RECORD OF SOCIETY OF ACTUARIES
1985 VOL. 11 NO. 4B

RISK SELECTION IN MULTIPLE CHOICE BENEFIT PROGRAMS

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- Actuarial implications of individual choice
- Antiselection problems for medical coverages
- Plan design considerations
- Flexible benefits program experience
- Impact of alternative delivery systems on insured plans

MR. R. JAY BECKER: Cafeteria benefits are a package of benefits where the employees choose which coverages they want and the level of benefits within those coverages. The coverages could be medical, dental, life, accidental death and dismemberment (AD&D), short or long term disability (LTD), and any others. The term flexible benefits has taken on a broader meaning in that it is now used to describe any type of employee choice in an employee benefits plan. The most comprehensive use of the term would match the concept of a cafeteria plan. Currently, most employers want to give their employees some choice, but there is a wide variety of opinion about how much choice is appropriate. For example, even a company with only an HMO option on its traditional plan might say it has a flexible benefits plan (FBP).

When I first started working with FBPs, early in 1979, I read a lot of articles, and each contained a sentence that caught my eye. The sentence stated that antiselection can be controlled by appropriate plan design. My topics are concerned with the presence of antiselection in FBPs, specifically the issues that arise and the questions that an actuary and/or consultant would be involved with in discussing antiselection. The thought that antiselection is frightening, ruins your plan, costs a lot of money, and should be avoided at all costs, arises from the principles of both individual and group insurance. In fact, antiselection is sometimes part of the basis for a cafeteria plan, since giving employees coverages that they can use best will often generate significant extra costs, which an employer may be willing to live with in exchange for restructuring the basic benefits plan. In individual insurance, to limit your risk, you may decide to examine each individual very carefully to make sure they are healthy and have no significant preexisting conditions. In group insurance, you are going to pool the

risks of the group as a whole, so you need not be as concerned about any single individual within a large group or one with enough years of experience as you would be within a smaller one. However, you would still worry about a group which as a whole would not be average, such as one with a dangerous occupation. Since you would not consider scuba divers to be an average group, you would try to protect against antiselection.

Flexible benefits are a very different subject than traditional group insurance. You are much closer to individual insurance because you are giving each employee, depending on how you have set up the plan, a choice of which benefits he wants or, perhaps, what level of benefits he wants. Within this framework, it is pretty clear that, on the average, the group as a whole will be better than average in choosing benefits that are good for them. Good for them might mean choosing more life insurance because they have a lot of small children, or it might mean choosing higher levels of medical insurance, because they have a health problem. Therefore, the first point to consider in discussing antiselection is: when somebody makes a choice that is best for them, is it a choice that is going to cost the insurer or the employer more than would ordinarily be expected, i.e., can antiselection be anticipated?

If you go through the types of coverages in an employee benefits plan, you can see that with different ones, employees have different degrees of knowledge as to how much chance they have of collecting. Medical insurance will be the most significant area, both in terms of total cost and total dollars of antiselection. The key elements here are (1) what type of choices are given in the plan, (2) what are the demographics of the group, and (3) whether spouse coverage is optional under the plan. Figure 1 was taken from the 1976 issue of the Society of Actuaries (SOA) Record. It is an after-the-fact analysis of the distribution of dental claim costs for one large government group. Because every group is different and every type of plan is different, this graph is not representative of anything other than this one group, in one year, for one type of coverage. The reason it is here is that it shows that, when the year was over and the results were tabulated, you knew exactly what percentage of your group had what percentage of the total claim dollars.

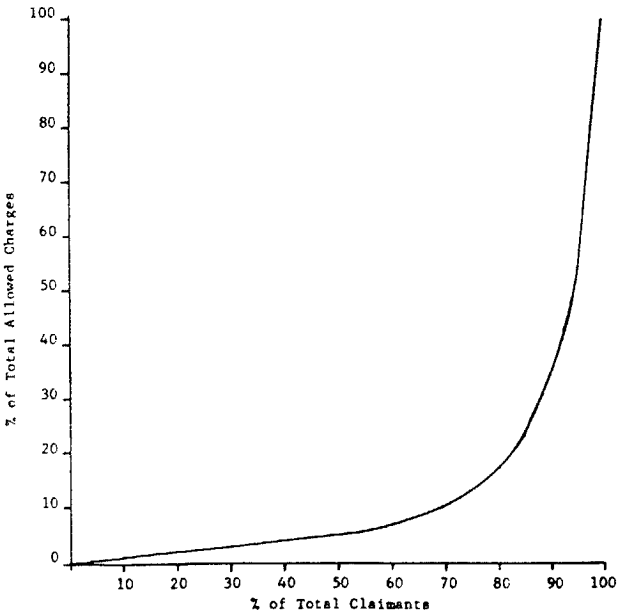
Figure 2 shows the axis reversed, and when you look at the graph this way, it will be easier to talk about antiselection. The basic idea is that if you knew exactly who was going to have the biggest claim in the year, the second biggest claim down to all the people who do not have any claims, then you could say that, if a given percentage of people signed up for coverage and if those people had the highest claim costs, you would know exactly how much worse than average the group would be. In this example, if you look at just the 10 percent line, it shows that the worst 10 percent of the group had 70 percent of the claim dollars in this one year. If, in fact, these people knew exactly what was going to happen, then their claims would be seven times worse than average, and the loading would be 600 percent. The more people that sign up for our plan, the lower the selection, because you are spreading the risk among people who are on average less ill, or have better teeth, or are less at risk for whatever coverage you are talking about.

FIGURE 1

DISTRIBUTION OF CALENDAR YEAR DENTAL SERVICE CHARGES

For 2 Select Groups Of Approximately 12,000 Insureds

With No Annual Maximum



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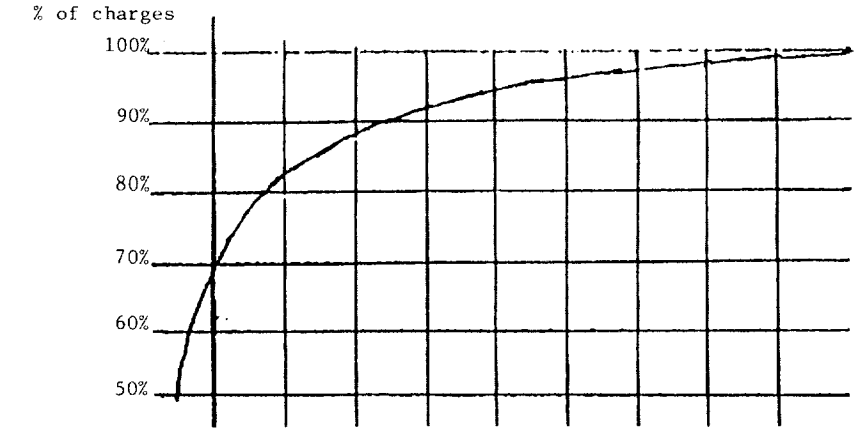
Vol. 2 #4

FIGURE 2



% of claimants	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
% of total claims	70%	83%	89%	92%	95%	97½%	98¼%	99%	99½%	
loading if perfect anti-selection	600%	315%	197%	130%	90%	63%	40%	24%	11%	0%

In figure 3, the first line shows the same numbers as figure 2. The purpose of this line is to show that, with perfect knowledge, these are the loadings given when only the worst risks signed up for coverage. In the real world, every plan is totally different. Thus, these numbers represent a general sort of theoretical maximum for this plan in the worst possible scenario.

In the real world, the selection will be much lower, because the foreknowledge of the need for coverage will be far less precise than hindsight would have been. For dental coverage and for individual case situations, I came up with tables with lower sets of percentages, depending on the benefit parameters and the demographics of each group. This will give you some feel for what might happen when you have different levels of participation within a plan. Figure 3 lists other types of coverages. I think it is fair to say that the dental, the prescription drug, and the preventive care package would have the highest loadings because these are the plans where people have the most foreknowledge when it comes to potential claims. On the other hand, optional life and dependent life would have the lowest loading because there is not that much knowledge of when you are going to die, and you are not in a position to affect the results. These are examples of "all-or-nothing" benefits, where the insured is not going to overuse the coverage.

FIGURE 3

Antiselection Loadings

% choosing coverage	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%
I Dental (from graph)										
% antiselection loading	900%	600%	315%	197%	130%	90%	63%	40%	24%	11%
II (Dental (from real life)										
III (Optional Life and SIB)										
IV Preventive Care Package										
V Dependent Life										
VI Prescription Drugs										
VII LTD										

The idea of setting option prices seems to be tied in with people's idea of how to properly control a FBP. This is consistent with what they say about controlling antiselection. A very important way to look at this is that an employer's employees are going to be making their choices of coverage after you have set the option prices, i.e., after they know what it is going to cost them. Any talk about what percent-

age of people are going to sign up for option A, B, or C is totally irrelevant until it is clearly stated what they are going to have to pay for each, either in terms of employee contributions, flexible credits usage, or otherwise.

Quite often you hear an estimate that, for example, 40 percent of the group is going to take option A, and there is going to be a 20 percent extra cost for that group. This does not mean anything unless it is clearly stated what the option price for each option is going to be. As this price changes, the percentage of people choosing the option will change, so you are always going to be dealing in comparatives among the options, in terms of what they cost relative to each other or relative to the other coverages that are available.

To say antiselection can be controlled by the option prices charged is, in the abstract, a true statement. For example, if you charge a million dollars for the most expensive option, no one will sign up for it. If you charge zero, everyone will sign up. All you have to do is figure out what happens in between. However, what is in between is everything. Therefore, since the employer is going to be setting the option prices and has a fixed idea as to what he wants his plan to accomplish, you need to determine what options he wants the majority of his employees to accept in order to set prices that will lead to that result. Alternatively, you could determine how much he is willing to charge an employee for a given increase in coverage, and this will help to estimate what percentage of people will sign up for the option on that basis. The key point in this discussion is that the percentage of antiselection is going to differ depending on the prices charged, because the pricing will affect your group participation significantly.

Another thing to consider is what you want to do for your employees. If you have a plan that will cost $100/month and you want to also offer a plan costing $50/month, you might consider giving $50/month credit to the people who go to the cheaper plan. However, there are several cheaper and more reasonable alternatives. For example, by charging $50 for the richer plan, you can make the cheaper plan the "no cost" plan, save the employer a lot of money, and provide a strong "incentive" to the employees to choose the cheaper plan. As an alternative, you could offer them much less than a $50 credit, since the employees that are most likely to switch are the ones that have coverage elsewhere, and they would need only a small incentive to make a switch that will not really decrease their coverage but only change the primary payor to their spouse's employer.

The ideas of antiselection, of option prices, and of plan design are all intimately tied into one big package, and the key to opening that package is to determine what the employer is trying to accomplish by his plan design. Is he trying to save money, trying to make his employees happy, or is he magically trying to do both? If he is trying to do both, the situation will always be one where you are trying to find a happy medium between these contradictory goals. Everyone wants to make their employees happy, and most people want to save money, but they should know they cannot do both at the same time and give full weight to each of these goals.

For a simple example of antiselection, we can look at a medical plan with two options; one would cost $100/month, and the other would cost $80/month, if each were the only plan offered. Let us set the option prices in such a way that we end up with 50 percent of the group in each plan. If the in-force plan is now the richer plan, then it would require a greater price differential to get 50 percent of the people to switch because they are already used to the richer plan. However, if the in-force plan is the cheaper plan and then we offered the more expensive option as an alternative, a smaller price differential would be needed to get 50 percent of the people to switch to the more expensive one. In this example, let us assume that a payroll deduction will be used to pay the additional sum for the high-cost option, that the in-force plan is now the high-cost option, and that our best estimate is that a charge of $25/month for the high-cost option will be necessary to get 50 percent of the group to switch to the low-cost option.

There are two types of antiselection that should be discussed. First, there is the antiselection based on the assumption that the less healthy people will sign up for the richer plan. Second, there is the anti-selection, or in some cases the positive benefit of selection, of modifying people's behavior. This is based on the fact that as they choose cheaper plans, and pay more out of their own pocket in terms of deductibles and coinsurance, they will use less coverage. The opposite is also true if they pay extra for a richer plan; if not this year, then sometime in the future, they will use more coverage on the average. This happens because the employees who choose this richer coverage feel that they have been putting aside money each month to pay for this richer coverage, and given the opportunity, they will "get their money's worth."

Getting back to my example, let us say that the health costs of the group that took the richer coverage are 10 percent higher than the $100, and the health costs of the group that took the cheaper plan are 10 percent lower than the $80. The first element of antiselection is that the richer plan has an extra cost of $10 (.10 X $100), and the cheaper plan has an extra savings of only $8 (.10 x $80). This is the first and most trivial example of why antiselection costs more. All other things being equal, the people who are saving you money because of good health are saving less against the cheaper plan than the people who are costing you money because of poor health are costing more against the more expensive plan.

The second thing, which is harder to discuss because it is going to vary so much in every case, is the idea of how the people's behavior is going to be affected by the fact that they had a choice. This comes to the surface in the Rand Corporation study. This study went into a lot of mathematical detail about how the less you have to pay for benefits and the more you get for nothing, then the more benefits you use, and the more the employer's cost is going to be affected. Not only is the benefit level higher, but so is the benefit utilization. This is all rather straightforward, and in the real world it shows up regularly. Thus, you can count on your plan also having antiselection based on an increase in the usage of the rich plan or a decrease in the usage of the cheaper plan.

In our example, let us say there is a 5 percent increase in the richer plan because of usage and a 5 percent decrease in usage for the cheaper plan. This will give you $115.50 for the richer plan ($100 x 1.1 x 1.05) and a cost of $68.40 for the cheaper plan ($80 x 0.9 x 0.95), which creates a situation where two plans that looked like they were $20.00 different when you started now show a difference of $47.10. This leads to an antiselection spiral, which every year just keeps perpetuating itself. In order to give an accurate cost next year, you have a $47.10 starting difference to worry about even though you started this year with only $20.00, and determining how to handle this type of increasing differential is one of the keys to the successful operation of a FBP.

MR. PETER L. HUTCHINGS: When we hear the term flexible benefits, we are talking about multiple choice plans. Clearly, flexible benefits can have in their cafeteria dozens of dessert courses, salad courses, and so on, but the main course from both the employer and employee point of view is usually the medical plan.

I am going to take as my assumption that a company has a medical plan in place that may coexist with other HMOs but does not have other choice features. My assumption is that there is something about that plan that the employer does not like. Perhaps its design is too complex; perhaps the incentives for inpatient care are a problem; costs may be an issue; the company has a sense that this medical plan needs to be redone. There are a couple of traps in this, but before we get to the traps, let us talk about the employee's perspective on medical insurance.

It is a common observation that when the dust settles on a major multiple choice plan, a high percentage of the employees wind up in whatever the high option is, that is, whatever costs the most. If the present plan is offered, a number of employees wind up in that present plan even where it is obviously not a good decision. Why is this? The answer is that employees are not well versed in the medical area. They, like we, know that hospital care is unaffordable if you do not have good coverage. They, like we, know that hospital care is expensive and getting more so. As a result, they are very biased in favor of being well protected. Unless the company is in some way jobbing them, they assume that more expensive is better.

Given three, four, or five health choices, many employees will start with the most expensive, which they assume is the best, and only look at the other choices if they cannot afford or feel they do not need the best.

In subsequent years, there may be a move to the less expensive plans. But in year one, the high option will typically be a plurality or majority choice.

In my opinion, plan design is more important than plan pricing because it is easier to adjust errors in pricing than it is to adjust errors in design. If option number two is priced a little higher or a little lower, based on actual experience, you can clean that up next year when you

reprice the options. However, if the new main line plan has unattractive features in its design, then you are either going to have to tolerate these for a number of years, or you are going to undertake another major redesign project, or, and this is the least appealing possibility, you are going to have to use pricing to try to pull people out of the plan you do not like.

This last approach is commonly attempted, but it can be an exceptionally expensive and time-consuming solution. The more expensive you make that high option plan, the more they assume it is better than the rest of your choices. I believe it is unreasonable for an employer to encourage employees not to choose the most expensive plan because it isn't a good plan. If the employer does not like it, he should not offer it. This trap often occurs when the company thinks that it must offer the present plan even though it is unsound.

Companies often times dramatically overestimate the number of employees who will downshift to a very high deductible plan, by which I mean a $500 or a $1,000 deductible. There are some traps within this catastrophic plan. The first trap is that if you are going to pay the employee to take that catastrophic plan, you are going to give him a credit to use for other benefits. This payment can be thought of as a bribe to the employee to go from rich coverage to cheap coverage. The size of this bribe has to be reasonably related to what the employees who accept it would have cost you if they had not changed plans. Suppose, for example, the only people who take your high deductible plan are people who have coverage through a spouse, ignoring those few people who assume they are immortal.

How much of a credit can you afford to give a person with spouse coverage? In the coordination of benefits (COB) environment, you cannot afford to give them a credit for being a family person because, if they stayed in the high plan, they would have been in a COB environment with the spouse's coverage, and they would have had a claim cost more like that of a single person. Similarly, in terms of age and in terms of health status, you cannot afford to pay people a tremendous amount of money to come out of a high deductible plan because these people did not cost you a lot to begin with.

One of the things that has happened in medical plan redesign, as part of the choice plan, is that it has changed the shape of the health maintenance organization (HMO) alternative in a quite interesting way. A common theme in a medical plan redesign is to go from base plus major medical, or paid-in-full hospitalization plus major medical, to a coverage which is a true comprehensive major medical (CMM) plan with a deductible and copayment on all services. I am not here to discuss whether it is a good idea or a bad idea, but it is a common result for the new plan to look like a series of alternative CMMs. Where this is the case, the HMO alternatives occupy an interesting market niche. The HMO alternatives have the typical paid-in-full doctor's office visits and other first-dollar-oriented coverages. As a result, all other things being equal, you can expect a by-product of a flex conversion to be an increased HMO representation, and you want to make sure that this is desirable.

If this sounds like a problem, then you ought to pause and think about it.

Obviously, simplicity counts in flexible benefits to the extent that plans can be simplified as part of one of these conversions. This is desirable, and people sometimes pass up opportunities to simplify. I urge that those of you who are interested in this never miss a chance to make things easier.

Dental insurance in a FBP poses problems that border on the insurmountable. There is that element of advanced knowledge on the part of the employees. When it comes to dental insurance, it is hard for an employee to make a wrong coverage choice, in that no one ever has to sell their house to pay the dentist the way you might have to sell your house to pay a hospital bill. I am not at all sure that it is necessary to put multiple choice dental into a FBP. If you want to make a pricing mistake, at least make it on a worthwhile coverage. The antiselection element in dental is such that I am not sure it warrants inclusions in a multiple choice sense. If, however, you do decide to include it, there are some strategies you can use to cut down on this problem. You can ask people to make two-year choices on dental rather than one-year choices. You can also require people to take the same family status on dental that they take on medical, so they cannot pick and choose between the spouse's dental coverage and the spouse's medical. You can have the dental coverage provide more liberal benefits to employees after they have been in the option for a year or two.

Moving to life insurance, we see a range in employee needs that are probably greater than with any other benefit. There are a few employees who would want the minimum that you offer and would like that minimum to be zero. There are people who honestly cannot figure out who to designate as the beneficiary because they do not need the insurance. Conversely, there are other people who do need insurance and would rather buy it by an anonymous checkoff than by calling a life insurance salesperson. The potential for employee choice in life insurance is something that I strongly favor.

I have a couple of points, though. First, you have to be looking at appropriate age-rated pricing. You cannot afford to have X cents per thousand at all ages be the price for buying coverage, and similarly, you cannot have X cents per thousand at all ages be the credit that you give people for selling coverage back to the company. In my opinion, you have to be looking at realistic age rating. If the present company plan has elements of employee-pay-all supplemental life and if those present plan prices are either not age-sloped or insufficiently age-sloped, you are definitely going to have to change that as a precondition toward introducing full-scale flexible life insurance. This can pose some special problems, depending on the nature of the present pricing structure.

Second, the employee response that you get in a true multiple choice plan is substantially greater than the range you get if you simply mail everybody a stuffer and say, "If you want some life insurance just check off and send it back." The communication an employee gets on

his way into a multiple choice flexible plan is usually intensive. The employee is given several medical and life choices and told that, if the company does not hear from him, it will select a plan for the employee. This requires the employee to participate in the process. He comes out knowing more about the benefits, even if he chooses the status quo benefits. This may be one of the principal noneconomic returns of flexible benefits.

Let me briefly describe one company's experience. This firm started with an employer-pay-all base plus major medical benefit, which was costing an altogether unreasonable amount of money.We put together a four-choice program with three different CMM plans, plus an HMO option. We anticipated, and this was in fact the result, that the richest of the plans would attract the most people. Forty-six percent of the people took this high option, even though they had to pay between $20.00/month for single coverage and $36.00/month for family coverage. The coverage was not quite as good as the previous plan, and the previous plan was free. Twenty-eight percent of the people elected the HMO option, which was offered for free; 19 percent chose a low cost CMM plan, with a $250 deductible, for $8.00/month; the remaining 7 percent took the highest deductible plan. These were the results on the medical parameter. This particular client decided, and we certainly supported it on this, not to have dental as a choice. Incidentally, all of the plans included the same universal dental benefit plan.

In life insurance, the company contributed enough money to pay for one times salary. The employee had to contribute for additional coverage, but if the employee wanted less, the plan returned a credit. The one times salary option was the single most popular. Twenty-four percent of the people chose this, while 2 percent elected to cut back to one half their salary. This cutback rate is less than we expected; one possible reason is that group term life insurance is relatively cheap, and the amount of money you can save by selling coverage back to the company is not worth it for most people. However, this particular plan allowed up to six times salary, and a substantial 9 percent elected to do this. Further details on this plan are covered in "Employee Decision Patterns in a Full-scale Flexible Benefit Plan," H. Shoemaker and P. Hutchings, Benefits News Analysis, March 1985.

MR. ROBERT J. DYMOWSKI: The presence of HMO options is often viewed as a first step in a FBP, even if it is not a formal FBP. The ability of HMOs, under existing legislation, to mandate coverage to a group has created an environment in which multiple options have occurred, even if an employer did not intend to create a specific FBP. Certainly, the recent growth in HMOs has been significant. I have seen some figures which estimate the current total HMO market share to be about 6 percent.

In the last several years, we have seen many factors contributing to growth: interest in cost containment; employer concerns about trends in total costs; the change in the relative levels of HMO premiums relative to commercial insurance company premiums for traditional

programs; and the willingness on the part of employers to accept some intervention in the process of delivery of care. With regard to employees and the competition between providers, we see many factors that suggest this market share growth will continue. I have seen some estimates in the 15 to 25 percent range as the HMO ultimate market share level. I even saw one estimate of 45 percent, which I find a little hard to believe.

There are significant geographic variations in that penetration. There are some areas of the country where HMO penetration already represents almost 60 percent of the employee market. You may be in an area which has not seen much growth yet or be in other areas which have had greater growth.

Another aspect, in terms of growth, is what we see as the entrepreneurial style of successful HMO managements. Many of them are continuing to expand into promising markets. There are new players in the game: Blue Cross/Blue Shield Plans that are establishing HMOs; carriers that are involved in developing HMOs; hospital chains with HMOs and PPOs. Also, we think there is going to be a lot of moving down of HMO target marketing. HMO activity has so far largely been focused on larger groups, simply because they are getting more for their money. With increasing penetration in areas of saturation, there appears to be an interest in moving down to smaller group sizes, which is going to have a major effect on traditional group coverages. We have heard a lot about antiselection in this session and other sessions, and in thinking about the impact of alternative delivery systems, I considered what kind of information might be available about this process.

You have heard the figures Mr. Hutchings quoted about the patterns of choice, and the numbers Mr. Becker showed. I thought we could get some information on the HMO penetration by looking at a survey. I submitted this survey to a number of our clients and nonclients who are Blue Cross/Blue Shield Plans. I chose to use Blue Cross/Blue Shield Plans as a survey base simply because their localized operations make them very much aware of what the HMO activity is in a particular area. In addition, they are distributed all over the country, so we had an opportunity to observe variations in a number of locations. Of the twenty plans I solicited, I received seven responses. This might have been because they were too busy to respond, but in some cases, it was because the answers to the questions I asked in the survey were not something they had readily available. I tried to ask questions that related to studies that they might have already done. I did get some interesting material in connection with the survey dealing with HMOs and what they are doing, and some were recently published articles. One of the plans sent a published article concerning their own experience. It happened to have been the Minnesota Plan, and the article was published in the Journal of the American Medical Association, November 25, 1983. It is entitled "Evidence for Self-Selection Among Health Maintenance Organization Enrollees." The article indicates that even after adjusting for age and the sex differences, the people who selected the HMO options were essentially

the preferred risks of the groups observed. I believe there was another article published in 1983 which suggested the opposite. There were several articles that appeared recently in the Wall Street Journal, as well as an article in Barron's, suggesting some disenchantment on the part of large employers with HMOs. One of the articles in the Wall Street Journal was entitled "Some Large Employers Believe HMOs Overcharge and Might Not Save Money," which is a discussion about HMOs' community-rating practices and the desire of employers to see a greater reflection of their own experience.

There was also a recent publication about the HMO that was providing coverage to a large segment of the J.C. Penney organization. The HMO announced that it would no longer continue to provide that coverage because the employer's contribution rates had been restructured, making them less favorable to the HMO. They were concerned about the deterioration in their risk, so they were discontinuing the coverage. These examples indicate people's awareness of differences between the programs, differences between the groups of people selecting particular programs, and the idea that there is a risk being transferred between these groups.

One last point on some of the general material that was sent is that one plan also sent a copy of a marketing piece they use. It looks like training material they provide for their marketing staff and talks about HMOs and why HMOs are not always the most advantageous to the group. They point out that they favor HMOs, and they sponsor an HMO, but that groups have to realize the risks that are involved. From this piece, I quote, "This can be a serious matter. We estimated that HMO offerings cost one of our groups in excess of $2,000,000 above what their expenses would have been if all employees had stayed in the tradition plan. They challenged our numbers, examined their own records, and concluded that our estimate was extremely conservative."

In the survey, the first question I asked was to get an idea of what the degree of HMO penetration might be. We are aware of significant variations, and the survey bore that out. There were three respondents who indicated they had 0 to 5 percent penetration in their area, two had 5 to 10 percent, one had 10 to 20 percent, and one had 20 percent or more penetration. I noted that within the plans that did respond, there were various lengths of time involved in which any significant degree of HMO activity had existed in their area. Some HMOs had been around for a while, and other activity only picked up in the last couple of years. Several of the respondents commented that there was a considerable fluctuation observed from group to group with regard to this overall service area of penetration.

The next question concerned the degree of HMO penetration by size of group, and whether a targeting of group sizes could be discerned in their area. One of the comments was, "It (the penetration) just varied by group only." I asked about range of penetration: from less than 5 percent to 20 percent or more, and by size of group, from under 100 employee groups through 500 or more employee groups, and got a fairly wide range of responses. There seemed to be a tilting of heavier

penetration in the larger sizes of groups, and again, this would be a reflection of the general marketing thrust that HMOs have had.

The next question related to the HMO penetration level, and how it stabilized over time for the groups that they had observed. I asked about the time required to stabilize the penetration and got a wide range of answers such as one year, two years, three years, four years, and five years. It obviously depends on various factors and is not something that has been well-developed at this point. I received several responses concerning ultimate versus initial penetration levels. One suggested that the ultimate penetration level might be 25 percent relative to an initial level of 20 percent; one suggested an initial level of 5 percent increasing to as much as 60 percent; and another one suggested that the ultimate level might be in the range of two to three times the initial level. I asked for other considerations concerning the penetration level and how it stabilized. The responses generally related to a consideration of the relationship between the rates for the traditional program and the HMO option. I think this is consistent with what Mr. Becker was mentioning in terms of rate levels of program options.

The next question related to the degree of tracking and the kinds of tracking that plans had done concerning the selection patterns of the groups which had experienced any significant HMO penetration. I asked whether they had tracked all of their groups to be able to see how much penetration was occurring, and apparently, that was not widely done. One plan indicated that it had been trying to track penetration in all groups, while another indicated that it was tracking groups of 25 employees or more. A more typical monitoring appeared to focus on the larger groups, which is again consistent with what the HMO marketing thrust has been. Perhaps the monitoring also focused on groups with certain age/sex characteristics and then added groups when a certain degree of penetration was observed. The other studies that were indicated were exit studies prepared by plans in connection with groups terminating from traditional coverage or groups in which they had been able to observe a significant HMO penetration. There were a number of studies focused on demographics. Others indicated that they monitored on the basis of employee contribution levels and the level of cost increases. This, again, goes back to the very sensitive issue of the rate relationships between the programs. It seems to be a key factor in the jeopardy of the group's traditional program.

The next question related to analyses of claims experience for individuals electing the HMO, versus the traditional coverage, before and after the HMO election. There were five respondents that indicated they did do this analysis; one said they did not; and one did not answer.

The next question dealt with how the observed selection patterns compared to what the expectation of the HMO selection would be. The most frequent type of response that I received indicated the tendency to have the younger individuals in the groups electing the HMO. Six of the plans indicated that the individuals electing the HMO option are

generally the younger and healthier lives. Interestingly enough, one of them observed that individuals electing the HMO option were older or less favorable risks. Another one did comment that they could see, in some cases, what appeared to be antiselection against the HMO. Another one commented that there appeared to be more than just demographics involved; even after you have adjusted for the age/sex differences between the traditional and the HMO group, there still appears to be a more favorable utilization level with people who elected the HMO. Asked if those people electing the HMO had been tracked after the HMO election, the response was that it was for a very short period, if at all. They were tracking experience before the election, and that was about it. I asked if they could provide any examples of net claim cost relative values for the individuals taking the HMO option versus the traditional coverage. That is, they should look at these individuals before the election was made, and relative to the same level of benefits and recognizing age/sex characteristics, they should answer what were the relative levels of utilization of the benefits involved. In reply, some suggested that if the level in aggregate was at 100 percent before the election, the HMO people might be at 90 percent, and the traditional people might be at 101 percent. After the election, the HMO would continue at 90 percent, but the traditional people would be at 103 percent. Some other results before election were (1) HMO at 62 percent of the aggregate versus the traditional group at 102 percent, (2) 47 percent for the HMO versus 115 percent for the traditional group, and (3) 75 percent for the HMO versus 103 percent for the traditional group. This shows a fairly consistent pattern of lower utilization for those selecting the HMO. It was not clear in all cases whether the age/sex had been adjusted for, so some of these may reflect age/sex differences.

I did ask a question specifically about age/sex. The question was whether these factors could be tracked for groups that had shifted. Some responded to this, and some just provided the distributions. Generally, where they provided the distribution, there was a marked tendency for the individuals, under age 45 particularly, to elect the HMO option in preference to remaining with the traditional option. One response was that 75 percent of individuals in the HMO versus only 57 percent of the people in the traditional program were under age 45. The figures for other groups were 61 percent for the HMO versus 49 percent for the traditional; and 89 percent for the HMO versus 79 percent for the traditional. I drew up some age factors for some of the distributions that I received from another respondent. This compares the age distribution of all the people before the HMO option to the age distribution of the people remaining with the traditional program. For single males, the factors went from 1.01 to 1.07; for single females, from an age factor of 1.35 to 1.42; and for family contracts, from a factor of 1.00 to a factor of 1.01.

I also asked a question concerning the degree of deterioration in either individual groups or the whole group portfolio that could be attributed to the HMO penetration. Responses were from 3 to 5 percent, from 5 to 10 percent, and some unknown.

Another question I asked was the kind of strategies that have been implemented to try to offset the effects of these multiple option selections. One plan answered that it had not implemented any strategies. Several said they had introduced high/low options in their traditional programs in order to be more competitive from the standpoint of the benefits. One of our consultants suggested that this was fairly rare and might occur only if there was a significant rate differential. The idea of rate-blending or some cross-subsidization would be possible if the plan owned the HMO involved and was controlling the rates on both. There was some indication of that, but it was relatively rare, because it depends on the ownership status or the degree of cooperation between the organizations. Again, the plans seemed to recognize the inevitable on some of these and indicated that a fairly typical strategy was to change the groups to cost plus and get rid of the risk. There were also indications of requesting health underwriting on any returns from the HMO. There were PPO product alternatives introduced, and age rating was introduced in a couple of cases. Others suggested the need to develop, and that they had developed, integrated approaches to the process, where they were trying to differentiate on the basis of the benefits, as opposed to on the basis of price levels. Still others talked about introducing HMO design type programs to compete on the basis of benefits.

When asked about changes in underwriting rules which may have been implemented in any of these situations, the general consensus was that little had been done. The focus had been on redefining the eligible employees to be considered in the base, determining whether you had enough people to have an eligible group, and redefining their participation requirements. Some discussed establishing new late entrant procedures to take care of people coming back from the HMO option, and there were some comments about recognizing the need for varying the treatment of different groups because you could not set blanket rules for these situations.

I asked about the key factors in any decision being made to terminate the traditional benefit portion of a group's benefit program. The two most popular responses were (1) the reduction in the size of the group below some minimum requirement, and (2) a significant deterioration in the experience of the group over some extended period. There were also comments concerning the degree of change in the employee contribution and the extent to which it would favor the HMO enrollment and also the magnitude of the differentials between the HMO rate and the traditional rate. This again ties in with the rate issue.

MR. BECKER: I would like to point out a couple of things in figure 4, because they seem to tie in with what Mr. Hutchings talked about. Figure 4 shows what happens in real life when you get involved in pricing and questions of selection.

If you look at the health insurance example first, it is set up to describe the situation where the richer plan is a bad buy for everyone. Either the company has to lose money by paying for the antiselection itself, or else they must pass on the extra cost to the employees. If

they pass on the cost, it creates a paradox. There is nothing theoretically wrong with this illustration. It just shows that antiselection leads to difficult problems which have to be addressed in designing a plan. I set this example up for simplicity. The maximum difference between the benefits is clearly $400--the difference between the deductibles. A price of $200/month for one plan and $220/month for the other plan may be reasonable if you start with the question "What would be the price if everyone in your group signed up for one plan and then for the other plan?" When you give each employee a choice, how much should you charge per month as the extra cost for the richer plan? It would be logical to say "no more than $400 divided by twelve," because that is the maximum difference in benefits. If you think that you will have sicker people in the richer plan, then you must realize that you cannot base the two plan costs only on the expected experience of the two groups, but you also have to base it on what the benefits are. So, in the example with my expected 10 percent antiselection, I ended up with a $62 differential between the plans, which when multiplied by twelve is greater than the maximum difference between the benefits. In practice, this $62 cost differential is unreasonable, but in theory, it is probably an accurate estimate of the relative expected claim costs. It just reflects the situation that Mr. Hutchings described.

FIGURE 4

Pitfalls to be Avoided

A). Is there anything wrong with this illustration?

Life Insurance

	1 times salary	2 times salary
% choosing	20%	80%
assumed selection loading	-40%	30%
base price	$.40/$1,000/month	
offering price	$.24	$.52

B). Is there anything wrong with this illustration?

Health Insurance

Plan A	$100 deductible-everything else paid in full	
Plan B	$500 deductible-everything else paid in full	
% choosing	50%	50%
assumed selection loading	-10%	10%
base price	$200/month	$220/month
offering price	$180/month	$242/month

My life insurance example is definitely wrong in theory and is even more incorrect in practice because the usual reason one buys life insurance is to protect one's family rather than because of one's poor health. Thus, as Mr. Hutchings said, you do not have to worry about antiselection in life insurance and should charge the same rate per thousand for both options. The point that I am trying to bring out

in the example has actually come up in one real world situation and also in one teaching situation. In both cases, the example was set up in such a way that the mortality of the group that had two times salary was greater than the mortality of the group as a whole. This leads to the concept of negative mortality for the one times salary group. It is even a step beyond immortality because I could have set up the example with a zero mortality rate for one group and the entire mortality for the other group. When you are talking about a coverage with no behavioral modification involved, all you are doing is switching a given group of people around. You are not changing their health by giving them a multiple choice plan, you are just changing which option they choose.

Life insurance is such an example, where there is no increase or decrease in mortality based on what plan the people take. In my example, if 80 percent of the people took the two times salary plan, the product of the percent choosing it times the selection loading has to exactly equal the product of the percent choosing the one times salary plan times the selection loading for it. In the example, these two products are not even close, and this is why we would get a negative mortality for the first group if the second plan did indeed have a 30 percent selection loading. Since (0.80 x 0.3 = 0.20 x 1.2), the one times salary group would have to have mortality that is 120 percent better than the group as a whole, which is mathematically and physically impossible. What we might have here, if 80 percent chose the two times salary plan, is a selection loading of perhaps 4 percent, balanced by a negative selection on the first group of 16 percent (0.80 x 0.04 = 0.20 x 0.16). This point is equally valid for any other coverage where you do not have behavior modification. You have to make sure that the sum of your weighted average for participation times selection always equals zero.

Medical insurance claims experience is often modified by changes in behavior, so you will have situations where the percentage increase in the claim costs of the high cost plans due to selection is considerably higher, when weighted by the percentage of the people taking it, than is the percentage savings for the low cost plan. This is just another way antiselection costs the plan additional money. In one form or another, it will always be there, and it will always cost you money. What you are doing when designing a plan is trying to determine how much the selection will be, keeping it within the limits that the employer who hired you is willing to live with, and at levels which are consistent with the goals of the plan. This is exactly what Mr. Hutchings was saying.

MR. FRANK L. PARTRIDGE: Mr. Becker, you mentioned that the employees have a greater tendency to choose against the plan under dental or medical coverage than they do under life insurance. I was wondering what you thought about LTD insurance?

MR. BECKER: LTD is interesting in that there is not a tremendous amount of antiselection based on health, although there is some. My opinion is that there are two main elements of antiselection present, including one found almost exclusively in disability plans. That element is shown clearly on regular LTD plans where the plans that have higher

replacement ratios have poor experience, just because it is a lot easier to stay out longer if you are getting 70 percent of salary than if you are getting 50 percent. This will be reinforced if the insured had a choice of benefit levels and chose to pay extra for the higher level, which leads to the second element. Let us say you have been paying $25/month for the last nine years just to get this extra coverage. You then get disabled and are out of work for six months. Once you have reached the waiting period limit, you finally start collecting the benefits. Not only are you collecting a high level of benefits, but you have paid for them for a long time. I think FBPs have a sort of "jackpot" element involved for LTD, where you have made a choice, and it is finally paying off, although of course you have physically paid the price to receive it. You have additional motivation to stay out longer, more than if you were just in a regular plan where everyone had the same coverage and had not made a specific choice to take this richer benefit level.

Of course, LTD is a low frequency coverage. If you have an LTD plan with a six month waiting period that has 10,000 people in it, you might expect 50 claims a year. If you have a flexible plan and only 6,000 people sign up, with 3,000 choosing the richer option, then if you have two extra claims and each person who is disabled under the rich plan stays out 20 percent longer on the average, then you have generated perhaps an additional 15 to 20 percent per capita cost because of the FBP antiselection. It is almost impossible to protect against this in any rational way. It is just something that you have to be willing to accept, and the extra cost is going to take longer to show up, obviously, since the benefit is paid for into the future.

MR. HUTCHINGS: LTD, in a multiple choice plan, is one of the few coverages where employees may not make optimum choices. When you are looking at choice plans in LTD, there are some tax considerations as to whether the benefits are taxable or not, depending on who pays for them. There is another special problem in LTD. The Social Security integration factor means a $20,000 a year family person has much less than half of the claim cost expection of a $40,000 person. This is because Social Security replaces much more income for a $20,000 person, which leaves less for the company plan to pay. Now, if your pricing to a group client is X percent of eligible payroll, that is fine. However, if you are pricing to an individual employee and your employee level pricing is a simple percent of pay, then a $40,000 person pays twice as much as a $20,000 person, which is wrong.

The role of multiple choice LTD is one that requires a lot of thought. I am not sure that you want to run the risk of employee blunders. If an employee fails to take the LTD choice, which may be just a few dollars a month, and then gets in a motorcycle accident and is out for life, that is a tremendous calamity. You have to think about the Social Security factor, the tax status, and how you are going to explain that to employees. In short, you are taking on a lot of work. If the main reason in doing this overall flexible benefits project is to clean up something in medical, then to buy into a great big LTD tangle in year one is questionable. Once you get the medical under control, and if you want to build on the concept later that is another matter.

MR. CHARLES F. LARIMER: HMOs are attracting the healthier segment of the population. Eventually, that positive selection will wear off. A lot of that is hidden during these times because of the rapid growth of the HMO. First, how quickly do you think this positive selection will wear off, and have you done much modeling to detect this, or will it be several years before that is even noticeable? Second, I imagine that most of your short-term modeling will ignore that fact, but have you done any modeling for the long term?

MR. DYMOWSKI: It is something we have thought about, but I have not been involved in any modeling of that kind. I know some of the people in our firm have begun to think about it. I believe their feeling is that the management of care that is provided will probably still provide gains for a while, and it will take perhaps five to ten years before this selection aspect begins to wear off. It is still a new idea, though, because there are not that many HMOs that have hit this level. There are a fair number of HMOs around the country, particularly in California and Minnesota that have been around for that period and probably are still experiencing fairly low levels of utilization. Now that may just reflect the growth that you were talking about, but it is something that needs to be looked at further.

MR. BECKER: As plan designs change and become less rich, you are going to get a different mix of insureds between the plan itself and the HMO. This ties in with what Mr. Hutchings said, about how the FBPs change the mix of people who sign up for HMOs, based on what the prices are of the options.

MR. JOSHUA JACOBS: In view of the fact that you stress the importance of conferring with the employer on how much he is willing to pay for this employee choice, do you think it is feasible to construct the design, that can be sold to small groups that are all pooled and which can also protect the insurance company? In addition, do you anticipate, in a group where you have conferred with the employer, and discussed what is expected, that there will be changes as the years go by so that you will have to do this conferring each year based on the experience, and can you achieve a stability over time?

MR. BECKER: In reply to your first question, about a packaged flexible benefits product for small groups, where you pool all of their experience, I think that different people would respond in different ways. A sales person would definitely say yes, and many companies are setting up that type of a product. I, personally, would say very strongly no, so you have zeroed in on my own feelings. You could develop it and sell it, but your prices would start to vary so quickly from year to year that it probably would not work out well. This would be true not only from a financial point of view, but also public-relations-wise. As you get into your assessment spiral and the prices rise significantly each year, the people who think they are still ahead of the game will stay in, and the ones with better experience will be unhappy and get out.

In reply to your second question about what is needed each year to keep your FBP going and does that work tend to stabilize over time, it

depends on how you go about your designing plan. Mr. Hutchings mentioned a few possible ways to go. One is to try to drive people out of the rich plan in order to stabilize your costs. A much more likely scenario is that you want to keep your FBP going, and every year you have to do quite a bit of work, because it is not so much a question of looking at the new experience to determine what to charge as it is taking that experience and figuring out how you want to continue to modify the plan and modify your employees' contribution and behavior.

What you are going to get, in reality, is the type of thing that I had in my example, where the actual cost in the previous year was not something that you could rationally pass on the next year. You either pass on a percentage of the increases to the rich plan, as well as the entire increase for the cheaper plans, or you change the richest plan to a less rich plan and pass on an equivalent percentage of the increment to both plans. You will never be in a position where you can pass on the entire increments without either radically changing the plan design, which is perfectly acceptable, or dropping the most expensive options and adding new options on the low end. Your design will stabilize over time because the antiselection lessens each year. I tell my clients to use a range of 5 to 10 percent for antiselection on medical, just to give them a starting point. If they look at this figure as an extra cost beyond what the standard claim cost would be, they should see that percentage decrease each year as the plan goes along. This is a significant point because you are controlling behavior and changing the options each year.

MR. DYMOWSKI: I am aware of at least one company that is developing a smaller group package of that kind and one Blue Cross/Blue Shield Plan that is. This is not a full-blown cafeteria type plan, but essentially a multiple option situation where there is a choice between the traditional benefit program, an HMO, and perhaps a PPO. So they will have a two- or three-choice situation, and it is restricted to these choices. That way we are dealing with a situation where one carrier is controlling the pricing of all the arrangements and certainly expects to be monitoring them. They are also trying to anticipate the antiselection in advance and expecting to make a go of it, on that basis, within a controlled environment. Opening up a choice too freely, will be a factor in what Mr. Becker was saying; you cannot keep after them because you will just be chasing your tail, in terms of the overall program results.

MR. ANTHONY J. HOUGHTON: We find that a certain number of employers, who are either self-funded or insured, feel HMOs are a nuisance, especially if there are multiple locations, because of people coming in and out of their program. Some of them have considered different strategies to avoid the administrative difficulty of paying a lot of different prices to a lot of different people throughout the country. One type of strategy might be to keep their costs very low, making the extra for an HMO high, which might mean actually cutting into the benefits they offer. Another strategy might be to provide coverage for well care, and physical exams, so there would be something that would compete with the HMOs' appeal to young families. This, of course, raises the premium, so these two are somewhat inconsistent. We are

also finding some who are looking at the antiselection part of it and trying to do things that would help them vis a vis an HMO competitor, such as having a one-year preexisting condition limitation. As an alternative, the employer might suggest that the individual should go with this HMO for at least a year, because it will take them right away. These are just a few of the strategies that employers are using to gain the edge.

MR. JAMES A. HUGHES*: Can any of you tell me if any work has been done on models to predict the choices people make based on demographics, and then use this as a predictor of the kinds of costs that will be incurred by offering such choices?

MR. DYMOWSKI: I am not aware of models that will predict the choices, but I am aware of the kind of information I have gotten in the survey responses. I have also seen some other material published within the Blue Cross/Blue Shield system, showing the pattern of selection in terms of the age/sex distributions. These things are beginning to be more widely available, and you can certainly construct your own models from them. I have developed a computerized approach with one client, which can be done rather easily if you have access to electronic spreadsheet software. The approach is to start with the assumption that you have an average claim cost. From that assumption, you can expand on it by making further assumptions regarding the distribution of people with different levels of care within the group and how that might change. You can also take a simplifying approach, by starting off with this basic distribution of claim cost levels relative to the average and begin to make assumptions regarding how these people will elect. Using this kind of information that we are seeing, in terms of age/sex patterns, family patterns, and so on, it gives you some guidance as to how to construct that. Then you begin to see, given your assumptions regarding claim cost levels and patterns of choice, what the additional selection costs will be. What we tried to do in a situation like that was to bracket the cost. A range of 5 to 10 percent, as Mr. Becker mentioned, or some other range like 10 to 20 percent might be appropriate. This is something that can be put together fairly easily. I am not aware of any other more sophisticated models that do that.

MR. HUTCHINGS: There is a less sophisticated model available, which is to ask the employees in a nonbinding survey, "If we have these choices, for roughly these kinds of prices, what would you do? You can change your mind later, or we might change our mind later, but help us figure out what to offer you." That adds substantially to the elapsed time of a project, but it has something to offer in terms of sharpening your understanding of what is going on and getting the employees to start to think about the whole idea of choices as part of your communication strategy.

MR. BECKER: The accuracy of those employee surveys is surprisingly good. The average person would think they would be very inaccurate.

* Mr. Hughes, not a member of the Society, is Director of Actuarial Services at the Community Mutual Insurance Company.

There have been situations where surveys had been done, plans were implemented, and the results turned out very differently than what had been expected. Everybody wondered how this could be, after all the work that went into the surveys. The reason was that the plan designers did not believe the results of the survey and instead provided options very different from those that the employees had said they wanted. Your employees are the ones who are going to make the choices, so they are clearly the ones who have the best shot at giving you the information that you need to know. The problem is that you cannot just put out a survey about flexible benefits. It has to be about employee benefits in general and then include some flexible benefits questions. You cannot afford to be in a position where everyone is asking "When does our FBP start?"

In reply to the other part of the question, whether you can use computer simulation results to predict future selection, there are many computer programs now that do this. You have to make a decision of who to believe, because, since every plan and every group is different, getting data that combine the experience of 75 plans may not be useful. The question is whether you trust whoever you are asking this question of to zero in on your own plan parameters and make better estimates than would be produced by this generalized software program.

MR. LLOYD M. BLOOM: I have seen an increasing number of plans that have wanted some kind of claim liability guarantee with their flexible benefits package. What is the best way to handle that when you do not have any selection data to start with?

MR. BECKER: I think many insurers provide that sort of "stop-loss" or minimum premium protection regularly, but John Hancock has not been in any great rush to do it. When I was at John Hancock and a request came in for such coverage, the first thing I did was to determine the level of sophistication of the client. In most cases, the client did not realize what they were asking for, so an explanation made things go much smoother. Occasionally, the prospects were just looking for somebody who was willing to do this at an unreasonably low cost. They were certainly sophisticated enough, but they were usually not groups that we wanted to get in a bidding war over. Our most difficult situation was when our own clients asked us for such protection. They were not shopping among carriers but strongly wanted this type of coverage. For this group of clients, we tried to discuss how they wanted to pay for this service.

In general, the insurance company is in the risk management business or the risk spreading business, and we explained to them that we were not spreading any risk here. The selection costs were certain to happen. The only questions were how much they were going to be and whether they wanted us to charge them up front for it. We could do this, but we would have to charge them much more than if we charged them at the end of the year, when we actually knew what had happened. We would be willing to assume the antiselection risk to the extent of saying, "If you give us 15 percent extra, we will cover the whole selection cost ourselves, but at the end of the year it might have only cost you 4 percent. As an employer, you are running a risk to

the extent that it is going to be more or less than the 15 percent." (The 15 percent number is hypothetical and is not meant to be related to John Hancock's fee for such service.)

MR. WILLIAM A. J. BREMER*: Much of the discussion in terms of a full-blown FBP implies that all of the people in a group stay in the group, whether they choose a high level, low level, or HMO option. Under what circumstances could an individual, who dropped his coverage to be covered under his spouse's plan, be allowed back in it, for example, the spouse loses her job? In addition, is there any underwriting consideration or any consideration whatsoever?

MR. BECKER: You have virtually answered the first question yourself. As you implied, there need only be proof of why they need to get back in; the spouse has lost coverage, lost a job, or whatever. This is not a significant antiselection problem. A large number of employers who are putting in FBPs are doing so for the major reason of making it worthwhile for employees who have the potential for coverage under a spouse's plan to opt out of the employer's plan and to join the spouse's. It is now perfectly legal to pursue this strategy due to a flaw in the current COB rules, and this flaw was not fixed in the latest proposed revision, because to actually implement the necessary cross-checking between employers is almost impossible. In theory it is bad, but in practice, we do not have much choice. There is a lot of that going on, and there is no antiselection involved in such changes. It is just the severest form of antiselection for the spouse's employer, who is covering people as dependents who should have been covered as employees under someone else's plan. As more employers follow this approach, it will create a serious distortion in the system of providing medical benefits, because employers will be striving to switch their employees' coverage to other employers faster than the reverse is happening to them.

MR. HUTCHINGS: If the employer wants to encourage people to drop coverage in the presence of a working spouse, then the employer and the insurer will have to guarantee easy return. If the easy return is not there, people are not going to do what you want them to, and that is something either the insurer or employer has to acknowledge before starting such an endeavor.

* Mr. Bremer, not a member of the Society, is Director of Actuarial Services and Research at Blue Cross/Blue Shield of Maine.