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Open Forum: Short-Term/Intermediate Risks

Short-Term/Intermediate Risks in Health Insurance
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HMOs and the Valuation Actuary
John F. Fritz

SHORT-TERM/INTERMEDIATE RISKS IN HEALTH INSURANCE

MR. JAMES T. O'CONNOR: Our panel is made up of John Fritz and myself, Jim O'Connor. John is a Vice President and Consulting Actuary with Tillinghast, practicing out of its Irvine, California office. He works primarily with health insurance companies, HMO clients, and medical service providers advising them in areas regarding health insurance including claims liabilities. John is currently a member of the Academy's Committee on Risk Classification. I'm a consulting actuary with Milliman & Robertson, practicing out of our Chicago office. I work primarily in the individual and small group health markets.

John and I will both offer some ideas regarding the short-term risks we face in health insurance today. In many ways, there is a fine line between what constitutes a short-term risk and a long-term risk. Many of the sources of risk are the same for both and only differ in how we respond to them and measure them over various time spans. In this session, we will concentrate on responding to these risks within the context of setting claim liabilities.

John will speak about the risks related to HMOs. I will concentrate on the indemnity market.

Overview of Actuarial Standards Board (ASB) Recommendations Concerning Incurred Claim Liabilities

In this context of setting claim liabilities to discuss short-term risks, I would like to address these by reviewing with you the ASB recommendations and interpretations concerning incurred health claim liabilities. As valuation actuaries working in the health insurance industry, establishing an adequate claim liability is perhaps in itself a key short-term risk our companies face. The savings and loan industry's failures and such investigations as the House Subcommittee's report, "Failed Promises: Insurance Company Insolvencies" (February 1990), have increased focus on the financial health and solvency of the insurance industry. We play a critical role in reassuring the public that the industry will be able to keep its promises to its insureds. Proper pricing is one side of the equation; adequate reserving is the other.

One of the most important statements of the ASB recommendations is that we must always remember that the setting of claim liabilities is at best an estimate. While the mathematical methods and models we have developed to calculate the liabilities serve as useful tools, the liability determination ultimately depends upon our judgment as trained actuaries. No formula can capture all the elements that impact the claim liability. We hope to discuss a number of these forces at play and how they can be addressed in claim liability determination.

Claim Liability Methodologies

We use a number of different methodologies in determining claim liabilities. Our choice of method largely depends on the type of business we are analyzing, the age of the business, and the data available.

Typically, we will use tabular methods for liabilities of longer duration such as disability income or long-term-care business. While there are certainly immediate risks related to this business particularly in its rate setting, underwriting, and reserving, we will concentrate primarily on shorter-duration-type products such as comprehensive major medical business. Disability and long-term care will be discussed in other sessions of this symposium.

The most commonly used and generally most appropriate method for short-duration claim business is the developmental method. This method uses historical claim runoff patterns to predict the future development of existing claims as of the valuation date. It is usually used in conjunction with a loss ratio or claim cost method for the most recent incurral periods.

Loss ratio methods are sometimes used when a new block or line of business is being examined.

Other methods include projection models, claim cost trend models, factor methods, and so on. Even among the common methods, there are as many variations of technique and application as there are valuation actuaries and blocks of business to analyze.

My focus will be primarily on the developmental method.

ASB Recommendations

The ASB has made ten recommendations concerning incurred claim liabilities. They are listed as follows:

1. Components of Incurred Health Claim Liabilities
2. Recognition of Plan Provisions and Practices
3. Data Requirements and Assumptions
4. Recognition of Trend
5. Recognition of Exposure
6. Recognition of the Time Value of Money
7. Recognition of Claim Settlement Expenses
8. Follow-Up Studies
9. Reasonableness of Results
10. Recognition of AIDS

Let's look at each one in more detail and discuss the ramifications involved. In doing so, I hope to identify the risks involved in health insurance.

Recommendation No. 1: Components of Health Claim Liabilities

We are all aware that there are two basic components of claim liabilities: (1) claims already reported but not yet paid and (2) claims already incurred, but not yet reported (IBNR).

In order to address a key risk of health insurance, I would like to break this into a more detailed list: pending claims, unreported claims, and large claims. First, let's note that, unless specifically recognized, large claims can impact claim liability determination significantly, especially for smaller blocks of business. Without recognition of large claims, liabilities calculated using the developmental method can be
easily over- or understated depending on the timing of the large claims.

We might further divide the components as follows, introducing not only normal-sized claims and large claims, but also contested claims, claim settlement expenses and reinsurance (Chart 1).

CHART 1

Recommendation No. 1
Components of Incurred Health Claim Liabilities

- Normal-Sized Claims
    - Pending (Already reported)
    - IBNR (Incurred but not Reported)
- Large Claims
    - Pending (Amounts Already Reported)
    - IBNR - Managed Care Claims
    - IBNR - Incurred but Claim Unknown
- Contested Claims
- Claim Settlement Expenses
    - Normal-Sized Claims
    - Large Claims
    - Claim Litigation
- Reinsurance

Note that we need to recognize that large claims also have an IBNR component. It is not enough to concern yourself with the large claim amounts already known, but not yet paid. There are two types of IBNR for large claims.

The first is the IBNR on those large claims that have been reported but are expected to have additional bills not yet submitted. With the growth of utilization review and large case management, with proper attention to available data or follow-up in working with the claims department or the utilization review firm, we have a great new source for tracking potentially large claims before any bills are even submitted. Tracking these managed care claims and in particular, the large case claims, can provide new information for improving our IBNR claim liability estimates.

The second type of IBNR is the usual one where we are not aware of either the occurrence of or the amount of the claim. Large claims continue to be a great risk for health insurers. But, of course, the true purpose for health insurance is to provide financial security from these large claims. As medical technology continues to improve, extending and saving lives with costly medical resources, large claims are likely to increase in frequency and amount. Depending on the definition of large claim you choose to use, these can represent a substantial portion of the claim liability. As actuaries, we probably need to focus on these claims more than we generally do.

I would be interested in hearing if any of you have used data from your managed care programs to help in estimating your claim liabilities. If we can tap these resources from new data, not only will we have better information for claim liability determination but also, in the process, valuable data for pricing purposes will be generated.

I have also listed claim settlement expense as a component of the claim liability. The ASB standards call for recognition of such expenses. The expenses might vary depending on the nature of the claims. We will discuss this item later.

Reinsurance is another important component of claim liability determination. The large claim data discussed above are, of course, directly related to any stop-loss reinsurance results for claim liability purposes; the evaluation of the net cost can easily be ascertained and kept current, rather than treating it as just another project.

Reinsurance allows us to manage our risks better. The analysis of large claims and related reinsurance recoveries during the liability determination process can promote sounder judgment regarding reinsurance retention and profit-sharing decisions.

In claim liability work, the impact of reinsurance can be categorized into the following:

- Amounts recovered.
- Amounts already paid by the company and recoverable from the reinsurer.
- Amounts known pending by the company and recoverable from the reinsurer.
- The amount of the company's IBNR which will be recoverable from the reinsurer.

The first three categories are usually addressed in our statement work. However, many companies do not recognize the fourth category, either as a measure of conservatism or just because they never consider it. Whether or not it is included in the liability, it is an item that should be recognized in evaluating your health insurance risks.

Recommendation No. 2: Recognition of Plan Provisions and Practices

The ASB's second recommendation is critical to establishing adequate claim liabilities and brings to the surface many of the risks inherent in health insurance. Plan provisions and practices need to be recognized.

This is an area that we might often take for granted, especially once claim classes are defined and methodology and completion factors determined. We are to recognize all pertinent plan provisions. This includes the following:

Contractual Obligations -- For what benefits or costs is the company liable? What are the risks the company has promised and is obligated to pay for? Generally, we address these questions by defining with which class of business a particular policy is to be grouped.

The contractual obligations of any plan present an everchanging and dynamic risk to the company. Although the contract language may be fixed, the world it addresses is far from static.

It is important that we understand the differences between various plans within a group, especially as new plans are added. New plans, though similar in benefits, may differ because of not so obvious variations from the plans, perhaps due to mandated benefits or changes in distribution of deductible and coinsurance features or the introduction of managed care features in the plan. Subtle changes can impact payment lags.

Provider Practices -- Changes in health provider practices can have significant impact on health insurance risk. Claim trend is greatly impacted by provider behavior. But changes in provider practices not only can impact charge levels and utilization but also can affect the claim reporting lags. Simple changes such as new billing systems and procedures for a hospital, doctors requiring payment at time of visit or no longer filing the claim or assignment for the patient can affect lags. Recently, it became mandatory for doctors to

file their patients' claims directly with Medicare. Even though they are not required to file with the Medigap carrier, claim lags may be affected because Medicare's claim lags will be affected.

Provider practice changes such as shifts from inpatient care to ambulatory care and day surgery have a tendency to change payment patterns.

Not only is there increasing incidence of claim unbundling by certain physicians, but also there appears to be an increase in the number of providers who may bill a patient. Where a primary physician bill would once be the only bill a patient received, today exploratory day surgery will generate bills from the primary surgeon, perhaps an assistant surgeon, the anesthesiologist, the radiologist, and perhaps a consultation charge from a physician the patient never saw or even knew was involved. The proliferation of specialty makes the claim submission process for the insured much more complicated than in the past. It also presents an increased risk to the insurer in that the sum of the parts is more likely to exceed the whole. The more providers a claims adjustor must deal with for a given case, the greater the likelihood for error or lax adjudication and a longer lag.

Managed Care -- As discussed earlier, managed care provides an insurer opportunity not only to contain claim costs, but also to learn more about its claims at an earlier point in time.

In certain situations, it might also affect the claim payment patterns. An example of this is seen in PPO arrangements where claims are first sent to the PPO to reprice the claim for its contractual discount.

In developing claim liabilities, the actuary needs to be aware of the impact managed care programs can have on the claim liability. John Fritz will address this topic in more detail and will focus on some of the risks inherent in certain HMO relationships.

New Business Activity -- Introduction of a new plan often brings in an increase in new business production. The actuary needs to be aware of the changing dominance one plan may have in relation to the others in the same class. This will be discussed further related to the recommendation on exposure.

Plan Termination Action -- When a decision is made to take plan termination action, the actuary needs to be aware of what obligations the insurer needs to take on beyond the date of termination. Does the plan require an extension of coverage? The effect of COBRA

requirements, disability extensions, and conversions to individual forms all need to be considered.

Claim Settlement Practices -- Claim settlement practices are crucial to understand if the actuary is going to have a good handle on estimating the claim liability. The actuary cannot sit in his ivory tower and estimate the claim liability in a vacuum. He must communicate effectively with the claim people.

One of the risks an insurance company takes on is that it can hire and develop staff and systems capable of adjudicating claims in an accurate and timely manner. Proper work conditions and pending reports are necessary in order to assess success in this area. By-products of such reports can also help the actuary in setting his reserves.

Staffing, system, definitional, and procedural changes in the claim department and its operation and reports can directly affect the claim data the actuary uses to set his liability estimates. He needs to be able to interpret how changes in claim handling procedures affect his results.

Recommendation No. 3: Data Requirements and Assumptions

The third recommendation addresses what every actuary is concerned with in estimating

claim liabilities: data and assumptions. It is said that the companies with quality data will be the winners; but that is only if they use the data. As actuaries, we often find ourselves not only as users of the data, but also instrumental in defining what data should be collected and how they should be summarized.

By gathering and using data wisely, we can help our companies and clients better manage their insurance risks. This permeates all of our activity: statement work, pricing analysis, valuation studies, and the many other projects in which we become involved. I have listed five characteristics to consider.

1. Availability

   What data are available for the task at hand? If not readily available, is it possible to get data? This calls for planning, oftentimes, long-term. It also often involves a lot of expense. Management needs to assess the value of the data versus the cost of gathering it. We won't always be able to get what we want and will have to make do with what we have.

2. Accuracy/Reasonableness

   It is important that we have confidence in the accuracy of the data. All the data in the world are useless if they are not accurate or at least reasonably accurate.

Does the company have audit checks in place to provide some measure of the accuracy of the data? You should conduct reasonableness checks each time you get a new set of data. A simple comparison to the prior report may be all that is needed. Your general knowledge of the operation will usually indicate whether something does not appear correct.

3. Consistency

Because we often use data generated from different sources, it is important that we know that the data are consistent. Several examples come to mind:

- Are the claims data consistent with the exposure data used in determining the claim liabilities?
- Are the time periods represented by the data consistent?
- Understanding the nature of the data can help determine whether it is being used consistently. In-force data are measured at a certain point in time; however, because of such policy provisions as the grace period, what point in time does that in-force data really represent?
- How consistent is the pending data or claim department work condition reports from month to month or with other data you may be using?

4. Completeness

Another attribute of data we need to concern ourselves with is their completeness. This is, of course, related to the accuracy question. In evaluating claim data it is crucial that the data be complete. Missing data could result in understating or sometimes overstating liability estimates.

One example comes to mind: a company several years ago understated its year-end claim liability simply because the TPA it was using failed to include unopened mail counts that had been backlogged in the claim inventory data. The pending data sent looked fairly normal, but was in fact understated.

Another company I am aware of had a TPA that failed to include claim data from a small block of older business.

I imagine most of us at some time or another have had experiences when data are not complete. If it is blatant, it is usually noticed, but often it may be a more subtle omission that may take awhile before it is detected.

5. Segregation

By segregation I refer to the ability to break the data down into finer detail that you may wish to analyze because the macro data raised some questions.

Earlier we referred to the impact changes in plan benefits or provider practices have on claim results. The ability to break data down into smaller components, such as claims by diagnosis or procedure, can help you understand what is happening and provide opportunity for a more educated response.

Clearly, segregation by claim class is important. And, of course, the availability of a claim triangle is extremely desirable. But we may want finer detail such as splitting the data by issue period or by size of claim.

The ability to segregate data allows management the opportunity to understand its business much better and helps it to make better decisions.

What Is Needed?

Having said all that, what data do we need for determining claim liabilities?

Chart 2 lists typical data needs for a developmental method. In no way do I pretend that the list is all inclusive. Data needs are dictated by the type of business, its past history, and the current situation. However, these are generally needed to establish a comfort level with the liability estimates.

We referred to these throughout our discussion and little more need be said. I might encourage you to not limit yourself needlessly. The more information you can look at in an organized way, the more comfortable you will likely be with your liability estimates. In particular, work with the claim people to get both quantitative data and qualitative impressions as to what is happening with the business. Understand the movement in the pending claims inventory including claims on and not yet on the system, mail backlog, claims paid, mail received, manpower changes due to vacation, sickness, overtime, terminations and additions. Understand the definitions of each term. The claim manager may have a different measurement than what you think it is. Don't trust labels.

Recommendation No. 4: Recognition of Trend

The fourth ASB recommendation is to consider the impact trend may have on the liability.

In general, trend considerations are most important in long-period payment coverages such as long-term care and disability income plans.

CHART 2

Data Recommendation No. 3
Data Requirements and Assumptions

WHAT IS NEEDED?

- Claim Triangles by Class
- In-Force Data
    - Premium
    - Policy Exposure
- Pending Claims
    - Amounts
    - Counts
    - By Paid and Incurred Dates
- Large Claims
    - Amounts
    - Counts
    - By Paid and Incurred Dates
    - Reinsured Amounts
- Other

For shorter-duration products, trend generally has less impact. It should be considered if loss ratio estimates or claim cost methods are used for the most recent months of incurral. The actuary needs to consider the plan benefit's sensitivity to trend.

Major medical business is, of course, very sensitive to trend. Health actuaries are constantly concerned with predicting future trend. I have listed some of the sources of trend (Chart 3).

Trend needs to be recognized by the actuary as a serious risk to evaluate. It presents significant risk to an insurer in whether its premium rates will adequately cover the trend increases. Too low of an assumption could cost the company that year's expected profits; too high may lead to unnecessary antiselective lapsation and drops in new business levels below expected. This too can translate to lower profits.

What is trend running at today? From my discussions with various companies and from industry runs, it appears that companies continue to use about a 20% trend assumption in their rate setting. For indemnity business, it may be a bit higher than 20%, for HMO and managed care business somewhat less. We all are hoping for a downturn in 1991, but no one seems to be very confident about this.

CHART 3

Recommendation No. 4
Recognition of Trend

- Sources of Trend
    - Inflation
    - Utilization Changes
    - Provider Practices
    - Technological Changes
    - Cost Shifting
    - Economic Conditions
    - Deductible Leveraging
- Relationship to Completion Factors
- Relationship to Loss Ratio Projection

To address the ravages of these high trends on affordability, companies will continue to strengthen the managed care features of their plans, introduce more cost sharing through higher deductibles and coinsurance, and perhaps, begin to return to scheduled plans.

Recommendation No. 5: Recognition of Exposure

The fifth recommendation calls for us to recognize the impact of changing exposure in developing claim liabilities. Again, this can be generalized to other aspects of our work and the impact to the risks assumed by a health insurer.

Changing new business volumes and persistency variations including lapsation brought on through termination action impact the health insurance risks.

While new business may have lower morbidity levels initially due to underwriting and certain policy provisions, it may also experience a longer lag than older in-force business. In setting completion factors, we need to be aware of such shifts in durational distribution.

When using loss ratio or claim cost methods for estimating ultimate incurred claims, recognition of accurate exposure levels is important. This means not only being aware of what the period's premium was, but also how the implementation of rate increases have

affected the premium. In turn, this will help you assess what loss ratio assumptions may be most appropriate, given the historical loss ratios.

I suggest that policy exposure be examined as well as premium. The two together present a fuller story than either one alone can. Look at average premium and claim cost movements, and don't forget to adjust your expected claim cost for trend.

Recommendation No. 6: Recognition of the Time Value of Money

Recommendation No. 6 calls for us to recognize the time value of money if it is significant. This again has greater application to disability and longer-term-care business. The notion is straightforward, given a reasonable discount rate can be agreed upon.

Major medical runoff generates relatively little discount and is usually ignored. It may be included as a minor offset to other reserves.

Recommendation No. 7: Recognition of Claim Settlement Expense

My only comments are that companies need to decide along with their auditors and state regulators what claim settlement expenses are defined to be. Some believe the entire costs associated with claim settlement should be included; others only unusual or outside

expenses should be included. The preponderance of opinion appears to recognize both usual and unusual expenses.

My second comment is that it has been proposed in the NAIC to add to the Annual Statement blank a line to record these claim settlement expenses in Exhibit 9.

Recommendation No. 8: Follow-Up Studies

The eighth ASB recommendation is that follow-up studies should be conducted. In order to feel comfortable with our liability estimates, we need to assess how good our prior estimates were.

There are various approaches to such follow-up. Past-period liability valuations are the most common. Revisiting the completion factors used in the prior periods and what they have turned out to be can be useful in assessing how good your most current sets of factors might be.

Recommendation No. 9: Reasonableness of Results

With Recommendation 9, we come full circle from where I started this discourse. In doing claim liability work, we are developing an estimate.

As such, we should look at various scenarios and, perhaps, use several methods to develop a range of reasonable results.

Review the implications of the estimates by looking at the resulting loss ratio and claim cost streams. One would expect reasonable patterns with explanations for any outliers.

Recommendation No. 10: Recognition of AIDS

The final recommendation regards AIDS and our responsibility to make provision if needed for the epidemic.

Underwriting

1. Manage the risk by selection
2. Methodologies -- Individual and Small Group
    a. Blood and urine testing
    b. APS (Attending Physician Statements)
    c. Telephone Verification
    d. Tighten Applications
    e. Substandard Ratings
    f. Exclusion Riders (e.g., obesity, hernia, etc.)

3. Small group developments

   - Underwriting may become severely limited.
   - Level playing field

HMOS AND THE VALUATION ACTUARY

MR. JOHN F. FRITZ: I will be discussing the risks that result in the kinds of liabilities that are created within an HMO setting. Some of these liabilities have counterparts in the traditional indemnity setting. However, certain unique features of an HMO environment can dramatically change the way these liabilities are calculated within the HMO as opposed to the way actuaries have calculated these liabilities for an insurance company. Jim has done a good job summarizing many of the important issues on the insurance side. I will assume that we are all familiar with the insurance company techniques used to calculate these liabilities and will generally spend time only on the differences encountered under HMO environments. Liabilities found under both settings are the following:

- Incurred But Not Paid (IBNP) Claims
- Claim Settlement Expenses
- Experience Rating Refunds
- Advance Premiums and Unearned Premiums

Only the first three will be discussed further, since there is really no difference between advance premium and unearned premium liabilities under either the indemnity or the HMO setting.

Some liabilities under an HMO setting have no counterpart in the traditional indemnity setting. For purposes of this discussion, I have divided these into four groupings as follows:

- Provider Withhold Pools
- Provider Incentive Pools
- Supplemental Payments to Providers
- Provider Settlements

As you will see, there may be a bit of overlap among several of these. For example, provider settlements can refer to all three of the others; supplemental payments can also refer to provider incentive pools. However, these latter two categories could also refer to other forms of payments not involving either withhold or incentive pools.

In addition to discussing short-term and/or intermediate risks involved with the above types of liability items, I will also touch on the NAIC Model HMO Bill, especially relating to its minimum surplus requirements.

Liabilities with Indemnity Insurance Counterparts

The actuarial methods in use for calculating these liabilities for indemnity insurance can be used for HMOs, as well. However, certain HMO features will require special handling to

determine their effect on the traditionally calculated values. These features include the following:

- Provider risk-sharing arrangements,
- Provider incentives/penalties,
- Changes in the network provider mix, and
- Utilization review services.

There are a great variety of provider risk-sharing arrangements in use. The following four examples illustrate the main types in common use:

- Physician/hospital capitation contracts.
- Specialty provider capitation contracts, such as with drug companies or managed mental health/substance abuse service organizations.
- Primary care physician (PCP) capitation contracts with financial incentives or penalties that come into play depending on how effectively the PCP manages the use of specialty physician referrals and inpatient hospital use in comparison to a set budget.
- A withhold of a portion of physicians' fees, subject to payout depending on the experience of the block of business with this feature.

Before moving on, just to be sure everyone is familiar with a very important term, I will define capitated provider payments (i.e., capitations). This is the amount of money paid to a provider by an HMO for which the providers agree to provide certain health care services to the HMO's members. These capitations are generally expressed on a per member per month (PMPM) basis.

The IBNP Claim Liability -- Where capitations are involved, HMOs generally do not hold any IBNP liabilities for those medical supplies or services capitated. However, in some cases, capitated providers, especially physicians and hospitals, are provided specific stop-loss protection by the HMO against large claims. In such cases, the stop-loss coverage results in potential claim liabilities for the HMO and must be recognized by the actuary. In addition, medical services not covered under a provider contract (such as out-of-area emergency physician use) should be recognized appropriately as claim liabilities. It may sometimes be difficult to get the necessary data to properly allocate medical service costs between those covered by provider contract and those not covered. In any event, reasonable estimates need to be made.

In the case of a capitated entity, such as a physician group, that physician group should be setting up appropriate IBNP liabilities for any referral medical services not provided by the group whose services are covered under the capitation where these services may have been

incurred but not yet paid. Unfortunately, many physician groups, perhaps most, do not set up such a liability. In many cases, these groups are not even aware that the need for setting up such a liability exists.

The Actuarial Standard of Practice No. 16 states that the actuary should include information regarding the actuary's knowledge of all capitated risk contracts in any actuarial opinion on claim liabilities. This statement should indicate whether the actuary has evaluated the financial position of the capitated providers. In addition, the actuary's statement should disclose knowledge of any financially insolvent provider entity and make appropriate provisions for these, where such insolvency could have a material effect on the HMO's reserve or financial condition. In those cases where physician groups have capitation contracts with multiple HMOs, the actuary should disclose the existence of such groups and indicate whether their financial position and resulting impact on the HMO has been evaluated.

Where the capitated provider group has a stronger business tie to the HMO than simply the capitation agreement (e.g., where one entity owns the other), the NAIC Model HMO Bill seems to require that the combined IBNP set up by both parties (i.e., the physician group and the HMO) is adequate in total. The Bill states that, "... financial statements of a plan ... must be on a combining basis with an affiliate, if the plan or such affiliate is

substantially dependent upon the other for the provision of health care, management, or other services."

Because an HMO manages the delivery of care, this will affect the way the actuary ultimately determines the claim liability estimate. Because of the utilization review services performed, more data should be available to the actuary with regard to current utilization of medical services even before claims are received and/or paid. This additional information can be used in making the liability estimates. For example, information about claims in progress is available when hospitalizations are in progress or occurred during the period covered by the financial statement even before claims are known by the claim department, because such hospitalizations may have been preauthorized. This information can be used as a test of the adequacy of IBNP liabilities, which may have been estimated using some other techniques.

The claim liability estimation process should also take into account potential or expected changes in the delivery system, such as changes in provider reimbursement, mix of providers being used, utilization review procedures, etc. This is especially important if these changes are expected to raise claim costs above that which may be exhibited in the claim history available. An example where provider mix can affect the liability is in the case of point-of-service products. For example, historical claim experience may be based on lower levels

of in-network utilization (vs. out-of-network) than might be expected in the future or vice-versa.

Claim Settlement Expense Liability -- The new health claim liability standards, which are summarized in Actuarial Standard of Practice No. 5, require that a company set up appropriate claim settlement expenses in addition to the usual IBNP claim liability. There is not a great deal of guidance as to which expenses need to be included for this liability. I have seen additional amounts set up for this item that ranged from about 3-8% of the IBNP liability.

The typical approach is to try to estimate the administrative and overhead cost of paying the run-out claims, which generally comes down to estimating the claim department costs plus some portion of overhead as a percent of total claim costs. In the case of managed care programs, like HMOs, the actuary should also take into account those claim settlement expenses unique to managed care, such as utilization review, case management and probably even some provider relations costs.

Experience Refund (ER) Liability -- First of all, experience refunds are still very unusual within an HMO setting. However, I have run across some situations where HMOs have used ERs.

In the traditional sense, all that is generally needed to calculated ERs is to estimate the incurred claims and other expense experience of the various accounts eligible for refund and recognize the effect of any investment income (or cost) to determine the refunds. In a managed care environment, the issues become much more complex.

All of the provider contract arrangements also need to be recognized in a way similar to that discussed for the IBNP liability calculations. In cases where negative provider incentive pools exist, the HMO may want to consider withholding some or all of an experience refund until the pools are again in a positive position. Where the overall experience has been good in relation to pricing assumptions, decisions need to be made about how to allocate the "gains" on employer accounts between the employers and the providers.

Where provider capitations are used, experience refunds could be done only for the noncapitated portion of the claim costs. On the other hand, if the data exist, the actual utilization of capitated medical services for specific employers can be taken into account in determining refunds. In such cases, great care must be taken in allocating to the employers their share of favorable claim experience, since the capitation costs are generally a fixed expense for the HMO, regardless of actual utilization experience. In fact, if the physician capitations were set exactly correct based on the actual experience that unfolded, these costs are then on average exactly correct to cover the physician costs for the entire

pool of employers within the HMO. If an HMO wanted to increase the likelihood of paying out refunds on capitated portions of the claim costs, either the portion of premium being charged to cover the capitated costs needs to be set higher than will be needed or the capitation payments need to be set lower than will be required to cover the physician costs.

Liabilities Unique to HMO Settings

There are several types of liabilities that have no counterpart in the indemnity insurance setting. These are created simply because contracts exist with providers in the HMO setting that result in some risk transfer to those providers. These are discussed below.

Provider Withhold Pools -- These liabilities are fairly straightforward. The provider contracts will spell out the fee levels on which basis physicians will be reimbursed. As a financial inducement to help maximize the cost effectiveness of medical care, a portion (such as 20%) of these agreed-on fees may be withheld from the providers' reimbursement. If financial experience is favorable, part or all of the withhold is paid to the providers at some point, such as year-end. If experience has been adverse, part or all of the withholds would be retained by the HMO. The actuary should determine how such withholds will affect the claim liabilities to be established.

Withholds can also be used with capitated fees for the same reason discussed above as well as to ensure that funds will be available to pay for referral services covered under the capitation arrangement. For the latter case, the amounts withheld may approximate the estimated IBNP claim liabilities of the provider group being capitated. This would be a prudent actuarial practice, especially in those cases where there is some doubt about the financial stability of the capitated provider group.

Provider Incentive Pools -- It is a relatively common practice for primary care physicians (PCPs) to be given some kind of incentive to provide cost-effective medical care beyond simply a withhold or capitation approach. This is generally done by establishing certain budgets for hospital inpatient and/or specialty physician referrals. These budgets are generally set based on certain ranges of utilization. When actual utilization during the budget period is below or within the range established, providers earn bonuses in addition to their other compensation, prorated in proportion to where the providers' own utilization levels fall within the budgeted range. When utilization exceeds the maximum level of the budget range, physicians may be charged a penalty for such excessive utilization. When used, such penalties are generally limited to some maximum level (e.g., 50% of the excess utilization cost to a maximum of 20% of the capitation level). Similarly, there is generally also a limit on the maximum incentive bonuses paid to physicians.

Incentive bonuses or penalties are accumulated in certain designated incentive pools or funds. Settlements from these funds are generally made with physicians on some periodic basis (e.g., every six months, annually, etc.) When these funds are in a negative position (i.e., utilization has exceeded the maximum in the budgets), HMOs sometimes offset these "negative liabilities" from those providers with negative fund levels against other liabilities, such as the positive fund balances of other providers. Such offsets are generally made between provider groups that are independent from one another (i.e, one provider group has no legal responsibility to repay the liability for another group). Therefore, it is important that the valuation actuary is satisfied that such negative balances are reasonably collectible.

Another practice used by HMOs in this regard is to set up a provider receivable, as an asset, on the balance sheet of the HMO. Again, the actuary needs to be satisfied that these assets are indeed collectible.

It is not uncommon for HMOs to "forgive" providers' negative balances. The extent to which such practices are being used by the HMO should be considered by the actuary when evaluating liabilities and/or assets.

As for the positive balances in the provider incentive funds, appropriate balance sheet liabilities should be held by the HMO for these. Negative balances are generally recovered from future physician reimbursements, when it is the practice to recover these amounts, because such a practice is generally more palatable to physicians than some kind of year-end assessment.

Supplemental Payments to Providers -- The PCP financial incentives discussed before are a special case of supplemental payments to providers. HMOs sometimes have capitation contracts with other provider organizations, such as drug companies, mental health/substance abuse organizations and commercial laboratories that may result in additional payments to these organizations beyond the capitations. Such additional payments are based on how the actual claim experience relates to the experience anticipated in the capitation payments. Such arrangements can either increase or decrease an HMO's claim liabilities in the affected service categories.

Sometimes, HMOs are willing to pay supplemental capitation payments on a retroactive basis to financially troubled provider entities. Liabilities for such actual or anticipated settlements should be established.

Provider Settlements -- The various risk-sharing arrangements discussed above generally involve some kind of year-end settlement procedure with providers. As discussed, these settlements may involve amounts owed by the HMO to providers or to the HMO from the providers. In the latter case, it is important for the valuation actuary to consider the collectibility of such amounts, especially where no contractual withholding provision exists in the provider contracts. This is especially important if such due amounts are netted against liabilities included in the actuary's review. The HMO's practices with regard to the forgiveness of such indebtedness and the financial stability of the providers are also considerations.

Minimum Capital and Surplus Requirements

While a direct analysis of an HMO's capital and surplus level is not under the purview of the valuation actuary, we should still be aware of minimum capital and surplus requirements. After all, the actuary's review of the appropriateness of certain asset and liability items of the balance sheet will impact on the HMO's remaining net capital and surplus.

Current minimum capital and surplus requirements are all over the map, and in many cases it does not require a great deal of start-up capital or surplus to license an HMO. However,

the financial difficulties recently encountered within the HMO industry are bringing about a change in this area.

The recent NAIC Model HMO Bill recommends that an HMO must have a minimum net worth (capital and surplus) of at least the greater of the following:

- $1 million
- 2% of the first $150 million of premium revenues plus 1% of any excess
- 3 months of uncovered health care expenditures
- An amount equal to the sum of:
  - 8% of annual health care costs not including those paid on a capitated basis or a managed hospital payment (MHP) basis, and
  - 4% of annual hospital costs paid on an MHP basis.

The bill recommends a four-year phase-in period to meet this standard for any existing HMOs that do not already qualify under this requirement.

Before issuing a certificate of authority to a new HMO, the bill recommends a minimum net worth of $1.5 million. Once authorized, the minimum net worth requirement is as stated above.

Conclusion

I have tried to discuss those issues that I consider to be the main differences between an indemnity insurance company's and an HMO's short and intermediate term risks. These issues will affect the way the valuation actuary evaluates an HMO's assets and liabilities. While not all states require actuarial opinions about certain HMO liabilities at this time, the trend is certainly in that direction, as it should be. And, as was discussed, it seems appropriate that the actuary should have an awareness of the financial condition of contracted provider entities in rendering such opinions and should not consider the HMO financial data in isolation.