

# HEALTH PRACTICE COUNCIL PRACTICE NOTE

*August 2005*

INDIVIDUAL MAJOR MEDICAL BUSINESS

Developed by the  
Health Practice Financial Reporting Committee  
of the American Academy of Actuaries



AMERICAN ACADEMY *of* ACTUARIES



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### Individual Major Medical Business

#### Introduction

*This practice note was prepared by a work group organized by the Health Practice Financial Reporting Committee of the American Academy of Actuaries. The work group was charged with developing and updating a description of some of the current practices used by health actuaries in the United States for determining actuarial reserves and liabilities for individual accident and health insurance business. This work group was originally formed in 1993 and issued the first set of Health Practice Notes that year; changes have been made to this set of practice notes to reflect additional information on current practices. These practice notes have undergone a major review in 2003 and 2004.*

The practice notes represent a description of practices the work group believed to be commonly employed by U.S. health actuaries. The purpose of the practice notes is to assist actuaries who are required to prepare a statutory statement of opinion by providing examples of some of the common approaches to this work. However, we make no representation of completeness; other approaches may also be in common use. It should also be recognized that the information contained in the practice notes provides guidance, but is not a definitive statement of what constitutes generally accepted practice in this area. Moreover, these practice notes are based on the Accounting Practices and Procedures manual adopted by the National Association of Insurance Commissioners (NAIC), which includes model Standard Valuation Law, the model “Minimum Reserve Standards for Individual and Group Health Insurance Contracts,” and, by reference, the NAIC Health Reserves Guidance Manual. To the extent that the laws of a particular state differ from the NAIC model, practices described in these practice notes may not be appropriate for actuarial practice in that state. This practice note has not been promulgated by the Actuarial Standards Board, nor is it binding on any actuary.

Members of the current work group are D. Joeff Williams, chairperson; David Bahn; Karen Bender; Tim Gustafson; Jim O’Connor; Julia Philips; and Bernie Rabinowitz. The members of the original work group were Thomas J. Stoiber, chairperson; David J. Bahn; James E. Carter; John A. Hartnedy (with Richard J. Ruppel’s assistance); Bernard Rabinowitz; and Robert Shapland.

Comments on the appropriateness of the practice notes, desirability of annual updates, substantive disagreements, etc are welcome. Comments should be sent to the Academy’s state health policy analyst at the directory address.

## 1. Q. What does this practice note address?

**A.** This practice note addresses questions and issues regarding the valuation actuary's responsibility for compliance with the NAIC *Accounting Practices and Procedures Manual* which contain *Statements of Statutory Accounting Principles (SSAP)*, the NAIC model Standard Valuation Law (SVL), the NAIC model *Actuarial Opinion and Memorandum Regulation (AOMR)*, the NAIC *Health Insurance Reserves Model Regulation*, the NAIC *Health Reserve Guidance Manual*, and the Actuarial Standards Board's actuarial standards of practice (ASOPs) as related to preparing a statutory statement of opinion. The actuary may be preparing an opinion on reserves for individual major medical coverage sold through an insurance policy, an HMO policy, or a group association or trust master policy that provides certificates of coverage that are individually solicited and underwritten. The practice note specifically addresses the work that is undertaken to support such a statement of opinion, in particular that regarding compliance with state statutory minimum reserve standards, actuarial adequacy of reserves, and the adequacy of assets to support the future liabilities.

While many valuation issues are common to life and health insurance in general, the degree of emphasis varies by type of business, and each product type presents its own unique problems, responses, methods, and bases for setting assumptions. Some requirements related to the statutory statement of actuarial opinion for life and health insurance companies reporting on the statutory "blue" blank differ from those for health plans reporting on the "orange" blank or health business reported on the property & casualty "yellow" blank. In particular, the requirement for asset adequacy testing may differ. This practice note is one of several health insurance product practice notes that have been compiled to provide information to valuation actuaries.

The actuary may choose to refer to Health Practice Note, *General Considerations*, to review valuation issues that are common to many health insurance product lines that may not be addressed in this note. The actuary may also choose to visit the American Academy of Actuaries' website health tab to see information on all the health practice notes and the ASOPs.

## 2. Q. For purposes of this practice note, what is *individual major medical business*?

**A.** *Individual major medical business* includes fully-insured comprehensive medical plans and catastrophic major medical plans sold to individuals and their families. These plans may be sold via individual policy contracts or through issuance of coverage certificates for a group policy sold to an association or held by a trust, but are intended for sale to individuals and their families rather than coverage of a group. The definition of "individual" for purposes of reporting in the statutory blanks generally refers to the contract form of the policy, not necessarily to whom it is sold, and is therefore more restrictive in definition than that stated above. This distinction should be kept in mind when reviewing this practice note.

In general, this practice note addresses medical coverage with short duration runoff. It considers ancillary benefits only to the extent that they may affect the choice of assumptions and the evaluation of the medical coverage.

## 3. Q. How are *reserves* and *liabilities* defined when used in this practice note?

**A.** Traditional meanings of the terms are intended, particularly those reserves, liabilities, and related actuarial items for which the valuation actuary provides a statutory statement of opinion regarding their adequacy. These items are identified in the instructions for actuarial opinion of the NAIC Accounting Practices and Procedures manual, and all exhibits that support those items. Only statutory reserves are addressed in this practice note. Refer to Health Practice Note, *General Considerations*, for more detail on these meanings.

While traditional meanings are intended, in some instances the valuation actuary may choose to consider changes in risk that are reserved for due to the changing regulatory environment and, in particular, health care

reform in which individual major medical carriers are conducting business. These changes, such as premium rating restrictions, minimum loss ratio requirements, guaranteed issue requirements, etc., may call for additional reserves or for different or additional methodologies for determining reserve adequacy.

This practice note supplements Health Practice Note, *General Considerations*, in addressing deficiency reserves and issues related to the determination of when they are appropriate and what reserve amount are to be held.

#### **4. Q. Why is it important to have a practice note unique to individual major medical products?**

**A.** While all types of health insurance deal with claim costs as the major obligation risk, the year-to-year volatility, size, and growth trends of this risk generally are greater for major medical insurance than for others. Further, individual major medical deals with an environment in which future premiums frequently increase at a slower rate than claim costs, and the ability of the insurer to relinquish or reduce its risk is, in general, more restricted than under group major medical health insurance products. The combination of these three elements is unique to individual major medical policies, creating a need for specialized guidance to support the valuation of such policies.

#### **5. Q. What are the risks for individual major medical business that affect the minimum reserve requirements, the adequacy of reserves, and the adequacy of assets?**

**A.** The *Model Regulation* lists eight risks (lapse rates, interest crediting rate strategy, mortality, policyholder dividend strategy, competitor or market interest rate, annuitization rates, commissions and expenses, and morbidity) that should be documented in testing reserves, and that may or may not apply to various lines of business. Morbidity and lapse are those generally considered the most important. These are categorized as *obligation risks*. Mortality, also an obligation risk, generally presents a relatively insignificant risk to the individual major medical business.

The *Model Regulation* further lists five risks (default costs, bond call function, mortgage prepayment function, determining market value for assets sold due to disinvestment strategy, and determining yield on assets acquired through the investment strategy) that should be documented in testing assets. The asset risks are typically considered relatively insignificant for health insurance in general, major medical insurance in particular.

In practice, the reserve risks are generally impacted by the following:

1. the insurer's ability and/or willingness to adequately fund future claim costs through premium rate changes, due to regulatory or management strategy reasons;
2. premium rate adequacy;
3. premium rate structure;
4. morbidity levels;
5. morbidity trend and accurate and timely measurement of claims trend;
6. adverse lapse and resulting claims antiselection;
7. durational factors related to morbidity, underwriting selection wear-off, and adverse lapse;
8. implications of legislative and regulatory changes (e.g., renewability, rate restrictions, and guaranteed issue requirements);
9. expenses, particularly commissions, settlement, network and managed care fees, and general renewal; and
10. reinsurance.

**6. Q. How are the above risks accounted for by adequacy testing and determination of minimum reserve compliance in other than claim and premium reserve categories?**

**A.** For states that have not adopted the new *Accounting Practices and Procedures Manual*, which contains the *Statements of Statutory Accounting Principles (SSAP)* or the new *NAIC Model Regulation (AOMR)*, Section 7 and Section 8 opinions still apply (although carriers that write business in multiple states are likely to be subject to Section 8 requirements). An opinion of minimum compliance is required for both Section 7 and Section 8 situations of the *Model Regulation* to the SVL. In states where minimum reserve requirements are more stringent than a single gross unearned premium total, at least contract reserves are normally evaluated, and often gross premium valuations are used.

In Section 8 situations, contract reserve calculations, gross premium valuations, or a cash flow testing approach normally can be used to satisfy the actuary that reserves are adequate. Some actuaries use a combination of these, while others rely on one over the other, depending on the particular risks (see above) that most apply.

States that have adopted the new *Accounting Practices and Procedures Manual* which contain the *Statements of Statutory Accounting Principles (SSAP)* as well as the new *NAIC Model Regulation (AOMR)* require that all actuarial opinions consider testing for adequacy of reserves, like the testing required for the old Section 8 opinions. Health plans that report on the “orange blank” are required to issue a statement of opinion on the adequacy of the actuarial reserves and liabilities, but not necessarily in light of the adequacy of the assets held to support the liabilities.

**7. Q. To what extent are valuation actuaries recognizing, or otherwise considering, business not yet issued as of the valuation date?**

**A.** Since the SVL is concerned with reserve and asset adequacy, only risks attributed to business in force are considered under the model law. However, one common practice with regard to expense obligations is to consider future expenses attributed to in-force business in an ongoing concern environment, not those that would occur if the company were to completely shut off new sales. (This recognizes that some portion of developmental and certain fixed overhead expenses need not be totally covered by in-force policies, but may be allocated to future sales.)

Similar treatment of investment allocations is generally considered.

The valuation actuary may choose to consider the adequacy of the new business rates. To the extent that inadequate rates are in place and will not be changed on a timely basis, it may be appropriate to establish premium deficiency reserves. This can be especially important in a guaranteed issue environment. There are differences in opinion among valuation actuaries regarding the need to establish reserves for new business in this situation. Some believe there is no obligation to establish such reserves, while others believe that, at a minimum, it is preferable to determine reserves for new business sold before the valuation date with effective dates after the valuation date. In doing so, actuaries usually consider the durational nature of this business.

**8. Q. What techniques do actuaries use to comply with minimum statutory reserve standards and to demonstrate reserve adequacy?**

**A.** First, an actuary will usually obtain the following information:

- The current requirements for the annual actuarial opinion in states where the company’s annual statement will be filed,<sup>1</sup>

1. For life insurers, these are usually in the state’s version of the Standard Valuation Law and any state regulations associated with it. For HMOs, often the only requirements are found in the NAIC’s instructions for the health annual statement blank.

- The rate structure of the policies, either durational rated or some variation of levelized, and,
- The adequacy of future premiums under likely future regulatory, company strategy, and environmental conditions.

Renewability may be a consideration. Most policies in force today are “guaranteed renewable,” as required by the Federal Health Insurance Portability and Accountability Act (HIPAA), passed in 1996. “Guaranteed renewability” under HIPAA allows for termination of the business in certain circumstances, which may be different from the term as defined in the policy contract for some policies, particularly older forms. Rarely are in-force policies “non-cancelable,” as this limitation on rate levels can be very risky for the insurer in a high trend environment.

The annual statement blanks provide summary reserve information on the balance sheet, and more detailed breakdowns on subsequent pages. In the life (blue) blank, these breakdowns are in Exhibits 6 and 8, and in the health (orange) and P&C (yellow) blanks, they are in the underwriting and investment exhibit. The detailed breakdowns separate reserves into two categories, claim reserves and policy reserves. Reserves related to premiums, such as unearned premium amounts and deficiency reserves, are generally included in the policy reserve category.

#### Claim Reserves and Claim Liabilities

Because the duration of outstanding liabilities for individual major medical claims is almost always relatively short (under 2 years) and accrued before the valuation date, in the life (blue) blank they are reported in Exhibit 8 and considered an estimate of claim liability rather than a claim reserve. Claim reserves reported in Exhibit 6 are generally minimal and may include provision for unaccrued claims for coverage risks such as extension of benefit policy provisions. The terms “claim reserves” and “claim liabilities” tend to be used interchangeably, but individual major medical insurance usually refers to estimates of claim liability on accrued claims.

Techniques to establish estimates of claim liability for individual major medical business and to verify their adequacy do not usually differ from such techniques for other short-tail health insurance products, such as group major medical and dental coverage. Analysis of recent paid claims—adjusted for any changes in coverage, exposure, or claim processing systems—is normally used to estimate claim reserves. Developmental methods in which completion factors or lag factors are applied to claims paid to date are most commonly used. For the most recent two or three months of incurred claims, claim reserves are often estimated by applying an expected loss ratio to earned premiums or an expected claim cost to policy exposures for those months, and subtracting the paid claims. The result is generally modified by adjustments for seasonality, and the addition of margins and a reserve for claim adjustment expenses (i.e., claim settlement expenses).

#### Policy Reserves

This category includes reserves for any significant insurance liability that is not included in claim reserves, such as *contract* reserves (sometimes called active life reserves) reflecting liability under levelized premiums. It also includes reserves set up for premium deficiency or as a result of a gross premium valuation for a company’s total business.

The NAIC’s Accounting Practices and Procedures Manual, in SSAP 54 and SSAP 55, and the NAIC Health Reserves Guidance Manual, provide guidance on statutory requirements that apply to policy reserves for health insurance.

#### Contract Reserves

For durational-rated policies, where the rates for each duration are intended to fully fund the claim cost for that duration, no contract reserves are usually established. Other types of policy reserves may be appropriate, however. For individual major medical, policies are rarely durational-rated at issue, because the rates would rise dramatically in the first two or three years to match the increase in claim cost as the positive effects of

underwriting wore off. However, for closed blocks of business, the rate increases are usually calculated on a block basis to fund the claim costs for the current year, and no contract reserves are usually held.

For most blocks of individual major medical business, rates are charged on an attained-age basis, levelized to ignore the durational impact of underwriting on claims. It is generally appropriate to set up contract reserves to reflect the excess of future claims over future net valuation premiums for this business, since this excess can be relatively significant in the first two or three contract years. However, in practice the reserves are usually immaterial, relative to the company's longer-duration business or other lines of health business, especially when a 2-year preliminary term methodology is used.

For policies with levelized rates based on the issue age of each policy, several different methods are used to calculate contract reserves. The most detailed approach is a seriatim calculation using *factors* for each valuation cell. Factors by duration and age are typically calculated based on reasonable estimates of future morbidity levels, lapses, interest, and so on. Then each policy generates an amount of reserves based on its factor.

A less detailed method, which is usually appropriate when claim costs are close to the expected level, is the use of a *benefit ratio*. The reserve is normally equal to the difference between the anticipated lifetime loss ratio and the actual experienced cumulative loss ratio to date, multiplied by the cumulative earned premiums on a block of issue-age rated business. This method is discussed in detail in the Society of Actuaries' *Transactions, Volume XL, 1988*.

Some blocks of individual medical policies are rated by pooling the policies, such as policies sold to association members or policies sold in a state that requires community rating. Although it might be appropriate to set up contract reserves to reflect anticipated aging or other future changes in these blocks, in practice such reserves are rarely set up.

#### Other Policy Reserves

These reserves are usually set up to recognize liability that does not arise from levelized premiums, but from such issues as premium deficiency, future expected losses in excess of contract reserves, and so on. Most often, actuaries use a gross premium valuation method to calculate the amount of these liabilities. This method projects costs and revenue forward for some period of time, and calculates the present value of each year's anticipated losses.

### **9. Q. How long are the projection periods actuaries use in calculations performed to support a statement of opinion?**

**A.** For issue-age-premium structured policies that are guaranteed renewable or noncancelable, it is common practice for actuaries to run projections until the projected inforce is insignificant, or to the terminal age of the policy.

For other premium-rate-structured policies, it is common to project at least through any period for which premiums are levelized (see above) and possibly through to the end of the current pricing period (i.e., the period over which premium rates have been calculated unless there is reason to believe future premium rates beyond that period may be inadequate, possibly due to regulatory or company strategy reasons. When there is reason to believe that future premium rates may be restricted, then the projections are usually run until future values become insignificant, or until the actuary believes the rate restriction situation no longer will exist.

The length of the projection period is often determined to be consistent with the underlying pricing assumptions. For example, one policy may be priced using a "levelized premium pricing assumption" (e.g., underwriting selection wear-off) of 10 years, while other policies may be priced to recognize only 2- or 3-year selection periods. Alternatively, the projection period may reflect only the average selection period remaining for the block of business (which often may be less than one year) and thereby be more dependent on the remaining period until

the next anticipated rating change is (e.g., perhaps a 12-month projection). If the anticipated rate increases are not expected to fully offset claims trends, the period may be extended beyond the current rating period.

There are also practices for these other premium-rate-structured policies where actuaries are always performing projections to a time where values become insignificant. This seems to be more common in states that have passed the latest NAIC Health Insurance Reserves model regulation, and where renewal pricing strategies call for the linking of renewal rates with rates on currently issued policies.

For those actuaries opining in companies requiring an asset-adequacy opinion, one common practice is to project a few years beyond the pricing period for attained-age-rated business if there is no reason to believe rates will be restricted, and to project to points in time where values become insignificant when there is reason. For issue-age-rated policies, the projection period usually continues through the term of the contract.

**10. Q. Are actuaries combining closed blocks of business with open ones for the purposes of projections?**

**A.** Generally, blocks of business that are combined for rate filing purposes define the blocks for which projections are performed. However, when rating blocks are combined further, the actuary usually makes a judgment about the degree to which some forms' premiums within the combined block may be subsidizing other forms. The actuary then usually considers the financial health and longevity of the subsidy and whether it is material for the purposes of the projection.

**11. Q. What morbidity assumptions are used?**

**A.** It is common for actuaries not to use a published morbidity table for individual major medical business in either contract reserve calculations or gross premium valuations, whether analyzing reserve adequacy or determining minimum reserve compliance. They commonly use claim cost assumptions used in pricing, appropriately adjusted for actual experience, or loss ratio expectations applied to projected premiums. These are appropriately adjusted for the differences between rate increases and anticipated claims trends, including the impact of underwriting selection wear-off.

For actuaries who use morbidity tables, the pricing morbidity table underlying the original set of premium rates for a form, appropriately adjusted in future years by subsequent changes in costs, is often used for contract reserve or gross premium valuation purposes. It is adjusted due to inflation, morbidity trend, benefit changes, anti-selection, durational influences, and variation in benefit mix (which occurs when forms are blocked—see above). As a proxy for the above, some valuation actuaries adjust the pricing morbidity table in years subsequent to the original pricing year by the applicable gross premium percentage rate increases. Others use fully redeveloped tables. The latter practice is more common when tables are also redeveloped for renewal gross premium pricing purposes. Margins, either implicit or explicit, may be included when the pricing morbidity is used for valuation purposes.

**12. Q. For valuation actuaries who follow the NAIC Health Insurance Reserves Model Regulation, to what extent are future premium increases and claim cost changes used in determining minimum contract reserves?**

**A.** Such changes are usually not recognized on the assumption that future premium rate increases will cover the increases that result from future claim cost increases. Another common practice is to recognize the same percentage increase in future premiums as that assumed for future claim costs over the projection period.

In either case cited here, if the actuary believes that future premiums are not likely to fully cover future claim



costs and expenses, then an additional reserve is commonly established by appropriate adjustment to the contract reserve method being used, or by performing a separate calculation, such as a gross premium valuation.

**13. Q. What practices are in place to determine the risk that future premium levels, along with existing reserves, may not be adequate to cover the future obligations of the policies because of regulatory or other reasons?**

**A.** The practices depend on the characteristics of the company's business related to considerations such as durational mix, rate increase history, and claims trend expectations along with the company's ability to appropriately group similar blocks of business.

The valuation actuary may believe that it is likely to delay rate increases beyond the delays anticipated in the calculation of the renewal premium rates. This is frequently determined by using the company's historical state approval patterns to determine what proportion, and to what extent, future premiums may be delayed beyond those assumed in the renewal pricing. The actuary then makes an appropriate adjustment.

In states where individual health insurance premium rates are regulated by minimum loss ratio standards, actuaries usually consider the probability that future premiums may need to be restricted to meet overall lifetime minimums. The likelihood of this occurring is usually considered particularly high in situations where insurers have policy forms that have had high loss ratios in recent years but that maintain low lifetime cumulative loss ratios. It is common in such situations for the actuary to perform a gross premium valuation on the entire block of business to determine if a premium deficiency exists. Often projections made during the renewal rating process provide the likely magnitude of the potential shortfall and any premium deficiency reserve.

In states that have enacted some type of guaranteed loss ratio laws, particular consideration is normally given to how the nuances of the laws are expected to affect future premium rates, especially if the experience on any forms indicates that a refund is probable.

**14. Q. What methods are used to recognize changes in claims pending and claims backlogs in determining claim reserves?**

**A.** For reserves determined by a loss ratio projection method, no adjustment is commonly considered necessary, because paid claim levels do not normally affect the reserve calculation.

For reserves determined by a developmental method, one technique used is to multiply an estimation of the backlog claim numbers as of the valuation date, over or under normal backlog count by an estimate of the dollars per claim. This determines the reserve amount to be added to (or subtracted from) the liability estimated from using completion factors based on the normal historical level of inventory.

**15. Q. How are claim settlement expenses treated?**

**A.** For a claim reserve, the actuary usually considers setting up an associated reserve equal to projected settlement expenses for those claims. The reserve settlement expenses are usually based on the historical ratio of paid settlement expenses to paid claims, multiplied by the claim reserves.

For business administered by a third party, the actuary will often review the agreement between the insurer and the administrator to determine the extent of responsibility for future claim settlement expenses on past incurred claims. The company's auditor may require the insurer to establish a claim settlement expense reserve even if that expense equals the administrator's future liability per the agreement.

Investment earnings are usually not considered in the calculation of claim settlement expenses, but may be reflected in a reduction of the associated claim reserves or claim settlement expense reserves.

Expected litigation costs are usually added to the claim settlement expenses when a portion of the claim reserve reflects an anticipated settlement under a legal dispute.

**16. Q. How are extraordinarily large claims, either unreported or in process, treated in claim reserves?**

**A.** Often, most large claims are implicitly recognized in the development methods used to set up claim reserves because previous large claims are included in the claim history. The actuary will usually review any large ongoing claim in detail to determine if any unusual circumstances are expected to generate a change in the claim reserves.

However, some carriers will remove large claims of a certain minimum size from their paid-by-incurred claim triangle history for development of their completion factors. They will apply those completion factors to claims paid, excluding the large claims. Using this approach, they can usually establish a reserve for known large claims using a case reserve approach with consultation from the case manager. They can also establish an IBNR reserve for unknown large claims based on historical experience or using claim probability models.

**17. Q. How are incurred dates set for purposes of determining the beginning of a claim liability (e.g., service date, cause date, or other)?**

**A.** The contract provisions and the pricing practice are usually considered together to determine the incurred date. For example, common contract provisions today create an obligation to pay claims based on service date. When the pricing is also calculated on the same basis, the contract date is usually relied on. When the pricing practice is to charge for covered medical costs, assuming a liability date other than that created by contract provisions, the actuary generally uses the date that produces the largest appropriate reserve.

Some actuaries choose to consider the date of the claim's cause, or the first date after a deductible is met, regardless of a service date contractual provision. However, it is more common practice to use the service date of the claim.

To simplify coding of service dates, the claim adjudicator will often batch related services using a single service date, usually either the first or the middle date of service period. This is most typical for inpatient hospital services for a single stay.

**18. Q. What are "Section 7" and "Section 8" opinions, and what special considerations are addressed regarding them?**

**A.** Refer to Health Practice Note, *General Considerations*, regarding Section 7 opinions. These have been or are being phased out as the new NAIC model valuation law is being adopted by states as part of the NAIC requirements for uniform codification of actuarial opinion. Most life and health companies (blue blank) are now subject to having their valuation actuaries issue what was known as a "Section 8" opinion, which requires statements regarding the adequacy of reserves and actuarial liabilities to reflect the adequacy of the assets supporting them.

It should be noted that an opinion based on asset adequacy is currently only required for life and health insurance companies reporting on the statutory life and accident and health reporting blank (the blue blank). Health plans and health insurance companies reporting on the statutory health business reporting blank (the orange blank) are not required to perform asset adequacy analyses, but a statement regarding adequacy of the reserves and actuarial liabilities is required.

**19. Q. In some states there are no minimum standards that address both the long-term nature of the insurer’s obligation to provide benefits (often for life under HIPAA) and many of the issues cited in the above sections of this practice note. What are actuaries doing when preparing opinions for these states?**

**A.** The valuation actuary will usually verify whether the state has become subject to the NAIC Health Insurance Reserve Model Regulation as a result of the state’s agreement to uniform state codification. For multi-state carriers, it is likely that at least one will subject a blue blank carrier to the SSAPs. For a single state carrier or health plan operating in a state where there is no regulatory guidance, some actuaries follow the minimum as specifically as the state requires. This may mean establishing only gross unearned premium, premium deficiency, and claim reserves. Some states do not specify standards, per se. The laws may outline requirements in broader terms, such as requiring a *reasonable* level of reserves to provide for policy liabilities. In such instances, actuaries exercise professional judgment as to minimum reserve levels. A possible safe harbor for this judgment may be reliance on the NAIC Health Insurance Reserves model regulation. The Health Insurance Reserves model regulation states that,

[W]ith respect to any block of contracts, or with respect to an insurer’s health business as a whole, a prospective gross premium valuation is the ultimate test of reserve adequacy as of a given valuation date. Such a gross premium valuation will take into account, for contracts in force, in a claims status, or in a continuation of benefits status on the valuation date, the present value as of the valuation date of: all expected benefits unpaid, all expected expenses unpaid, and all unearned or expected premiums, adjusted for future premium increases reasonably expected to be put into effect.

Such a gross premium valuation is to be performed whenever a significant doubt exists as to reserve adequacy with respect to any major block of contracts, or with respect to the insurer’s health business as a whole. In the event inadequacy is found to exist, immediate loss recognition shall be made and the reserves restored to adequacy. Adequate reserves (inclusive of claim, premium and contract reserves, if any) shall be held with respect to all contracts, regardless of whether contract reserves are required for such contracts under these standards.

The actuary may look for guidance on premium deficiency reserves in the NAIC Health Reserves Guidance Manual.

**20. Q. Are reserve adequacy and asset adequacy being determined by a single method, or in combination, such as in a cash flow testing method or gross premium valuation method?**

**A.** Due to the nature of the individual major medical product line, asset risks are commonly considered to be nominal relative to obligation risks. Consequently, actuaries do not, as a rule, analyze the interaction of asset adequacy with that of the obligation risks in the most formal way: the cash flow testing method. However, gross premium valuation methods are common, and often appropriate to satisfy minimum reserve requirements and certain statutory accounting principles. In performing these, some actuaries find it convenient to test adequacy of investment earnings as an asset risk. Some actuaries who have not performed gross premium valuation tests on the methods they use to comply with minimum legal reserves now plan to do so because of the convenience of testing both asset and reserve adequacy in one step. This practice is becoming more common as actuaries make changes to comply with recent revisions to the Actuarial Opinion and Memorandum model regulation (AOMR) adopted by the NAIC, and as they address issues regarding premium deficiency reserves for SSAP No. 54.

**21. Q. What types of asset adequacy analyses are being performed?**

**A.** It is common to review the quality of the assets and to determine whether the term and yield of the assets generally match the term and interest assumptions of the reserves. Due to rate restrictions or management strategy,

the revenue upon which the insurer's obligations will be met for individual major medical business usually depends to a much greater extent on obtaining adequate and timely future premium rate increases than on the adequacy and earnings of the assets backing the reserves. Thus, the actuary commonly makes a judgement about the materiality of the assets' vulnerability to default. He or she also must evaluate investment earnings potential relative to the sensitivity of obligation and other risks before deciding whether a specific asset analysis will be performed at all. In many cases, unless either a gross mismatching occurs between asset term and average term of liabilities, or unless the quality of the assets is poor, no further analysis on assets is performed.

An actuary can generally demonstrate the relative immateriality, if it exists, by comparing net premium to incurred claims in the past. If cumulative past net premium, less any reserves at the end of the testing period, has consistently covered the incurred claims in the past, the investment earnings would have played an insignificant role in funding for the claims. Another way to demonstrate the immateriality is the occasional performance of a cash flow model test on the business, or gross premium valuation test for sensitivities of the investment assumptions relative to the obligation variations.

In some instances, actuaries perform cash flow testing as a method to demonstrate compliance with current opinion requirements, as well as recent requirements for statutory accounting practices to test the need for potential premium deficiency reserves. In such cases, variations on investment earnings and default assumptions are tested for sensitivity along with variations on the other risks, such as premium rate increase, morbidity, lapse, and health care reform.

## **22. Q. What particular sensitivity analyses are being performed in the method used to test reserve adequacy?**

**A.** Actuaries commonly concentrate their efforts on key risks. These are listed below with a comment about considerations that are generally applicable in selecting the magnitude of the variations on each of these sensitivity tests.

*Morbidity levels*—Size and recency of the data base used to support the morbidity level, the similarity of the benefits for which the morbidity levels were based, use of credible company data if levels are sufficient, and the study technique used are all factors that are usually considered. Actuaries normally consider the impact on this type of business where rate spiraling may occur such that, regardless of the level of future premium rate increases, morbidity levels may deteriorate.

*Morbidity trend*—Normally one or two years of trend are given careful evaluation. Beyond two years, the actuary commonly considers sensitivity testing less important as adequacy becomes more a function of re-rate ability. In such cases it is common to assume that premium rate increases are not independent from trend, so sensitivity tests on premium rate increases can usually replace the separate trend testing. The testing of premium rate increases can usually consider potential rate regulation changes and the effectiveness of the rate increases to control morbidity trend.

*Morbidity by duration*—Sensitivity to variations in morbidity by duration is generally considered more important for newer policy forms or blocks of business in early policy duration. The magnitude of the variations tested commonly varies by the size of the block of business, the similarities of the block's risks to blocks of historical business, and the level and type of underwriting. The larger the magnitude and more similar the risks, the more common it usually is to test sensitivity for smaller variations in morbidity assumptions.

For policies priced on an aggregate basis, additional consideration for coordination with the persistency assumptions can be important, because such assumptions typically change the durational mix assumption of the business.

*Persistency*—Similar to morbidity by duration, the magnitude of the variations tested commonly varies by size of the block being analyzed and the similarities to historical blocks. When the actuary is aware of a situation that may cause an unusual variance (e.g., a regulation change or a product change by the company that may entice in-force business to rewrite) the actuary usually performs tests with higher levels of volatility based on reasonable expectations.

*Expenses*—It is not very common to test variations on expenses, as they are usually dwarfed in size and volatility by the other assumptions noted above, unless there has been a significant change in the insurer's way of doing business (e.g., new distribution channels, agents incentive program changes, acquisition or sale of business, etc.).

### **23. Q. What will be the impact of the revisions to the Actuarial Opinion and Memorandum Regulation?**

**A.** The main revisions are the elimination of the specific seven scenarios and the smaller company exemptions. All companies reporting on the “blue blank,” with a few exceptions, will be required to submit an actuarial opinion based on an asset adequacy analysis. This will likely have an impact on smaller insurance companies, many of which may have individual health insurance lines of business, that ignored doing any form of asset adequacy testing in the past.

### **24. Q. What are companies doing to address the potential problem between the revised Actuarial Opinion and Memorandum Regulation and *Statements of Statutory Accounting Principles No. 1*?**

**A.** This question was addressed at the December 2002 meeting of the Life and Health Actuarial Task Force of the NAIC. The comments can be found at the American Academy of Actuaries' website under the Life subsection of the Publications section. The address is [www.actuary.org/pdf/life/aomr\\_dec02.pdf](http://www.actuary.org/pdf/life/aomr_dec02.pdf). The potential problem arises due to the requirement of SSAP No. 1 that a company disclose differences between reserves actually held and reserves required with the new *Accounting Practices and Procedures Manual*, which contains the *Statements of Statutory Accounting Principles (SSAP)*. This may require that a company perform asset adequacy analysis that might otherwise not have been required in order to quantify the difference. The comments supplied to the Life and Health Actuarial Task Force by the Life Valuation Subcommittee provide several possible solutions to this problem.

### **25. Q. How do companies calculate premium deficiency reserves for this type of business? Do companies perform separate gross premium valuations for the same business? If so, what is different between the premium deficiency reserve analysis and gross premium valuation?**

**A.** Actuaries have varied in practice in determining premium deficiency reserves (PDRs) and differentiating this from conducting a gross premium valuation. The NAIC has requested the Health Financial Reporting Committee of the American Academy of Actuaries to assist it with illustrating some of the potential issues and relationships related to this question. Generally, PDRs are measured for specific blocks of business that may be defined by characteristics not common to all the health business of the company and cover only the current premium rating period, while gross premium valuations (GPVs) usually would include all the health insurance business of a company and project over the expected lifetime of the health business currently in force as of the valuation date. The actuary may choose to refer to NAIC Health Insurance Guidance Manual regarding methods and assumptions for calculating these reserves and to Health Practice Note, *General Considerations*, for further discussion on this question.



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