,000/3,500 = \$10,200$	0.94	\$10,851
2012	$\$36,560,000/3,500 = \$10,446$	0.92	\$11,354

$$\begin{aligned} \text{Risk-adjusted trend} &= 2012 \text{ risk-adjusted PMPM} / 2011 \text{ risk-adjusted PMPM} - 1 \\ &= \$11,354/\$10,851 - 1 \\ &= 4.64\% \end{aligned}$$

- (d) Calculate the risk adjusted savings for the DM Program. Show your work.

Commentary on Question:

Several candidates risk adjusted the total dollar savings amount, which is an inappropriate way to measure savings for a DM program. In addition to using the calculation from the source material (presented below), many candidates alternatively used two other algebraically equivalent methodologies. All three appropriate methodologies received full credit. Again, the requirement to “show your work” indicates that some explanation should be given or formulas written out explicitly.

Non-chronic risk adjusted trend is used as a proxy for chronic risk-adjusted trend in the absence of intervention.

$$\begin{aligned} \text{Expected 2012 Chronic PMPM cost without intervention} \\ &= 2011 \text{ Claims} / 2011 \text{ Member Months} * (1 + \text{non-chronic risk-adjusted trend}) \\ &= \$33,800,000 / 2,000 * 1.0464 \\ &= \$17,725.21 \end{aligned}$$

$$\begin{aligned} \text{2012 risk-adjusted Chronic PMPM cost} \\ &= (2012 \text{ Total Claims} / 2011 \text{ Member Months}) * (2011 \text{ risk score} / 2012 \text{ risk score}) \\ &= (\$34,520,000 / 2,000) * (1.50 / 1.52) \\ &= \$17,032.89 \end{aligned}$$

$$\begin{aligned} \text{Savings PMPM} &= \text{Expected 2012 Chronic PMPM cost without intervention} - \\ &\quad \text{2012 risk-adjusted Chronic PMPM cost} \\ &= \$17,725.21 - \$17,032.89 \\ &= \$692.32 \text{ PMPM} \end{aligned}$$

$$\begin{aligned} \text{Total Savings} &= \text{Savings PMPM} * 2012 \text{ member months} \\ &= \$692.32 * 2000 \\ &= \$1,384,632 \end{aligned}$$

3. Learning Objectives:

5. The candidate will understand and prepare a Statement of Actuarial Opinion (SAO) for selected Health Matters.

Learning Outcomes:

- (5a) Describe the U.S. Qualifications Standards and Statements of Actuarial Opinion (SAOs) as outlined in the Standard.
- (5f) Describe the continuing education credits for signing SAOs.

Sources:

AAA Qualification Standards, January 2008

Commentary on Question:

Question three tested candidate's knowledge of the basic and education requirements and continuing education requirements and applying that knowledge to determine if an actuary is qualified to sign an annual statement. Candidates performed well for the list questions in part (a) and part (b), but many missed a key point in the calculation question in part (c).

Solution:

- (a) Describe briefly the basic and education requirements needed to sign SAOs.

Commentary on Question:

Part a of the question tested the basic and education requirements needed to sign SAOs. Most candidates recognized most of the points tested. If candidates scored poorly in this section, it was most often due to not listing the knowledge of applicable laws through exams and professional development.

Actuary must be a member of the American Academy of Actuaries or a similar organization and have at least 3 years of responsible actuarial experience.

Actuary must be knowledgeable of laws related to statement of actuarial opinion (SAO) through examinations and professional development.

- (b) Describe briefly the continuing education requirements needed to sign general SAOs.

Commentary on Question:

Part (b) of the question tested the continuing education requirements. Almost all candidates were able to list the requirements related to the minimum or maximum hours related to professionalism, organized activities, total hours, and general business skills. Candidates could have scored better if they would have mentioned that the hours can be carried forward or backward, meeting the requirements in one year qualifies you for the next, and providing examples of organized and other activities.

3. Continued

Actuary must obtain 30 hours of continuing education requirements each year. Meeting the requirements in one year, qualifies actuary for the following year. 50 minutes equals 1 continuing education hour.

Hours can be carried forward or backward.

At least 3 hours must be related to professionalism.

At least 6 hours must be organized activities such as webinars and conferences.

At most 3 hours can be related to general business skills.

- (c) Determine whether the documented continuing education meets the qualification standards to sign an annual statement SAO in 2012. Show all work.

Commentary on Question:

Part (c) of the question tested candidate's application of the continuing education requirements.

Most candidates recognized that the actuary exceeded the number of business skills hours which reduced the amount of total hours from 30 to 28 and caused the actuary to be unqualified at the beginning of year 2012.

To receive full credit, candidates needed to recognize that the continuing education hours earned in 2012 could be carried back to 2011. Therefore, the actuary became qualified effective February 1, 2012.

Partial credit was given for testing the hours of professionalism, organized activity, business skills, specific activity, and total hours.

Common mistakes included calculating the standards for signing opinions for 2013 based on the 2012 hours, averaging the 2011 and 2012 hours together, assuming 6 hours of professionalism was required.

At the end of the year 2011, test the following continuing education requirements:

At least 3 hours of professionalism: Pass (3)

At least 6 hours of organized activities: Pass (11)

At least 15 hours of specific activities: Pass (21)

At most 3 hours of business skills: Fail (5 – reduce 2 hours)

At least 30 hours: Fail (only 28 after removal of excess business skills)

The actuary included 5 hours of business skills which exceeds the maximum of 3 hours. The actuary must deduct the excess 2 hours of business skills from the total hours. The actuary only has 28 hours of continuing education credits at the end of year 2011.

The actuary is unqualified to sign an annual statement SAO at the beginning of 2012.

3. Continued

Date	Hours	Specific	Organized	Professionalism	Business Skills
1/1/2011	3	0	3	3	0
2/1/2011	8	8	0	0	0
3/1/2011	8	8	8	0	0
4/1/2011	5	5	0	0	5
5/1/2011	2	0	0	0	0
6/1/2011	4	0	0	0	0
2011 Subtotal	30	21	11	3	5
Business Skills Adj	-2	0	0	0	-2
2011 Revised	28	21	11	3	3

The actuary is allowed to carry continuing education hours back from the current year to the prior year. The actuary may take 2 hours from the hours earned on February 1, 2012 to apply to the 2011 year. The actuary can't count those 2 hours for the 2012 year.

The actuary is qualified to sign an annual statement SAO after February 1, 2012.

Date	Hours	Specific	Organized	Professionalism	Business Skills
2011 Revised	28	21	11	3	3
2/1/2012 (Carryback)	2	0	0	0	0
2011 Subtotal	30	21	11	3	3

4. Learning Objectives:

4. The candidate will understand how to formulate, calculate and evaluate carrier reserving techniques.

Learning Outcomes:

- (4b) Explain the limitations and applications of the various valuation methods:
- (i) Lag methods
 - (ii) Tabular methods
 - (iii) Case reserves
 - (iv) Projection methods
 - (v) Loss ratio methods
- (4c) Calculate appropriate claim reserves given data.

Sources:

Group Insurance, Bluhm, 6th Edition, Chapter 40 page 854 and Chapter 41 pages 872 and 878

Commentary on Question:

Commentary listed underneath question component.

Solution:

- (a) Calculate the tabular claim reserves at the end of the 3rd month of disability for a 45 year-old claimant who has a policy with a 3 month elimination period, a 3 month benefit period, and a flat monthly benefit of \$2000. Show your work.

Commentary on Question:

The tabular claim reserves will be dependent on when the disability payment is made (beginning of the month, middle of the month, or end of the month) and when the individual is considered disabled (beginning of the month, middle of the month, or end of the month). Candidates were given full credit for stating their assumption, showing their work, and arriving at the correct answer (more than one answer was considered correct). Candidates did well on this part of the question.

The model solution assumes:

- The disability payment is made middle of the month
- State is disability is determined middle of the month
- The given interest rate of 5.0% represents an annual rate

$$V_n = \sum_{t=n}^{BP+n-1} \text{Benefit}_{t+1} \times \frac{l_{t+5}}{l_n} \times (1+i)^{-(t-n+5)/12}$$

4. Continued

$$\begin{aligned} &= \$2,000 * (825/850) * (1.05)^{(-0.5/12)} + \\ &\quad \$2,000 * (775/850) * (1.05)^{(-1.5/12)} + \\ &\quad \$2,000 * (725/850) * (1.05)^{(-2.5/12)} \\ &= \$1,937.24 + \$1,812.44 + \$1,688.64 \\ &= \$5,438.32 \end{aligned}$$

- (b) Explain ways to increase the margin on your block of claim reserves.

Commentary on Question:

The question asks the candidate ways to increase (or add margin to) the claim reserves. A fair number of candidates misinterpreted the question and provided ways to increase the profit margin. The majority of candidates did well on this question and received partial credit for listing one of the answers shown below.

The claim reserves are a function of the interest rate and the continuance rates. A more conservative claim reserve can be developed by:

- (i) Lowering the interest rate assumption used to calculate the claim reserves
 - (ii) Increasing the continuance rate (or decreasing the lapse rate) used to calculate the claim reserves.
 - (iii) Adding an explicit margin to the calculated claim reserves.
- (c) Describe these methods and explain their appropriateness in estimating claim reserves for disabled lives.
- (i) Lag method
 - (ii) Loss ratio method
 - (iii) Average claim size.

Commentary on Question:

*The question asks the candidate to **describe** the methods used to develop claim reserves and **explain** the appropriateness of these methods to estimate claim reserves for disabled lives. Candidates that provided brief responses without elaboration received partial credit only. The majority of candidates did well on this question.*

4. Continued

Lag Method

The lag method requires claims data by incurred and paid dates (typically monthly). The method assumes that consistent payment patterns and calculates age-to-age factors to estimate the completion factors for each incurral period. The completion factor represents the percentage of claims that are paid for each incurral period. The ultimate incurred amount for an incurral period is calculated as the paid amount for the incurral period divided by the completion factor – the claim reserves for the incurral period is the ultimate incurred amount less the paid amount. The total claim reserves = the sum of the claim reserves for each incurral period.

This method is not appropriate to develop the claim reserves for disabled lives and is more appropriate for medical claims that have short run outs and consistent lag patterns; disability claims have longer run outs. Tabular reserves or average claim size method is more appropriate to estimate claim reserves for a mature block of business.

Loss Ratio Method

This method assumes a loss ratio for the block of business. The claim reserves = (Loss Ratio) * (Earned Premium) – (Paid Claims)

This method is generally used when sufficient information is not available to use such as for new blocks of business or periods of time when experience is not credible.

This method is not appropriate to estimated reserves for disabled lives; the tabular reserves or average claim size method is recommended for a mature block. However, this method would be appropriate if you don't have information needed to do tabular reserves and the block is immature or as a check of other reserve methods.

Average Claim Size Method

The average claim size method reviews claim sizes for previously closed claims to arrive at an average claim size. The claim reserve is then calculated as the product of the number of reported claims and the average claim size less paid claims. A separate calculation is need for incurred by not reported claims (in other words, this method estimates the reserves for known “open” claims only).

This method is appropriate provided it is a mature block, but the method is not appropriate for a new block.

5. Learning Objectives:

2. The candidate will understand how to describe and evaluate the functions underlying a well-run health plan.

Learning Outcomes:

- (2b) Describe the product development process including risks and opportunities to be considered during the process.
- (2c) Describe the claims adjudication process
 - (i) Identify data required to adjudicate claims
 - (ii) Understand techniques for identifying and preventing claims processing errors
 - (iii) Understand techniques for identifying and preventing fraud
- (2d) Understand the basic processes of member services including:
 - (i) Understand the basic process of call centers
 - (ii) Understand the basic staffing and management issues in member services
 - (iii) Understand the basics of how a plan addresses member concerns and grievances
 - (iv) Understand proactive approaches a plan may take to measuring and maintaining member satisfaction
 - (v) Understand the legal and regulatory aspects of member services

Sources:

Essentials of Managed Care, Kongstvedt, 6th Edition

- Chapter 18 Claims and Benefit Administration, page 417
- Chapter 20 Member Services, pages 436, 441, 443, 444 and 455

Commentary on Question:

Commentary listed underneath question component.

Solution:

- (a) Describe the role of TPAs in providing major medical health benefits.

Commentary on Question:

Most candidates were able to list most of the administrative services provided by TPAs. However, most did not go beyond the major points.

TPAs provide/contract administrative services including:

- Plan design
- Claims processing/adjudication
- Member services
- Contact point for plan beneficiaries

Generally used by self-insured groups

Alternative to ASO or ASC arrangements with health insurers

5. Continued

TPA may outsource/subcontract certain activities, including:

- Clerical functions
- Claims processing

Value added services/focus frequently on:

- Product design
- Market differentiating services

- (b) List and describe the functions a Member Services Organization (MSO) performs.

Commentary on Question:

Similar to part (a), most candidates were able to list the major functions, without describing each function, therefore missing most of the possible points.

Benefits and eligibility

- Respond to questions on available benefits
- Respond to questions/requests for prior-authorization, referrals, etc.
- Respond to questions on benefit limits
- Respond to questions on care management programs including program requirements and processes

Enrollment Issues and ID Cards

- Produce/Mail ID cards
- Correct information on ID card
- Update member enrollment information

Provider /access

- Answer questions on participating providers and mail provider directories
- Allow/update PCP selection
- Respond to questions/authorization for receiving benefits when away from home

Claims processing and payment issues

- Respond to questions on pending/denied claims
- Respond to question on claims status
- Respond to questions on claim or payment errors

Log and address member complaints, grievances, and appeals

- Includes claim appeals and denials of coverage

5. Continued

Coordinate member communications and education/outreach efforts

- Provide administrative and clinical information requested
- Educate new members on plan policies/provisions
- Educate members on changes in benefits/policies or other areas of concern to the plan

(c) Provide reasons that would help you justify why the following prospects should contract with ABC:

- (i) A large national employer providing self-funded medical benefits to its employees and their dependents.
- (ii) A new Managed Care Organization (MCO) that will issue health insurance policies.

Commentary on Question:

For the most part, candidates listed how ABC could help the large national employer and the new MCO – listing the administrative services ABC could provide, but failed to justify why those services are important to each.

- (i) National employers are traditional customers of TPAs
Employer is interested in (and ABC needs to provide):
 - Responsive, accurate member service – TPA can act as a “buffer” between employees and employer
 - Efficient, competitive claims negotiations/adjudication processes
 - National provider network
 - Customized claims adjudication/plan design capabilities
 - Stable, reliable business partner (solid financial/market standing)
 - Innovative care/utilization management programs – TPA has expertise in these programs, which will consequently lower medical costs for the employer since they are self-funded

By contracting with ABC, the employer is able to pay one small administrative fee to gain the TPA’s expertise and experience with the abovementioned services. This enables the employer to keep their internal capabilities to adjudicate claims and administer benefits

- (ii) Will eventually develop most capabilities internally but more efficient initially to outsource most administrative functions
MCO expects ABC to provide:
 - Customize, scalable services
 - Comprehensive provider network with competitive contracts
 - Possibly to supplement agreements the MCO has signed

5. Continued

- Reliable member services fully reflecting the MCO's brand
 - Members should not realize ABC is providing the administration
- Reliable, accurate claims handling including adjudication and complaint/appeal processes
- Innovative product design/administration that can collaborate with the MCO's management
- Timely, accurate claims/financial reporting
- Effective claims/utilization management programs

Since the MCO is establishing themselves, partnering with ABC allows them to rely on ABC's expertise for what will become essential functions for the MCO. This will enable them to develop their own capabilities at an expert level, which is needed for their success. For instance, in the beginning they will not have the membership volume to negotiate substantial discounts on provider contracts – contracting with ABC will allow them to gain these discounts and in turn helps them grow their membership. The partnership will also enable the MCO's staff to learn how to manage costs (i.e. claims reporting along with utilization/disease management programs) which is also essential to their success and survival in the marketplace.

6. Learning Objectives:

6. The candidate will understand how to apply principles of pricing, benefit design and funding to an underwriting situation.

Learning Outcomes:

- (6c) Recommends strategies for minimizing or properly pricing for risks.

Sources:

Modeling Anti-Selective Lapse and Optimal Pricing in Individual and Small Group Health Insurance, HealthWatch, February 2010

Commentary on Question:

The main focus of the question was to test the candidates' understanding of how policy lapses affect product pricing and financial performance with a strong emphasis on how market position is a critical component of lapse rate management.

In general, success on this question was linked directly to (1) relating the question to the article and (2) understanding the points emphasized within the article.

Solution:

- (a) Explain challenges an actuary faces in determining an optimal rate increase in these markets.

An actuary faces three primary challenges in the determination of an optimal rate increase:

1. Anti-selective lapse can result from a rate increase. Healthy lives lapse at a higher rate than impaired lives, which results in an increase in the morbidity of the remaining block.
2. Accounting for competitive pressures and market position in the rate increase determination in addition to the modeling of anti-selective lapse.
3. Regulatory limitations restrict the ability to vary rate increases within a class of individuals.

- (b)

- (i) Explain the concept of a sustainable block.
- (ii) List strategies insurers can employ to increase profit capacity.
- (i) Sustainable blocks are achieved when rate increases are moderate or equal trend increases and lapses minimal. Characterizations of a sustainable block include:
 - a. High proportion of healthy lives
 - b. Neutralized or zero price-induced lapses
 - c. Profit maximized by setting the price equal to the market price level

6. Continued

- (ii) Strategies to increase profit capacity include:
 - a. Reduction of excess risk through improved ability to assess risks and underwrite
 - b. Increase the perceived quality
 - c. Increase the switching costs
 - d. Reduce the firm specific costs
 - e. Reduce costs through improved provider contracting
- (c) Outline recommended rules for optimizing pricing in this market.

Commentary on Question:

This was the toughest component of question 6. Few candidates connected building a lapse model and tracking lapse experience. Many answered this question with: if the block is impaired, apply the maximum rate increase. If the block is sustainable, set rate increase to achieve the market level rate.

To optimize pricing in this market:

1. Track competitor pricing in the market
 2. Build a good lapse model for pricing
 - a. Set target lapse rates by class of insureds
 - b. Monitor actual lapse rates, especially base and price-induced lapses
 - c. Adjust prices accordingly to experience. If lapse rates exceed the base level, prices are likely too high.
- (d) Determine if this insured will switch. Show your work. Justify your answer.

Commentary on Question:

Most candidates understood the how to approach the problem (i.e. adjust the premium and compare to the market level) but many did so with an additive calculation rather than a multiplicative. Full points were given if the recommendation reflected the result of the different rounding application.

The formula to calculate price-induced lapse probability is:

$$L = S(P'/M), \text{ where}$$

$$P' = P/A, \text{ where}$$

$$A = (1.12) \cdot (1.075)$$

$$P' = \$1,080 / [(1.12) \cdot (1.075)] = \$897$$

$$L = S(1)$$

Since curve is a step function, $L = 1/2$

Because the price-induced lapse probability is $1/2$, the insured is indifferent to switching or remaining with the current plan.

7. Learning Objectives:

2. The candidate will understand how to describe and evaluate the functions underlying a well-run health plan.

Learning Outcomes:

- (2a) Compare the relationship between different marketing channels and how each market impacts the underlying needs of the consumers.
- (2b) Describe the product development process including risks and opportunities to be considered during the process.
- (2e) Understand the basic activities of sales and marketing within a managed care organization
 - (i) Understand how marketing differs from sales
 - (ii) Understand compensation of sales and marketing personnel
 - (iii) Understand the different segments of the health care market differ depending on the market segment
 - (iv) Understand how sales and marketing differ by market
 - (v) Understand how metrics are used in the sales and marketing process

Sources:

Essentials of Managed Care, Kongstvedt, 6th Edition

- Chapter 16 Marketing and Sales, pages 350 - 364

Commentary on Question:

Commentary listed underneath question component.

Solution:

- (a) Identify the essential health benefit categories for qualified health plans under the ACA.

Commentary on Question:

Candidates performed well on this section by identifying most of the categories.

1. Ambulatory Benefits
2. Prescription Drugs
3. Maternity and newborn care
4. Pediatric dental and vision
5. Rehabilitative Services
6. Mental Health/Substance Abuse Services
7. Emergency Services
8. Chronic Disease Management
9. Inpatient Hospital
10. Preventive Care/Wellness
11. Laboratory Services

7. Continued

- (b) List the conditions under which a grandfathered plan will lose its grandfathered status under the ACA.

Commentary on Question:

Candidates performed well on this section listing most of the conditions.

Benefits for a particular condition are eliminated or substantially reduced

Co-insurance charges are significantly increased

Deductibles or out-of-pockets limits are significantly increased

Office copay amounts are significantly increased

Significantly lower employer contributions toward premiums

Addition or lowering of annual limit

Change in insurer [As in syllabus material; later changed.]

Transferring employees to a new plan typically causes loss of grandfather status for that employee

- (c) List the pre-2014 ACA provisions that a grandfathered plan must comply with.

Commentary on Question:

Candidates also performed well on this section listing most of the provisions.

Prohibition on preexisting condition exclusion or discrimination based on health status for children under age 19

Prohibition on rescissions after coverage begins except in the case of fraud or intentional misrepresentation

No lifetime limits on coverage

Extension of dependent coverage until age 26

Plan was in effect on March 23, 2010 or Employer/insurer must have filed to acknowledge their desire for grandfathered status

- (d) Compare and contrast the small group health option program (SHOP) exchanges and the Individual exchanges.

Commentary on Question:

The question asked for a comparison and contrasting of the exchanges, which involves a description of the exchanges, their functions, and how the SHOP and Individual exchanges are alike or different across these functions.

Many responses contained information not particular to the exchanges, such as rating restrictions and underwriting rules. Candidates should read all questions carefully.

The SHOP exchanges are for small employers and their employees, while the Individual exchanges are for individuals seeking coverage.

7. Continued

Both SHOP and Individual Exchanges:

- Offer Qualified Health Plans of various Metal Levels
- Certify the health plans offering coverage on the exchange as qualified health plans
- Assign ratings to each plan offered through the exchange on the basis of relative quality and price
- Provide consumer information on qualified health plans
- Create an electronic calculator to allow assessment of cost coverage after premium tax credits and cost sharing reductions
- Operate an internet website and toll free telephone hotline offering comparative information allowing customers to apply for and purchase coverage
- Determine eligibility for tax credits
- Determine applicable cost sharing reductions
- Determine exemptions from requirements on individuals to carry health insurance
- Establish a navigator program
- Implement outreach and education programs

In addition, the individual exchanges perform the following functions:

- Validation of citizenship
- Determine applicable premium subsidies
- Shopping
- Enrollment
- Navigators

- (e) Explain how the ACA legislation impacts OTTIC's:
 - (i) Operations
 - (ii) Sales and marketing

Commentary on Question:

Most candidates didn't do well.

This question sought the effect of the ACA on operations and sales/marketing of a plan. Many candidates lost credit by limiting the discussion to actuarial aspects of the ACA. Others missed points by limiting their responses only to a re-hash of the ACA provisions. For example "Must be guaranteed issue" is an inferior response to a description of how that provision will affect OTTIC's underwriting department

7. Continued

(i) Operations:

- More need for IT staff to assist in entering and maintaining new exchange (to handle information flows and connect systems)
- Compliance with advertising and operational rules potentially changed; simplify pricing steps
- Defined contribution products = new small employer strategy/create uptick in individual line from small group
- Essential health benefits additions might cause trend increases; could be dealing with state/federal
- Medical underwriting staff affected; consumer information on QHPs dictated
- Electronic calculator to assess cost of coverage
- Prices may change because of loss of underwriting
- Determine eligibility/ low income subsidies will increase data needed/ claims readjudication
- Shop exchanges:
 - Employers not required to use
 - Health plans not required to use
 - Must offer certain products in exchange
 - States may merge individual and small employer exchanges
 - Merging risk pools could affect profitability and pricing
 - Can lose GF status if go to new products
- Products offered on renewal could be limited
- Stickiness of customers might be affected by the annual enrollment process on the exchange
- How products are presented will change/or/ products on exchange must have the same price off exchanges if same/or/ pools combo
- Metallic products (Bronze, Silver, Gold, Platinum)
- Actuaries need to make sure actuarial values met
- Actuaries need to make sure minimum actuarial values met (60%)
- Individual who buy very high deductible plans (less than 60%) will have to upgrade their plan and thus will get charged higher amounts
- Small group benefit design limitations on deductibles and OOP max
- Cost-sharing refers to the total of all cost sharing (ded/copays/coinsurance)
- Minimum Loss Ratio requires the need to efficient

7. Continued

(ii) Sales:

- Market segment proportions could change
 - Bifurcate into public/private exchange or grandfathered/non-grandfathered
 - Imply possible staffing changes between markets
- Small employer market definition change (50 to 100 employees)
- Increase potential members on individual because of federal subsidies; depends on state decision for Medicaid expansion
- Increased potential members on small group because of 50-100 markers/tax subsidies
- Compensation for brokers could change/reduce
- Relationships with brokers could become more strained because of loss of business to auto enrollment on the exchange
- Look to fairness of broker compensation between public and private exchange/ across individual versus small group market segment
- Expansion of sales channels (50-100 employers size and new exchange channel)
- More direct selling approaches
- Less need of sales staff since applications much simplified
- Less need of sales staff since exchange enrollment for many may be automated
- More need for advertising
- Small employers may stop offering coverage pushing employees into individual market
- Less need for individual and small group underwriting staff (age/geo/smoking only allowed rating factors and no denials of coverage)

8. Learning Objectives:

4. The candidate will understand how to formulate, calculate and evaluate carrier reserving techniques.

Learning Outcomes:

- (4f) Describe, calculate and evaluate different types of reserves and explain when each is required
- (i) Deficiency reserves
 - (ii) Active life reserves
 - (iii) Premium reserves
 - (iv) Deferred acquisition costs
 - (v) Claim administration expense reserves
 - (vi) Calculate the reserves given data

Sources:

GHA-109-13: Individual Health Insurance, Bluhm, Chapter 6 – Reserves and Liabilities

Commentary on Question:

Commentary listed underneath question component.

Solution:

- (a) Explain Deferred Acquisition Costs (DAC).
- Deferrable expense include up-front acquisition expenses, such as underwriting and new business costs
 - Deferrable expenses and deferrable commissions (commissions in excess of ultimate rate) are amortized over the expected policy lifetime
 - DAC is only applicable to GAAP income statement
- (b) Calculate the maximum allowable DAC balance at the end of year 1, year 2 and year 3. Show your work.

Commentary on Question:

Many candidates correctly deferred only part of year 1 commission; but the year 2 commission in excess of the ultimate rate should have been deferred as well. The timing of the cash flows (i.e. 2nd year deferred commissions) is important as shown below. Many candidates incorrectly applied a level \$ amount DAC reduction instead of applying lapse rates. Candidates could get credit for knowing that the DAC balance at the end of year 3 should be \$0.

Deferrable expenses (first year) = 25% of premium = \$250
First year commission deferral = (75% - 5%) = 70% of premium = \$700
Second year commission deferral = (15% - 5%) = 10% of premium
Expected 2 year premium = .7 * 1000 = \$700
Second year commission deferral = .1 * \$700 = \$70

8. Continued

Amortization period for 1st year deferrals = $1 + .7 + .7 * .8 = 2.26$

Amortization period for 2nd year deferrals = $1 + .8 = 1.8$ years

DAC BOY year 1 = $(250 + 700) = \$950$

DAC net premium = $950 / 2.26 = \$420.35$

DAC EOY year 1 = $(950 - 420.35) / .7 = 756.63$ or $950 * (1.8 / 2.26) = \$756.64$

DAC on first year deferral EOY year 2 = $(756.63 - 420.35) / .8$ or $950 * (1/2.26) = \$420.35$

DAC on first year deferral EOY year 3 = $(250 + 700) * (0 / 2.26) = \0

DAC BOY year 2 on 2nd year deferrals = 70

DAC net premium = $70 / 1.8 = \$38.88$

DAC EOY year 2 on 2nd year deferrals = $(70 - 38.88) / .8$ OR $70 * (1 / 1.8) = \$38.89$

DAC EOY year 3 on 2nd year deferrals = $70 * (0 / 1.8) = \$0$

total DAC EOY year 1 = $\$756.63 + \$70 = \$826.63$

total DAC EOY year 2 = $\$420.35 + \$38.89 = \$459.24$

total DAC EOY year 3 = $\$0 + 0 = \0

- (c) Develop a 3 year projection of profit using GAAP and Statutory accounting for each of the following scenarios. Show your work.
- (i) Your company establishes the maximum allowable DAC.
 - (ii) Your company does NOT establish a DAC.

Commentary on Question:

Candidates could get many points by showing one of the correct profit calculations; fewer points were given for remaining calculations since they built off each other. Some candidates did not organize or label their answers well in this part so partial credit may not have been given versus if they had shown all their work and labeled their calculations appropriately. Candidates also needed to show that the total 3-year profit was the same under all calculations (just a timing issue of when profits/losses were recognized). Some candidates added the reserve change rather than subtracting (or didn't use the "change").

8. Continued

GAAP income statement without DAC

	prems	-claims	reserves	-reserve change	-Commissions	-acquisition expense	-maintenance expense	Profit
1	1000	200	283	283	750	250	100	-583
2	700	300	316	33	105	0	70	192
3	560	400	0	-316	28	0	56	392
Total	2260	900	599	0	883	250	226	1

GAAP income statement with DAC

	Profit above	-Deferred Expense	DAC balance	+DAC Amort + Capitalized Amt	Profit
1	(583.00)	950.00	950	263.36	103.64
2	192.00	70.00	459.24	297.40	(35.40)
3	392.00	-	-	459.24	(67.24)
Total	1.00	1,020.00		1,020.00	1.00

STAT income statement without DAC

	prems	-claims	reserves	-reserve change	-Commissions	-acquisition expense	-maintenance expense	Profit
1	1000	200	0	0	750	250	100	-300
2	700	300	0	0	105	0	70	225
3	560	400	0	0	28	0	56	76
Total	2260	900	0	0	883	250	226	1

DAC not allowed under STAT

(d) Recommend whether to set up a DAC. Justify your answer.

Commentary on Question:

Candidates needed to make a recommendation rather than just explain the benefits of DAC. Candidates could get credit for this part even without answering parts b & c.

Recommend they should create DAC because:

- total profits don't change in any model (with 0% interest), but smooths profit by year
- less reserve strain
- profit strain due to acquisition expenses

9. Learning Objectives:

5. The candidate will understand and prepare a Statement of Actuarial Opinion (SAO) for selected Health Matters.

Learning Outcomes:

- (5a) Describe the U.S. Qualifications Standards and Statements of Actuarial Opinion (SAOs) as outlined in the Standard.
- (5b) Discuss specific issues with respect to these classes of SAOs
 - (i) Certification of health reserves
- (5c) Develop documentation for an SAO
- (5e) Describe common situations where insurance regulations or Medicare laws call for a signed SAO by a qualified actuary.

Sources:

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

Commentary on Question:

The point of this question was to test the candidate's knowledge of Actuarial Standard of Practice No. 21: Responding to or Assisting Auditors or Examiners in Connection with Financial Statements for All Practice Areas. Only about a third of the candidates were able to correctly identify ASOP 21 even though a majority identified many of the elements in the standard. The second point of the question was an attempt to get candidates to apply ASOP 21 in a real-world situation: how a reviewing actuary would apply ASOP 21 with regards to the impact on the Financial Statements for insurers participating in the health insurance exchange. A small minority of candidates were successful in identifying elements on the Financial Statements that specifically would have been impacted due to the health insurance exchange and should be requested by the reviewing actuary. A common mistake on this question was for a candidate to focus their answer on ASOP 23: Data Quality, which didn't address the specifics of this question. Other candidates took the shotgun approach and listed as many ASOPs as possible in the hopes that something would stick and they would get some credit without thinking through which ASOPs specifically applied to this question.

Solution:

Outline the content of your first correspondence to Responding Actuaries, which will also kick off the auditing process. Be specific in items requested. Make sure you consider standards of practice by which you and they must comply as you outline the content of this first communication.

9. Continued

The reviewing actuary should

- Introduce themselves and who they work for
- Disclose any relationships between the reviewing and responding actuary and any conflicts of interest
- Discuss the scope and purpose of the audit
- Outline the expected timeline for the audit
- Disclose the expected dates for responses, expanded timing due to new regulations
- Assure confidentiality of information
- Outline request for information:
 - Data, assumptions and methods
 - Environmental considerations (changes in the operating environment, trends, product or plan changes, compliance with laws, etc.)
 - Impact of new items related to the Health Insurance Exchange:
 - Compliance with new assessments
 - Federal Risk Mitigation (3Rs), MLR, rebates, RBC Changes
 - Effect on Financial Statements of changes in Product Mix, Demographic mix, and assumptions for reserves
- Applicable ASOPs:
 - ASOP 21: Responding to or Assisting Auditors or Examiners in Connection with Financial Statements for All Practice Areas
 - ASOP 28: Statements of Actuarial Opinion Regarding Health Insurance Liabilities and Assets
 - ASOP 41: Actuarial Communications

10. Learning Objectives:

4. The candidate will understand how to formulate, calculate and evaluate carrier reserving techniques.

Learning Outcomes:

- (4g) Demonstrate adequacy of the reserve
 - (i) Gross premium valuation
 - (ii) Asset adequacy analysis
 - (iii) Recast analysis

Sources:

GHA-109-13 Individual Health Insurance, Bluhm

- Ch. 6 Reserves and Liabilities, page 193

GHA-103-13: Health Reserves (Lloyd), page 47

Commentary on Question:

This question is testing the student's ability to perform a gross premium valuation, and to test the students understanding of the impact of interest rate on reserves.

Solution:

- (a) Determine if the reserves are adequate for the block as of 12/31/2012. Show your work.

Commentary on Question:

This section of the question required the student to perform a gross premium valuation (GPV), and to compare the GPV to the assets available (the reserves less the DAC). A few students interpreted the IBNR as claims rather than a reserve, and that was not counted against them for interpreting it that way. Under the interpretation that IBNR was not considered a reserve, the overall reserve level was not adequate, but the solution was similar.

The most common mistakes were to ignore the DAC, or to count the DAC as a future asset rather than a future liability. The DAC is relevant to a reserve adequacy analysis, and if the reserves had not been adequate, then the DAC would need to be released, and if that made the reserves adequate everything would be good going forward, otherwise a PDR would need to be set up. In this analysis however, the reserves were adequate and could support the DAC, so students were not expected to discuss a need to release DAC.

Calculation of the Gross Premium Valuation

Preliminary work – sum the claims and premium:

10. Continued

<u>Year</u>	<u>Claims</u>	<u>Premium</u>
2013	175,000	250,000
2014	176,000	227,000
2015	177,000	206,000
2016	178,000	187,000
2017	179,000	170,000
2018	13,000	0
<u>Total</u>	<u>898,000</u>	<u>1,040,000</u>

Present value of future claims (PVFB) = sum of claims (since no discounting)

$$\text{PVFB} = 898,000$$

Present value of future premium (PVFP) = sum of premium (since no discounting)

$$\text{PVFP} = 1,040,000$$

Present value of future expenses (PVFE):

Commissions (7% of PVFP)	72,800
Claims expenses (5% of PVFB)	44,900
Taxes (2% of PVFP)	20,800
All other expenses (7% of PVFP)	72,800
<u>PVFE</u>	<u>211,300</u>

GPV: $\text{GPV} = (\text{PVFB} + \text{PVFE}) - \text{PVFP}$:

$$\begin{array}{r} 898,000 \\ + 211,300 \\ - 1,040,000 \\ \hline 69,300 \end{array}$$

This is the amount by which future expenses exceed future revenue

Assets to support the future shortfall are the reserves less the DAC asset:

IBNR + Policy Reserve - DAC

	15,000	12/31/2012 IBNR
+	85,000	12/31/2012 policy reserve
-	<u>20,000</u>	12/31/2012 DAC Asset
	80,000	Total reserve less DAC Asset

Since the assets available are greater than the future shortfall, the reserves are adequate.

$$(80,000 > 69,300)$$

10. Continued

- (b) Describe the impact of a changing interest rate environment on the adequacy of reserves.

Commentary on Question:

Most students described the expected directional impact of higher or lower interest rates on reserves. The candidates who scored highest also discussed durational differences in the relationship between premium and claims.

Reserves are required when expected costs are greater than expected revenue in future years the relationship between cost and benefit at different durations determines how varying interest rates will impact reserves required.

In general:

Lower interest rate increases the reserve required.

Higher interest rate decreases reserves required.

11. Learning Objectives:

1. The candidate will understand how to evaluate the effectiveness of traditional and leading edge provider reimbursement methods from both a cost and quality view point.

Learning Outcomes:

- (1d) Understand accountable care organizations and medical patient home models and their impact on quality, utilization and costs.
- (1f) Describe quality measures and their impact on key stakeholders.

Sources:

Essentials of Managed Care, Kongstvedt, 6th Edition

- Chapter 5 Provider Payment, page 124

Commentary on Question:

This question tested the candidates' understanding of ACOs and how the savings or losses resulting from these relationships will be shared between the parties involved. Candidates were expected to know how beneficiaries will be attributed, the implications of quality, and the mechanics of sharing gains or losses under the one-sided and two-sided approaches.

Solution:

- (a) Describe the method that will be used to attribute beneficiaries to the ACO for purposes of determining benchmarks.

Commentary on Question:

Many candidates correctly identified the plurality of primary care visits as the method used to attribute beneficiaries. However, most of these candidates failed to describe how members without any primary care claims will be attributed.

Beneficiaries will be attributed based on the plurality of allowed charges for primary care services rendered by Primary Care Physicians (PCPs). Beneficiaries without any PCP claims will be attributed based on the plurality of allowed charges for primary care services rendered by any ACO professional.

Beneficiaries will be prospectively assigned initially, with retrospective reconciliation occurring annually.

- (b) Describe how quality performance will be assessed and how it will impact the ACO's shared savings arrangement.

Commentary on Question:

Most candidates were able to describe how quality performance impacted the shared saving payment calculation. A lot of candidates struggled to list the four core quality domains.

11. Continued

Initially quality performance will be based on 33 measures across four domains. These four domains are:

1. Patient experience
2. Care coordination and patient safety
3. Preventive care
4. Caring for at-risk populations.

Quality performance will be used to determine the level of savings or loss that is shared with the ACO.

- (c) Recommend which shared savings approach the ACO should pursue. Show your work.

Commentary on Question:

A large majority of candidates were able to calculate the savings or loss for each of the future years. There was a wide variation in the responses to calculating the savings or loss for each year. Many candidates made one or more of the following errors:

- 1. After three years, the arrangement will become two-sided. Some candidates did not recognize this provision*
- 2. There is a minimum corridor of savings or loss. Any gain or loss within this 2% corridor will not be shared*
- 3. Under the two-sided model, the ACO shares in 40% of the loss in the first year and 60% of the savings in the third year. Many candidates used 60% for all years.*

All else being equal, I would recommend the savings approach that produced the greatest savings over the 4 year projection.

Step 1: Calculate the expected savings or loss for each year

Year	Benchmark	Base Cost	Trend Factor	Projected Cost	Difference
2013	\$270	\$255	1.09	\$277.95	\$7.95
2014	\$306	\$255	1.09 ²	\$302.97	-\$3.03
2015	\$342	\$255	1.09 ³	\$330.23	-\$11.77
2016	\$350	\$255	1.09 ⁴	\$359.95	\$9.95

11. Continued

Step 2: Calculate the expected savings under the one-sided approach

Year	Difference	Within 2% corridor?	Share Loss?	Shared %	Shared Savings
2013	\$7.95	No	No	0%	\$0
2014	-\$3.03	Yes	No	0%	\$0
2015	-\$11.77	No	No	50%	\$5.88
2016	\$9.95	No	Yes	40%	-\$3.98
Total					\$1.90

Step 3: Calculate the expected savings under the two-sided approach

Year	Difference	Within 2% corridor?	Share Loss?	Shared %	Shared Savings
2013	\$7.95	No	Yes	40%	-\$3.18
2014	-\$3.03	Yes	Yes	0%	\$0
2015	-\$11.77	No	Yes	60%	\$7.06
2016	\$9.95	No	Yes	40%	-\$3.98
Total					-\$0.10

Since the one-sided approach produces greater savings, I recommend using the one-sided approach.

12. Learning Objectives:

1. The candidate will understand how to evaluate the effectiveness of traditional and leading edge provider reimbursement methods from both a cost and quality view point.

Learning Outcomes:

- (1e) Evaluate the effectiveness of pharmacy benefit manager on controlling costs and providing quality care.

Sources:

Essentials of Managed Care, Kongstvedt, 6th Edition

- Chapter 11 Prescription Drug Benefits in Managed Care, pages 259 and 262 - 273

Commentary on Question:

Most candidates did well listing services in part (b) as the question asked. For parts (a) and (c), the question called for candidates to 'describe' but most candidates just wrote a list with little description. Generally speaking, candidates did poorly on this question overall.

Solution:

- (a) Describe environmental factors impacting pharmacy program management.

Commentary on Question:

Generally speaking, candidates did poorly on this part. Some could recall a few major points, but very few did well on this part.

- \$90 billion in brand name drugs expected to lose their patent which will reduce drug trend
- Increase in the number of high-cost specialty drugs
- Due to high cost of specialty drugs, plans will integrate pharmacy and medical management programs
- Medicare and Medicaid membership increasing
- PPACA will result in more members joining individual and small group markets
- Initiatives to reduce costs and improve quality by PPACA and CMS/Medicare
- New technologies will increase efficiencies and reduce costs
 - To support ACOs and Patient Centered medical homes
 - On-line prescribing
- Greater restrictions on formularies
 - Tiering of drugs
 - Step Therapy

- (b) List services typically provided by Pharmacy Benefit Managers (PBM).

12. Continued

Commentary on Question:

Generally speaking, candidates did well on this part.

- Claim processing
 - Reporting
 - Retail pharmacy contracting
 - Mail service
 - Specialty drug services
 - Formulary management & design
 - Drug manufacturer contracting / rebates
 - Pharmacy benefit design and administration
 - Clinical programs
 - Drug utilization review
 - MTM
 - Other services at client's request
- (c) Describe various methods PBMs can use to control or reduce pharmacy costs.

Commentary on Question:

Generally speaking, candidates did poorly on this part. Most candidates only discussed Utilization Management and not any of the other methodologies.

- Utilization Management
 - Prospective (before dispensing), concurrent (at time of dispensing) and retrospective (after dispensing) DUR can help make sure member is taking the right medication
 - Use Medical Therapy Management (MTM) for care management
 - Look for drug adherence
 - Look for Fraud and Abuse to eliminated waste
- Formulary Design – design the formulary to steer members to cost effective drugs
 - Exclude drugs not approved by FDA, OTC drugs and cosmetic drugs
 - Step Therapy, Prior Authorization steer members to lower cost drugs
 - Use multiple tiers to steer members to generics and preferred brands
- Benefit design
 - Design cost sharing to incent use of generics to lower costs
- Negotiate prices with pharmacies and manufacturers
 - Set up limited or restricted networks to get better discounts
 - Improve rebates from drug manufacturers to lower costs
- Use of mail service
 - Costs are lower at mail than retail
 - Can achieve volume discounts

13. Learning Objectives:

3. The candidate will understand how to evaluate techniques for claims utilization and disease management.

Learning Outcomes:

Sources:

Managing and Evaluating Healthcare Intervention Programs, Duncan

- Chapter 9 Understanding Patient Risk and Its Impact on Chronic and non-Chronic Trends, pages 170 - 173

Commentary on Question:

The purpose of this question was to test whether or not the candidate understood the concept of risk adjustment and could apply that understanding to a given problem. Since the question did not specify a format, nor was it the point of the question, full points were awarded so long as the candidate produced the correct answer regardless of scale (PMPM, PMPM x membership or PMPM x membership x 12). Also, several candidates calculated risk factors to complete the problem. While not necessary, many of these answers produced mathematically equivalent results to what is presented here.

Generally, many candidates understood the savings calculation and could explain risk adjustment but could not apply it to a situation. A common approach was to use the year 0 member distribution for both actual and expected costs in part (i). This is actually a risk adjusted calculation, the opposite of what was requested. Additionally, candidates would use two different risk distributions in part (ii), which is how part (i) should be accomplished.

Solution:

Calculate the expected Year 1 savings under the following scenarios. Show your work.

- Without risk adjustment
- Risk adjustment using the three strata

- Without Risk Adjustment

Year 1 Savings = Year 1 Expected Costs – Year 1 Actual Costs

Year 0 Actual Costs PMPM = $\frac{\sum(\text{Cohort Members} \times \text{Cohort PMPM})}{\text{Total Members}}$

$$= \frac{(800 \times 846.40 + 3200 \times 653.20 + 6000 \times 552.00)}{10,000}$$
$$= \$607.94 \text{ PMPM}$$

13. Continued

$$\begin{aligned}\text{Year 1 Expected Costs PMPM} &= \text{Year 1 Actual Costs PMPM} \times (1 + \text{Trend Adjuster}) \\ &= 607.94 \times (1.05) \\ &= \$638.33 \text{ PMPM}\end{aligned}$$

To determine Year 1 Actual Costs, we need to determine the population in each risk cohort. We do this by applying the probability of year 1 enrollment to the year 0 risk cohorts. For example:

$$\begin{aligned}\text{Year 1 High Risk Cohort Population} &= \sum(\text{Year 0 Risk Cohort} \times \text{Probability of enrolling as high risk in Year 1}) \\ &= 800 \times 0.70 + 3200 \times 0.05 + 6000 \times 0.15 \\ &= 1620 \text{ members}\end{aligned}$$

$$\begin{aligned}\text{Year 1 Medium Risk Cohort} &= \sum(\text{Year 0 Risk Cohort} \times \text{Probability of enrolling as medium risk in Year 1}) \\ &= 800 \times 0.10 + 3200 \times 0.75 + 6000 \times 0.05 \\ &= 2780 \text{ members}\end{aligned}$$

$$\begin{aligned}\text{Year 1 Low Risk Cohort} &= \sum(\text{Year 0 Risk Cohort} \times \text{Probability of enrolling as low risk in Year 1}) \\ &= 800 \times 0.20 + 3200 \times 0.20 + 6000 \times 0.80 \\ &= 5600 \text{ members}\end{aligned}$$

$$\begin{aligned}\text{Year 1 Actual Cost PMPM} &= (1620 \times 915.12 + 2780 \times 631.43 + 5600 \times 494.16) / 10,000 \\ &= \$600.51 \text{ PMPM}\end{aligned}$$

$$\begin{aligned}\text{Year 1 Savings PMPM} &= 638.33 - 600.51 = \$37.82 \text{ PMPM} \\ \text{Year 1 Savings} &= \$37.82 \times 10,000 \times 12 = \sim \$4,538,000\end{aligned}$$

(ii) With risk adjustment

$$\text{Year 1 Savings} = \text{Risk Adjusted Year 1 Expected Costs} - \text{Year 1 Actual Costs}$$

$$\text{Year 1 Actual Costs were calculated in part (i)} = \$600.51 \text{ PMPM}$$

To get risk adjusted year 1 costs, we need to re-weight our year 0 costs by our year 1 risk distribution:

$$\begin{aligned}\text{Year 0 Risk Adjusted Costs} &= (1620 \times 846.40 + 2780 \times 653.20 + 5600 \times 552.00) / 10,000 \\ &= \$627.83 \text{ PMPM}\end{aligned}$$

13. Continued

Risk Adjusted Year 1 Expected Costs = Year 0 Risk Adjusted Costs x (1 + Trend Adjuster)

$$\begin{aligned} &= 627.83 \times 1.05 \\ &= \$659.22 \text{ PMPM} \end{aligned}$$

Year 1 Savings with Risk Adjustment = $659.22 - 600.51 = \$58.71 \text{ PMPM}$

Year 1 Savings = $\$58.71 \times 10,000 \times 12 = \sim \$7,044,000$

14. Learning Objectives:

6. The candidate will understand how to apply principles of pricing, benefit design and funding to an underwriting situation.

Learning Outcomes:

- (6a) Understand the risks and opportunities associated with a given coverage, eligibility requirement or funding mechanism.

Sources:

Group Insurance, Bluhm

- Chapter 27 Underwriting Small Groups – pages 439-451

Commentary on Question:

Commentary listed underneath question component.

Solution:

- (a) List group underwriting parameters to consider.

Commentary on Question:

Most candidates were able to supply the list for group parameters. Few candidates were able to provide both the group and individual parameters.

Group parameters;

- Financial viability
- Industry
- Occupation
- Group size
- Participation
- Worker's compensation
- Employer contributions
- Prior experience
- Eligibility rules
- Eligibility class

Individual parameters:

- Preexisting condition limitations
- Individual medical assessment
- Post-issue underwriting (fraud or material misrepresentation)
- Items specific to the issuance of optional benefits

(b)

- (i) List traditional rating case characteristics used by insurers.
- (ii) Explain how each characteristic is impacted by the Affordable Care Act (ACA) and the potential impact to rating.

14. Continued

Commentary on Question:

Most candidates did very well with section..

Age

- ACA limits highest to lowest ratio with 3:1 ratio limit
- Younger insureds will subsidize older insureds premium rates

Gender

- ACA requires unisex rating in all states and all small groups
- Males at most ages will subsidize higher costing females

Geographic area

- ACA continues to allow rating variation by area

Group size

- ACA disallows group size rating

Industry

- ACA disallows industry rating

Managed care and negotiated discounts

- No ACA impact

Plan of benefits

- ACA allows rating factors

Family composition

- ACA will limit carriers in what they can use for family composition

Participation levels

- ACA disallows rating for participation levels

Tobacco use

- ACA allows tobacco use rating factor up to 50%
- State rules may be more restrictive, in which case ACA will not override

Others:

- Evidence of prior coverage
- Full-time vs. part-time employee content
- ACA disallows rating for these other items

15. Learning Objectives:

4. The candidate will understand how to formulate, calculate and evaluate carrier reserving techniques.

Learning Outcomes:

- (4f) Describe, calculate and evaluate different types of reserves and explain when each is required
 - (i) Deficiency reserves
 - (ii) Active life reserves
 - (iii) Premium reserves
 - (iv) Deferred acquisition costs
 - (v) Claim administration expense reserves
 - (vi) Calculate the reserves given data

Sources:

GHA-109-13: Individual Health Insurance, Bluhm, Chapter 6 – Reserves and Liabilities, pages 330 - 331

Commentary on Question:

Commentary listed underneath question component.

Solution:

- (a) Describe the purpose of unearned premium reserves.

Commentary on Question:

UPR is set to reduce profit and pay claims for the near future (periods less than 1 year), which is the unearned period. Some candidates confused UPR with policy reserve, which is set up for higher claim cost in later policy cycle

Some premium payable may be due for future periods

Unearned premium reserve holds back premium earned in future

Unearned premium reserve reduce profit realized from premium payment

- (b) Describe the two approaches to calculating benefit reserves.

Commentary on Question:

These two methods should have same results. Most candidates did not mention that the premiums are net premiums.

Benefit reserves can be calculated on prospective basis OR

Benefit reserves can be calculated on retrospective basis

Retrospective is the accumulation of past net premiums in excess of tabular benefit costs with interest

Net premium is $PV_{Future\ Bens} / PV_{Future\ premiums\ at\ issue}$

Prospective is the $PV\ future\ benefits\ less\ PV\ future\ net\ premiums$

15. Continued

(c)

- (i) (2 points) Calculate benefit reserves held at each policy year end using both methods. Show your work.
- (ii) (1 point) Calculate unearned premium reserves on 3/31/2013, 6/30/2013, 9/30/2013 and 12/31/2013. Show your work.

Commentary on Question:

Most candidates did not compute a net level premium and then arrived at negative reserves. Most candidates calculate UPR on gross premium basis, which resulted in Gross UPR.

- (i) Net premium = PVFB/PVFP at issue
PVFB at issue = $200 * .9 / 1.05 + 400 * .9^2 / 1.05^2 + 600 * .9^3 / 1.05^3 = 171.42 + 293.88 + 377.84 = \843.14
PVFP at issue = $1000 + 1000 * .9 / 1.05 + 1000 * .9^2 / 1.05^2 = 1000 + 857.14 + 734.69 = \2591.83
Net Premium = $\$843.14 / \$2591.83 * 1000 = \$325.31$
Retrospective reserve at end of year 1 = $(325.31 * 1.05 / .9 - 200) = \179.53
Retrospective reserve at end of year 2 = $(179.53 + 325.31) * 1.05 / .9 - 400 = \188.98
Retrospective reserve at end of year 3 = $(188.98 + 325.31) * 1.05 / .9 - 600 = 0$
Prospective reserve at end of year 1 = $(600 * .9^2 / 1.05^2 + 400 * .9 / 1.05) = 783.67$ less
 $(325.31 * .9 / 1.05 + 325.31) = 604.15$
 $= 179.52$
Prospective reserve at end of year 2 = $600 * .9 / 1.05 - 325.31 = 188.98$
Prospective reserve at end of year 3 = 0
- (ii) Unearned premium reserve is % of net premium that is not earned on valuation date
UENP on 3/31 = $9/12 * 325.31 = \$243.98$
UENP on 6/30 = $6/12 * 325.31 = \$162.66$
UENP on 9/30 = $3/12 * 325.31 = \$81.33$
UENP on 12/31 = $0/12 * 325.31 = 0$

16. Learning Objectives:

2. The candidate will understand how to describe and evaluate the functions underlying a well-run health plan.
4. The candidate will understand how to formulate, calculate and evaluate carrier reserving techniques.

Learning Outcomes:

- (2b) Describe the product development process including risks and opportunities to be considered during the process.
- (2c) Describe the claims adjudication process
 - (i) Identify data required to adjudicate claims
 - (ii) Understand techniques for identifying and preventing claims processing errors
 - (iii) Understand techniques for identifying and preventing fraud
- (4a) Describe the types of claim reserves (e.g., due and unpaid, ICOS, IBNR, LAE, PVANYD).
- (4d) Identify adjustments to IBNR (margins, trend, seasonality, claims processing changes, etc.).
- (4f) Describe, calculate and evaluate different types of reserves and explain when each is required
 - (i) Deficiency reserves
 - (ii) Active life reserves
 - (iii) Premium reserves
 - (iv) Deferred acquisition costs
 - (v) Claim administration expense reserves
 - (vi) Calculate the reserves given data

Sources:

Essentials of Managed care, Kongstvedt, 6th Edition
Chapter 18 Claims and Benefit Administration
Chapter 20 Member Services

Group Insurance, Bluhm, 6th Edition, Chapter 44

GHA-103-13: Health reserves (Lloyd)

AAA Premium Deficiency Reserves Discussion Reports

Commentary on Question:

Commentary listed underneath question component.

16. Continued

Solution:

(a)

- (i) List information needed to adjudicate a medical claim.
- (ii) Identify the source (department or entity) of each item listed in (a)(i).

Commentary on Question:

Most candidates did fairly well on this question. The better-prepared candidates distinguished themselves by having more thorough responses (listing far more than just a few items of information) and more specific responses (e.g., citing the enrollment system as the source for eligibility, not just saying the information comes from “the insurer”).

- Member ID & eligibility (claim submitter, enrollment system)
- Provider ID (claims submitter)
- Procedure code + modifier (provider)
- Authorization for service (medical management or eligibility)
- Service date, billed amount (provider)
- Plan benefit details for member (enrollment)
- Provider payment schedules (provider contracting)
- PCP information (enrollment)

(b)

- (i) List and describe reasons the pending claims inventory may be larger than usual.
- (ii) List and describe reasons valid claims may have been auto-denied.

Commentary on Question:

Although many candidates did well on this section as well, the reasons given for (ii) sometimes applied to (i) and vice-versa.

(i)

- Claims may be flagged for manual review because member is indicated as having other coverage, and therefore COB comes into play.
- Claims not appropriate for the age/gender of the patients

16. Continued

- Some procedures, like cosmetic surgery, may be flagged for manual review/adjudication
 - System error (claims system not fully functional)
 - Error in coding prevents claim from being adjudicated
 - Incorrect data format
 - Claims being reprocessed to reflect retroactive changes to adjudication parameters/variables
 - Suspicious claims (fraud/abuse)
- (ii)
- System not updated to auto-adjudicate certain benefits (e.g., cosmetic surgery), i.e., system thinks it isn't covered.
 - Missing provider information (or system does not think provider is a valid provider)
 - Member eligibility issue – system thinks members are not covered on the service date.
 - Pre-authorization information missing or invalid
 - Claim appears redundant
- (c)
- (i) Identify types of reserves that are impacted by the sudden increase in the claims inventory.
- (ii) Predict the impact of an increase in pending claims on each type of reserve.

Commentary on Question:

Most candidates were able to name IBNR and ICOS, and indicate that these would be higher. Not nearly as many candidates mentioned that a PDR might be affected (or established) from a sudden increase in claims inventory, and very few thought of outcome-based contractual reserves, like provider liabilities.

- IBNR or ICOS -- IBNR includes components for claims not reported, claims in the course of settlement (ICOS / pending), and claims not paid
- ICOS: increased due to inventory increase
- Pending claims: increase should be reflected
- Total IBNR/ICOS likely to be higher

- PDR: not impacted by claims inventory, but is affected by profitability expectations.
- PDR: if increase in pending claims leads to decreasing profitability, may need to establish a PDR or increase it if there already is one.

16. Continued

- Outcome-based contractual reserves, esp. provider liabilities: If provider contracts include withholds or bonus provisions, there may be a decrease in withhold/bonus payments with an increase in paid claims
- (d) Explain reasons a 2-year rate guarantee may be significant and assess the impact it will have on your reserve estimates.

Commentary on Question:

It was in this section of the question that many candidates realized that a PDR may be necessary (to establish or increase). A good number, but far from all, correctly stated the obvious: that a 2-year rate guarantee prevents the insurer from changing rates until the end of year 2.

- Cannot adjust rates when rates are not sufficient for 2nd year; must wait until year 3.
 - If the new product is unprofitable, the 2-year rate guarantee may increase losses.
 - Reserve estimate needs to be adjusted based on the 2-year guarantee
 - A PDR may be set up if there is an expected significant loss in the projected period (or increase PDR if one already exists)
 - Need to project premiums and claims over the remaining contract period.
 - PDR will be larger than if rate guarantee was only 1 year, or did not exist.
 - This results from the need to reserve for losses until rates can be revised and implemented.
- (e) Describe the steps you would take to review and correct the performance of the new product, assuming that the product doesn't perform as expected.

Commentary on Question:

Many candidates put forth a list of steps in a product development cycle, only some of which related to the example in this question. The better candidates tailored their responses to the situation presented, in particular, the rich benefits, long rate guarantee, and the expected effect on anti-selection and subsequent profitability.

- Assess the product
 - Evaluate results compared to expectations (ongoing)
 - Solicit and review feedback from consumers and market to identify issues/needs
- Review infrastructure
 - Analyze distribution channels used and if any selection concerns based on marketing/distribution methods

16. Continued

- Review/revise product design
 - Review benefit limits/cost-sharing provisions. Manage utilization by increasing member cost-sharing
 - update product structure to reduce/eliminate opportunity for anti-selection and abuse of benefits (add PCP/referral requirement, change OON benefits, add medical management programs)
- Review/update product pricing
 - Update rates to reflect actual experience
 - Validate/revise pricing assumptions
 - Seek updated regulatory approvals/reviews
 - Model financial results to assess profitability and sensitivity to assumptions

17. Learning Objectives:

5. The candidate will understand and prepare a Statement of Actuarial Opinion (SAO) for selected Health Matters.

Learning Outcomes:

- (5a) Describe the U.S. Qualifications Standards and Statements of Actuarial Opinion (SAOs) as outlined in the Standard.
- (5b) Discuss specific issues with respect to these classes of SAOs
 - (i) Certification of health reserves
- (5c) Develop documentation for an SAO

Sources:

ASOP 12 Risk Classification

ASOP 23 Data Quality

ASOP 41 Actuarial Communications

ASOP 45 The Use of Health Status Based on Risk Adjustment Methodologies

Commentary on Question:

The question is testing candidate's understanding of risk adjustment. Candidates who scored poorly did not demonstrate sufficient understanding of risk adjustment. In Part (a), they did not provide the correct definition of risk assessment and risk adjustment; more specifically, many candidates provided broad, unfocused response and mixed the definition of risk assessment and risk adjustment. For Part (b), candidates who scored poorly either did not identify the appropriate considerations or did not provide sufficient detail discussing the considerations listed.

Candidates who scored well were able to differentiate and define appropriate risk assessment and risk adjustment in the context of health care delivery and financial management. Also, these candidates listed key considerations for maintaining or updating a risk adjustment model with sufficient explanation and provided brief descriptions of the considerations contained in each relevant ASOPs instead of only listing the ASOPs.

Solution:

- (a) Describe the difference between risk assessment and risk adjustment.

Risk assessment: The act of evaluating expected risks associated with an individual or a group. Risk assessment precedes risk adjustment.

Risk adjustment: Uses risk assessment results to modify or normalize costs to account for known or expected risks.

17. Continued

- (b) Describe U.S. standards that you must consider in justifying risk adjustment changes.
- Consider ASOP 12 and ASOP 45 when updating a risk adjustment model
 - Consider intended purpose of the model and determine whether it is appropriate
 - Consider any changes in behavior that may result from changing incentives
 - Consider the model version and if any significant changes have been made to prior models
 - Consider the population used to develop and test the model; specifically, consider whether the population is representative of the model population
 - Consider timing of when the model was developed versus when it will be implemented
 - The model should be made as transparent as possible
 - The model should maximize its predictive ability
 - Those giving input to the model should be experts in risk adjustments
 - The model should be practical and not exceedingly costly to implement
 - Also consider any disclosure/documentation required under ASOP 41 and data quality standards under ASOP 23

18. Learning Objectives:

6. The candidate will understand how to apply principles of pricing, benefit design and funding to an underwriting situation.

Learning Outcomes:

- (6a) Understand the risks and opportunities associated with a given coverage, eligibility requirement or funding mechanism.
- (6b) Evaluate the criteria for classifying risks.
- (6c) Recommends strategies for minimizing or properly pricing for risks.

Sources:

Group Insurance, Bluhm 6th Edition

- Chapter 28-Managing Selection In A Multiple-Choice Environment

Commentary on Question:

The candidate was required to show mastery of the computational skills of selection load, reasoning for the applying a selection load, and process for using a selection load to adjust rates. Candidates who were familiar with the text tended to do well.

Solution:

- (a) Explain why a selection load is needed.

Commentary on Question:

This section proved most challenging for candidates, few candidates gave a detailed explanation of why a selection load is needed beyond the first two points.

A rational and informed individual will usually choose the insurance plan that best meets his/her individual needs.

Choice leads to selection issues, since selection can be favorable or unfavorable.

Favorable Selection (aka positive selection) occurs when low risk employees choose the insurer or plan option.

Unfavorable selection (aka anti-selection or negative selection) occurs when high risk employees choose the insurer or plan option.

In a multiple choice environment, if one or more options experiences favorable selection, the remaining options experience unfavorable selection.

Pricing in a multiple choice environment must measure the current health status and/or estimate the future health status of employees expected to choose each option.

18. Continued

Employee contribution has significant impact on plan choice.

Employer defined contribution of fixed dollar amount creates opportunity for selection.

(b)

- (i) Explain methods to group employees by morbidity.
- (ii) Calculate a selection load for this group. Show your work.

Commentary on Question:

About half the candidates got at least part of part (i). Few candidates got full credit on part (b).

This section was essentially a straight computation, most candidates did well. Occasionally candidates would not provide an answer to this part of the question.

Traditionally used age-gender mix of each option or change over time to measure selection.

More recent models include

- Health Risk Assessment – questionnaire and employee self-reporting to assign risk score.
- Risk Adjusters – uses members medical claim information including diagnosis, medical services, Rx history to make prediction of future claim costs – better than demographic models.

Company XYZ	Number of Employees	Relative Health Status (Morbidity)	Plan	Insurer Premium Rates	Calculation	Monthly Insurer Total Premium	Insurer Total Actual Cost
Low Risk	80	60%	A	\$450		\$36,000	\$21,600
Average Risk	45	100%	B	\$550		\$24,750	\$24,750
High Risk	25	230%	C	\$700		\$17,500	\$40,250
Composite	150	100%				\$78,250	\$86,600

$$80 * \$450 = \$36,000$$

$$80 * \$450 * .6 = \$21,600$$

$$78250/86600 = 1.10671$$

Selection Load is 10.67%

18. Continued

- (c) Outline how employers should set up premium contributions under a choice environment.

Commentary on Question:

Most candidates stated that the selection load should be an even percentage, others would state that it should vary by plan. Few gave both as options.

Few candidates provided the process.

To compensate for the anti-selection cost, an insurer needs to anticipate the mix of subscribers choosing respective plan options and include a selection load in the premium rate.

The selection load can be spread as an even percentage load across all plans or can vary selection load by plan and are often greater for higher cost plans and lower for the least costly plans. This tends to encourage subscribers to choose the lower cost plans and imposes a penalty on those choosing higher cost plans.

Step 1 – Determine the actuarial value of each benefit option (prior to the selection impact).

Step 2 – Estimate the enrollment mix by plan option.

Step 3 – Estimate the relative health status factor for each option based on the expected enrollment mix from Step 2.

Step 4 – Calculate the preliminary selection adjustment rates from each option.

Step 5 – Calculate the average selection load.

Step 6 - Calculate the blended selection adjustment rates.

- (d) Explain how an insurer can manage selection and its financial impact.

Commentary on Question:

Most candidates were able to provide at least a few of the points in the section.

Few candidates explained the nuances between single insurer and multiple insurers.

Add an additional premium margin (1-3%) to the total premium after estimating the selection to account for imperfect underwriting.

Limit the spread in monthly employee contributions from the lowest cost option to the highest cost option; i.e. \$50 for single coverage, \$100 for family coverage.

Limit the spread in benefits so the difference in relative value of the richest benefit option is not more than 20% to 30% of the lowest option.

18. Continued

Mix favorable and unfavorable cost sharing or benefit provisions among options to avoid one option being labeled as the “best plan” for employees who expect high health costs.

Avoid options with selection potential for specific issues; i.e. Only one option carries infertility benefits.

For One insurer offering multiple choices:

- Participation requirements (usually 75% - increases as group size decreases) can offset antiselection in one option with favorable in another option.
- Employees who waive coverage and opt for a spouse’s plan are usually excluded from the count.

Multiple Insurers offering multiple choices:

- Participation requirements (i.e. 50% of all employees)
- Require that all insurers have consistent underwriting, eligibility or pre-existing conditions.
- Require that all employees agree to a redistribution of income based on health status measured by risk adjusters or age/gender status.
- Can waiver participation requirements if expect favorable selection.

Study existing accounts to understand selection patterns.

Monitor experience including MCR, actual to expected selection patterns, changes to health status, and computer pricing/underwriting practices.

19. Learning Objectives:

2. The candidate will understand how to describe and evaluate the functions underlying a well-run health plan.

Learning Outcomes:

- (2c) Describe the claims adjudication process
 - (i) Identify data required to adjudicate claims
 - (ii) Understand techniques for identifying and preventing claims processing errors
 - (iii) Understand techniques for identifying and preventing fraud
- (2d) Understand the basic processes of member services including:
 - (i) Understand the basic process of call centers
 - (ii) Understand the basic staffing and management issues in member services
 - (iii) Understand the basics of how a plan addresses member concerns and grievances
 - (iv) Understand proactive approaches a plan may take to measuring and maintaining member satisfaction
 - (v) Understand the legal and regulatory aspects of member services

Sources:

Essentials of Managed Care, Kongstvedt, 6th Edition

- Chapter 18 Claims and Benefit Administration, pages 418 - 422
- Chapter 19 Health Care Fraud and Abuse, pages 425 - 426 and 432 - 433

Commentary on Question:

This question was testing basic knowledge related to fraud and abuse in a health care organization. The question has been well answered by many candidates, except for part (c)(ii).

Solution:

- (a) Explain the concept of a Fraud Triangle.

Commentary on Question:

In order to get the maximum points allowed for this question, the candidate must have listed the major items of the model solution.

Many candidates did well on that part of the question.

Pressure:

- Comes from a significant financial issue
 - Need to pay medical bills
 - Drug addiction
- Fraud increases when the economy takes a downturn

19. Continued

Opportunity:

- The ability to commit fraud comes from weaknesses and lack of controls
- Historically, committing fraud in health care has been fairly easy
- Adding controls and having a compliance program can significantly prevent fraud

Rationalization:

- For some, cheating the government or an insurer is acceptable
- To others, unemployment and poor economic conditions provide rationalization

- (b) Identify examples of fraud and abuse in a Managed Care Organization (MCO) that are specific to MA plans.

Commentary on Question:

Many candidates did well on that part.

Provider fraud:

- Billing for services not performed
- Unbundling
- Upcoding
- Duplicate billing
- Durable medical equipment (DME) not provided
- DME rentals that exceed the value of the equipment
- Billing for care provided to dead people
- Falsification of medical records to justify payment
- Billing for more drugs than dispensed
- Billing for brand name drugs when generic are dispensed

Patient fraud:

- Falsification of eligibility
- Filing false claims
- Identify theft
- Obtaining prescriptions for illegal resale
- Doctor-shopping for narcotics

19. Continued

(c)

- List potential indicators of health care fraud in a Managed Care Organization (MCO).
- Describe the steps that could be taken by your organization in order to mitigate your exposure and liability regarding health care fraud and abuse.
- List the common elements in developing an effective compliance program, as identified by the Office of the Inspector General (OIG).

Commentary on Question:

Most candidates got full credit for parts (i) and (iii), but very few got full credit for part (ii).

For part (ii), the majority of candidates did not mention clearly the steps to mitigate the exposure to fraud and abuse in a health care organization.

- (i) List potential indicators of health care fraud in a Managed Care Organization (MCO).
 - Insufficient time spent by providers with patients
 - Lack of appropriate care
 - High levels of referrals of patients to specialists
 - Sign of a kickback arrangement
 - Consistently poor care outcomes
 - Sign of lack of treatment
 - Unusual patient encounter ratios
 - Sign that patients are being scheduled fictitiously but not seen
 - High numbers of patient claims for treatment outside the HMO service area
 - Sign that patients are filing claims for not covered care
- (ii) Describe the steps that could be taken by your organization in order to mitigate your exposure and liability regarding health care fraud and abuse.
 - Follow as closely as possible all government regulations and laws
 - Seek interpretive guidance when an issue is unclear
 - Self-disclose the issue immediately, rather than waiting until a whistleblower with a different interpretation does it for you
 - Ensure that that you have dedicated appropriate resources to ensure that payment processing and billing systems are accurate and not overbilling

19. Continued

- Implement an effective compliance program
 - Audit your own program against the standards set by the government
 - Self-disclose immediately and take steps toward effective corrective actions
 - For audits, be aware of the plethora of entities working on behalf of government health care payers and what the authority is for each.
 - When a fraud-related audit takes place, some best processes for surviving it include:
 - Centralize a location and designate an accountable person to receive all requests and related communication
 - Track all requests and be aware of due dates, deadlines, and appeal periods
 - Necessary elements to survive a governmental fraud control compliance audit:
 - Make sure your fraud team are adequately staffed and given appropriate resource
 - Be able to demonstrate that effective fraud control training is completed in a timely manner
 - Ensure that you are screening your staff and clients against OIG Exclusion List
- (iii) List the common elements in developing an effective compliance program, as identified by the Office of the Inspector General (OIG).
- Develop written policies and procedures
 - Designate a Compliance Officer
 - Conduct effective training and education programs
 - Develop effective lines of communication
 - Enforce standards through well-publicized disciplinary guidelines
 - Conduct internal monitoring and auditing
 - Respond promptly to offenses and develop corrective action

20. Learning Objectives:

1. The candidate will understand how to evaluate the effectiveness of traditional and leading edge provider reimbursement methods from both a cost and quality view point.

Learning Outcomes:

- (1a) Calculate provider payments under standard and leading edge reimbursement methods.

Sources:

Essentials of Managed Care, Kongstvedt, 6th Edition

- Chapter 5 Provider Payment, pages 98 and 106

Commentary on Question:

Candidates generally performed very well on this question. In part (a), the pros and cons requested were from the HMO's perspective. Some candidates unnecessarily also listed pros and cons from the provider's perspective. No credit was given for that extra information. Candidates generally did a good job of showing their work in part (b) so that the calculations could be followed even if an error was made.

Solution:

- (a) List the pros and cons for an HMO entering into a capitation agreement with a provider.

Pros

Puts provider at risk or provides incentive for controlling medical expense and utilization

Aligns financial incentives of HMO and providers

Costs are more easily predicted for the health plan

Easier to administer

Cons

Payment is not directly linked to services provided

Some argue that capitation agreements promote inappropriate underutilization

- (b)

- (i) Calculate the 2011 Physician Office/Home Visits capitation rate (per member per month) based on 2011 experience. Show your work.

- (ii) Calculate the 2012 Physician Office/Home Visits capitation payment per member per month. Show your work.

- (i) $\$112.24 * 4986.9 / 12,000 = \46.64

- (ii) $(\$112.24 * 1.05 - \$10.00) * (4986.9 * 0.9) / 12,000 = \40.34