

A PUBLIC POLICY PRACTICE NOTE

Actuarial Memorandum Practice Note

October 2020

Developed by the Actuarial Memorandum Practice Note Work Group
of the American Academy of Actuaries' Health Practice Council



AMERICAN ACADEMY *of* ACTUARIES

Objective. Independent. Effective.™

A PUBLIC POLICY PRACTICE NOTE

Actuarial Memorandum Practice Note

October 2020

Developed by the Actuarial Memorandum Practice Note Work Group
of the American Academy of Actuaries' Health Practice Council



AMERICAN ACADEMY *of* ACTUARIES

Objective. Independent. Effective.™

The American Academy of Actuaries is a 19,500-member professional association whose mission is to serve the public and the U.S. actuarial profession. For more than 50 years, the Academy has assisted public policymakers on all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues. The Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.

Actuarial Memorandum Practice Note

Marc Lambright, MAAA, FSA—*Chairperson*

Stephen Butz, MAAA, FSA

Nancy Hubler, MAAA, ASA

Annette James, MAAA, FSA, FCA

Leslie Jones, MAAA, ASA

Donna Novak, MAAA, ASA, FCA

Michael Polakowski, MAAA, FSA

Alisa Swann, MAAA, FSA

Contents

Introduction and Background 4

Drafting the Memorandum: Content Considerations and Sample Content..... 9

Appendix I 28

Appendix II 33

Appendix III 35

Introduction and Background

This practice note is a product of the Actuarial Memorandum Practice Note Work Group of the American Academy of Actuaries (Academy) Health Practice Council's Financial Reporting & Solvency Committee. This practice note is not a promulgation of the Actuarial Standards Board, is not an actuarial standard of practice (ASOP), is not binding upon any actuary, and is not a definitive statement as to what constitutes generally accepted practice in the area under discussion. This practice note does not necessarily represent the views of the Academy as a whole, nor does it represent a statement or view of the National Association of Insurance Commissioners (NAIC).

Events occurring subsequent to this publication of the practice note could make the practices described in this practice note irrelevant or obsolete.

Review of Exposure Draft Comments

This practice note was exposed for public comment prior to completion. The work group received some substantive and many relatively minor comments from multiple commenters. Thanks to each actuary who supported the work group by taking the time to review the Exposure Draft and provide thoughtful comments.

The work group incorporated several comments to improve the formatting of this note and make minor wording improvements. More substantive comments were incorporated based on recommendations to incorporate more precise wording to clearly communicate requirements versus typical practice, and to not appear to suggest requirements where none may exist in practice. All of the comments were helpful in improving the work product.

Purpose of This Practice Note

The purpose of this practice note is to provide information that can be useful for appointed actuaries dealing with the challenges of producing an Actuarial Memorandum in support of the Actuarial Opinion filed as part of the Health Annual Statement Blank (often referred to as the *Health Blank* or the *Orange Blank*); however, the concepts covered in this practice note could be useful for other situations requiring documentation for health business. For convenience, throughout this practice note, unless specified otherwise, when referring to Actuarial Memorandum (or Memorandum), this refers to an Actuarial Memorandum associated with the NAIC Health Annual Statement Blank.

Companies that file the Health Blank include companies licensed as Health Maintenance Organizations, as well as companies for which medical and dental lines of business make up the dominant portion of the premium and reserves, as defined by the "Health Statement Test" included in the *NAIC Annual Statement Instructions*.

What Are Practice Notes?

Practice notes are intended to provide actuaries with information on industry practices rather than authoritative guidance. The Academy's "Guidelines for Developing Practice Notes," adopted by the Board of Directors on September 25, 2006, states:

The purpose of practice notes is to provide information to actuaries on current or emerging practices in which their peers are engaged. They are intended to supplement the available actuarial literature, especially where the practices addressed are subject to evolving technology, recently adopted external requirements, or advances in actuarial science or other applicable disciplines. ... Practice notes are not interpretations of actuarial standards of practice nor are they meant to be a codification of generally accepted actuarial practice. Actuaries are not in any way bound to comply with practice notes or to conform their work to the practices described in practice notes.

Approaches other than those described in this practice note may be in common use, and this practice note should not be interpreted as invalidating those practices, as is the case with all practice notes.

State and federal laws, regulations and other regulatory guidance, such as the NAIC Accounting Practices and Procedures Manual (AP&P), and Statements of Statutory Accounting Principles (SSAPs) take precedence over the ASOPs, accounting rules, and other binding guidance. Practice notes play a significant supporting role by highlighting the practical application of binding guidance; however, actuaries are not in any way bound to comply with practice notes or to conform their work to the practices they describe.

Comments are welcome as to the appropriateness of the practice note, desirability of annual updates, substantive disagreements, etc. Comments should be sent to health@actuary.org.

Actuarial Memorandum

The *NAIC Health Annual Statement Instructions* (as of December 2019) define the Actuarial Memorandum as follows:

‘Actuarial Memorandum’ means a document or other presentation prepared as a formal means of conveying the appointed actuary’s professional conclusions and recommendations, of recording and communicating the methods and procedures, of assuring that the parties addressed are aware of the significance of the appointed actuary’s opinion or findings and that documents the analysis underlying the Opinion.

In addition, the Instructions further specify that the Actuarial Memorandum should contain both narrative and technical components as indicated in this excerpt from the Instructions:

The Actuarial Memorandum should contain both narrative and technical components. The narrative component should provide sufficient detail to clearly explain to company management, the regulator, or other authority the findings, recommendations and conclusions, as well as their significance. The technical component should provide sufficient documentation and disclosure for another actuary practicing in the same field to evaluate the work. This technical component must show the analysis from the basic data, (e.g., claim lags) to the conclusions.

The objective of the Actuarial Memorandum is to provide sufficient narrative and technical detail in order to support the appointed actuary’s conclusions with respect to the items within its scope and the type of Actuarial Opinion issued. Given the importance of the Actuarial Memorandum as an actuarial communication, the appointed actuary is encouraged to ensure that the Memorandum conforms to ASOP No. 41, *Actuarial Communications*, in addition to all other relevant ASOPs.

While the appointed actuary might have relied on others for analysis of some items within the scope of the Actuarial Opinion, it should be noted that the Annual Statement Instructions specify that the Actuarial Opinion include a statement of reliance that attests to the appointed actuary having reviewed the actuarial assumptions and actuarial methods, as well as the underlying basic liability records. Accordingly, it is appropriate for the Actuarial Memorandum to describe the review performed.

Scope of This Practice Note

Both the narrative and technical components of the Actuarial Memorandum are within the scope of this practice note. The Actuarial Opinion that the Memorandum supports is outside the scope of this practice note; however, the contents of the Actuarial Opinion for companies filing the Health Blank are explicitly identified in the *NAIC Health Annual Statement Instructions* and are addressed in the practice note titled *Revised Actuarial Statement of Opinion Instructions for the NAIC Health Annual Statement Effective December 31, 2010*, published in January 2011.

This practice note describes practices used in preparing an Actuarial Memorandum in support of the Actuarial Opinion for companies that file a Health Blank with the NAIC.

In preparing the Actuarial Memorandum, it is recommended that the actuary verify that it is being prepared in compliance with:

- the *NAIC Health Annual Statement Instructions*; and
- any individual state requirements that may modify or supplement the NAIC requirements.

The Annual Statement Instructions are updated annually. State laws, regulations, ASOPs, and SSAPs are also subject to change; therefore, it is recommended that the appointed actuary review each of these annually to ensure that he or she is in compliance with the requirements for the Actuarial Opinion being prepared that year.

Legal and Regulatory Requirements

The NAIC provides codified statutory accounting rules via SSAPs and uniform quarterly and Annual Statement blanks. State regulations generally require conformity with the NAIC SSAPs and financial statement filings in accordance with the NAIC quarterly and Annual Statement blanks and Instructions that are specific to different types of insurers.

The NAIC Health Statement Blank Instructions provide detailed instructions for the appointed actuary's completion of the Actuarial Opinion, which also requires the completion of an Actuarial Memorandum and communication to the board of directors. Subsequent sections of this practice note will get into the specific content and practical considerations with respect to the completion of the Actuarial Memorandum.

Overview of Items to Be Addressed in Memorandum

The Annual Statement Instructions list the following items that are required to be included in the Actuarial Memorandum:

- An exhibit that ties to the Annual Statement and compares the actuary’s conclusions to the carried amounts;
- Documentation of the required reconciliation from the data used for analysis to the Underwriting and Investment Exhibit, Part 2B;
- Any other follow-up studies documenting the prior year’s claim liability and claim reserve run-off as considered necessary by the actuary; and
- Documentation of the assumptions used for contract reserves and any material changes to those assumptions from the assumptions used in the previous Memorandum. Such documentation should address any studies that support the adequacy of any margin in such reserves.

The Annual Statement guidance, however, is general in nature and, as a result, there is significant variation in the Actuarial Memoranda produced. This practice note serves to provide actuaries with information to understand these general requirements, including how actuaries have typically addressed the following challenging issues:

- Providing sufficient information to justify the conclusions of the opining actuary;
- Comprehensive documentation of the items included in the scope of the Actuarial Opinion, even when the results of those calculations are zero (a common example of this is a premium deficiency reserve);
- Addressing the amount of margin relative to the amount of risk, and how moderately adverse is determined;
- Providing a description of how the actuary concluded that the data is accurate and complete, as well as any adjustments made to the data (for example, netting out reinsurance);
- Adequately documenting the extent of reliance on the work of others, including what exactly was relied upon, and how that reliance allowed the opining actuary to draw their conclusions. For example, many appointed actuaries rely on other subject matter experts to determine the risk adjustment receivable or payable; and
- Demonstrating how the reasonableness of the data, analysis, or conclusions was verified when relying on others.

Additional Resources Available

Actuarial Standards of Practice

“The Actuarial Standards Board (ASB) sets standards for appropriate actuarial practice in the United States through the development and promulgation of Actuarial Standards of Practice (ASOPs). These ASOPs describe the procedures an actuary should follow when performing actuarial services and identify what the actuary should disclose when communicating the results of those services.”¹

The ASOPs are fundamental to actuaries in all fields of practice and form the basis of what actuaries do and are required to consider. Actuaries are expected to consult with applicable ASOPs related to their work and adhere to the standards set forth within.

¹<http://www.actuarialstandardsboard.org/standards-of-practice/>. Accessed October 2018.

The actuary should also note that certain circumstances, such as a state’s regulations, may require the actuary to deviate from sections of an ASOP. If the actuary departs from the guidance set forth in an ASOP in order to comply with applicable law (statutes, regulations, or other legally binding authority), or for any other reason the actuary deems appropriate, the actuary should refer to the Communication and Disclosure section of the relevant ASOP for guidance.

Appendix I of this practice note includes a summary of several ASOPs that the health actuary may find useful when completing an Actuarial Memorandum.

NAIC Resources

- NAIC Annual Statement Instructions—these are updated annually and are available from the NAIC. There are separate Instructions for Health, Life/Accident/Health, and Property/Casualty.
- NAIC *Health Reserve Guidance Manual (HRGM)*—available for download from the NAIC. From the Introduction, “The purpose of the *Health Reserves Guidance Manual* is to provide guidance regarding the calculation and documentation of health reserves for statutory financial statements as described in the Health Insurance Reserves Model Regulation.” Guidance from the manual may be considered, but the actuary should be careful not to base conclusions on the manual should there be other requirements that supersede it. For example, to the extent something said in the HRGM contradicts the language in the SSAPs, the SSAPs govern.
- Valuation Manual—available for download from the NAIC and amended periodically. Primarily geared to life insurance; however, requirements are applicable to accident and health insurance in states that have adopted the 2009 revisions to the NAIC Standard Valuation Law.
- Model Regulations—available for download from the NAIC.
- Statements of Statutory Accounting Principles (SSAPs)—published by the NAIC in its Accounting Practices and Procedures Manual (AP&P). The manual includes more than 100 SSAPs, which serve as the basis for preparing and issuing statutory financial statements for insurance companies in the U.S. in accordance with, or in the absence of, specific statutes or regulations promulgated by individual states. Appendix II of this practice note contains a listing of some of the relevant SSAPs.

State Departments of Insurance

Each state department of insurance has resources available to answer questions; these resources are typically easy to find on the state websites and available through the NAIC website links.²

Other Resources

Practice Notes—In addition to this practice note, the Academy has produced several other practice notes relevant to the Health Actuarial Memorandum. Appendix II of this practice note contains a listing of some of the relevant practice notes.

Actuarial Memorandum Checklist—Included in Appendix III of this practice note is a checklist of items the actuary might consider in preparation of the Actuarial Memorandum.

² Naic.org

Drafting the Memorandum— Content Considerations and Sample Content

The Annual Statement Instructions state that the Memorandum should have a narrative and technical component, to allow for multiple users of the Memorandum with varied interests to understand the work completed in developing the Opinion, as well as actuarial items that are included on a company's balance sheet. In writing the Memorandum, usual practice is to focus on presenting a clear and sufficiently comprehensive narrative component with references to additional information that are necessary for other actuaries or technical reviewers to have a granular understanding of data and calculations.

This general-to-specific construct appears to be preferred by many preparers and reviewers of Health Memoranda. A degree of judgment is required with regard to how much detail to include in the body of a Memorandum versus Appendices, and even how much information should be included in Appendix material. This practice note provides references to practices that have been observed to be widely used. Ultimately, the appointed actuary is responsible for developing a Memorandum that provides sufficient and suitable materials for all audiences.

Audiences for the Actuarial Memorandum

The Actuarial Memorandum is written for two primary audiences: company management, including the Board of Directors, and regulators, including actuaries reviewing the Memorandum who practice in the same field. The Memorandum contains proprietary and confidential information, and as such is not intended to be made public. The Memorandum might also be shared confidentially with the insurer's auditor.

Company Management

The appointed actuary is required to report on the contents of the Actuarial Opinion to either the Board of Directors or the Audit Committee, with both the Actuarial Opinion and the Actuarial Memorandum supporting it made available to the Board of Directors. Subject to the preference of the Board, presentation of the Actuarial Memorandum need not be made in person. The minutes of the Board of Directors should reflect that presentation and the availability of the documents.

While interest in actuarial items varies from board to board and director to director, boards will generally focus on significant items that impact the reported financials and have implications regarding the future profitability and solvency of the company. Specific board members may spend limited time reviewing and understanding details of actuarial communications, which makes it critical for the actuary to communicate effectively and efficiently in the Memorandum to the intended audiences.

Regulators

The Actuarial Memorandum supporting the Actuarial Opinion is required to be produced annually. As with the Opinion, a separate Memorandum is required for each company filing an Annual Statement. The NAIC Health Annual Statement Instructions require the Memorandum to be available by May 1 following the year-end for which the Opinion was rendered and to be available for regulatory examination for a period of seven years. As noted above, individual state requirements can

modify or supplement the NAIC requirements (e.g., by requiring the Memorandum to be available prior to this date or requiring a longer retention period).

Regulators generally use the Memorandum as part of their monitoring of financial solvency of a company, including to gain an understanding of how key risks and significant areas of judgment were reflected in recorded Annual Statement amounts. Regulators might not be as familiar with the day-to-day management of the company, so it could be necessary to include additional background information, context, and detail for their benefit so that they can readily understand and evaluate the amounts included in the Annual Statement. This highlights the importance of understanding the various audiences of the Memorandum and writing the Memorandum to address all audiences.

Narrative and Technical Components

The narrative component generally is intended to be understood by non-actuaries, such as company management, the Board of Directors, and regulators with non-technical backgrounds, while the intended audience of the technical component is other health actuaries, and regulators with more technical and/or financial backgrounds. The Memorandum also must conform to the Communications and Disclosures requirements of any relevant ASOP.

The Annual Statement Instructions do not necessarily discuss how to separate the narrative and technical components, but usual practice is to compose the body of the Memorandum to focus on addressing the narrative component, and then to provide additional details for the technical component either in appendices or in later sections of the report. However, it is up to the actuary to determine how best to address each component. To the extent information is included in the appendices, the work group suggests that care be taken to tie the narrative to the appendices, so it is easy to move from one to the other and to ensure that the narrative fully explains the content of the appendices.

The Memorandum must include an exhibit that ties to the Annual Statement and compares the actuary's conclusions to the carried amounts, as well as support for conclusions related to Underwriting and Investment Exhibit, Part 2B, by including:

- Documentation of the required reconciliation from the data used for analysis to the Underwriting and Investment Exhibit, Part 2B; and
- Any other follow-up studies documenting the prior year's claim liability and claim reserve run-off as considered necessary by the actuary.

These required items are generally included in the body of the Memorandum to address the narrative component, perhaps with detailed and/or supplemental exhibits included as Appendix materials to address the technical component.

Sometimes, especially with the Health Blank, there are Annual Statement lines that include both actuarial and non-actuarial components. If an applicable line item is part of the mandatory scope of the Opinion, e.g., page 3 line 1, then both the actuarial and non-actuarial components of that line are relevant to the Opinion. However, for a line item that is not included in the mandatory scope of the Opinion, the appointed actuary may have decided to include only the actuarial balances recorded on that line item within the Opinion's scope. In such cases, it can be helpful if the appointed actuary

itemizes the components of the Annual Statement lines, so the scope is more clearly understood rather than opining on only part of a line and not discussing the rest of the line or why only part is being opined on.

Narrative Component of the Memorandum

The narrative component, per Annual Statement Instructions, “should provide sufficient detail to clearly explain to company management, the regulator, or other authority the findings, recommendations and conclusions, as well as their significance.”

The actuary normally considers what is meant by *sufficient detail* for the stated audiences and takes into consideration what is meant by *significance*. *Sufficient* has a qualitative aspect to it requiring judgment by the actuary; in determining how much information is sufficient, the actuary might consider the importance of a particular item—i.e., its *significance*. In considering *significance*, the actuary might take into consideration the magnitude of an actual recorded amount for a particular item relative to amounts recorded for other balance sheet items, as well as the potential that the actual value of an item could vary substantially from the recorded amount, and the diligence and complexity associated with determining any amount.

In addition, the work group suggests that “significance” includes the importance of the findings, recommendations, and conclusions relative to the reporting entity’s financial position and results of operations (i.e., “materiality”) as well as the magnitude relative to the fair value measurement of reserves and related items that are included within the Opinion (i.e., “risk level”).

The work group suggests that the actuary provide some context regarding company products and agreements, and why the nature of its business contracts result in items being recorded on the balance sheet that are subject to the Health Actuarial Opinion. ASOP No. 28, *Statements of Actuarial Opinion Regarding Health Insurance Liabilities and Assets*, states “The actuary’s judgment in developing actuarial assumptions and methods should take into account the specific characteristics of the policy and contract provisions affecting the items with respect to which the actuary is expressing an opinion.”

It also may be helpful to comment on which actuarial items are more (or less) important with regard to the financial performance and solvency of the company to provide context for the rest of the Memorandum.

Findings should be explained for each of the Scope items (e.g., Items A – I) of the Opinion. It could be necessary to explain any item where a recorded amount of \$0 required a comprehensive analysis and finding, such as premium deficiency reserves (PDRs); or explanation for another result that is zero or non-zero that is not obvious to the intended audiences or where the Annual Statement information might suggest a different result. Noting the materiality of changes over the previous Annual Statement period and each quarter also could be beneficial and notable in the Scope/Significance narrative section of the Memorandum.

The appointed actuary might consider including in the narrative section a detailed explanation of any estimate: that requires substantial judgment; that is difficult to estimate; and/or for which the probable variance in the actual outcome versus the estimate has significant implications on reported income or company solvency/surplus. This could include the calculation process, major assumptions,

conclusions, or any level of volatility considered in the actuary's evaluation. This explanation then might be augmented with references to the technical component of the Memorandum that would show additional details. For items where the potential impact on the company is minimal and the bounds of any potential misestimate are easily explained and generally well understood, the actuary might choose to limit the amount of discussion in the narrative.

Per the NAIC Health Annual Statement Instructions, the Opinion might include a Relevant Comments section if, for example, there has been any material change in assumptions and/or methods from those previously employed. In this case, a brief description of the change should be included in the Opinion, and a more detailed analysis should be included in the Memorandum.

As mentioned above, the actuary might be required to use substantial judgment to determine an estimate, which without sufficient documentation is subject to misunderstanding. Additionally, using judgment is a fundamental actuarial exercise when choosing assumptions, models, completion factors, time periods, or analyzing results. It is prudent for the actuary to discuss, at least generally, the different approaches and uses of actuarial judgment, and in greater detail when judgment is used to go outside normal processes, or when it has a significant impact on results, or when it appears to be highly subjective.

Technical Component of Memorandum

The technical component, per Annual Statement Instructions, "should provide sufficient documentation and disclosure for another actuary practicing in the same field to evaluate the work. This technical component must show the analysis from the basic data, (e.g., claim lags) to the conclusions."

The wording above uses the qualitative term, "sufficient," but also uses the word "must" with regard to the requirement to demonstrate how the basic data was used in the determination of the estimate included in the Actuarial Opinion.

"Sufficient" could mean that after reading the Memorandum, another actuary practicing in the same field and reviewing the Memorandum would be able to make an objective appraisal of the actuary's methods and assumptions and the reasonableness of the actuary's conclusions based on the information provided in the Memorandum, which details how the appointed actuary has come to his or her conclusions. The work group notes that the Memorandum is considered to be an actuarial report, subject to the requirements of ASOP No. 41, *Actuarial Communications*.

For unpaid claim liability (UCL) (sometimes referred to as "incurred but not paid") studies, claim lag data is generally considered basic data. In other instances, interpretation might be required with regard to what constitutes basic data. However, the language states an expectation that significant detail will be provided with regard to the basic data, along with how that data is used in drawing conclusions in order to allow for another actuary practicing in the same field to evaluate the work. The actuary might consider whether summarized data is sufficient for the result to be evaluated. If this type of information is used, it is important to ensure that the summarized data is not based on a different reporting or data source than the reporting or data source that was used to demonstrate the decision-making process within the Memorandum narrative or appendices. The technical component of the Actuarial Memorandum must show the details of the analyses for all components within the

scope of the Actuarial Opinion. As noted previously, the actuary should review ASOP No. 41, *Actuarial Communications*, for additional guidance.

Actuarial Opinion Scope Items

The main objective of the Memorandum is to provide a detailed explanation of how information was considered, and how conclusions were drawn for specific Annual Statement items required to be addressed by the Actuarial Opinion. The actuary might simply list and explain the analysis done to draw the conclusions required by the standard Opinion language related to each of the specific items covered within the scope of the Opinion, and, if applicable, the process by which the actuary decided to include any additional or revised wording, or issue a Qualified, Adverse, or Inconclusive Opinion. While this approach might be stylistically unappealing, the Memorandum is not a creative writing exercise, but a document where completeness and clarity are the primary considerations. It is generally regarded as a good idea for the Memorandum to give more information (not less information) than the Opinion, particularly in the event that the Opinion is Adverse, Qualified, or Inconclusive. In the event that the Opinion is Adverse, Qualified, or Inconclusive, it is important to note that the NAIC Health Annual Statement Instructions require the appointed actuary to explicitly state the reason(s) for such in the Opinion itself.

Sample Actuarial Memorandum Construction

A. Company Overview including product descriptions, provider contracting, and other characteristics that have implications with regard to actuarial items to be addressed by the Opinion and supporting Memorandum.

Many actuaries begin the narrative portion of an Actuarial Memorandum with an overview of the company. The overview will often include a description of the company or entity for which the Opinion was prepared, such as how the entity is organized and the markets in which it does business.

Actuaries often include a description of the products the entity sells in each of its markets. A high-level description of the entity's relationships or contracting arrangements with its principal providers can be good background information to provide. Including a description of any other characteristics of the company, or its products, that have implications with regard to actuarial items addressed by the Opinion would be helpful to provide context relating to the determination of actuarial assets and liabilities. A summary of changes in products, lines of business, company strategy, or regulatory environment, if applicable, would also be helpful to include, if the changes affect the determination of actuarial items. This section might also include a listing of products and relationships that are less material to the company and how or why the materiality determination was made. For larger companies with complex reporting and organizational structures, it can also be helpful to describe the interaction between the appointed actuary and individuals from different segments of the company who have a role in providing support for the determination of items included in the Opinion.

B. Listing of Health Annual Statement Scope items and actuarial accruals that fall under Scope items; for each type of accrual include:

Providing Sufficient Information

As mentioned in the introduction, one of the purposes for creating this practice note is to provide useful information for actuaries in addressing challenges with providing sufficient information to

justify the findings, recommendations, and conclusions of an opining actuary without providing so much detail that it becomes difficult for the audience of the Memorandum to digest and understand.

The narrative component generally has a description of the method used, the source(s) of the data, how the reasonableness of the data was determined, any concerns or limitations of the data or analysis, and whether there were any changes in the methodology from the prior year. The technical component generally begins with the data, summarized as appropriate, and will demonstrate how the liability (or accrual) was calculated from the data. The demonstration of the calculation should be presented in such a fashion that another health actuary could follow the steps in the calculation in order to evaluate the work, using clear labeling and some indication of how data flows through the calculation.

The narrative and technical components should not only address items that have a positive or negative dollar amount, but also all items that are zero. An amount of zero indicates that the item does not apply or was projected to be not needed, as with a PDR, and those decisions and projections should be documented.

Within the narrative component, actuaries often discuss provisions for adverse deviation, or margin considerations, associated with the most significant items included in the Statement of Actuarial Opinion, as well as the total provision for adverse deviation (or margin) held in aggregate across all items included in the Statement of Actuarial Opinion. This discussion can be supplemented by technical components demonstrating levels of stability or volatility and used to support the actuary's conclusion regarding the adequacy of the aggregate of actuarial assets and liabilities.

The Memorandum should include a description of any subsequent events that might have a material impact on the results.

Another challenge the appointed actuary faces is determining which items to include in the technical component. The appointed actuary might follow the principles of "significance" and "sufficiency" described above regarding the narrative component to make that determination. Actuaries might use sensitivity testing to determine the likelihood and magnitude of variances among estimates to aid in determining the relative importance of a given item.

Many health actuaries will find the following items to be significant due to their relative magnitude on the balance sheet or importance to income statement changes, and therefore will include them in the technical component with sufficient detail: unpaid claim liabilities, capitation or provider incentive and risk-sharing liabilities or accruals, premium deficiency reserves, risk adjustment liabilities or accruals, medical loss ratio rebate liabilities, pertinent hindsight testing performed, or any other item the appointed actuary considers to be appropriate for additional detail.

Regardless of whether the actuary decides to include an item in the technical component, the actuary needs to be prepared to provide upon request further documentation and demonstration of all the estimates included within the scope of the Actuarial Opinion. Just as is the case for the Memorandum, any additional documentation provided needs to adhere to the communication and disclosure requirements of any relevant ASOPs.

The following are examples of what might be incorporated into the Memorandum to support the conclusions for each of the items in scope for the Opinion. The level of detail in each of the examples

is intended to strike a balance between sufficient detail to justify conclusions, without providing so much detail that it becomes difficult for the audience of the Memorandum to digest and understand. This is done primarily by offering questions the Memorandum might address. Additionally, Appendix III includes a convenient checklist of items an actuary might follow in constructing the Memorandum.

Finally, it is not uncommon for the appointed actuary to complete work sufficient to determine that a recorded amount developed by someone else meets relevant standards and requirements. In this case, the Memorandum documentation might reflect the analysis completed to support the appointed actuary's determination, and this documentation might differ from the documentation provided by an actuary who developed a recorded amount.

Claims unpaid (Page 3, line 1):

Show the amount of unpaid claims liability broken down by line of business or other component categories. The documentation often includes the development of the final estimates including explicit margin. The details typically include any adjustments to the lag-based calculations, if applicable, such as commercial and/or governmental reinsurance, internal pooling arrangements, as well as governmental or provider risk-sharing arrangements. Include data with paid and incurred claims triangles and actual unpaid claims liabilities calculations.

The Actuarial Memorandum usually describes the following aspects of the data, methodology, and margin considerations for the UCL.

Description of the data

- The source(s) of the data used for this purpose.
- The definition of incurred date used in the analysis.
- The extent of reliance on data provided by others, including documentation of how such data was reviewed for reasonableness and consistency.
- Any concerns that the actuary has with the data used, in accordance with guidance from ASOP No. 23, *Data Quality*. Considerations might include the applicability of the data, the quality, the time period, any limitations, and other characteristics of the data which should be considered in its use.
- The required reconciliation from the data used for analysis to the Underwriting and Investment ("U&I") Exhibit, Part 2B. Alternatively, the actuary could provide the reconciliation in another section of the Memorandum and include a reference to that section.

Description of the methodology

Actuaries might find it helpful to address the following questions when describing the methodology used:

- For lag-based calculations, how were the completion factors developed? Was an averaging approach used? If so, what was it?
- How were the estimated incurred claims determined for incurral months where completion factors were not used?
- How were estimated incurred claims adjusted for seasonality?

- Were claim recoveries considered in the development of the completion factors?
- Are multiple exhibits needed to show the development from the raw triangle to the final factors?
- An explanation of the approach used to develop incurred claims estimates is typically included in the narrative component, with additional details included in the technical component. The actuary may want to address whether nontraditional methods are used, either alone or in combination with traditional methods, and if so, why.
- Were there any changes in methodology from the prior year? What was the justification(s) for the change?
- How was reinsurance reflected? Was reinsurance modeled; if so, how?
- Are there counterparty risks that were or should be reflected in the calculations?
- Are there any collectability concerns or credit risks associated with reinsurance receivables?
- By offsetting the unpaid claims liability with amounts expected to be recovered from the reinsurer, the actuary is implicitly indicating that this offset is appropriate and in compliance with the state's credit for reinsurance laws. Did the actuary indicate the level of familiarity with these laws and whether compliance was determined as part of the actuary's analysis or relied upon by another party?
- Were there any adjustments for operational challenges (large inventory increases or decreases), large claims, etc.?
- Were there any special considerations (e.g., new company, new line[s] of business) that were reflected in the calculation?
- How was capitation handled?

Actuaries often will have a narrative for the UCL calculation for each line of business including pertinent details underlying the estimates development.

Provision for Adverse Deviation (or Margin)

- How is the margin determined?
- Is the margin explicit or implicit?
- Who sets the margin level, the actuary or the company? If the company determines the provision for adverse deviation or margin, does the actuary believe that it is reasonable?
- Are there different margins for different lines of business or by service type (e.g., medical vs. pharmacy)?
- Are there company-specific or external factors that may require an "extraordinary" margin to be applied for the statement year?
- Are there any assumption changes reflected in the calculations, and are the justifications for these changes documented?

Did the actuary perform any reasonableness checks? If so, what were they? Examples include the ratio of UCL to premium or the calendar year incurred loss ratio. Do these ratios indicate reasonableness of the UCL? Were any follow up-studies performed, and what did they reveal?

Accrued medical incentive pool and bonus payments (page 3, line 2).

These types of contractual arrangements may take many forms. Therefore, it is important for the actuary to describe the general contracting arrangements that give rise to medical incentive pool and bonus payments, including a detailed description of how the accruals were calculated, details of the assumptions and methods used, and any changes in the assumptions or methodology from the previous year.

Unpaid claims adjustment expenses (“UCAE”) (page 3, line 3).

Describe the UCAE and provide details of its calculation.

It is typical for this accrual to be calculated as a flat percentage applied to the unpaid claims liability. It is also typical for the percentage or other assumptions used in this calculation to be provided by the company or another third party. Generally, the information provided by the actuary or another party includes a description of the analysis performed to determine its reasonableness. This might include an analysis of the actual claims adjustment expense as a percentage of incurred claims compared to the UCAE as a percentage of unpaid claims over several years, or a description of the approach used for a newer line of business where historical expenses are not available.

Aggregate health policy reserves (page 3, line 4).

This line item is comprised of all of the liabilities included in line 8 of Part 2D of the Underwriting and Investment Exhibit. It is usual practice for the actuary to document the amounts of the component items and ensure that the total matches the amount recorded in the aggregate health policy reserve line item—component items such as:

- **Unearned premium reserve:** Consider stating the amount of the unearned premium reserve and describing how it is calculated. If this is simply an accounting item provided by another party, it could be sufficient for the actuary to provide a high-level description and document the reliance.
- **Premium deficiency reserve (“PDR”):** This item can be a complex actuarial estimate that involves a significant amount of actuarial judgment to determine the appropriate actuarial assumptions, methods, and reasonableness of results. Therefore, this section of the Actuarial Memorandum is intended to provide detailed information relating to the PDR calculation, including a statement of the amount of the PDR calculated by the actuary, even if it is \$0, and a description of the calculation, assumptions, and methods. The following is a representative list of items that could fit in this section of the Actuarial Memorandum; however, the amount of documentation appropriate may vary based on specific circumstances—e.g., a stable block of business with consistent profit margins may need less support for a recorded PDR of \$0 than one that has had recorded recent losses:
 - *Calculation methodology* (e.g., gross premium reserve). Many actuaries find it useful to describe the overall approach used to determine the PDR. Note any special circumstances that warrant specific considerations for the PDR calculation. For example, the methodology used to calculate the PDR could be different for a new carrier or a significant new block of business as opposed to a mature, credible existing block of business.

- *Grouping methodology.* Describe the groupings used for both the analysis and for reporting of the PDR. This includes an explanation of the basis for the groupings, the reasoning behind the groupings, as well as a description of any material concerns such as the credibility of data by group and an explanation of how these concerns were mitigated. If the grouping methodology changed since the previous determination of the PDR, the actuary would typically explain the change(s) and the reason(s) for the change(s).
- *The projection period.* An important element of the PDR calculation is the determination of an appropriate projection period. Therefore, the rationale for the choice of the projection period is typically provided, as well as any changes in the projection period compared to the period used for the previous PDR calculation.
- *Data used.* The data used as a starting point for the projection of the various cash flows can have a significant impact on the results. It is important to document the data used—including, but not limited to, the inclusion or exclusion of cash flows from policies effective after the valuation date but contracted on or before the “as of” date, which should be defined.
- *Administrative expense allocation methodology.* There are several options available to the actuary for allocating fixed and variable expenses among the groups used for PDR reporting purposes. Therefore, documentation of the expense allocation approach used, as well as any expenses excluded, along with its justification should be included in this portion of the Memorandum.
- *Treatment of investment income.* It can be helpful for the actuary to include the responses to the following questions in this portion of the Actuarial Memorandum: Does the PDR calculation reflect an offset for investment income? Why or why not? If investment income is included, what are the assumptions used to project investment income? How are these assumptions justified? Have these assumptions changed since the previous PDR calculation? Why or why not? If investment income is included, how is it allocated to the groups used for PDR reporting purposes?
- *Claims projection assumptions.* A thorough description of the methodology used to project claims during the projection period is key to providing the reviewer of the Actuarial Memorandum with sufficient information upon which to form an opinion regarding the reasonableness of the PDR.
- *Premium increase assumptions.* Actuaries include the basis for this set of assumptions and reflect on the relationship to rate increases filed and/or approved.
- *Treatment of amounts recoverable from reinsurance or other risk-sharing agreements or programs.* For each item used as an offset to the PDR calculation, the actuary typically states the amount, along with a description of the item and details of the calculations, including the assumptions and methodology used. Actuaries describe any concerns with the collectability of reinsurance recoverables, including any material counterparty risks, which may affect the calculation of the amounts used as an offset to the PDR calculation, and whether the use of expected reinsurance proceeds to reduce the company’s PDR liability is allowed pursuant to state law. The work group recommends that an actuary relying on the expertise of other parties document that reliance.

- *Method for amortizing the PDR during the year.* Based on an actuary’s understanding of the expected emerging pattern of losses, it might be prudent to suggest an appropriate method for amortizing the PDR during the projection period and to document it in this section of the Actuarial Memorandum. This would provide a basis for monitoring the emerging losses and determining the need for a re-evaluation of the PDR before the end of the projection period.

Actuaries often find it useful to review the discussion of PDRs in ASOP No. 42, *Health and Disability Actuarial Assets and Liabilities Other Than Liabilities for Incurred Claims*, as well as the American Academy of Actuaries’ March 2007 *Premium Deficiency Reserves Discussion Paper*.³

As stated above, the PDR calculation involves significant actuarial judgment and can be subject to differing opinions by reviewing actuaries. Therefore, it might be prudent for the actuary to demonstrate the reasonableness of this estimate by including in the Actuarial Memorandum a description of any reasonableness checks used to verify assumptions and/or the overall results.

- **Medical loss ratio (“MLR”) rebate liability:** This liability may be required to be calculated based on state and/or federal law. If one or more blocks of business are subject to rebate requirements, it is important to explicitly state the amount of the MLR rebate liability, even if it is zero, and describe the assumptions and method of how the MLR rebate liability was calculated with sufficient information for the reader of the Actuarial Memorandum to confirm that it is done in accordance with applicable law or regulations. If alternate methodologies are allowed, then a detailed description of the methodology used and the appropriateness of the approach used should be included.
- **Reserve for rate credit or experience rating refund.**
If this item is indicated based on the nature of the business of the company, include an explicit statement of the amount, along with a description of how it is calculated, including assumptions and methodology.
- **Medicare Part D Risk-Sharing Asset or Liability.** If the carrier writes Medicare Part D business, it is prudent to dedicate a portion of the Actuarial Memorandum to this item, even if it is zero. At a minimum, the actuary might state the amount of this item and describe how it is calculated, including details of the assumptions and methodology used.
- **Contract reserves:** Contract reserves (also referred to as active life reserves or policy reserves) are established when the future pattern of expected claim payments does not match the future pattern of premiums. Contract reserves represent the portion of current and past premiums needed to prefund future increases in claims. Typically, issue age products such as long-term care, disability income, Medicare Supplement, and specified disease products require the carrier to set up a contract reserve. An actuary would usually:
 - State the amount held and include a description of how this amount is calculated.

³ Available on the Academy’s website at <https://www.actuary.org/sites/default/files/files/publications/Premium%20Deficiency%20Reserves%20Discussion%20Paper%20March%202007.pdf>

- Document the methods and assumptions used in this calculation, including the treatment of reinsurance.
- If contract reserves are required to be tested using a particular approach (such as a gross premium valuation), describe the results of that testing and indicate the regulatory and/or actuarial guidance with which the calculation is intended to comply.
- Document how the actuary concluded the selected methods and assumptions support the Opinion, including how minimum statutory requirements are met.

Aggregate life policy reserves (page 3, line 5).

An actuary would typically state the amount held and include a description of how this amount is calculated, including when the amount is \$0.

Property/casualty unearned premium reserves (page 3, line 6).

An actuary would typically state the amount held and include a description of how this amount is calculated, including when the amount is \$0.

Aggregate health claim reserves (page 3, line 7).

This category covers all items included in line 14 of Part 2d of the U&I Exhibit. Usually, in the work group’s observation, actuaries itemize each item in this category, stating the amount, and including a description of the liability and how it was calculated. This category may include the following:

- Provider insolvency reserve: This represents the liability that may revert to the company if the provider becomes insolvent. For companies utilizing provider risk-sharing arrangements, the actuary may need to establish a provider insolvency reserve.
- Reserve for future contingent events, for example, potentially might include extension of benefit reserves.

Any other loss reserves, actuarial liabilities, or related items presented as liabilities in the Annual Statement.

For each actuarial liability included in the scope of the Actuarial Opinion but not otherwise included in any of the above items, include a description of the liability and how it was calculated, state the amount and indicate where it is found in the Annual Statement (page and line number). Generally, these items would be included as a liability on page 3, line 23. Examples of liabilities that might fall under this category include:

- Amounts payable by the carrier under the provisions of risk-sharing arrangements: For carriers writing Medicaid, Medicare Advantage or Affordable Care Act (ACA)-compliant business, that participate in state or federal risk adjustment programs, actuaries would include the accrual for the risk adjustment payable by the carrier to the program.
- Other amounts payable by the carrier to federal or state programs that are actuarial in nature.

Specified actuarial items presented as assets in the Annual Statement.

For each actuarial asset included in the scope of the Actuarial Opinion, include a description of the asset, state the amount, and indicate where it is included in the Annual Statement (page and line number). Generally, these items would be included either as an asset on page 2 or as a contra-liability on page 3.

- Pharmacy rebates (page 2, line 24): This is not necessarily an actuarial item. However, if it is included as part of the Actuarial Opinion, the actuary should include it in the Actuarial Memorandum. If the determination of this item did not involve actuarial considerations, the actuary would include a statement reflecting that and document any reliance.
- Amounts recoverable from risk-sharing programs: For carriers writing Medicaid, Medicare Advantage, or ACA-compliant business, or that participate in state or federal risk adjustment programs, an actuary would usually include the accrual for the risk adjustment receivable to the carrier by the program.
- Amounts recoverable under provider risk sharing agreements.
- Amounts recoverable from reinsurance programs (page 2, line 16.1): For carriers writing ACA-compliant business that participate in state or federal reinsurance programs, an actuary would usually include the accrual for any amounts receivable to the carrier by the program.
- Accrued retrospective premiums or contingent premium receivables (page 2, line 15.3).
- Other amounts receivable from federal or state programs.

For any assets included in the Opinion, the appointed actuary might document whether collectability of the asset has been considered and whether there are any concerns related to counterparty risk.

With respect to all of the Actuarial Opinion liability and asset items discussed above, the actuary might want to discuss any subsequent events that could have a material impact on the estimated amounts or financial results. In addition, for any item in which the actuary relied upon another party, the actuary should include a description of the information provided, the level of reliance, the review performed, any adjustments made, and the actuary's conclusion regarding the information provided.

C. Supporting Documentation for Statements in Opinion Section

The Memorandum should provide support for the statements the actuary makes in the Statement of Actuarial Opinion (SAO). The Memorandum should document how the actuary arrived at the Opinion provided. Standard language for the Opinion section of the SAO includes making six statements A – F (six total).

Considerations for supporting documentation for each six Opinion statements:

Statement A—The amounts carried in the balance sheet on account of the items identified above are in accordance with accepted actuarial standards consistently applied and are fairly stated in accordance with sound actuarial principles.

Given the liabilities and assets falling within the scope of the SAO, which actuarial standards of practice (ASOPs) were deemed applicable and how were they applied? Common ASOPs to consider for the Health SAO would include:

ASOP No. 5, *Incurred Health and Disability Claims*

ASOP No. 11, *Financial Statement Treatment of Reinsurance Transactions Involving Life or Health Insurance*

ASOP No. 23, *Data Quality*

ASOP No. 28, *Statements of Actuarial Opinion Regarding Health Insurance Liabilities and Assets*

ASOP No. 41, *Actuarial Communications*

ASOP No. 42, *Health and Disability Actuarial Assets and Liabilities Other Than Liabilities for Incurred Claims*

ASOP No. 45, *The Use of Health Status Based Risk Adjustment Methodologies*

ASOP No. 56, *Modeling*

Actuaries often discuss how they considered guidance from applicable ASOPs and other actuarial guidance. As an example, the actuary would describe how the components of ASOP No. 5, *Incurred Health and Disability Claims*, were considered in the determination of the unpaid claims liability; or how the actuary considered the need for a premium deficiency reserve, and the suggested components discussed in ASOP No. 42, *Health and Disability Actuarial Assets and Liabilities Other Than Liabilities for Incurred Claims*.

Statement B—The amounts carried in the balance sheet on account of the items identified above are based on actuarial assumptions relevant to contract provisions and appropriate to the purpose for which the statement was prepared.

Are the development of the reserves and liability estimates consistent with the company's contracts? Are the assumptions underlying the amounts appropriate? The actuary might find it appropriate to discuss how they decided these statements to be true.

Statement C—The amounts carried in the balance sheet on account of the items identified above meet the requirements of the Insurance Laws and regulations of the state of [state of domicile] and are at least as great as the minimum aggregate amounts required by any state.

The actuary might find it appropriate to discuss what state laws were reviewed in making this statement. For example, what laws are applicable to the company? Are there any insurance department bulletins with guidance that were reviewed or adhered to? How is the company regulated (health insurer, managed care organization, reinsurer), and are there regulations specific to this type of company that were reviewed?

Statement D—The amounts carried in the balance sheet on account of the items identified above make a good and sufficient provision for all unpaid claims and other actuarial liabilities of the organization under the terms of its contracts and agreements.

It is usual for the actuary to discuss the process leading to the conclusion that the amounts being opined upon (including any \$0 items) are reasonable, and when viewed in aggregate,

are good and sufficient. The actuary might include support, such as an exhibit with best estimates and booked amounts to demonstrate the overall provision for adverse deviation, or margin, across the amounts opined upon, or a volatility analysis. The actuary might describe the thought process behind the good and sufficient conclusion, including discussion of what the range of the assets and liabilities could be under moderately adverse conditions, including a discussion of any interactions. For example, a company booking both an unpaid claims liability and an MLR rebate liability might find that these two liabilities are inversely correlated, and thus under moderately adverse conditions either liability could run out unfavorably but not both. The actuary should provide enough details to convince the reviewer that it is a reasonable conclusion that the amounts booked will be sufficient under moderately adverse conditions.

Statement E—The amounts carried in the balance sheet on account of the items identified above are computed on the basis of assumptions and methods consistent with those used in computing the corresponding items in the Annual Statement of the preceding year-end.

If the same assumptions and methods were used as in the prior year, the actuary should confirm that this statement is true, and could state the reasons for using the same approaches (such as the contracts and business being written by the company are the same as in the prior year). If, however, the assumptions or methods changed, the actuary typically would remove or alter this statement, and would include detailed support for the change in the Memorandum.

Statement F—The amounts carried in the balance sheet on account of the items identified above include appropriate provision for all actuarial items that ought to be established.

The actuary might describe the analysis done to support the conclusion that all actuarial items have been accounted for based on the actuary's knowledge and understanding of the company's business and operations.

D. Relevant Comments Section of the Statement of Actuarial Opinion

This section of the SAO provides the actuary the opportunity to describe significant items or challenges that are relevant to understanding the conclusions made in the Opinion section. Examples are: data deficiencies that either could or could not be overcome; heavy reliance on industry data for a new product; or implications of operational, organizational, or industry changes.

When relevant comments are included in the SAO, it is usual practice for the actuary to include in the Memorandum additional background information and supporting documentation regarding the issues to the extent that a reviewer might need this additional information to fully appreciate the actuary's challenges and how these challenges were addressed in support of the conclusions drawn in the SAO.

Other Than Unqualified SAO

For any SAO (Qualified or Unqualified), actuaries typically discuss the details regarding the conclusion in the Actuarial Memorandum to the extent the reasons are not already clear from any relevant comments included in the SAO.

If the opining actuary prepares an SAO that is not Unqualified (Inconclusive, Qualified, or Adverse), the actuary will want to explain in detail the reasons the SAO is not Unqualified. For example, if the SAO is Inconclusive due to missing or inconsistent data, the Memorandum might include details of what the data issues were such that the actuary could not issue an Unqualified SAO.

E. Reconciliations

Required Reconciliations

The NAIC Health Blank Instructions provide guidance on the reconciliations required to be completed, both in the Instructions and the standard Statement of Actuarial Opinion (SAO) language:

The technical component should provide sufficient documentation and disclosure for another actuary practicing in the same field to evaluate the work. This technical component must show the analysis from the basic data, (e.g., claim lags) to the conclusions.

The Memorandum must include: *Documentation of the required reconciliation from the data used for analysis to the Underwriting and Investment Exhibit, Part 2B.* Typical practice is to reconcile the paid and incurred lag triangles to the Underwriting and Investment Exhibit, Part 2B paid and incurred prior and paid and incurred current columns by line of business, and in total; and reconcile the corresponding unpaid claim liabilities to the Underwriting and Investment Exhibit, Part 2B unpaid claims incurred prior and unpaid claims incurred current columns by line of business, and in total.

The Actuarial Opinion requires a statement from the actuary, such as, *I evaluated the data for reasonableness and consistency. I also reconciled the underlying basic liability records to the Underwriting and Investment Exhibit, Part 2B of the company's current Annual Statement.*

Other Reconciliations

The actuary typically considers what other reconciliations might be included with the Memorandum. The actuary often discusses or demonstrates how the data underlying the development of any material amount included in the actuary's SAO are consistent with the company's financial statement. The actuary typically considers the materiality of any of the items in the SAO for reconciliation purposes. Items that are opined upon but are immaterial to the SAO may not require reconciliation.

Some reconciliations to consider include:

- Accrued medical incentive pool and bonus payments (page 3, line 2):
 - Showing how these amounts are calculated, including the underlying data. If claims or premium data are used, show how this data can be reconciled back to the NAIC Health Blank, whether to Underwriting and Investment, Part 2B or other pages.
- Unpaid claims adjustment expenses (page 3, line 3):
 - Showing how the estimated unpaid claims adjustment expense liability and the related claims adjustment expenses used to calculate this liability reconcile to the Underwriting and Investment Exhibit, Part 2C.

- Aggregate health policy reserves (Page 3, Line 4) including unearned premium reserves, premium deficiency reserves and additional policy reserves from the Underwriting and Investment Exhibit, Part 2D:
 - Unearned premium reserves—The actuary might demonstrate that premiums and unearned premiums from policyholder records are consistent with accounting entries.
 - Premium deficiency reserves—The actuary might demonstrate that claims, premiums, administrative expenses, and membership projections are reasonable relative to the current experience developed in the NAIC Health Blank. The actuary might address methods and assumptions driving material differences in the emerging experience versus projected experience.
 - Additional policy reserves—The actuary might describe the underlying data, methods and assumptions used to calculate these reserves and reconcile these reserve balances to the Annual Statement.
 - Medical Loss Ratio (MLR) rebate liability—If an MLR rebate accrual is being opened upon (even if \$0), the actuary may reconcile total premiums and claims underlying the MLR calculation to the NAIC Health Blank, and demonstrate that the unpaid claim liabilities used in the MLR calculations reconcile to the total unpaid claim liability reported on page 3, line 1.
- Aggregate life policy reserves (page 3, line 5): The actuary should describe the underlying data, methods, and assumptions used to calculate these reserves and reconcile these reserve balances to the Annual Statement.
- Property/casualty unearned premium reserves (page 3, line 6): See discussion on the Health unearned premium reserves above.
- Aggregate health claim reserves (page 3, line 7):
 - The actuary might describe the underlying data, methods, and assumptions used to calculate these reserves and reconcile these reserve balances to the Annual Statement.
- Any other loss reserves, actuarial liabilities, or related items presented as liabilities in the Annual Statement:
 - For companies writing Medicare Advantage, ACA medical coverage, or participating in a private exchange or other risk-sharing arrangements that can generate risk adjustment, risk corridor, or risk-sharing liabilities that are actuarially determined, a payable for these amounts may be included here. The actuary might demonstrate that the data underlying the calculation, including claims, premiums, or membership, are consistent with the NAIC Health Blank.
- Specified actuarial items presented as assets in the Annual Statement:
 - Similarly, for companies writing Medicare Advantage, ACA medical coverage, or participating in a private exchange or other risk-sharing arrangements that can generate

risk adjustment, risk corridor, or risk-sharing assets that are actuarially determined, an asset, or receivable, for these amounts may be included here. The actuary might demonstrate that the data underlying the calculation, including claims, premiums, or membership, are consistent with the NAIC Health Blank.

- Pharmacy rebates—The actuary might describe how pharmacy rebates and corresponding pharmacy rebate receivables are calculated, and how they relate to the pharmacy expenses reported in the NAIC Health Blank. Are the rebates and rebate receivables reasonable relative to the pharmacy claims expense? Are rebate receivables consistent with historical levels and patterns?

The purpose of the reconciliation demonstrations and discussions is to ensure the data underlying the analysis used to form the actuary's SAO conclusion are reasonable and consistent with the company's current financial statement. The actuary should consider the materiality of each accrual in deciding how much reconciliation detail should be included. A reviewing actuary should be able to review the discussions and reconciliations included in the Actuarial Memorandum to make a reasonable assessment that the data underlying the conclusions are consistent with the current NAIC Health Blank.

F. Hindsight testing, including Underwriting and Investment Exhibit, Part 2B, if not covered in Section D, above

Hindsight testing of actuarial items involves comparing actuarial estimates reported in the Annual Statement to updated estimates using more current data or to the actual amounts once they are known. This provides a mechanism for the actuary to monitor the assumptions and methodologies used for appropriateness and adjust for material variances. Including the results of hindsight testing in the Actuarial Memorandum provides an opportunity for the actuary to be transparent about his/her thought process involving the selection of the assumptions and methods used in the determination of actuarial items included in the scope of the Statement of Actuarial Opinion. The following illustrates some examples of hindsight testing that can be helpful to include in the Actuarial Memorandum:

- Claims unpaid (page 3, line 1).
 - Compare the unpaid claims liability to periodically revised estimates with additional runout and ultimately to the actual runout over several years (three to five) to determine whether there is a pattern of overstating or understating the liability. A consistent pattern of significant overstatement or understatement over time could indicate that the underlying assumptions (including margin) or methodology needs to be reviewed and potentially revised.
 - Compare the estimated reinsurance recoverable reflected as an offset to the unpaid claims to the actual reinsurance amounts paid for claims incurred but unpaid as of the valuation date. Analyze patterns of differences between estimated and actual reinsurance payments over time. For example, is there an emerging pattern for reinsurance payable on claims incurred in the last quarter of the year?
- Accrued medical incentive pool and bonus payments (page 3, line 2).
 - Compare actual payments against the liabilities held for this item year-over-year and over three to five years.

- Unpaid claims adjustment expenses (“UCAE”) (page 3, line 3).
 - Compare the UCAE as a percentage of UCL to the claims adjustment expenses as a percentage of incurred claims, as reported on page 4, line 20. Compare these two percentages over several years. A consistent disparity can indicate that the assumptions used to determine the UCAE may need to be revised.
- Premium deficiency reserve (“PDR”):
 - Compare the PDR to the net underwriting losses on page 4, line 24 for the year following the valuation date. A consistent discrepancy between the PDR and the net underwriting gain or loss for the following year can indicate that the assumptions and/or methodology used to determine the PDR might need to be examined further and potentially revised.
- Medical loss ratio (MLR) rebate liability.
 - Compare actual to the liability.
- ACA risk adjustment transfer payments.
 - Compare the actual risk adjustment transfer payments to the accruals held. The table on Part I of the supplemental health care exhibit (SHCE), which is part of the Annual Statement filing, provides this comparison by state, separately for the individual and the small group markets. A review of the values included in this exhibit allows the actuary to gauge the accuracy of the actuarial estimates over time and can be helpful in determining whether assumptions or methodology used need to be revised. The actuary might also deem it a good idea to compare the values of the actual inputs to the calculation (such as the statewide average premium and relative risk scores) to the estimated values. A review of the accruals and actual transfer payments over time can allow the actuary to determine whether a simplified approach to the determination of this estimate may be appropriate.

G. Other available information that can be provided to regulator or management to support Opinion/Memorandum

The Annual Statement Instructions require the technical component of the Actuarial Memorandum to “show the analysis from the basic data, (e.g., claim lags) to the conclusions.” In order for the reviewing actuary to follow the analysis, it should be well organized and provide a clear road map of the actuarial analysis, starting from the basic data as required, and proceeding through a narrative description of the steps taken to arrive at the conclusions. Some actuaries make more detail available via data files or spreadsheets when the data is so voluminous as to be unworkable in a written document. If this latter approach is used, the actuary should be prepared to supply the additional detailed data in a workable format, and within a reasonable amount of time from request.

Reliance letters should be included if others were relied upon in the preparation of the Opinion. If others performed the estimations included in the Opinion, their detailed analysis, or sufficient summary of their analysis, upon which the actuary was able to form an opinion should be included in the Memorandum.

~ ~ ~

The above discussion is intended to provide supporting information to actuaries endeavoring to prepare a meaningful and professional communication in the form of the Actuarial Memorandum in support of the Health Actuarial Opinion. The following appendices are included to provide additional sources of information and reference materials to support that effort.

Appendix I

Actuarial Standards of Practice Relevant to Health Actuarial Memoranda

ASOP No. 5, *Incurred Health and Disability Claims* (Effective September 1, 2017)

This actuarial standard of practice provides guidance to actuaries estimating or reviewing incurred claims when preparing or reviewing financial reports, claims studies, rates, or other actuarial communications as of a valuation date under a health benefit plan.

This standard applies to actuaries who estimate or review incurred claims under health benefit plans on behalf of risk-bearing entities, such as managed-care entities, self-funded employer plans, health care providers, government-sponsored plans or risk contracts, or government agencies.

ASOP No. 7, *Analysis of Life, Health, or Property/Casualty Insurer Cash Flows* (Effective July 15, 2002)

This actuarial standard of practice provides guidance to actuaries who perform professional services involving the analysis of asset, policy, or other liability cash flows for life, health, or property/casualty insurers.

This standard applies to actuaries when performing the analysis of part or all of an insurer's asset, policy, or other liability cash flows for life or health insurers (including health benefit plans). The standard also applies to actuaries when performing the analysis of cash flows involving both invested assets and liabilities for property/casualty insurers.

The actuary should consider cash flow testing when variations in the underlying risks are likely to have a material impact on the expected cash flows in certain products, certain lines of business, or on the company. Situations that might indicate a need for cash flow testing include the following:

1. where there are material asset risks;
2. where there are liabilities that have cash flows far out into the future;
3. where a company has a new or rapidly growing line of business; and
4. where options have been granted to policyholders or borrowers and the likelihood of anti-selection in the exercise of these options is significant.

ASOP No. 11, *Financial Statement Treatment of Reinsurance Transactions Involving Life or Health Insurance* (Effective January 1, 2006)

This actuarial standard of practice provides guidance to actuaries when performing professional services relating to financial statements that contain material reinsurance transactions involving life insurance (including annuities) or health insurance.

This standard applies to actuaries when performing professional services in connection with preparing, reviewing, or analyzing financial statement items that reflect reinsurance ceded or reinsurance assumed on life insurance (including annuities) or health insurance.

ASOP No. 18, *Long-Term Care Insurance* (Effective June 1, 1999)

This standard sets forth recommended practices for actuaries involved in designing, pricing, funding, or in evaluating liabilities for insurance contracts or similar arrangements providing long-term care (LTC) benefits.

This standard applies to actuaries when performing professional services for individual and group LTC insurance plans, LTC insurance benefits issued as riders or included within other insurance and annuity products, and self-insured plans providing LTC benefits.

ASOP No. 21, *Responding to or Assisting Auditors or Examiners in Connection with Financial Audits, Financial Reviews, and Financial Examinations* (Effective December 15, 2016)

This actuarial standard of practice provides guidance to actuaries when performing actuarial services while responding to or assisting auditors or examiners in connection with a financial audit, financial review, or financial examination.

This standard applies to actuaries when performing actuarial services as a responding actuary or as a reviewing actuary in connection with a financial audit or financial review in accordance with generally accepted auditing standards or a financial examination for the purpose of oversight of the financial condition of an entity.

ASOP No. 22, *Statements of Opinion Based on Asset Adequacy Analysis by Actuaries for Life or Health Insurers* (Effective April 15, 2002)

This actuarial standard of practice provides guidance to actuaries when serving as an appointed actuary or a qualified actuary in providing a Statement of Actuarial Opinion relating to asset adequacy analysis of a life or health insurer, when such Opinion is prepared pursuant to applicable law such as the following:

- Applicable law based on the model Standard Valuation Law as amended by the National Association of Insurance Commissioners (NAIC) in 1990, in conjunction with the model *Actuarial Opinion and Memorandum Regulation (AOMR)* adopted by the NAIC in 1991 and subsequently amended; or

- Other applicable laws requiring an actuary to opine on the adequacy of a life or health insurer's reserves and other liabilities in light of supporting assets.

This standard applies to actuaries when providing statements of opinion and supporting memoranda for life or health insurers, including fraternal benefit societies and health benefit plans, to satisfy applicable law as specified previously.

Actuaries performing work for health benefit plans such as health insurers, health service plans, and HMOs should note that this standard potentially applies to each of these types of plans. Applicable law will determine for which of these types of plans an appointed or qualified actuary is required to submit a Statement of Actuarial Opinion based on asset adequacy analysis subject to this standard.

ASOP No. 23, *Data Quality* (Effective April 23, 2017)

The purpose of this actuarial standard of practice is to provide guidance to the actuary when performing actuarial services involving data.

This ASOP provides guidance to actuaries when selecting data, performing a review of data, using data, or relying on data supplied by others, in performing actuarial services. The ASOP also applies to actuaries who are selecting or preparing data, or are responsible for the selection or preparation of data, that the actuary believes will be used by other actuaries in performing actuarial services, or when making appropriate disclosures with regard to data quality.

Other actuarial standards of practice may contain additional considerations related to data quality that are applicable to particular areas of practice or types of actuarial assignment.

If an actuary prepares data, or is responsible for the preparation of data, to be used by other actuaries in performing actuarial services, the actuary should apply the relevant portions of this standard as though the actuary were planning to use the data, taking into account the preparing actuary's understanding of the assignment for which the data will be used.

ASOP No. 28, *Statements of Actuarial Opinion Regarding Health Insurance Liabilities and Assets* (Effective December 31, 2011)

The purpose of this actuarial standard of practice is to provide guidance to actuaries in issuing a written Statement of Actuarial Opinion regarding health insurance liabilities and health insurance assets.

This standard applies to actuaries providing written Statements of Actuarial Opinion with respect to health insurance liabilities and health insurance assets of insurance or reinsurance companies and other health insurance financing systems (such as health benefit plans provided by self-insured or government plan sponsors) that provide similar coverages, under one or more of the following circumstances:

- a. the Statement of Actuarial Opinion is prepared to comply with NAIC Health Annual Statement Instructions;
- b. the Statement of Actuarial Opinion is otherwise prescribed by law or regulation;

- c. the statement is prepared to fulfill contractual obligations of the principal, including review of the work product of another actuary; or
- d. the Statement of Actuarial Opinion is represented by the actuary as being in compliance with this standard.

ASOP No. 41, *Actuarial Communications* (Effective May 1, 2011)

This actuarial standard of practice provides guidance to actuaries with respect to actuarial communications.

This standard applies to actuaries issuing actuarial communications within any practice area.

This standard does not apply to communications that do not include an Actuarial Opinion or other actuarial findings (for example, this standard does not apply to brochures, fee quotes, or invoices).

This standard provides guidance for preparing actuarial communications, including those that may be required by the *Qualification Standards* or by other ASOPs. If such other guidance contains communication requirements that are additional to or inconsistent with this standard, the requirements of such other guidance supersede the guidance of this ASOP. However, the guidance in this ASOP applies to the extent it is not inconsistent with such other guidance.

Law, regulation, or another profession's standards may prescribe the form and content of a particular actuarial communication (such as a government form). In such situations, the actuary should comply with the guidance in this standard to the extent not prohibited by applicable law, regulation, or standard.

Actuarial communications include written, electronic, or oral communication issued by an actuary with respect to actuarial services.

Because the Actuarial Opinion and Memorandum should be considered actuarial communications, the appointed actuary may wish to revisit this ASOP on a regular basis in order to remain fresh on its contents. Section 3 of this ASOP contains requirements for actuarial communications, including form and content, identification, disclosures, reliance, assumptions and methods, etc.

ASOP No. 42, *Health and Disability Actuarial Assets and Liabilities Other Than Liabilities for Incurred Claims* (Effective August 1, 2018)

This actuarial standard of practice provides guidance to actuaries estimating or reviewing health benefit plan actuarial assets and liabilities, other than liabilities for incurred claims, when preparing or reviewing financial reports, claims studies, rates, or other actuarial communications as of a valuation date. This ASOP complements ASOP No. 5, *Incurred Health and Disability Claims*.

This standard applies to actuaries when performing actuarial services with respect to estimating or reviewing health benefit plan actuarial assets and liabilities, other than liabilities for incurred claims, on behalf of risk-bearing entities.

Health and disability actuarial assets and liabilities other than liabilities for unpaid incurred claims include such items as contract reserves, premium deficiency reserves, provider-related assets or liabilities with respect to risk-sharing arrangements, and actuarially determined assets or liabilities related to risk adjustment programs.

ASOP No. 45, *The Use of Health Status Based Risk Adjustment Methodologies* (Effective July 1, 2012)

This actuarial standard of practice provides guidance to actuaries applying health status-based risk adjustment methodologies to quantify differences in relative healthcare resource use due to differences in health status.

This standard applies to actuaries quantifying differences in morbidity across organizations, populations, programs and time periods using commercial, publicly available or other health status-based risk adjustment models or software products.

ASOP No. 56, *Modeling* (Effective October 1, 2020)

This standard applies to actuaries in any practice area when performing actuarial services with respect to designing, developing, selecting, modifying, or using all types of models. For example, an actuary using a model developed by others in which the actuary is responsible for the model output is subject to this standard.

If the actuary's actuarial services involve reviewing or evaluating models, the reviewing or evaluating actuary should be reasonably satisfied that the actuarial services were performed in accordance with this standard.

In addition, the guidance in this ASOP applies to the actuary when, in the actuary's professional judgment, reliance by the intended user on the model output has a material effect for the intended user. Examples include actuarial services performed in relation to pension plan contribution and cost projection models, insurance pricing models, predictive models, reserving models, and insurance company financial planning models.

~ ~ ~

In addition to the ASOPs, the appointed actuary may want to refer to other actuarial practice notes or publications of the American Academy of Actuaries, or other actuarial literature, including education and examination materials published or referenced by the Society of Actuaries.

Appendix II

Practice Notes and Statements of Statutory Accounting Principles Relevant to Health Actuarial Memoranda

Practice Notes Relevant to Health Actuarial Memoranda

- [*Revised Actuarial Statement of Opinion Instructions for the NAIC Health Annual Statement Effective December 31, 2010*](#)

Health Practice Financial Reporting Committee practice note on the Revised Actuarial Statement of Opinion Instructions of the NAIC Health Annual Statement that went into effect Dec. 31, 2010. Intended to help actuaries both understand and comply with requirements issued by the NAIC regarding health Annual Statement filings.

- [*Large Group Medical Insurance Reserves, Liabilities, and Actuarial Assets*](#)

Addresses issues regarding the valuation actuary's responsibilities under the NAIC's *Accounting Practices and Procedures Manual*, the NAIC's model *Actuarial Opinion and Memorandum Regulation*, the NAIC's *Health Insurance Reserves Model Regulation*, the NAIC's *Health Reserves Guidance Manual*, the NAIC's *Health Annual Statement Instructions* and the Actuarial Standard Board's actuarial standards of practice related specifically to determining reserve levels and other actuarial assets and liabilities for large group medical insurance coverage.

- [*Small Group Medical Insurance Reserves and Liabilities*](#)

Health Practice Financial Reporting Committee practice note addressing questions and issues regarding the valuation actuary's responsibilities related specifically to determining reserve levels and asset adequacy for small group medical insurance coverage.

- [*Practices for Preparing Health Contract Reserves*](#)

Health Practice Financial Reporting Committee practice note providing examples of common practices for setting contract reserves and answering common questions about accounting treatment of contract reserves.

Statements of Statutory Accounting Principles Relevant to Health Actuarial Memoranda

- SSAP 50—Classifications of Insurance or Managed Care Contracts

Provides a general framework for classifying insurance or managed care contracts into categories where the recognition of contract and policy reserves and related revenue, benefits, and claims is fundamentally different.

- SSAP 53—Property Casualty Contracts—Premiums

- Establishes statutory accounting principles for income recognition of premium revenue for all contracts classified as property and casualty contracts in SSAP 50.
- SSAP 54—Individual and Group Accident and Health Contracts
Establishes statutory accounting principles for income recognition and policy reserves for all contracts classified as individual and group accident and health contracts in SSAP 50.
 - SSAP 55—Unpaid Claims, Losses, and Loss Adjustment Expenses
Establishes statutory accounting principles for recording liabilities for unpaid claims and claim adjustment expenses for life insurance contracts and accident and health contracts and unpaid losses and loss adjustment expenses for property and casualty insurance contracts. Applies to all insurance contracts as defined in SSAP 50.
 - SSAP 61—Revised Life, Deposit-type and Accident and Health Reinsurance
Establishes statutory accounting principles for life, deposit-type and accident and health reinsurance. This statement applies to life, deposit-type and accident and health contracts as defined in SSAP 50.
 - SSAP 107—Accounting for the Risk-Sharing Provisions of the Affordable Care Act
Adopts accounting treatment for Affordable Care Act (ACA) risk adjustment program. Permits admission of receivables for the risk adjustment if the estimates are based on conservatism and sufficiency of data. It allows the receivable to be treated consistent with other government receivables subject to impairment guidance.

Appendix III

Actuarial Memorandum Checklist

General Considerations Throughout the Memorandum

- Documentation for the appointment of the appointed actuary by the board of directors
- Review the *NAIC Health Annual Statement Instructions*
- Review all relevant individual state requirements
- Review relevant ASOPS, including, but not limited to:
 - ASOP No. 5, *Incurred Health and Disability Claims*
 - ASOP No. 11, *Financial Statement Treatment of Reinsurance Transactions Involving Life or Health Insurance*
 - ASOP No. 23, *Data Quality*
 - ASOP No. 28, *Statements of Actuarial Opinion Regarding Health Insurance Liabilities and Assets*
 - ASOP No. 41, *Actuarial Communications*
 - ASOP No. 42, *Health and Disability Actuarial Assets and Liabilities Other Than Liabilities for Incurred Claims*
 - ASOP No. 45, *The Use of Health Status Based Risk Adjustment Methodologies*
 - ASOP No. 56, *Modeling*

- Documentation for each relevant item within the scope of the Actuarial Opinion
 - For each item, determine to provide sufficient detail to clearly explain to company management, the regulator, or other authority the findings, recommendations, and conclusions, as well as their significance, addressing all items that were calculated, even if the calculation resulted in a reserve or asset of zero

- Description of how the accuracy and completeness of data was ascertained, and how the data used in the analyses reconciles to the Annual Statement

- Discuss the analysis and calculation of the provision for adverse deviation (or margin) relative to the amount of risk

- Discuss Reliances
 - Prepare documentation for all areas of reliance
 - Who was relied upon and for which items (data, liabilities, assets)
 - How the reliance was used to draw conclusions
 - How the data, analysis, liability, reserve, or asset were determined to be reasonable

- Disclose any potential subsequent events that may have a material impact on estimated liabilities or assets

Items to Consider Addressing in the Narrative Component of the Memorandum

- Company overview
 - High-level description of characteristics of the company, its organization, markets and products
 - Summary of any changes in products, lines of business, company strategy, or regulatory environment
 - Use and materiality of reinsurance and other risk-sharing arrangements
- Claims unpaid liability
 - Describe the data used for the calculation, including how it was reviewed for reasonableness
 - Development of the estimate, including assumptions, and any adjustments made
 - Describe any changes in methodology from prior year
 - How the provision for adverse deviation (or margin) is determined and included (implicit or explicit)
 - Describe reasonableness checks performed on the claims unpaid liability
 - Consider creating a technical component
- Accrued medical incentive pool and bonus payments
 - Describe general contracting arrangements
 - Describe how accruals are calculated
 - Data, assumptions, and methods
 - Changes in methodology from previous year
 - Consider creating a technical component
- Unpaid claims adjustment expenses
 - Provide details of the calculation
 - Data, assumptions, and methods
 - Describe relationship of this estimate to the claims unpaid liability and how reasonableness was determined
 - Consider creating a technical component
- Aggregate health policy reserves
 - List amounts of component items and ensure the total matches amount recorded in the Annual Statement health policy reserve line item
 - For premium deficiency reserves (PDR) in particular:
 - Provide detailed information regarding the analysis and calculation of the PDR, including assumptions, even if the result is \$0
 - Description of any reasonableness checks used to verify assumptions and/or the overall results
 - Describe changes in methods and/or assumptions from prior year
 - Consider creating a technical component for PDR
 - For ACA risk adjustment accruals, address how the accrual was determined and the potential impact of material deviation from the estimated accrual—consider addressing this even if the actuary is estimating no liability for ACA risk adjustment

- Aggregate health claim reserves
 - List amounts of component items and ensure the total matches amount recorded in the Annual Statement line item
 - For each liability, include a description of the liability and how it is calculated
 - Consider creating technical components for relevant items
- Any other loss reserves, actuarial liabilities, or related items presented as liabilities in the Annual Statement
 - Such as amounts payable by the carrier under the provisions of risk-sharing programs
 - Indicate where the liabilities can be found in the Annual Statement
 - Consider creating a technical component for each additional liability item
- Any specified actuarial items presented as assets in the Annual Statement
 - Such as pharmacy rebates or estimated ACA risk adjustment receivables
 - Indicate where the assets can be found in the Annual Statement
 - Address how the accrual was determined and the potential impact of material deviation from the estimated amount
 - Consider creating a technical component for each additional asset item
- Hindsight testing
 - Describe testing performed, results, and how results were factored into any of the methods, assumptions, or analyses performed for:
 - Claims unpaid liability
 - Premium deficiency reserves
 - Medical loss ratio rebate liability
 - ACA risk adjustment transfers
 - Any other liabilities or assets

Considerations for Technical Component

- Data sources, reconciliations of data to the Annual Statement, full or summarized data used in calculations, as appropriate
- Demonstrations for how each liability or asset was calculated from the data, and level of supporting detail required
- Consider whether methods are clearly described, easy for a non-technical person to follow, and that headers, columns, and rows are clearly labeled
- Acronyms are defined
- Underlying data flows through calculations include sufficient explanations