GH SPC Model Solutions
Spring 2019

1. **Learning Objectives:**
1. The candidate will understand pricing, risk management, and reserving for individual long duration health contracts such as Disability Income, Long Term Care, Critical Illness, and Medicare Supplement.

Learning Outcomes:
(1a) Identify differences between short-duration contracts and long-duration contracts, from the standpoints of pricing and reserving.

Sources:
Individual Health Insurances, 2nd Edition, Chapter 8 pp. 294-298

Commentary on Question:
In order to earn credit, candidates needed to clearly describe in greater detail. Best candidates were able to justify their recommendations.

Solution:
(a)
      (i)   Define a deterministic model including when it is helpful.

      (ii)   Define a stochastic model including when it is helpful.

      (iii)   Explain which model is preferred when pricing stop loss reinsurance business.

      (iv)   Explain which model is preferred when evaluating the potential of future losses to completely absorb a company's surplus.

Commentary on Question:
Candidates were generally able to differentiate between deterministic and stochastic models, however some struggled to recommend appropriate models for each situation and clearly explain their reasoning.

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1. Continued

Part (i):
- Deterministic models show the interrelationships of variables, but each piece of output is a single value – the expected value of that variable under the assumptions chosen.
- Deterministic models can still be helpful. When we want to test the impact of specific alternative situations (scenario testing), they can be quite useful.

Part (ii):
- Stochastic models treat one or more variables with the variable's whole distribution of possible results used.
- Stochastic models give us information about the distribution of results, not just their average or expected value. This is particularly important when the impact of such results isn't linear.

Part (iii):
- Stochastic model is the preferred model for stop-loss reinsurance.
- This is because stop-loss reinsurance has a non-linear function (claim costs).

Part (iv):
- Monte Carlo simulator (e.g., a stochastic model) is the preferred model for evaluating financial ruin.
- This technique is used to develop stochastic results when the underlying distribution is unknown or possibly does not exist.

(b) Describe the essential characteristics of ensuring a good model.

Commentary on Question:
Candidates generally were able to identify most characteristics but few identified all characteristics.

- Reliable Accuracy: A model isn't worth much if it doesn't do a good job of predicting the future.
- Robust: Another aspect of this is the need for robustness. A model is robust if it continues to be a good model, and doesn't fail in some way as the input varies.
- Suitability for use: The model should produce the results it is designed for, without adding unnecessary complications.
- Granularity: A major element of model definition is the level of granularity of the component model cells, in order to achieve the sensitivity and robustness needed (level of detail in output).
- Appropriate Precision: e.g. Appropriate number of decimal places used and displayed.

1.   Continued

- Sensibility: The underlying basis of the model should reflect a logical, theoretical construction of what is being modeled.
- Effectively Communicated: The results of the model are useless unless they can be effectively, thoroughly communicated to the users or clients.
- Ensure the data used to build the model is appropriate for the intended purpose or has been appropriately adjusted.
- Any counterintuitive aspects should be rationalized or investigated.

2.   **Learning Objectives:**
1.   The candidate will understand pricing, risk management, and reserving for individual long duration health contracts such as Disability Income, Long Term Care, Critical Illness, and Medicare Supplement.

Learning Outcomes:
(1b)   Understand utilize experience studies in setting assumptions for long-duration contracts.

(1c)   Apply applicable Actuarial Standards of Practice.

Sources:
Report on the Proposed 2016 Cancer Claim Cost Valuation Tables
ASOP #23 Data Quality

Commentary on Question:
Commentary listed underneath question component.

Solution:
(a)   List relevant and material disclosures required in ASOP 23.

Commentary on Question:
Many candidates scored well in this part of the question. Many were able to identify the majority of relevant disclosures as required by ASOP 23. Some candidates did not thoroughly elaborate on the applicable requirements as prescribed by ASOP 41.

- The source of the data
- Any limitations on the use of the actuarial work product due to uncertainty about the quality of the data.
- Any unresolved concerns the actuary may have about questionable data values that are relevant to the use of the data and could have a significant effect on the work product (in summary form)
- Whether the actuary performed a review of the data (and if not any resulting limitations on the actuarial work product)
- Discussions of any steps the actuary has taken to improve the data due to identifying questionable data (in summary form)
- Significant judgmental adjustments or assumptions that the actuary applied to the data or to the results (in summary form)
- Existence of Results that are highly uncertain or have a potentially significant bias of which the actuary is aware due to the quality of the data or other information relevant to the use of the data and the nature and potential magnitude of such uncertainty or bias
- The extent of the actuary's reliance on the data and other information relevant to the use of the data supplied by others

2. Continued

- As identified in ASOP # 41
  - If any material assumption or method was described by applicable law
  - If the actuary states reliance on other sources and thereby disclaims responsibility for any material assumption or method selected by a party other than the actuary
  - If in the actuary's professional judgment, the actuary has otherwise deviated materially from the guidance of this ASOP.

(b) Assess how disclosures in the Proposed 2016 Cancer Claim Cost Valuation Tables study satisfy the list identified in Part A.

Commentary on Question:
The majority of candidates did not spend appropriate time in this section and only described two or three examples of how the 2016 Cancer Claim Cost Valuation Tables satisfied those answers provided in part A. Given the number of exam points for this specific part of the question, candidates need to recognize the level of detail and depth of answers graders are looking for. Additionally, some candidates were rather vague in their answers, simply repeating the answers from part A, and not providing specific examples of the 2016 CCVT.

- The source of the data:
  - Fifteen insurers responded to a request by the SOA to supply claim data on the first occurrence benefits from cancer policies (excluding critical illness policies and in total represented about 69% of the industry in terms of 2008 annual earned premium.
  - An objective of the study was to receive and summarize detailed policyholder experience data from 2001 through 2011 from insurers that have provided cancer insurance.
- Any limitations on the use of the actuarial work product due to uncertainty about the quality of the data:
  - All calculations are on an Age Last Birthday (ALB) basis and are associated with the attained age of the insured person on the most recent birthday.
- Any unresolved concerns:
  - Skin cancer and in situ claims were specifically excluded from the study. However, there were instance where these claims may have been present and unable to be identified.
  - While reviewing the each payment (and all payment) hospitalization results, it should be noted that shock hospitalization claims (i.e. those with a length of stay longer than 30 days) were not excluded from the analysis.

2.   Continued

- Whether the actuary performed a review of the data:
  - o The subgroup on Older and Younger ages made a number of observations with respect to gender differences at the older ages. None of these observed created any material concerns.
  - o The subgroup on Older and Younger ages observed increased volatility and the very old and very young ages due to limited exposure. The volatility was smoothed prior to the finalization of the tables.
- Discussions of any steps the actuary has taken to improve the data due to identifying questionable data:
  - o Data was excluded for a variety of reasons. If Milliman could not reliably identify key information for the insured, key information for the claim and a reliable link between the two, the data was not included in the study.
  - o After considerable correspondence, missing data was populated if available and any residual insureds with missing data were excluded. (Entire datasets were excluded.)
  - o There were instances of overlapping exposure in the study. These instances were collapsed down to continuous single exposure records to avoid duplicative contributions.
- Significant judgmental adjustments or assumptions that the actuary applied to the data or to the results:
  - o An age difference study at the submitter company level was utilized to populate the birthdate of the spouse based on the birthdate and gender of the primary insured.
  - o For all companies, all records associated with an issue age of less than 18 years old or greater than 90 years old were removed from the raw data submitted to the work group.
  - o Within the study there were cells that contained obvious outlier data. The raw data provided to the work group was not processed or smoothed to remove outliers, as they are expected in any large data set.
- Existence of Results that are highly uncertain or have a potentially significant bias of which the actuary is aware due to the quality of the data or other information relevant to the use of the data and the nature and potential magnitude of such uncertainty or bias:
  - o The actual to expected ratios by company ranged from 70 to 137 percent for cancer incidence. Due to the large variances across companies, loads were developed to co cover some companies with actual to expected well over 100%. To attain a goal of covering at least 80% of the companies, a 15.35% load needed to be added to the basic incidence rate table for the first occurrence incidence rates.

2. Continued

- The extent of the actuary's reliance on the data and other information relevant to the use of the data supplied by others
  - o SOA confidentiality guidelines require that for each gender and age combination there must be at least five distinct companies that contribute exposure. For the first Occurrence study, each age and gender combination met this requirement.
  - o SOA confidentiality guidelines require no company may contribute more than 25% of the exposure for a given gender and age combination. For the First Occurrence and All Payment Hospitalization study, some age and gender combinations failed this requirement and the data had to be scaled.
  - o For the Each payment study, the five companies requirement was not met for males at certain ages. Therefore, male results were aggregated at certain points into age bands such that each band met the requirement.

3. **Learning Objectives:**
2. The candidate will understand how to evaluate health insurance organization risk and mitigation strategies.

Learning Outcomes:
(2b) Complete a capital needs assessment.

Sources:
Group Insurance, Chapter 39

Commentary on Question:
Candidates generally struggled with this question in providing sufficient detail. Best candidates provided rationale to help demonstrate their knowledge of the components of RBC.

Solution:
(a) Describe how the risk parameters were developed for H2 (Underwriting Risk) in the Health Risk-Based Capital (RBC) formula.

Commentary on Question:
*Many candidates failed to recognize that the question asked to describe the process and key considerations in **developing** the formula and instead described the formula itself.*

- To develop risk parameters for underwriting risk, the work group developed a stochastic "ruin theory" model.
- This model was used to determine the level of capital needed to give a 95% probability that an insurance company would not become insolvent over the next five-year time horizon.
- The key factors that impacted the risk for a given scenario included:
  - The risk of catastrophic claims and other statistical fluctuations in claim levels.
  - The risk of misestimation trends and pricing errors.
  - The length of time needed to recognize a pricing error, implement an adjustment, and have the adjustment become effective.

(b) Compare and contrast the risk factors for XYZ's two largest holdings.

Commentary on Question:
Candidates generally were able to identify H_0 and H_1 as the appropriate risk factors and identify high level considerations. The most successful candidates were able to compare and contrast the risk factors quantitatively.

3. **Continued**

- H_0 (asset risk – affiliates) reflects the risk that an investment in the stock of an affiliated company may lose some or all of its value.
    - The RBC requirement for a stock investment in an affiliate is based on the RBC after covariance for the subsidiary, prorated for the percentage ownership in the subsidiary.
    - The see through approach, combined with the fact that H_0 risk is not subject to the covariance adjustment, tends to imply that in situations where one insurer owns another, the RBC after covariance of the parent will be similar to what it would be if the two insurers were merged.
- For other investments in affiliates, the RBC requirement is calculated as a factor of 30% times the book value of the stock of those affiliates.
- H_1 (asset risk – other) reflects the risk that investments may default or decrease in value.
    - Investments in unaffiliated common stock, including most mutual funds, receive a risk factor of 15%.
    - Note the factor is double (but capped at 30%) for certain assets held in the 10 largest securities issues (as applies in this case as it is a top two investment).
- It seems the risk charge is equal (both are at 30%).
- However, that analysis ignores the impact of covariance as ABC company stock is part of H_1.
- Since affiliated stock lies outside the covariance adjustment, while unaffiliated stock lies within, in reality the effective risk charge per dollar invested is considerably smaller for unaffiliated common stock than for affiliated common stock.

(c) Evaluate the ramifications to the company's target Health RBC with regards to the reduced corporate tax rate.

Commentary on Question:
*Candidates were able to identify the resulting increase in after-tax income but most considered impact on the RBC formula rather than how the company would strategically consider changing its **target** RBC.*

- The impact of the tax changes on a company's finances are such that company will have more after-tax income.
- More after-tax income will result in the probability of a company going insolvent over the next five-year time horizon to be less.
- Absent any changes in the factors, the company may decide to target a lower TAC (Total Adjusted Capital) to ACL (Authorized Control Level) given that the probability of going insolvent is less.
- More after-tax income should be reflected in the stochastic "ruin theory" model to develop new factors.

3. **Continued**

- The actual formula is specified by the NAIC. This allows the NAIC to modify or refine the formula over time without requiring each state to take legislative or regulatory action to adopt the changes.
- The continuous review process that is implicit in the development and evolution of the Health RBC formula is intended to ensure that updates to the formula address emerging risks are considered and implemented as appropriate.

4. **Learning Objectives:**
2. The candidate will understand how to evaluate health insurance organization risk and mitigation strategies.

4. The candidate will understand how to apply risk adjustment in actuarial work.

Learning Outcomes:
(2c) Integrate reinsurance arrangements within an overall risk management strategy.

(2e) Apply applicable Actuarial Standards of Practice.

Sources:
GHS-122-18: Why are Many Coops Failing

ASOP #47: Risk Treatment in Enterprise Risk Management

Commentary on Question:
Generally candidates did well on this question. The best candidates were able to provide greater detail outlining their plan to keep CO-OPs alive.

Solution:
(a) Describe ACA-related federal policies that increased chances that co-ops would fail.

Commentary on Question:
Candidates did well on this question and were able to correctly describe the difficulties CO-OPs faced.

- Congress slashed much of the budget for the ACA, limiting number of nonprofits and cash flow of program.
- Prospective enrollees were allowed to keep their old plan, causing risk pool to be sicker than expected and causing costs to go higher for members in the risk pool.
- The ACA risk corridor program was disabled, severely impacting smaller insurers who do not have a diverse revenue stream or large capital base.
- ACA prohibited CO-OPs from using federal start-up loans to support marketing activities, leading to CO-OPs having to be creative in their marketing solution.
- ACA required CO-OPs to generate "substantially all" of their enrollment from the individual and small-group markets, limiting the number of enrollees a CO-OP could potentially sell.

4. Continued

(b) Recommend how to mitigate the risk in your co-op because of these federal policies. Justify your answer.

Commentary on Question:
Candidates generally struggled on recommending risk mitigation actions and should provide greater specifics to help defend their position.

- Provider Networks: Many CO-OPs rented networks in order to meet state and marketplace network adequacy standards.
- Provider Networks: Lock down proprietary provider network to get better reimbursement rates for providers.
- Administrative Services: Many services, such as call centers, claims processing, and customer support, were outsourced to a TPA.
- Marketing: CO-OPs capitalized on federal regulations allowing loans for "community and prospective member education" initiatives.
- Marketing: Expand beyond the small group and individual market or into other states, if capable.
- Benefit Design: CO-OPs typically declined to sell platinum level plans due to high claim costs with such plans.
- Benefit Design: Tailor the cost share of a plan to "cherry pick" specific members.
- Pricing: Rely your pricing strategy on behavior of largest competitor.

(c) Define the following terms, per ASOP 47:

(i) Risk appetite

(ii) Risk tolerance

(iii) Risk mitigation

(iv) Risk limit

Commentary on Question:
Candidates generally understood high-level differences but some didn't provide ample distinction between the terms.

- Risk appetite: The level of aggregate risk that an organization chooses to take in pursuit of its objectives.
- Risk tolerance: The aggregate risk-taking capacity of an organization.
- Risk mitigation: An action that reduces the frequency or severity of a risk.

4. **Continued**

- Risk limit: A threshold used to monitor the actual risk exposure of a specific unit or units of the organization to ensure that the level of aggregate risk remains within the risk tolerance.

(d) Describe items the actuary should consider when determining risk tolerance, per ASOP 47.

Commentary on Question:
Candidates either excelled or struggled to identify the correct considerations.

- The financial and non-financial benefits associated with each planned, risk-taking activity and aggregation of those activities.
- Degree of concentration of risk of the organization.
- Opportunities available to mitigate breaches of risk limits and tolerance, as well as cost and effectiveness of mitigation strategies.
- Regulatory or accounting constraints that may affect the risk environment.
- Relationships between risk tolerance, risk appetite, and risk limits.
- Historical volatility of the organization's results in the context of its current risk profile.

5.

Learning Objectives:

3. The candidate will understand an actuarial appraisal.

Learning Outcomes:

(3b) Describe an approach for preparing and actuarial appraisal.

Sources:

GHS-110-14 Chapter 4 of Merger and Acquisitions, Toole and Herget (sections 4.1 – 4.8 only)

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a)

(i) Calculate the Adjusted Book Value. Show your work.

(ii) Critique the actuarial appraisal from the buyer's perspective.

Commentary on Question:

The majority of candidates were able to accurately identify the formulas need for part i and correctly calculate the ABV. Many candidates only commented on one or two items from the Appraisal, where more time could have been spent disclosing additional observations.

Part i

- All Values in Millions
- PV of distributable cash flow = Actuarial Appraisal Value = $450
- Appraisal Value = ABV + VIF + VFB
- Value of Inforce Business (VIF) =

Subtotal Pre-tax Existing Business	$320
- Federal Income Tax	- $100
- Cost of Capital based on 200% RBC	- $40
Subtotal After-tax Existing Business	**$180**

- Value of Future Business Capacity (VFB) =
Health Unallocated Expenses

Subtotal Pre-tax Future Business	$200
- Federal Income Tax	- $160
- Cost of Capital based on 200% RBC	- $50
Subtotal After-tax Future Business	**- $10**

Adjusted Book Value (ABV) = Appraisal Value – VIB – VFB
        = $450 - $180 – (-$10) = $280

5. **Continued**

Part ii
- The VIF is a nice positive value.
- The VFB is negative.
- Given the VFB is negative; this may be concerning enough to not buy the entire block.
- One could argue for buying the inforce block then close the business to new sales.

(b)   Verify the accuracy of the following four statements with respect to the major components of Actuarial Appraisal Value. Justify your answers.

(i)   Adjusted book value is equal to the net worth of the insurance company on a GAAP basis.

(ii)   Asset valuation reserve is typically included in adjusted book value.

(iii)   The opportunity cost of maintaining capital is included in order to meet regulatory requirements, but not management requirements.

(iv)   The difference in an actuarial appraisal value and an embedded value is the adjusted book value.

Commentary on Question:
The vast majority of candidates were able to accurately identify the correct answers in this section. When the answer was False, only a few candidates did not justify why and therefore were not credited points.

(i)   False: Statutory basis

(ii)   True

(iii)   False: it also included management requirements

(iv)   False: The difference in actuarial appraisal value and EV is the VFB

(c)
(i)   Describe two key items sellers typically include in their actuarial appraisal report, in addition to the actuarial appraisal value.

(ii)   Describe adjustments buyers typically make to the seller's analysis in developing their own actuarial appraisal.

5. Continued

Commentary on Question:
Many candidates were not able to correctly identify the solution for part i. For part ii many candidates were able to accurately identify all necessary adjustments.

Part i
- Annual earnings
  - This provides insights into patterns of profitability.
- Capital requirements of the business
  - Allows for analysis of capital needs and financing alternatives
- Sensitivity analyses
  - Shows impact of reasonable deviations in critical assumptions

Part ii
- Reflect their own internal view of the appropriate discount rate
- Adjust certain experience and product management assumptions
- Adjust new business values of goodwill premium for future business capacity
- Reflect the benefits from anticipated synergies or cost savings.
- Reflect the benefits from one-time acquisition costs
- Specific structure anticipated by a buyer may have an impact on the appraisal values, including tax benefits or cost and capital structure.

(d) Recommend the method you would use in developing operating expenses after the sale. Justify your recommendation

Commentary on Question:
Almost all candidates were not able to identify the appropriate method, however in justification were awarded partial credit in mentioning the fundamental change was important in considering the development of operational expenses.

Method: Target unit expenses without an unallocated expense
Justification: A fundamental change in the business operations is expected after sale.

6. **Learning Objectives:**
4. The candidate will understand how to apply risk adjustment in actuarial work.

Learning Outcomes:
(4a) Describe and compare risk adjustments based on commonly used clinical data and grouping methods.

Sources:
Healthcare Risk Adjustment and Predictive Modeling, Duncan, Chapter 6 Development and Construction of DRGs, DCGs, and ETGs

Commentary on Question:
For all parts a and b of this question candidates cited the main points. There was more elaboration that could have been stated which would have resulted in higher scores. Part c required more detailed explanations (rather than lists). Part c's scores reflected the level of understanding the candidate's possessed.

Solution:
(a) Describe the common features of Medicare prospective payment systems.

1. System of averages
   a. Providers are paid a fixed amount regardless of the resources used or patient charges, may not make a profit on an individual but should overall
2. Increased complexity
   a. In order to more accurately align payments and resource consumption, prospective payment systems provide incentives to improve efficiency, despite being complicated to administer
   b. They also provide different incentives to providers than the system that they replaced (per diem reimbursement)
3. Relative weights
   a. Associated with each patient group is a "relative weight" which reflects the average resources used by efficient providers
   b. The calculation of relative weights is usually based on the estimated costs of each admission
4. Conversion factor
   a. A conversion factor (base price) is the dollar amount for a unit of service
5. Outliers
   a. Cases occasionally occur that require above-average resources; thus, hospitals receive additional payments to reflect patients that required an extraordinary amount of resources
6. Updates
   a. Each year, the base amount and relative weights are adjusted to reflect new technologies and changing practice patterns in acute inpatient hospital settings, and advancements in diagnosis and medical treatment

6.   Continued

       7.   Access and quality
          a.   Congress and CMS are generally supportive of prospective payment systems because prospective payment encourages healthcare providers to become more efficient. Policymakers monitor PPSs and survey patient access and quality

(b)   Describe the challenges with Patient Classification Systems based on coding systems

       1.   Need for new DRGs
          a.   Sometimes new DRGs must be created, Input is obtained from specialty organizations, researchers, and CMS review committees
       2.   ICD Coding
          a.   Some codes may not be sufficiently precise as diseases and procedures are refined
       3.   Upcoding
          a.   Providers may be tempted to exaggerate a patient's secondary diagnoses to increase severity and hence increase payment. The determination of which codes should be included involves careful work and judgment by professional coders, based on documentation in the medical record.
       4.   New Coding Systems
          a.   Implementation of ICD-10-CM and the ICD-10 Procedure Coding System (PCS) has resulted in a major increase in the number of codes that will eventually provide more precise descriptions of patients' diagnoses and treatments

(c)

    (i)   Explain how episodes of care provide a more comprehensive unit of analysis than more traditional utilization comparisons

    (ii)   Explain the difference between the use of the *AgeSex* weighting in Episode Risk Groups (ERGs) prospective risk scores and retrospective risk scores

    (i)   1. They provide a more cohesive and more provider-specific unit of comparison than other systems that focus on a specific type of care
2. Because there are often many different treatment protocols for the same diagnosis, any analysis that is concerned with comparing resource use by different physicians needs to consider a broader range of procedures and settings of care, as provided by Episode Groupers

6. **Continued**

    (ii)   1. They provide a more cohesive and more provider-specific unit of comparison than other systems that focus on a specific type of care
2. Because there are often many different treatment protocols for the same diagnosis, any analysis that is concerned with comparing resource use by different physicians needs to consider a broader range of procedures and settings of care, as provided by Episode Groupers

7.

Learning Objectives:
4. The candidate will understand how to apply risk adjustment in actuarial work.

Learning Outcomes:
(4a) Describe and compare risk adjustments based on commonly used clinical data and grouping methods.

Sources:
Duncan, Chapter 22, Accountable Care Organizations (ACO)

Commentary on Question:
Commentary listed underneath question component.

Solution:
(a) Describe how a provider group-based ACO is expected to generate savings.

Commentary on Question:
Candidates did well on this question.

1. The practice will implement "care coordination" to manage the care of the patients who need additional services
2. Access to integrated medical records and consistent management by the physician will reduce the need for tests
3. The ACO will develop a network of efficient providers for referrals and will limit the use of less efficient and more expensive providers
4. The focus on quality will also result in fewer unnecessary services, and by emphasizing preventive services, lead to later savings as population health is improved

(b)
(i) Describe the requirements for the Medicare ACO to share savings with CMS.

(ii) Explain how the Medicare ACO's situation relates to the requirements.

Commentary on Question:
Candidates listed the main points but did not give enough detail for the sub-points on part i. Few candidates listed both points for part ii.

7. Continued

    (i)   There are two requirements for sharing savings with CMS:

        1. Meeting or Exceeding quality standards
            a. Must be able to report on quality in first year
            b. Not required to meet or exceed standards in first year
            c. Must meet standards thereafter
            d. Currently 31 individual measures – used to be 33.
        2. Meeting savings hurdle rate
            a. 2% for large ACOs (60,000+)
            b. 4% for small ACOs (5,000 members)

    (ii)   Current Situation
        1. Meeting the quality standard in the first year is not required. The ACO should work to meet the standard because it is required in future years.
        2. Since the ACO's membership is below 5,000 it is not eligible to share savings with CMS

(c)   Describe how the ACO's updated certified participant list is used.

Commentary on Question:
Some candidates struggle when a list is not specifically offset in the source material as a "list".

1. Recalculate the ACO's historical benchmark based on the 3 years prior to the start of its agreement period (the "adjusted historical benchmark")
2. Determine the ACO's quality sample
3. Determine performance year expenditures (shared savings/losses)
4. Produce quarterly and annual feedback reports

(d)

    (i)   Define:

        a. newly-assigned beneficiaries
        b. continuously-assigned beneficiaries
        c. average risk ratio

    (ii)   Describe the basis for newly-assigned and continuously-assigned beneficiaries and when risk adjustment is applied.

7. **Continued**

Commentary on Question:
Candidates did well on this part.

(i)
    a. No primary care services in the prior year from a provider belonging to the ACO, or not assigned in the prior year
    b. At least one primary care service from a provider belonging to the ACO in the prior year, or assigned to an ACO in the prior year
    c. Risk ratios are weighted for each Medicare enrollment type relative to their respective person years and per capita benchmark dollars to obtain an overall dollar-weighted average risk ratio

(ii)   Newly Assigned – Uses CMS-HCC always, or the ACO's CMS-HCC prospective risk scores are recalculated to adjust for changes in severity and case mix arising from this population's risk score

    Continuously Assigned
    a. If overall risk ratio <1, HCC ratios are applied for continuously assigned beneficiaries
    b. If overall risk ratio > or = 1, demographic ratios are applied to continuously assigned beneficiaries.