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HMO'S

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1. Structuring an HMO
2. Financing . . . solvency
3. Underwriting

MR. ROBERT H. DOBSON: I will start out with a few definitions because we all use esoteric terms and initials which tend to confuse people. An IPA HMO is an Individual Practice Association and that is basically any number of physicians to whom the HMO is not the primary portion of their practice. In a group model HMO, each physician must devote 50% of his time to the medical group and 35% of the aggregate time of the medical group must be devoted to the HMO. A staff model HMO directly employs the physician rather than contracting with an individual practice association or with a medical group.

The basic differences between the three models center around the relationship of the plan with the individual physicians. The organizational structure has a great effect on the effectiveness of the utilization controls which are crucial to the success of HMO's. It also affects the nature of rate-making and the nature of financial projections. Actuaries are used to dealing with the demand side - - how many services will be utilized and how do you rate to make sure that you have adequate income to cover the costs of the services. In dealing with a staff or group model HMO you also have to be concerned with the supply side - - you have to make sure there will be enough physicians, enough support staff, enough supplies, etc. It really makes the financial projections much more complicated than other things which we are used to dealing with.

I will start with the financial projection for a staff model HMO, rather than with the rate making, because the financial projection is explicitly tied in to the development of rates. With a staff model it is difficult to do one without the other because of the level of fixed overhead and staffing projections. So you cannot just start a non-operational HMO and establish a rate without going through a financial projection and projecting the staff requirements. The first crucial assumption in the financial projections, of course, is the enrollment. Most of the plans that we have worked with project enrollment in four different categories. One is the regular group business, another is Medicare, a third Medicaid and the fourth is fee-for-service. The fee-for-service category represents patients who come to the medical group or to the clinic but are not members of the HMO. Enrollment projections are really critical because of the levels of fixed overhead. There is a need to be conservative, but you also need to be realistic because you might end up short of physicians if you project lower enrollment than is attained. Plans have been hurt by both slower than expected and faster than expected enrollment growth. (Thus, contingency plans and controlled growth are important to balance supply and demand.)

The second crucial assumption is the age/sex distribution and the distribution of contracts by family status. In our particular model and data base, all of the assumptions vary by age/sex. Though in the final rate-making it might come down to a per capita assumption, it is all geared to the particular age/sex distribution of the HMO if it is already operational or the projected age/sex distribution if it is not. The contract distribution becomes important because many HMO's will introduce subsidies among the different types of contract categories. For example, they might put the single premium higher than it needs to be for a single adult, hoping to subsidize the family premium. That is fine if you get the assumed distribution but if you end up with too many families and not enough singles this becomes a real problem.

Outside costs are the costs provided outside of the clinic, such as hospital costs, extended care facilities, specialist referrals, etc. Assumptions are made regarding utilization frequencies and unit cost, similar to the budgeting approach for an IPA. Certain items referred, like laboratory and x-ray, are a direct reflection of how much of this work is assumed to be done in the clinic. The assumed distribution by contract type and assumed age/sex distribution are important factors. If there is more than one enrollment class we would use separate sets of assumptions for each - - for example, Medicare, Medicaid, etc.

In developing a staffing model, you assume the physicians needed per 1,000 enrollees in each of the specialties. Some plans might hire in four or five basic specialties and refer the rest. Other plans might provide for ten or more specialties. The physician utilization will vary by enrollment class and by age/sex distribution. A Medicare group would have a greater physician need but the pediatrician utilization would be zero. A starting minimum staff is assumed and the staffing assumptions are used to determine additions in each specialty area. If you can contract for part of a physician's time, you will not have to hire a full-time physician. We also project the costs of referring to a specialist full-time as opposed to having a staff specialist, using the full-time-equivalent ratio and gross earnings assumptions. Often we find that it is cheaper to hire a specialist, even with a high percent of idle time, than to refer large numbers of patients. The break-even point is usually in the 50% to 60% utilization range, depending upon the specialty.

In developing staffing projections, we put all of the enrollment classes together. As the computer model projects month by month, tests are made for the need to hire a physician based on the combined enrollment projections for the four different categories mentioned earlier. A plan may use physician extenders, nurse practitioners or physician assistants, and assumptions regarding their use need to be made - - how much of a physician's time can they replace and what ratio of physicians to physician extenders will you require. The number of registered nurses and other nurses is related to the number of physicians.

We break clinic overhead into administrative personnel, facilities, equipment, supplies and other costs but this is an oversimplification. Each of these has an assumed fixed cost or an assumed cost per 1,000 members. The assumptions need to be very specific about x-ray supplies, lab supplies, injections, immunizations - - everything that a clinic needs. It is also important that anything not built into the clinic cost gets put in as an outside cost. The fixed cost per member per month will drop dramatically as the enrollment increases.

The different cost items are brought together to obtain the financial projection on an incurred cost basis. The expenses include the outside cost which is simply the product of the projected cost per member per month times the enrollment. Also included are the salaries and fringes for the medical staff, clinic costs and plan administration (as opposed to the clinic administration). This is the point at which inflation is introduced in the projection. It also is the point at which the loan subsidy for a federally qualified HMO is built in. Debt service on the loan, interest earnings on the escrow fund and monthly drawdowns to cover net operating deficits are determined.

We also do a cash basis projection. This will show the balances in the escrow account, which is where the money is placed when a Federal loan is taken before it is actually needed. Assumptions are made regarding the timing of payment of expenses, receipt of income and capital purchases and depreciation to determine the cash position of the HMO.

The final product of the projections is a projected balance sheet which is the reconciliation of the cash flow statement and the incurred income and expense statement.

Our method of rate-making is to set the assumptions and run a projection before we know anything about the rates. We determine an initial trial capitation which is the sum of the cost per member per month for outside costs and the assumed overhead and clinic costs at some month in the future. For example, if the plan wants to break even after 30 months, you might take the total estimated fixed cost in month 30 and divide by the number of members and add that to the outside cost per member per month to get an initial test capitation. There are quite a few adjustments that have to be made to this total. The first is that you have to add the cost of any debt service based on the size of loan you think you will need. You have to add a contingency reserve contribution (if required), premium tax (if any) and then make an adjustment to reflect that the rate sold to a group will typically be guaranteed for twelve months. The plan may only change rates every three months, every six months, or maybe even just once a year so you need to have an inflation-type adjustment. At that point, you develop a trial capitation and run the projection. It may turn out that a loan of \$18 million is required and that you have to go back and fine-tune it. If the results look good, usually the premium turns out to be uncompetitive. So there is a lot of adjusting that is done once you determine the trial capitation and make a financial projection, but that is really when the work starts. The actual premium rates to be charged are developed from the capitation. That is where a lot of confusion has come into HMO work because many management staff persons of HMO's do not understand the distinction between the capitation, which is per member per month income requirement, and premium rates that you need to charge. They also get confused about the fact that the capitation obviously differs greatly depending on how many children you have involved, since the costs per capita differ significantly between children and adults. (Different age mixes make it very difficult to compare experience among plans - - although everybody does it. One plan might have 20% children and another 50% children and if they have identical hospital days experience that obviously does not mean that their results have been identical.) The projection, of course, also builds in a rate increase assumption. The financial plan has to assume a certain level of rate increases over the future because of inflation trends built into the cost items. The HMO will pick this rate increase assumption, not necessarily

based on what they expect their costs to increase, but based on what they think the commercial insurance carriers and Blue Cross rate increases will be in the future. When the projection is completed with rate increase assumptions and inflation assumptions it forms the basis for the loan or whatever other financial commitment the HMO's going to need, as part of an overall financial plan. As actuaries, we know that assumptions never work out exactly and it is very important that the plan be able to change this overall financial plan as the experience emerges. It has been very difficult though to convince HMO management that they need to change the rate increase assumptions when they see the expenses emerging differently from what was budgeted.

I would like to spend a little time talking about what can go wrong. The most obvious thing is that the budget projections and the utilization and cost assumptions can be inadequate. Typically, the assumptions are set as management goals and not necessarily a best estimate assumption with which an actuary might feel comfortable. You end up using an assumption that they must meet to be competitive and then it becomes management's problem to try to meet that assumption. The staffing model assumes that physicians can be hired as soon as it is financially feasible. Well in the real world, you cannot just go out and find a pediatrician on the street the day you decide you need one. Most physicians are hired on a July 1st through June 30 contract year basis. So sometimes we build into the projection initial overstaffing every July 1st ending up with some understaffing in May and June. Other problems include omitted items. If you have a general surgeon on the staff it is easy to think that you have your surgery cost covered and not put in any cost for anesthesiology. There is an item we call other outpatient procedures which is a group of minor items that often are overlooked, such things as allergy testing, hemodialysis and other services that are not done in the clinic but for which the cost may be excluded from outside referrals. The HMO may get a different enrollment mix than was assumed in the premiums and the loan subsidies that were built in may become inadequate. Enrollment assumptions impact on everything, but particularly with government contracts. The government contracts are very favorable to starting out staff model HMO's because they cover their fair share of the excess overhead. So if the Medicare enrollment becomes very crucial, overestimating this enrollment can have a drastic effect on the HMO's financial results. The item that goes wrong every time is referrals. A plan always seems to refer more than they think they will. If a plan grows too fast, it may not have the staff to handle the demand so it refers for primary services also. Referral rates may increase if a plan grows too slowly because the physicians become use to being idle and when somebody comes in who is sick they refer them. The answer is not to be extremely conservative in setting assumptions since you will come up with an uncompetitive rate and the HMO will never open its doors. The answer is to try to be as realistic as possible and to try to make management realize that the projections establish goals that they must meet to be successful. They are not assumptions - - they are goals we are setting for them.

Once the plan is operational, it becomes important to monitor the experience and management needs to have the ability to react to changes in the environment quickly and appropriately. Often the financial statement line items do not tie into the financial projection line items so it is hard to really tell where the deviations are taking place as the experience emerges. The enrollment is always different from what was projected so you try to compare the spread in fixed costs and variable costs to see how you are doing in each of these areas. The General Accounting Office, in reviewing some federally

qualified HMO's, pointed out that there is a real need for a sound cost accounting system and we have observed that need also. There is a further need for an actuarial data base and few plans have one. There is also a need for management to realize that they need to continue using and revising the financial projections. Some of the plans seem to think the projections are something you go through for the Federal government to get qualified, but after that you forget about them.

In closing I would like to make what may be considered a dire prediction. I see a substantial number of insolvencies among federally qualified HMO's. There have already been several significant ones and I do not see any way additional insolvencies will be avoided in the foreseeable future. In my very biased opinion, the biggest single reason is that the plans do not make enough use of actuaries. The Federal government and the plans do not understand the need for actuaries and they do not understand what actuaries can do to forestall their financial problems. They are unwilling to approve and pay for the assistance they need. While they are preaching preventive medicine for their members, I am trying to preach preventive actuarial work and that includes monitoring their experience and reappraising their financial plan as the experience emerges.

MR. ALLEN J. SORBO: I would like to outline one approach, which might be called the "budget approach," for developing rates for fee-for-service IPA-type HMO's. I will limit my discussion to rate development for operational plans with at least one full year of operational experience, and which community rate their groups. Certainly all the data requirements and special considerations I will review are critical determinants regardless of the approach used to determine premium rates. I have some exhibits which summarize the data requirements for rate development financial projections and include a simple example of the approach to be described.

I would like to comment on the data requirements for developing premium rates and financial projections, which are summarized in Exhibit 1.

1. Marketing Projections. This item is fairly self explanatory. It would seem that the more years' experience a Plan has under its belt, the better it will be able to project group penetration rates. Not so -- at least according to Kaiser.
2. Summary of In-Force Groups. This should include, for each group, an indication of the anniversary date, contract distribution (number of single, double and family contracts and average family size), effective premium rates and benefit plan code. This summary is required to project premium revenue at in-force rates to contract anniversary dates and to categorize groups according to benefit plan for expense projection purposes.
3. Claims Experience. One full year's experience should be used as a basis for making projections. State regulations regarding filing of rates will affect the twelve-month period selected, but it is desirable to include at least two months' claim receipts for the last month of the experience period under study, in order to minimize the range of error in the unreported claims estimate.

For IPA's, the source of claims experience is the claims lag report generated by the management information system. This report indicates

the number of claims received and total dollars related to those claims according to the month in which services were provided and the date the claim was received from the provider. Portions of illustrative claim lag reports are included as Exhibits 2, 3 and 4. Generally, claims are at least segregated between hospital services and physician services. It is desirable to separate hospital claims into inpatient and outpatient categories, and to provide separate runs for supplemental benefits, such as prescription drugs, which are a significant cost item. These reports are used to estimate claim lag factors, or completion factors, which are used to develop estimates of unreported claim liability. The dollar amount claimed, not the number of claims, should be used to determine the lag factors, since the billing lag may vary by size of claim. Claim lag factors should be reviewed periodically, because they may change, either with an increase in the number of physicians submitting bills or methods introduced by the HMO to simplify the billing process.

Adjustments to gross claims figures may be indicated as a separate item in the claims lag report, or net figures may be entered into the system. The former approach seems much more desirable, in order to observe trends in adjustment items - - including copayments (if collected by providers), coordination of benefits offset, ineligible services and rejected claims, and physician or provider fees which exceed a scheduled maximum for a service. In projecting claims, it is important to apply the inflation trend factor to the gross amount (including copayments), if copayments are unadjusted, to avoid understating anticipated costs. The value of copayments would subsequently be subtracted from the gross projected cost estimate. It is also desirable to keep separate records on all coordination of benefits (COB), so that the cost projections are not understated (overstated) due to an abnormally high (low) level of COB items during the year.

If enrollment is growing rapidly during the experience period, special attention should be paid to the effect of seasonal trends on the weighted average experience. For example, if the twelve-month period used for analysis ends with the winter quarter, which is seasonally a high-cost quarter, a large increase in enrollment in January will skew the average cost for the twelve months, if the average is determined by dividing total estimated claims by total member months. An arithmetic average of the capitated cost estimates for each month would provide a better estimate perhaps. Claims experience should be segregated by population sector and benefit plan - - including employer groups (high and low options), Medicare, Medicaid and individual enrollment. Utilization experience may differ between low option and high option plans offered to employer groups, due perhaps to different copayment levels or socio-demographic characteristics. The Federal HMO law does not expressly prohibit a qualified plan from establishing a separate community-rating basis for different options.

The HMO may have special contracts with providers - - for example, a fixed capitation with a mental clinic, private laboratory or chain of drug stores (or pharmaceutical society). Separate claims reports will be required in these cases for contract negotiation purposes and claims from these providers should not be included in the aggregate summaries.

In projecting claims cost, changes in utilization patterns may be anticipated due to the introduction or tightening of controls, or due to

definitely observed shifts during the observation period itself. Such changes would, of course, be agreed to in advance by the HMO management and the IPA member physicians, who are generally at risk if the projected changes do not materialize.

Enrollment by month and population sector/benefit plan for the experience period is required to compute the cost per enrollee per month, which will be the basis for the expense projections.

Most management information systems are able to develop claim lag reports, as well as utilization summaries, by group. These reports facilitate the renew or not-renew decision by the HMO management.

4. **Inflation Trends.** Inflationary factors are always very difficult to project, even for periods as short as one year; however, for an HMO, the inflation risk may be greatly reduced (or perhaps eliminated) over the short term, depending on the provider risk-sharing agreements. If the IPA physician members are at 100% risk for the provision of physician services, then the cost for these services is absolutely fixed for the effective period of the negotiated IPA capitation. The capitation may be negotiated for a specified twelve-month period (Plan-year basis) or may be fixed on a contract-year basis (i.e., the agreed-to capitation will be the source of all payments to providers until the next anniversary date of each group renewing or enrolling during a specified period). The HMO may have fixed per diem contracts with its contract hospitals, perhaps with some retrospective adjustment should actual costs exceed a specified range. Governmental influences must also be considered - - for example, decisions by State Rate Review Commissions which approve prospective hospital per diems or hospital rate schedules. The timing of projected rate increases will be significant if all hospitals change rates at the same time (as is the case in Minneapolis).
5. **Administrative Budget.** This would include all the salaries and fringes, rent, printing and reproduction, postage, depreciation, etc., related to both the general administration and marketing of the Plan. Naturally, the budget should coincide reasonably with the marketing plan. The cost of the management information system and debt service (for a federally qualified plan with a large start-up loan) are significant expense items. Special items related to HMO's include the cost of providing health education services and utilization review programs. After break-even, an IPA plan should be able to operate within an administrative budget that is 8% - 10% of premium.
6. **Miscellaneous Expense Items.** The principal factor included in this category is reinsurance. The cost projections should take into consideration anticipated changes in the reinsurance contract, such as changes in applicable deductibles, coinsurance levels and covered services.
7. **Miscellaneous Income Items.** This category includes interest on claim reserves, government-mandated reserves, and the federal loan escrow fund. Interest income can be a significant item for a large plan which realizes the return on the reserves in the IPA-physician pool. Otherwise, this interest income would accrue to the physicians. Also included as miscellaneous income would be copayments which are billed for and collected by the HMO, with an appropriate adjustment for bad debts.

8. **Benefit Changes.** Adjustments in the expense projections would be required as a result of liberalizations or reductions in plan benefits - such as, removal or introduction of copayments or expansion of mental health benefits. Additional cost items would be needed for the addition of new benefits.
9. **Surplus/Contingency Margin and Budgeted Deficit/Loan.** Certainly, the appropriate loading for contingencies must consider the amount of risk related to each expense item. The risk will depend on the provisions of the risk-sharing agreements with the providers. For most IPA's, the physicians are at least 100% at risk for the cost of physician and related services. Many plans share the risk for hospital expenses with the IPA. Thus, the HMO's risk is generally limited to adverse fluctuations in the following items: inpatient utilization, hospital per diem charges, administrative expenses, claims under the reinsurance contract, coordination of benefits, enrollment and contract distribution (contract size). Surplus margin must be included in the rates to provide for repayment of any previous loan and to meet state and federal reserve accrual requirements. Typical state reserve requirements would be 1% - 2% of premium accumulated to a maximum amount (\$250,000-\$500,000). Plans may be granted waivers from reserves depending on their provider risk-sharing agreements and the presence of insolvency coverage and conversion options (i.e., a positive demonstration of ability to provide services in the event of insolvency). Prior to break-even, a plan must operate within a budgeted deficit, which creates an additional constraint on the rates.

Exhibits 5-11 outline the determination of rates for a specific case. The basic assumptions for this example are indicated in Exhibit 5. Exhibit 10 shows how the capitation rate is calculated as the balancing item in the projected statement of income and expenses. While this illustration, which considers the case of a new plan which has not yet achieved break-even, includes only a one-year projection, it would seem desirable to do a financial projection, based on revised enrollment and cost assumptions, to re-determine the projected break-even point each year. I would finally like to take a brief look at special considerations in determining group rating structures.

One federal definition of community rating, as it applies to qualified plans, is that all premium rates be based on the same capitation amount per enrollee per month. Thus, premium rates can be established based on group-specific contract distribution and family size characteristics. Too, the ratios between rates may be established at a level commensurate to the ratios of the competing Blue Cross or indemnity carrier (or other competing HMO's), in order to preserve a reasonable relationship between the employee contribution levels, if any are required. Contract distributions vary considerably by industry and the potential impact on plan marketing efforts of combining groups with similar characteristics for rating purposes should be analyzed. Also, the contract mix may vary between groups of contracts with different rating structures - - for example, two-tier rates versus three-tier rates. A decision must be made as to whether the rates in these cases will reflect the actual distributions of groups within each rating basis, or be based on an average mix of all groups. If the latter route is taken, and the subsequent average mix shifts because of a large shift in the relative number of groups with three-tier versus two-tier rates, then the average income per enrollee may shift significantly to the benefit of or detriment to the HMO, unless the shift was anticipated in the rating structure.

Adjustments may be made to family rates for variations in dependent definitions. Different loadings for administrative expenses may be used for individual contracts, small groups and large groups. The federal HMO law permits such a variation in rates established by qualified plans to recognize differences in the cost of administration and marketing.

MR. PETER L. HUTCHINGS: Blue Cross and Blue Shield of Greater New York is the company that I represent. We are one of the largest such organizations in the country. We sell hospital and surgical medical insurance and drug and dental and, for approximately 25,000 of our people, we are also an HMO.

We have four different relationships with HMO's. First of all, we are an employer (offering the HMO option to our employees). Secondly, for a great many of the groups, we are the reference point against which the employee contribution is measured. That is, we are the conventional insurer (competing on a dual choice basis with HMO's). For example, if in a particular group, the Blue Cross and Blue Shield and major medical rate is \$70 and the HMO rate is \$80 the employees would pay \$10 (assuming employer-pay-all under the conventional plan). As the conventional insurer our \$70 premium is a partial determinant of the \$10 contribution. The third role that we play with respect to HMO's is that we are one ourselves. We have a two site operation with about 25,000 people. The site locations include the Long Island Jewish Hillside Medical Center and Montefiore, two New York area hospitals. Our fourth relationship is that we do cover the hospital risk for some of the non-Blue controlled HMO's in our area.

I am sure you have noticed that there are some apparent contradictions and ambiguities in sub-contracting to your competition, being in the HMO business on your own and being in the conventional insurance business, all at the same time. We believe corporately, and I believe personally, that the idea of an ultimate delivery system for those people who wish to get their care in this fashion makes good sense and we think it is important to our company to participate in that movement in a variety of ways. Now, in our capacity as conventional insurer, we play this key role of, in effect, determining the rate differential that the HMO has to market.

It is important to note that the HMO product is not insurance or even group coverage. That is, if an HMO, either through a federal mandate or good salesmanship, succeeds in selling its plan to the employer, it has accomplished nothing at all until it gets to the individual employees and convinces them to come on board, to pay the rate differential, and (perhaps) to change the doctor relationship that they may have established. Our HMO is organized along lines of the staff model requiring enrollees to sever their relationship with their existing doctors and other medical care providers as a pre-condition to coming on board because our HMO only provides care in these specific sites. The point I am making is that the HMO business is not particularly insurance, since it is really the provision of care, and it is not particularly group, since it gets down to one on one decision making by the employee and spouse.

There was a time when one of the characteristics of the HMO movement was to offer significantly broader benefits than the conventional insurer for significantly more money. In the New York area, as a result of state mandates, the conventional Blue Cross is much more comprehensive than it was a few years ago and such things as full service maternity for the whole family are now included. Such things as out-patient care on a service basis have now

been mandated so the benefits are coming closer together. There still are important benefit differences of course - - routine physicals and pediatric visits are common in the HMO design and are infrequently found in the conventional package.

In our capacity as a sub-contractor to HMO's, covering the hospital risk, there is a delicate relationship in that we have to prove that our company has something to offer to these HMO's. In New York, at least, the HMO's have the alternative of dealing directly with the hospitals on a basis comparable to our own from a financial point of view so we have to market ourselves in terms of ease of administration, economy of operation, utilization review capabilities and administrative expense. Whether or not an HMO will sub-contract for the hospital piece of their product gets down to individual decision making by the HMO leadership. The Blue Cross business is complex enough and the HMO business is complex enough. HMO's have their work cut out for them doing what they are supposed to do and we can provide a service within our own area of expertise.

Finally, as an HMO, we have the two site operation which I have alluded to before. We are not a federally qualified HMO. Under New York State law, we have been able to gain one of the key federal benefits which involves having the right of access to an employer. By going the state qualification route, we have this option open to us without getting all bogged down with federal red tape with which we are all so familiar. As a by-product of this we never did seek nor did we receive the kind of massive federal dollars that some of the federally qualified HMO's have. My own view is that the existence of large sums of federal money is as important a contributor to the insolvency problems of small emerging HMO's as their lack of actuarial or financial expertise. The federal money gives these scratch operations the ability over a short period of time to operate in a fiscally unsound way without suffering the consequences. It is sort of addictive and when the federal money starts to taper down or dries up, the withdrawal can be very severe.

It should be noted that the people who start HMO's are not really looking to go into a branch of the insurance business. As a matter of fact, they are looking to be as far away as they can from the insurance business. Their vision, by and large, involves such ideas as how care should be rendered to people, how doctors should organize for such matters as peer review, how utilization of hospitals should be changed from an in-patient to an out-patient mode. In other words, their vision is more a health care vision than an insurance vision. This is, of course, one of the strengths of the HMO movement. However, it does lead to difficulties if there is a lack of financial orientation or sophistication among the decision makers.

Getting back, for just a moment, to the economics of employee contributions, we can observe the leverage of the price difference between an HMO and the conventional plan. Take the case of a \$70 conventional plan rate (employer-pay-all) competing against an \$80 HMO rate. Note that a \$5 increase in the HMO rate produces a 50% increase in the employee contribution (from \$10 to \$15). So a relatively modest change in either the Blue Cross reference rate or the HMO rate can lead to dramatic swings in the employee contribution and this, combined with the perennial enrollment problems of emerging HMO's, leads to chronic underpricing of the product and a certain mañana philosophy that can be most dangerous.

Our company works entirely within the health field and has from the day we were founded over 40 years ago. But even for a company that has grown up in

the health business in the local area and has had no other lines of business, there are problems in adjusting to the kinds of challenges that are involved in the HMO business. As one example, our own marketing organization has had to shift from an orientation towards the group decision maker and has had to re-assess what their job is because, as I mentioned before, getting into a group means exactly nothing - - you have to get individual people to choose. This has been a great mental adjustment for our marketing people. On the financial side, when our HMO was started, we utilized a three-way rate in which the rate for a two-person family was double and the rate for a three-person family was triple the single-person rate. This approach produced a strong incentive for specifically two-person family membership, and a two-person family membership turns out to be a problem. While many two-person families are young families without children, many other two-person families are in their forties or fifties with no children dependents. The average age of the two-person population is significantly above that of the three-or-more-person family. We had to reverse our tracks because we were drawing too many two-person families and go from a three-rate approach to a two-rate approach. This involved a significant rate increase for the two-person families in order to produce a more representative draw in terms of people, families and ages.

I would like to sum up by saying the HMO movement is a system offering alternatives in the delivery of care. It is not particularly an insurance system as such and the people in it are not, in many cases, particularly financially oriented. For those of us who have that background and training, this can be a kind of surprising weakness. The compensating strength that these people possess is their vision - - a vision which is shared by a growing number of Americans as to how well care can be rendered. As the future develops, I think that the surviving HMO's, as they either choose to or perhaps are forced to develop a degree of financial acumen, will become progressively a more important part of the American scene. From a Blue Cross/Blue Shield perspective, our objective is to relate to that trend in as many ways and from as many perspectives as we can.

MR. JOHN HAYNES MILLER: I know very little about HMO's but I am interested in the concept and my interest goes back far earlier than the origin of the term HMO. About 50 years ago I read with considerable interest an article in one of the national magazines about a revolutionary new concept of medicine which had been set up by the Ross-Loos Medical Clinic in Southern California, which was, as far as I know, the first group medical care plan operating on capitation basis. Years later, the doctors decided they should offer comprehensive protection. They considered the building or purchase of a hospital, which would have put them on a par with Kaiser-Permanente, but instead they decided to create an insurance company which would offer group hospitalization. Then they could provide this complete package - - a service agreement for medical care and a hospital contract which would not only pay most of the hospital costs but would have an additional advantage of free choice of hospital within a limited number - - maybe six or eight. The interesting thing to me was the relative cost and the comparatively low utilization rate of hospital services - - shorter stays and lower admission rates. At the Group Health Association in Washington, D.C., I found much the same situation - - lower utilization and, presumably, lower overall costs - - but instead of being directed by a group of doctors, this was a community-sponsored organization with a lay Board of Directors representing the members or consumers. It occurred to me that there was a basic difference between these and traditional insurance coverages. From the standpoint of management and financial control, the HMO is a monolithic structure as compared to the dichotomy

of the doctors on one hand and the hospitals on the other. Both doctors and hospitals are interested in providing the best care at the lowest cost but neither really has any control over the other, whereas with the HMO, which is typified by Ross-Loos, Group Health or Kaiser-Permanente, there is a single hand on the purse strings. If HMO costs are allowed to go up faster than necessary by either the hospital or the doctors, the choice would be to reduce the income to one or the other or to raise the charge to the public, which might put the HMO at a competitive disadvantage. So I have seen in these cases not only a method of effectively delivering complete medical care with perhaps more emphasis on prevention, but also a means of controlling costs more effectively than is possible through other traditional methods. My question is: Is there any validity to this impression? What I have read about HMO's, to my recollection, has never mentioned this financial control aspect - - does it exist? And if so, do you have any comments on it?

MR. DOBSON: Yes, I think it very definitely exists and some federally qualified plans have been a little weak on stressing that they do end up costing more but they have the big advantages that you pointed out. They cost more because they offer more benefits and they do not seem to come across and stress that quite as much as they can. They need to emphasize the difference in the programs and try to sell the fact that there are no major deductible or co-insurance requirements in the HMO, and sell the advantages more effectively instead of trying to act like they are selling just another insurance program.

MR. SORBO: An HMO has been defined as an organized system of health care which guarantees to provide or arrange for the provision of health care services to a closed group of enrollees for a fixed premium. Note the inclusion of the term "organized," which with respect to federally qualified HMO's means they must meet a stringent set of requirements as to how they are going to provide and manage the provision of services to their enrollees and keep track of what is happening in terms of the cost of providing those services.

MR. RICHARD A. BURROWS: From my understanding of HMO's, it might be wrapped up in how you might calculate a premium. I will defer to the better experience on the panel as to how this is done, but it seems that fee and utilization assumptions do not apply anymore (to the ratemaking process). You go to the marketing department and ask what the enrollment will be for the next year, and you go to plan administration and obtain the budget. You divide the one by the other to determine the capitation rate, and all the actuary has to do is convert it to the desired rating breakdown. Of course, then the rates are found to be noncompetitive and you have to cut the budget or adjust the enrollment projections. Now I presume this is oversimplified, but it simplifies the whole actuarial problem.

MR. SORBO: I hope that our presentations clearly indicated that you still have to keep close tabs on the utilization and unit cost experience - - both for staff models and IPA's. A claim lag report is used to determine the estimated experience for IPA's on an aggregate basis and other reports are available to take a look at the utilization and cost of specific services if it is determined that something is going awry and you want to find out where the experience is varying from the budget.

MR. ROBERT J. DYMOWSKI: I would like to compliment the panel for a very thorough and very interesting discussion. Peter's comments raised a question that I will direct first to him. I would like some discussion of the

impact of HMO enrollment on the cost of the traditional insured plan. You commented on the impact of changes in the indemnity plan rates or Blue Cross rates as opposed to the HMO rates and I wonder if you could comment briefly on how a group gets further reflection of the experience of the HMO subscribers, or if it is tracked in any way. Have you noticed any significantly higher HMO enrollment among groups that have had poor experience under your traditional programs and therefore have higher experience rated premium and perhaps a lesser differential?

MR. HUTCHINGS: I think it is fair to say that the penetration within a specific experience-rated group of any HMO, ours or anybody else's, will indeed be very sensitive to the employee out-of-pocket differential. It is more difficult for the enrollment department to get individuals within a group to pony up \$20 to \$30 a month for benefits. Our marketing department tends to avoid wasting its time on situations where the gap is inordinate. People will pay significantly more money for significantly better benefits, but a point exists at which it becomes an impossible marketing problem.

As to the relationship between the experience rated group and its HMO members, our practice in the New York City area is to not reflect back to the group any characteristics of its HMO membership. Let me take an extreme example. Suppose we had a group of 100 people and 40 of them joined the HMO. The 40 that joined the HMO never used any HMO services. They just paid their money and stayed home. No financial benefit would roll back to the group as a result of their favorable HMO experience whereas if the other 60 people did not use their coverage at all, then the rates would tend to go down and the dividends would tend to go up and there would be that linkage.

One reason that we do not exchange money on the HMO component of an experience-rated group is there is really no good basis to do so. The definition of an HMO given by Allen almost gives you the reason. The fixed payment buys access to a delivery system. Whether an individual or a group of individuals utilize that system heavily or not so heavily or not at all does not affect the employer's cost. It could be contended that Medicare, as a quasi-insurer, leans the other way. The Medicare people do pay more attention to characteristics of their own population.

There are fundamental bedrock incompatibilities between the experience-rating operation in which we grew up and this little community-rated chip of that experience rated group that has decided to go in the HMO direction. It may be that as HMO's in our plan area become more important you will see more impact on the non-HMO group. As an example, if the young and prevention oriented people enroll in the HMO, all other things being equal, you would expect to see experience deterioration in the non-HMO group -- in some of the parts of the country where the HMO involvement is much greater than in our own area, this is a measurable result. At this point in our own area, however, this is mostly in the range of an academic possibility because of the relative size of the two modes.

MR. JAMES P. GALASSO: Given the very unconventional funding arrangements that now exist in the group market place (types of self-insurance), the conventional insurance premium that Mr. Hutchings referred to is often not so conventional anymore. How are these approaches reconciled with the premium that the employer has to pay to the HMO? What problems have come up in these cases and how have they been solved?

MR. HUTCHINGS: Well, there are problems in determining the comparison point for this contribution. Suppose you are a national employer who has historically paid a uniform rate to provide for your conventional health insurance across the country. Do you want to use a uniform rate for the benchmark for Alabama HMO's, South California HMO's and New York City HMO's, or should you try to disaggregate your conventional rate by area? How do you handle the case in which the individual/family mix of your HMO's is different from the individual/family mix of your employees in the conventional plan? I am not sure that even as obvious a question as that has been definitely resolved - - the responsibilities are essentially between the employer and, in the case of a federally qualified plan, the federal government.

We have on occasion been asked to supply data and ideas to the employer so that he can calculate the appropriate differential and we do this as a service. But we do not express an opinion as to the ins and outs of this calculation. Since Blue Cross and Blue Shield in the New York City area is not a premium tax payer, no particular benefit is served for our customers by some of the unconventional funding arrangements. So we have not had to wrestle with the issues. In my personal opinion the area and mix problems are significant and are not definitively solved.

MR. SORBO: I might just mention that the federal dual choice regulations specify how employers are to determine their contribution to an HMO. They presumably handle every situation from the simple community-rated case to self-insurance. For a self-insured plan, the employer should use a best estimate of incurred claims cost over the past 12-month period, apply some inflation factor, and, provided there is justification, may adjust for anticipated changes in the insured-plan group mix after people enroll in the HMO. One problem which has occurred is that in some cases it appears the employer is using paid claims experience, rather than an estimate of incurred claims cost, to determine the contribution to an HMO. Of course, this may understate incurred claims considerably, if the group of employees increased in size during the year. The problem is that in some cases, it is very difficult for the employer to estimate unreported claim liabilities, but the regulations say that an estimate must be made.

EXHIBIT 1

DATA REQUIREMENTS FOR DEVELOPING RATES AND FINANCIAL PROJECTIONS

- A. Marketing Projections
- B. Summary of In-Force Groups
 - 1. Anniversary Dates
 - 2. Contract Distribution
 - 3. Premium Rates
 - 4. Benefit Plan/Population Sector
- C. Claims Experience (Claims Lag Report)
 - 1. Benefit Type
 - 2. Adjustments to Gross Claims
 - 3. Seasonal Trends
 - 4. Benefit Plan/Population Sector
 - 5. Special Provider Contracts
 - 6. Changes in Utilization Patterns
 - 7. Enrollment by Month
 - 8. Group Specific
- D. Inflation
- E. Administrative Budget
- F. Miscellaneous Expenses --- Reinsurance
- G. Miscellaneous Income
 - 1. Interest
 - 2. Copayments
- H. Benefit Changes
- I. Surplus/Contingency Margin or Budgeted Deficit/Loan
 - 1. Federal and State Reserves
 - 2. Risk-Sharing as a Determinant

EXHIBIT 2
SAMPLE CLAIM LAG REPORT

JANUARY 1978 POSTINGS
BY MONTH OF SERVICE

REPORT NO: WHC369.01
JOB NUMBER: WHCA60
DATE: 02-01-78

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SVC DATE	--- P H Y S I C I A N S ---		F U N D ---	----- G E N E R A L F U N D -----			TOTAL NET
	TOTAL	C.O.B.		NET	TOTAL	C.O.B.	
OCT 75	18.00-	.00	18.00-	.00	.00	.00	18.00-
MARCH 76	.00	.00	.00	1,111.00	.00	1,111.00	1,111.00
MAY 76	15.00	.00	15.00	.00	.00	.00	15.00
JULY 76	20.00	.00	20.00	75.00	.00	75.00	95.00
SEPT 76	30.50	.00	30.50	.00	.00	.00	30.50
OCT 76	24.90	.00	24.90	.00	.00	.00	24.90
DEC 76	20.00	.00	20.00	.00	.00	.00	20.00
JAN 77	20.00	.00	20.00	.00	.00	.00	20.00
FEB 77	37.00	.00	37.00	141.00	.00	141.00	178.00
MARCH 77	60.00	10.40-	49.60	1,514.13-	1,595.77	81.64	131.24
APRIL 77	75.51	.00	75.51	1,106.63	.00	1,106.63	1,182.14
MAY 77	149.75	106.88-	42.87	138.70	.00	138.70	181.57
JUNE 77	44.00	.00	44.00	76.00	.00	76.00	120.00
JULY 77	1,027.50	103.26-	924.24	78.75	.00	78.75	1,002.99
AUG 77	707.81	159.60-	548.21	21,943.15	21,818.02-	125.13	673.34
SEPT 77	2,544.60	933.80-	1,610.80	2,367.78	1,962.72-	405.06	2,015.86
OCT 77	8,768.72	3,657.09-	5,111.63	10,755.58	4,324.10-	6,431.48	11,543.11
NOV 77	16,973.51	1,109.80-	15,863.71	70,593.85	28,816.78-	41,777.07	57,640.78
DEC 77	34,419.95	2,741.93-	31,678.02	67,729.97	27,325.87-	40,404.10	72,082.12
JAN 78	27,158.25	10,501.16-	16,657.09	15,030.93	5,474.98-	9,555.95	26,213.04

TOTALS	92,079.00	19,323.92-	72,755.08	189,634.21	88,126.70-	101,507.51	174,262.59

DISCUSSION FORUM

EXHIBIT 3

SAMPLE CLAIM LAG REPORT

	PHYSICIAN SERVICES			HOSPITAL OUTPATIENT			HOSPITAL INPATIENT		
	#	%	AMOUNT CLAIMED	#	%	AMOUNT CLAIMED	#	%	AMOUNT CLAIMED
INCURRED NOV 76	913	28.92	23,703	100	51.81	6,170	28	32.56	20,422
1ST MONTH FOLLOWING	1,532	48.53	53,647	60	31.09	3,725	48	55.81	52,358
2ND MONTH FOLLOWING	458	14.51	21,773	18	9.33	1,106	4	4.65	1,299
3RD MONTH FOLLOWING	84	2.66	3,158	9	4.66	341	1	1.16	175
4TH MONTH FOLLOWING	46	1.46	2,676	1	0.52	39	0	0.00	0
5TH MONTH FOLLOWING	44	1.39	1,759	3	1.55	391	1	1.16	366
6TH MONTH & OLDER	80	2.53	6,086	2	1.04	54	4	4.65	780
TOTAL	3,157		112,802	193		11,826	86		75,400

TOTAL MEDICAL SERVICES

#	%	AMOUNT CLAIMED	CO-PAY AMOUNT	DISALW AMOUNT	RESRVE AMOUNT	AMOUNT PAYABLE	AMOUNT PAID
1,041	30.30	50,295	1,159	1,209	4,482	0	43,445
1,640	47.73	109,731	3,703	6,676	9,754	0	89,597
480	13.97	24,179	223	2,150	3,838	0	17,968
94	2.74	3,675	117	172	515	0	2,870
47	1.37	2,715	36	431	436	0	1,812
48	1.40	2,515	78	117	333	0	1,987
86	2.50	6,919	587	514	1,256	571	3,991
3,436		200,028	5,903	11,270	20,615	571	161,670

HMO'S

EXHIBIT 4

SAMPLE CLAIM LAG REPORT

BY DATE OF SERVICE

PRIVATE PAY

	MAR	FEB	JAN	DEC	NOV	OCT	SEP	AUG	JUL
PHYSICIAN CLAIMS									
BILLED	1,329	2,473	2,689	2,162	2,105	2,295	2,256	1,967	2,044
PAID	104	1,219	2,134	2,004	2,044	2,265	2,229	1,937	2,018
UNPAID	1,225	1,254	555	158	61	30	27	30	26
\$ BILLED	31,027	61,217	70,493	48,443	47,467	54,065	50,957	44,896	45,613
\$ PAID	1,765	24,913	49,255	39,583	41,003	47,626	44,943	38,795	41,409
\$ DISA	46	1,421	3,713	4,082	4,029	4,934	4,710	4,782	3,676
\$ UNPAID	29,215	34,883	17,525	4,779	2,435	1,505	1,303	1,318	528
HOSPITAL CLAIMS									
BILLED	156	344	368	276	290	306	264	262	287
PAID	2	109	314	255	284	300	263	261	286
UNPAID	154	235	54	21	6	6	1	1	1
\$ BILLED	20,433	55,336	60,572	42,946	43,268	60,149	33,124	40,767	49,991
\$ PAID	514	10,807	41,772	35,440	37,223	53,809	29,219	36,107	43,717
\$ DISA	39	1,641	4,394	4,500	5,406	5,893	3,708	4,574	6,259
\$ UNPAID	19,880	42,888	14,406	3,007	639	447	196	85	15
OTHER CLAIMS									
BILLED	9	10	6	7	12	7	9	7	6
PAID	1	6	5	4	12	6	8	7	6
UNPAID	8	4	1	3		1	1		
\$ BILLED	165	355	753	874	310	193	828	107	190
\$ PAID	1	151	397	46	234	129	805	106	123
\$ DISA		124	349	18	76	80	22	2	66
\$ UNPAID	164	80	8	811		5	2		

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DISCUSSION FORUM

EXHIBIT 5

ASSUMPTIONS FOR ILLUSTRATIVE RATE DEVELOPMENT AND
FINANCIAL PROJECTION FOR A FEE-FOR-SERVICE IPA-TYPE HMO

1. One Benefit Plan --- No Benefit Changes Proposed
2. All Groups Community Rated --- No Realignment Based on Group-Specific Characteristics
3. Employer Groups Only --- No Medicare or Medicaid
4. Copayments Collected by Providers
5. Provider Agreements ---
 - a. Hospitals Paid Billed Charges
 - b. Physicians Reimbursed 80% of UCR up to Maximum; Payments to Physicians Limited to Availability of Funds Accumulated Through Capitation Payments (i.e., Physicians at risk for their services; 20% of billed fee is withheld in a contingency reserve for fluctuations).
6. Fiscal Year --- April 1 - March 31
7. Premium Rates --- Change Every Six Months with Twelve-Month Guarantee for Each Group
8. Inflation

--- Hospital Inpatient	12%
--- Hospital Outpatient	16%
--- Physician	7%
9. Budgeted Deficit --- \$450,000
10. Federally Qualified Plan, Operational Since April 1, 1978

DISCUSSION FORUM

EXHIBIT 6

SUMMARY OF IN FORCE AS OF DECEMBER 31, 1978

<u>Renewal Month</u>	<u>Contract Mix</u>			<u>Family Members</u>
	<u>Single</u>	<u>Double</u>	<u>Family</u>	
January	500	200	600	2,280
February	25	10	50	210
March				
April	100	50	50	225
May	75	45	25	100
June				
July	300	150	250	1,050
August				
September				
October	150	100	125	525
November				
December	<u>100</u>	<u>70</u>	<u>150</u>	<u>610</u>
Total	1,250	625	1,250	5,000

<u>Current Premium Rates</u>	<u>Single</u>	<u>Double</u>	<u>Family</u>
April-September Cases	\$37.50	\$75.00	\$103.00
October-March Cases	39.50	79.00	108.50

EXHIBIT 7

ESTIMATE OF GROSS INCURRED CLAIMS COST

Member Months		<u>Hospital Inpatient</u>			<u>Hospital Outpatient</u>			<u>Physician</u>		
		<u>Amount Received</u>	<u>Lag Factor</u>	<u>Estimated Amount Incurred</u>	<u>Amount Received</u>	<u>Lag Factor</u>	<u>Estimated Amount Incurred</u>	<u>Amount Received</u>	<u>Lag Factor</u>	<u>Estimated Amount Incurred</u>
6,700	January	\$ 83,800	1.00	\$ 83,800	\$10,000	1.00	\$ 10,000	\$124,500	1.00	\$124,500
6,750	February	74,400	1.00	74,400	10,200	1.00	10,200	108,000	1.00	108,000
6,750	March	101,600	1.00	101,600	9,100	1.00	9,100	142,600	.99	144,000
6,850	April	68,600	1.00	68,600	10,300	1.00	10,300	108,500	.99	109,600
6,900	May	73,500	1.00	73,500	10,500	1.00	10,500	116,600	.98	119,000
6,900	June	78,400	1.00	78,400	14,500	1.00	14,500	105,800	.96	110,200
7,150	July	65,700	1.00	65,700	14,100	.99	14,200	87,300	.94	92,900
7,150	August	72,400	1.00	72,400	15,600	.97	16,100	96,800	.92	105,200
7,150	September	81,800	.98	83,500	10,000	.94	10,600	118,300	.90	131,400
7,300	October	85,900	.96	89,500	11,600	.90	12,900	86,500	.85	101,800
7,300	November	87,400	.92	95,000	12,500	.85	14,700	109,500	.80	136,900
<u>7,500</u>	December	89,200	.85	<u>105,000</u>	11,400	.80	<u>14,200</u>	90,900	.60	<u>151,500</u>
84,400				\$991,200			\$147,300			\$1,435,000
	Capitated Cost			\$ 11.75			\$ 1.75			\$ 17.00

HMO'S

EXHIBIT 8

PROJECTED MEDICAL EXPENSE FACTORS

1. Hospital Inpatient

Incurring Claim Estimate		\$11.75
Inflation (1½ years at 12% per year)	x	1.152
Projected Utilization Change	x	<u>.90</u>
Projected Cost, 1979		\$12.18

2. Hospital Outpatient

Incurring Claim Estimate (Gross)		\$ 1.75
Inflation (1½ years at 16% per year)	x	<u>1.204</u>
Projected Gross Cost, 1979		\$ 2.11
Copayments	-	<u>.25</u>
Projected Net Cost, 1979		\$ 1.86

3. Physician

Incurring Claim Estimate		\$17.00
Inflation (1½ years at 7% per year)	x	<u>1.088</u>
Projected Gross Cost, 1979		\$18.50
Copayments	-	<u>1.25</u>
Projected Net Cost, 1979		\$17.25

EXHIBIT 9
ENROLLMENT PROJECTIONS

	<u>New Members</u>	<u>Total Members</u>
January 1980	1,000	8,500
February	50	8,550
March		8,550
April	200	8,750
May		8,750
June		8,750
July	1,500	10,250
August		10,250
September		10,250
October	750	11,000
November		11,000
December		11,000
January 1981	1,750	12,750
February	75	12,825
March		12,825
Member Months (April 1980 - March 1981)		128,400

EXHIBIT 10

DETERMINATION OF RATE FACTORS FOR FISCAL YEAR 1981

I. PARTIAL PROJECTED STATEMENT OF INCOME AND EXPENSE

Income

Premium	\$1,798,600
Interest (Escrow Fund, Claim Reserves, State Reserve)	<u>25,000</u>
	\$1,823,600

Expenses

Medical

Physician (128,400 x \$17.25)	\$2,214,900
Hospital Inpatient (128,400 x \$12.18)	1,563,900
Hospital Outpatient (128,400 x \$1.86)	238,800
Reinsurance (net)	49,200
Administration and Marketing	600,000
Debt Service	115,600
Reserve Accrual (1.0% of Premium)	<u>18,000</u>
	\$4,800,400

NOTE: Premium includes all amounts projected to be paid up to contract renewal dates during Fiscal Year 1981.

EXHIBIT 10

(Continued)

II. CALCULATION OF FISCAL YEAR 1981 CAPITATION RATES

A. Expenses	\$4,800,400
B. Less Income at Old Rates	- 1,823,600
C. Less Budgeted Deficit (Loan)	- <u>450,000</u>
	\$2,526,800

Member Months at New Rates

April 1980 - September 1980	38,765
October 1980 - March 1981	31,700

New Rates, Net of Reserve Accrual

$38,765 \times R + 31,700 \times R \times 1.05 =$	\$2,526,800
April 1980 - September 1980 Rate = R =	\$ 35.07
October 1980 - March 1981 Rate = R x 1.05 =	\$ 36.82

New Rates, Including Reserve Accrual (1% of Rate)

April 1980 - September 1980	\$ 35.42
October 1980 - March 1981	\$ 37.19

DISCUSSION FORUM

EXHIBIT 11

PREMIUM RATES, FISCAL YEAR 1981

	<u>April 1980 - September 1980</u>	<u>October 1980 - March 1981</u>
Capitation	\$ 35.42	\$ 37.19
Single	44.75	47.00
Double	89.50	94.00
Family	123.00	129.25

NOTE: These rates represent over a 19% increase over the old rates. If this rate hike undermines the enrollment projections, budget may have to be revised --- renegotiate with providers, analyze administrative budget, etc.