GH DP Model Solutions
Fall 2024

1. Learning Objectives:

1. The candidate will understand how to describe and evaluate plan provisions and government programs, including:
   - Group and Individual medical, dental and pharmacy plans.
   - Group and Individual long-term disability plans.
   - Group and Individual short-term disability plans.
   - Group and Individual long-term care insurance.
   - Group life insurance plans.
   - Supplementary plans, like Medicare Supplement.

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

Learning Outcomes:

(1a) Describe typical organizations offering these coverages.

(1d) Describe Medicare benefits and evaluate pricing and filing requirements.

(2c) Calculate and recommend assumptions.

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

Sources:

Group Insurance, Skwire, 8th Edition, 2021, Ch. 7 and 23
GHDP-105-17

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Describe the layers of the prescription drug distribution channel.

Commentary on Question:

Candidates generally performed well on this question.

1. Continued

Manufacturer - produce drugs and distribute through wholesalers. Sometimes sell directly to pharmacy, hospitals, or others.
Wholesaler - middlemen between manufacturers and retailers. Retailers prefer to purchase from one source rather than negotiating with individual manufacturers. Warehouse drugs.
Retailer - Pharmacies. Dispense drugs to consumers.
Consumer - individuals or entities who purchase the drugs.
PBMs whom own mail service or specialty pharmacy services and directly dispense drugs

(b) Describe types of formulary-related benefit designs in the prescription drug coverage market.

Commentary on Question:
Candidates generally performed well on this question.

Closed: only drugs listed on formulary are covered. A process for non-formulary medications is in place when medically necessary.
Open: Do not restrict but do usually vary cost sharing. Some have fixed percent coinsurance, while other have tiered cost sharing.
Tiered (Incentive): More than one cost sharing tier. Tiers may be assigned copays, coinsurance, or a combination of the two.

(c) Calculate:

(i) The brand ingredient cost per script for 20X1 and 20X2.

(ii) The generic ingredient cost per script for 20X1 and 20X2.

(iii) XYZ's expected paid claims for 20X2.

Show your work.

Commentary on Question:
Many candidates did not calculate the correct answer, typically due to not understanding the ingredient cost formula. Partial credit was awarded when the candidates perform some of the necessary steps in their Excel work.

The model solution for this part is in the Excel spreadsheet.

1. Continued

(d) Propose a revised tier structure for the PBM to implement. Justify your answer.

Commentary on Question:
Some candidates did not propose tier structure changes and instead discussed value based insurance design or other program changes. Full credit was award for candidates proposing a tier structure change and justifying how that tier structure change could result in cost savings to XYZ.

I propose the following three tier formulary design:

Tier	Drugs	Copay
Tier 1	Generic	Low
Tier 2	Preferred Brand	Medium
Tier 3	Non-Preferred Brand	High

This design can manage costs better over a 2 tier system by encouraging patients and physicians to use preferred tier of drugs through higher cost sharing than non-preferred drugs. Introduction of preferred brand tier creates opportunity for PBM to negotiate rebates with drug manufacturers in exchange for preferred brand tier placement. Preferred band tier placement offers lower out of pocket cost share and incentivizes members to use lower cost, preferred brand drugs.

2. Learning Objectives:

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

3. The candidate will understand how to apply principles of pricing, risk assessment and funding to an underwriting situation.

Learning Outcomes:

(2c) Calculate and recommend assumptions.

(2d) Calculate and recommend a manual rate.

(2e) Identify critical metrics to evaluate actual vs. expected results.

(3c) Recommend strategies for properly pricing, underwriting and funding case specific risks.

Sources:

Group Insurance, Skwire, 8th Edition, 2021, Ch. 3, 29, and 30.

Commentary on Question:

Candidates generally did well on the question, with many opportunities for partial credit available. The general idea of the question was built around risk selection and the idea of antiselection in particular, and candidates that identified and understood that concept tended to perform better than those that did not. A common issue was that candidates were confused by the concept of offering two different plans that had different risk pools, as opposed to shifting from one plan to another.

Solution:

(a) Describe factors that influence employees' choice of medical plans.

Commentary on Question:

The answer below is longer than what is expected for this question. A candidate would receive full credit if they described at least four items similar to those below.

- Inertia - employees tend to stay with their current plan unless new information becomes available. Moderate premium increases are not enough to drive movement
- Plan provisions and costs - covered services, cost sharing, employe premiums, OON benefit design
- Employee and dependent demographics - age, gender, health status, family size, income, risk aversion, education

2. Continued

- Employer actions and attitudes - employer contributions, attitude towards managed care, communications and support for enrollment process
- Eligibility for other health insurance coverage - such as through a spouse or from a government program
- Information available about options - Employee communications, both official and unofficial. This is especially important for CDHPs, and private exchanges offer decision-support tools. This can increase antiselection
- Provider Network Attributes - provider availability, access restrictions, reputation, fees, quality and medical management restrictions
- Insurer and administration issues - claim service, customer service, online tools and reputation

(b) Calculate the following using the information given:

(i) The expected PEPY cost for each benefit plan option.

(ii) The total expected claims cost for Company ABC.

Show your work.

Commentary on Question:
Candidates generally did well here. Common mistakes included ignoring the risk factors or not being able to calculate a PEPY for each plan. Partial credit was awarded.

The model solution for this part is in the Excel spreadsheet.

(c) Calculate the savings from the CFO's proposal. Show your work.

Commentary on Question:
Candidates generally did well. One common mistake was to assume the plan was introducing a narrow network or moving from just the broad to just the narrow network.

The model solution for this part is in the Excel spreadsheet.

(d) Critique the CFO's statement.

Commentary on Question:
To receive full credit a candidate had to 1) comment on the CFO's expected results, ideally referencing part (c), 2) identify the reason why the savings would not materialize and 3) discuss other considerations. Most candidates received at least partial credit.

2. Continued

- The savings from eliminating the existing plan is less than a million, not millions.
- The cost of the plan per person increases when the existing plan is eliminated because unhealthier beneficiaries would have stayed in the existing plan, driving up costs when the existing plan is eliminated.
- There are also other effects from eliminating the existing plan such as employee dissatisfaction from having to go to a narrower network and having their benefits managed more closely.

(e)

(i) Describe stages of the product development cycle by completing the tables below:

Design Stage	**Description**
Product Structure	This can refer to how the networking is structured (PPO vs HMO) or the type of plan such as Traditional vs CDHP.
Variables in Design	The cost sharing (deductible, coinsurance, out of pocket maximum). Waiting periods and service maximums.
Contribution Requirements	The minimum amount the employer needs to contribute to the plan. Higher employer contributions means that more members will enroll in the plan which will mitigates antiselection

Build Stage	**Description**
Project Enrollment	This helps determine if the product is worth pursuing. If there aren't many members expected to enroll, leadership may not be able to justify developing the product
Price the Product	Price the product based on the benefit design and variables described above. A price sensitivity test should be performed as well as market assessments to see if prices are competitive. Enrollment should be projected again after this step is finished
Financial Assessment	These should be performed to see if the product is able to meet company profit goals such as ROI or ROE

2. Continued

(ii) Recommend an action to mitigate antiselection using one of the phases from the table in part (i).

Commentary on Question:
One common error in part (i) was to restate the name of the stage instead of describing it (e.g. in "Project enrollment" – "this is where you do enrollment projections" would not receive credit). The other most common error was to fail to describe the stage in the product development cycle. These are not mechanical activities or calculations, but stages and steps in the development of the product. For example, pricing a produce can be a calculation, but in the context of product development it has to do with developing a price point, testing it against the market, balancing it against enrollment, etc.

For part (ii), full credit required a candidate to support their recommendation. Partial credit was awarded if a candidate only described their recommendation.

The plan can balance benefit offerings between multiple plans to mitigate antiselection. By covering similar services in all plans offered, you avoid creating a plan that attracts high risk members, riskier members. For example, if only one plan offered a fertility benefit or broader formulary, members that need or want that coverage and would utilize more would opt into that plan.

3. Learning Objectives:

1. The candidate will understand how to describe and evaluate plan provisions and government programs, including:
   - Group and Individual medical, dental and pharmacy plans.
   - Group and Individual long-term disability plans.
   - Group and Individual short-term disability plans.
   - Group and Individual long-term care insurance.
   - Group life insurance plans.
   - Supplementary plans, like Medicare Supplement.

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

Learning Outcomes:

(1b) Describe each of the coverages listed above.

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

(2b) Develop a medical cost trend experience analysis.

(2c) Calculate and recommend assumptions.

(2d) Calculate and recommend a manual rate.

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

Sources:

Individual Health Insurance, 2nd Edition, Ch. 5.

Group Insurance, Skwire, 8th Edition, 2021, Ch. 21.

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Describe the Affordable Care Act (ACA) modified community rating variables for non-grandfathered individual and small group coverage.

Commentary on Question:

Candidates generally did well on this question. To receive full credit a candidate needed to 'describe' the modified community rating variables rather than only 'listing' them.

3. Continued

The modified community rating variables are:

1. Age
    a. Carriers must use standard age rating factors which vary by no more than 3:1 from the oldest to the youngest adult ages
2. Tobacco
    a. Limited to no more than a 50% surcharge for users
3. Area
    a. Rating areas are prescribed by the state, but factors are unlimited unless limited by state law
4. Family Tier/Structure
    a. Family rates must generally equal the sum of member level rates, with the number of child dependents capped at three (unless limited by state law)
5. Plan
    a. Rating variables may include benefits, cost sharing, and network

(b)

(i) Evaluate the appropriateness of using each data source for developing the individual ACA pricing for the upcoming year.

(ii) Recommend which data source(s) to use. Justify your response.

Commentary on Question:
Many candidates did well on this question. Reasonable evaluations other than those listed below were given credit.

(i)
Individual ACA claims on incurred basis: Best to use same state as it will follow utilization patterns, costs and experience. This dataset is appropriate to use.

Individual ACA claims on reported basis: Want to use incurred basis as it will align with experience period. It shouldn't matter when the claims were reported; this dataset is not appropriate to use.

Individual ACA national industry claims data bought from external consultant: Since own company data is credible, no need to use national data set; this dataset is not appropriate to use.

Small group ACA claims on incurred basis: Individual ACA experience is credible so there is no need to use group experience. This dataset is not appropriate to use.

3. Continued

Individual ACA premiums received: You do not want to use premiums received as it may include premiums outside of the experience period. This dataset is not appropriate to use.

Individual ACA premiums earned: You want to use this data set for premiums, as it aligns with the experience period. This dataset is appropriate to use.

(ii)
Recommend using individual ACA claims on incurred basis; doing so ties the values to the experience period whereas reported claims may be outside of the experience period.

Recommend using individual ACA premiums earned; doing so ties the values to the experience period whereas received premiums may be outside of the experience period.

(c) Describe how plan design can affect claim cost trends.

Commentary on Question:
Candidate generally did well on this one. The intent of this question is to test candidates on trend leveraging effect. But all other reasonable answers are also accepted.

Plan designs can affect claim cost trends in the following ways:

1. Deductible leveraging
    a. Occurs when a deductible remains constant as the underlying claims trend increases. Because the deductible has remained constant, the insurance carrier is actually paying more each year for claims of a similar nature.
2. Out of pocket maximum and Copay leveraging
    a. Similar to deductible leveraging in that when out of pocket maximums and copay remain constant, the underlying claims trend increases.

3. A percent based benefit like coinsurance will not have leverage effect on claim trends.

3. Continued

(d) Calculate the gross premium PMPM. Show your work.

Commentary on Question:
Candidate performance on this question was mixed. For the most part, candidates were able to calculate the in-network costs. Many candidates struggled with calculating the out-of-network costs. Some candidates did not use the Claim Probability Distribution (CPD) appropriately in calculations. Some candidates struggled with distinguishing between member liability and total liability.

The model solution for this question is in the Excel spreadsheet.

(e)

(i) Describe reasons for these cost and utilization patterns.

(ii) Assess how you can reflect these utilization patterns in the premium development.

Commentary on Question:
Candidate performance on this question was mixed. To answer this question correctly, candidates needed to address induced utilization and morbidity when selection an ACA plan option. Additionally, candidates needed to illustrate how to address these patterns in the premium development. Reasonable assessments of the premium development other than those listed below were given credit.

(i)

1. Induced utilization/induced demand: Different benefit plans are likely to experience different utilization patterns depending on the degree of insured cost sharing.
2. Plan selection/morbidity: Costs will also be affected since members who are more or less healthy will select certain benefit plans because they are aware of the services they will or will not need.

(ii)

Under the ACA, one cannot reflect plan selection or morbidity at the plan level, this impact is required to be spread across the entire risk pool. One can normalize the experience period data to reflect a common benefit plan, which will account for induced utilization.

4. Learning Objectives:

1. The candidate will understand how to describe and evaluate plan provisions and government programs, including:
   - Group and Individual medical, dental and pharmacy plans.
   - Group and Individual long-term disability plans.
   - Group and Individual short-term disability plans.
   - Group and Individual long-term care insurance.
   - Group life insurance plans.

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

Learning Outcomes:

(1b) Describe each of the coverages listed above.

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

(2c) Calculate and recommend assumptions.

(2d) Calculate and recommend a manual rate.

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

Sources:

Group Insurance, Skwire, 8th Edition, 2021, Ch. 6 & 22.

Commentary on Question:

This question was intended to evaluate the candidates' understanding of the value of employee benefits in the context of dental coverage, ability to compute manual rates by correctly applying rating factors, ability to discern insurance consumers behaviors, evaluate plan designs and recommend changes to limit insurance risks.

Solution:

(a) Calculate the annual claim cost PMPY for Company ABC for 20X5. Show your work.

Commentary on Question:

Candidates needed to demonstrate an ability to compute manual rates by correctly applying information. Candidates received full credit if they correctly identified the applicable trend period, applied the correct age and area factors, and then deducted the value of the coinsurance, deductible, and plan maximum from the projected allowed cost. The solution provided assumes all values provided are PMPMs; candidates who interpreted values as PMPYs but otherwise approached the solution as illustrated received full credit.

4. Continued

Common areas where candidates struggled were identifying the appropriate midpoints of the experience and projection periods, identifying that age and area adjustment factors are to be applied to allowed costs and not plan liabilities, and applying the value of the deductible and plan maximum to the projected allowed spend. In particular, candidates should be aware that the value of the deductible is computed based on the insurer's expectations for what a deductible is worth for a distribution of members/claimants. Since not every member will have claims that exceed the deductible, it is not appropriate to deduct the full deductible value from the projected allowed spend.

The model solution for this part is in the Excel spreadsheet.

(b) Describe the advantages of a voluntary employee-pays-all PPO dental plan over a pay-as-you go dental care.

Commentary on Question:
Candidates should demonstrate comprehension of the value of employee benefits in the context of dental coverage. In particular, there are benefits to an employee of being able to purchase a group insurance policy – even if the employee needs to pay the entire premium. Full credit was given to candidates who identified at least four relevant advantages.

A voluntary employee-pays-all PPO dental plan has the following advantages over pay-as-you go dental care (where the employee visits a dentist and pays cash based on services received):

1. Employee contributions may be on a pre-tax basis, thus giving the employee a financial advantage.
2. Dental Insurance provides a budgeting mechanism, particularly beneficial to low-waged employees.
3. Contracted dental network providers charge discounted fees
4. Insurers generally credential network providers helping ensure quality of care.
5. Dental insurance encourages dental care. Oral health links to overall health.

(c)

(i) Critique the plan design for Company ABC if offered on a voluntary basis.

(ii) Recommend modifications to the proposed plan design if offered on a voluntary basis. Justify your response.

4. Continued

Commentary on Question:
Candidates were expected to demonstrate an ability to discern insurance consumer behaviors, evaluate plan designs and recommend changes. Most candidates realized this type of coverage is susceptible to anti-selection. Few candidates, fully critiqued and proposed sufficient alternatives that would mitigate the antiselection risks. Most candidates received partial credit on this part. Common candidate errors included treating the plan maximum as a member out of pocket maximum or confusing plan coinsurance with member coinsurance.

(i) Voluntary Dental Coverage is subject to significant anti-selection particularly for the first two years of coverage. This plan design is too rich. The Payer Coinsurance is too high for a new voluntary plan. The annual maximum is too high - the $4,000 maximum has minimal or no effect because dental cost is low and is higher than typically offered for this type of coverage. The annual deductible is too low inviting immediate utilization of services. There is no mention of preventing employees immediately enrolling and using benefits and then disenrolling.

(ii) The plan design needs anti-selection risk mitigation. Recommend:

- Adjust the coinsurance values over time: start with relatively low payer coinsurance, e.g., 70/60/50, in the first year and grade up to 100/80/50 over three years .
- Adopt a lower annual maximum in the first year, e.g. $1,000 and grade up to $2,500. This limits what will be spent on enrollees with large dental coverage needs.
- Apply a higher deductible for Class II and Class III services: potentially $100 for Class II and $500 for Class III. This limits what is paid for higher cost services (making premiums more affordable) while not discouraging enrollees from seeking preventive services.
- Adopt additional risk mitigation features including
  - Waiting period of Class II and Class III services (e.g. 3 months and 6 months respectively – which ensure the insurer collects some amount of premium before needing to pay for these costly services.
  - Minimum participation requirement such as 25%
  - A reduced network with favorable network discount.
  - Pre-authorization or pre-determination provision for expense procedures exceeding a certain threshold
  - Frequency limits (e.g. 2 cleanings a year)
  - Pre-Existing Condition exclusions (e.g. missing tooth exclusion)
  - Least Expensive alternative treatment
  - Additional coverage/coinsurance tiers to differentiate risk and cost sharing

4. Continued

- Risk margins and additional adjustment factors
  - Occupation/Income Adjustment factors
  - A load for pre-announcement of upcoming coverage (e.g. around 5% for each month of pre-announcement)

Group size adjustment - the underlying experience is based on large groups. Small groups could be 30%-40% more costly than large groups. Employee Turnover effect is magnified in the small groups. Explicit margins could be warranted.

5. Learning Objectives:

1. The candidate will understand how to describe and evaluate plan provisions and government programs, including:
   - Group and Individual medical, dental and pharmacy plans.
   - Group and Individual long-term disability plans.
   - Group and Individual short-term disability plans.
   - Group and Individual long-term care insurance.
   - Group life insurance plans.
   - Supplementary plans, like Medicare Supplement.

3. The candidate will understand how to apply principles of pricing, risk assessment and funding to an underwriting situation.

Learning Outcomes:

(3a) Understand the risks and opportunities associated with a given coverage, eligibility requirement or funding mechanism.

Sources:

GHDP-137-20

Group Insurance, Skwire, 8th Edition, 2021, Ch. 12.

Commentary on Question:

Question 5 required candidates to be familiar with the various elements of pricing STD insurance, the drivers of premium changes, and different legislation that impacts it. Candidates who were able to demonstrate an understanding of the implications of changing factors within the premium did well on this item.

Solution:

(a) Describe

(i) The Family and Medical Leave Act (FMLA)

(ii) The impact of FMLA on STD insurance.

Commentary on Question:

Candidates who recognized that FMLA is not a paid benefit did well on Part A. Many candidates confused FMLA with PFML which is offered in several states, which was not the question asked.

(i) The Family and Medical Leave Act (FMLA) is a federal law that permits eligible employees to take extended leaves of unpaid absence from work for personal or family medical reasons with continued group insurance coverage from their employer without risk of termination. Employees on FMLA leave may typically be absent for up to 12 weeks over a 12-month period.

5. Continued

(ii) FMLA Programs have proven difficult for some employers to administer. Recognizing the complexities of administering FMLA and other leave programs, STD insurers have begun to offer full leave administration services to their customers, which include STD insurance coverage along with administrative support for FMLA, sick leave, vacation, and other leave programs.

(b) Explain the drivers of STD premium changes.

Commentary on Question:
Candidates who were able to explain the drivers associated with STD premium changes performed the best on part B. Candidates who simply listed the drivers without explanation or explained the premium setting process without explaining reasons for why a STD premium may change over time were given less than full credit. Additional explained drivers received full points.

1) Increased or decreased utilization, which may be driven by the general economic outlook as people are less likely to return to work if job prospects are less than ideal.
2) Cost inflation with regards to the extent that wages are impacted since STD benefits pay as a percentage of wages.
3) Benefit changes or changes in regulation will change the expected costs of STD
4) Changes in the employer, such as growing the number of employees or changing demographics.

(c) Calculate revised group size and employee participation factors for 20X3. Show your work.

Commentary on Question:
Candidates did well on Part C with many receiving full points.

The model solution for this part is in the Excel spreadsheet.

(d) The Sales Lead of Company ABC is in aggressive pursuit of providing STD insurance to Big Fish Corp., a fast-growing company with 75 employees. The Sales Lead is anticipating a wave of new sales to smaller groups of 5-9 employees and asks you to price those groups at a higher rate to subsidize offering a lower rate to Big Fish Corp.

Critique the Sales Lead's request.

5. Continued

Commentary on Question:
Candidates who demonstrated an understanding of the various implications of the Sales Lead's request on sales to small groups, regulatory restrictions, and were able to tie in the results of Part C performed the best on Part D. Candidates who described only a couple of these pieces received partial credit, and points were awarded for additional acceptable responses.

Small groups are already set to receive a larger rate increase due to their change in rating factor increasing by 2.6% compared to the 75+ group increasing by 1.4%. Additional unwarranted increases in premium for small groups is likely to result in loss of business from small groups receiving better rates at competitors, which will result in anti-selection, and decrease the likelihood of having enough small groups to cover the needed subsidization amount for Big Fish.
The differences in volatility across the two groups is already priced for in the rating factors, and cross-subsidization would require leadership and regulatory approval.
Target loss ratio reductions (even immaterial) generally requires permission from regulators in states where the product is approved for sale. While state regulatory approval is generally required to change rates and rating factors, the key regulatory concern in rate review is the reasonability of the expected loss ratio for each class of consumer.
Big Fish can lower their premium by increasing their employer subsidy and encouraging a larger employee participation rate.

6. Learning Objectives:

1. The candidate will understand how to describe and evaluate plan provisions and government programs, including:
   - Group and Individual medical, dental and pharmacy plans.
   - Group and Individual long-term disability plans.
   - Group and Individual short-term disability plans.
   - Group and Individual long-term care insurance.
   - Group life insurance plans.
   - Supplementary plans, like Medicare Supplement.

3. The candidate will understand how to apply principles of pricing, risk assessment and funding to an underwriting situation.

Learning Outcomes:

(1b) Describe each of the coverages listed above.

(3e) Apply Total Risk Analysis (TRA) strategies to block and case specific pricing.

Sources:

Group Insurance, Skwire, 8th Edition, 2021, Ch. 5, 10. "Calculated Risk"

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Describe the key findings in the Total Risk Analysis research results.

Commentary on Question:

Many candidates either left section blank or only described one or two key findings of the Total Risk Analysis research results. For full credit, candidates need to describe at least four key findings.

Key findings from the Total Risk Analysis research:

The 5/50 principle **-** similar to the Pareto principle in that ***spend is concentrated in a relatively small percentage of the population***. Several published studies have shown that for the overall population about 50% of U.S. health care spend can be attributed to roughly 5% of the population. This study shows that the 5/50 principle applies, but the concentration percentages vary by population. In 2017 the top 5% accounted for 63% of the spend for the Commercial population and 43% for the Medicare Advantage population

6. Continued

Consistency - The cost distributions, transition probabilities and source distributions for a specific population were ***consistent year over year during the study period***. That said, the data may not be as consistent in the future because of changes in reimbursement methodologies, treatment patterns and the COVID-19 pandemic.

Coefficient of Variation - defined as the standard deviation divided by the mean, is ***relatively stable*** for both the commercial and Medicare populations. The coefficient of variation is a key element in determining the RV risk.

Leveraging - Health care costs increase every year, so the percentage of costs above or below a specified dollar amount changes every year. This concept is referred to as leveraging or the iceberg effect.

(b) Interpret:

(i) Expected variance to budget

(ii) Chance of exceeding budget

Commentary on Question:
Some candidates defined these terms instead of interpreting the results and providing a numeric solution. Also, some candidates only considered one scenario instead of all scenarios when interpreting the results.

(i) Expected variance to budget - $12.87 (or $12.87M)

(ii) Chance of exceeding budget - 22.7%

(c) Recommend a different budget. Justify your answer.

Commentary on Question:
Candidates who performed well recognized that scenarios 4 and 5 yielded catastrophic results (high probability of exceeding budget and/or catastrophic loss)

Given an initial budget of $512.50, there is a significant likelihood that of exceeding budget and having a catastrophic loss based on scenario 4 & 5. A recommended budget of $525, would lower the likelihood of exceeding the budget and catastrophic loss.

7. Learning Objectives:

1. The candidate will understand how to describe and evaluate plan provisions and government programs, including:
   - Group and Individual medical, dental and pharmacy plans.
   - Group and Individual long-term disability plans.
   - Group and Individual short-term disability plans.
   - Group and Individual long-term care insurance.
   - Group life insurance plans.
   - Supplementary plans, like Medicare Supplement.

Learning Outcomes:

(1a) Describe typical organizations offering these coverages.

(1h) Compare social programs in Canada and the United States and evaluate the value of the different systems.

Sources:

Group Insurance, Skwire, 8th Edition, 2021, Ch. 9, 10.

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) List expenses typically reimbursed by private medical plans in Canada.

Commentary on Question:

Candidates generally did well on this part and were able to list several services. In Canada, private health care mostly covers services that are not available under Medicare.

- Hospital charges for room and board
- Prescription drugs
- Health professional practioners (such as physiotherapists, chiropractors, psychologists, etc.)
- Vision care
- Miscellaneous expenses (such as ambulance, laboratory or radiology tests, orthopedics, etc.)
- Out-of-Canada coverage for emergency care

(b) Describe program financing for:

(i) Medicare in the United States

(ii) Medicare in Canada

(iii) Medicaid in the United States

7. Continued

Commentary on Question:
Candidates usually did well in describing financing for Medicare in the US, but struggled with Medicaid or Medicare in Canada.

(i) Medicare in the United States
The Hospital Insurance (HI) trust fund finances Part A primarily through employment payroll taxes, which fund current expenditures rather than future costs. The HI tax rate is 1.45% of earnings with a matching employer contribution and an additional 0.9% for high income earners. Congress can change tax rates periodically to ensure short-term solvency.

Supplementary Medical Insurance (SMI) funds finance Part B and D with a combination of contribution from general Treasury fund (about 75%) and beneficiary premium (about 25%). Contributions to SMI funds are established annually.

(ii) Medicare in Canada
Coverage is funded by general tax revenues in all provinces. Some also have employer specific payroll taxes or collect resident's premium through income tax reports. The federal government provides transfer payments in form of cash or tax point transfers.

(iii) Medicaid in the United States
Each state finances its own program with substantial federal support. The level of federal support is an inverse function of the state's average per capita income. The federal government funds a minimum of 50% of state's cost to administer the program up to 83%. Under the ACA, the federal government finances 90% of the cost of expansion. In spite of the federal match, Medicaid represents one of the largest components of state expenditures.

(c) Explain why each of the following proposals for cost savings would or would not apply to Canadian Medicare under current Canada Health Act provisions.

(i) Reduce or eliminate some covered services.

(ii) Increase cost sharing through higher deductibles and copays.

(iii) Raise the current eligibility age for benefits.

(iv) Adjust reimbursement to providers of care.

(v) Encourage new initiatives that slow growth in health care costs.

7. Continued

Commentary on Question:
Candidates did generally well on this part, correctly identifying whether these solutions would apply in Canada or not. Some justifications lacked an understanding of the mechanism at play in Canada where provinces administer and fund the program, but also depend on federal transfers for financial solvency of the programs. Provinces are limited on their ability to modify their program and still comply with federal rules.

(i) Reduce or eliminate some covered services.
This solution would not apply for most covered services since most are mandatory benefits. Provinces that would reduce those would sacrifice their eligibility to receive federal transfers, thus increasing their overall costs. However, to the extent the province still offers extended benefits, this solution could apply.

(ii) Increase cost sharing through higher deductibles and copays.
This solution is not applicable as provinces that collect user fees would lose federal grants. It could however apply to extended benefits, such as public coverage for prescription drugs for the elderly and poor where offered.

(iii) Raise the current eligibility age for benefits.
This solution does not apply to Medicare in Canada as all permanent residents of a province are eligible for coverage.

(iv) Adjust reimbursement to providers of care.
This would apply as provinces negotiate contracted rates for physician services and operate their own facilities. However, reducing physician rates or hospital budgets may reduce access and increase delays in getting care.

(v) Encourage new initiatives and expand existing initiatives that slow growth in health care costs.
This solution would apply but somewhat differently as provinces act more as service providers rather than simply payer of benefits. Initiatives to provide same quality services at lower costs or to improve the efficiency of the service delivery would successfully reduce overall healthcare costs.

8. Learning Objectives:

1. The candidate will understand how to describe and evaluate plan provisions and government programs, including:
   - Group and Individual medical, dental and pharmacy plans.
   - Group and Individual long-term disability plans.
   - Group and Individual short-term disability plans.
   - Group and Individual long-term care insurance.
   - Group life insurance plans.
   - Supplementary plans, like Medicare Supplement.

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

Learning Outcomes:

(1b) Describe each of the coverages listed above.

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

(2c) Calculate and recommend assumptions.

(2d) Calculate and recommend a manual rate.

(2e) Identify critical metrics to evaluate actual vs. expected results.

Sources:

Insuring LTC, Ch. 2, 6, and 7.

Commentary on Question:

The question tested the candidates understanding of pricing considerations for Long Term Care (LTC) Insurance.

Solution:

(a) Describe the tax-qualified benefit triggers defined within HIPAA and the benefit triggers used prior to HIPAA.

Commentary on Question:

Candidates demonstrated a reasonable level of knowledge on this question, particularly the HIPAA benefits. Full credit was given to candidates that described specific criteria used to qualify for LTC coverage.

8. Continued

The tax-qualified benefit triggers were:

- Inability to perform at least 2 of the 6 ADLs
- Cognitive impairment that requires substantial supervision to assure the safety of the patient

The pre-HIPAA triggers were:

- A three day hospital stay prior to entering a care facility
- Medical necessity, as determined by a physician

(b)

(i) Calculate the experience-based aggregate days utilization and dollars utilization rates by site of care. Show your work.

(ii) Recommend days utilization and dollars utilization assumptions by site of care to be used for projecting XYZ's existing LTC block. Justify your response.

Commentary on Question:
Candidates did well in determining the aggregate days utilization, but struggled with determining the dollars utilization. The dollars utilization is a two step calculation. Most students provided total utilization.

Full credit was given for thoughtful justifications for the response, such as including commentary about credibility, identified trends, or the current duration of the block.

For part (ii), the graders provided credit for offering a recommended rate that was consistent with the response in part (i), even if the initial response was inaccurate.

The model solution for this part is in the Excel spreadsheet.

(c) Calculate the difference in aggregate historical paid claims for each site of care between the existing expense reimbursement benefit design and:

(i) Indemnity benefit payment

(ii) Cash disability benefit payment

Show your work.

8. Continued

Commentary on Question:
Many candidates struggled with these calculations. Partial credit was provided for properly defining the two benefit payment methods.

The model solution for this part is in the Excel spreadsheet.

(d)

(i) Critique the Chief Marketing Officer's position.

(ii) Explain how a rate increase may be justified.

Commentary on Question:
Candidates demonstrated a solid knowledge of these concepts. Full credit required specific critique of the CMO's positions. Many candidates provided a description of the considerations behind analyzing LTC insurance rate adequacy without specifically addressing the CMO's position. Partial marks were awarded for reasonable alternative justifications not outlined in the model solution.

- The Chief Marketing Officer is incorrect. Premiums may not continue to be higher than expected and paid claims may not continue to be lower than expected given these updated assumptions.
- LTC is a long-term policy, so it can take many years for us to see the effect of incorrect assumptions. We want to make sure that we are staying ahead and updating rates appropriately in advance – that also can mean a graded approach of having several smaller rate increases rather than waiting several years and seeing the long-term effects of incorrect assumptions and trying to take a huge rate increase all at once at that time.
- A rate increase may be justified in this case because lapse rates were lower than pricing expectations. The product is lapse supported, so when fewer people lapse, that means there are more people who are still on the plan and claiming, which can result in much higher costs.
- Lower mortality also means that there will be more people on plans continuing to claim, which also can result in higher costs.
- Utilization being lower than expectations would help lower costs, but if the effect of the lapse assumptions and mortality assumptions outweighs the utilization assumption, then a rate increase may be necessary.

9. Learning Objectives:

1. The candidate will understand how to describe and evaluate plan provisions and government programs, including:
   - Group and Individual medical, dental and pharmacy plans.
   - Group and Individual long-term disability plans.
   - Group and Individual short-term disability plans.
   - Group and Individual long-term care insurance.
   - Group life insurance plans.
   - Supplementary plans, like Medicare Supplement.

Sources:
GHDP 145-24: Retiree Health Benefits – Accounting and Valuation Assumptions. Excel Model: Retiree Health Care Study

Commentary on Question:
Commentary listed underneath question component.

Solution:

(a) List healthcare assumptions used to calculate the Accumulated Postretirement Benefit Obligation (APBO) and Service Cost.

Commentary on Question:
Candidates did not perform well on this question. The question specifically asked for healthcare assumptions. Long-term assumptions such as termination or salary escalation did not receive credit.

1. Per-capita claims costs
2. Health plan inflation/trend rates
3. Administration expenses
4. Medicare offset considerations
5. Medical cost aging assumptions

(b)

(i) Recommend Plan 1 or Plan 2 based on DEF's objectives under:

- Trend Scenario #1
- Trend Scenario #2

Show your work. Justify your responses.

(ii) Evaluate the risk of using Trend Scenario #2.

9. Continued

Commentary on Question:
Few candidates received full credit to this question.
b(i): The question tested the candidates understanding of EPBO, APBO, and service cost. Few candidates identified the difference between balance sheet requirement (APBO is liability) vs. income statement requirement (service cost is expense).

b(ii): Candidates received full credit for identifying the trend differences and indicating the misestimation risk may result in unfavorable financial impact as well as poor plan selection. Other reasonable responses also received full credit.

The model solution for this part is in the Excel spreadsheet.

10. Learning Objectives:

3. The candidate will understand how to apply principles of pricing, risk assessment and funding to an underwriting situation.

Learning Outcomes:

(3c) Recommend strategies for properly pricing, underwriting and funding case specific risks.

Sources:

Individual Health Insurance, Bluhm, 2nd Edition, 2015, Chapter 4.

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a)

(i) 20X1 total premium PMPM

(ii) 20X1 total claim cost PMPM

Show your work.

Commentary on Question:

Most candidates calculated the total premium PMPM and total claims PMPM correctly. Candidates needed to express the solution as a PMPM amount to earn full credit.

The model solution for this part is in the Excel spreadsheet.

(b) Calculate the buydown effect on premium for 20X2 as a PMPM due to member transition. Show your work.

Commentary on Question:

The buydown effect is calculated by comparing the expected change, which excludes transitions, to the actual change, which includes transitions. Some candidates only compared the actual change to the year 1 premium.

The model solution for this part is in the Excel spreadsheet.

(c) Calculate the buydown effect on claims for 20X2 as a PMPM due to member transition. Show your work.

10. Continued

Commentary on Question:
The buydown effect is calculated by comparing the expected change, which excludes transitions, to the actual change, which includes transitions. Some candidates only compared the actual change to the year 1 claims.

The model solution for this part is in the Excel spreadsheet.

(d) Explain the difference in the changes calculated in (b) and (c).

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

The model solution for this part is in the Excel spreadsheet.