GH 201-U Model Solutions
November 2025

1. Learning Objectives:

1. The candidate will understand how to apply valuation principles for short duration group and health insurance contracts.

Learning Outcomes:

(1b) Explain the limitations and biases of the traditional valuation methods

(1c) Calculate appropriate claim reserves given data

(1e) Evaluate data resources and appropriateness for calculating reserves

Sources:

GH201-100-25: Health Reserves

Commentary on Question:

This question primarily assesses candidates' knowledge of claim reserve estimation methods, their understanding of the limitations of traditional approaches, and their familiarity with alternative techniques.

Solution:

(a) Describe the characteristics of coverages where the use of the development method is appropriate.

Commentary on Question:

Many candidates were given credit for listing as well as describing. Some candidates struggled with the 3rd bullet as they mentioned short benefits or coverages rather than short duration relative to an ultimate run-out. For full credit candidates needed to mention at least 4 of the characteristics.

Characteristics of coverages for which the development method works well include:

- Ability to systematically record an incurred date and a payment date as each claim is adjudicated and paid. The difference between these dates across policies in a valuation cell defines the lag pattern.
- Fairly consistent lag patterns in the progression of claims from their incurred date to a date on which they are ultimately paid in full. Methods exist to smooth and adjust patterns for some disruptions, but the inherent payment pattern cannot be too erratic.

1. Continued

- Incurred periods should have a relatively short duration relative to the ultimate run-out. Monthly periods typically are used for medical claims. Quarterly periods are often used for disability and may even work for large blocks of term life coverage. Annual periods are usually limited to some property/casualty coverages in which run-out may last for years. Longer incurral periods also create complications due to the impact of inflationary or operational changes. with the smoothing of statistical fluctuations described in more detail below.
- A sufficient volume of business must be included in a given valuation cell to obtain reasonable stable results. This amount varies by the nature of the benefits and the frequency of claim. Combining blocks of business to achieve credibility therefore requires that they exhibit similar patterns in reporting and processing.
- The technique also requires either earned premiums or an exposed contract count to assist in the calculations. These values help with certain volume adjustments and with the smoothing of statistical fluctuation.

(b) Calculate the IBNR as of the valuation date. State any assumptions and show your work.

Commentary on Question:
The valuation date in this question was December 31, 20X3 and the data was intended to be between 20X1 and 20X3, but ultimately displayed dates between 20X3 and 20X5. Some candidates made an assumption the intent of the question was to use a valuation date of 20X5. Therefore, candidates were given credit for using a valuation date of 20X3 or 20X5. Candidates also were given credit for using several different data periods in calculating the completion factors. The intended answer would have used all information, which is shown in the solution below. Since the question specifically asked for "an averaging technique that excludes the highest and lowest values using the smoothed age-to-age factors from the data provided," answers that used age-to-ultimate development factors or did not exclude the max and min age-to-age factors did not receive credit.

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

(c) Calculate the IBNR as of the valuation date using the:

(i) Loss ratio method

(ii) PMPM projection method

State any assumptions and show your work.

1. Continued

Commentary on Question:
Many candidates understood this question and calculated the IBNR appropriately. Some candidates lost some credit by not providing the full year IBNR as their answer and just providing the IBNR for the months with low loss ratios. A few candidates didn't follow instructions (LR < 40%) in that they re-calculated the November IBNR for the PMPM projection method. The most common mistake was that several candidates did not apply the trend for the appropriate time period, when accounting for the assumptions made in part (b).

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

(d) Recommend which method should be used. Justify your answer.

Commentary on Question:
Most candidates provided a recommendation as requested. However, many candidates did not provide adequate justification in order to get full credit. Candidates needed to mention all 3 methods in their justification to receive full credit.

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

2. Learning Objectives:

1. The candidate will understand how to apply valuation principles for short duration group and health insurance contracts.

Learning Outcomes:

(1e) Evaluate data resources and appropriateness for calculating reserves

(1f) Describe, calculate, and evaluate non-IBNR types of reserves and explain when each is required

Sources:

AAA Premium Deficiency Reserves Discussion Paper
ASOP 42 Section 3.5

Commentary on Question:

This question is designed to assess a candidate's understanding and practical application of premium deficiency reserves (PDR) in health insurance reserving, specifically under GAAP/statutory frameworks and ASOP 42 guidance. The question evaluates both conceptual knowledge and technical skills, identifying whether candidates can integrate regulatory guidance, actuarial best practices, and technical calculations to accurately estimate, update, and disclose premium deficiency reserves in a real-world insurance context.

Solution:

(a) Define premium deficiency reserve (PDR).

Commentary on Question:

Very few candidates received full credit for this question. Successful candidates provided a comprehensive explanation of a PDR's purpose, significance, and relevance under GAAP and statutory financial reporting, as well as its impact on the balance sheet. Candidates that simply stated the mathematical formula used in future parts of this question received very little credit.

- A PDR is a liability created when the present value of claims and expenses exceeds the present value of premium. A PDR moves losses to the beginning of the policy period and is released as losses are incurred.
- PDRs, when needed, are one category of a health insurance organization's liabilities. In the United States, PDRs are required for both general-purpose accounting (GAAP) and regulatory accounting (Stat).
- The difference in the purpose of Stat versus GAAP results in potential differences in the purpose(s) of the PDR. For Stat accounting, the focus is on the solvency of the legal entity. In general, the basis for reporting assets and liabilities under statutory accounting is more conservative than GAAP and is more rigidly defined in the manner and detail of the display of results.

2. Continued

- For GAAP accounting, the focus is more on the reporting of income properly allocated to the reporting period, assuming that the organization is capable of continuing in business. The definitions and detail level of reporting are not pre-defined but relate to the materiality of results for components of the organization.

(b) List 10 considerations for estimating a PDR according to ASOP 42.

Commentary on Question:
Candidates received full credit for clearly listing 10 or more relevant considerations from ASOP 42 in a well-organized manner. Partial credit was awarded depending on the relevant number of considerations listed.

- Assumptions
  - Interest rates
  - Morbidity
  - Persistency
  - Expenses
  - Trend
- Premium rate changes
- Previously established assumptions
- Valuation method
- Exposure
- Risk sharing arrangements
- Reinsurance
- Taxes
- Expenses
- Block of business and characteristics
- Time period
- Risk-sharing arrangements
- Claim adjustment expense
- Applicable authority

(c) Explain key considerations used to determine contract groupings within a PDR analysis.

Commentary on Question:
[Candidates generally struggled with this question. Most responses only highlighted that contracts shall be grouped in a manner consistent with how policies are marketed, serviced and measured, or testing vs reporting level. Successful candidates explained both considerations in addition to the balance sheet and income statement implications.]

2. Continued

- Contracts shall be grouped in a manner consistent with how policies are marketed, serviced and measured (which is synonymous with acquiring, servicing, and measuring the profitability)
- A liability shall be recognized for each grouping where a premium deficiency is indicated.
- Deficiencies shall not be offset by anticipated profits in other policy groupings
- The testing level should consider how to group contracts so that projections will provide meaningful results based on reasonable and credible assumptions. The external report level answers how testing groups are arranged into an aggregate grouping for reporting purposes. GAAP reports are generally at a corporate consolidated level while statutory reports are at a legal entity level.

(d) Calculate the required PDR as of 12/31/20X1. State any assumptions and show your work.

Commentary on Question:
[Please refer to the excel file for the commentary and model solution for this subpart of the question.]

The model solution for this part is in the Excel spreadsheet

(e) Calculate the PDR to be recorded in the 12/31/20X2 income statement, using the updated claims projections and your result from part (d). State any assumptions and show your work.

Commentary on Question:
Please refer to the excel file for the commentary and model solution for this subpart of the question.

The model solution for this part is in the Excel spreadsheet

(f) Develop a narrative disclosing the applicable items as it relates your PDR estimate in part (e).

Commentary on Question:
[Very few candidates received full credit for this question. Successful candidates shared their results from part (e), a brief description of the assumptions used in the PDR estimate, identification of the appropriate time periods relevant to the PDR calculation and YOY change in the reserve, and recognition that testing should be documented, even for those years in which the PDR is negative—in accordance with ASOP 42.]

2. Continued

General assumptions about claims, expense, and membership trends were used as outlined by the appointed actuary. Actual and projected PEPM claims were updated based on the data provided by the UW team.
As of 12/31/20X2, the PDR was reduced from $3.4M to $1.9M. This reduction in the PDR of $1.4M should be reflected as a release from the outstanding liability, and net income should increase by the respective amount.

3. Learning Objectives:

2. The candidate will understand how to prepare and interpret insurance company financial statements in accordance with Statutory Accounting Standards and GAAP.

Learning Outcomes:

(2a) Prepare a financial statement in accordance with Generally Accepted Accounting Principles (GAAP)

(2b) Interpret the results of both statutory and GAAP statements from the viewpoint of stakeholders, including regulators, senior management, and investors

(2c) Project financial outcomes and recommend strategy

(2d) Apply applicable best practices related to financial statements

Sources:

Group Insurance, Skwire, 8th Edition, 2021, Ch. 43: Analysis of Financial and Operational Performance

GH201-400-25: Health Insurance Accounting Basics for Actuaries (Ch. 2.4)

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Create an income statement for this customer's account for years 20X1, 20X2, and 20X3.

Commentary on Question:

[Overall performance on this question was mixed.
Common issues included:

- *Commission amortization errors*
- *Incorrect member-month calculations, often using headcount instead of multiplying by 12.*
- *Failure to apply trends correctly*
- *Incorrect profit margin application:*
- *Many recalculated the margin instead of applying the required +1% annual growth.*
- *Incorrect premium determination and general misunderstanding of the relationship between expenses, profit margin, and premium.]*

3. Continued

Solution:
Three components

- Create income statement template and with year 20X1 assumptions and apply growth for 20X2 and 20X3
- Project required annual premium based on assumptions
- Calculate gross margin, total expenses and profit

INCOME STATEMENT

Assumptions							
Annual Growth				20X1	20X2	20X3	
6%	6,000		Member months	72,000	76,320	80,899	
	$ 600	PMPM	Premium	$43,200,000	$48,041,627	$53,477,318	
5%	$ 480	PMPM	Claims	34,560,000	38,465,280	42,811,857	
			Gross Margin	8,640,000	9,576,347	10,665,461	
2%	$ 49	PMPM	Admin	3,528,000	3,814,474	4,124,209	
	25%		Commissions	3,600,000	3,600,000	3,600,000	$ 10,800,000
	2%		Premium Tax	864,000	960,833	1,069,546	
			Expenses	7,992,000	8,375,306	8,793,755	
1%			Profit	648,000	1,201,041	1,871,706	
			Profit Margin	1.5%	2.5%	3.5%	
			(claims + admin + commission)		$45,879,754	$50,536,065	
			(1 - premium tax% - profit margin%)		95.5%	94.5%	
			Projected premium calculation		$48,041,627	$53,477,318	

Note: First year commission of $10.8 million is amortized over three years in accordance with GAAP

First component:

Claims:
20X1: $480 × 72,000 member months = $34,560,000
20X2: $480 × 1.05 (claims growth) × 72,000 × 1.06 (member growth) = $38,465,280
20X3: $480 × 1.05^2 (claims growth) × 72,000 × 1.06^2 (member growth) = $42,811,857

Premium (20X1): $600 × 72,000 member months = $43,200,000

Gross Margin: Premium – Claims
20X1: = $43,200,000 - $34,560,000 = $8,640,000

Admin Expenses:
20X1: $49 × 72,000 member months = $3,528,000
20X2: $49 × 1.02 (admin growth) × 72,000 × 1.06 (member growth) = $3,814,474
20X3: $49 × 1.02^2 (admin growth) × 72,000 × 1.06^2 (member growth) = $4,124,209

3. Continued

First Year Commissions: 25% of $43,200,000 (first year premium) = $10,800,000
20X1 to 20X3: $10,800,000 ÷ 3 = $3,600,000 per year amortization

Premium Tax (20X1) = 2% of Premium = $864,000

Non-Claim Expenses = Admin + Commissions + Premium Tax
20X1: $3,528,000 + $3,600,000 + $864,000 = $7,992,000

Profit (20X1): Gross Margin – Non-Claim Expenses
= $8,640,000 – $7,992,000 = $648,000

Profit Margin (20X1): $648,000 ÷ $43,200,000 = 1.5%
Profit Margin (20X2): 1.5% + 1% growth = 2.5%
Profit Margin (20X3): 1.5% + 2% growth = 3.5%

Second Component:

Premium = Claims + Admin + Commissions + Premium Tax + Profit
Premium (20X2) = Claims + Admin + Commissions + 4.5% of Premium
= ($38,465,280 + $3,814,474 + $3,600,000) / (1 – 4.5%) = $48,041,627
Premium (20X3) = Claims + Admin + Commissions + 5.5% of Premium
= ($42,811,857 + $4,124,209 + $3,600,000) / (1 – 5.5%) = $53,477,318

Premium Tax (20X2): 2% of premium = $960,833
Premium Tax (20X3): 2% of premium = $1,069,546

Third Component:

Non-Claim Expenses (20X2) = $3,814,474 + $3,600,000 + $960,833 = $8,375,306
Non-Claim Expenses (20X3) = $4,124,209 + $3,600,000 + $1,069,546 = $8,793,955

Gross Margin (20X2) = $48,041,627 – $38,465,280 = $9,576,347
Gross Margin (20X3) = $53,477,318 – $42,811,847 = $10,655,461

Profit (20X2) = $9,576,347 – $8,375,506 = $1,201,401 = 2.5% of premium
Profit (20X3) = $10,655,461 – $8,793,955 = $1,876,706 = 3.5% of premium

3. Continued

(b) Create an income statement for this customer's account for years 20X4 and 20X5.

Commentary on Question:
[Candidates performance generally improved on this part compared to part (b)
Common issues included:

- *Incorrect identification of ASO-specific items (e.g., claims included when they should be excluded).*
- *Leaving premium taxes in the ASO income statement (ASO is not subject to premium tax).*
- *Incorrect trending of admin expenses or membership (similar to part a).*
- *Failure to use the given profit margin (e.g., 12%) to derive admin revenue.]*

Solution:
Three components

- Member months and admin growth in 20X$ and 20X5 based on prior assumptions
- Calculate required fees/revenue based on new profit margin
- Calculate total profit for 20X4 and 20X5

Using information developed in part a

	20X3	PMPM	Growth		20X4	20X5
Member months	80,899		6%	Member months	85,753	90,898
Premium	$ 53,477,318			Fees/Revenue	$ 5,067,153	$ 5,478,606
Claims	42,811,857			Claims	-	-
Gross Margin	10,665,461			Gross Margin	5,067,153	5,478,606
Admin	4,124,209	$ 50.98	2%	Admin	4,459,095	4,821,173
Commissions	3,600,000			Commissions	-	-
Premium Tax	1,069,546			Premium Tax	-	-
Expenses	8,793,755			Expenses	4,459,095	4,821,173
Profit	1,871,706			Profit	608,058	657,433
Profit Margin	3.5%		12%	Profit Margin	12%	12%

First Component:
Admin:
20X4: = 72,000 member months × 1.06^3 (growth) × \$49 × 1.02^3 (growth) = \$4,459,095
20X5: = 72,000 member months × 1.06^4 (growth) × \$49 × 1.02^4 (growth) = \$4,821,173

Second Component:
Fees (Revenue) = Admin + Profit (12% of Revenue)
20X4: \$4,459,064 ÷ (1 – 12%) = \$5,067,153

3. Continued

20X5: $4,821,173 ÷ (1 – 12%) = $5,478,606

Third Component:
Profit = Admin + Profit (12% of Revenue)
20X4: $5,067,153 – $4,459,064 = $608,058 = 12% of revenue
20X5: $5,478,606 – $4,821,173 = $657,433 = 12% of revenue

(c) Explain why increasing profit margins might not lead to an increase in total earnings.

Commentary on Question:
[A minority of candidates understood that part (c) related to parts (a) and (b) and reflected on different relationships between profit margin and total earnings for ASO vs FI business. The majority of candidates generally identified that the same profit margin would result in different total earnings for different revenue volumes.]

Solution:

- Fully insured plans deliver higher profit per customer than self insured because of inherent claims risk; expected medical claims are a major component of fully insured premium
- Self-insured (ASO) plans typically have higher profit margins, while fully insured (risk) plans have lower profit margins due
- Profit margins can be gamed as key metric
- Profit margins can also be cosmetically increased by allowing clients to terminate which lowers overall earnings

(d) List and describe classifications of PGH's administrative expenses

Commentary on Question:
[Performance was highly dependent on the candidate's ability to recall details from the study note.
Common issues:

- *Some candidates were able to list the expected 5-item functional list from GHVR-109-25.*
- *Credit was also given to candidates referring to table 43.7 from page 767 in the Skwire reading.]*

3. Continued

Solution:

- Policy acquisition expenses: Costs associated with generating new business
- Claim administration expenses: Benefit adjudication costs on behalf of policyholders
- Policy maintenance expenses: All ongoing administration costs other than those used to pay claims, e.g., billing maintenance
- Investment expenses: Costs associated with generating investment income
- Corporate overhead: Fixed costs that are not attributable to a particular set of contracts

(e) Financial reporting and capitated arrangements

Commentary on Question:
[Candidates struggled to recall discussion of this topic in Chapter 43 of Skwire.
Part (e)(i):

- *Most could identify one or two issues, such as provider insolvency.*
- *Many provided operational issues instead of financial reporting issues.*
- *Full credit required four distinct points, which very few produced.*

Part (e)(ii):

- *Many simply repeated items from (i) or described capitation conceptually.*
- *Students struggled to explain the impact of capitated services to financial statements. Many students explained capitated services but did not identify or describe adjustments related to financial reporting]*

Solution:
(i) Explain issues

- Pitfalls for the analyst such as use of financial ratios to measure solvency
- Gathering financial information from the subcontracted providers
- Comparability of financial statements between otherwise similar health plans.
- Segmentation of expenses between health benefits and administrative costs.

(ii) Describe adjustments

- Remove capitated services from both the health and administrative expenses
- Consolidate the economics of the capitated entity
- Perform admin and health benefit ratios for only the members not subject to capitation.

4. Learning Objectives:

3. The candidate will understand how to evaluate the impact of regulation on insurance companies and plan sponsors in the United States.

Learning Outcomes:

(3a) Describe the regulatory and policy making process in the United States

(3b) Describe the major applicable laws and regulations and evaluate their impact

Sources:

State Regulation of Prescription Drugs in the United States, The Actuary, Feb 2021

Federal Regulation of Prescription Drugs in the United States, The Actuary, Feb 2021

Group Ins Ch. 16: State Regulation in the United States

Group Ins Ch. 17: Federal Regulation in the United States

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Critique each proposed policy change above in relation to the aspects.

Commentary on Question:

Candidates that recalled the four aspects from the syllabus generally did well on the question and were usually able to apply the aspects to the proposals. Candidates that did not recall the aspects, often provided generic critique of the proposals that received little or no credit.

Solution:

Proposed policy #1: with respect to cost, waiting to introduce new-to-market drugs at the start of the new plan year could cause manufacturers to increase costs to cover the lost time, so this would not minimize cost. Access – waiting to introduce new-to-market drugs also diminishes consumer access to the drugs. Quality – this waiting time does not impact the quality of the drug. Transparency – this could hinder transparency since it may not be known to the public that this drug is ready to be used but is not going to be added to the formulary. Minimal impact to transparency.

4. Continued

Proposed policy #2: Cost – this policy change would help minimize costs since only the lowest allowed cost therapeutic equivalent would be covered. Access – this reduces consumer access to drugs that they may need since they would not be covered. Quality – it is assumed the drug that is covered is of acceptable quality if it was approved by the FDA. Transparency – minimal impact to transparency, be could hinder patients understanding why certain drugs are not included.

Proposed policy #3: Cost – this is likely a very costly drug if it is experimental and not yet proven in all clinical trials. Access – this does improve consumer access to the drug since the consumer doesn't have to wait for all clinical trials. Quality – this impedes the federal government's goal of monitoring quality. The drug cannot be considered safe or of high quality before all clinical trials have been completed. Transparency – if this fact is made known, then it would be transparent.

Proposed policy #4: Cost – the level at which reporting is done may not have a huge impact on cost. However, if manufacturers believe costs will be concealed, this could cause higher costs. Access – this does not impact the access consumers have to the drugs. Quality – does not impact quality. Transparency – this does impact transparency since consumers will not be able to see pricing reports at the drug level.

(b) Compare the method available for regulating the pharmacy industry between state and federal governments.

Commentary on Question:
Candidate responses were mixed on this part. This was primarily a recall question from a couple of sections of the syllabus. Candidates generally did better on methods used by the federal government than by the state government.

Solution:

Federal regulations include the FDA and CMS being heavily involved. The FDA oversees manufacturing. The FDA approves drugs for safety and efficacy. CMS develops and maintains the formulary for Part D coverages. The federal government also influences via any willing provider laws.

States regulate via legislative and Medicaid impacts. State legislative changes include utilization management control, member cost sharing and community pharmacy support. The state government can also regulate via Medicaid changes. For example, the state can manufacture their own generics, which we have seen with CalRx in California. Purchasing drugs in bulk and importing them can also lower costs. The state can monitor the pharmacy industry via the commissioner.

4. Continued

(c) Explain the advantages associated with having the prescription drug industry regulated at each of:

(i) The state level

(ii) Federal oversight

Commentary on Question:
Candidates did relatively poorly on this question. Many candidates provided generic responses regarding state and federal regulation without anything specific to the prescription drug industry. These responses received little to no credit. Candidates that tried to tie advantages to the prescription drug industry performed reasonably well on the question.

Solution:

STATE: Closer relationships with their constituents – can reflect the characteristics of their state

STATE: Often large employer of their own citizens – the state is financially tied to managing cost due to drug costs impacting state budgets

FED: Oversee health insurers and private purchasers - can create rules that impact the marketplace

FED: Relationships with community pharmacies

(d) Explain which of the following groups under state laws are typically permitted to purchase group life and health insurance policies.

Commentary on Question:
Candidates performed very well on this question. Most common deficiencies in the answer included not providing an explanation (just a yes or no) or missing the correct response on the creditors of a local credit union. Less frequent were missed responses on the association for dermatologists or the construction companies under a trust.

4. Continued

Solution:

The following are allowed to purchase group insurance:

- An independent grocer covering employees and dependents,
- Statewide medical association for dermatologists,
- Three independently owned construction companies under a trust,
- The local ironworkers union covering its members, and
- Creditors of a local credit union.

These are large professional groups with sufficient volume that are either through their employer trusts or are MEWAs. They can band together under one umbrella to purchase insurance and/or use their union status to purchase group insurance.

Group of independent artists all living in the southwest corner of the state, the mother and father of the owner of the coffee shop, seasonal workers during the holiday rush for a commercial beauty franchise are not large professional groups and they do not represent a professional body which can be united for insurance.

(e) Explain two examples of state level consumer protections for both HMO and PPO products.

Commentary on Question:
Based on candidate responses, candidates interpreted the question in different ways: 1. The question asked for four examples (two for HMO and two for PPO) 2. The question asked for two examples applying to both HMO and PPO. The sample answer below addresses the former but full credit was also given to candidates who provided an adequate answer using the latter interpretation.

Candidates performed well on this question given the wide range of acceptable responses and the limited number of examples requested. Candidates who did not perform well often provided examples related to federal legislation (such as ACA or COBRA) and not to state regulation or legislation.

Solution:

Instead of providing a single solution, the following is a partial list of examples the candidate could draw from.

PPO State Consumer Protections:

(1) Assure reasonable access to services and compliance with the NAIC Health Benefit Plan Network Access and Adequate Model Act
(2) Ensure provider quality by ensuring accreditation and creating improvement plans for low scoring providers

4. Continued

(3) Utilization Review regulation creating restrictions on how UR is conducted and placing restrictions on required information needed, types of physicians performing UR, and state licensing
(4) Pharmacy Laws – Any willing provider laws, limit mail order requirements, licensing requirements, and require coverage for certain drug categories.
(5) Corporate Practice of Medicine – requires specific licensing for providers
(6) Antitrust Laws

HMO State Consumer Protections:

Some Rules include:
(1) Requirements for Certificate of Authority to demonstrate initial and ongoing compliance with ongoing regulatory requirements
(2) Rate Regulation – require filing of rates or rating methodology from insurer
(3) Financial Regulation – Require annual filings
(4) Protect – Defining regulatory authority
(5) Regulation of Producers -licensing requirements
(6) Point of Service product Restrictions – Some states authorize open-HMO products which have an OON benefit

5. Learning Objectives:

4. The candidate will understand how to describe government programs providing health benefits in the United States.

Learning Outcomes:

(4b) Describe Medicaid program structure and benefits, and evaluate pricing and filing requirements

(4c) Describe the Affordable Care Act and evaluate impacts on pricing and filing

Sources:

Group Insurance, Skwire, Daniel D., 8th Edition, 2021

- Ch. 9: Government Health Plans in the United States

GH201-406-25: Attempting to Boil the Ocean: A High-Level Overview of Medicaid and Its Risk-Based Managed Care Programs

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Describe eligibility and financing for Medicaid both before and after the ACA was implemented by completing the table below:

	Medicaid before ACA	Medicaid after ACA
Eligibility		
Financing		

Commentary on Question:

[Candidates generally did well on this part of the question. Some candidates did not receive full credit for reasons such as misunderstanding the state/federal split for financing, failing to include both categorically eligible groups AND income requirements for eligibility before ACA, or not providing enough detail on the changes post-ACA.]

Eligibility before the ACA: There are two main eligibility criteria. First, to be eligible, a person must belong to one of the following categories:

- Low-income families
- Children
- Parents or caretakers with dependent children
- Pregnant women
- Individuals receiving SSI
- Seniors

5. Continued

Second, an income requirement must be met. The income requirement is based on the FPL. For example, pregnant women must have an income below 133% of the FPL. Finally, states can also expand eligibility to include those who are medically needy.

Eligibility after the ACA: Almost everyone under age 65 with an income of up to 133% of the FPL is eligible, so low-income adults with no dependent children became eligible. However, a 2012 Supreme Court decision made expanding eligibility optional.

Financing before the ACA: A state's Medicaid program is financed by both the state and the federal government. Legally, the federal government must fund between 50% and 83% of the program; the percentage is determined by the state's average per capita income. The total amount of financing depends on the number of recipients as well as the coverage and cost of services. Federal financing comes from general revenues. Despite the federal financing, a state's Medicaid program is still the largest component of total state expenditures.

Financing after the ACA: Up until 2016, the federal government financed 100% of the cost of the Medicaid expansion population, although this percentage reduced to 90% in 2017.

(b) Critique the accuracy of the following statements by completing the table below:

Statement	**True/False**	**Justification**
Section 1115 waivers allow states to enroll members in programs that provide Long Term Services and Support (LTSS) in institutional settings rather than in Home and Community Based Services (HCBS) settings.		
Medicaid members are similar to populations enrolled in other types of health coverage.		
Medicaid benefits usually have high deductibles and copays to disincentivize overutilization.		
Since public funds are used to pay for Medicaid, states should always set capitation rates to be as high as possible.		

5. Continued

Commentary on Question:
[Most candidates did not receive credit for their answers on the first statement in the table. Some candidates incorrectly marked this statement as true, while others correctly marked it false but did not recognize that LTSS fall under Section 1915(c) rather than Section 1115. Most candidates missed that the inaccuracy was due to the "HCBS," and "institutional" settings being swamped in the wording of the statement.

In general, candidates correctly identified that the other statements in the table are false, and most candidates provided sufficient justification to receive credit on those three statements.]

Solution:

(i) The statement is false. It can be corrected in 1 of 2 ways:

Section 1915(c) waivers allow states to enroll members in programs that provide LTSS in HCBS settings rather than in institutional settings.

OR

Section 1115 waivers allow states to implement experimental, pilot, or demonstration projects that promote the objectives of Medicaid.

(ii) The statement is false.

Medicaid members are different from populations enrolled in other types of health coverage because:

- Medicaid members are more difficult to contact compared to commercial healthcare populations. Since the members have low incomes, methods to contact them, such as cell phone numbers or fixed mailing addresses, may change often.
- A higher portion of Medicaid members may face housing and nutrition challenges that negatively affect their health than commercial healthcare populations.
- Medicaid members as a group have higher mental health and substance abuse needs than the commercial healthcare population.
- Due to the nature of the types of members that Medicaid covers, there are more mentally and physically disabled members and more members that require LTSS.

(iii) The statement is false.

Another unique aspect of Medicaid benefits is that there is little to no member cost-sharing in the program. In the commercial market, health insurance products use cost-sharing mechanisms such as deductibles or copays in the plan benefit design to disincentivize overutilization. Because of Medicaid members' limited financial resources, Medicaid programs tend to have little to no cost-sharing, so cost-sharing is not a lever that is used in Medicaid for utilization management.

5. Continued

(iv) The statement is false.

The states develop the capitation rates paid to the MCOs instead of the MCOs setting the rates. Since public funds are used to pay for Medicaid, the states have a vested interest in keeping the costs as low as possible while still paying enough to have MCOs willing to provide the product. To keep this balance within Medicaid, CMS requires qualified actuaries to certify the capitation rates or capitation rate ranges as actuarially sound according to a specific definition and requirements.

(c) Describe unique aspects of Medicaid capitation rate development and certification.

Commentary on Question:
[Candidates generally struggled with this part of the question. Most candidates described the general aspects of capitation rate development but did not adequately describe aspects that are unique to Medicaid.]

Solution:
Below are examples of unique aspects of Medicaid capitation rate development and certification.

- Certification of capitation rate ranges—States have the option of developing and certifying a capitation rate range instead of a point estimate, provided the upper and lower bounds are certified as actuarially sound with supporting documentation and the upper bound does not exceed the lower bound by more than 5%. States can pay MCOs at different points in the range so long as there is justification.
- Mid-year rate adjustments—States are allowed to adjust capitation rates during the rating period, usually because of policy or program changes that impact the Medicaid population and/or their covered benefits. States must provide support for the capitation rate change. A revised capitation rate certification may be needed if the rate change is significant.
- Incentive arrangements—Incentive arrangements are additional payments (over and above the capitation rate) which an MCO may receive for meeting specified targets. CMS requires that the total payments to MCOs do not exceed 105% of approved capitation payments.
- State sets the rate – Medicaid managed care is especially unique in that it is the only type of health insurance in the US where the buyer of the coverage (the state governments) determines the cost of purchasing the coverage. Whereas most insurance companies taking on the risk of coverage set the rates for said coverage, MCOs take on risk as “rate takers” instead of “rate makers”.

5. Continued

(d) Calculate the state's recoupment from or payment to each MCO as a result of the risk corridor. Show your work.

Commentary on Question:
[For candidates that calculated the correct MLRs for each MCO, most were able to correctly identify that there were no dollars exchanged for MCO 2. Results were mixed for calculating the amounts transferred for the other MCOs.]

Solution:
See Excel file for model solution.

(e) Recommend three alternative methods. Justify your answer.

Commentary on Question:
[Most candidates performed well on this part of the question, though many failed to provide sufficient detail to receive full credit. Some candidates described Medicare or ACA risk transfer strategies that were not applicable to Medicaid.]

Solution:

State X has several other options for protecting the MCOs from insolvency.

- Reinsurance—State X can act as the reinsurer for the pool of MCOs by charging a "premium" (i.e. reducing the capitation payment) in exchange for providing reinsurance protection. State X would be at risk for costs that exceed the collected premium amounts. State X could include a mechanism for the MCO to retain some financial responsibility above the threshold, so that the MCO continues to have the financial incentive to manage care.
- Risk Adjustment—The popular risk transfer strategy is revenue risk adjustment. Risk adjustment adjusts the base capitation payments to MCOs in a budget neutral manner to the state to reflect the health status of each MCO's members. By adjusting payments based on the health risk of the enrolled population, MCOs that serve individuals with more complex health needs receive higher payments to cover the associated costs. A risk adjustment model may be prospective or concurrent. A prospective model uses claims experience during an evaluation period to predict future costs whereas a concurrent model uses claims experience in an evaluation period to calculate risk scores within that same time period. Concurrent models tend to be more accurate; however, prospective models are far more commonly used in practice because they allow both the state and the MCOs to know the final capitation rates during the rating period without having to wait until after the end of the rating period to retrospectively apply a concurrent risk adjustment model to calculate final capitation rates.

5. Continued

- Risk Pools— Budget-neutral risk pools are established to re-distribute capitation revenue between MCOs based on actual experience in the rating period for a certain benefit, service, or risk. A common application of risk pools is for high cost claimants where one or more MCOs have a disproportionate share of these members. Each MCO will fund the risk pool based on the state's projected cost for that benefit, service, or risk. Once actual experience is known for the rating period, the risk pool is re-distributed based on each MCO's share of the total expenses.

6. Learning Objectives:

5. The candidate will understand how to describe the flow of funds in the health care system and the role of providers in the system.

Learning Outcomes:

(5b) Describe the role physicians play and their influence on the flow of funds

(5c) Describe the market power of hospitals and how provider systems compete for patients, physicians, and contracts

Sources:

Getzen 121-124

Getzen 143-144

Flow of Funds B03

Flow of Funds C02

Commentary on Question:

Overall performance on this question was mixed. Candidates generally performed better on parts (a) and (b), while part (c) proved notably more challenging. Few candidates earned full credit across all subparts. Many responses included thoughtful ideas that were tangentially relevant but not fully aligned with the specific mechanisms emphasized in the study material, resulting in partial rather than full credit.

Solution:

(a) Compare and contrast the motivations of a large group practice and a large hospital system in extending an offer to Dr. A to join their organization.

Commentary on Question:

[Most candidates demonstrated a basic understanding of why group practices seek to grow, often identifying economies of scale but less frequently noting risk sharing or increased market power. Many candidates correctly stated that hospitals compete for physicians to drive patient volume, though few explained the underlying agency relationship emphasized in the source material. Responses tended to list motivations rather than describe them in depth, leading to partial rather than full credit.]

6. Continued

Solution:
Physicians who join together in group practices have higher earnings than solo practitioners for three primary reasons:

- **Economies of scale**
  - Group practices can more efficiently utilize shared input like office space and lab equipment.
  - Group practices can more effectively substitute ancillary labor to free up physician's time for billable patient work, e.g., hiring more billing clerks and technicians.
- **Added market power brings in more revenue**
- **Groups can better share risks**

By extending an offer to Dr. A to join their organization, a large group practice would look to increase their advantages in each of these areas.

Except for emergency room and outpatient clinic visits, hospitals compete for patients primarily on decisions made by physicians as patients follow the advice of their doctors. This has led to an increase in the number of doctors joining hospitals as salaried employees and has resulted in over half of all large medical groups being owned by hospital systems. The offer to Dr. A from the large hospital is a continuation of this trend.

(b) Evaluate potential advantages and disadvantages of each offer for Dr. A.

Commentary on Question:
[Candidates generally performed well in identifying key advantages to Dr. A, including higher income and improved work–life balance, and many recognized the loss of autonomy associated with joining a larger organization. However, fewer candidates addressed other required trade-offs such as reputational risk, additional management burden, or increased services stemming from expanded scope or technology. Some candidates compared the two offers directly instead of evaluating each relative to solo practice, limiting their ability to earn full credit.]

Solution:
Either offer will likely increase Dr. A's earnings but will require him to cede personal autonomy and align with group/hospital policies.
The advantages and disadvantages of joining a large group practice for Dr. A are:

- Advantages
  - Physicians in group practices enjoy higher earnings than solo practitioners because of economies of scale, market power, and risk sharing
  - Physicians in group practices can enjoy a higher quality of life because of the ability to share the burden of being on-call and to shift low value work (e.g., billing) to adjuncts

6. Continued

- Disadvantages
    - Dr. A loses personal autonomy in management and policy decisions made by the group
    - Dr. A will take on additional time/cost associated with overall group management
    - Dr. A takes on reputational risk of overall practice

The advantages and disadvantages of joining a large hospital system are

- Advantages
    - Generally, hospitals compete for physicians through multiple means. In some cases, they offer straight salaries with signing bonuses. In others, they provide income guarantees, resources availability, or referral volume. A hospital's overall reputation in an area can drive additional patient volume to a physician as a halo effect.
    - While specific advantages to Dr. A depend on the nature of the hospital's offer, they would presumably result in higher earnings for Dr. A and similar quality of life benefits to the group practice offer.
    - Dr. A's patients may gain access to additional care pathways and technologies through Dr. A's association with the hospital.
- Disadvantages
    - Dr. A loses personal autonomy in management and policy decisions made by the hospital.

(c) Assess the ways in which Dr. A joining with a large hospital system could impact the cost and quality of care in the metro region.

Commentary on Question:
[Part (c) proved to be the most challenging for candidates, with few candidates addressing all four system-level mechanisms. Many responses discussed cost and quality in general terms but did not reference key concepts such as efficiency gains, the "medical arms race," mix-shift effects, or the hospital chargemaster. Some candidates focused on the impact of losing a solo practitioner rather than assessing the metro-level flow-of-funds implications tied to hospital system behavior. As a result, most responses earned only partial credit.]

6. Continued

Solution:
There are four ways Dr. A joining a large hospital system could impact the cost and quality of care in the metro region:

- **Efficiency increases**
  Dr. A will be able to provide more care to his patients and have additional capacity to provide care to additional patients because of the availability of additional resources (e.g., space, equipment) and ability to leverage extenders (e.g., billing clerks, physician assistants, lab technicians). This will lower the overall cost of care in the region and increase quality.

- **Potential "medical arms race"**
  Hospital competition for physicians can lead to a sort of "medical arms race," in which nearby hospitals each try to be the first with the newest technology and respond strategically. It is possible that this can lead to inefficiencies and escalating costs because of overinvestment and underutilization of newer equipment. To the extent that Dr. A joins the hospital because of this dynamic or Dr. A's joining increases this dynamic, costs would rise.

- **Mix shift**
  To the extent that Dr. A's patients utilize higher cost care pathways or higher cost technologies because of his association with the hospital, overall system costs would rise along with overall quality levels.

- **Change in patient and provider costs**
  Hospital charge master and negotiated prices, which drive prices paid by insurers and individuals, are complex and slow to reflect changes in underlying unit costs associated with Dr. A's decision. Similarly, fees paid by Medicaid are set by regulators and would not change because of Dr. A's move. Thus, any reduction in system unit costs and efficiencies because of Dr. A's move would be retained by the hospital and not passed on to patients and providers.