GH CORC Model Solutions
Fall 2016

1. **Learning Objectives:**

5. The candidate will understand how to prepare and interpret insurance company financial statements in accordance with IFRS & IAS.

Learning Outcomes:

(5a) Interpret insurer financial statements from the viewpoint of various stakeholders.

(5b) Evaluate key financial performance measures used by L&H insurers for both short and long-term products.

(5c) Project financial outcomes and recommend strategy to senior management to achieve financial goals.

(5d) Describe the planning process of an L&H insurance company (strategic, operational, and budgeting)

Sources:

Group Insurance 7th (Bluhm/Skwire) Ch. 35 pg. 613-634

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a)

(i) List the four major types of group insurer financial reporting.

(ii) Identify the information about assumptions that must be included in the actuary's report filed with the Life-1 annual statement.

Commentary on Question:

Most candidates did well here

(i)

1. Statutory
2. GAAP (Generally Accepted Accounting Principles)
3. Tax
4. Managerial

1. Continued

(ii)

1. A description of all the assumptions used.
2. A full and complete justification for each assumption.
3. A description of any approximations used.
4. Any changes in the assumptions and the effect thereof.

(b)

(i) Describe the requirements and purpose of Dynamic Capital Adequacy Testing ("DCAT").

(ii) List the key DCAT components to include in your presentation to the Board of Directors and Senior Management.

Commentary on Question:
Candidates did well on this part.

(i)

- Purpose: Intended to measure state of an insurer's financial health and ability to remain in business
- 5 year projection period
- Stress testing of plausible adverse scenarios
- Must assess company's position with respect to future guarantees (e.g. mortality, morbidity, expenses, etc.)
- Assess impact on capital position
- Includes combination shocks
- Categories:
  1. External environment (economic, government, legal)
  2. Business experience (claims, productivity, sales, surrenders)
  3. Business planning (investment, products, bonus, capital)

(ii)

- An analysis of the projections made under the various stress conditions
- A discussion of the company's condition
- A test of management reaction under significant scenarios
- Recommendations and progress on past recommendations

1. Continued

(c) One of your staff members has summarized stress testing for a group long term disability ("LTD") block as follows:

Stress Test Scenarios	Reserve Impact
Morbidity Termination +25%	+8.2%
Morbidity Termination -25%	+10.5%
Expenses +10%	+2.3%
Expenses -10%	-2.3%

Critique the results.

Commentary on Question:
Candidates did critique the 4 scenarios above but most did not comment on other tests that should be done.

- Morbidity termination up and down shocks should not both result in a reserve strengthening
- Morbidity term +25% shock might have missed the -ve sign, correct result might be -8.2%
- Expense up and down shocks appear perfectly linear, check if each test was run or was this assumed for simplicity

Stress Tests:
- Other stress tests could be significant to LTD, e.g., salary increase, economic tests such as discount curve, interest rates.

(d) List applicable stress tests for a group life block that are not listed in part (c).

Commentary on Question:
Candidates generally did well here.

- Mortality
- Salary increase
- Discount curve
- Interest rates

2. Learning Objectives:

3. The candidate will understand how to recommend an employee benefit strategy.

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

7. The candidate will understand and evaluate Retiree Group and Life Benefits in Canada

Learning Outcomes:

(3a) Describe employer's rationale and strategies for offering employee benefit plans.

(3c) Recommend an employee benefit strategy in light of an employer's objectives.

(7e) Describe current issues faced by governments, employers and employees related to post-retirement post-employment benefits.

Sources:

GHC-661-16: Employee Life and Health Trust & Health and Welfare Trust; Morneau Shepell Ch. 22; GHC-650-15: Supplement Calculation Note for IAS 19

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Compare and contrast ELHTs with Health and Welfare Trusts (HWTs) in regards to:

(i) Treatment of key employees

(ii) Qualified multi-employer rules

(iii) Distribution of excess funds at wind-up

Commentary on Question:

Most candidates did well on part i.) and ii.) Candidates performed poorly on part iii.)

- Key employees – rules apply to ELHT but not to HWT:
  - Anti-avoidance concept of "key employees" (high income households or those that have a significant shareholding)
  - Benefits cannot accrue more favorably to key employees

At least one class of beneficiaries of an ELHT must contain more than 25% of all employees and at least 75% of that class must not be a key employee

2. Continued

- Qualified multi-employer rules – only ELHTs have these in place provide that an ELHT with at least 15 employers under a collective bargaining agreement will, provided certain technical conditions are met, be able to claim a full current year deduction for all contributions made

- Distribution of funds at wind-up
  - HWT: charity
  - ELHT: beneficiaries, another ELHT, The Crown

(b) Calculate the employer tax deductions in each of 2013, 2014 and 2015 from the perspective of a/an:

(i) ELHT

(ii) HWT

Show your work.

Commentary on Question:
Focus was given on calculating the current year deductions. Most of the candidates did well on part i.) To obtain full marks, the additional carry forward deduction in 2015 must be calculated. For part ii.) Full marks were not given to those that included Admin Cost and Life Insurance Premiums Paid in the deductions

(i) ELHT:

- Contributor can take a current year deduction in an amount equal to the sum of:
  - Benefits paid out of an ELHT
  - Life insurance premiums paid out by the trust in-year
  - Pre-paid life insurance coverage
- Non-deductible contributions in a current year can be carried forward to a future year in which benefits are paid

- Can deduct benefits paid (claims), premiums paid, pre-paid life insurance (not applicable), and reasonably amounts to enable the trust to provide benefits (administrative costs)

2013:

- Current year contributions: 1,550,000 x $2.00 = $3,100,000
- Current year deduction: $2,500,000 + $100,000 + $12,000 = $2,612,000
- Excess non-deductible contribution: $488,000

2. Continued

2014:

- Current year contributions: 1,450,000 x $2.00 = $2,900,000
- Current year deduction: $3,200,000 + $115,000+ $14,000 = $3,329,000
- Excess contribution: -$429,000
- Carryforward from 2013, 2014: $488,000 - $429,000 = $59,000

2015:

- Current year contributions: 1,450,000 x $2.00 = $2,900,000
- Current year deduction: $3,000,000 + $112,000 + $13,000 = $3,125,000
- Excess contribution: -$225,000
- Can only deduct additional $59,000 from 2014/2015 carryforward

(ii) HWT:

- Carry-forward and carryback provisions do not apply
- Can only deduct taxable benefits it pays out
- A contribution to a HWT can be deducted in the year in which there is legal obligation to make payment to the extent that the contribution is reasonable in circumstance
- 2013: $400,000
- 2014: $300,000
- 2015: $450,000

(c) The union is considering establishing a retiree medical plan using surplus funds in the ELHT. The intent is to reward individuals who have been long-standing union members. The union wishes to establish a reserve within the ELHT to prefund the cost of the retiree benefits.

(i) Explain the risks that the union should consider when setting up the plan.

(ii) The union is trying to decide between offering a defined benefit plan and a health care spending account (HCSA). Propose eligibility criteria and plan provisions under each approach that would mitigate the union's risk exposure. Justify your response.

2. Continued

Commentary on Question:
To obtain full marks on part i.) Candidates should demonstrate an understanding of the topic by describing the impact of the issues – i.e., indicating how each of these factors would impact the plan, namely liabilities. (e.g., if increased life expectancy, retirees are living longer than originally expected, which would then increase expected liability). To obtain full marks on part ii.) Candidate should demonstrate an understanding of how the various strategies would manage cost/risk. Most candidates did not provide a recommendations so full marks were not given.

(i) A number of factors to consider in establishing a retiree plan – increased number of retirees, increased life expectancy, benefit cost inflation, public sector cost shifting

(ii) Defined benefit plan:

- Eligibility – restrict based on age/service e.g. 55&15, eligibility limited to employee only
- Plan provisions
  - Overall lifetime or annual maximum e.g. $50,000 – limits impact of exposure to high costs from any one claimant
  - Managed Drug formulary – limits drug usage to selected cost effective drugs
  - Retiree cost sharing through premiums and/or coinsurance/deductibles – shares cost
  - Decrease retiree portion of premium rates for long-service retirees (e.g. retirees pay 50% premium at 15 years of service, but 10% premium at 30 years of service) – shares costs
  - Premiums determined based on retiree experience only (no active subsidy) – shares costs
  - Annual/periodic maximums on paramedicals, hearing aids, private duty nursing – limit exposure
  - Short OOC trip duration e.g. 60 days or less – limits plan exposure
- Survivor benefits limited beyond death to 3 months, or 1 year

HCSA:

- Eligibility – restrict based on age/service (similar to DB plan)
- Plan provisions – areas to limit credit spend
  - Annual allocation varies by service e.g. $50 per year of service
  - Limited survivor benefits (e.g. one year or none)
  - No indexing of annual allocation
  - Do not offer carry-forward provision
- No additional credits for spousal coverage

3. Learning Objectives:

7. The candidate will understand and evaluate Retiree Group and Life Benefits in Canada

Learning Outcomes:

(7b) Determine appropriate baseline assumptions for benefits and population.

(7e) Describe current issues faced by governments, employers and employees related to post-retirement post-employment benefits.

(7f) Apply actuarial standards of practice to post-retirement and post-employment benefit plans.

Sources:

GHC 650, Case Study

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Describe the existing legislative framework for self-insured LTD plans in Canada.

Commentary on Question:

Legislation in Ontario is focused on private employers which candidates didn't typically differentiate.

- While not a current concern for Powell as it operates in BC and isn't federally regulated (it is a local gaming company), since they are considering expansion, they should be aware that in certain provinces (i.e. Ontario), self-insured LTD arrangements for private employers are prohibited by the government
- In addition, federally regulated private sector employers are not allowed to self-insure their employees' LTD plan, as a result of Bill C-38 amendments.
- Some other provinces require that plan sponsors disclose, prior to or at the time that benefits are offered, that the benefits are not underwritten by an insurer and are supported solely by the financial resources of the company
- Goal is to help Canadians understand when their LTD plans are not insured, and the implication on their financial security

(b)

(i) Calculate the expected number of terminations for each age/duration over the last five years. Show your work.

(ii) Recommend adjustment(s) to the current termination rates used in the valuation of Powell's LTD plan. Show your work and justify your response.

3. Continued

Commentary on Question:
On part (i) many candidates didn't answer the question being asked, instead choosing to calculate the actual termination rates experienced by Powell.

On part (i), candidate should show that they referenced the correct termination table, multiplied by the number of exposures

On part (ii), candidate should show analysis, explain results from analysis, and make a recommendation based on the results of their analysis

(i) Expected Number of Recoveries

Age at Disability	Duration Since Disability (In Years)					Totals
	1	2	3	4	5	
27	0	0	0	0	0	0
32	8.8	0	0	0	0	8.8
37	19.32	14.35	0	0	0	33.67
42	44.8	31.31	7.2	0	0.54	83.85
47	29.97	18.75	6.15	6.16	0	61.03
52	24.48	14.91	0	0	0	39.39
57	0	0	0	0	0	0
Total	127.37	79.32	13.35	6.16	0.54	226.74

(ii) Calculate actual to expected termination ratios to see how the experience compares to the current assumption.

Actual/Expected Terminations Comparison					
Age at Disability	Duration Since Disability (In Years)				
	1	2	3	4	5
27					
32	102%				
37	57%	237%			
42	134%	64%	97%		741%
47	250%	373%	276%	130%	
52	266%	302%			
57					
Total	173%	213%	180%	130%	741%

- The experience study suggests that the actual termination of the group is consistently higher than what the current termination assumption, across all ages at disability and all durations.

3. Continued

- Earlier durations have higher exposure counts therefore the data is more credible and can be relying upon to develop a better termination assumption.

Recommended change based on the experience study:

Age at Disability	Duration Since Disability (In Years)				
	1	2	3	4	5
All Ages	150% to 200%	200% to 250%	150% to 200%	100% to 150%	100%

(c)

(i) List and describe the additional sections, if any, that are required in the report.

(ii) List the statements required in the actuarial opinion.

Commentary on Question:
(i) Most candidates didn't include an assets section or failed to describe the information contained in the section.

(i)

- Methods and assumptions for valuation of liabilities - Description of any changes to assumptions and quantification of effect
- Assets (since this is self-funded LTD) - Including method to value assets, market value/value in plan financial statements
- Plan provisions - Including cost sharing provisions and identification of any expected amendments that have been valued

(ii)

- In my opinion, the data on which the valuation is based are sufficient and reliable for the purposes of the valuation
- In my opinion, the assumptions are, in aggregate, appropriate for the purposes of the valuation
- In my opinion, the methods employed in the valuation are appropriate for the purposes of the valuation
- This report has been prepared, and my opinion given, in accordance with accepted actuarial practice in Canada.

4. Learning Objectives:

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

Learning Outcomes:

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

Sources:

GSC 625, GSC 621

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a)

(i) Three months after the transition of the group Another Day becomes aware that a participant provided an incorrect age to the new insurer.

Describe the impact this will have on the participant's coverage.

(ii) Six months after the transition of the group Another Day advises that a participant who was formerly disabled has become disabled again due to the same cause. This employee returned to work one month after the transition and had been working on a full time basis until the recurrence of his disability.

Sketch the timeline of responsibilities related to this employee for each of the new and former insurers.

Commentary on Question:

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

A timeline sketch was necessary for part (ii). Those that did not draw a timeline did not receive full credit. Many candidates failed to recognize that the reoccurring LTD would be paid by the new insurer, which is critical for this question.

(i) The life insurance benefit – insurer may adjust to reflect the difference in premiums corresponding to the difference between the actual age and the incorrect age

In accident and sickness insurance - insurer may elect to adjust the premium to make it correspond to the premium applicable to the true age of the insured

4. Continued

If participant is no longer qualify for insurance, then the insurance coverage may be declared void; however, if the error is discovered after the death of the participant, the insurer may not be able to deny life insurance coverage

In the absence of fraud, misrepresentation or concealment as to risk does not justify the annulment or reduction of insurance once it has been in force for two years. This rule does not apply in the case of disability insurance if the disability begins during the first two years of insurance

(ii) As part of the timeline, the following needed to be noted on the timeline:

- LTD occurred prior to transition date
- The former insurer pays the first month of benefits post-transition
- The employee accumulated 30 days elimination around month 2
- LTD reoccurred at month 6, post-transition
- There is no Waiting Period since LTD is due to same cause and within 180 days
- the reoccurring LTD is paid by new insurer

(b)

(i) Define a contract of adhesion under the Quebec Civil Code and describe the major consequences of this definition for an insurance contract.

(ii) Compare and contrast the content required in the insurance contract versus a group insurance plan description.

(iii) Critique the draft dental contract for Another Day. Assume that the table provided represents the entirety of the contract for this benefit.

Commentary on Question:
Candidates did not do well on this question. For part (i), many candidates defined a contract of adhesion but failed to describe the major consequences. For part (ii), many candidates listed the requirements of insurance contract and the plan description, but failed to compare and contrast the two. In part (iii), many candidates did not note the missing provisions. Full lists were not required for full marks.

(i) A contract of adhesion is a contact in which the essential stipulations were imposed or drawn up by one of the parties, on his behalf or upon his instructions, and were not negotiable.

4. Continued

Major consequences of the definition

- The insurance contract must be interpreted in favour of the policyholder or the insured
- An external clause is null if, at the time of formation of the contract, it was not expressly brought to the attention of the adhering party (policyholder or insured), unless the other party proves that the policyholder or insured otherwise knew of it
- A clause that is illegible or incomprehensible to a reasonable person is null if the adhering party suffers injury therefrom, unless the other party proves that an adequate explanation of the nature and scope of the clause was given to the adhering party

(ii)

	Quebec Contract	Plan Description
Similar	Insurer name Policyholder name	
Differences	Identification of insured persons Object of insurance Nature of risks insured Time from which risks are covered Term of coverage Period of benefits payable Premium rates, due date, and time limit on payment of premiums Right of policyholder to participate in profits	Exclusions/limitations Circumstances under which insurance terminates Information is important and should be kept for safe keeping Procedure for making a claim Where to get more information

(iii) Correctly includes the following provisions:

- Insurer's name
- Policyholder's name
- Amount of coverage

4. Continued

Missing the following provisions:

- Identification of insured persons
- Object of insurance
- Nature of risks insured
- Time from which risks are covered (effective date)
- Term of coverage
- Period of benefits payable
- Premium rates, due date, and time limit on payment of premiums
- Right of policyholder to participate in profits
- Right to convert

Inconsistent information with case study

- 80% coinsurance on basic should be 100%
- $2,000 lifetime ortho max should be $1,500

Other noted issues

- Reference to dental fee guide is a possible external clause
- Exclusion on dental floss could be considered an abusive clause
- Notes section could be an illegible clause and "fine print" clauses may not be enforceable

5. Learning Objectives:

5. The candidate will understand how to prepare and interpret insurance company financial statements in accordance with IFRS & IAS.

Learning Outcomes:

(5a) Interpret insurer financial statements from the viewpoint of various stakeholders.

(5c) Project financial outcomes and recommend strategy to senior management to achieve financial goals.

Sources:

Analysis for Financial Management, 10thEdition, Higgins Ch. 4 Managing Growth

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a)

(i) Describe the life cycle of a successful company.

(ii) Explain the possible consequences for each of excessive growth and slow growth.

Commentary on Question

(i) Listing the four stages of a company's life cycles only obtains part mark. Candidates need to describe the issues and characteristics of each stage to obtain full mark.
(ii) Candidates did well on this part.

(i)

- Start-up: loses money while developing products and gaining market share
- Rapid growth: profitable but is growing so rapidly that it needs infusion of outside financing
- Maturity: growth declines and switches from absorbing outside financing to generating more cash than the firm can profitably reinvest
- Decline: the company is perhaps marginally profitable, generates more cash than it can reinvest internally, and suffers declining sales

(ii)

- Rapid growth can put considerable strain on a company's resources. Unless management is aware of this effect and takes active steps to control it, rapid growth can lead to bankruptcy
- Slow growth indicates incapability of investment, will disappoint investors.

5. Continued

(b) Outline a memo to Montgomery's leadership taking a position on growth levels since 2012. Your response should address:

- How actual growth levels compare to the sustainable growth rate;
- Three sustainable growth "what if" scenarios for 2015, each testing a different variable;
- A recommended target growth level;
- A description of three strategies to reach your recommendation; and
- Limitations/disadvantages for each recommended strategy.

Show your work and justify your response.

Commentary on Question:
Points are assigned to each of the bullet point listed in the question.
To obtain full points, candidates need to

- *State that the actual growth is not sustainable (or actual growth rates are higher than the sustainable rates);*
- *Show numeric results of "what-if" scenarios;*
- *Recommend a target growth level that is no higher than the calculated sustainable rate;*
- *Provide three strategies, which may or may not be related to the "what-if" scenarios.*
- *Comment on limitations of each suggested strategy.*

Note: the format of a memo will not affect the final mark.

Step 1: calculate actual growth and sustainable growth rates of 2012 to 2015

	2012	2013	2014	2015
Net Income (a)	$47.8	$50.3	$60.0	$64.6
Sales Revenue (b)	$1,000	$1,200	$1,500	$1,850
Total Assets ($MM) (c)	$700	$740	$800	$1,000
Retention Ratio (d)	95%	95%	95%	95%
Financial Leverage (e)	1.9	1.8	2.1	2.0
Profit Margin (f) = (a)/(b)	4.78%	4.19%	4.00%	3.49%
Assets Turnover (g) =(b)/(c)	1.43	1.62	1.88	1.85
Sustainable growth rate (d)x(e)x(f)x(g)	12.33%	11.62%	14.96%	12.27%
Actual Sales Growth (b) (yr/yr)		20.00%	25.00%	23.33%

5. Continued

Step 2: "What if" scenarios calculation

Scenario A = Profit Margin increase

Scenario B = Financial Leverage increase

Scenario C = Retention Ratio increase

	2015	A	B	C
Net Income (a)	$64.6		$64.6	$64.6
Sales Revenue (b)	$1,850	$1,850	$1,850	$1,850
Total Assets ($MM) (c)	$1,000	$1,000	$1,000	$1,000
Retention Ratio (d)	95%	95%	95%	100%
Financial Leverage (e)	2.0	2.0	2.2	2.0
Profit Margin (f) = (a)/(b)	3.49%	4.00%	3.49%	3.49%
Assets Turnover (g) =(b)/(c)	1.85	1.85	1.85	1.85
Sustainable growth rate (d)x(e)x(f)x(g)	12.27%	14.06%	13.50%	12.92%
Actual Sales Growth (b) (yr/yr)	23.33%	23.33%	23.33%	23.33%

Step 3: write out a memo

To: Montgomery's SMT
Subject: Growth Sustainability and Recommendations

Memo:

From 2012 to 2015, Montgomery's actual sales growth consistently exceed sustainable growth rate.

	2012	2013	2014	2015
Sustainable growth rate	12.33%	11.62%	14.96%	12.27%
Actual Sales Growth		20.00%	25.00%	23.33%

Current growth rate is not sustainable.

5. Continued

To understand the driver of over growth, we did 3 "What If" scenarios:

- If in 2015 profit margin had been 4% instead of 3.5% (for the same amount of revenue) then sustainable growth rate would have been 14.1% instead of 12.3%
- If in 2015 financial leverage had been 2.2 instead of 2.0 then sustainable growth rate would have been 13.5% instead of 12.3%
- If in 2015 retention ratio was 100% instead of 95% then sustainable growth rate would have been 12.9% instead of 12.3%

I recommend a target growth level of 14%.

The strategies to consider to achieve balanced growth when actual growth exceeds sustainable growth include

1. Increase prices
   - Raise prices to increase profit margin back to at least 4% if not higher
   - Increasing profit margin also increases sustainable growth rate

   Limitations/disadvantages:
   - Slows down growth; can be challenging to predict consumer response
2. Increase financial leverage
   - Raise debt so that leverage is 2.2

   Limitations/disadvantages:
   - Upper limit to company's debt financing
3. Reduce dividend payout (increase retention ratio)
   - Cut dividend payouts

   Limitations/disadvantages:
   - Lower limit of 0 dividends
   - Could reduce stock price if shareholders don't believe profits are being put to productive use.

(Other possibilities:

1. Sell new equity
   - Sell more shares

   Limitations/disadvantages:
   - Not available to all companies/in all countries
2. Prune away marginal activities
   - Sell off marginal business and/or slow-paying customers/slow-turning inventory

   Limitations/disadvantages:
   - Sales decline because tightening credit terms and reducing inventory selection drives away some customers

5. Continued

3. Outsource some or all of production
   - Outsource non-core competencies to other vendors

   Limitations/disadvantages:
   - Risk of jeopardizing company's core competencies/product/services
4. Merge with a "cash cow"
   - Look for partner with deep pockets

   Limitations/disadvantages:
   - Finding partner may be challenging
   - Drastic solution, for the company to go through an acquisition)

(c) Explain the impact of inflation on growth rates and Montgomery's financial statements.

Commentary on Question:
Most candidates were able to relate inflation to higher growth rates but very few explained the impact on financial statements.

- Inflation increases the cost of inventory and eventually of fixed assets once requiring replacement.
- The company needs additional investment to support increased costs.
- Inflation does two things to a company's financial statement:
  - Increases amount of external financing required
  - In absence of new equity financing, increases company's debt-to-equity ratio when measured on its historical-cost financial statements
- If management or creditors require the historical-cost debt-to-equity ratio stay constant over time, inflation will lower the company's real sustainable growth rate.
- However, the real value of liabilities declines as companies become able to repay their loans with depreciated dollars.
- Therefore, the net increase in external financing may be little affected by inflation.
- In summary: Inflation has little impact on sustainable growth rate, when viewed via inflation-adjusted financial statements. However, if viewed on historical-cost basis, will appear that inflation lowered the sustainable growth rate.

6. Learning Objectives:

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

Learning Outcomes:

(4b) Describe how private group insurance plans work within the framework of social programs in Canada.

Sources:

GHC 609-13 Communique: Ontario Generic Drug Price Reforms Finalized

Commentary on Question:

Question focuses on the Ontario drug price reform. Understanding of potential impacts on plan sponsors, plan members and pharmacies inside and outside of Ontario was required for full marks. Bullet points with supporting descriptive wording were acceptable for full marks.

Solution:

(a)

(i) Summarize the 2010 Ontario drug reform and its implications for plan members, plan sponsors, and pharmacies.

(ii) NU expected that drug costs under the benefits plan would have decreased as a result of the drug reform in Ontario. However, it experienced an increase in drug costs in 2013 and 2014.

Explain the factors that could have contributed to the increase.

(i)

- Generic drug prices reduced to 25% of brand name equivalent
  - Drug plan costs will decrease for plan sponsors and plan members
  - Pharmacy revenue will decrease
- Pharmacy professional allowances (rebates) have been eliminated
  - Drug plan costs will decrease for plan sponsors and plan members
  - Pharmacy revenue will decrease
- New classification system for allowable Pharmacy dispensing fees under the Ontario Drug Benefit (ODB) plan
  - 4 categories based on location of pharmacy (rural or urban) and proximity to other pharmacies with rural and remote pharmacies having the highest dispensing fees
  - Given there is no maximum legislated dispensing fees for private plans, pharmacies may try to recover lost revenue from ODB plan by increasing dispensing fees for private plans

6. Continued

- Pharmacy mark-up fee remains at 8% of drug price, with no cap
  - No impact in drug plan costs for plan sponsors, plan members or pharmacies

(ii)

- Even though generic drug prices decreased, overall drug plan costs could have increased for the following reasons
  - Dispensing fees under private plans for all prescriptions (generic and brand name) may have risen
  - Pharmacy chains may try to make up lost revenue in Ontario by significantly increasing generic drug prices, pharmacy mark-up and dispensing fees in pharmacies located in other provinces
  - A few new specialty drug claims could easily raise the overall drug plan cost
  - Demographic changes of the plan sponsor could increase the prevalence of drug claims for certain illness/diseases
  - New brand name drugs came to market that still had full patent rights (i.e., no generic equivalent available)

(b)

(i) Compare the cost of the generic drug in Ontario to the cost of the therapeutic alternative drug. Assume the therapeutic alternative drug is 80% effective. Show your work.

(ii) Calculate the hourly pay rates that would make the specialty drug more cost effective when compared to brand name and generic drugs, respectively. Show your work.

(iii) Discuss other considerations when deciding whether to list the new specialty drug on NU's drug formulary.

Commentary on Question:
Question was designed to test candidate's understanding of the components of brand name, generic, therapeutic alternative and specialty drug costs for private plan sponsors and members, drug cost-benefit analysis based on efficacy, and strategic advice for adding new specialty drugs to existing drug formularies.

6. Continued

(i) Annual cost of generic drug

- Generic ingredient cost is 25% of brand name drug cost
  - $160 per 10 pills x 25% = $40 per 10 pills
- Dispensing fee = $15per 10 pills
- Pharmacy mark-up (assume maximum of 8% of ingredient cost)
  - $40 per 10 pills x 8% = $3.20 per 10 pills
- Total generic drug cost per 10 pills
  - $40 + $3.20 + $15 = $58.20 per 10 pills
- Annual generic drug cost (1 pill per day)
  - $58.20 / 10 pills x 365 days = $2,124 per year

Annual cost of step therapy drug

- Total step therapy drug cost adjusted for 80% efficacy
  - $120 per 25 pills / 80% = $150 per 25 pills
- Annual step therapy drug cost
  - $150 / 25 pills x 365 days = $2,190 per year

Conclusion

The step therapy drug has a higher effective annual cost than the generic drug

(ii)

Annual cost of specialty drug = $10,200 (given)
Annual cost of brand name drug = $160 per 10 pills x 365 days = $5,840 per year
Annual cost of generic drug = $2,124 per year (from i)
Reduced absenteeism hours = 25 days x 8 hours x 80% = 160 hours

Hourly rate for specialty drug to be more cost effective over brand name drug

Savings from drug costs must exceed additional cost of specialty drug
$10,200 - $5,840 = $4,360
Hourly rate at which specialty drug is more cost effective over brand name drug
$4,360/160hours = $27.25 per hour
If an employee makes more than $27.25 per hour, it is more cost effective to take the specialty drug over the brand name drug.

Hourly rate for specialty drug to be more cost effective over generic drug

Savings from drug costs must exceed additional cost of specialty drug
$10,200 - $2,124 = $8,076
Hourly rate at which specialty drug is more cost effective over generic name drug
$8,076/160 hours = $50.48 per hour
If an employee makes more than $50.48 per hour, it is more cost effective to take the specialty drug over the generic drug

6. Continued

(iii) The following should be considered when deciding to list a new specialty drug to an existing formulary:

- How will employees with allergies to the non-medicinal ingredients of the specialty drug be handled, will a brand name drug be allowed without penalty>
- Increased/decreased disability or EAP costs
- Paternalism or company philosophy
- Will the drug be accessible through a government program

7. Learning Objectives:

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

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

Learning Outcomes:

(4a) Describe eligibility requirements for social programs in Canada and the benefits provided.

(4b) Describe how private group insurance plans work within the framework of social programs in Canada.

(4c) Compare social programs in Canada and the United States and discuss the value of the different systems.

(6a) Describe the regulatory and policy making process in Canada

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

Sources:

Morneau Shepell Ch. 15 (p. 373 - p. 375)

GHC-672-16: CLHIA Guideline G17: Coordination of Benefits for Out-of-Country/Out-of-Province/Territory Medical Expenses

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Compare and contrast the reciprocal fee arrangement between Saskatchewan and:

(i) Florida

(ii) other Canadian provinces

Commentary on Question:

Candidates need to discuss the difference between Quebec vs. other provinces to receive full marks.

7. Continued

(i) For emergency medical costs incurred outside of Canada, patients can submit their expenses for services for reimbursement, but they are only covered up to the amount that would have been paid if the service had been performed in the province of residence or pre-set limit per day

(ii) Between Saskatchewan and all Canadian provinces except Quebec, there is an arrangement which covers the following:
- They agree that medical services provided in the other jurisdiction is covered

(i) - Jurisdiction that provides service will be automatically billed to the medical plan of the jurisdiction in which the person receives medical services resides

(ii) Between Saskatchewan and Quebec, there is no reciprocal fee arrangement
- Non-residents who receive services in Quebec must pay for services at the point of sale, then seek reimbursement from their own medical plan

(b) Define and identify the Primary and Secondary Plan(s). Justify your response.

Commentary on Question:
Candidates need to justify answers as opposed to just listing the plans being primary or secondary without giving a reason.

- Primary plan means the plan that provides coverage first before any other plan
- Secondary plan means a plan that only provides coverage for any outstanding balance on a claim after the Primary Plan or Plans have paid eligible expenses
- In order to be considered a Secondary Plan, the coverage must include a provision which stipulates it is "excess to all others"
- If the Primary Plan or Plans have sufficient limits to cover the loss, the Secondary Plan or Plans will not provide coverage
- Retiree plan is secondary because it has a lifetime limit less than $50k
- Therefore primary plan is Laguna coverage

(c) Identify the First Carrier and describe its responsibilities.

Commentary on Question:
Candidates generally did well on this part.

7. Continued

- First Carrier is the insurer or plan administrator that is first contacted in the event of a claim
- First Carrier for Chris is Laguna plan

Responsibilities of the First Carrier include:

- Handle the Case Management/ This includes, but not limited to taking the initiative to involve an assistance group or service provider, choosing a preferred provider organization, monitoring medical care and/or repatriation
- Notify Other Carriers
- Pay the claim with an amount that is equal to the coverage determined by the terms and conditions of its contract.
- Forward claims documents to Other Carriers
- Receive assessment from Other Carriers Based on these assessments Recover amounts owing from other carriers and GHIP

(d) Calculate the costs to:

(i) Saskatchewan provincial health insurance plan

(ii) Retiree group benefits plan

(iii) Laguna plan

(iv) Chris

Show your work.

- None of the elective surgery costs are reimbursed as they are not emergent
- Total cost paid by provincial plan = 100 x 2 days + 60 x 2 visits = $320
- Note this will be paid initially by the primary plan, and later reimbursed
- Laguna is the primary plan so calculate this payment first
- Total cost paid by Laguna plan = 90% x (10,000 + 3,000 + 1,500 + 500) – 320 = 13,180
- Retiree plan is the secondary plan so calculate this payment after all others have been determined
- Candidate may assume that the amount reimbursed under the retiree plan if it were primary payor would be greater than the residual amount given the level of coinsurance; alternatively, candidate can calculate actual amount [full marks either way with appropriate justification]
- Total cost paid by retiree plan = $15,000 – 320 – 13,180 = $1,500
- Total cost to Chris = elective hip replacement
- surgery + MRI scan = $2,000 + 45,000 + 15,000 + 100 +750 = $62,850

8. Learning Objectives:

1. The candidate will understand how to describe plan provisions typically offered under:
   a. Group and individual medical, dental and pharmacy plans
   b. Group and individual long-term disability plans
   c. Group life and short-term disability plans
   d. Supplementary plans, like Medicare Supplement
   e. Group and Individual Long Term Care Insurance

3. Evaluate and recommend an employee benefit strategy.

Learning Outcomes:

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

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

(3a) Describe employer's rationale and strategies for offering employee benefit plans.

(3b) Evaluate the elements of cafeteria plan design, pricing and management.

(3c) Recommend an employee benefit strategy in light of an employer's objectives.

Sources:

Group Insurance, Ch. 5; Handbook of Employee Benefits, Ch. 2

Commentary on Question:

This question was testing candidates' understanding of employee benefit plans, their design, and appropriate coordination of benefits across more than one plan. Candidates who struggled with this question applied the benefits from each of John's and Rebecca's plans independently across each claim, rather than coordinating the benefits on each claim.

Solution:

(a) Describe the functional approach for employee benefit plan design.

Commentary on Question:

Maximum credit was awarded for providing at least 8 of the 12 steps below. Most candidates were successful at describing at least 8 of the steps in the functional approach.

- Classify Employee needs in functional categories
- Classify the categories of persons
- Analyze the current benefits in terms of the functional categories of needs and the categories of employees that the employer wants to benefit

8. Continued

- Determine any gaps in benefits in terms of the functional categories of needs and employees
- Consider recommendations for changes in the benefit plan to meet any gaps or overlapping in benefits
- Estimate cost savings from each recommendation above
- Evaluate alternative methods of financing or securing the benefits above
- Consider other cost savings techniques
- Decide upon the appropriate benefits, methods of financing, and sources of benefits
- Implement the changes
- Communicate benefit changes to employees
- Periodically reevaluate the benefit plan

(b) Describe the general purposes served by having the employees share in the cost of the plan.

Commentary on Question:
Maximum credit was awarded for providing at least 2 of the 3 purposes below. A description for each purpose was required to receive credit. Candidates more often identified the first 2 purposes as opposed to the last.

- Control of utilization: EEs are more aware of their behavior which reduces the volume of unnecessary services
- Control of costs: reduces plan costs leading to lower premiums
- Control of risk to the insurer: makes the cost a more insurable risk.

(c) Determine which parent's plan is first payer for Owen. Show your work.

Commentary on Question:
Candidates who showed the accumulation of cost sharing across both benefit plans were able to identify the correct answer and receive maximum credit.

John's 2/20 $300 claim:
John's plan (1st payer):
$300 toward individual (John) & family deductible
Rebecca's plan (2nd payer):
plan pays: ($300 - $250) * 0.80 = $40 (John deductible is met)
member OOP: $300 - $40 = $260
Rebecca's 3/6 $400 claim:
Rebecca's plan (1st payer):
plan pays: ($400 - $250) * 0.80 = $120
(Rebecca deductible and family deductible are now met)
member OOP: $400 - $120 = $280

8. Continued

John's plan (2nd payer):
$280 toward individual (Rebecca) & family deductible

Owen's 4/30 $500 claim:
Rebecca's $500 family deductible has been met.
John's $1,000 family deductible has not been met ($420 remains)
If Rebecca's plan is first payer: Rebecca's plan pays: $500 * 0.80 = $400
Remaining $100 goes towards John's family deductible
If John's plan is first payer: John's plan pays: ($500 - $420) * 0.80 = $64
Remaining $436 is sent to Rebecca's plan: $436 * 0.80 = $369
Total paid by both plans would be $433.

Based on the claims history provided in the question, Rebecca's plan is the first payer for Owen.

(d) Determine the plan that John selected. Assume the deductible counts toward any out of pocket maximums. Show your work.

Commentary on Question:
None of John's plans matched the benefit payments provided in the question, therefore points were only awarded for showing the correct coordination of benefits for each claim, not for determining the plan John selected. Most candidates who were successful in part c were also successful in part d.

Benefits are coordinated for the first three claims in part (c).
John's 5/1 $200 claim:
John's plan (1st payer):
$200 toward individual deductible & family deductible;
$500 individual deductible is now met with first claim of $300
$880 ($300 + $280 + $100 + $200) of $1,000 family deductible has been met
Rebecca's plan (2nd payer):
plan pays: $200 * 0.80 = $160
member OOP: $200 - $160 = $40
Owen's 5/30 $700 claim:
Rebecca's plan (1st payer):
plan pays: $700 * 0.80 = $560 (family deductible already met)
member OOP: $700 - $560 = $140
John's plan (2nd payer):
$120 toward meeting the $1,000 family deductible
plan pays: ($140 - $120) * 0.80 = $16
member OOP: $140 - $16 = $124

8. Continued

(e) Determine which of John's plans would minimize the family's out-of-pocket costs next year. Show your work.

Commentary on Question:
Candidates who struggled with this part were unsuccessful coordinating the benefits from each of John's and Rebecca's plans across each claim. Partial credit was awarded if candidates who recognized that Plan 3 was correct given John's second large claim alongside the low OOP max (up until the last claim, plan 3 actually maximizes the family's out-of-pocket costs).

Plan 1:
- John's 2/20 $3,000 claim:
  - John's plan (1st payer):
    - plan pays: ($3,000 - $500) * 0.80 = $2,000
    - remaining amount sent to 2nd plan: $3,000 - $2,000 = $1,000
  - Rebecca's plan (2nd payer):
    - plan pays: ($1,000 - $250) * 0.80 = $600
    - member pays: $1,000 - $600 = $400
- Rebecca's 3/6 $1,500 claim:
  - Rebecca's plan (1st payer):
    - plan pays: ($1,500 - $250) * 0.80 = $1,000
    - remaining amount sent to 2nd plan: $1,500 - $1,000 = $500
  - John's plan (2nd payer):
    - $500 toward meeting the individual & family deductibles
- Owen's 4/30 $1,500 claim:
  - Rebecca's plan (1st payer):
    - plan pays: $1,500 * 0.80 = $1,200 (family deductible already met)
    - remaining amount sent to 2nd plan: $1,500 - $1,200 = $300
  - John's plan (2nd payer):
    - plan pays: $300 * 0.80 = $240 (family deductible already met)
    - member pays: $300 - $240 = $60
- John's 5/1 $24,000 claim:
  - John's plan (1st payer):
    - plan pays: $24,000 * 0.80 = $19,200
    - remaining amount sent to 2nd plan: $24,000 - $19,200 = $4,800
  - Rebecca's plan (2nd payer):
    - plan pays: $4,800 * 0.80 = $3,840
    - member pays: $4,800 - $3,840 = $960
- Total OOP = $400 + $500 + $60 + $960 = $1,920

Plan 2:
- John's 2/20 $3,000 claim:
  - John's plan (1st payer):
    - plan pays: ($3,000 - $500) * 0.70 = $1,750
    - remaining amount sent to 2nd plan: $3,000 - $1,750 = $1,250

8. **Continued**

Rebecca's plan (2nd payer):
plan pays: ($1,250 - $250) * 0.80 = $800
member pays: $1,250 - $800 = $450

Rebecca's 3/6 $1,500 claim:
Rebecca's plan (1st payer):
plan pays: ($1,500 - $250) * 0.80 = $1,000
remaining amount sent to 2nd plan: $1,500 - $1,000 = $500
John's plan (2nd payer):
$500 toward meeting the individual & family deductibles
Owen's 4/30 $1,500 claim:
Rebecca's plan (1st payer):
plan pays: $1,500 * 0.80 = $1,200 (family deductible already met)
remaining amount sent to 2nd plan: $1,500 - $1,200 = $300
John's plan (2nd payer):
plan pays: $300 * 0.70 = $210 (family deductible already met)
member pays: $300 - $210 = $90
John's 5/1 $24,000 claim:
John's plan (1st payer):
member pays: min($1,250, $24,000 * 0.30) = $1,250
($1,250 from John's first claim and $1,250 from this claim meets John's individual OOP max)
plan pays: $24,000 - $1,250 = $22,750
remaining amount sent to 2nd plan: $1,250
Rebecca's plan (2nd payer):
plan pays: $1,250 * 0.80 = $1,000
member pays: $1,250 - $1,000 = $250
Total OOP = $450 + $500 + $90 + $250 = $1,290

Plan 3:
John's 2/20 $3,000 claim:
John's plan (1st payer):
member pays: min($1,500, $500 + ($3,000 - $500) * 0.50) =
$1,500 (John's OOP max is met)
plan pays: $3,000 - $1,500 = $1,500
remaining amount sent to 2nd plan: $1,500
Rebecca's plan (2nd payer):
plan pays: ($1,500 - $250) * 0.80 = $1,000
member pays: $1,500 - $1,000 = $500

8. **Continued**

Rebecca's 3/6 $1,500 claim:
- Rebecca's plan (1st payer):
  - plan pays: ($1,500 - $250) * 0.80 = $1,000
  - remaining amount sent to 2nd plan: $1,500 - $1,000 = $500
- John's plan (2nd payer):
  - $500 toward meeting the individual & family deductibles

Owen's 4/30 $1,500 claim:
- Rebecca's plan (1st payer):
  - plan pays: $1,500 * 0.80 = $1,200 (family deductible already met)
  - remaining amount sent to 2nd plan: $1,500 - $1,200 = $300
- John's plan (2nd payer):
  - plan pays: $300 * 0.50 = $150 (family deductible already met)
  - member pays: $300 - $150 = $150

John's 5/1 $24,000 claim:
- John's plan (1st payer):
  - John's first claim met his OOP max so the plan pays $24,000. The member pays $0.

Total OOP = $500 + $500 + $150 + $0 = $1,150

Plan 3 minimizes the family's out-of-pocket costs.

9. **Learning Objectives:**

1. The candidate will understand how to describe plan provisions typically offered under:
   a. Group and individual medical, dental and pharmacy plans
   b. Group and individual long-term disability plans
   c. Group short-term disability plans
   d. Supplementary plans, like Medicare Supplement
   e. Group and Individual Long Term Care Insurance

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

Learning Outcomes:

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

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

(2b) Develop an experience analysis.

(2d) Calculate and recommend a manual rate.

Sources:

Skwire, Ch 5, 21; Individual Health Insurance, Ch 5,

Commentary on Question:

Question attempts to test the exam taker's ability to

1) Understand the Plan Design requirements of the ACA
2) Use given data to adjust an index rate for morbidity by combining population data/assumptions to ensure selection impacts are not financially determental.

Solution:

(a) Describe the different types of cafeteria plans available.

Commentary on Question:

Candidates got a quarter point for each of the bullet points up to a maximum of one point. Providing additional detail around any of the bullets did not result in additional credit. Providing detail without providing the major bullets did not result in credit. Many candidates provided EHB and pre-existing exclusion answers. Mental Health Parity and OOP Maximums were rarely mentioned.

9. Continued

- Coverage of Preventative services at zero cost share to the member
- Prohibition of lifetime and annual limits
- Limits on OOP Maximums when using In Network benefits
- SG and Individual plans must cover Essential Health Benefits
- Prohibition of exclusions based on pre-existing conditions
- The ACA extended federal mental health parity requirements to the small employer and individual marketplaces.

(b) The Index Rate under the ACA is defined as the expected average allowed PMPM claims for essential health benefits of the carrier's entire book of ACA products. Calculate a recommended morbidity adjustment that can be applied to the Index Rate. Show your work.

Commentary on Question:
Many candidates used the proper data from the case study (incurred claims) for the PPO, Quantum and HMO. Some used the Paid claims instead and did not receive full credit. Almost all used the correct membership. Not excluding the Non-EHB claims resulted in not receiving full credit. Other common errors included:1) Not using the Paid to Allowed to convert Incurred to allowed. 2) Taking a straight average of PPO and HMO PMPMs instead of a member weighted average. 3) Multiplying by the age/gender factors instead of dividing. 4) Providing the morbidity adjustment as assumed distribution average PMPM prior to age/gender adjustment dividing by assumed distribution average PMPM post age/gender adjustment. All of these resulted in less than full credit. Lastly, credit was not given for trending claims to 2017 levels as the trend would have resulted in being divided out in the final morbidity adjustment calculation.

Steps:
1) Pull correct Member Months and Incurred claims from case study (i) and (ii)
2) Find Paid PMPMs (iii)
3) Find allowed PMPM by dividing by Paid to Allowed Ratio (v)
4) Subtract out Non-EHBs (vii)
5) Blend together HMO and PPO on Member Months to find EHB Allowed for current Individual plans (equals $349.89)

	(i)	(ii)	(iii) = (ii)/(i)	(iv)	(v) = (iii)/(iv)	(vi)	(vii) = (v)-(vi)
	MM	Incurred Claims	Paid PMPM	Paid to Allowed Ratio	Total Allowed	Non-EHB Allowed	EHB Allowed
HMO Individual	74,055	19,482,802	$263.09	71.50%	$367.95	$2.76	$365.19
PPO Individual	21,153	5,469,488	$258.57	86.20%	$299.96	$3.65	$296.31
					$352.85	$2.96	$349.89
Quantum III Individual	52,998	15,919,661	$300.38	85.00%	$353.39	$1.25	$352.14

9. Continued

6) Divide each sub-segment of the population by the given Age/Gender factor (iv)
7) Use the assumed distribution of enrollment from the question to find the future market average (vi)
8) Divide the market average by the current Individual PMPM to find the morbidity ratio (vii)

	Using EHB Allowed				
	From Q (i)	*From Q (ii)*	*2 From Q and 2 Calculated in Part A (iii)*	*(iv) = (iii)/(ii)*	
	Enrollment	A/G	Allowed PMPM	Normalized for A/G	
Existing ACA Products	5.00%	1.015	$349.89	$344.72	(v)
Uninsured	20.00%	1.256	$472.31	$376.04	
Quantum Legacy III Indi	29.00%	1.004	$352.14	$350.74	
Other Carriers	46.00%	1.085	$398.65	$367.42	
Market average				$363.17	(vi) = Sumproduct (iv) & (i)
Ratio to current ACA products				1.054	(vii) = (vi)/(v)

10. Learning Objectives:

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

Learning Outcomes:

(2d) Calculate and recommend a manual rate.

Sources:

Skwire Chapters 25 & 26

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) List and describe key characteristics that should be considered when pricing group LTD and group LTC plans.

Commentary on Question:

In order to receive full credit on the question candidates needed to 1) distinguish between LTD and LTC and 2) describe the characteristics listed.

- Age/Gender: maternity may impact LTD, LTC is issue age rated (increase for older issue ages) and females have a steeper slope and higher utilization
- Group size: in LTD highest claim costs occur for largest and smallest groups (U shaped cost curve)
- Participation factors: antiselection at low participation rates for both LTD and LTC
- Marital status: LTC (lower cost for married couples, consideration in composite rating)
- Area: LTD has significant variation by area, LTC services vary by region: in Midwest – nursing homes, in Florida – home care services

(b) Evaluate whether your company will win the business. Show your work.

Commentary on Question:

Few candidates were awarded full credit for part B. Common issues were not considering the elimination period, misapplication of continuance factors, and not using given claim costs for Thunderball. Partial credit was given where candidates used a two year calculation period instead of a three year calculation period.

10. Continued

$$Cost = Incidence \times \sum(Benefit_t \times Continuance_t \times Discount_t)$$

XYZ

	Year 1	Year 2	Year 3
Benefit	(365-90) * 100 = $27,500	$36,500	$36,500 - $27,500 = $9,000

Termination by Duration

	Year 1	Year 2	Year 3
F37	.9*0.42 = 0.378	0.9*0.35 = 0.315	0.9*0.22 = 0.198
M47	0.370	0.250	0.150
F52	.9*0.34 = 0.306	0.9*0.21 = 0.189	0.9*0.13 = 0.117

Continuance = 1 - Termination

	Year 1	Year 2	Year 3
F37	1 - 0.378 = 0.622	0.622 * (1 - 0.315) = 0.4261	0.4261 * (1 - 0.198/4) = 0.4050
M47	1 - 0.370 = 0.630	0.630 * (1 - 0.250) = 0.4275	0.4275 * (1 - 0.150/4) = 0.4548
F52	1 - 0.306 = 0.694	0.694 * (1 - 0.189) = 0.5268	0.5268 * (1 - 0.117/4) = 0.5464

Note: Benefit during year 3 extends only one-quarter (3 months) into the year

F37: $0.0018 * \{\$27{,}500 * 0.622 * (1.035)^{-1} + \$36{,}500 * .4261 * (1.035)^{-2} + \$9{,}000 * 0.4050 * (1.035)^{-2.25}\} = \$61.95$
M47: $69.59
F52: $84.34

Year 1: $61.95 * .35 + $69.59 * .30 + $84.34 * .35 = $72.08
Year 2: $61.95 * .50 + $69.59 * .35 + $84.34 * .15 = $67.98

Thunderball

Year 1: $73.00 * .35 + $67.09 * .30 + $82.25 * .35 = $74.46
Year 2: $73.00 * .50 + $67.09 * .35 + $82.25 * .15 = $72.32

Present Value of Savings

XYZ costs minus Thunderball costs, discounted at IRR of 15%

Year 1: ($2.39) * $1.15^{-.5} = ($2.23)$
Year 2: ($4.34) * $1.15^{-1.5} = ($3.52)$

XYZ will win the business because it will save the company money.

11. Learning Objectives:

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

Learning Outcomes:

(2c) Calculate and recommend assumptions.

Sources:

Group Insurance, Bluhm, Chapter 34 (pages 599-606)

GHC_105_13 Pricing Considerations for Drugs Covered Under Pharmacy Benefit Programs

Commentary on Question:

There we candidates who received a large number of points on this question – it was very possible, just came at the end of a long day and some people obviously ran out of time. There were a couple common errors that led to about half credit, though.

Solution:

(a) Explain the components of health insurance pricing trends and how each applies to prescription drugs.

Commentary on Question:

In section a, candidates did reasonably well as long as they included all of the trend components (recite list) AND state what unit cost and utilization mean to pharmacy (trend in cost of the drug/AWP and trend in the number of scripts per member).

- Unit cost trend – Change in the cost of services. Represents unit cost trend on a fixed market basket, severity, and mix of services. For pharmacy this would be the cost of the drugs (AWP).
- Utilization trend – Change in the utilization of services. For pharmacy this would be the number of drugs used by members.
- One time changes – Such as legislation, high flu season, internal issue. For pharmacy this could be impact of a new drug or high flu.
- Expected population shifts – Demographic, geographic mix.
- Structural changes – Change in cost structure. For pharmacy this could be PBM contract changes that impact discounts/dispensing fees.
- Capitation or Large claims impact

11. Continued

(b)

(i) (*2 points*) Calculate the expected PMPM claims cost for 2017 under the current PBM contract terms. Show your work.

(ii) (*5 points*) Calculate the expected 2017 savings under each PBM contract proposal. Show your work.

(iii) (*1 point*) Define potential criteria for awarding the contract and recommend a proposal for approval. Justify your recommendation.

Commentary on Question:
In section b, the key was to convert AWP total dollars to AWP per script, then trend that AWP per script by cost trend and trend the scripts by utilization trend. Many candidates trended the total AWP dollars by cost trend only – but utilization trend would have applied to total dollars as well. A large number of candidates did calculate the expected cost of the new drug correctly, but there were many candidates that didn't even attempt the new drug calc. There were many moving parts in this section, so the candidates had to be careful to apply the correct discounts and dispensing fees to the 3 different 2017 claims cost calcs. For the recommendation, many candidates simply mentioned which proposal was cheaper using exact given data. Question is looking for candidates to think about other justifications for staying or switching – think about future drug mix changes, rebates, utilization management, member disruption, etc.

Calculate AWP per script to use in the calculations
2015 Experience

	Brand	Generic	Specialty
AWP per script = 2015 AWP / 2015 Scripts			
Retail	210.00	102.00	2,044.98
Mail	700.00	219.99	3,628.94

2017 Calculations
Calculate the following for each Brand/Generic/Specialty – Retail/Mail Combo:
2017 AWP per script = 2015 AWP per script * (1+unit cost trend)^2
2017 Scripts = 2015 Scripts * (1+utilization trend)^2
2017 Allowed = (AWP per script *(1 - Discount) + Disp Fee) * Scripts

11. Continued

2017 New Drug Scripts = prevalance rate (180/100,000) * total membership (120,000) * % of patients that will take the drug (50%) * number of months they will take it (depends on release date)
For sections i) and ii):

	AWP per script	Scripts		Current Contract Terms:		Current PBM Proposal:		Competitor PBM Proposal:
Retail:								
Brand	$272.91	166,489		$38,822,143		$38,011,903		$38,560,965
Generic	$110.32	898,186		$28,372,643		$26,688,103		$25,670,832
Specialty	$2,611.24	2,328		$5,160,094		$5,098,128		$5,140,107
Retail total:				$72,354,881		$69,798,134		$69,371,904
Retail PMPM:				$50.25		$48.47		$48.17
Mail:								
Brand	$909.72	7,904		$5,741,550		$5,644,128		$5,716,028
Generic	$237.94	49,488		$2,779,564		$2,543,462		$2,472,810
Specialty	$4,633.79	8,952		$35,596,993		$35,260,652		$35,675,483
New Drug	$750.00	1,296		$834,624		$826,200		$835,920
Mail total:				$44,952,730		$44,274,441		$44,700,240
Mail PMPM:				$31.22		$30.75		$31.04
Total				**$117,307,611**		**$114,072,576**		**$114,072,145**
Total - PMPM				**$81.46**		**$79.22**		**$79.22**
Savings						**-$2.25**		**-$2.25**
Total without New Drug				$116,472,987		$113,246,376		$113,236,225
Total - PMPM without new drug				$80.88		$78.64		$78.64
New Drug by itself				$0.58		$0.57		$0.58
Savings						-$2.24		-$2.25

(iii) The savings is basically the same between the Current and the Competitor proposals. There are likely to be costs associated with moving to another PBM. Also the specialty discounts are better with Current PBM proposal, and specialty drugs are becoming a higher part of overall pharmacy spend each year. I recommend sticking with Current PBM.

12. Learning Objectives:

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

Learning Outcomes:

(6a) Describe the regulatory and policy making process in the U.S.

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

(6c) Apply applicable standards of practice.

Sources:

Handbook of Employee Benefits, Ch 24

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) List the general characteristics that make the communication of benefit programs challenging and describe how those characteristics may or may not apply to Company XYZ.

Commentary on Question:

Majority of the students fared well on this question. They were asked to identify the challenges and apply to XYZ. The regulatory requirements portion was answered the least. Some students focused on actual communication (i.e.: email, mail) vs general characteristics of communication and thus missed the point of the question.

1. The workforce is diverse in composition, with various levels of education, financial sophistication and interest in understanding plan provisions.
   Company XYZ employs a wide variety of workers, from software developers who are likely to be highly-educated to warehouse workers who may only have a high school education.

2. Some benefits are of little interest to a majority of employees until point of use.
   Company XYZ, for example, has a disability income plan which tends to be a benefit that is not truly understood until the use of the benefit is needed.

3. Multiple regulatory requirements often affect plan features and lead to confusion.
   Company XYZ is a global firm, and each country has their own regulatory environment to consider.

4. Language barriers and plan complexity can also contribute to the challenge.

12. Continued

(b) Assess whether the SPD meets the ERISA-specified minimum standards to be considered a bona fide SPD. Assume the plan is subject to Title I of ERISA. Justify your position.

Commentary on Question:
This question was mixed in responses. Some outlined the items below, but some listed multiple items that weren't relevant. Those who identified the appeal and Legal process tend to fare better than those who didn't. No candidate discussed the timeline for SPD which is covered in rubric and related to the question but not explicitly asked in the question.

The SPD must contain the following information

The requirement to describe how a participant covered by the plan can make a claim for benefits.
Does SPD meet standard? YES

The procedure for appeal if a participant's claim for benefits is denied.
Does SPD meet standard? NO

The name and address of the person(s) to be served with legal process should a legal action be instituted against the plan.
Does SPD meet standard? NO

General description of provider network
Does SPD meet standard? NO

Description of COBRA rights
Does SPD meet standard? NO

(c)

(i) Determine the date by which you must issue the COBRA rights to your severed employees. Justify your response.

(ii) Determine the date by which you must issue the SMM. Justify your response.

12. Continued

Commentary on Question:
This part of the question was very poorly answered. For the most part, candidates understood that COBRA right should be issued, but couldn't identify when. Many were also confused of "issuing" vs. "communicating" the COBRA rights, which has different timelines. Answers for (i) ranges from 2 months before to 3 months after the date of termination. Part (ii) was poorly answered and only a few candidates got part marks. Overall, not one candidate got full marks on c).

(i) There is a notification requirement when the employee experiences a qualifying event, such as termination from employment. Since the layoffs occurred two months after the issuance of the SPD, the date by which it should be issued is approximately November 30th.

(ii) The SMM is required to be issued within 210 days after the plan year in which the material modification was adopted, which is reduced to 60 days for plans that make "material reduction" in covered services or benefits. Considering that this plan has overhauled its benefits plan, the 60-day rule would likely apply.
The plan is currently one month prior to the start of the plan year, so the date by which the SMM should be issued is approximately February 28th.