GH DPC Model Solutions
Fall 2021

1.

Learning Objectives:

1. The candidate will understand how to describe plan provisions typically offered under:
   - 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:

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

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

Sources:

Group Insurance – Ch. 5 (Medical Benefits in the United States)

Essentials of Managed Health Care – Ch. 2

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a)

(i) Describe the three dimensions of medical benefit plans.

(ii) List two examples for each dimension.

Commentary on Question:

Candidates generally did well on this part of the question and received full credit for providing the numbered items below along with two examples (lettered items) for each.

1. Continued

The three dimensions of medical benefit plans, including examples, are as follows:

1. The definition of services covered and conditions under which they are covered
   a. Definition of incurral date
   b. Covered services (limitations and exclusions)
   c. Covered facilities
   d. Covered professional services
   e. Other covered services

2. The degree to which the insured shares in the cost of medical services (commonly referred to as cost sharing)
   a. Deductible
   b. Coinsurance
   c. Copay
   d. UCR charge levels
   e. Paying at a fee schedule or per diem
   f. Daily limits on specified services
   g. Limits on the number of days covered

3. The relationship between providers and the health plan, including the breadth of the provider network and the degree to which the provider participates in the cost
   a. Discounts from billed charges
   b. Fee schedules and maximums
   c. Per diem reimbursements
   d. Hospital DRG reimbursement, ambulatory payment classifications, or global payments
   e. Bonus pools based on utilization
   f. Capitation
   g. Integrated delivery system

(b) Explain how the three dimensions of medical benefit plans interact within:

(i) Managed Indemnity

(ii) Health Maintenance Organization (HMO)

(iii) Preferred Provider Organization (PPO)

1. **Continued**

Commentary on Question:
Most candidates received partial credit on part (b), and provided stronger responses for HMO and PPO. Credit was given for reasonable answers not included here.

(i) Managed indemnity is a traditional indemnity plan with managed care overlays. The most common types of managed care overlays are general utilization management, large case management, specialty utilization management, disease management, rental networks, and workers' compensation utilization management. Members have few provider restrictions; however, cost sharing is typically higher since members are balance billed for the amount not paid by insurance companies. Providers are typically paid based on billed charges.

(ii) HMOs typically have restrictive networks with low cost sharing for members. Primary care physicians (PCPs) act as gatekeepers (i.e., members must see their PCP to receive access to specialty care). Most providers are paid via capitation so there is incentive for the providers to control utilization.

(iii) PPOs provide more freedom of choice for members via two networks: in network and out of network. Cost sharing varies by the two networks with lower cost sharing for using in network providers and higher cost sharing for using out of network providers. In network providers negotiate large discounts on services in order to have more members steered to them.

(c) Explain the purpose of required cost sharing between the plan and the insured.

Commentary on Question:
Candidates generally did well on this part of the question and received full credit for explaining the purpose of cost sharing.

Generally, requiring the insured to share in the cost of services serves the following purposes:

1. Control of Utilization: It is widely believed that requiring a covered individual to share in the cost of medical services significantly controls utilization. Several studies have shown drastic reductions in utilization when an insurance plan is subject to deductibles, copays, or coinsurance.

2. Control of Costs: Requiring the covered individual to share in the cost lowers the premium and thus provide more affordable coverage.

1. Continued

3. Control of Risk to the Insurer: Increased cost sharing results in a benefit program that more truly represents an insurable risk.

(d) Propose strategies an insurance company can use to manage insured spend at non-preferred providers.

Commentary on Question:
Most candidates received partial credit on part (d). Credit was given for reasonable answers not included here.

Strategies an insurance company can use to manage insured spend at non-preferred providers include:

1. Limiting reimbursement using usual, customary, and reasonable maximums or using fee schedules

2. Reduce plan benefits between in network and out of network

3. Exclude claims at out of network providers

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.

Learning Outcomes:

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

(2c) Calculate and recommend assumptions.

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

Sources:

Group Insurance, Skwire, Daniel D., 7th Edition, 2016. Chapter 34: Medical Claim Cost Trend Analysis.

Commentary on Question:

Commentary listed underneath each question component.

Solution:

(a) Describe the following components of core cost trend and provide an example for each.

(i) Unit cost trend

(ii) Severity

(iii) Mix of services

Commentary on Question:

Most candidates were able to describe the trend components and provide examples.

(i) The year-over-year change in the cost of a fixed basket of services, holding utilization constant. It is similar to a Consumer Price Index (CPI) calculation, a common measure of inflation. For example, a provider increases their physician fee schedules for a visit by 5% in order to keep pace with inflation.

(ii) This part refers to the change in the intensity of treatment. An example would be a shift away from 15-minute office visits to more 30-minute office visits.

2. Continued

(iii) This component refers to high-level changes such as the overall distribution between inpatient, outpatient, professional, and other services. Because of the complexity involved in analyzing all possible changes due to mix of services, it is often thought of as a balancing item. An example would be an overall shift in utilization from Inpatient settings to Outpatient settings.

(b) Calculate the components of core cost trend for 2021. Show your work.

Commentary on Question:
Candidates struggled to calculate the components of core cost trend. Many candidates were unable to calculate Severity (a cost trend component calculated using changes in utilization weights) and Core Utilization (higher-level adjustments based on economic impacts, workdays/holidays, and pent-up demand). Partial credit was given to candidates who were able to demonstrate the key concepts of each component, holding utilization constant to calculate unit cost, holding unit cost constant to calculate severity, and calculating service mix as a balancing item.

2. Continued

Column:	A	B	C	D	E	F
	Given	Given	Given	Given	=A/(Sum of Col A)	=C/(Sum of Col C)
	2020		**2021**		**2020**	**2021**
Medical Subcategory	**Utilization/ 1000**	**Cost Per Service**	**Projected Utilization/1000**	**Projected Cost Per Service**	**Utilization Weight**	**Utilization Weight**
Inpatient - Medical	100	4,000	110	4,100	0.6%	0.6%
Inpatient - Surgical	80	9,000	85	9,100	0.5%	0.5%
Inpatient - Maternity	25	3,500	35	3,600	0.1%	0.2%
Inpatient - Mental Health	20	1,000	25	1,050	0.1%	0.1%
Inpatient - Other	20	600	25	620	0.1%	0.1%
Outpatient - ER	150	1,200	155	1,220	0.8%	0.9%
Outpatient - Radiology	300	600	195	610	1.7%	1.1%
Outpatient - Pathology	350	200	355	220	2.0%	2.0%
Outpatient - Surgery	120	3,400	125	3,450	0.7%	0.7%
Outpatient - Other	500	250	520	260	2.8%	2.9%
Office Visit - 15 minutes	5,300	60	5,350	70	29.8%	30.0%
Office Visit - 30 minutes	2,800	80	2,805	85	15.8%	15.7%
Other	170	300	175	320	1.0%	1.0%
Ambulance	15	1,400	20	1,410	0.1%	0.1%
Rx	7,000	75	7,005	80	39.4%	39.3%
Physical Therapy	700	115	705	120	3.9%	4.0%
Other	120	200	125	200	0.7%	0.7%

Unit Cost Trend	4.5%	=(SUMPRODUCT of columns D & E)/(SUMPRODUCT of columns B & E)-1
Severity	2.9%	=(SUMPRODUCT of columns B & F)/(SUMPRODUCT of columns B & E)-1
Service Mix (Balancing)	0.2%	=(1+Core Cost Trend)/((1+Unit Cost Trend)*(1+Severity Trend))-1
Core Cost Trend	7.7%	=(SUMPRODUCT of columns C & D)/(SUMPRODUCT of columns A & B)-1

2. Continued

(c) Calculate the components of the final trend projection and complete the table below. Show your work.

Trend Component	**Projected 2021 Trend**
Core Cost Trends	
Core Utilization Trends	
One-Time Changes	
Population Shifts	
Structural Changes	
Capitation Trend Impact	
Best Estimate Trend	
Expected Impact of Large Claims	
Other Fluctuations	
Margin	
Final Trend Projection	

Commentary on Question:
Candidate performance on this part was mixed. Candidates who performed well were able to differentiate core trend components, best estimate trend components, and margin trend components. Many candidates were able to calculate the workday adjustment. Credit for Core Cost Trends was given based on each candidate's calculation from part (b). Partial credit was given to candidates who summed trends rather than using multiplicative factors.

Day Counts			
	2020	**2021**	**Weights**
Weekdays	252	251	1.00
Weekends and Holidays	114	114	0.45

Weighted Sum, 2020	303.3	=252*1.00+114*0.45
Weighted Sum, 2021	302.3	=251*1.00+114*0.45
Workday Trend Impact	-0.3%	=302.3/303.3-1

2. Continued

Trend Component	Projected 2021 Trend	Source	Formula
Core Cost Trends	7.7%	*candidate answer from part (b)*	=(1+Unit Cost)*(1+Severity)*(1+Service Mix)-1
Core Utilization Trends	-0.3%	*calculated using Day Counts table*	*calculation shown above*
One-Time Changes	2.0%	*given in question*	One-Time Pandemic Adjustment
Population Shifts	0.8%	*calculated from question*	Product of Demographic Changes & Geographic Changes =(1+.003)*(1+0.005)-1
Structural Changes	1.1%	*calculated from question using Benefit, Clinical, Leveraging, Network components*	Product of Benefit Changes & Clinical Program Changes & Leveraging & Network Changes =(1+0.005)*(1-0.002)*(1+0.005)*(1+0.003)-1
Capitation Trend Impact	0.1%	*given in question*	Capitation Impact
Best Estimate Trend	**11.7%**	*calculated using above components*	=(1+0.77) * (1-0.003) * (1+.020) * (1+0.008) * (1+0.011) * (1+0.001) - 1
Expected Impact of Large Claims	1.0%	*given in question*	Expected Impact of Large Claims
Other Fluctuations	1.0%	*solved for so that Margin = 2%*	=(1+0.02)/(1+0.01)-1
Margin	2.0%	*given in question*	Margin
Final Trend Projection	**13.9%** (14.0% if values are not rounded)	*calculated using components in this table*	=(1+0.117)*(1+0.02)-1

(d)

(i) Calculate the revised 2021 trend. Show your work.

(ii) Explain differences between the projected and current estimates.

Commentary on Question:
Most candidates were able to calculate the current trend estimate and compare it to the projection. Candidate explanations varied with many candidates listing differences in trends without explanation of the overall projection and possible reasons for variance.

2. Continued

(i)

Trend Component	Projected 2021 Trend	Revised 2021 Estimate	Difference
Core Cost Trends	7.7%	4.0%	-3.7%
Core Utilization Trends	-0.3%	3.0%	3.3%
One-Time Changes	2.0%	3.0%	1.0%
Population Shifts	0.8%	0.5%	-0.3%
Structural Changes	1.1%	0.5%	-0.6%
Capitation Trend Impact	0.1%	0.2%	0.1%
Best Estimate Trend	**11.7%**	**11.7%**	**0.0%**
Expected Impact of Large Claims	1.0%	-1.0%	-2.0%
Other Fluctuations	1.0%	0.0%	-1.0%
Margin	2.0%	-1.0%	-3.0%
Total Trend	**13.9%**	**10.6%** (10.5% if not rounded)	**-3.3%**

Best Estimate Trend =
(1+0.04)*(1+0.03)*(1+0.03)*(1+0.005)*(1+0.005)*(1+0.002)-1
Total Trend = (1+0.117)*(1-0.01)-1 = 10.6%

(ii)

The current "Best Estimate Trend" is within 0.1% of the projected "Best Estimate Trend." However, the overall total trend (10.5%) is lower than projected (14%). This is because the total margin of 2% proved to be excessive, especially since the impact of large claims was lower than expected. This could be due to our trend evaluation only using a few months of runout, as it takes time for large claims to be processed and adjudicated.

In the "Best Estimate Trend," there are offsetting differences between components. Core cost trends were significantly overstated, which were offset by understated utilization trends.

- Core cost trends could have been overstated due to an unforeseen contract negotiation that resulted in a smaller than expected increase in the unit cost trends. There could have also been a systematic overstatement of the core cost trends.
- Utilization trends were significantly understated, which may be because they were calculated only using workday and weekend weights. There could have been a new drug introduced or loss of patent protection of an existing drug, resulting in higher-than-expected utilization.

2. **Continued**

(e) Recommend modifications to improve the trend projection process. Justify your response.

Commentary on Question:
Candidates needed to provide multiple trend process modifications with justification in order to receive full credit. Credit was given for reasonable answers not included here.

I recommend performing a detailed analysis to calculate utilization trends on a book-of-business level and then using those for all sub-groups. Utilization changes should be tracked over time and should incorporate more than just workdays and weekends/holidays. The detailed study should include a pipeline analysis of new drugs coming to the market or losses of patent protections on existing drugs. This additional detail will help the company understand more about what is driving trend to help make more informed assumptions.

I also recommend developing core cost trends using more than just one year of experience data. Using multiple years of data may help smooth out potential outliers and noise, leading to a more accurate forecast.

3. 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.

Learning Outcomes:

(2c) Calculate and recommend assumptions.

(2d) Calculate and recommend a manual rate.

Sources:

GHDP-128-21 Pricing Medicare Supplement Benefits, 2020, Sections IV & V

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Describe pricing methodologies for Medicare Supplement plans and explain reasons why each would be selected.

Commentary on Question:
Candidates generally received full or no credit on this part.

Community rated programs: All participants will pay the same rate and experience the same rate increase.

Issue-age pricing: The rate an individual pays will be based upon his/her age at first issue, and will be the same as others issued at that same age.

Attained-age methodologies: The rate will be based on the individual's current age, regardless of how long coverage has been in force.

Selection of a pricing methodology needs to consider regulatory requirements and competitive considerations. The insurer would also need to consider the member experience and the extent of underwriting.

(b)

(i) Describe policy standardization requirements reflected in the National Association of Insurance Commissioners (NAIC) Medicare Supplement Model Regulation.

(ii) Describe the purpose of this regulation.

Commentary on Question:
Candidates generally performed poorly and did not describe the policy standardization requirements, instead describing the NAIC Model regulation in general.

3. **Continued**

(i) A company is allowed to only have one policy form per plan type, for each of individual non-Select, group non-Select, individual Select, and group Select, unless subsequent policy forms have one or more of the following differences: inclusion of innovative benefits, marketing method (e.g., direct marketed vs. agent sold), underwriting method (e.g., fully underwritten vs. guaranteed issue), or eligibility for Medicare aged vs. Medicare disabled.

The regulation requires that any decision to discontinue availability of a policy form must be communicated to the insurance commissioner. The company who discontinued that form is then prohibited from filing another form of that same type and plan for a period of 5 years.

(ii) The purpose of this restriction is to prevent a company from closing one block of poorly-performing business, beginning sale of a new form, and then taking large rate increases on the older block.

(c) Calculate the annual premium for an 80-year-old policy holder. Show your work.

Commentary on Question:
Most candidates made errors at various steps of the calculation and received partial credit. Adj. Claim Cost = (Unadjusted Claim Cost) x (1 + Sex Factor Adj.) x (1 + Smoker/Non-Smoker Adj.)

Policy Year	Att. Age	Unadjusted Claim Cost	Sex Factor Adj.	Smoker/Non-smoker Adj.	Adj. Claim Cost
1	80	1,644.73	7.7%	-3.00%	1,718.23
2	81	1,707.43	8.0%	-3.00%	1,788.70
3	82	1,726.77	8.2%	-3.00%	1,812.31
4	83	1,745.30	8.4%	-3.00%	1,835.15
5	84	1,801.06	8.6%	-3.00%	1,897.27
6	85	1,819.93	8.9%	-3.00%	1,922.45
7	86	1,839.58	9.1%	-3.00%	1,946.77
8	87	1,859.29	9.3%	-3.00%	1,971.24
9	88	1,879.49	9.6%	-3.00%	1,998.12
10	89	1,899.91	9.6%	-3.00%	2,019.83
11	90	1,921.29	9.6%	-3.00%	2,042.56
12	91	1,942.91	9.6%	-3.00%	2,065.55
13	92	1,965.11	9.6%	-3.00%	2,089.15
14	93	1,987.33	9.6%	-3.00%	2,112.77
15	94	2,010.48	9.6%	-3.00%	2,137.38
16	95	2,034.17	9.6%	-3.00%	2,162.57

3. Continued

Survivors, Policy Year 1 = 1000
Survivors, Policy Years 2+ = (Survivors previous year) x (1 – Mortality Previous Year/1000) x (1 – Lapse Rate Previous Year)
Incurred Claims = (Adj. Claim Cost) x (Survivors)
PV Incurred Claims = (Incurred Claims) / (1 + Discount) ^ (Policy Year – 0.5)
PV Premium = 1 / (1 + Discount) ^ (Policy Year – 1)

Policy Year	Attained Age	Mortality	Lapse Rate	Survivors	Incurred Claims	PV Incurred Claims	PV Premium
1	80	95.00	20%	1,000.00	1,718,233	1,676,824	1.000
2	81	104.37	15%	724.00	1,295,021	1,203,630	0.952
3	82	114.94	15%	551.17	998,894	884,192	0.907
4	83	126.66	15%	414.65	760,937	641,485	0.864
5	84	139.30	15%	307.81	583,996	468,876	0.823
6	85	152.57	10%	225.19	432,917	331,027	0.784
7	86	166.30	10%	171.75	334,358	243,490	0.746
8	87	180.28	10%	128.87	254,032	176,185	0.711
9	88	195.82	10%	95.07	189,968	125,479	0.677
10	89	214.77	10%	68.81	138,985	87,432	0.645
11	90	240.12	10%	48.63	99,327	59,509	0.614
12	91	279.05	10%	33.26	68,693	39,196	0.585
13	92	349.97	8%	21.58	45,081	24,498	0.557
14	93	470.08	8%	12.90	27,265	14,111	0.530
15	94	670.00	8%	6.29	13,447	6,628	0.505
16	95	1,000.00	8%	1.91	4,131	1,939	0.481

Total Incurred Claims = ∑ PV Incurred Claims = 5,984,500
Premium Factor = Sumproduct(PV Premium , Survivors) = 3,378
Premium PMPY = 5,984,500 / 65% / 3,378 = **$2,725.54**

(d) Calculate the expected profit margin over the lifetime of the policy. Show your work.

Commentary on Question:
Most candidates received partial credit making errors at various stages of the calculation while very few received full credit.

Premium Income = Premium PMPY x Survivors
Commissions = Premium x Broker Commissions
Admin Expenses = Premium x Admin and Tax Load
Gain from Ops = Premium Income – Incurred Claims – Commissions – Admin Expenses
PV Profits = (Gain from Ops) / (1 + Discount) ^ (Policy Year)

3. Continued

Policy Year	Attd. Age	Premium Income	Incurred Claims	Commissions	Admin Expenses	Gain from Ops	PV Profits
1	80	2,725,536	1,718,233	545,107	408,830	53,365	50,824
2	81	1,973,288	1,295,021	197,329	295,993	184,944	167,750
3	82	1,502,235	998,894	150,224	225,335	127,782	110,383
4	83	1,130,133	760,937	113,013	169,520	86,663	71,298
5	84	838,942	583,996	83,894	125,841	45,211	35,424
6	85	613,766	432,917	61,377	92,065	27,407	20,451
7	86	468,111	334,358	46,811	70,217	16,725	11,886
8	87	351,238	254,032	35,124	52,686	9,396	6,360
9	88	259,125	189,968	25,913	38,869	4,376	2,821
10	89	187,545	138,985	18,754	28,132	1,673	1,027
11	90	132,539	99,327	-	19,881	13,331	7,794
12	91	90,643	68,693	-	13,596	8,353	4,651
13	92	58,814	45,081	-	8,822	4,910	2,604
14	93	35,172	27,265	-	5,276	2,632	1,329
15	94	17,147	13,447	-	2,572	1,128	543
16	95	5,206	4,131	-	781	294	135

Profit Margin = ∑PV profits / (∑PV Incurred Claims / 0.65) = 495,280 / 9,206,922 = **5.4%**

4. Learning Objectives:

1. The candidate will understand how to describe plan provisions typically offered under:
   - 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:

(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.

Sources:

Group Insurance Ch. 12 (Group Disability Income Benefits) & Ch. 25 (Estimated Disability Claim Costs)

Commentary on Question:

Generally, candidates did not receive full credit for this question. Most candidates demonstrated general knowledge about disability products but struggled to synthesize the information to address the specific scenarios in each sub-part. Many candidates used the correct formula to calculate the manual premium in part (e), though few produced the correct values for all factors in the manual premium formula.

Solution:

(a) Describe ways a group long term disability (LTD) insurer mitigates:

(i) Moral hazard

(ii) Financial risks

Commentary on Question:

Many candidates did well on this part, though there tended to be overlap between items that could fit under either (i) or (ii). Candidates who provided appropriate responses in either box received credit.

4. Continued

(i)
LTD insureds are somewhat incentivized not to recover. Mitigation strategies include:

- Limiting the maximum benefit amount insureds can receive to less than pre-disability income.
- Changing to more restrictive definitions of disability (from any occupation to own occupation) and loss-of-income requirements (from 20% to 40%) after a set period of time (usually 2 years)
- Offsetting benefits for Social Security disability payments, worker's compensation payments, and post-disability income

(ii)
Financial risks can be managed by:

- Limiting claim durations for mental health claims (due to difficulty of assessing ongoing disability), typically 2-year benefit limit
- Fraud review
- Settlements, although the insurer should make sure the insured has legal representation to avoid the appearance of taking advantage of the insured
- Managing disabilities and providing rehabilitative support and encouragement to return to work

(b) Evaluate the advantages and disadvantages to an insurer of offering both short term disability and LTD with respect to:

(i) Financial risk

(ii) Claims management

Commentary on Question:
Some candidates incorrectly provided responses from the employer, rather than insurer, perspective. Candidates needed to provide responses from the insurer perspective to earn credit.

Advantages

- Able to administer complex claims from the start (more info, more claim management).
- Insurer may be able to manage claims during the STD period and prevent them from developing into LTD.

Disadvantages

- Presence of STD makes it easier for employees to remain out of work during the LTD elimination period, and increases the chance of a member having LTD claims
- Greater financial risk in total

4. Continued

(c) Describe considerations for developing LTD interest rate assumptions.

Commentary on Question:
Many candidates responded with explanations of why the interest rate assumption is important, instead of <u>considerations</u> for an insurer when selecting the interest rate assumption.

The interest rate needs to be in line with Thunderball's expected returns on the assets backing its active life and disabled life reserves. The interest rate assumption should be based on the types of investments used.

In addition, Thunderball should ensure that the durations of its assets are appropriately matched to those of its liabilities. Duration matching is a technique that can be used in investment management to mitigate risk, and the selection of appropriate bond/equity assets to cover the predicted losses will ultimately determine the interest rate that the account earns.

(d) Compare and contrast benefit offsets and timing considerations used in setting net manual premium rates for standard LTD plans in:

- the United States
- Canada

Commentary on Question:
Most candidates struggled with this part. Many candidates provided information about the benefit design of LTD products, rather than information specific to benefit offset or neglected to provide any considerations from a Canadian perspective. Very few candidates provided details regarding offsets with the Canada Pension Plan and Quebec Pension Plan.

US disabled claimants can receive payments from SSDI (Social Security Disability Income) while Canadian claimants can receive offsets from the CPP (Canada Pension Plan) and the QPP (Quebec Pension Plan).

After the elimination period, LTD benefits in the US are reduced by anticipated state disability benefits and workers compensation during the early months of disability. For later months of disability, SSDI offsets are also anticipated.

The CPP and QPP have an elimination period of 5 months before benefits can be received whereas SSDI has an elimination period of 6 months. However, SSDI awards may take longer to be approved.

SSDI primary awards are typically higher than CPP and QPP primary awards but dependent awards may be higher from the CPP or QPP.

4. Continued

The insurer should consider the timing and benefit amount differences between the US and Canada if they attempt to use an LTD model from one country for valuing/pricing LTD plans in the other country

(e) Calculate the monthly net manual premium per employee for the client. Show your work.

Commentary on Question:
Many candidates provided the correct framework for the calculation, even if they did not use the correct factors in deriving the net premium. Most candidates correctly calculated the discount rate, though only some calculated the correct continuance rates by year. Candidates were awarded partial credit if they provided the correct formula, even if the factors used were incorrect.

$$(IncidenceRate) \times \sum_{\substack{Benefit\\Period}} Benefit_t \times Continuance_t \times InterestDiscount_t$$

From Exhibit 1:
Incidence Rate for males under 30, with 6-month elimination period
= 0.5 per 1,000 lives
= 0.0005

t	B_t	p_t	$c_t = c_{t-1} \times (1 - p_t)$	$v_t = (1+5\%)^{-t}$	$B_t \times c_t \times v_t$
Year	Benefit	Death / Recovery Rate	Continuance	Interest Discount	Product
1	50,000	0.360	0.640	0.952	30,476
2	50,000	0.340	0.422	0.907	19,156
3	50,000	0.190	0.342	0.864	14,778
4	50,000	0.120	0.301	0.823	12,385
5	50,000	0.080	0.277	0.784	10,852
				Total =	87,648

Death/Recovery Rate comes from Exhibit 2b, with age at disablement of 27

Monthly net manual premium = (0.0005 × 87,648) / 12
= **$3.65 PMPM**

5. Learning Objectives:

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

Learning Outcomes:

(3a) Describe structure of employee benefit plans and products offered and the rationale for offering these structures.

(3b) Describe elements of flexible benefit design and management.

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

Sources:

The Handbook of Employee Benefits, Rosenbloom, Jerry

- Ch. 18: Selected Additional Benefits
- Ch. 25: Cafeteria Plan Design and Administration

Commentary on Question:

Candidate performance on this question was mixed. Many candidates received at least partial credit. Poor performance on one section did not limit or restrict the candidates' ability to earn credit in another section.

Solution:

(a) Describe advantages and disadvantages of a cafeteria plan for:

(i) Employees

(ii) Employers

Commentary on Question:

Candidates needed to provide two advantages and two disadvantages for both employees and employers to receive full credit. The following solution shows items that would receive credit, but responses outside of these could receive credit as well.

Many candidates listed items related to defined contribution strategies or private exchanges. While there is some commonality between these and cafeteria plans, they are distinct topics.

Employees: Advantages

- Save money by paying for benefits on a tax advantaged basis
- Employer contribution exempt from federal income tax, FICA tax

5. Continued

Employees: Disadvantages

- All benefit elections must be made prior to the plan year and cannot be changed
- FSAs are subject to “use-it-or-lose-it” rule
- Lack of FICA taxes could lead to a decrease in Social Security benefits

Employers: Advantages

- Financial savings from not paying FICA tax on contributions
- Deferral amounts are not considered wages for workers’ compensation premiums or other payroll-based expenses
- Helps employees understand the overall value of their benefits

Employers: Disadvantages

- Ongoing costs associated with the administration of the plan
- If offering a healthcare FSA, required full amount of benefit to be available during the entire plan year
- Potential for adverse selection on the part of the plan participants
- Subject to complex coverage and nondiscrimination requirements

(b) Compare and contrast types of cafeteria plans by completing the following table:

	Premium Conversion Plan	Flexible Spending Account	Full Flex Plan
Taxability of Benefits			
Employer Contributions			
Benefits Offered			
Cash Options			
Other			

Commentary on Question:

Many candidates provided limited, often one-word responses in each box. The purpose of the chart is to provide structure for the response and help the candidate focus their response, instead of leaving it broad and open-ended. The candidates are still expected to effectively communicate the similarities and differences between each type of plan.

Candidates needed to be able to highlight similarities or differences among the different plans to receive full credit and these elements needed to be described accurately. Partial credit could be received for accurately comparing/contrasting two out of three plan types.

5. Continued

	Premium Conversion Plan	Flexible Spending Account	Full Flex Plan
Taxability of Benefits	Tax-favored	Fund benefits on a pre-tax basis	Tax advantaged
Employer Contributions	No contribution except when allowing employees to opt out of employer-paid benefits	Can be funded through a combination of salary reductions and employer contributions	Employers determine a dollar value for benefits through a cash contribution or a credit system. Employees fund the difference.
Benefits Offered	Generally only used for medical (med/dental/vision/etc) coverage or group term life up to $50k	Can cover medical reimbursements, dependent care reimbursements or adoption assistance	Covers a full range of benefits
Cash Options	If the employer offers the ability to opt out of employer-paid benefits, requires a cash option in the plan. Does not require this to be equal to the full value of the benefit	No cash options, employee contributions are done through salary reductions	A credit system allows employers to offer a cash option that is not dollar-for-dollar
Other	Disability plans can be included, but usually aren't due to the taxability of benefits	Can be partnered with a premium conversion feature	

(c) Recommend a cafeteria plan type for Zorin. Justify your response.

Commentary on Question:
Candidates received full credit if they 1) recommended a plan type and 2) provided at least two justifications for their recommendation. Any of the plan types could be acceptable answers.

Candidates who failed to recommend a cafeteria plan type did not receive credit.

Acceptable justifications required the candidate to connect their recommendation to Zorin's stated goals for their benefit plan. General observations or descriptions of advantages or disadvantages unrelated to Zorin's goals did not receive credit.

5. Continued

I recommend a full-flex plan for Zorin. This plan allows Zorin to make contributions for benefits while also giving its employees the option to buy-up coverage on a tax advantaged basis. This plan design gives Zorin the ability to offer a wide range of potential benefits, while controlling their own costs by setting the employer contribution and setting the cash option at a level below the value of the benefits.

(d) Critique the CEO's proposal.

Commentary on Question:
Candidates received full credit for supplying at least two critiques that either addressed the CEO's stated goals or Zorin's benefit strategy.

Descriptions, observations or opinions that did not tie to the concerns of the CEO or Zorin did not receive credit.

The CEO's proposal may not deliver on its promises. Critical Care, Cancer and Hospital Indemnity insurance are taxable benefits under the tax code, so employees will not have a tax benefit.

Disability buy-ups can be offered on a tax advantaged basis, but that would make the benefits taxable. Many plans offer disability buy-ups after tax, so employees get a much richer benefit should they pay out at a small tax cost.

Employers are prohibited from making contributions for voluntary benefits on behalf of plan participants to avoid triggering ERISA compliance, so the CEO's plan would not avoid ERISA regulations