

February 14, 2007



*National
Association of
Insurance
Commissioners*

Health Reserves Guidance

**HEALTH RESERVES
GUIDANCE MANUAL**



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**NATIONAL ASSOCIATION
OF INSURANCE COMMISSIONERS**

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ISBN 978-1-59917-130-2

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Printed in the United States of America

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SECTION I. 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. This guidance is intended for:

- Actuaries and other parties who estimate reserves for health coverages; and
- Examiners who review the statutory financial statements on behalf of regulatory agencies.

The principles stated in this guidance manual do not necessarily apply to financial statements prepared according to Generally Accepted Accounting Principles (GAAP) or to reserve estimates prepared for purposes other than statutory financial statements, such as rate filings.

These guidelines are intended to be a general statement of reserving principles and not specific, detailed instructions. The guidance manual is designed to encompass all health coverages including medical, dental, disability and long-term care.

The manual outlines the minimum guidance for reserving for health coverages and additional reserves may be appropriate based on actuarial principles and standards of practice. In addition, the standards in this guidance manual may be superseded by applicable state law or regulation. The National Association of Insurance Commissioners' (NAIC's) model laws, model regulations, and this guidance manual do not carry any jurisdiction.

The *Health Reserves Guidance Manual* addresses the following:

- Claim reserves;
- Contract reserves;
- Provider liabilities; and
- Premium deficiency reserves.

This guidance manual does not cover all reserves that may need to be established, and future versions will address additional categories of reserves.

A. Reference Sources

In preparing the manual, a number of existing standards on reserving for health risks were reviewed, including:

- Statements of Statutory Accounting Principles (SSAPs);
- Actuarial Standards of Practice (ASOPs);
- The NAIC Health Insurance Reserves Model Regulation;
- The NAIC *Financial Condition Examiners Handbook*;
- The American Academy of Actuaries (AAA) Health Practice Notes; and

- Accounting standards and statements of principles from the American Institute of Certified Public Accountants (AICPA) and the Financial Accounting Standards Board (FASB).

A bibliography of reference source materials is contained in the appendix to this guidance manual.

ASOPs are promulgated by the Actuarial Standards Board (ASB). Precept 4 of the Code of Conduct of the AAA provides that it is the professional responsibility of the actuary to observe applicable standards of practice in the jurisdiction in which the actuary renders professional services, and to keep current regarding changes in the standards.

Practice notes are developed by the AAA to provide information to actuaries on current actuarial practices in areas that are intended to supplement the available actuarial literature, especially where the areas of practice addressed are subject to emerging technology or recently adopted external requirements. The AAA is the public policy organization for actuaries practicing in all specialties within the United States. The AAA also develops and upholds actuarial standards of conduct, qualification and practice, and the Code of Professional Conduct for all actuaries practicing in the United States. Practice notes are not interpretations of standards, nor do they convey generally accepted actuarial practices in the same sense that standards of practice do. Actuaries are not in any way bound to follow practice notes.

Additional standards on reserving and establishing liabilities for health coverages are found in model laws and regulations promulgated by the NAIC. The NAIC is an association representing the state and U.S. territorial insurance regulatory agencies. The model insurance laws and regulations may be adopted in whole or in part by states. The NAIC also publishes audit guides and other advisory materials. The audit guide provides instructions and suggestions for carrying out various phases of examinations of insurance companies by state regulatory authorities.

Finally, various accounting procedures and standards issued by the FASB and the AICPA were reviewed. FASB is a private organization designated by the Securities and Exchange Commission to help establish accounting and reporting standards for publicly held companies. The AICPA is the national, professional organization for certified public accountants practicing in the United States. It establishes professional standards and publishes accounting and audit guidance materials.

The above sources are referenced later in the manual. Each cited source should be reviewed as there may be inconsistencies among them.

B. Financial Reporting Requirements

1. NAIC Annual Statements

The NAIC Annual Statement Blanks include a number of requirements for the reporting of reserve amounts by companies. These forms include annual statements for life and

health insurers, health maintenance organizations, fraternal insurers, and property and casualty insurers.

2. Actuarial Opinion and Memorandum

Historically, actuaries have been required to opine that annual statement reserves and related actuarial values meet the requirements of the state of domicile. This is still true for carriers, such as property and casualty carriers, that are not subject to the requirements described in Model 822, Actuarial Opinion and Memorandum Regulation (AOMR). However, in 1994, the AOMR was revised, and Sections 7B(6)(c) and 8B(6)(c) stated that the actuarial opinion should include the following statement by the actuary:

“In my opinion the reserves and related actuarial values ... meet the requirements of the Insurance Law and regulation of the state of [state of domicile] and are at least as great as the minimum aggregate amounts required by the state in which this statement is filed.”

In 2001, the AOMR was revised again, and Section 6B(6)(c) stated that the actuarial opinion should include the statement above by the actuary. Section 6F provides alternative wording, which allows the actuary to avoid certifying that, “... are at least as great as the minimum aggregate amounts required by the state in which this statement is filed.”

When opining on reserves, the actuary should refer to appropriate and current AOMR requirements.

Also, Section 3 of the AOMR (which is titled “Scope”) states that the AOMR is applicable to life insurance companies and fraternal benefit societies. Some states may not extend the AOMR requirements to health maintenance organizations or hospital, medical, and dental service or indemnity carriers; however, the Annual Statement Instructions for these carriers provides for another, essentially similar, actuarial opinion.

C. Definitions

A document titled “Glossary of Actuarial Terms” was developed by the Editorial Advisory Committee of the ASB for use in the ASOPs and the Actuarial Compliance Guidelines of the AAA. That glossary may be referenced for definitions of many key terms used in this guidance manual.

SECTION II. GENERAL CONSIDERATIONS

This section addresses issues that are shared by all types of reserves and includes the following:

- A. Multiple Years of Data
- B. Reconciliation
- C. Data Quality and Documentation
- D. Follow-up Studies
- E. Reserve Method
- F. Conservatism
- G. Relationship to Risk-Based Capital Requirements

A. Multiple Years of Data

Multiple years of data are required to reasonably estimate the impact of seasonal effects. Changes in the levels of benefits and/or plan provisions, as well as trend, can mask the impact of these effects. Therefore, seasonal effects are usually considered only for lines of business that have been in force for several years and where the structure of benefits has not changed significantly.

B. Reconciliation

All claim data used to calculate reserves should be reconciled, to the extent possible, with paid claims reported by the carrier in its financial statement.

It should be noted here that the definition of “payment” reflected in the data should be the same as, or reconcilable to, the definition of “payment” incorporated in the financial statements. For example, in statutory financial statements, claims are usually represented as “paid” when a check or draft has been issued, rather than when it has been cashed; uncashed checks or drafts are reported as an offset to cash. If the reserving data represent claims as paid when a check is issued, then the claim reserve will be consistent with the paid claims in the financial system. However, if the reserving data represent claims as paid when they are adjudicated, it typically will be necessary to establish an additional claim reserve component representing adjudicated claims for which checks have not yet been issued.

C. Data Quality and Documentation

It is the actuary’s responsibility to review data for consistency and reasonableness. This issue is addressed by ASOP No. 23, “Data Quality.”

The following describes some of the standards in ASOP No. 23 that are pertinent to the quality and documentation of data used to establish reserves for health products:

1. The actuary should consider what data to use, based on the scope of the assignment and the intended use of the analysis [Section 3.2].
2. The actuary may rely on data supplied by others and should disclose such reliance [Section 3.3].
3. The actuary should, when practical, review the data for reasonableness and consistency. The nature and extent of the review should be based on the circumstances of the actuarial assignment [Section 3.5]. This standard does not recommend that an actuary audit data, determine whether the data is misleading, or develop additional computations to search for inconsistent data [Section 3.6].
4. The actuary may be aware that the data are incomplete, inaccurate, or not as appropriate as desired. In such cases, the actuary should consider whether the use of the data may produce material biases in the results, or whether the data cannot be used to satisfy the purpose of the study. Because data that are completely accurate, appropriate, and comprehensive are frequently not available, the actuary should apply professional judgment in its use [Section 3.7].
5. If it is impossible or impractical to perform a sufficient review of the data, the actuary should disclose that the data has not been sufficiently reviewed, and any resulting limitation in the use of the actuarial work product [Sections 3.7 and 4.1].
6. An actuary should maintain, for a reasonable period, adequate documentation to support the use of specific data underlying the actuarial work product. The time period for maintaining documentation will depend on considerations, such as the purpose of the analysis, the needs of the client, and any applicable regulatory requirements [Section 3.8].

Documentation should be prepared by the valuation actuary regarding the level of review performed on the underlying data. For the establishment of claim reserves, this may involve a review of paid claims for reasonableness and consistency with a check register or general ledger.

The actuary should also state reliance on others to perform such reconciliation, particularly in cases involving outside vendors.

Along with reconciliation, a statement should be made regarding the method used to estimate the claim reserves by line if different. For example, medical claim reserves can be established using the development method, while long-term care reserves can be established by tabular or loss ratio method.

D. Follow-up Studies

ASOP No. 5, “Incurred Health and Disability Claims,” specifically addresses follow-up studies for claim reserves in Section 3.6. Follow-up studies are performed to determine the accuracy of previous reserve estimates. A comparison is made between the reserve calculated as of a given valuation date, and the sum of:

- Obligations incurred prior to the valuation date but paid after the valuation date; and
- An estimate of any residual unpaid obligations, remaining at the end of the period for which actual payment amounts are known.

The longer the period for which actual payments made after the valuation date are known, the less material will be the estimate of residual unpaid obligations, and the more reliable will be the follow-up study.

When data are collected to perform a follow-up study, all the general considerations about data quality are applicable. In particular, care must be taken to ensure that the payment data include all of the types of obligations represented in the original reserve, and no other obligations.

If a follow-up study shows that prior reserve estimates were reasonably accurate, then some comfort can be taken that the reserving data and reserving methodologies continue to be reasonable. If follow-up studies indicate that historical reserve methods have produced inadequate reserves in an excessive proportion of the instances studied, then the reserving methodologies should be revised appropriately.

Follow-up studies are generally reported in Schedule H and Schedule O Supplement in the life and health statement blank, the Underwriting and Investment Exhibit in the health statement blank, and Schedule P and Schedule H in the P&C statement blank. A comparison is made of the paid claims subsequent to the valuation date plus the residual claim reserve. Follow-up studies should be performed for each category used in establishing reserves. Aggregate analysis could mask emerging patterns of surpluses or deficiencies by category that might impact overall reserves as the mix of business changes.

The studies should be performed, at a minimum, for each year-end. However, studies of the reserve held at the end of financial reporting periods (monthly or quarterly) would normally be expected. The results of the studies should be used to adjust current claim reserves. As the percentage of the prior reserve that has been paid increases, greater reliance should be placed on the study. Any changes in circumstances should be taken into account when using the results of the studies.

E. Reserve Method

In addition to reviewing each type of reserve, the actuary should consider the appropriate type of reserve method. Often, actuaries may choose to combine various methods. The actuary should take into consideration that the data used in calculating the reserve may differ depending on the method used for the reserve valuation.

F. Conservatism

1. General

Conservatism can be explicit or implicit depending on the method used. “Explicit conservatism” means that a preliminary reserve is determined using assumptions that represent expected experience; then, a separate provision for adverse deviations from expected (the “load” or “margin”) is added to provide conservatism. “Implicit conservatism” means that the reserve is determined using assumptions that are more conservative than what is actually expected. In some cases, reserves may be determined with some implicit conservatism, and then increased by an explicit load or margin to provide sufficient overall conservatism.

Tabular reserve methods may incorporate conservatism in the assumptions made in the calculation of the tabular reserve. In some cases, statutory reserve requirements have established standards for assumptions of interest rates, mortality, morbidity and policy lapses. Where statutory standards apply, no additional margin would normally be added to the reserve. However, the tabular reserves should be tested to determine if the statutory reserves are adequate, or if conservatism should be added. Section 4A(5) was added to the Health Insurance Reserves Model Regulation in 2000 to address this issue: “The total contract reserve established shall incorporate provisions for moderately adverse deviations.”

With respect to any reserve method, some support should be provided for the adequacy of the explicit margin (even when that level is zero, i.e., when all provision for conservatism is implicit). The best support will be an analysis of historical data indicating how frequently the underlying method produces inadequate reserves, and the amount of the shortfall when inadequacy occurs. Note that historical studies are applicable only to the degree that historical circumstances apply; changes in circumstances will require an adjustment of the explicit margin, usually on a very subjective basis. Also, in performing a historical study, the degree of conservatism that was intentionally introduced into the historical reserves must be taken into account.

The level of conservatism needed will typically vary by, among other factors, the size of the block of business and the type of coverage. Small blocks of business are typically less credible than larger blocks, and therefore require more conservatism in reserve estimation; coverages (or subsets of claims within coverages) that involve low-frequency claims also are typically less credible than high-frequency coverages. Note, however, that reserve adequacy, ultimately, is to be judged in the aggregate for a reporting entity. For example, a high degree of conservatism might be appropriate for small-group hospital claims on a stand-alone basis; when a reporting entity combines its reserves for hospital and physician claims, and small and large groups, the necessary degree of conservatism is likely to be substantially less than the sum of the margins developed on a stand-alone basis.

Several factors in the process of determining liabilities would impact the level of conservatism. As the process more precisely adjusts for large claims and for increases and decreases in inventory, the amount of additional margin needed would be decreased. Other factors that impact the margin level are: the potential variance in the trend in claim costs at the valuation date, and the rate of growth in the line of business.

The level of conservatism needed will also vary according to the sophistication of the reserving process. Less margin should be needed to the extent that the process explicitly and accurately reflects such items as atypically large claims; changes in the level of claim inventory or “backlog” (claims received but not yet processed); trend in claim costs; seasonality of claim costs; changes in provider reimbursement arrangements (e.g., switches between capitation and fee-for-service payments); and changes in the demographic characteristics of the covered lives (age/sex mix, etc.). This list is not exhaustive, and other techniques may also reduce the need for conservatism in the reserve. However, unless such techniques have been in use for a significant period of time, the acceptable reduction in conservatism will be largely a matter of judgment.

2. Sources

Requirements addressing conservatism may be found in the following sources:

- Health Insurance Reserves Model Regulation;
- NAIC Models;
- NAIC *Accounting Practices and Procedures Manual*;
- NAIC Annual Statement Instructions; and
- ASOPs.

There are a number of requirements, concerning conservatism, contained in the above sources. For health insurance sold by property and casualty carriers, particular attention is needed to the exact wording of the reference materials, to determine whether or not they apply. In addition, similar reference materials for property and casualty insurance should be reviewed, to determine whether they apply to health insurance. ASOPs addressing property and casualty insurance may also apply in certain situations.

G. Relationship to Risk-Based Capital Requirements

Risk-based capital (RBC) requirements assume that adequate liabilities of all kinds have been established—i.e., that statutory net worth (total adjusted capital, in risk-based capital terms) has been fairly stated. For many health coverages, the RBC calculation relies on incurred claims (used to develop the earned premium times loss ratio values used) as reported in the annual statement. As such, an accurate assessment of claim reserves, by type of coverage (i.e., not just in the aggregate), is also important.

SECTION III. CLAIM RESERVES

A. General Definition and Applicable Lines of Business

A *claim reserve* is a measurement of a reporting entity's contractual obligation to pay benefits, as of a specified date (the "valuation date"). For this purpose, "benefits" include those covered by a capitation arrangement with a medical provider; therefore, claim reserves include the amount of any capitation payments that are due as of the valuation date, but have not been paid as of that date.

The NAIC Life and Health Annual Statement and SSAP No. 54 and No. 55 differentiate between claims that have accrued costs (claim liabilities) and claims that have been incurred but for which costs will be accrued in the future (claim reserves). The discussion of claim reserves in this guidance manual uses the broader definition of claim reserves to include both the accrued and unaccrued portions.

Based on that broader definition, a claim reserve is needed on virtually every line of health business.

B. Relationship to Other Reserves

The claim reserve is in addition to deficiency and contract reserves, rate stabilization reserves, retroactive premium liabilities, provider liabilities, and other reserves not held to specifically make future payments for medical benefits.

According to the Health Insurance Reserves Model Regulation, the methods and procedures for claim reserves and contract reserves should be consistent.

C. When a Reserve Should Be Established

A claim reserve should be established whenever a claim has been incurred, i.e., a contractual obligation for benefits has been created, but complete payment of the claim has not been fully settled as of the valuation date. The date, as of which the obligation is created and the claim becomes a liability of the reporting entity, is termed the *incurral date*. Incurral date, as defined in the Glossary of Actuarial Terms developed by the Editorial Advisory Committee of the ASB, is the date as of which a claim becomes a liability of a plan or insurer.¹ There are a number of issues associated with the definition of the incurred date, many of which are specific to a given contract type.

¹ This definition is intended to be broad enough to encompass a variety of different methods or procedures to determine incurral date for administrative purposes.

1. Medical Insurance Contracts

The true incurral date of a claim must be determined by reference to the underlying contract, which establishes the reporting entity's legal liability. However, in claim reporting systems, claim data are often assigned to "incurral date" on a basis that varies somewhat from the contractual definition, for ease of administration. Some common incurral date assignment methods are as follows:

(a) *First Dollar Medical Insurance*

Most frequently, first dollar medical insurance uses the date of service, or in the event of a hospital admission, the date of admission, as the incurred date. Two notable exceptions to that rule occasionally occur. In some cases, claims with a number of service dates are processed as one large claim, and the date of incurral is most frequently the first date of service in the grouping of services. The second exception is that occasionally carriers will use a date of discharge as opposed to date of admission for coding the incurred date on a hospital admission. In this event, it is necessary for them to establish an additional adjustment to their reserve to reflect claims for individuals that are currently hospitalized.

(b) *Medical Stop-Loss Insurance*

This is an area where current practice varies significantly. For some stop-loss contracts, liability attaches at the point of claim payment, while other stop-loss contracts are on an incurred basis.

(c) *Reserves Arising from an Extension of Benefit Provision*

Typically, medical insurance contracts provide that under certain circumstances, benefits may be extended past the time at which an individual's coverage, or an entire group policy, would otherwise terminate. Usually, extension of benefits is predicated on the individual being "disabled," according to some contractual definition of disability (which may require only hospital confinement, or may include other criteria not involving hospital confinement). In general, a liability is incurred at the moment that an individual becomes disabled, as defined in the extension of benefits provision. The length of the extension will vary from policy to policy and state to state; many states have established a statutory or regulatory minimum length of extension. Note that the statutory provisions applicable to traditional life and health or property-casualty insurers may not apply to managed care organizations such as health maintenance organizations; the latter may be subject to different requirements, or to no requirements at all. Another consideration is the effect of the federal Health Insurance Portability and Accountability Act of 1996 (HIPAA), as amended, and similar state statutes. These statutes have limited the extent to which pre-existing conditions may be excluded from coverage, thereby creating situations where medical services may be covered by both a former carrier, under an extension of benefits provision, and

the succeeding carrier. It is important to determine which carrier's coverage is primary in such situations, in order to evaluate the impact of these statutes on the reserve for extended benefits.

The reserve is typically determined by applying a factor to some dollar-valued base. The factor may be derived from a study of the historical volume of payments made under extended benefits provisions for contracts that have terminated; however, the historical volume may depend on whether a terminated policy was replaced with other coverage, and on the degree of diligence with which the new carrier or administrator identified eligible claims for submission to the previous carrier. Therefore, the factor may also be based on disability studies, which attempt to identify the volume of historical claims that would have qualified for extension of benefits had the contract been terminated. In either case, an historical reserve as of some valuation date would be determined, and would be compared to some base to produce a factor. Appropriate bases include, but are not limited to: the other claim reserves as of that historical valuation date, and the volume of claims paid during some period immediately preceding the valuation date. The factor is then applied to the comparable base amount determined as of the current valuation date.

The determination of the reserve amount should assume that all policies were terminated as of the close of business on the valuation date. There should be no reduction for the probability of persistence of the policies. However, it is appropriate, although not mandatory, to reflect the probability that eligible claims will actually be submitted, as discussed above.

It is necessary to determine whether the "incurral date" assigned to claims for reserving purposes is identical with the contractually determined incurral date. To the extent that there is a difference, the result will be an understatement or overstatement of the reserve.

2. Disability Income Insurance Contracts

Liabilities are generally assigned an incurred date as of the date of disability. Alternatively, a carrier using lag based liability establishment for short-term disability may use the date payment streams begin, as opposed to the date of disability, and then hold a separate reserve for claims during the elimination period. There are a number of other instances when the proper incurred date is not as apparent or may not be uniformly applied including:

(a) *Takeover of Disabled Lives (Block Buyout)*

This situation arises when a group has been self-insured and wishes to move their claims and associated liability to an insured basis. When this occurs, the incurred date is the original date of disability. For purposes of determining interest rates, however, the date liability is assumed should be utilized.

When the transfer of liability occurs between two insurers or reinsurers, however, interest rates for the original dates of disability should be utilized.

(b) *Survivor Benefits*

When benefits are paid to a survivor of a disabled individual, the date of incurral should be the date of disability of the decedent.

(c) *Reopened Claims*

If a claim is closed and then reopened under a continuous disability provision, the incurral date should be the original date of disability and not the date of requalification.

3. Long-Term Care Insurance Contracts

The date of qualification for coverage should generally be used as the date of incurral for tabular long-term care liabilities. There are a limited number of insurance companies that use a completion factor approach for developing claim reserves for reimbursement type long-term care benefits. In those cases, the date of service or first date on a bill is often utilized, and some additional reserve must be held to reflect the unaccrued claim reserve.

4. Reserves for Loss Adjustment Expenses

Reserves for loss adjustment expenses (the administrative expense associated with adjudicating unpaid claims) should be established based on the level of claim reserves for all contract types. This assumes that the liability for adjudicating the claim is incurred at the same time the claim is incurred. Loss adjustment expense reserves are generally held as a percentage of the unpaid claim reserve. The percentage should be the carrier's own expense of processing claims, typically expressed as a percentage of claim dollars paid.

Interpretation INT 02-21 in Appendix B of the *Accounting Practices and Procedures Manual* states that the liability for unpaid loss adjustment expenses should be established regardless of any payments made to third-party administrators, management companies or other entities. This includes any loss adjustment expenses on non-capitated payments under managed contracts, but excludes any capitated payments under those contracts.

D. Calculation

A number of methods are employed to develop claim reserves. Companies frequently use a combination of these methods. Separate approaches may need to be applied for incurred but not reported (IBNR) and waiver of premium claims. The methods in general use include, but are not limited to:

1. Development Methods

Development methods utilize various analyses of the historical claim payment pattern of the line of business. These analyses are typically based on claim “triangles” that categorize claims according to both the period in which they were incurred and the period in which they were paid, adjudicated or reported. For short-duration claims, such as medical, the period used is usually a calendar month. Such claim triangles are studied to determine what proportion of the claims incurred during some period have been paid (or adjudicated or reported, as the case may be) within various time-spans after the beginning of the incurral period. For longer duration claims, such as disability, it may be by quarter or annually.

Development methods estimate incurred claim amounts for each time period, and claim payments made for claims incurred in that time period are subtracted, in order to develop the reserve estimate. For the most recent time periods, insufficient data may result in the development method producing unreliable incurred claim estimates. Another method should be used to estimate the incurred claims for these time periods, such as the loss ratio or exposure method.

The analysis used in a development method will vary from company to company and within a company, for various lines of business. Variations are seen in the length of time used to develop the completion factors, the method of developing the average completion factors (arithmetic means versus geometric for example), credibility assigned to the incurred claims estimates, and the method used to estimate incurred claims when the development method is deemed to produce unreliable estimates.

2. Tabular Methods

Tabular methods are used to develop claim reserves by estimating the present value of future benefits based upon a continuance table with an appropriate interest rate applied. Minimum reserve standards in states may dictate which tables and interest rates may be used for particular lines of business. Internally developed tables or multiples of published tables may also be used. Tabular methods, as defined above, can only be used to determine reserves for reported claims; therefore, other methods must be used to develop claim reserves for incurred but not reported claims. Tabular methods are most commonly used for disability income and long-term care contracts.

3. Exposure Methods

Exposure methods estimate incurred claims by analyzing the historical claims rate of a line of business against a measure of the company's exposure to liability for that line. An example of an exposure for a health maintenance organization would be covered members. The estimate of the claim rate is multiplied by the exposure for the appropriate time period, and paid claims are then deducted to develop the reserve estimate. Exposure methods are frequently used for lines of business where the volume of claims is too low for development methods to be applied, or when fluctuations in claim payment patterns

make a development method unreliable. Exposure methods are also frequently used to modify incurred claims estimates made using a development method for the most recent durations (such as estimating the most recent month of experience for a first dollar medical coverage).

4. Loss Ratio Methods

Loss ratio methods are a special case of exposure methods. They develop an estimate of incurred claims by applying an estimated loss ratio (incurred claims over earned premiums) to earned premiums, and then subtracting incurred and paid claims to develop the claim reserve. That estimated loss ratio will generally be developed based on the company's experience of similar lines of business, the assumptions used in pricing the coverage, or the experience of other companies with similar lines of business. The loss ratio method is used when insufficient data is available to use another method; particularly in the early period of a new line of business, as a reasonability test of other methods, or to modify incurred claims estimates made using a development method for the most recent durations (such as estimating the most recent month of experience for a first dollar medical coverage).

5. Case Reserve (or Direct Enumeration) Methods

Case reserve methods develop claim reserves by estimating the ultimate claim amount of a reported claim and subtracting any amounts already paid against that claim. The ultimate claim amount may be estimated based on the historical experience of the company with similar claims, an estimate developed by a claim examiner based upon the specifics of the claim, or by determination of the actual claim amount.

Case reserve (or direct enumeration) methods are practical only for application to a small volume of reported claims. Thus, they are typically used only for small blocks of business or for subsets of claims within a larger block (e.g., pre-authorized inpatient claims). When the methods are applied to a subset of claims, care must be taken that the estimation of the remaining claim reserves does not double-count or under-count these claims. Another significant issue is the completeness of the reported claim listing. The undercounting of reported claims will result in the claims reserves being too low, while not removing denied claims from the estimate will overstate reserves. When accurate and complete reported claim listing, are available, and reasonable estimates of the ultimate liability for a given claim can be made, these methods will provide an appropriate claim reserve estimate. These methods can only be used to determine reserves for reported claims; therefore, other methods must be used to develop claim reserves for incurred but not reported claims.

Under most circumstances, direct enumeration is the only acceptable method for determining the reserve for capitation payments that are due but unpaid at the valuation date. The reporting entity should be able to precisely enumerate such amounts, provider by provider.

Changes in claims backlog can have a significant impact on the reserves for lines of business with a high volume of claims, such as group medical. When calculating claim reserves using historical data, it is important to be aware of, and adjust for, changes in claim backlogs. Similarly, high dollar claims can also have a significant effect on reserves. The actuary needs to adjust historical data for these, as well.

E. Contract Groupings

Frequently, lines of business with similar payment patterns may be combined to develop the reserves in order to increase the credibility of the data. These lines may have different plan provisions and various benefit structures. Additional conservatism might be needed in the liability estimate to reflect the greater variance in incurred claims on this grouping of contracts. The manner in which an entity manages its various types of health coverage may vary from the statutory reporting requirements, which also vary by the type of statement required. Common types of groupings for management purposes in a well diversified company could include product type, benefit type and group size.

For medical insurance products, product groupings may include, but are not limited to:

- Comprehensive Medical;
- Medicare supplement (including Medicare Select);
- Medicare Risk (Medicare Advantage);
- Medicare Part D;
- Medicaid (and similar state-sponsored medical assistance programs);
- Dental; and
- High-deductible medical reinsurance premiums, including aggregate coverages.

For disability income or long-term care insurance, groupings may include, but are not limited to:

- Policy series;
- Elimination period;
- Benefit period; and
- Duration.

Group sizes may include, but are not limited to:

- Individual;
- Small group;
- Large group; and
- Mega group.

The exact dividing point by group size will differ from company to company and sometimes by state-based on state small group insurance rating laws. The dividing line between large and mega groups may be determined by the level at which the company considers a group fully credible, and rates groups using only the actual experience of the group. In some cases, mega groups are issued custom designed products, rather than standard policy products. For fully insured mega groups where each group is issued their own custom product, it is allowable to group all of the experience together for deficiency reserve calculations.

F. Assumptions

Assumptions that should be included in claim reserves calculations include, but are not limited to: seasonality, experience blending with tabular reserves, use of disability cause for tabular reserves, other disability income benefit provisions, disability income offsets and cost-of-living adjustments.

1. Seasonal Effects

Some types of coverage experience seasonal variations in claim costs. Multiple years of data are required to reasonably estimate the impact of seasonal effects, and changes in the levels of benefits, plan provisions, and/or enrollment, as well as trend, can mask the impact of these effects. Therefore, seasonal effects are usually considered only for lines of business which have been in force for several years, and where the structure of benefits has not changed significantly.

2. Blending of Carrier Experience for Tabular Reserves

For tabular reserves, it is often desirable to blend carrier experience with industry tables in order to reflect an appropriate level of carrier experience credibility at early claim durations.

Carriers modify the valuation tables for their own experience, to the extent they have credible experience, and to the extent they are permitted to under the Health Insurance Reserves Model Regulation. For example, for disability insurance, some carriers make no modifications to the claim continuation rates in the valuation table, some modify the first two years, and few modify the first five years (for group LTD claims). Carriers should add provision for adverse deviation (PAD) to their own experience when performing such modifications.

Carriers can also more accurately reflect differing policy distinctions, such as the own occupation/any occupation test change based on their own experience for long-term disability if they are allowed to use their own experience. The prescribed tables were generally based on a two-year own occupation period. This is not as standard as it once was. Carriers who are able to adjust, and do adjust the tables for their own experience are recognizing the effect of their own company's claims practices, which has the greatest effect at early durations, and could vary widely from company to company.

To the extent permitted or required under the Health Insurance Reserves Model Regulation, published tables may be modified to reflect the circumstances of the products being valued.

The ultimate test for the appropriateness of the modifications of the table is reserve adequacy testing. The actuary has the requirement to ensure that reserves held by the carrier are adequate in the aggregate, based on a gross premium valuation, and to hold reserves in excess of the valuation table's results if simple application of the valuation table leads to inadequate results.

3. Use of Cause of Disability for Tabular Reserves

(a) *Cause of Disability*

Many companies establish cause-specific termination rates for Acquired Immunodeficiency Syndrome (AIDS) and maternity disability claims. Separate assumptions were established for AIDS claims because: (1) AIDS claims were not prevalent when the standard industry tables were constructed; and (2) the pattern of AIDS claim terminations were significantly different than other claims due to high mortality rates. Recently, there has been a significant reduction in AIDS mortality so that overall AIDS termination rates are closer to those of other types of disability claims.

Some companies also have separate assumptions for mental/nervous claims. A few go into even further detail in setting termination assumptions by cause (musculoskeletal, circulatory, etc.). Termination rates varying by cause of claim are usually only made in the early claim durations when an insurer is using its own experience.

Claim reserves utilizing termination rates that vary by cause of claim are generally more responsive to changes in the mix of claims. They are, therefore, less likely to result in redundancies or inadequacies due solely to changes in the mix of claims. However, if an adjustment to tabular rates is made to reflect cause of disability, it is important for the actuary to also make adjustments to the tabular rates for all other disabilities to reflect the differing characteristics of that remaining subgroup.

It remains the responsibility of the actuary, however, to ensure that the reserve is appropriate and adequate to provide for future liabilities.

(b) *Occupational Provisions for Continued Disability*

Termination rates vary significantly with the definition of disability. There are lower termination rates and greater claim durations associated with longer own occupation periods. However, companies generally do not adjust statutory minimum claim reserves to recognize the higher costs associated with longer own occupation periods in the definition of disability.

With regard to residual benefits, Health Practice Note “Statutory Reserves for Individual Disability Income Insurance (March 2006)” states that, “theoretically a different continuance table and approach from that used for base (totally disabled) claims could be appropriate (for residual claims).” However, it is usually difficult to accumulate sufficient data to create a new table and methodology. Pro-rata tabular reserves for claims receiving residual benefits are often used. One common approach is to multiply the base claim reserve by the ratio of the current benefit to the maximum (or basic) benefit. A fixed ratio of (e.g., 60%–80%), regardless of the current residual benefit, may be used. Although this approach may not be theoretically precise, the error may be small and covered by the overall margin in the reserve.

Statutory reserves determined without reflecting the additional costs of longer own occupation periods and residual benefits may not adequately reflect the true underlying costs. By overlooking these additional costs, the adequacy of the claim reserves could be reduced.

(c) *Disability Income Offsets*

The Health Insurance Reserves Model Regulation prescribes the morbidity tables to be used in setting group disability reserves but do not explicitly address the issue of Social Security or other offsets.

In establishing claim reserves, companies should reduce the monthly benefit for currently payable offsets, whether their reserves are based on their own experience or on the prescribed industry morbidity table. Companies may also consider reducing the offset by assigning a probability for the potential of losing current offsets or modifying termination rates on claims where Social Security benefits are currently being paid. Most actuaries use assumptions based on their own company’s data.

With regard to future potential offsets, the most common offsets are the following:

- Social Security (Primary and Family);
- Public employee and railroad retirement benefits;
- Canadian and Quebec plans (primary and family);
- Workers' compensation benefits;
- State disability benefits; and
- Short-term disability benefits.

For reserving purposes, the key contingencies are:

- The probability of obtaining an offset;
- The probability of losing a current offset;
- The estimated amount of the offset; and
- The estimated duration of payment for the offset.

Group disability claim reserves are significantly impacted by the adjustments made and assumptions set, with regard to Social Security and other offsets. Reserves established without adjusting for offsets are unduly conservative. By setting proper assumptions for benefit offsets, the appropriateness of the calculated reserve is greatly enhanced. The approval process for many offsets from government programs is subject to the political process where approval requirements can change quite quickly. It is, therefore, important that the actuary consider the future changes, rather than to rely solely on past experience. In all cases, however, it is incumbent upon the actuary to ensure that the calculated claim reserves net of offsets are adequate and reasonable and meet the minimum regulatory standards.

(d) *Cost-of-Living Adjustments*

Claim reserves on policies with cost-of-living (COL) riders usually take into account past and future COL increases. However, there is no statutory minimum standard to define the inflation assumption. A reasonable approach is to use an inflation assumption equal to the discount rate less an estimate of a real interest rate. Other actuaries may use their best long-term estimate of future inflation.

Once the inflation assumption is chosen, many actuaries project the exact annual increases in benefits due to the COL rider, given the underlying continuance table, and calculate exact claim reserves. Such calculations typically recognize specific COL rider features, such as lifetime caps, maximum annual increases and simple or compound indexing. If the resources are not available to do exact calculations of the COL reserves, the actuary may choose to rely on overall adjustment factors determined from some modeling. In using such adjustments, the actuary may find it prudent to bear in mind that the ratio of the COL reserve to the base claim reserve usually increases with claim duration.

Company practices range from reflecting only prior but not future increases in benefits due to the COL rider, to precise calculations of future benefit payments reflecting all features of the specific rider as enumerated above (lifetime caps, maximum and minimum increases, simple or compound indexing). In addition, some companies decrease the termination rates for claims with COL to reflect the expected lower incentive to return to work.

The existence of cost-of-living on a claim can significantly increase the ultimate payments on that claim. The actuary should be careful to ensure that the method chosen to reserve for COL benefits provides for all of the associated costs. Failure to do so could compromise the adequacy of the reserves in question.

4. Other Adjustments to Non-DI Tabular Reserves

Other types of health insurance may have similar reasons that the tabular reserve factors may need to be adjusted to reflect both a carrier's actual past experience and possible differences in future experience, due to contractual provisions. For example, tabular reserves for LTC would need to be adjusted if the benefit triggers use activities of daily living (ADLs) which are significantly different from those used in the underlying studies that are the basis for tabular reserves; e.g., triggers that include instrumental activities of daily living (IADLs).

Adjustments to the tabular reserves for inflation protection provisions in LTC coverage, or similar specified increases in contractual benefits per unit of coverage, should be included if material.

G. Conservatism

In addition to the general considerations pertaining to conservatism addressed in Section F of Section II. General Considerations, conservatism pertaining specifically to claim reserves is discussed below.

Claim reserves determined by the completion factor method can use completion factors with varying degrees of conservatism. Normally, completion factors are selected near the average factors. The last few months of incurred claims are normally calculated by alternative methods, and an explicit margin might be added. To the extent all assumptions are made at the expected level, an overall load for conservatism should then be added to this average reserve.

Claim reserves determined using exposure methods may incorporate implicit conservatism, if the loss ratio, per-member cost or other exposure-based factor is selected to be higher than the expected level. Alternatively, an expected-level reserve may be developed, and an explicit margin added.

SECTION IV. CONTRACT RESERVES

A. General Definition

A contract reserve is a reserve set up when a portion of the premium collected in the early years is meant to help pay for higher claim costs arising in later years.

Contract reserves are in addition to claim and premium reserves.

B. Applicable Lines of Business and When a Reserve Should be Established

Contract reserves are required for any individual or group health insurance coverages for which the present value of future benefits exceeds the present value of future valuation net premiums. This will typically, but not always, be the case for level-premium contracts. The need for a contract reserve should be evaluated using annual benefit costs and valuation premiums; it is not necessary to establish a contract reserve if a portion of the monthly premiums charged in the part of a policy year is needed to offset benefit costs in another part of the same policy year.

In particular, contract reserves are commonly used for insurance policies of long duration where the premiums frequently do not match the expected changes in claims by age. For example, such coverages as individual disability income, long-term care, and medical policies have issue-age based rates. Medicare supplement insurance and additional or limited benefit insurance sometimes use issue-age rates. Most individual major medical policies currently sold have attained age rates.

Some individual major medical policies may prefund some of the cost increases due to the wear-off of underwriting and cumulative antiselection but still have attained age based rates. Some carriers establish contract reserves for such policies. This depends on how the carrier determines the value of future benefits and valuation net premiums.

The minimum reserve standards provide for a one- or two-year preliminary term method to be used in the calculation of contract reserves. This is meant to allow for the recovery of initial expenses and required increases in capital (RBC component) prior to the establishment of contract reserves. Where the premiums in the first years are more than sufficient to cover both claims and initial expenses, the prefunding of future claims may require an earlier starting point for contract reserves.

Coverage that has a rate guarantee may include an assumption that the claim costs will increase faster during the guarantee period than the premiums. In other cases, the rate guarantees provide for specified premium increases that are assumed to equal the anticipated increase in claim costs. In the first situation, the carrier may need to establish a contract reserve, without any provision for preliminary term methodology, for the period of the rate guarantee. In the second instance, where premiums are assumed to increase in line with claim costs, the actuary will need to review the need for deficiency reserves if the then current expected increase in claim costs is in excess of that assumed in the original pricing of the rate guarantee.

Contract reserves may need to be calculated on a group-by-group basis if the rate guarantees vary by group.

C. Relationship to Other Reserves

As mentioned above, contract reserves are in addition to claim and premium reserves. The methods and procedures for determining contract reserves should be consistent with those used to determine claim and premium reserves, so that appropriate provision is made for the aggregate liability. In particular, the definition of date of incurral should be the same for both claim reserves and contract reserves. According to the Health Insurance Reserves Model Regulation, the methods and procedures for claim reserves and contract reserves should be consistent.

Contract reserves will also impact the need for deficiency reserves. Deficiency reserves are addressed in another section of this guidance manual.

D. General Requirements for Reserve Calculation

The Health Insurance Reserves Model Regulation specifies minimum standards for the calculation of contract reserves. These requirements include the basis (i.e., assumptions) of the reserve calculation and the reserve method (i.e., calculation formula). The basis requirements include: morbidity, interest rates, mortality rates and termination rates.

For certain types of coverages (e.g., long-term care, Medicare supplement and major medical), the model regulation does not explicitly specify the morbidity basis. The selection of the morbidity basis and related issues are discussed in more detail below.

E. Time Period for Calculation

For policies with issue-age based rates, the time period used in the calculation is generally the potential lifetime of the policy.

For policies that prefund future claim increases due to rate guarantees (e.g., a group is given a guarantee that their rate for dental coverage will not be increased for a period of two or three years), the time period used in the calculation would be the rate guarantee period.

F. Assumptions

As mentioned above, the Health Insurance Reserves Model Regulation specifies many of the assumptions to be used in the calculation. Some of the issues not explicitly addressed in the model regulation are noted below.

1. Recognition of Inflationary Cost Increases in the Development and Updating of the Contract Reserve Factors

There are a number of approaches to recognizing inflation of future benefit costs. Reserve factors should always be developed recognizing any anticipated increase in benefit costs that results from the aging of the insured individuals. Additional cost increases that are projected to arise from inflation, general changes in utilization, etc., may also be incorporated in the initial development of reserve factors. If that is not done, or if the actual cost increases diverge significantly from the projected levels, it will be necessary to modify the reserve factors. Methods for modifying reserve factors include:

- (a) Each year, multiply the contract reserve by a factor that reflects the cumulative inflationary cost increases since contract reserve factors were developed. Note that this method requires consistent historical and expected future increases in the net premiums and incurred claims for the coverage;
- (b) Each year, calculate a new set of contract reserve factors that reflect the inflationary cost increase and add this to the prior contract reserve factors; and/or
- (c) Develop a completely new set of reserve factors based on new projections of future benefit costs.

2. Morbidity Basis for Business that does not have a Specifically Required Morbidity Table

Section 4B(1) of the Health Insurance Reserves Model Regulation states that, “(c)contracts for which tabular morbidity standards are not specified in Appendix A shall be valued using tables established for reserve purposes by a qualified actuary and acceptable to the commissioner. The morbidity tables shall contain a pattern of incurred claims cost that reflects the underlying morbidity and shall not be constructed for the primary purpose of minimizing reserves.”

For coverage that does not have a specified morbidity table, the valuation actuary must choose a morbidity basis. The valuation actuary may use the pricing assumptions, perhaps adding a margin for conservatism, because these typically reflect the “expected level” of the morbidity. In any case, the actuary should be satisfied that the selected morbidity basis, in combination with the other reserving assumptions, produces a reserve that includes adequate provision for reasonable adverse deviations from anticipated experience.

3. Future Morbidity Improvement

Section 4B(1)(a)(i) of the Health Insurance Reserves Model Regulation states that, “... the actuary shall use assumptions that represent the best estimate of anticipated future experience, but shall not incorporate any expectation of future morbidity improvement.”

SECTION V. PROVIDER LIABILITIES

A. General Definition

For purposes of calculating reserves according to this guidance manual, provider liabilities represent the reporting entity's obligation to make future payments to providers under some form of risk-sharing arrangement. For this purpose, a "risk-sharing arrangement" is an arrangement between the reporting entity and a provider that calls for payments to the provider, where:

- The payment is not related to a specific service performed by that provider; and
- The payment is contingent upon certain financial or operational goals being achieved.

B. Application to Lines of Business

This section applies to any type of coverage where providers assume risk, including medical, vision, dental, drugs, chiropractic and mental health. Currently, this section only discusses medical insurance.

C. Relationship to Other Reserves and Health Care Receivables

The provider liabilities address only those arrangements under which payments to providers are contingent upon the achievement of financial or operational goals. Various types of these arrangements are discussed below, in the section about the liability calculation. This liability does not include amounts for other payments to providers, such as capitations or fee-for-service payments, except to the extent that portions of such payments are subject to the previously mentioned contingencies. The manner in which these liabilities are established, may result in amounts due the company (i.e., health care receivables). The actuary may be involved in determining these amounts as well. The approaches and constraints in SSAP No. 84—*Certain Health Care Receivables and Receivables Under Government Insured Plans* will apply in these situations.

The provider liability also does not address additional liabilities that may arise if a capitated provider becomes insolvent. Additional fee-for-service payments that must be made because of provider insolvency should be reflected in the claim reserve. To the extent that provider insolvency, and the resulting substitution of fee-for-service payments for capitation payments, may cause premium rates to become inadequate, a premium deficiency reserve should be considered.

The provider liability should be considered a liability for medical benefit costs, and should not be included in a liability for general expenses. It may be classified with claim reserves for some purposes, although statutory reporting formats may present this reserve as a distinct item.

D. When a Provider Liability Should Be Established

A liability shall be established for all provider contracts in effect or not fully settled as of the valuation date. The provider contract will specify the period(s) covered by the risk-sharing arrangement; the financial experience or provider performance during that period(s) will determine the payment to be made to the provider. If a contract period has ended and there has not been a final settlement, any potential settlement with respect to provider liability should be included. If the valuation date occurs during a contract period, an appropriate liability should be determined that represents the time period from the beginning of the contract period through the valuation date.

E. Calculation

The provider liability should be the value of any risk-sharing payments accrued as of the valuation date, that have not been settled as of that date.

The provider liability can be calculated on a seriatim or on an aggregate basis. However, the aggregate reserve calculation should group contracts with similar types of provider liabilities. It is also possible to perform a periodic seriatim calculation and accrue an estimated amount per member on an interim basis. Whichever method is used, follow-up studies should be employed to test the adequacy of these estimates.

Provisions for adverse fluctuations should be included in provider liabilities. The method depends on the derivation of the liability. For example, increasing the incurred claim estimate can lower the estimate for provider payments under a risk-sharing contract.

For risk-sharing payments that are related to financial goals, the calculation of the risk-sharing settlement will usually involve an estimate of the claims incurred during the contract period, although settlements may instead be based on the amount of claims incurred during the period and paid before the end of some subsequent run-out period (e.g., six months following the end of the contract period). In some cases, where an estimate is required, the contract will specify standard reserve factors that will be used in the settlement; in such cases, those same factors should be used in calculating the provider liability. Usually, however, no standard factors are provided by the agreement; in those situations, and when the settlement is based on a run-out period, the calculation of the provider liability will require the estimation of incurred claims using one of the methodologies discussed in the Claim Reserves section of this manual. The estimate of incurred claims may include a provision for conservatism if no such provision is made elsewhere in the calculation. Note, however, that for this purpose, an estimate is conservative if it is *lower* than the expected level, because lower incurred claims may result in a higher risk-sharing payment. Any stop-loss provisions included in the risk-sharing arrangement should be considered in establishing the provider liability.

Often valuations will be completed during the provider contract year. Alternative methods to determining this interim liability (or final liability) should be considered if there is insufficient information for a calculation to be generated from emerging experience. Alternative methods include, but are not limited to: (1) using the pricing assumptions to estimate the expected provider payments; (2) a loss ratio methodology for contracts contingent on financial targets incentives; and (3) reserving all or part of the withhold payment based upon historical experience. In addressing the interaction of these two liabilities, the actuary should comply with applicable ASOPs promulgated by the ASB.

Typically, the calculation of the provider liability will require estimates or projections of financial experience or operational experience. Accordingly, the liability should include provision for a reasonable degree of adverse deviation from the projected or estimated values.

F. Types of Provider Liabilities

The types of provider agreements vary considerably, and new contract forms appear each year. Even contract types which have been used for many years are modified to fit new types of arrangements. While it is not possible to fully detail all possible arrangements, the following broad types of agreement provisions are found in contracts:

1. Payments Contingent on Financial Results

These are payments under provider contracts that share risk, based on a target cost per member or loss ratio. The risk-sharing target cost need not be related to direct services of the provider. For example, a target for primary care physicians could be based on hospital experience.

2. Stop-Loss

In some cases, risk-sharing arrangements contingent on financial goals will include stop-loss provisions that remove the effect of large claims from the settlement calculations, typically resulting in a larger payout. Such provisions should be reflected in the determination of the risk-sharing liability for those arrangements. Providers may also purchase actual stop-loss coverage from insurance companies and managed care organizations, separate from any risk-sharing arrangements. Such stop-loss coverage will reimburse the provider for claims in excess of some high deductible amount (e.g., \$150,000); in some cases, only a specified category of claims is covered. The reporting entity's liability for payments under such true stop-loss coverage should be included in the entity's claim reserves, rather than in the provider liability.

3. Payments Contingent on Operational Goals

Many provider contracts provide payments for the achievement of targets such as the number of hospital days, or the percentage of dependents of plan members who receive a standard set of inoculations. As experience emerges based on the attainment of the operational goals, an appropriate liability for the provider payment should be recognized.

4. Withholds

Often, risk-sharing arrangements involve the withholding of portions of capitations or fee-for-service claims that would otherwise be payable to providers. Such withholds may be forfeited by the provider if the goals contingent on financial or operational measures are not achieved. The calculation of the provider liability should make provision for the amount of such withholds that have been made as of the valuation date and that are anticipated to be returned to providers upon final settlement. Note that statutory financial reporting guidelines may direct that the liability for withholds should be reported as part of the claim reserve, rather than as part of the provider liability.

G. Liability for Expense of Risk-Sharing Payment Determination and Settlement

A liability should be established for the cost of calculating and distributing the ultimate accrued but unpaid provider payments. There will be a settlement expense even if there are no actual payments, because the reporting entity may need to explain to the providers the rationale for the lack of additional payments and/or return of withholds.

The expense of determining and settling provider risk-sharing payments is not part of a reporting entity's medical benefits cost. Therefore, the liability for such expenses is a general expense liability, and not part of the reporting entity's claim reserves. Therefore, the liability for such expenses should be separately documented.

This expense is included as part of loss adjustment expenses in the annual statements.

SECTION VI. PREMIUM DEFICIENCY RESERVES

A. General Definition

A premium deficiency reserve is a reserve that is established when future premiums and current reserves are not sufficient to cover future claim payments and expenses for the remainder of a contract period. Considerable judgment must be exercised in determining the “contract period” when circumstances exist that artificially shorten the contract period (such as the likelihood of lapsation) or extend it (such as regulatory limitations on rate increases). More detailed discussion appears below in the section titled “Time Period of Calculation.” A gross premium valuation or other method is needed to determine the amount of the premium deficiency.

In certain circumstances, SSAP No. 5 requires a liability similar to Premium Deficiency Reserves. For example, with Administrative Services Only (ASO) business, when the administrative fees are not sufficient to cover expenses for the remainder of the contract period, the liability should be calculated using the same procedures as outlined for premium deficiency reserves. This calculation would apply to the Administrative Services Contract (ASC) line of business as well as ASO business.

While the Health Insurance Reserves Model Regulation does not specifically address premium deficiency reserves (PDR), SSAP No. 54 does in paragraph 18. The historical basis for this addition is the requirement for such a reserve under Generally Accepted Accounting Principles (GAAP). Both SSAP No. 54 and GAAP permit contracts to be grouped for purposes of determining if a PDR is required. Minor wording differences are not intended to signify major differences in groupings. In those instances where a PDR is required for GAAP reporting, or could reasonably be expected to be held for companies that do not report on a GAAP basis, the company should determine if a PDR should also be held for statutory reporting. In addition, the NAIC believes that further guidance is needed, beyond simply adopting whatever groupings are used for GAAP; specifically, there should be defined lines of business for this purpose. To the extent each is credible, these lines of business are the minimum basis for grouping contracts for determining if a PDR is required for a line of business.

B. Applicable Lines of Business

A deficiency reserve may be needed on any of the following specified lines of business (if material). All health coverage is to be included in one of these specified lines of business by the company.

- Comprehensive Medical (to include other medical type coverage and Medicare supplement as well as any coverage where the benefits are substantially subject to inflationary cost trends; e.g., dental and vision);
- Long-Term Care Insurance;
- Income Protection (disability income) Insurance; and
- Limited Benefit Plans (e.g., hospital indemnity, critical illness and other coverage where the benefits are not significantly subject to inflationary cost trends).

Consistent with the requirements of the Health Insurance Reserves Model Regulation, any of these specified lines that is not material by itself should be combined for testing with the most similar other line.

C. Relationship to Other Reserves

The deficiency reserve is in addition to claim reserves and contract reserves. The deficiency reserve is also in addition to rate stabilization reserves, retroactive premium liabilities, provider reserves, provider withhold or bonus pools, and other reserves not held to specifically make future benefit payments.

D. When A Reserve Should be Established

Premium deficiency reserves are addressed in the following sources:

- | | | |
|----|--|---|
| 1) | NAIC Model 010 | Health Insurance Reserves Model Regulation |
| 2) | NAIC SSAP No. 54 | Individual and Group Accident and Health Contracts |
| 3) | ASOP No. 14 | When to Do Cash Flow Testing for Life and Health Insurance Companies |
| 4) | Health Care Organizations—
AICPA Audit and Accounting
Guide (May 1, 1999) Chapter 13 | Financial Accounting and Reporting by Providers of Prepaid Health Care Services |

The AICPA Audit and Accounting Guide is listed above; however, it presents GAAP standards, and is not authoritative for statutory reporting. The AICPA Guide presents a convenient summary of some of the key issues involved (e.g., when a liability should be recognized, what costs should be reflected in the calculation and how contracts should be grouped); the guidance given on each of those issues is not necessarily appropriate for statutory reserving purposes.

E. Calculation

The following describes the manner in which the reserve value for testing premium deficiency for each block would be calculated. Concurrent values of all blocks within a specified line are to be combined for purposes of financial reporting. In order to make more meaningful projections of experience, it may be appropriate to separate a defined line of business into smaller blocks. Hereafter in this section “reserve value for testing premium deficiency” means the result of internal calculations for a block and any reserve on the financial statements is the net positive amount from the calculations of all blocks within a specified line of business.

The reserve value for testing premium deficiency is the sum of:

- Present value of future paid claims through the end of the deficiency period;
- Present value of future expenses; and
- Present value of claim and contract reserves at the end of the deficiency period.

Less:

- Current claim reserve, including special large claims reserves;
- Current contract reserve;
- Present value of future earned premiums; and
- Current balance sheet accrual for future expenses.

A deficiency period is defined for any block where the internal calculations result in a positive result from the above test. If the values vary for different periods, the deficiency period is the period with the greatest value. Other blocks within the same specified line of business would be tested for the defined period as well. If no block within a specified line has a positive result for one or three year testing periods, in general, no further testing of this type needs to be done for that line of business. It may be necessary to test longer periods using a gross premium valuation to determine the adequacy of contract reserves (see Section IV).

The following items should be reflected in the present-value calculation:

- Claims. Claims included in the calculation should be those paid after the valuation date during the deficiency period.
- Expenses. Expenses included in the calculation should be those paid after the valuation date during the deficiency period. See the note under “Assumptions,” below, regarding which types of expenses should be included.
- Premiums. Premiums included in the calculation should be those received after the valuation date to the extent earned during the deficiency period.
- Investment Income. The calculation may reflect investment income that is appropriately attributable to the business and the time period for which the calculation is being performed.
- Other Investment Cash Flows. The investment of funds received should be reflected as a cash outflow in the calculation. Similarly, the funds received from the maturity (partial or total) or anticipated sale of investments, should be reflected as a cash inflow. Note that investments may, under the proper circumstances, be treated as transferred or “sold” to other blocks of business at statutory book value, when cash is needed to pay claims and expenses; however, this treatment is available only if such other blocks of business can reasonably be anticipated to produce sufficient cash flow to “pay” for the transferred assets at the appropriate points in time. To the extent that invested funds are needed to pay

claims and expenses, and transfers at book value cannot be supported, provision should be made in the calculation for some reasonable level of capital gains and losses resulting from the sale of assets, or for borrowing costs if funds are anticipated to be borrowed in preference to liquidating investments.

The question has been raised whether it is appropriate to include investment income in the analysis, given that the future income streams are also being discounted to the valuation date. It is appropriate, because the future profit or loss is partly dependent on the amount of future investment income, and the present value of that profit or loss must include a discount for the time value of money.

Premium deficiencies that are likely to occur only for a few months or only for part of a rating period usually need not be recognized, because premiums are anticipated to be sufficient over the entire year or rating period. Premium deficiency reserves are also not needed when contract reserves have already been set up to recognize the deficiency, such as for issue-age rated individual policies. Deficiency reserves should closely correspond to the anticipated risk to the insurer.

As an example, suppose the insurer has guaranteed rates to one large employer for three years, starting January 1 of year X. The insurer expects to make profits of \$5 million in year X, profits of \$1 million in year X+1, and losses of \$4 million in year X+2 (all amounts discounted to December 31, year X-1). The insurer does not need deficiency reserves on December 31, year X-1, because the premiums are sufficient over the contract and the employer is unlikely to lapse at the end of the first or second years. The insurer should hold about \$3 million of deficiency reserves on December 31, year X (adjusted for present value), and should hold about \$4 million (adjusted for present value) on December 31, year X+1.

As another example, suppose the insurer has similarly guaranteed rates, but expects to lose \$5 million in year X, lose \$1 million in year X+1, and make \$8 million in year X+2 (all amounts discounted to December 31, year X-1). The insurer needs deficiency reserves on December 31, year X-1, because the employer is likely to lapse at the end of year X+1. Another insurer could offer the employer coverage in year X+2 at a lower price, and still make a profit. The insurer should hold \$6 million of deficiency reserves on December 31, year X-1, about \$1 million on December 31, year X, and nothing on December 31, year X+1.

This reserve should be reviewed at least annually and adjusted as necessary. Valuations may be done monthly, quarterly, or any time frame that the actuary determines is reasonable. As of the date of each successive statutory financial statement, the premium deficiency reserve must be adjusted to reflect the losses that have been realized because the previous financial statement, and any new deficiencies that have arisen. With respect to previously existing deficiencies, the actuary may judge that a previously established amortization schedule continues to be appropriate, and adjust the reserve in accordance with that amortization schedule without re-evaluating the reserve from basic financial data. The use of the term “amortization” is intended to permit modification of a prior deficiency reserve amount for quarterly reporting rather than require recalculation of the reserve based on underlying data each time. However, a calculation based on underlying data should be performed at least annually.

F. Contract Grouping

Premium deficiency reserves should be determined for distinct groupings of policies. Generally, the groupings should reflect how premium rates are developed and applied. This will usually result in groupings by product type and case size. Other criteria that may be considered include, but are not limited to: marketing methods (e.g., direct marketing vs. agent/broker sales), geographical rating areas, and length of rate guarantee periods, to the extent that such criteria materially affect premium rates. Whichever criteria are used, each grouping should be large enough to be material, relative to the size of the reporting entity as a whole. In some cases, considerations of similarity and materiality may result in the entire health business being treated as a single grouping.

If there is more than one grouping within a specified line of business for a reporting entity, the actuary should review each contract grouping and perform a gross premium valuation on all groupings where the premium and reserves may not be sufficient to cover claims and expenses in the near future. The actuary should perform gross premium valuations on other groupings sufficient to demonstrate that in total for each specified line of business, the cumulative premiums and current reserves are sufficient to cover the cumulative claims and expenses through the end of the last period of deficiency on any grouping.

In the event that the total of the results for a specified line of business will not cover all the deficiencies of internally tested groupings within that line, the company shall hold the net amount as a premium deficiency reserve.

For medical insurance products, if the block is large enough, internal product groupings could be defined as:

- Comprehensive Medical;
- Medicare supplement (including Medicare Select);
- Medicare Risk (Medicare Advantage);
- Medicare Part D;
- Medicaid (and similar state-sponsored medical assistance programs);
- Dental; and
- High-deductible medical reinsurance premiums, including aggregate coverages.

Group sizes may include, but are not limited to:

- Individual;
- Small group;
- Large group;
- Mega group; and
- Any large group comprising 10% or more of the carrier's total enrollment.

A surplus originating from the life portion of a single contract could be used to offset deficiencies resulting from the health portion of the same contract, subject to restrictions identified in SSAP No. 54. Those restrictions include that the life and health were marketed, serviced and measured together.

The exact dividing point for contract groupings will vary from company to company, but should be internally consistent from valuation to valuation as much as possible, taking into account the growth or decline in size of each coverage grouping. Group size may be based on state small group insurance rating laws, so varying state laws will cause the size to vary from company to company. The dividing line between large and mega group may be determined by the level at which the company considers a group fully credible, and rates groups using only the actual experience of the group. In some cases, mega groups are issued custom designed products, rather than standard policy products. For fully insured mega groups where each group is issued their own custom product, it is allowable to group all of the experience together for deficiency reserve calculations.

G. Time Period of Calculation

The valuation date is the beginning of the time period over which to project financial losses from a block of insurance policies for determining a premium deficiency reserve. The ending of the time period is more difficult to determine, and requires a substantial amount of judgment in many cases.

SSAP No. 54—*Individual and Group Accident and Health Contracts*, states that deficiency reserves should be established for, “the remainder of a contract period.” The implicit assumption is that premiums will be increased at the beginning of the new contract period, and will be adequate to cover claims and expenses in the new period.

The Health Insurance Reserves Model Regulation states that a gross premium valuation should take into account, “all expected benefits unpaid ... and all unearned or expected premiums, adjusted for future premium increases reasonably expected to be put into effect.”

The apparent contradiction between these two requirements must be resolved using actuarial judgment. The actuary must consider realistic assumptions regarding lapsation, rate increases, and claims trend.

For example, in the case where a block of business has a premium deficiency, but is expected to be restored to profitability at the next renewal date, it is not reasonable to anticipate future profits on this block as an offset to concurrent deficiencies on other blocks. Demonstrated results from the reserve testing for premium deficiency on existing blocks within the same specified line of business are the only appropriate values to combine to determine the reported financial value. Only if a block of business is locked in with no possibility of moving to a competitor, should future profits (following reported or projected losses) be used as an offset.

As another example, there may be a block of business that renews annually, but for which the premiums are subject to regulatory restrictions. In that case, the “contract period” implicitly lasts until the business can be restored to profitability or lapses completely. This could be as long as the contracts are expected to last, subject to reasonable termination assumptions. For some groupings, losses could extend indefinitely and, thereby, could generate a perpetuity of deficiency reserves.

1. Individual/Small Group

- (a) Due to regulatory changes over the past few years, medical blocks of business can be generally guaranteed renewable. Specific small groups or individual policy forms within these blocks of business must be assumed to be renewable at the option of the policyholder since, in most cases, the carrier can only terminate the entire block of business.
- (b) If a carrier has clearly indicated that they plan to cancel a block of business (e.g., by notifying the state regulatory authority of their intent), then the time period for the block of business is projected up to the point where the block would most likely be terminated if that date is prior to the end of the contract period.

2. Large Group/Mega Group

Cancellation (either explicitly or by imposing a large rate increase) of groups in a loss position is technically an option, but may not always be a realistic option in practice. Any assumptions made about cancellation of groups must be justifiable, based on the reporting entity’s practices and historical experience.

H. Assumptions

1. Enrollment

The deficiency reserve should be calculated using reasonable enrollment assumptions. Note that enrollment assumptions should be tied to rate increases. For example, new enrollment should not be assumed to improve overall morbidity unless there is some actuarial reason for the improvement, and drops in enrollment should reflect potential anti-selection of disenrollment.

Lapses of policies, cancellation of groups, and other terminations should be considered in the projection of inforce business. Termination assumptions should be reasonable and tied to morbidity and the level of premium increases anticipated.

Unlike other reserve calculations that consider only contracts in force at the valuation date, a premium deficiency reserve calculation should consider all of the following:

- (a) Contracts in force at the valuation date, including any increase or decrease in enrollment under group contracts that is reasonably anticipated to occur after the valuation date;
- (b) Contracts expected to become effective after the valuation date, for which rate guarantees were made prior to the valuation date; and
- (c) Individuals whose coverage originated under contracts or certificates that were terminated before the effective date, but whose coverage remains in force because of claim status or waiver-of-premium status.

2. Premium Rate Increases

Reasonable rate increases and any market and regulatory restrictions on rates should be considered in establishing deficiency reserves. Assumptions for future rate increases should be reasonable, considering assumptions for future levels of claim costs.

3. Claim Trends

Durational wear-off and adverse selection resulting from premium increases and plan design should be considered in setting up deficiency reserves.

4. Risk-Sharing Arrangements

Some risk sharing arrangements with providers call for settling a budget versus actual costs, and may require the provider to share in losses due to excess costs. The amount due from the provider group in future years should be estimated using reasonable assumptions. The amount should only be used to the extent that it is collectible. In cases where the providers must make a cash refund to the insurer, it may be difficult to collect the amounts due.

5. Expenses

Generally, the expenses considered for a particular grouping should represent a reasonable allocation of all the reporting entity's expenses (other than claim costs, which should not merely be an allocation, but should be projected separately for each grouping). The allocation may reflect that some expenses, such as the cost of installation of new business, may not be applicable to a particular grouping. If other lines of business can cover overhead expenses, the test for a deficiency and the calculation of the deficiency reserve can be performed using only direct costs.

6. Interest Rate

The interest rate used in determination of the present values should be reasonable, based on the period of deficiency.

7. Taxes

The deficiency reserve should be calculated on a pre-tax basis; any tax impact related to the establishment of deficiency reserves should be incorporated into the calculation of deferred tax assets/liabilities under SSAP No. 10.

I. Disclosure and Documentation

The company should disclose, in documentation that can be made readily available to regulators upon their request (such as the actuarial memorandum supporting the actuarial opinion), the contract groupings it has used for purposes of determining reserve values for testing premium deficiency for each specified line of business. The company should include in the disclosure, whether or not it combined lines of business due to lack of materiality of one of the specified lines of business. The basis for any change to the groupings should be disclosed as well. To the extent possible, any change in contract groupings should be identified well in advance of its use. If a deficiency reserve is not required for any grouping, the disclosure should note this, and the actuarial tests that established that none was necessary should be documented as below.

The company should disclose, in that same documentation available to regulators, each contract grouping that had a positive premium deficiency reserve value. All other contract groupings' reserve value for testing premium deficiency should be documented. The documentation described below should be completed for each such contract grouping.

As back-up to the disclosures, the company should document the following information:

1. The distinguishing characteristics of each contract grouping;
2. The assumptions used in the calculation of reserve values for testing premium deficiency (including margin for conservatism in any grouping without a positive deficiency value). The assumptions should include:
 - (a) Enrollment changes;
 - (b) Premium rate increases;
 - (c) Claim trends (including morbidity changes, as well as inflation and utilization trends);
 - (d) Expense trends;
 - (e) Interest rate; and
 - (f) Special adjustments made for anti-selection, durational wear-off, provider insolvency, etc.
3. The time period over which revenues and costs were projected.

Bibliography of Reference Sources

The Working Group reviewed the following materials in preparing the *Health Reserves Guidance Manual*:

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3. Life and Health Insurance Entities – AICPA Audit and Accounting Guide, American Institute of Certified Public Accountants.
4. Statement of Statutory Accounting Principles No. 54, Individual and Group Accident and Health Contracts, National Association of Insurance Commissioners, effective January 1, 2001.
5. Statement of Statutory Accounting Principles No. 55, Unpaid Claims, Losses and Loss Adjustment Expenses, National Association of Insurance Commissioners, effective January 1, 2001.
6. Statement of Statutory Accounting Principles No. 84, Certain Health Care Receivables and Receivables Under Government Insured Plans, National Association of Insurance Commissioners, effective December 31, 2001.
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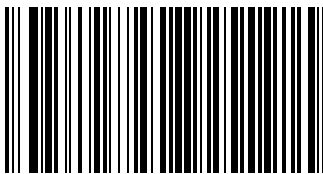
1. Health Practice Note – Group Long-Term Disability Income Insurance, August 2006.
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4. Life and Health Valuation Manual.

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1. Actuarial Standard of Practice No. 5, Incurred Health and Disability Claims, December 2000.
2. Actuarial Standard of Practice No. 7, Analysis of Life, Health or Property/Casualty Insurer Cash Flows, June 2002.
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4. Actuarial Standard of Practice No. 11, Financial Statement Treatment of Reinsurance Transactions Involving Life or Health Insurance, June 2005.
5. Actuarial Standard of Practice No. 12, Risk Classification (for All Practice Areas), December 2005.
6. Actuarial Standard of Practice No. 16, Actuarial Practice Concerning Health Maintenance Organizations and Other Managed Care Health Plans, July 1990.
7. Actuarial Standard of Practice No. 19, Appraisals of Casualty, Health, and Life Insurance Businesses, June 2005.
8. Actuarial Standard of Practice No. 21, Responding to or Assisting Auditors or Examiners in Connection with Financial Statements for All Practice Areas, September 2004.
9. Actuarial Standard of Practice No. 22, Statements of Opinion Based on Asset Adequacy Analysis by Actuaries for Life or Health Insurers, September 2001.
10. Actuarial Standard of Practice No 23, Data Quality, December 2004.
11. Actuarial Standard of Practice No. 28, Compliance With Statutory Statement of Actuarial Opinion Requirements for Hospital, Medical, and Dental Services or Indemnity Corporations, and for Health Maintenance Organizations, April 1997.
12. Actuarial Standard of Practice No. 41, Actuarial Communications, March 2002.
13. Actuarial Standard of Practice No. 42, Determining Health and Disability Liabilities Other Than Liabilities for Incurred Claims, March 2004.

National Association of Insurance Commissioners Documents

1. Actuarial Opinion and Memorandum Model Regulation.
2. Health Insurance Reserves Model Regulation.
3. Quarterly and Annual Statement Instructions.



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