DP-GH Model Solutions
Spring 2013

1. **Learning Objectives:**

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

Learning Outcomes:

(5b) Describe key provisions of major legislation.

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

Sources:

American Academy of Actuaries: Critical Issues in Health Reform, Minimum Loss Ratio
GH-D125-11, Summary of New Health Reform Law, Kaiser Family Foundation

Commentary on Question:

Demonstrate knowledge of minimum loss ratio (MLR) requirements at the state and federal level in the US and the technical issues on defining the benefits and premiums in calculating the MLRs.

Solution:

(a) Describe considerations for MLR calculations, according to the article on Minimum Loss Ratios from the AAA Series "Critical Issues in Health Reform."

Commentary on Question:

It is necessary to list the main issues and to give one or two details about why it is an issue or how to include in the MLR calculation. It is not necessary to provide every detail in order to get full credit.

Items to consider are:

1) Incurred-basis versus paid-basis
   a) Consistency would suggest using incurred-basis
   b) Need to allow run out to reduce inaccuracies caused by reporting lags and claims payment process
2) Cost containment expenses.
   a) NAIC regulation defines these amounts that insurer spends to manage costs.
   b) Examples: case management
   c) Examples: disease management
   d) Examples: 24-hour nurse hotlines
   e) Examples: wellness programs

1. Continued

f) Examples: provider network development
g) Examples: fraud detection and prevention programs
h) Including the costs as part of value of benefits encourages insurers to effectively manage the quality, efficient, and cost of care

3) Capitation payments
   a) May include administrative costs if provider assumes responsibility of paying claims or other member services
   b) Difficult to segment admin of capitation but without segmenting, the insurer can manipulate the loss ratio
4) Premium taxes
   a) Taxes vary by state
   b) Taxes may vary between domiciled and out-of-state insurers within a state
   c) Need to remove premium taxes from revenue to make the MLR calculation comparable
5) Income taxes
   a) Some HMOS are not subject to income taxes
   b) Need to remove income taxes from revenue to make the MLR calculation comparable
6) Reinsurance and risk adjustment payments.
   a) Need to include both of these in the calculation of revenue
   b) Need to make sure reinsurance mechanism is not used merely to avoid falling below MLR
7) Policy reserves
   a) Need to add value of change in policy reserves to the value of benefits
8) Time Period
   a) Need to do annual calculation due to seasonality of benefit designs and resulting net claims
9) Geographic variances
   a) Areas with lower claim costs will have lower loss ratios since admin costs don't vary as much

(b) Calculate the 2014 MLR, making adjustment for these considerations, and indicate if you agree with Sales and Marketing that your plan has a problem. Show your work.

Commentary on Question:
It is important to show the calculations and list out the cost containment initiatives and taxes. Make sure the work is transparent so that the grader can follow and give appropriate points. Make sure to answer the question of whether you agree or disagree with Sales and Marketing.

Incurred Claims = Paid in 2014 for 2014 Services + Paid in 2015 for 2014 Services

1. Continued

Paid in 2014 for 2014 Services = 456,876,000
Paid in 2015 for 2014 Services = 9,790,200
Incurred Claims = 466,666,200

Earned premium = Paid in 2013 for 2014 Plan Year + Paid in 2014 for 2014 Plan Year
Paid in 2013 for 2014 Plan Year = 47,272,727
Paid in 2014 for 2014 Plan Year = 520,000,000
Earned Premiums = 567,272,727

Adjustment to Claims = Add Cost Containment to Incurred Claims
Cost Containment = Case Management + Disease Management + 24-Hour Nurseline + Wellness Programs + Provider Network Program Development + Fraud Detection and Prevention Programs
= 4,200,000 + 3,900,000 + 330,000
= 8,430,000

Adjustment to Revenue = Subract Taxes from Earned Premium
= Premium Tax + State Income Tax + Federal Income Tax
= 284,000 + 1,418,000 + 9,927,000
= 11,629,000

Adjusted Incurred Claims = 475,096,200
Adjusted Earned Premium = 555,643,727
Adjusted MLR = 475,096,200 / 555,643,727
Adjusted MLR = 85.50%

Plan is OK since the loss ratio is 85.50% which is above 85% requirement for Medicare Advantage for 2014

(c) Identify the repercussions for failing to meet PPACA and state MLR rules for

(i) Medicare Advantage plans; and

(ii) Commercial individual plans.

Commentary on Question:
Students missed points by only listing the PPACA related repercussions. Be more specific about who receives the refunds (government vs. policyholder).

1. Continued

Medicare Advantage Plans

1) PPACA Related
    a. Falling below target requires payments to Government. Payments are the difference between the Minimum MLR and the plan's actual MLR.
    b. Falling below for 2 consecutive years results in the Medicare Advantage plan losing ability to enroll new members (suspend enrollment)
    c. Falling below for 5 consecutive years results in plan termination
2) State Related
    a. None, State rules do not apply

Commercial Individual Plans

1) PPACA Related
    a. Proposed federal rules may require payment of refunds to policyholder. Payments are the difference between the Minimum MLR and the plan's actual MLR.
    b. Transferring refund to insurer can be difficult due to administrative issues around finding members who have switched plans.
2) State Related
    a. State may disapprove rate filing

2. Learning Objectives:

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

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

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

Learning Outcomes:

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

(4c) Assess the social good and risks associated with each coverage.

(7c) Develop experience analysis (claims cost and expenses)

Sources:

GH-D101-07: Group Disability Insurance (Section 1 pgs. 3 – 9, Section 4 pgs 17 – 21)

Group Insurance, Bluhm, Fifth Edition, 2007

- Chapter 12, Government Old-Age, Survivors, and Disability Plans in the U.S., pgs 221 - 223
- Chapter 31, Estimating Claim Costs for disability Benefits, pgs 637 - 639

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Describe typical benefit provisions included in a group LTD policy, and explain how each provision can impact claims experience.

Commentary on Question:

Candidates that did the best did an excellent job of not only recalling the policy provisions, but also describing them and explaining the impact on the claims. In addition to the response below, there were acceptable provisions.

2. Continued

The Benefit Amount is typically expressed as a percentage of an employee's salary. Claims experience usually higher with higher benefit amounts or replacement ratios, because there is because there is less incentive to return to work.

Maximum Benefits Amount is the maximum amount an LTD policy will pay, usually expressed as a flat amount per month. Lowers claim experience by limiting the payment of benefits for those with high salaries because their disability benefit does not replace as much of their salary in comparison to a lower salary.

Elimination or Waiting Period is the length of time for which an insured must be disabled before he or she is eligible for benefits. Longer elimination period lowers claim experience by cutting out short duration claims.

Maximum Benefit Duration is the maximum length of time that an LTD policy will pay usually expressed as years (2, 5, 10 years), age (to age 65) or Lifetime. Claims experience higher with higher maximum benefit durations because it is a richer benefit and there is less incentive to return to work.

Definition of disability is crucial element to policy and is the basis for whether or not a claimant is paid benefits. Any Occupation refers to eligibility for benefits if person cannot perform work for ANY occupation. Own Occupation refers to eligibility for benefits if person cannot perform work for OWN occupation. Specialty Occupation refers to eligibility for benefits if person cannot perform work for own SPECIALTY occupation

The definition impacts by the level of claims since Any Occupation has lower claims than Own Occupation definition. Any Occupation is a more restrictive definition and it's harder to get benefits paid out. Specialty Occupation expected to have high claims than Own Occupation which is less restrictive

Also, Occupational vs. Nonoccupational is crucial - occupational means disabilities occurring at work are covered. Nonoccupational means disability occurring at work are NOT covered.

Integration refers to the manner in which benefits are reduced by other income received and includes Direct Integration and All Sources Integration. Lowers claims by the amount of other income received, so claim experience is better.

(b) Calculate the total monthly LTD premium for Silver Fox without a social security disability benefit offset, using the tables above. Show your work.

2. Continued

Commentary on Question:
Most candidates did well, with the most common mistake being neglecting to add in retention.

First determine the Monthly **Base Rate** = Incidence Rate * Reserve / 12

0.003 * 40 / 12 = .01

Repeat for remaining age groups

Next calculate **exposure** for each age group:

Exposure = Number of Employees * Salary * 0.7 / 12

30 * 25,000 * 0.7 / 12 = 43,750

Repeat for remaining age groups

Determine the Expected Claims

Base Rate * **Exposure**, done for each age group

0.01000 * $43,750 = $438

Repeat for remaining age groups and sum

Sum = $22,767

Finally add in retention (14%)

$22,767 / (1 - 0.14) = $26,473 per month

(c) Describe requirements for individuals:

(i) To be covered under social security.

Worker must have disability insured, currently insured or fully insured status. A certain number of coverage credits is needed as well. Some or all of the coverage credits must have been earned recently ("recent attachment test").

- If required to have 20 or more, at least 20 of them must have been earned in the 40 prior calendar quarters
- If required fewer than 20 but more than 6, at least half must have been earned after age 21

2. Continued

- If required only 6, they must have been earned in the 12 calendar quarters ending with onset of disability

(ii) To receive disability benefits under social security.

Recipients must meet definition of disability and be unable to engage in any "substantial gainful activity (SGA) because of a physical or mental impairment. Additionally the disability must have lasted or be expected to last for 12 months.

(d) Calculate the total monthly LTD premium for Silver Fox with a social security disability benefit offset, using the tables above. Assume the family social security benefit is 150% of the primary benefit in all cases. Show your work.

First calculate the expected monthly social security payment.

Probability (Primary) * (Primary Benefit) + Probability (Family) * (Family Benefit) * 150% = **Offset**

0.30 * $550 + 0.15 * $550 * 150% = $288.75

Repeat for remaining age groups

Recalculate monthly exposures, subtracting expected social security payment

Exposure = Number of Employees * (Salary * 0.7 / 12 - **Offset**)

30 * [$25,000*.70/12 - $288.75] = $35,088

Repeat for remaining age groups

Multiply each exposure by the corresponding base rate from (b)

0.0100 * $35,088 = $350.88

Repeat for remaining age groups and sum

Sum = $16,746

Finally add in retention (14%)

$16,746 / (1 - 0.14) = $19,472 per month

2. Continued

(e) Explain the impact of a social security disability benefit offset on expected LTD incidence and termination rates.

In comparison to a policy without the social security offset provision, a policy with the integration will lessen the claimants total disability income. This situation provides less motivation to remain on disability and not attempt to return to work. The impact is that incidence rates and duration will be lower.

3. Learning Objectives:

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

Learning Outcomes:

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

Sources:

The Handbook of Employee Benefits, Rosenbloom, Seventh Edition, 2011
Chapter 10, Pharmacy Benefits, pgs 275 – 277

Effective Contracting with Pharmacy Benefit Managers, Health Watch, February 2010, pgs 22 - 27
http://www.soa.org/library/newsletters/health-watch-newsletter/2010/february/hsn-2010-iss63.pdf

Commentary on Question:

Candidates did well on parts (a) (describing cost & utilization management options) and (b) (calculating new Rx premiums after utilization shift) of this question. A common mistake in part (c) was calculating the impact of the subsidy from Dombey's perspective versus the union premium impact, as well as missing the fact that the subsidy will result in utilization at current plan levels. In part (d), most candidates only identified the shift in utilization that would occur due to a copay change. However, there are other factors that would need to be considered (PBM discounts, AWP changes, etc.) in order to appropriately calculate the new premium.

Solution:

(a) Describe the options available for employers to manage prescription drug costs and utilization.

Commentary on Question:

Candidates did relatively well on Part (a). There was a better understanding of the cost management options versus the utilization management options.

Cost management options include -

- Review the design of the pharmacy benefit to determine how it fits into the overall benefit plan.
- Analyze experience to better understand which areas may need better management.

3. Continued

- Reduce pharmacy network to the smallest size without compromising access.
- Offer mail order or 90-day retail POS benefit.
- Adopt a plan design that encourages generic substitution.
- Use a formulary to encourage use cost- and clinically-effective drugs and receive manufacturer rebates.
- Practice utilization that targets high-cost members and intervenes with members and physicians.
- Target high-cost physicians with incentive programs to dispense appropriate medications.
- Anticipate the financial impact of new drugs and therapies, and set policies and procedures for the new drugs before they are released.

Utilization management options include –

- Drug utilization review (DUR) programs are designed to ensure the patients are taking a drug effective for their condition with a clinically optimal outcome – Includes Concurrent, Retrospective and Prospective utilization review.
    - Captures things like too-soon refills, duplicate claims, prior authorization requirements, or quantity limits.

(b) Calculate annual aggregate union and non-union premiums for the new design with Two Cities. Show your work.

Commentary on Question:
Key concept tested was utilization shift as well as a change in the AWP for tier I given utilization shift. Well prepared candidates were able to calculate both of these changes. The most common mistake included missing the AWP impact for tier I drugs after the shift.

Determine new utilization patterns/cost patterns - take utilization out of tiers II and III and put it into tier I

Union
Tier II New Utilization = (1 - 30%) x 2.00 = 1.40
Tier III New Utilization = (1 - 30%) x 1.00 = 0.70
New Utilization Allocated to Tier I = 30% x (2.00 + 1.00) = 0.90
New Tier I Utilization = 4.00 + 0.90 = 4.90

Non-Union
Tier II New Utilization = (1 - 30%) x 2.00 = 1.40
Tier III New Utilization = (1 - 30%) x 0.50 = 0.35

3. Continued

New Utilization Allocated to Tier I = 30% x (2.00 + 0.50) = 0.75
New Tier I Utilization = 3.00 + 0.75 = 3.75

Determine new costs by tier

- Assume Tiers II and III maintain constant costs
- New Tier I Cost = Weighted Average of Prior Tier I AWP and AWP of New Drugs in Tier I

Union
New Drugs in Tier I AWP = 100 x (1 + 20%) = $120
Total Tier I AWP = (100 x 4.00 + 120 x 0.90)/(4.00 + 0.90) = $103.67

Non-Union
New Drugs in Tier I AWP = 100 x (1 + 20%) = $120
Total Tier I AWP = (100 x 3.00 + 120 x 0.75)/(3.00 + 0.75) = $104.00

Apply new assumed experience pattern to plan design to determine cost

- Step 1: Apply discounts to AWP to determine average discounted cost per script
- Step 2: Subtract copays out of discounted cost to determine expected plan liability per script by tier
- Step 3: Multiply expected plan liability per script by average annual prescriptions by tier to determine average per member per year cost by tier
- Step 4: Add together the average per member per year cost by tier to determine average total plan cost per member per year

Union
Tier I Discounted Cost = 103.67 x (1 - 80%) = $20.73
Tier II Discounted Cost = 275.00 x (1 - 15%) = $233.75
Tier II Discounted Cost = 350.00 x (1 - 10%) = $315.00

Tier I Cost After Copay = 20.73 - 5.00 = $15.73
Tier II Cost After Copay = 233.75 - 30 = $203.75
Tier III Cost After Copay = 315.00 - 50.00 = $265.00

Tier I Cost PEPY = 15.73 x 4.90 = $77.10
Tier II Cost PEPY = 203.75 x 1.40 = $285.25
Tier III Cost PEPY = 265.00 x 0.70 = $185.50

Total Annual Cost Per Member = 77.10 + 285.25 + 185.50 = $547.85

3. Continued

Non-Union
Tier I Discounted Cost = 104.00 x (1 - 80%) = $20.80
Tier II Discounted Cost = 250.00 x (1 - 15%) = $212.50
Tier III Discounted Cost = 300.00 x (1 - 10%) = $270.00

Tier I Cost After Copay = 20.80 - 10.00 = $10.80
Tier II Cost After Copay = 212.50 - 35.00 = $177.50
Tier III Cost After Copay = 270.00 - 60.00 = $210.00

Tier I Cost PEPY = 10.80 x 3.75 = $40.50
Tier II Cost PEPY = 177.50 x 1.40 = $248.50
Tier III Cost PEPY = 210.00 x 0.35 = $73.50

Total Annual Cost Per Member = 40.50 + 248.50 + 73.50 = $362.50

(c) Dombey wants to give union employees a subsidy at point of sale to fully offset the increased member copays. Calculate the annual aggregate union premium in this scenario. Show your work.

Commentary on Question:
A majority of candidates misinterpreted the question. The key to solving the problem was understanding that by subsidizing copays of union employees at the point of sale, member behavior (utilization) would be the same as the previous plan. You are also asked to calculate the union premium, not the cost of the subsidy to Dombey.

Tier I Average Scripts Per Year = 4.00
Tier II Average Scripts Per Year = 2.00
Tier III Average Scripts Per Year = 1.00

Tier I AWP per script = $100
Tier II AWP per script = $275
Tier III AWP per script = $350

- Priced copays should be the same as actual current plan copays - the copays to the plan still changed, but the utilization patterns shouldn't.

Tier I Copay per script = $5
Tier II Copay per script = $30
Tier III Copay per script = $50

Tier I Discounted Cost = 100.00 x (1 - 80%) = $20.00
Tier II Discounted Cost = 275.00 x (1 - 15%) = $233.75
Tier III Discounted Cost = 350.00 x (1 - 10%) = $315.00

3. Continued

Tier I Cost After Copay = 20.00 - 5.00 = $15.00
Tier II Cost After Copay = 233.75 - 30 = $203.75
Tier III Cost After Copay = 315.00 - 50.00 = $265.00

Tier I Cost PEPY = 15.00 x 4.00 = $60.00
Tier II Cost PEPY = 203.75 x 2.00 = $407.50
Tier III Cost PEPY = 265.00 x 1.00 = $265.00

Total Annual Cost Per Member = 60.00 + 407.50 + 265.00 = $732.50

(d) Dombey and Sons has asked you to evaluate the impact of reducing union and non-union copays to $4 per script. An actuarial student calculates the price by merely reducing the copayments.

(i) Criticize the student's reasoning; and

(ii) Describe the additional information you would need to calculate revised premiums.

Commentary on Question:
This question is an application of the material on the syllabus instead of a recall exercise. Most candidates were able to make the observation that the student's reasoning did not consider the impact on utilization of a copay change. However, there are other key factors that need to be considered that were missed by most candidates.

Flaw's in student's reasoning:

- Does not take into account potential utilization shift of drugs from other tiers to tier I.
- Does not take into account drugs between $4 - $5 per script in tier I that were previously out of plan utilization, but will now come in to experience.
- Does not take into account potential change in AWP from new drugs in utilization and utilization shifts.
- Does not take into account potential change in PBM discounts due to new drugs in utilization and utilization shifts.
- Overall plan induced/increased utilization.

Additional Data Needed:

- How utilization will shift among the tiers.
- Assumption for new utilization in the plan.
- Adjustments to AWP due to utilization shifts
- Adjustments to PBM discounts due to utilization shifts.

4. Learning Objectives:

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

Learning Outcomes:

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

Sources:

Rosenbloom, Handbook of Employee Benefits, 7th Edition, Chapter 1, The Environment of Employee Benefit Plans

Case Study

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Calculate the premium (PMPM) GEIC should charge in 2013 without the initiative. Show your work.

Commentary on Question:

Candidates generally performed well on part (a) by trending both the utilization and unit cost figures for two years, from 2011 to 2013, to calculate a value for the claims PMPM in 2013 without the initiative. Most candidates then properly adjusted the claims PMPM for expenses, capitation, and profit in order to answer the question, though some missed this step. Some candidates applied only one year instead of two years of trend. To receive full credit, candidates had to clearly show the formulas that they were using in their calculations.

Experience is given for 2011, so must trend for 2 years to project 2013 experience
2013 Utilization = 2011 Utilization * (1 + Util Trend)^2
2013 Unit Cost = 2011 Unit Cost * (1 + Cost Trend)^2
2013 Claims PMPM = 2013 Utilization x 2013 Unit Cost / 12 / 1000

4. Continued

	2013 Utilization	2013 Unit Cost	2013 Claims PMPM
Hospital IP	225 * (1.04)^2 = 243.36	$6,800 * (1.05)^2 =$7,497.00	$152.04
SNF	16.22	$661.50	$0.89
ER	245.03	$2,634.52	$53.79
Surg	147.02	$3,293.15	$40.35
ER/Obs	98.01	$3,104.97	$25.36
Surg/Obs	147.02	$3,669.51	$44.96
Other OP	392.04	$263.45	$8.61
Phy	2550.25	$88.43	$18.79
RX	3290.96	$67.42	$18.49
Total			$363.28

The total claims PMPM projected for 2013 is $363.28.
2013 Premium PMPM = (2013 Claims PMPM + Admin + Capitation) / (1 – Variable Expenses – Profit)
2013 Premium PMPM = ($363.28 + $11 + $15) / (1 – 0.053 – 0.03) = $424.51

(b) Calculate the effective annual IP hospital utilization trend and OP utilization trend as a result of the initiative. Show your work.

Commentary on Question:
Candidates made various mistakes on this part of the question. Some candidates included SNF in their calculation of Inpatient Hospital trend, for which partial credit was given. Some candidates calculated the trend only for ER/Obs and Surg/Obs instead of the total outpatient utilization trend that was asked for. Other candidates did not take the square root to get to an annualized trend number, which was awarded partial credit. Some candidates incorrectly calculated the PMPM trend instead of the utilization trend.

Hospital IP
2013 Utilization before initiative = 243.36 from Part A
2013 Utilization after initiative = 243.36 * 0.95 = 231.19
2011 Utilization = 225
Annualized trend = (231.19 / 225) ^ (1/2) – 1 = 1.4%

Outpatient Services
Diverted Inpatient Admits = 243.36 – 231.19 = 12.17
60% go to ER with observation, so increase in 2013 ER/Obs Utilization = 12.17 * 0.6 = 7.302 cases
40% go to Surgery with observation, so increase in 2013 Surg/Obs Utilization = 12.17 * 0.4 = 4.868 cases

4. Continued

2011 Utilization = 250 + 150 +100 + 150 + 400 = 1050 cases
2013 Utilization after initiative = 1050 * (1 - 1.01)^2 + 7.302 + 4.868 = 1041.28
Annualized trend = (1041.28 / 1050) ^ (1/2) – 1 = -0.4%

(c) Calculate the financial impact of the initiative on GEIC in 2013 (in total claim dollars). Show your work.

Commentary on Question:
In this part of the question, candidates needed to calculate the revised utilization for inpatient hospital, ER with observation, and surgery with observation after taking the initiative into account. This should have been used to calculate the revised claims and compared to the claims in part (a). Several candidates did not multiply by the member months to arrive at the requested annualized claim savings. There were a variety of ways to set up these calculations, so credit was given as long as the steps were illustrated. Since this calculation may have been dependent on part (b), candidates were not penalized again if their methodology was correct but they carried forward an incorrect number from part (b).

From part (b), Hospital IP utilization decreased by 5% to 231.19 admits, while ER/Obs and Surg/Obs utilization increased. The other categories are unchanged so these values are taken from part (a).

2013 Utilization After Initiative
- ER/Obs = 98.01 + 7.302 = 105.31 cases
- Surg/Obs = 147.02 + 4.868 = 151.89 cases

	2013 Util Before Initiative	2013 Util After Initiative	2013 Unit Cost	2013 PMPM with Initiative
Hospital IP	243.36	231.19	$ 7,497.00	$ 144.44
SNF	16.22	16.22	$ 661.50	$ 0.89
ER	245.03	245.03	$ 2,634.52	$ 53.79
Surg	147.02	147.02	$ 3,293.15	$ 40.35
ER/Obs	98.01	105.31	$ 3,104.97	$ 27.25
Surg/Obs	147.02	151.89	$ 3,669.51	$ 46.45
Other OP	392.04	392.04	$ 263.45	$ 8.61
Phy	2550.25	2550.25	$ 88.43	$ 18.79
RX	3290.96	3290.96	$ 67.42	$ 18.49
Total				$ 359.06

In table above, 2013 Claims PMPM = 2013 Utilization x 2013 Unit Cost / 12 / 1000
New claims PMPM = $359.06

4. Continued

This is a difference of $363.28 - $359.06 = $4.22 PMPM by implementing this initiative.
Total annual claims savings = $4.22 PPM x 225,000 member months = $949,500

(d) Calculate the premium GEIC should charge in 2013, assuming the initiative is fully applied to member premium. Show your work.

Commentary on Question:
Candidates did very well on this section by applying the adjustments for expenses, capitation, and profit to their answer to part (c). Credit was given even if the answer from part (c) was incorrect but the candidate correctly converted it to a premium amount.

From part (c), the claims PMPM with the initiative is $359.06
Premium PMPM = (Claims PMPM + Admin + Capitation) / (1 – Variable Expenses – Profit)
Premium PMPM = ($359.06 + $11 + $15) / (1 – 0.053 – 0.03) = $419.91

5. Learning Objectives:

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

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

Learning Outcomes:

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

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

Sources:

Case Study

Commentary on Question:

To receive maximum points on part (a), the candidate needed to demonstrate the ability to:

- Apply allowed and utilization trends,
- Recognize the need for an effective copay on IP & SNF benefits,
- Split % of services between in and out of network,
- Calculate cost sharing in both copay and coinsurance benefit designs.

To receive maximum points on part (b), the candidate needed to demonstrate the ability to:

- Compare GEIC's IP and SNF cost share to Original Medicare either as a % of allowed or as a $PMPM
- Appropriately comment on the actuarial equivalence of GEIC's benefits.

Solution:

(a) Calculate the projected 2013 member cost sharing as a result of the revised assumptions. Show your work.

5. Continued

Member Cost Share PMPM: Coinsurance Calculation
[Trended Allowed PMPM * Coinsurance %] * % Services In/Out of Network

Member Cost Share PMPM: Copay Calculation
[(Trended Utilization PTMPY * Effective Copay) / 12000] * % Services In/Out of Network

Part A Services
Hospital
([(1600 * (1.02^2) * ($50*.8)) / 12000] * .8) + ([$305 * (1.05^2) * .4] * .2) = $31.34 PMPM
Skilled Nursing Facility
([(400 * (1.02^2) * ($20 * (1-.48))) / 12000] * .8) + ([$21 * (1.05^2) * .4] * .2) = $2.14 PMPM
Home Health
([$45 * (1.05^2) * 0] * .9) + ([$45 * (1.05^2) * 0] * .1) = $0.00 PMPM

Part B Services
Ambulance
([(200 * (1.00^2) * $100) / 12000] * .9) + ([(200 * (1.00^2) * $125) / 12000] * .1) = $1.71 PMPM
Medical Equipment/Supplies
([$18 * (1.02^2) * .2] * .9) + ([$18 * (1.02^2) * .4] * .1) = $4.12 PMPM
Outpatient – Emergency
([(500 * (.99^2) * $50) / 12000] * .9) + ([$27 * (1.03^2) * .3] * .1) = $2.70 PMPM
Outpatient – Surgery
([(400 * (.99^2) * $75) / 12000] * .9) + ([$105 * (1.03^2) * .3] * .1) = $5.55 PMPM
Outpatient – Lab
([(2500 * (.99^2) * $50) / 12000] * .9) + ([$80 * (1.03^2) * .3] * .1) = $11.73 PMPM
Physician - Primary Care
([(5000 * (1.01^2) * $5) / 12000] * .9) + ([(5000 * (1.01^2) * $15) / 12000] * .1) = $2.55 PMPM
Physician – Specialist
([(2000 * (1.01^2) * $10) / 12000] * .9) + ([(2000 * (1.01^2) * $25) / 12000] * .1) = $1.96 PMPM
Preventive Services
([$60 * (1.02^2) * 0] * .9) + ([$60 * (1.05^2) * 0] * .1) = $0.00 PMPM
Total
($31.34 + $2.14 + $0.00 + $1.71 + $4.12 + $2.70 + $5.55 + $11.73 + $2.55 + $1.96 + $0.00)=**$63.79 PMPM**

Note that the percent of out-of-network services was assumed to be 10% for all non-inpatient and non-SNF claims in this example. However, credit was given for any stated assumed percent since this information was not directly provided in the question or case study.

5. Continued

(b) Test and comment on the actuarial equivalence of the POS plan to Original Medicare for:

(i) The inpatient hospital benefits; and

(ii) The SNF benefits.

IP Benefit
$31.34 (member cost share PMPM from Part A)
$336.26 (Trended Allowed PMPM from Part A)

Actuarial Value (AV) of GEIC cost sharing (as % of allowed)
$31.34 / $336.26 = 9.3%

AV of Original Medicare (OM) cost sharing (as % of allowed)
8%

The AV of GEIC cost sharing is greater than OM (9.3% > 8%), therefore GEIC's benefit is not actuarially equivalent.
The proposed POS plan has a leaner benefit with a higher member cost share.

SNF Benefit
$2.14 (member cost share PMPM from Part A)
$23.15 (Trended Allowed PMPM from Part A)

Actuarial Value (AV) of GEIC cost sharing (as % of allowed)
$2.14 / $23.15 = 9.2%

AV of Original Medicare (OM) cost sharing (as % of allowed)
20%

The AV of GEIC cost sharing is lower than OM (9.2% < 20%), therefore GEIC's benefit is actuarially equivalent.
The proposed POS plan has a richer benefit with a lower member cost share

6. **Learning Objectives:**

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

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

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

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

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

Learning Outcomes:

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

(1f) Recommend policy provisions to minimize the risks identified above.

(2e) Recommend policy provisions to minimize the risks identified above.

(2f) Evaluates several coverage scenarios as alternatives to a given scenario.

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

(7b) Identify and evaluate the rating parameters needed to evaluate and manage a book-of-business.

6. Continued

(7c) Develop experience analysis (claims cost and expenses):
- (i) Construct the appropriate models
- (ii) Develop the appropriate assumptions, including trend, anti-selection, etc.

(7d) Recommend appropriate actions following the study including:
- (i) Areas for further study
- (ii) Changes in coverage, eligibility requirements or funding strategy

(7e) Evaluate the impact of changing economic conditions on pricing.

(7g) Integrate utilization management data into pricing.

Sources:
Duncan, Managing and Evaluating Healthcare Intervention Programs, 15, The Relationship Between Risk Factors and Health Care Claims Costs in Program Design and Evalution,

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

Article, Milliman Healthcare Reform Briefing Paper, Health Insurers Need to Quickly Assess Operational Costs for Medical Services Under Health Care Reform,

Commentary on Question:
This question tests the candidate's ability to evaluate alternative scenarios with regard to implementing a disease management program.
The evaluation compares the results with the program versus the results without the program.

Solution:
(a) Each member completes a Health Risk Assessment (HRA) to be stratified into each of the risk segments. Describe the categories and response options for the HRA.

Stress levels
Exercise levels
Eating/wellness habits
Tobacco/drug/alcohol use
Family history
Mental health history
Current health - any conditions, etc
Hi/med/low response options, times per week, etc.

6. Continued

(b) Calculate the 2012 per member per year (PMPY) expected costs for each risk segment and in aggregate if:

(i) No programs were implemented and no population mix shift occurred.

(ii) No programs were implemented and the population mix shift 1 occurred.

(iii) All programs were implemented and the population mix shift 2 occurred.

Show your work.

(i)
No program - new membership amounts
Shift 1
High risk - 200(80%)+300(15%)+500 (5%) = 230
Medium - 345
Low - 425
Shift 2
High = 220
Medium = 350
Low = 430

One year trend costs:
High risk = 2011 claims * trend…
=3030(1.03)+…
=8920.3
Med = 3321.40
Low = 433.4
Costs PMPM =

(ii)
Using membership from 'Shift 1" on previous page
Cost = 8920.3(230) + 3321(345) + 433(425) /
12000
= 3381747 / 12,000
= 281.81

6. Continued

(iii)
High risk = 2011 claims * trend * savings from program (where applicable)
= 3030 * 1.03 * (1 -5%) + …
= 8630
Medium -= 3134
Low = 473
Members from 'shift 2'
Aggregate cost = 8630(220) + 3134(350) + 473(430)
= 3199339
PMPM = 266.61

(c) Calculate the overall 2011 to 2012 trend in aggregate, and display the effective trends caused by each of cost inflation, population mix shift, and program implementation. Show your work.

Assuming w/ full implementation & shift 2
2011 PMPM

	Costs	Members
High	8280	200
Med	3092	300
Low	397	500

PMPM = 2782100 / 12000 = 231.84

Total trend = 266.61 / 231.84 = 15%
Inflation = scenario 1 / 2011 pmpm = 7.7%
Population mix = scenario ii / scenario I = 12.8%
Program = scen iii/scen ii = -5.4%

(d) Dr. Manette believes the total trend is too high and as a result wants to eliminate the programs on the grounds that they weren't effective. Draft an explanation to convince the CFO that these programs are effective.

The total trend appears too high, but that is not due to the cost of the medical management program. Inflation & member mix are a large driver of the total trend. The management program actually saves the company money (5.4%). If trend could be better controlled, the program may also improve population mix in the coming years.

7. Learning Objectives:

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

Learning Outcomes:

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

(1b) Identify the potential gaps in needed or desired coverages.

(1d) Assess the advantages and disadvantages to n sponsor of offering a given coverage/benefit.

Sources:

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

- Chapter 8, Understanding Managed Behavioral Health Care Benefits, pgs 202 – 204, 212, and 216 -220

Commentary on Question:

Solution:

(a) You've been asked how various mental health regulations will affect VBC's choice of mental health benefit offerings.

(i) Describe the provisions of The Mental Health Parity Act of 1996 (MHPA) and The Mental Health Parity and Addiction Equity Act of 2008 (MHPAEA).

(ii) List key requirements included in MHPAEA that resolved issues or loopholes in MHPA.

(iii) Explain the impact of The Patient Protection and Affordable Care Act of 2010 (PPACA) on mental health benefit requirements.

Commentary on Question:

Commentary on part (a), if appropriate.

7. Continued

MPHA prevents applying lower annual/lifetime limits on MH benefits when compared to the annual/lifetime limits of medical/surgical benefits

- Insurance companies, group health plans, and groups > 50 lives cannot impose these limits.
- Groups are not required to offer mental health benefits.

One of the loopholes was that if insurers and groups complied with the spirit of law, there were limits on the frequency/duration of visits used, number of prescriptions.

MHPEA required parity of both mental health and substance abuse benefits when compared to medical/surgical benefits of the specific group benefit plans.

- This still applied to groups > 50 lives, regardless if the groups were ASO or fully insured.
- Prevents plans from (a) applying financial requirements (cost sharing) and limits that are more restrictive than the predominant financial requirements (cost sharing) and limits (b) of substantially all medical/surgical benefits
- The parity requirements include 6 categories of medical/surgical benefits
    - Inpatient - in network , out of network
    - Outpatient - in network, out of network
    - Emergency care
    - Prescription drugs
    - The parirty test applies to each of the 6 categories. If a plan offers MH/SUD in any classification of benefit, then it must offer in all classification in which med / surg benefits are offered

- PPACA prohibits imposing annual/lifetime annual limits on mental health / substance abuse, because these are considered essential health benefits.

(b) Determine whether each of the mental health member cost sharing options shown below comply with MHPAEA. Justify your answers.

Commentary on Question:
Commentary on part (b), if appropriate.

To demonstrate compliance with MHPEA

First, determine the type of cost sharing that applies to substantially all benefits. Therefore copays apply to all the benefit categories

Second, determine the predominant level of cost sharing. Therefore $100 copay applies to majority of the medical/surgical benefits.

Option A is not compliant because the deductible (not a copay) does not apply to substantially all benefits.

Option B is not complaint because the coinsurance (not a copay) does not apply to substantially all benefits

7. Continued

Option C complies because it's a copay. And the $50 copay < $100 predominant copay.
Option D complies because it's a copay. And $100 copay = $100 predominant copay
Option E is not compliant because $150 > $100 predominant copay

(c) Describe care management and cost control mechanisms available to manage mental health benefits.

Commentary on Question:
Commentary on part (c), if appropriate.

Care mgt and cost control mechanisms
Prior auth before specific treatments is traditionally done
During the referral process, use an intake specialist to evaluate urgent vs. emergent situations
Predictive modeling and risk assessment is early intervention, and identifies likely high cost members (high utilization and repeat utilization)
Performance measurement of the provider network. Includes provider profiling and timely treatment of conditions. Result is lower emergency util'n.
Case management ensures appropriate treatment. It uses protocols that depend if the claim is acute or chronic.
Utilization review determines medical necessity/appropriate of treatment....it uses concurrent, prospective and retrospective protocols.
Outcomes management uses objective data/technology to evaluate risks and intervene early. Results are better outcomes and fewer emergencies.
Depression disease management coordinates among doctors, pharmacists, patients, and health plans. Depression is chronic and expensive and therefore needs to be managed.
Substance abuse relapse programs

(d) Describe the types of employee assistance programs (EAPs) available, and explain the advantages of offering an EAP to help reduce mental health costs.

Commentary on Question:
Commentary on part (d), if appropriate.

Full service EAP involves face-to-face consultation and provides a variety of services, which also include services such as 24-hour phone, legal calls, and unlimited calls.
Work-life EAP benefits are similar to full-service EAP but do not involve face-to-face consultation.

7. Continued

The advantages of EAP are (a) easy access to timely problem resolution (s) high utilization due to less stigma (c) proven cost management due to early intervention, (d) fewer expensive medical claims and (b) better/more frequent communication

8. Learning Objectives:

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

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

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

Learning Outcomes:

Sources:
Effective Contracting with Pharmacy Benefit Managers, Health Watch, February 2010
http://www.soa.org/library/newsletters/health-watch-newsletter/2010/february/hsn-2010-iss63.pdf

Group Insurance, Bluhm, fifth Edition, 2007
- Chapter 30, Estimating Medical Claim Costs, pgs 625 - 629

Generic Dispensing Rates: Silver Bullet No More?, Health Watch, May 2010
http://www.soa.org/library/newsletters/health-watch-newsletter/2010/may/hsn-2010-iss64.pdf

Commentary on Question:
Commentary listed underneath question component.

Solution:
(a) Explain risks with the CFO's prescription drug trend assumption. Include facts and industry developments to support your answer.

Commentary on Question:
The intent of this question was to test candidates on pharmacy market specific risks. The question wording did not define the types of risks that should be considered when providing a response to this question (e.g. pricing, trend, and legal risks, etc.). Therefore, additional points were awarded for providing and supporting these kinds of risks. Candidates also approached this with different lines of business in mind. Risks may vary for Commercial/Medicare/Medicaid populations. Responses related to any/all lines of business were accepted.

8. Continued

Increasing generic dispensing rate has kept trends low in the recent past. The increase in generic use is due to:

- Generic substitution: generic alternatives to brand name drugs
- Increased use of generic drugs due to plan design/formulary
- Increased public acceptance
- Direct to consumer marketing e.g. ("Wal-Mart" programs)
- Historically, the pipeline of brand drugs going off patent has been high, but it expected to have less impact going forward
- The generic dispensing rate (GDR) is reaching a saturation point
- High trends on specialty drugs
- New specialty blockbusters for specialty drugs far exceed non-specialty new development
- National prescription drug expenditures have increased by double-digit percentages in recent years

Trend risks:

- Only using 1 year of trend to project 4 years of experience
- Aging population / demographic changes

Legal risks:

- ACA legislation impacting pharmacy costs:
  - Closing the donut hole in Medicare
  - Pharmacy drugs considered essential health benefit in the Exchange

(b) Outline contractual elements with your PBM which should assist in keeping prescription drug trends low for the 2013 through 2016 period.

Commentary on Question:
Candidates generally did not perform well on this question. It was clear that some candidates pulled information from only one specific list. However, this only accounted for a smaller fraction of available points. In general, candidates did not mention things like insurers negotiating with their PBM for discounts off AWP or pass-thru pricing from manufacturers.

- Negotiate pass-through pricing based on a flat fee per claim or per member to pass the exact purchase price through
- Negotiate more favorable reimbursement for each prescription filled by the PBM (e.g. larger discounts on ingredient costs such as AWP)
- Formulary incentives
  - Tiered benefit structure / wider copay differentials
  - Multi-source brand penalties

8. Continued

  - Utilization management
    - Step therapy
    - Prior authorization
  - Coinsurance based cost sharing
- Contractual arrangements:
  - "Lesser of" pricing for network and mail order pharmacies
  - Price guarantees for brand-name and generic drugs
  - Minimum rebate guarantees
  - Formulary program discounts
  - Measurable performance guarantees

(c) Calculate the average Allowed and Net PMPMs for 2012 given the frequency and cost information below. Show your work.

Commentary on Question:
Candidates generally did well on this question. Several candidates struggled calculating the plan payment based on the specialty drug claim probability distribution. The claim probability distribution could have been interpreted as annual allowed claims, annual net claims, or annualized cost per script. Credit was given for any of these interpretations, but the graders were looking for consistent assumptions between the allowed and net PMPM calculations. Finally, many candidates lost points for not showing sufficient work within their calculations.

Allowed PMPM = (Annual Scripts per 1,000) * (Average Allowed Cost per Script) / 12,000
Tier 1: Allowed PMPM = (2,500 * $24.00) / 12,000 = $5.00
Tier 2: Allowed PMPM = (5,000 * $80.00) / 12,000 = $33.33
Tier 3: Allowed PMPM = (1,500 * $160.00) / 12,000 = $20.00
Specialty: Allowed PMPM = (100 * $3,000.00) / 12,000 = $25.00
Total Allowed PMPM = $5.00 + $33.33 + $20.00 + $25.00 = $83.33

Net PMPM = Allowed PMPM - Cost Sharing PMPM
Cost Sharing PMPM (Tiers 1-3) = (Annual Scripts per 1,000) * (Copay) / 12,000
Cost Sharing PMPM (Specialty): Weighted average cost after applying copay and coinsurance
Coinsurance limit threshold = $2,000 / 0.20 = $10,000
Tier 1: Cost Sharing PMPM = (2,500 * $10.00) / 12,000 = $2.08
Tier 2: Allowed PMPM = (5,000 * $25.00) / 12,000 = $10.42
Tier 3: Allowed PMPM = (1,500 * $50.00) / 12,000 = $6.25
Specialty: Cost Sharing PMPM = (($0 * 20% * 0.83) + ($435 * 20% * 0.11) + ($1,405 * 20% * 0.03) + ($4,500 * 20% * 0.02) + ($10,000 * 20% * 0.01)) / 12 = $4.67
Total Net PMPM = $83.33 - ($2.08 + $10.42 + $6.25 + $4.67) = $59.92

8. **Continued**

Tier	A Scripts per 1000	B Allowed Cost per Script	C=A*B/12000 Allowed PMPM	D Cost Share per Script	E=A*D/12000 Cost Share PMPM	C-E Net PMPM
Tier 1	2500	$ 24	$ 5.00	$ 10	$ 2.08	$ 2.92
Tier 2	5000	$ 80	$ 33.33	$ 25	$ 10.42	$22.92
Tier 3	1500	$ 160	$ 20.00	$ 50	$ 6.25	$13.75
Specialty	100	$ 3,000	$ 25.00		$ 4.67*	$20.34
			$ 83.33			$59.92

Specialty Cost Sharing Development

	a Frequency	b Annual Allowed Claims	c= b x 20% Annual Cost Sharing	d = a x c Annual Cost Share x Frequency
$0	0.83	$ -	$ -	$ -
$0.01 - $1,000	0.11	$ 435	$ 87	$ 9.57
$1,000.01 - $2,000	0.03	$ 1,405	$ 281	$ 8.43
$2,000.01 - $10,000	0.02	$ 4,500	$ 900	$ 18.00
>$10,000	0.01	$ 12,000	$ 2,000**	$ 20.00
			Annual Cost Sharing PMPY	$ 56.00
			Annual Cost Sharing PMPM = $56/12	**$ 4.67**

* Calculated from the Specialty Cost Sharing Development
** Member hits the $2000 OOP max

9. Learning Objectives:

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

Learning Outcomes:

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

Sources:

Group Insurance, Bluhm, Fifth Edition, 2007
Chapter 11, Miscellaneous Benefits

Individual Health Insurance, Bluhm, 2007
Chapter 4, Managing Anti-Selection

Timing's Everything: The Impact of Benefit Rush, Health Watch, May 2008
http://www.soa.org/library/newsletters/health-watch-newsletter/2008/may/hsn-2008-iss58.pdf

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a)

(i) Explain the shape of the graph for the experience year.

(ii) Explain the expected shape of the graph in the next twelve months.

(iii) Sketch the graph for the two year period.

(iv) Annotate the graph with labels describing the behaviors observed.

(v) Provide another example of a plan offering that would have similar patterns.

9. Continued

Commentary on Question:
Candidates were generally successful in identifying that this question was referencing the concept of benefit rush, hush and trend crush. Many were successful in explaining the general seasonality pattern of the vision benefits; however, it was less common for candidates to integrate both aspects (i.e., rush/hush/crush and seasonality) into their responses.

(i) The graph reflects a seasonality pattern for a vision benefit. In January and February, the PMPMs are low as members are still satisfying their deductibles. In March, there is a spike in the PMPM due to members satisfying their deductible, but not hitting the plan maximum. However, this is dampened in following months through September, as membership growth is experienced.

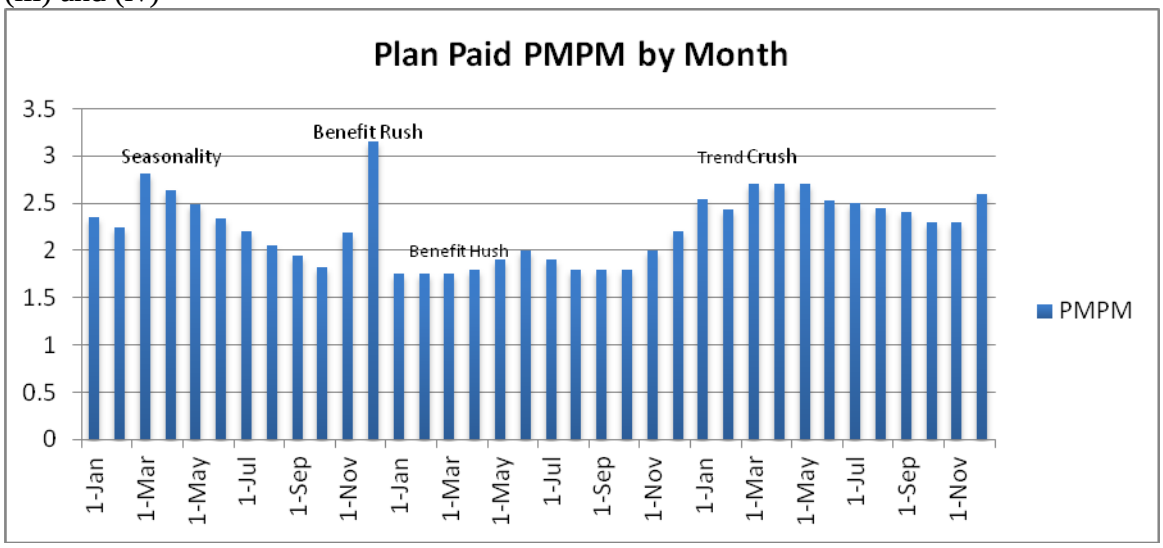
As the benefit announcement is made in October, members realize that they will be responsible for more of the benefit cost share in the following year. This resulted in a "benefit rush" and the PMPMs spike as members hurry to utilize services in November and December, taking advantage of the richer benefit plan that is currently in place.

(ii) The benefit rush not only impacts the year before a change is implemented, but also has an impact for 2 years following implementation there is a benefit hush. Claims are lower than they would be on a steady state basis in part because some of the services that would have been incurred in that time period were incurred during the rush. In addition, there is often a wait and see attitude as consumers adapt to the new plan.

In the second year, there is a trend crush as claims go back to a more normal level and consumers become more familiar with the new plan design. The trend, however, is higher that it would have been because it is coming off a lower base.

9. Continued

(iii) and (iv)



(v) Examples could include, but are not limited to:

- Dental benefits
- HDHP benefit reductions
- Discontinuing to offer certain benefits, such as LASIK or hearing aids

(b) Explain considerations in setting claims reserves at the end of the current year for this group's vision plan.

Commentary on Question:
Candidates were generally unsuccessful in identifying the effects of seasonality and noting the increasing membership. There was also little discussion of reserving methods. Partial credit was given to those who identified the effects of the rush/hush/crush pattern.

In setting the claim reserve, consideration should be made regarding the following:

- Seasonality and the rush/hush/crush
- Increases in membership growth may require additional analysis
- Evaluate which reserving method is most appropriate

(c) The group suggests that they would offer the vision plan on a voluntary basis as a cost savings measure. Outline the likely effects of going to a voluntary plan.

Commentary on Question:
Candidates were generally successful in identifying that anti-selection will exist and that the premium PMPMs would increase. However, few commented that the overall costs for the plan would decrease.

9. Continued

Since vision is a benefit in which members can reasonably predict their needs, moving to a voluntary plan would introduce a risk of anti-selection. External anti-selection would occur as members who know they will not use the benefit will elect to not purchase coverage while those who know they will use the benefit will purchase coverage.

This will cause the PMPM costs to go up, but the overall costs incurred by CrinklePuppy would still decrease since there would be lower enrollment.

10. **Learning Objectives:**

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

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

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

Learning Outcomes:

(1c) Identify which participants would find each coverage a valued benefit and why.

(1d) Assess the advantages and disadvantages to n sponsor of offering a given coverage/benefit.

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

(1f) Recommend policy provisions to minimize the risks identified above.

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

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

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

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

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

(8a) Understand the risks and opportunities associated with a given coverage, eligibility requirement or funding mechanism.

10. Continued

(8c) Recommends strategies for minimizing or properly pricing for risks.

(8d) Describe basic approaches to credibility theory.

(8e) Apply the credibility theory to a given underwriting situation.

Sources:
McKay Canadian Handbook of Flexible Benefits, 3rd Edition,

- Chapter 4, Plan Structure and Eligibility
- Chapter 14, Pricing

Commentary on Question:
Candidates are required to demonstrate their ability to price a flexible benefits program by using different rating approaches. They are also required to understand the impact to the employees and employers by using different pricing strategies as well as the implication of implementing a flexible benefit program in a unionized environment. Candidates in general were able to receive points for question (a), (b) and (e) as long as they listed the key points. Question (b) has two parts and candidates were not able to differentiate the rating methodologies required by part (i) and part (ii) in order to evaluate the financial impact of implementing a flexible benefits program. Part (b) is long and some candidates did not seem to have time to finish part (ii). Question (b)(ii) also relates to Question (c), and most candidates compared the price tags with the credits that employees can receive under the flexible benefits program but did not take into consideration the employee cost sharing under the current traditional program.

Solution:
(a) Explain the reasons why flexible benefit programs have been slower to emerge within unionized workforces and describe elements that can be included to help ensure the program's success.

- Strong influence of collective bargaining process on determination of benefits
  - Flex benefits viewed as a technique for shifting a greater proportion of the cost of benefits to employees
- Deep-seated union concern about ability of members to make benefit decisions
- Concept of Flex, with emphasis on individual determination of benefit needs, runs counter to basic principle of collective bargaining
  - Providing choices to members has potential to diminish role of union

Elements that can be included to help ensure the program's success

- Flex program for salaried employees is popular
- Employer demonstrates that active effort is under way to control health care costs beyond introducing Flex

10. Continued

- Retain pre-Flex plan as an option with employer-contributed credits sufficient to purchase this option at least in the first year
- Provide essentially same benefits as for salaried employees
- If there is a particularly attractive option, "bundle" it within the Flex program
- Develop an equitable solution for sharing cost increases or reductions in subsequent years
- Include a labor relations representative on the design team

(b) Calculate what CANMANAGE's 2012 costs would have been under the salaried flexible benefit plan design for both salaried and unionized employees if:

(i) The unionized and salaried employees were combined for rating purposes using the current salaried plan's price tags and credits.

Calculate combined life insurance rate:

- Current salaried: $80,000 x $0.180 x 1,500 = $21,600,000
- Current hourly for 1x salary: $60,000 x $0.150 x 500 = $4,500,000
- Combined life insurance rate = (21,600,000 + 4,500,000)/(60,000 x 500 + 80,000 x 1,500) = $0.174

Calculate combined LTD rate:

- Current salaried: $80,000 x 1.5% x 1,500 = $1,800,000
- Current hourly: $60,000 x 2.2% x 500 = $660,000
- Combined LTD rate = (1,800,000 + 660,000)/(60,000 x 500 + 80,000 x 1,500) = 1.64%

Calculate annual life insurance cost on combined basis:

- Formula: Annual cost = Average salary x rate / 1000 x 12 x number of lives
- Salaried: $80,000 x $0.174 / 1000 x 12 x 1,500 = $250,560
- Hourly: $60,000 x $0.174 / 1000 x 12 x 500 = $62,640
- Total: $250,560 + $62,640 = $313,200

Calculate annual LTD cost on combined basis:

- Formula: Annual cost = Average salary x rate x number of lives
- Salaried: $80,000 x 1.64% x 1,500 = $1,968,000
- Hourly: $60,000 x 1.64% x 500 = $492,000
- Total: $1,968,000 + 492,000 = $2,460,000

Calculate annual health and dental cost on a combined basis:

- Salaried health claims cost: 1,500 x 12 x (60% x $90 + 40% x $175) = $2,232,000
- Salaried dental claims cost: 1,500 x 12 x (70% x $85 + 30% x $150) = $1,881,000
- For hourly claims cost, assume same distribution between option 1 and option 2 as for salaried

10. Continued

- Hourly health claims cost: 500 x 12 x (($90 x 25% + $180 x 75%) x (0.65 x 60% + 40%)) = $746,550
- Hourly dental claims cost: 500 x 12 x (($80 x 25% + $160 x 75%) x (0.75 x 70% + 30%)) = $693,000

Cost of credits: $3000 x 2000 = $6,000,000
Price tags: 2000 x (0.6 x (25% x 700 + 75% x 1400) + 0.4 x (25% x 1000 + 75% x 2800) + 0.7 x (25% x 600 + 75% x 1300) + 0.3 x (25% x 900 + 75% x 1800)) = $5,870,000
Formula for employer health and dental cost: Claims cost + credits - price tags
Employer health and dental cost: 2,232,000 + 1,881,000 + 746,550 + 693,000 + 6,000,000 - 5,870,000 = 5,682,550
Total employer cost on combined basis: $313,200 + $2,460,000 + $5,682,550 = $8,455,750

(ii) The unionized plan was separately rated from the salaried plan with credits and price tags determined using the average credit approach.
Assume the following relative values of option 1 to option 2:

- Health: 0.65
- Dental: 0.75

State your assumptions and show your work.

Union rated separately:
Union Life insurance rate: 30%*0,150 + 70%*0,220 = 0,20
Union life insurance cost: $60,000 x $0.200 / 1000 x 12 x 500 = $72,000
Union LTD rate: 40%*2,2% + 60%*1,86% = 2,0%
Union LTD cost: $60,000 x 2% x 500 = $600,000
Average credits means credits = current employer cost for health and dental (current plan cost per covered employee)
Union employer cost = 0.8 x 500 x 12 x (90 x 0.25 + 180 x 0.75 + 80 x 0.25 + 160 x 0.75) = $1,428,000
Total union employer cost = $72,000 + $600,000 + $1,428,000 = $2,100,000
Current salaried plan costs:
Salaried life insurance cost: $80,000 x $0.180 / 1000 x 12 x 1500 = $259,200
Salaried LTD cost: $80,000 x 1.5% x 1500 = $1,800,000
Salaried health and dental claims cost: 1500 x 12 x (60% x 90 + 40% x 175 + 70% x 85 + 30% x 150) = $4,113,000
Salaried credits: $3,000 x 1500 = $4,500,000
Salaried price tags: $5,870,000 (see above) x 1500 / 2000 = $4,402,500
Salaried employer health and dental claims cost: $4,113,000 + 4,500,000 - 4,402,500 = $4,210,500

10. Continued

Total salaried employer cost: $259,200 + $1,800,000 + $4,210,500 = $6,269,700
Total employer cost if rated separately: $6,269,700 + 2,100,000 = $8,369,700

(c) The Director of HR is concerned that the flexible benefit plan could adversely impact unionized employees. Assess the validity of the Director's concerns by performing a winners and losers analysis. Assume the unionized employees are separately rated and use the average credit approach. Show your work.

Calculate credits and price tags for average credit approach for union plan
Credits = $1,428,000 / 500 = $2,856
Price tags (assuming realistics pricing)
Health option 1: Single = 90 x 12 x .65 = $702, Family = 180 x 12 x .65 = $1,404
Health option 2: Single = 90 x 12 = $1,080, Family = 180 x 12 = $2,160
Dental option 1: Single = 80 x 12 x .75 = $720, Family = 160 x 12 x .75 = $1,440
Dental option 2: Single = 80 x 12 = $960, Family = 160 x 12 = $1,920
Current employee cost
Single: 20% x (1080 + 960) = $408
Family: 20% x (2160 + 1920) = $816
Winners and losers analysis:
Health option1, dental option 1, single:

- Price tags = 702 + 720 = $1422, credits = $2856, Net employee cost = -$1434 vs. current cost = $408
- Lower cost, lower benefit, trade-off

Health option 1, dental option 1 family:

- Price tags = 1404 + 1440 = $2844, credits = $2856, Net employee cost = -$12 vs. current cost = $816
- Lower cost, lower benefit, trade-off

Health option 1, dental option 2, single:

- Price tags = 702 + 960 = $1662, credits = 2856, Net employee cost = -$1,194 vs. current cost = $408
- Lower cost, lower health benefit, same dental benefit, trade-off

Health option 1, dental option 2, family:

- Price tags = 1404 + 1920 = $3,324, credits = 2856, Net employee cost = $468 vs. current cost = $816
- Lower cost, lower health benefit, same dental benefit, trade-off

Health option 2, dental option 1, single:

- Price tags = 1080 + 720 = $1,800, credits = $2856, Net employee cost = -$1056 vs. current cost = $408
- Lower cost, lower dental benefit, same health benefit, trade-off

10. Continued

Health option 2, dental option 1, family:

- Price tags = 2160 + 1440 = $3,600, credits = $2856, Net employee cost = $744 vs. current cost = $816
- Slightly lower cost, lower dental benefit, same health benefit, trade-off but likely loser since difference in cost not significant

Health option 2, dental option 2, single:

- Price tags = 1080 + 960 = $2,040, credits = $2856, Net employee cost = -$816 vs. current cost = $408
- Lower cost, same benefits, winner

Health option 2, dental option 2, family:

- Price tags = 2160 + 1920 = $4,080, credits = $2856, Net employee cost = $1224 vs. current cost = $816
- Higher cost, same benefits, loser

(d) Recommend an alternative flexible benefit pricing strategy that would meet the CEO's cost objective and minimize the number of losers. Justify your recommendation.

Need a pricing strategy that will have no losers and at least no additional cost to employer

The recommendation could be any of the (a) single coverage credits, (b) buy-back pricing, or (c) election-based pricing. Marks will only be given to one of the three recommendations.

Recommendation #1 - single coverage credits

- Credits are allocated to all employees at a level equal to company cost of the employee-only coverage
- In order to meet the objective of no losers, prices for family coverage in all options have to be reduced

This is a subsidy and no realistic prices; relationship between family levels is inaccurate. This is hard for employees to make reasonable decisions when prices do not reflect true cost.

Recommendation #2 - buy-back pricing

- credits are allocated based on the average cost of each employee to the employer prior to flexible program
- takes into account the differing cost of employees based on whether or not they cover dependants.
- even though price tag in the option is higher for families than for singles, the excess credits to families are also higher
- does not achieve benefit value equity as employees with dependents receive more credits

10. Continued

Recommendation #3 - election-based pricing

- credits are allocated based on the average cost of each employee to the employer prior to flexible program (same as buy back)
- takes into account the differing cost of employees based on whether or not they cover dependants.
- lower option would allocate fewer credits to families, have same net cost regardless of family status
- complete benefit value equity is still not achieved but much of the inequity has been eliminated

(e) CANMANAGE's collective bargaining agreements are signed for a three-year period. Describe approaches that may be used to address costs for a multi-year contract.

Credits and price tags or net price remain fixed over life of the contract

- Employer picks up all inflationary cost during the term of the contract

Credits and price tags or net price determined up front for each year during the contract

Credits and price tags or net price increased each year according to some indices

- Could put a cap on the annual increase or on the maximum total increase during the contract

Credits and price tags or net price bargained each year

11. Learning Objectives:

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

6. Apply U.S. and Canadian taxation rules to employer and individual health plan.

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

Learning Outcomes:

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

(1b) Identify the potential gaps in needed or desired coverages.

(1f) Recommend policy provisions to minimize the risks identified above.

(6b) Describe key provisions of major regulation.

(7a) Identify and evaluate sources of data needed for pricing and underwriting including the quality, appropriateness, and limitations of each data source.

(7b) Identify and evaluate the rating parameters needed to evaluate and manage a book-of-business.

(7e) Evaluate the impact of changing economic conditions on pricing.

Sources:

GH-D103-07: Pricing Long-Term Care, pgs 1 – 34

A Suggestion to Do a Post Mortem Analysis of the Work Done by LTC Pricing Actuaries Over the last Quarter Century, Long Term Care News, December 2009
http://www.soa.org/library/newsletters/long-term-care/2009/december/ltc-2009-iss24.pdf

Commentary on Question:

Commentary listed underneath question component.

11. Continued

Solution:

(a) Explain how each of the following could impact premium adequacy.

(i) Higher voluntary lapses than expected in early durations

(ii) Higher voluntary lapses than expected in later durations

(iii) Higher mortality than expected

(iv) Higher morbidity than expected

(v) Higher interest rates than expected

Commentary on Question:
Most candidates did well on parts (i), (iv) and (v). A good portion of candidates failed to realize the higher lapse in later durations improves the premium adequacy. Several others mixed up the definitions of mortality and morbidity. The more successful candidates recognized that the mortality assumption has a similar effect as the lapse assumption which could impact the premium adequacy favorably or unfavorably.

(i) LTC products take a long time (7-10 years) to be profitable due to the front loaded acquisition costs (such as commission, marketing, underwriting, etc.) Higher voluntary lapses than expected in early durations make premium inadequate.
(ii) Higher voluntary lapses in later durations improve premium adequacy because LTC claim costs (morbidity) are higher in later durations and most premiums are already collected.
(iii) The mortality assumption has similar effect as the lapse assumption. Higher mortality in later durations or on unhealthier lives reduces the claims liability and increases the premium adequacy. Higher mortality in early durations or on healthier lives decreases the premium adequacy.
(iv) High morbidity increases LTC claim costs hence decreases the premium adequacy.
(v) High interest rate generates more investment income on reserves so has positive impact on the premiums adequacy

(b) Describe the "rate stability law" and the impact it has had on LTC premium rating.

11. Continued

Commentary on Question:
While it was clear that many candidates understood what the law was intended to accomplish, they generally failed to answer what the question actually asked. In this case the question asked the candidate to describe the "rate stability law" not why it was developed. Those candidates that read the question carefully enough to indicate the features of the law tended to do much better.

The rate stability law was introduced to restrict the ability of LTC providers from introducing large premium increases that resulted from the inadequacy of initial premium rates. The law requires that an actuary certify under moderately adverse experience, that the initial premium rate schedule be adequate to cover the anticipated cost of the form of the form with no future premium rate increases anticipated.

While rate increases are not assumed to occur they may still become necessary. The law requires an expected loss ratio of 58% in the initial premium and 85% on any increased premium.

Since the law has been enacted rate increases have continued to occur more frequently than expected. The law has not been effective in stabilizing premium rates.

(c)

(i) Describe the requirements for an LTC plan to be tax-qualified.

(ii) Assess whether the current eligibility requirements fulfill the requirements for a tax-qualified LTC plan and propose changes as necessary.

Commentary on Question:
Many candidates mistakenly thought a medical-necessity trigger was required, rather than prohibited, for a tax-qualified LTC plan. The more successful candidates recognized that the second part of this question required them to both explicitly state that the current plan does not meet the requirements to be a tax-qualified plan, and to propose specific changes that would enable the plan to meet those requirements.

To be tax-qualified, an LTC plan must only provide benefits for "chronically-ill individuals," as evidenced by a functional impairment that is certified by a licensed medical practitioner and expected to last at least 90 days. The functional impairment must either be a cognitive impairment or the need for substantial assistance with two or more activities of daily living (ADL). A medical-necessity-type trigger may *not* be required, because this is not the same standard as that of requiring the individual to be chronically ill.

11. Continued

The current plan does not meet the requirements for a tax-qualified plan. I recommend changing the number of required ADLs from one or more to two or more, add "or cognitive impairment," remove the medical-necessity trigger, and change the required duration from 60 days to 90 days.

(d) Explain the tax benefits of a tax-qualified plan to both the insured and the insurance company.

Commentary on Question:
The 7.5% of AGI is changing to 10% under the Accountable Care Act. It was not necessary to cite this to get full credit.

A common mistake candidates made was to cite the benefits to an employer offering a tax-qualified plan, rather than the benefits to an ***insurer****.*

The benefits of a tax-qualified LTC plan are received tax-free by the insured, and their premiums are tax-deductible to the extent they (and other medical expenses, if applicable) exceed 7.5% of adjusted gross income (AGI).

Insurers benefit from offering qualified plans because they can calculate active life reserves for tax purposes using one-year preliminary term, rather than two-year. This effectively lowers the insurer's tax burden in the early policy years.

12. Learning Objectives:

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

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

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

Learning Outcomes:

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

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

(7c) Develop experience analysis (claims cost and expenses):
- (iii) Construct the appropriate models
- (iv) Develop the appropriate assumptions, including trend, anti-selection, etc.

(8b) Evaluates the criteria for classifying risks.

Sources:

Group Insurance, Bluhm Fifth Edition, 2007
- Chapter 21, Small Group Rate Filings and Certifications
- Chapter 25, Underwriting Small Groups

Individual Health Insurance, Bluhm, 2007
- Chapter 3, Policy Forms

Cost and Benefit Trends Observed in July 1, 2011 Renewals for State Employers (Exclude Appendix), Health Watch, October 2011
http://www.soa.org/library/newsletters/health-watch-newsletter/2011/october/hsn-2011-iss67.pdf

Critical Issues in Health Reform: market Reform Principles
http://www.actuary.org/pdf/health/market_reform-may09.pdf

Commentary on Question:

This question was intended to test the students' knowledge of small group rating, NAIC model legislation and the necessary impacts to address in rate development due to the Affordable Care Act.

Solution:

(a) Calculate the calendar year 2010 expected total medical base rate that would have been filed, incorporating the impact from the chronic disease program.

12. Continued

Commentary on Question:
The majority of candidates were able to develop the correct formula for calculating the 2010 expected base rate. Some common issues in incorporating the disease management program were reducing for the physician disease management impact rather than increasing for the impact, and adding the disease management impact to one year of trend rather than multiplying.
In some cases candidates applied only one year of trend or omitted either the utilization trend or unit cost trend in the calculation.

In these types of questions it is important for candidates to clearly illustrate the formula being used in the calculation so graders can follow their work.

PMPM = The sum of the following for each service category:

Utilization * (1 + utilization trend)^2 *
Unit Cost * (1+contract trend)^2 *
(1+medical management impact) / 12000

=	Inpatient:	52.1 * (1 + 0.02)^2 *
		\$5,122 * (1 + 0.04)^2 *
		(1+-0.01) / 12000
+	Outpatient:	450 * (1 + 0.05)^2 *
		\$674 * (1 + 0.05)^2 *
		(1+-0.06) / 12000
+	Physician:	6,700 * (1 + 0.02)^2 *
		\$132 * (1 + 0.02)^2 *
		(1+ 0.03) / 12000
+	Rx:	9,124 * (1 + 0.04)^2 *
		\$32 * (1 + 0.06)^2 *
		(1+-0.00) / 12000

= \$24.77 + \$28.88 + \$82.17 + \$29.57

= \$165.39

(b) The plan has these expenses:

Claims and Customer Service	6%
Group Service	5%
Health Management	4%
Risk Charge	5%
Other Administrative	2%

Calculate the filed rate using this information. Show your work.

12. Continued

Commentary on Question:
Most candidates did well on this question. In some instances candidates accounted for the Health Management expense in the numerator (as a % of claims) and the remaining expenses in the denominator (as a % of premium). This was considered a reasonable assumption.

Calculate filed rate for 2010

Filed Rate	=	Medical Expense / (1- Retention) or
		Medical Expense / (1-Admin-Profit) or similar
	=	165.39 / (1 - (6.0% + 5.0% + 4.0% + 5.0% + 2.0%)
	=	165.39 / 78.0%
	=	212.04

(c) Identify normalizing factors that you would incorporate into the development of the manual rate and describe considerations for developing each factor.

Commentary on Question:
The majority of candidates were able to identify the basic normalization factors such as age/gender, area, benefit plan, and group characteristics. Roughly half of the candidates identified utilization management and provider reimbursement as normalization factors.

Candidates who scored well on this question were able to highlight how to normalize for the factors and describe major considerations for developing the factors. On these types of questions it is important to include supporting information beyond a list of factors.

Normalizing Factors incorporated in the development of the manual rate include the following:

Age and Gender

Considerations in developing these factors include:

- Variation in costs due to age/gender can be substantial (1:5)
- Either adjust historical costs to a standard population or renormalize factors to represent current mix
- Separate factors for major services categories (hospital, physician, or prescription drugs) may be appropriate

Geographic area

Considerations in developing these factors include:

- Variation can be substantial (+/- 50%)
- Need to adjust historical data to a standard area
- Can be studied in aggregate or by major service categories (hospital, physician, or prescription drugs)

12. Continued

- A company might use area factors from a competitor or from an actuarial consultant, and then monitor loss ratios by area as experience emerges.

Benefit Plan

Considerations in developing these factors include:

- Different benefit plans can produce significantly different claim costs, even when all other variables are identical.
- Different benefit plans are likely to experience different utilization patterns depending on the degree of insured cost sharing
- High deductible plans tends to have lower utilization than low deductible plans because deductible acts as deterrent
- Need to adjust data to a standard benefit design, commonly to the richest design

Group Characteristics

Considerations in developing these factors include:

- Need to adjust data to reflect average industry
- Industries with above average costs typically involve physical labor, such as mining or construction, or those where employees tend to be highly aware of available benefits and services, such as educational institutions and health care providers.
- Need to adjust data to reflect average group size
- Impact of individuals with serious conditions is more pronounced on small groups because large groups have more members to spread cost across
- Small employers have greater ability to select against insurer since more likely to know if there are persons with serious conditions that a large employer

Utilization Management

Considerations in developing these factors include:

- Need to adjust to reflect any significant changes in UM programs during the experience period and the rating period
- Utilization review or utilization management (UM) is used to assess the necessity of a given treatment or the appropriateness of the setting in which care is delivered.

Provider Reimbursement Arrangement

Considerations in developing these factors include:

- Need to adjust to reflect any significant changes in provider reimbursement arrangements changed during the experience period or the rating period

12. Continued

- Change from capitated physician to physician paid on fee schedule would require an adjustment to reflect utilization for capped services (or add estimate unit prices to encounters if capitated utilization was available
- Change in fee schedule requires an adjustment

(d) The state has adopted the NAIC model legislation with a literal interpretation.

(i) Describe the maximum rate a group could be charged for its first year.

(ii) Describe the maximum rate increase that can be given to a group after the first year, assuming there are no changes to the group or the offering.

Commentary on Question:
Candidates that scored well on this question defined the base rate and/or index rate in their answer and related the +/- 25% rule to the maximum rate being 67% above the base rate.

Most candidates correctly recalled the formula for the maximum rate increase; however it is important to provide enough detail in labeling the variables. For example many candidates did not specifically state that the 15% in the formula was for experience.

(i) The base rate would be the lowest possible rate (after case characteristic and benefit adjustment) that could be charged under the rating manual for a class of business. The corresponding highest rate would be 67% higher than the base rate, under the NAIC model law.
The 67% factor comes from a comparison of the highest to lowest rates allowed under the ±25% rule (1.25/.75). The index rate is average of base premium rate and highest premium rate for each class. Assume there is only one class of business so don't have to worry about 20% class differential between index rates

(ii) The Model Act limits rate increases applied to each group, to the sum of the following:

1. The percentage change in the new business rate measured from the first day of the prior rating period to the first day of the new rating period.
2. 15% annually for experience, adjusted pro rata for rating periods of less than one year (this also varies by state)
3. Any adjustment due to change in coverage or case characteristics.

12. Continued

(e) Describe changes you would make to this filing to make it applicable for an effective date of January 1, 2014.

Commentary on Question:
In general candidates did not provide enough detail in their answers. Candidates that scored well understood both the general steps needed to update the rate and the impacts of the Affordable Care Act currently in effect and the additional impacts that will take place in 2014.

- Update the baseline data
- Review trends (contract changes/medical management changes)
- Update trends and trend enough years
- Reduce admin to 20% or less to meet the 80% MLR requirement
- Adjust for subsidization caused by limitations on age/health status
- Adjust for expected impact of guarantee issue provisions
- Adjust for impacts of preventive services @ 100%, coverage of dependents to age 26, removal of annual limits on dollar value of coverage
- Adjust for temporary reinsurance pool assessment
- Adjust for insurer fees
- Adjust benefits to include all EHBs
- Adjust benefits to comply with AV levels
- Adjust for single risk pool

13. Learning Objectives:

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

Learning Outcomes:

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

(5b) Describe key provisions of major legislation.

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

(5d) Determine the potential impact on the cost of complying with the regulation.

Sources:

GH-D122-11, Should Your State Establish a Health Insurance Exchange?

GH-D120-11, Operation of a Health Exchange Within the PPACA

GH-D123-11, Health Insurance Exchanges: Implementation and Data Considerations for States and Existing Models for Comparison

Commentary on Question:

The question focused on implementation of state exchanges under PPACA. In general, students were successful with part (a), which tested retrieval of knowledge. Students struggled more with sections (b) and (c). Unsuccessful students reiterated the same state vs. federal information from section (a) on the latter sections, while successful students focused on the organizational and operational issues addressed in (b) and (c).

Solution:

(a) Describe issues that a state should consider regarding the creation of a health exchange under the Patient Protection and Affordable Care Act (PPACA).

Self-determination

States must decide whether the creation and control of an exchange by the individual state rather than the federal government is a critical local issue. If individual states don't act, the federal government will provide a default exchange to be designed by HHS.

Initial and ongoing cost

PPACA includes grant funding for creation of exchanges. Initial grant funding is available for a year from adoption of PPACA; grants may be renewed if satisfactory progress is being made. However, there will be ongoing costs to maintain an exchange

Exchange can assess insurers who participate but there may be pressure from insurers to keep those assessments as low as possible.

13. Continued

Recognition of individual state issues
If a state creates its own exchange, it can structure that exchange to meet the needs of its population, where the federal default exchange may use a "one size fits all" philosophy.
An individual state may also choose to create more than one exchange for its own purposes.

Coordination of exchange and coverage for Medicaid, CHIP and other uninsured populations that require coverage
States will be required to expand coverage for portions of their uninsured populations and have that option of placing at least some of those newly eligible in a state exchange. Because each state will be responsible for at least a portion of the costs for these expanded populations, it may want the exchange to be under state control.

Increased accountability to federal government
States that establish an exchange will be required to provide annual reporting to the federal government and may be subject to investigations and/or audits. This increased accountability will require strong finance and data-gathering functions within the exchange.

States will continue to regulate insurers at the state level
Because some insurers may have products in and out of the exchange, the state may find it easier to maintain regulatory control if it also controls the exchange.

(b) Describe the advantages of various organizational structure options when establishing a state-run health exchange.

The state could place the health exchange within a state government organization. Each state must choose the location of the exchange within its respective government structure: insurance department or commissioner's office health department, human services department, Medicaid or healthcare purchasing or other administrative operation where health insurance for state employees is currently administered. This would provide the new organization with a predetermined reporting structure as well as the state's current operating environment, eliminating the need to create a complete operating environment.

The state could place the health exchange within an independent quasi-public agency. This option creates an autonomous operation that will manage the exchange with its own structure, operating under the policy control of an appointed board outside the usual state government bureaucracy.

13. Continued

This structure tends to me more flexible and responsive than the traditional department form and may be seen as more independent. Because subsidies will be partially funded through state and federal sources, it is likely that agency will not be completely independent.

The administrative needs of the health exchange should be considered: eligibility determination, payroll, purchasing**,** accounting, financial reporting, and information technology needs**.**

(c) Describe operational considerations for a state-run health exchange to function. Include an example from Massachusetts, Utah, Connecticut or Washington.

Commentary on Question:
One example is included below, but there are several acceptable examples from the text.

The basic function of an exchange is to bring together buyers and sellers of health insurance benefits. It should be designed to attract and educate consumers on available health insurance choices. A **web-based portal** for consumers is intended to be a source of quickly accessed information. As a **navigator**, the site should offer information on available plans, including benefits and premiums, in a clear and comparative manner. PPACA requires that the navigator be an entity independent of the insurance issuer and that it not receive any consideration from issuers.

The information technology needs should be considered. The portal should include the following functions (but optional choices and assistance must be available for those unable or unwilling to use the website:

- Educate site visitors on qualification for subsidies
- Compare plan designs
- Compute premiums
- Model cost sharing for specific procedures
- Site must be able to connect the consumers with their insurance carriers, agents and, probably, the providers
- Quality measurement and comparison shopping may be provided to help ensure education and proper plan selection

The individual mandate requires that the exchange:

- Determine the eligibility of each consumer (subsidized or unsubsidized) and the amount of the subsidy for that consumer
- Facilitate choice among products

13. Continued

- Educate consumers from a wide range of educational backgrounds and native languages and cultures

Operationally, this task becomes even more challenging when identifying which product options are available relative to Medicaid, CHIP or, possibly, state employee coverage. A single exchange may become the statewide marketplace for the purchase of health insurance for all individuals and small employers.

PPACA also mandates that the exchange review and approve the insurance products of individual companies. The products must meet federal plan design requirements, but also any more stringent requirements of the insurance company's home state.

One example from the states:
Washington's Health Insurance Partnership requires small employers with low-income workers to purchase insurance through the exchange if they want to offer their low-income employees a state subsidy. Additionally, examples from Massachusetts, Connecticut, and Utah are all relevant.

14. Learning Objectives:

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

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

Learning Outcomes:

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

(1d) Assess the advantages and disadvantages to n sponsor of offering a given coverage/benefit.

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

(5b) Describe key provisions of major legislation.

Sources:

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

Health Watch, May 2011, Retirees vs. Active Workers: What is the Cost Difference?

CSP-D122-11, Summary of New Health Reform Law, Kaiser Family Foundation

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

GH-D104-07, Pricing Medicare Supplement Benefits

Health Watch, May 2010, Generic Dispensing Rates: Silver Bullet No More?

Commentary on Question:

This question was designed to see if the candidate could critically evaluate a trend projection. There wasn't a specific list in the source material for the candidate to use as a reference. Most of the candidates did ok on this question but the ones that struggled didn't provide specific critical commentary relative to the assumptions provided.

14. Continued

Solution:
Criticize the committee recommendations and the HR forecast as they apply to the following for each of the classes (Actives, Early Retirees and Medicare Supplement) and all service categories (Inpatient, Outpatient, Physician, Pharmacy).

(a) Cost per unit trend assumptions.

Commentary on Question:
The primary observations were listed below. Credit was given for any valid cost per unit trend observations.

- 4% across-the-board unit cost trend assumption is too simplistic
- Provider reimbursement trend should be monitored based on provider contract changes
- Should measure provider contracts by hospital, physician specialty, etc.
- Summarize contractual rates by standard service categories
- Service (intensity) mix will differ by service category and member class
- Impact of technology will differ by service category and/or member class
- Code creep will differ by service category and/or member class
- Pharmacy cost trend would be expected to be different by member class (active vs. retirees) and tier
- Maternity assumptions are not needed for early retirees and Medicare retirees

(b) Utilization assumptions.

Commentary on Question:
The primary observations were listed below. Credit was given for any valid utilization trend observations.

- 3% across-the-board utilization trend assumption is too simplistic (for non-prevention and mental health)
- Unreasonable to expect 50% reduction in physician preventive and inpatient mental health utilization, based on new cost sharing
- Need unique utilization assumptions for each service category, by member class
- Changes to deductibles and cost sharing will result in benefit rush for both actives and early retirees
- Layoffs based on seniority will reduce number of younger actives; results in higher utilization trend for actives
- Even more benefit rush / mini rush by those facing layoffs

14. Continued

- Changes to Medicare retiree pharmacy cost sharing will reduce utilization trend
- Maternity assumptions are not needed for early retirees and Medicare retirees

(c) Cost share equity between classes.

Commentary on Question:
The primary observations were listed below. Credit was given for any valid cost share equity observations.

- Cost share trend is same for all classes, not appropriate based on proposed changes from committee
- Medical costs for early retirees are not necessarily higher than actives
- Unreasonable to expect Medicare cost share increases at zero for non-pharmacy
- Need unique cost share trend assumptions for each service category, by member class
- Increase in deductibles for actives would be expected to have a greater impact than for early retirees

(d) Compliance with regulations.

Commentary on Question:
The primary observations were listed below. Credit was given for any valid regulations that were cited.

- ACA requires preventive services with zero cost sharing
- ACA requires parity for essential health benefits (e.g., mental health benefits)
- However, ACA applies to individual and small group -- this example is large group
- cost sharing cannot exceed high deductible limits