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GROUP HEALTH UNDERWRITING PRACTICES

Moderator: JEFFREY J. NOHL
Panelists: RAYMOND H. BAEDEKER*
CHARLES C. DEWEESE
ELIZABETH J. LEIF
Recorder: SHERYL ANN HENRY

- o Before the proliferation of HMOs, multiple options and flexible benefit programs, there were fairly standard underwriting rules regarding participation and benefit design. These rules no longer can be applied. What has replaced them? Specifically, what are the underwriting effects of HMO penetration, high/low options, working spouses, and new dependent coverage rules? How is renewal underwriting affected?

MR. JEFFREY J. NOHL: Most of us are pretty familiar with the antiselection going on with HMOs, the increasing incidence of working spouses, the demands of employees for flexible benefits, the increased federal and state legislation, the impact of AIDS, and the questionable impact of some managed health care programs. All of these items are creating forces which are causing us to reconsider how we do our underwriting. Underwriting is going to be pressed to develop new ways to handle these new situations.

This all forms the basis of what we're going to discuss. The meeting is set up into three sections. Mr. Raymond H. Baedeker will begin with a discussion about HMO impact on fee-for-service business. Mr. Charles C. DeWeese will then speak about flexible benefits. Lastly, Ms. Elizabeth Leif will discuss other issues facing our underwriters. The recorder for this session is Ms. Sheryl Ann Henry.

MR. RAYMOND H. BAEDEKER: The subject of my presentation is "Strategies to Deal With Adverse Selection in a Dual Choice Environment -- The Rhode Island Plan's Approach," or it may be said another way, "How to Get Sued for \$60 Million." The presentation is a chronology dealing with significant enrollment losses by BC/BS of Rhode Island (BCBSRI) to a new HMO in the state. I'll talk about an HMO-like product that we developed to help stem these losses, studies we undertook to measure differences in pure premium cost between the HMO population and traditional BC/BS, and the statistics that we obtained to help understand the cost differences. I'll describe our process of integrating rating of the HMO-like product with our traditional coverage. I'll delve into how we measured the adverse selection impact on traditional business and applied it in the rate-making process. I'll also reference an antitrust lawsuit levied by the HMO against BCBSRI.

- * Mr. Baedeker, not a member of the Society, is Vice President of Statistical, Actuarial and Underwriting Affairs at Blue Cross & Blue Shield of Rhode Island in Providence, Rhode Island.

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First, a little bit of background. BCBSRI historically has enjoyed high market penetration, anywhere between 80% and 85% depending on how you measure it. In late 1985 and early 1986, we began to feel the impact of a relatively new individual practice association (IPA) in Rhode Island. We began to experience the effect of the dual choice environment, something we had not experienced before. The new HMO offered attractive benefits and with a 12-month pre-existing limitation on benefits, it attracted younger healthier employees in the group marketplace. The new HMO began to make some fairly significant inroads into our enrollment in some of our major accounts. This bleeding or disenrollment as you would expect created a problem with adverse selection for the remaining group. Clearly an approach was needed to cope with adverse selection and to design a product to compete in the marketplace. Our own HMO, HMO Rhode Island, was not then licensed to do business. The product we developed was called HealthMate, an HMO look-alike. The product was referred to by our insurance regulator as an HMO decoy. HealthMate was designed with HMO-type benefits and restrictions. It was priced to compete head on with the HMO. We offered it on an employee choice basis along with Traditional, the one we refer to as Classic Blue benefits. HealthMate and Classic Blue were rated on an integrated basis which I'll describe later. Initially HealthMate was targeted for our larger experience-rated groups where a potential for HMO seemed to be present.

Listed below is the benefit structure of HealthMate.

HealthMate Benefits

- o Basic Semi-Private (S/P) Hospital, Plan 100, and Major Medical (M/M) ("Classic Blue" -- No Deductibles)
- o Office Visits With No Copay
- o Students to 23
- o Drugs (\$3 Copay or Special Capitation Reimbursement in Pharmacy [SCRIP])
- o Eye Exams
- o Good Health Benefit

Like the HMO, office visits with no copay and joint coverage made HealthMate more attractive than our Classic program where these benefits were available only through M/M with a deductible and copay. As I noted before, HealthMate includes some benefit restrictions, specifically a 12-month preexisting for hospitalization and/or surgical procedures. This means that during the 12-month period, a 25% copay would be imposed up to a maximum out-of-pocket expenditure of \$1,000. Other restrictions were that a participating physician must be used unless preauthorized in writing except in an emergency, and out-of-area care must also be preauthorized in writing, again except in an emergency. These restrictions were intended to be generally comparable to those of the competing HMOs.

With respect to pricing of HealthMate, we found that although HealthMate was approximately 25% more expensive because of the added benefits, the favorable health characteristics of those who would opt for HealthMate permitted it to be marketed at about the same price as Classic BC/BS.

In order to be able to measure adverse selection and be able to account for it in rating, the plan conducted a study of groups with enrollment loss to HMOs. The study was designed to determine the health characteristic factor (HCF) for

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HealthMate Benefit Pricing

	Pure Premium Index <u>(w/\$3 Copay Drugs)</u>
Classic Blue (S/P, 100, M/M)	\$100.00
Additional Benefits	24.70
Health Characteristic Factor	<u>(22.00)</u>
HealthMate	\$102.70

members transferring to an HMO and statistics on demographics, morbidity, individual/family mix and family size of members transferring. A comparison was made with the same statistics for the total group.

We define the HCF as the cost per member relationship of members transferring to an HMO to the total population, adjusted for the premium relationship of the two populations. The purpose of the HCF for members disenrolling is for us to estimate the adverse selection impact for those members remaining in the group.

The study that we conducted consisted of 12 group accounts totaling 112,000 members. Of the 112,000 members, 8,300 opted for the competing HMO. The period that we studied was the 12-month period immediately preceding the transfer to the HMO.

Table 1 illustrates our calculation of the HCF for one of the groups in the study. As shown in the upper section, the pure premium relationship of HMO transfers to the total group is .7534 or \$38.50 divided by \$51.10. In the next section a similar relationship is calculated for premium. The ratio here is .9614, which is based on \$53.36 divided by \$55.50. This premium relationship simply accounts for the difference in the individual/family mix of the two populations. The bottom line calculation dividing claims expense ratio by the premium ratio produces an HCF of .7836. In other words those members transferring to the HMO were 22% healthier cost-wise than the total group.

TABLE 1

Calculation of Health Characteristic Factor

	<u>Transfers to HMO</u>	<u>Non- Transfers to HMO</u>	<u>Total</u>
Claims Expense/Member Month Relationship to Total	\$38.50 0.7534	\$55.33	\$51.10
Premium/Member Month Relationship to Total	\$53.36 0.9614	\$56.21	\$55.50

$$\text{HCF} = 0.7836 = (0.7534/0.9614)$$

Table 2 shows the HCF determined for each of the twelve study groups. It also shows the total number of members in each group, the number transferring, and the percent transferring. The HCFs range from a low of .5310 for group K to .9186 for group F. For all groups the average factor is .7284. On average those members disenrolling were 27% healthier cost-wise than the total group.

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TABLE 2
Health Characteristic Factor by Groups for
BC/BS Members Transferring to an HMO

<u>Group Account</u>	<u>Total Members</u>	<u>Transfers to HMO</u>	<u>% Transferring</u>	<u>HCF</u>
A	39,536	3,554	9.0	0.7516
B	36,552	1,530	4.2	0.8409
C	2,521	636	25.2	0.7836
D	1,899	135	7.1	0.6310
E	3,166	388	12.3	0.5973
F	2,940	193	6.6	0.9186
G	2,413	104	4.3	0.6630
H	3,435	351	10.2	0.6220
I	408	131	32.1	0.7688
J	8,879	154	1.7	0.5843
K	8,822	540	6.1	0.5310
L	<u>1,301</u>	<u>553</u>	<u>42.5</u>	<u>0.5696</u>
Total	111,872	8,269	7.4	0.7284

Tables 3-5 show the demographic information that we derived from our study. Table 3 displays the mean age of members for each group for those transferring and for the total group. In 10 of the 12 groups, those transferring were younger. For all groups the mean age was 28.5 years for transfers compared with 34.8 years for the total group.

TABLE 3
Mean Age by Group for BC/BS Members
Transferring to an HMO

<u>Group</u>	<u>Transfers</u>	<u>Total</u>
A	28.6	36.0
B	29.1	37.1
C	27.5	28.6
D	33.1	38.8
E	26.4	30.1
F	26.4	31.7
G	23.6	30.8
H	30.1	37.1
I	33.2	30.3
J	29.8	29.3
K	25.6	29.6
L	<u>29.1</u>	<u>31.2</u>
Total	28.5	34.8

Table 4 shows the individual/family contract mix for each of the study groups for members transferring and for the total group. In nine of the 12 groups, the proportion of family contracts was greater for transfers than for the group as a whole. On average for all groups, members transferring reflected a 33/67 individual/family relationship while the total group mix was 38/62.

Table 5 shows family size of the two populations. In 11 of the 12 groups, those members transferring to the HMO had larger families than did the total group. For all 12 study groups the average family size was 3.28 members versus 2.95 members for the whole group.

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TABLE 4
Individual/Family Mix by Group for BC/BS
Members Transferring to an HMO

<u>Group</u>	<u>Transfers</u>	<u>Total</u>
A	26/74	35/65
B	25/75	36/64
C	33/67	38/62
D	61/39	62/38
E	42/58	49/51
F	47/53	46/54
G	42/58	46/54
H	13/87	23/77
I	69/31	57/43
J	39/61	38/62
K	17/83	38/62
L	<u>63/37</u>	<u>7/33</u>
Total	33/67	38/62

TABLE 5
Family Size by Group for BC/BS
Members Transferring to an HMO

<u>Group</u>	<u>Transfers</u>	<u>Total</u>
A	3.21	2.88
B	3.35	2.87
C	3.08	2.98
D	2.93	2.85
E	3.63	3.32
F	3.33	3.20
G	3.40	3.27
H	3.54	3.23
I	3.00	2.99
J	3.08	3.12
K	3.48	3.09
L	<u>3.34</u>	<u>3.28</u>
Total	3.28	2.95

In summary, individuals transferring are younger than the total group. Individuals transferring have a higher proportion of family contracts and a larger family size than the total group.

A primary purpose of the study was to enable the plan to calculate factors for adverse selection to be used in rating groups for membership remaining with BC/BS. The factor for adverse selection is dependent upon the health status factor for individuals transferring to the competing HMO and the distribution of enrollment between the Classic Blue subgroup and the competing HMO subgroup. In Table 6 we have assumed a 20% disenrollment or bleeding to the HMO. Given the 20% bleed and the HCF of .73 for HMO transfers, the calculation produces an adverse selection factor of 1.0675 for those remaining with traditional BC/BS. A critical assumption in calculating the adverse selection impact, of course, is the estimate of disenrollment. If we had a different mix, if it was 10/90 or 30/70, we obviously would have a different adverse selection factor than the 1.0675.

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TABLE 6

Calculation of Adverse Selection Factor for Classic Blue

	<u>Competing HMO</u>	<u>Classic Blue</u>	<u>Total Group</u>
Anticipated Enrollment Distribution	20%	80%	100%
Health Status Factor (Adverse Selection Factor for Classic Blue)	0.7300	1.0675	1.0000

Calculation of Health Status Factor for the Classic Blue,

$$\frac{1 - (0.73 \times 0.20)}{0.80} = 1.0675$$

The next process I would like to describe is our integrated rating of HealthMate, the HMO-like product, and Classic Blue. The primary objectives of integrated rating were to obtain the required subscription income in total for HealthMate and Classic Blue, to price HealthMate competitively, and to overcome a problem of adverse selection with the Classic Blue program.

With the integrated rating of HealthMate and Classic Blue we are able to vary assumptions of enrollment mix between the two products. We are also able to vary the benefit packages as may be required to suit the group and to vary the relationship of HealthMate and Classic Blue rates as may be deemed desirable for marketing purposes.

Table 7 illustrates our calculation of integrated rates for HealthMate and Classic Blue. Here we've assumed a 20/80% distribution of enrollment between the two products and a monthly family rate of \$200 required for Classic Blue benefits. Other variables are the HCF for HealthMate which in the illustration here is .73, the adverse selection factor for Classic Blue of 1.0675, and the HealthMate additional benefit cost of 24.7% which computes to dollars as \$49.40. Given the assumptions and variables used, rates adjusted for health status and added benefits are \$195.40 for HealthMate and \$213.50 for Classic Blue. Note the increase in total rate from \$200.00 to \$209.88. This illustrates the additional cost of the group for the 20% choosing the HealthMate benefits. The same principle would apply if we were talking about an HMO where the additional benefits for a certain proportion of the group would end up costing the group more in total. Shown on line five is a pricing situation where it was desirable for marketing purposes to sell HealthMate at a rate 5% less than the Classic Blue rate. Note that despite the restructured rates, the total rate remains at \$209.88. The methods of calculation are illustrated in footnotes A, B, and C.

We employed a general rating strategy in dealing with the HMO. If there were no HMO threat, then no prospect of adverse selection needed to be assumed in rates. If an HMO threat was evident, we offered HealthMate with integrated rates, i.e., integrated rates with Classic Blue. If the group declined HealthMate, bleeding to the HMO was anticipated for reasons of adverse selection. The prospective adverse selection factor was then built into the rate. So the group would have a sense of the cost of the dual choice environment, the Plan would advise the group as to what the rates would be if no past or future adverse

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TABLE 7

Calculation of Integrated Rates

Enrollment Distribution Calculation:	<u>HealthMate</u> 20%	<u>Classic Blue</u> 80%	<u>Total</u> 100%
1. Required Rate	\$200.00	\$200.00	\$200.00
2. Health Status	0.73	1.0675	1.00
3. Additional Benefit Factor (24.70% of Line 1)	\$49.40		
4. Rate Adjusted for Health Status and Added Benefits	\$195.40	\$213.50	(A) \$209.88
5. Rates Restructured HealthMate 5% Less Than Classic Blue	(C) \$201.40	(B) \$212.00	\$209.88

(A) $(\$195.40 \times 0.20) + (\$213.50 \times 0.80) = \$209.88$

(B) $0.80x + 0.20(0.95x) = \$209.88 \times = \212.00

(C) $\$212.00 \times 0.95 = \201.40

selection existed. In other words, if we had the total group, it would be given as an information rate.

Table 8 illustrates a typical rate relationship based on the general rating methodology/strategy I just described. As you can see, the most attractive rate is the business as usual rate, i.e., if no further HMO enrollment is to exist.

TABLE 8

Rate Renewal Strategy Illustration

	<u>Family Rate</u>
1. Business as Usual Rate (No Further HMO Loss)	\$200.00
2. Integrated Rating: Classic Blue	\$212.00
HealthMate (@20% Enrollment w/\$3 Copay Drugs)	\$201.40
3. HealthMate Refused -- Enrollment Loss to HMO Anticipated	\$218.00
If 100% of Group Were Enrolled in Classic Blue	\$191.20

In September, 1986, BCBSRI was sued by the competing HMO for \$60 million. The HMO alleged that BC/BS was in violation of United States and Rhode Island

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antitrust laws. We were accused of engaging in predatory and other anti-competitive pricing practices. We were also accused of interfering with the HMO's contracts and with its physicians. The reactions to our rating strategy generally were not favorable. Use of adverse selection factors in rates was attacked in the media and the marketplace as a "penalty" rating. National and regional publicity regarding our adverse selection recognition in rating appeared in various articles and such publications as *Business Insurance*, *Medical Benefits*, *Executive Membership Alert*, *BNA Pension Reporter*, and *New England Business*. However, an awareness was created of the cost impact of a dual/multiple choice environment. If we accomplished nothing else, I think everyone realized that there is a cost impact when you get into dual/multiple choice.

In October, 1987, the \$60 million suit was tried in Federal District Court. I had the dubious honor of being called as a witness for the HMO as well as for BCBSRI. The outcome of the trial was that the jury of six found the Plan guilty on two counts: (1) that BC/BS violated Section 2 of the Sherman Act by monopolizing and attempting to monopolize health care financing in Rhode Island, and (2) that BC/BS violated Rhode Island law by interfering with contracts between the HMO and its physicians. With respect to damages, none were awarded on the Sherman Act violation. However, damages were awarded on contract interference, \$1.7 million compensatory damages were paid to the physicians, \$250,000 punitive damages to the HMO and \$947,000 in compensatory damages to the HMO for a total of \$2.9 million. This was substantially less than the \$60 million the HMO sought. The Plan now has moved for judgment notwithstanding the jury verdict by reasons of law. One of the things that we feel very strongly about is that the jury was really not qualified to make judgment on such complex issues as antitrust and various rating aspects involved when you've got antiselection. It wasn't really fair for them to have to make a decision on such a matter.

Now the current status with respect to enrollment losses to the HMO is that such losses have tapered off significantly. I am not sure exactly as to the way, however, they have tapered off. We now have our own HMO up and running; it's licensed and enrolling members. We are aggressively marketing our Health-Mate product to both large and small groups. As far as results go, despite the lawsuit, the jury verdict, and all the bad press about penalty rates, we think the strategies used to deal with dual choice and adverse selection are really on target. Enrollment losses have slowed, we have improved in our ability to compete and the financial situation has improved.

MR. NOHL: I think this is a good illustration of where sound actuarial studies show that from a rating standpoint some actions are necessary but from a public standpoint we're going to run into some problems. I thank Mr. Baedeker for sharing with us what happened with Rhode Island. The next panelist is Mr. DeWeese, who is going to talk about flexible benefits and the underwriting issues involved there.

MR. CHARLES C. DEWEESE: The flexible benefit plan is an extension of the dual choice situation that Mr. Baedeker was just describing. Flexible benefit plans give an employee choices of how employer and employee benefit dollars are spent. Traditional plans have fixed benefits which are designed for some average employee situations with a limited choice available. The choice available to the employee might be that he could buy some additional term insurance or choose to cover his dependents for life or health insurance. Flexible benefit plans expand those choices. There are generally more kinds of benefits

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available in a flexible benefit environment and more choices particularly for medical plans. I will focus my remarks on medical plans.

A typical situation might be a core plan of medical benefits which might involve a product with a \$1,000 deductible. The employee can choose to buy a richer plan of benefits that may have a \$500 deductible or a limit on the out-of-pocket costs. He can also choose whether to cover just himself or his dependents as well. In the structure of some of these plans he might be able to choose not to have medical coverage at all. Where the employee makes these choices, he is paying for the richer benefits and he may be getting credits if he is taking lesser benefits. The employer would usually pay for the core benefits. The thing that goes hand in hand with this kind of choice is that there is selection. Employees are pretty smart about these things, and they have a pretty good idea of what benefits are going to be advantageous to them. It's the same situation as the election of HMO benefits. People who select the lesser plan tend to be the people who have a lesser expectation of health care needs; they're younger. Generally the people who buy the more expensive benefits and who might buy dental or vision care benefits would be people who expect to use them. The flexible benefit plans are constructed so that there are credits available if you don't take certain things that you can spend for other things. The fact that you can get a credit for taking a lesser benefit increases the propensity to select.

The job of the underwriter in a flexible benefits environment is to manage the plan design and pricing of the benefit options so the plan will be satisfactory for both the employees and the employer. The goals of the underwriter include creating benefit options that have reasonable relative costs to the employee, to keep the employer contribution at the desired level, and to control the impact of selection through plan design and pricing to absorb the cost of selection.

In structuring the employee costs, it's important to consider what the cost of each option would be if it were the only available option, as well as what the selection-adjusted cost might be. In other words, if we have a situation where there is a \$1,000 deductible plan and a \$250 deductible plan, we need to know what an actuarial selection-unadjusted cost might be for each of those plans and then take into account later the fact that the people who select the richer plan are going to use it a lot more than the other people. You really have two different groups of people, the high option plan people and the low option plan people. For example, if you have two options and one is a low option and one is a high option, if the low option were the only plan offered it would cost \$100 a month, and if the high option were the only one offered it would cost \$150 a month. But since you're offering both, the employees who expect low or no utilization would be more likely to choose the low plan and the selection-adjusted cost for that group might be only \$65 a month, while the selection-adjusted cost for the high option group might be \$200 a month. This is very similar to the kind of analysis that Mr. Baedeker was showing us with regard to the selection of the HMOs. Unbalanced you have 100% of the utilization that you would have had with only one plan, but you've split the group of employees into two or more groups based on their perception of how much health care they're going to utilize. The relative cost of these groups can be measured. In the flexible benefits environment, the additional cost to the employee for choosing the high option plan (in this example where we have two plans, one of which was nominally worth \$100 and the other nominally worth \$150) should be around \$50 or less. It would be less than \$50 if the employer wanted to subsidize that choice. The actual cost difference in the plans because of the utilization difference is

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more like \$135 in my example, because I said the selection-adjusted cost would be \$65 in the low option plan and \$200 in the high option plan. But if you charge \$135 for the difference, that exacerbates the selection potential. The only people who are going to pay \$135 more for a health plan that's only worth \$50 more are people who are really going to use it a lot.

The employer usually pays a substantial part of the cost of the core benefits, maybe the whole thing, and subsidizes part of the cost of selection inherent in the higher option plans. The employer will have an overall cost target for his plan and may have some objectives about which plans should be structured to be the most attractive to the employees. In this example, the employer may only want to pay \$100 per employee. The structure of what the credits are and what the extra cost is for the employee who chooses a higher option plan has to be designed so that when the inevitable selection takes place and the differences in utilization occur between different groups, the employer's cost objective ends up being met. To the extent the employer is subsidizing one plan more than another, he is hanging out there waiting to find out where the employees settle. So you have to make some judgments as to where employees are going to be, what the relative utilization levels are going to be, and how this is all going to fit together to give the employer the cost profile that's desired.

The plan design needs to be managed to help control selection so that costs will be predictable. Appropriate participation levels for any given benefit option have to be observed in order to control that selection. For example, if you have a lot of different options, an option that's selected by very few people not only may be abused but may be difficult to administer for a small number of people and, therefore, may not be worth the trouble. It might be an appropriate decision on the part of a buyer of a flexible benefits plan and on the part of the underwriter to say that an option that's selected by less than 20% of the people ought to be withdrawn. On the other hand, it's important to control that not too many people opt out of the whole medical benefits plan, because the people who tend to opt out are people who don't expect to have much utilization. You might set a maximum percentage for people opting out of the plan, or you might have a requirement that people who opt out have to prove that they have other coverage in order to be allowed to opt out.

Another area in which plan design is important is in setting conditions under which employees can change benefit options. If you have several benefit options, there are situations where people may want to upgrade or downgrade their coverage, and I think this is where traditional group underwriting rules have to be used and used very carefully. Every time you allow somebody to elect it's almost like an individual insurance situation, and the underwriting rules have to be much more strict than they are in normal group practice. If we're going to allow somebody to elect more in the way of medical benefits or life insurance, it's important to make sure the person is actively at work at the time of the election. Anytime there is an increase in medical benefits, preexisting condition limitations should apply. For example, if somebody moved from a \$1,000 deductible plan to a \$250 deductible plan, the difference in plans would not apply relative to a preexisting condition. The person would still be covered under the old plan for preexisting conditions assuming that the person had satisfied whatever requirements there were for the old plan. In order to upgrade the benefits any preexisting conditions would have to be satisfied. Very often it might be required, particularly for life insurance but also for medical insurance, that some evidence of insurability be provided. If you have more than two categories, you don't let somebody jump more than one at a time. That might discourage someone from

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making a radical change when he knew about a change in health status. You also need to have a minimum in or out time. If somebody makes an election for the rich plan, you want to avoid having that person make his selection, get the benefits, and then drop the coverage until the next time he or she needs it. You might have a limitation of one or two years. I think two years would be a reasonable amount of time. Once somebody decides they want to have dental benefits or the richer medical plan they'd have to stick with that decision for two years before they could change. The out you'd give somebody in that situation would be if there was a significant life status change such as marriage, divorce, or the birth or adoption of a child.

In addition, selection could be managed through bundling certain benefit plans together. For example, you may offer dental or vision care benefits in a flexible benefits environment. These benefits are very predictable in terms of how people utilize them. People who don't wear glasses probably don't want to buy vision care benefits. In order to control the level of selection and to make it easier to administer, you might bundle these coverages together; the result being if you want dental, you must buy dental and vision and there's one price for it. This might control the selection somewhat.

A requirement that the core benefits be bought can be helpful too. For example, if you have a low option medical plan that the employer is paying for, it would be helpful from an underwriting standpoint not to give people credits and let them get out of it. As I said before, if you don't have that structure and you do let people opt out, it's not good to let too many people opt out. You're going to save zero or very few claims dollars by letting people opt out, and the credits come in handy for supporting the plan.

The next thing that I want to talk about is a very simplified pricing model. In order to price in a flexible benefits environment, the underwriter needs to have information available in a number of areas or at least be able to make some credible estimates to support pricing development. Some of what I'm talking about is similar to what Mr. Baedeker showed where BCBSRI had studied the relative utilization between people who elect HealthMate or the HMO option and those who stay with the traditional Classic Blue plan. Where a flexible benefits plan is being put in to replace of an existing prior traditional plan, the underwriter should be able to price the existing plan based on experience and know what the split is between employees who have single and dependent coverage. The underwriter would price each proposed flexible benefit plan option as if it were the only option, ignoring the effects of antiselection. The underwriter would then gather information about anticipated participation by option plan and relative utilization levels for the various plans. While the selection that people do, particularly on medical plans, is not 100% efficient, the effect is very strong. What BCBSRI did is something that any company pricing flexible benefits should do, gather its own experience in situations where there are choice environments as to what the relative utilization levels are depending on what the participation is in various plans. Those relative utilization levels will be very sensitive to the level of participation. For example, if you have a low option plan that only 10% of the people elect, those 10% are going to be very healthy and have very low cost. However, if you have a low option plan that's selected by 60% of the people, that will be moderated some because there is a continuum of utilization propensity within the population. While it's not one for one that the lowest utilization person picks the lowest option plan, there is a propensity for the lower utilization people to go to the lower plan.

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Tillinghast/TPF&C, particularly TPF&C, has done a lot of work with large employers putting in flexible benefits plans. We've developed utilization tables that are sensitive to what the product is (dental, medical, etc.) and what the cost environment is and created a continuum based on the level of participation. Generally those tables would be helpful to somebody who's just starting and doesn't have a body of experience. The tables are based on the experience of a number of plans that we've been involved with, so they may be comparable to what other people might see.

Finally, the underwriter needs to consider the employer's cost objective and strategy for contributions to the plan. For example, the employer may want to pay a percentage of each option cost, or he may want to pay a flat dollar amount. Table 9 shows a very simplified pricing example. This is a situation where we had a three-option medical plan. I have not considered dependents. The concepts would be the same, but it would be a little more complicated. I also didn't allow anybody to opt out of this example.

TABLE 9

Medical Plan Options

<u>Benefit Option</u>	<u>Anticipated Participation</u>	<u>Unadjusted Cost</u>	<u>Projected Utilization</u>	<u>Adjusted Cost</u>
A	20%	\$60.00	52%	\$3.20
B	20	80.00	73	58.40
C	60	<u>100.00</u>	<u>25</u>	<u>25.00</u>
Weighted Average		\$88.00	100%	\$92.92

Employer Strategy 1

<u>Benefit Option</u>	<u>Anticipated Participation</u>	<u>Adjusted Cost</u>	<u>Employer Contribution</u>	<u>Employee Contribution</u>
A	20%	\$3.20	\$60.00	\$(28.80)
B	20	58.40	60.00	(.60)
C	60	<u>125.00</u>	<u>60.00</u>	<u>65.00</u>
Weighted Average		\$92.92	\$60.00	\$32.92

Employer Strategy 2

<u>Benefit Option</u>	<u>Anticipated Participation</u>	<u>Target Premium Differential</u>	<u>Total Price</u>	<u>Employer Contribution</u>	<u>Employee Contribution</u>
A	20%	\$0.00	\$67.72	\$60.00	\$7.72
B	20	8.00	85.72	60.00	25.72
C	60	<u>36.00</u>	<u>103.72</u>	<u>60.00</u>	<u>43.72</u>
Weighted Average		\$25.20	\$92.92	\$60.00	\$32.92

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Option A is the lowest option and what might be called the core benefits. Here we see a situation where we expect 20% of the people to elect option A, 20% option B, and 60% option C. The unadjusted cost for each of those plans is \$60 for option A, \$80 for option B, and \$100 for option C for a weighted average of \$88. By unadjusted cost I mean the cost for that plan if it were the only plan being offered. No effect of selection is being considered. I then calculated some utilization expected values based on the tables we had. It is a very similar process to what Mr. Baedeker was describing. The projected values were that the people who elected option A would have a relative utilization of 52% of what the whole group would have, the option B people would have a relative utilization level of 73%, and the option C people would have a relative utilization of 125%.

When you talk about selection, all these people are selecting against you but there's only so much utilization to go around. Despite the fact that they're all selecting, the total utilization is still 100% or soon to be 100% of what it would otherwise have been, but the effect on the cost would be an increase in cost due to the highest utilization people going with the highest utilization plan. The adjusted cost for each benefit is a cross multiplication of the relative utilization level and the cost of the option if everyone participated. For example, option A is 52% (relative utilization) times \$60 (the cost for option A if everybody participating chose A) resulting in the net cost of \$31.20. The adjusted cost for option B is \$58.40 and the adjusted cost for option C is \$125.00. The weighted average of all those is \$92.92. In this particular example the cost of selection to the plan was \$4.92.

To go on with this example, the employer has an amount that he is willing to pay toward the cost of medical benefits. There are a lot of different strategies the employer can use to accomplish this, and the pricing methodology has to be sensitive to what the employer wants to accomplish and also to the underwriting objectives. It is most important not to make the effects of selection any worse. I picked two employer strategies to show how each one would work. The first strategy is that the employer is willing to pay \$60 toward the cost of this plan and wants to treat all employees alike. Since the adjusted cost for the employees who elect benefit option A is \$31.20 and the employer's willing to pay \$60, there's a credit for those people who elect option A of \$28.80. For option B there is a credit of \$1.60, whereas the people who elect option C would have to pay \$65. This is perhaps equitable in that it reflects the actual cost to the Plan of the various groups. The problem with this, on a relative basis, is that it costs the people who elect option C \$93.80, and while they may use those benefits extensively on average, there is something that may seem unfair to them about that. In addition, \$93.80 is a lot of money, and people won't spend \$93.80 for that richer plan unless they are sure they're going to use it. This kind of pricing environment would create a situation where the relative utilization levels would get twisted because the participation would get twisted. If we use this kind of pricing approach, those anticipated participation levels, the 20%, 20%, and 60%, wouldn't come true. I don't know what they'd be, but they'd certainly change so that more people would elect option A and take the \$28.80, whether they could get it in cash or use it for other benefits. You might have a situation where instead of 20%, 20%, and 60%, we have 50%, 30%, and 20%. The relative utilization levels and the pricing would change, so the plan wouldn't work.

I think strategy 2 is a better one, but not the only one. There is a whole spectrum of alternate strategies. In this one, the pricing strategy underlying it

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is that the cost differential between any two plans would be set at 90% of the unadjusted difference in the plans. For example, if the unadjusted difference between plan A and plan B was \$20 we would set the target premium differential for plan B at \$18 relative to plan A. Similarly, we would set the target premium differential for plan C at \$36. We could then solve for the total price for each of these plans so that we'd still end up with \$92.92. By using an algebraic solution the total price for plan A ends up at \$67.72, which is exactly \$18.00 less than the cost for plan B of \$85.72, and exactly \$36.00 less than the cost for plan C. When the employer pays \$60 for each employee, the net cost to the employee of the three plans is \$7.72 for plan A, \$25.72 for plan B, and \$43.72 for plan C which has a more moderate impact on the employee and would be designed not to encourage additional selection.

In summary, there are a lot of complicated underwriting issues, and they're very much tied to the pricing of flexible benefit plans. It's very similar to pricing in the dual choice environment in that it expands the things to be considered somewhat, but it is a manageable exercise and the techniques are not all that complicated.

MR. NOHL: The next panelist to speak is Ms. Leif who is going to talk about the other factors affecting underwriting.

MS. ELIZABETH J. LEIF: I'm going to start by reading you a sample of headlines that we've seen in the newspapers and the industry publications over the past three or four months. See if you've heard or seen any of these: "Health Insurance Rates Surge as Effort to Control Costs Lags," *The New York Times*, January 12, 1988; "Critical Condition -- Defying all Expectations, Health Costs Continue to Soar," *Time Magazine*, February 1, 1988; "Latest Survey Shows Hospital Charges Increasing Far More Quickly than CPI," *Wall Street Journal*, January 6, 1988; "AIDS Surge May Tighten Group Insurance Market," *Business Insurance*, February 8, 1988; and "Health Insurance for All Voted in Massachusetts," *Los Angeles Times*, April 14, 1988. These headlines, and others like them that we've all seen, are really indicative of some of the environmental forces at work that influence the way that we, as group insurers, are conducting our business. My topic of discussion is how we are changing our underwriting practices to deal with the environmental situation.

What are these major environmental forces at work? I would summarize them into five major areas of concern: (1) failure of cost containment efforts; (2) deterioration of the group marketplace; (3) growing concern about AIDS; (4) increase in psychiatric and substance abuse claims; and (5) increasing state and federal regulation.

The first concern I mentioned is the failure of cost containment efforts. Over the past few years these efforts have been geared toward including second surgical opinion coverage, incentives for the use of outpatient facilities as opposed to inpatient, and some sort of utilization review strategy such as pre-certification of hospital admissions. While we've all been doing this for a few years, we didn't know what it was worth when we started. Now that we have some experience to look at, we can start to figure out what actually has happened.

At my company, Mutual of Omaha, we've been selling a cost containment product and a non-cost containment product at the same time over the last couple of years with our small employer block. We've been able to compare issues of the

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same time periods to determine how it worked. We've found that under the cost containment product, the average length of stay and the total charge per day were reduced. But in both of these cases very modest reductions occurred. It was not at all what we had originally hoped for. The frequency of hospital admissions was actually slightly higher under the cost containment program, and I don't know how to explain that. The frequency of outpatient treatment was dramatically higher under the cost containment product.

In summary, I guess what we set out to do, at least in part, worked because hospital stays are shorter and there's been a shift to outpatient treatment. However, there are a couple of environmental factors at work here that offset these positive results. One of these is related to cost with regard to our utilization review programs. Some companies, if they are large enough to support it, have their own in-house utilization review program, and others are hiring outside vendors to do it for them. Either way, there's a cost involved that cuts into whatever modest savings we're getting from these programs.

The second thing is that it appears that the doctors and the hospitals have caught on and have found ways to generate additional revenues for themselves in spite of all of our efforts to control that aspect. We've seen a surge in the utilization of many types of health care and in the cost of outpatient treatment, lab tests and prescription drugs. A lot of those types of things have risen much faster than we expected. Additionally, almost every second surgical opinion is confirming. We're back to the old balloon theory -- we've squeezed them on the inpatient side, and it popped out somewhere else.

The second environmental influence that I think is important is what I call the deterioration of the marketplace. It applies specifically to smaller groups and has come about over the past three to five years while all of us were designing and redesigning and perfecting our renewal rating strategies which recognized the experience of groups. What it looks like to me is that the majority of the groups that are out there looking for coverage are the ones that have gotten huge rate increases from their prior carriers. Since we're all looking at experience, it stands to reason that they are getting those large rate increases because of their claim situation. The groups that have better than average claims experience are not as likely to be looking for new coverage. We need to be aware of that aspect when we are underwriting our groups.

A third environmental influence that we're all aware of is AIDS. We've all heard plenty about this, and I'm sure if you're as concerned as I am, you've been watching your group business and trying to determine what effect it's having on your own business. I came across a survey of group insurers that was done by the North American Reinsurance Company where they surveyed 83 group insurers. These companies indicated that between 1986 and 1987 they had seen a 73% increase in life claims and a 50% increase in medical claims due to AIDS.

The average life claim was \$28,000 and the average medical claim was \$23,500 in that particular survey. At Mutual of Omaha, in our small employer block, we're seeing higher averages than that. Our average is something around \$35,000. The percentage of total claim dollars is not yet alarming. It is somewhere less than one half of a percent from everything I can tell in talking with other companies as well as my own. But the rate of increase in these claims is pretty scary, so it's something we certainly need to keep our eyes on.

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Another source of increase in claims is psychiatric care and substance abuse. At Mutual of Omaha, our claim payments on our small employer block for these causes rose from 7% of total claims in 1986 to 8% in 1987, the largest increase coming from inpatient treatment for substance abuse. In its 1987 survey of hospitals, the American Hospital Association asked those hospitals what profit centers were making the most money. Over 80% of the hospitals said that they were making money off of their substance abuse units. It appears that as hospitals have lost patients, they have expanded their number of psychiatric beds and substance abuse facilities so that they could cash in on more generous reimbursement in health insurance contracts for these causes. Added to this is the growing public awareness of alcoholism as a disease and acceptance of its treatment. You can hardly pick up a newspaper these days without reading about the increased drug situation in this country. I think drug abuse is certainly a growing problem, and that naturally results in the need for more treatment, especially among adolescent children.

The fifth environmental factor is state and federal regulation. State regulation in recent months has been focusing on such issues as continuance and replacement laws. At last count I think there are 22 states that have these laws. Other popular issues are in vitro fertilization, which is very expensive and highly selective. Some states are requiring annual mammography screenings and/or home health care. Some have laws regarding AIDS testing and underwriting. On the federal scene, the limits on what Medicare pays have resulted in a lot of cost shifting. I think we're all aware of that.

The increase in patients who are protected from rising fees by government programs and managed care programs where there are preset payment schedules means that patients who are covered by indemnity plans are having to pay a larger share of the rising expenses. As more employees enter into this managed care environment, the population that is still available to absorb the rising cost gets smaller and smaller so the trends get higher and higher. The enactment of COBRA certainly had an influence on the way we do business. We now not only have to insure active employees of a group, but we also have to insure persons who are eligible for coverage because of the continuation provisions of that law, whether they be employees who have been terminated or dependents of persons who have had divorces or dependents who have reached their limiting age.

We've been closely watching the progress of the Kennedy bill. This bill would require all employers to offer some basic health insurance package to employees and their dependents including all employees who work at least 17.5 hours a week. David Nexon, who is the health policy advisor to Kennedy, summed it up as "the biggest piece of social legislation since Medicare and Medicaid." I think that we need to be watching this closely and doing what we can to slow it down or get it stopped. However, this recent thing with Massachusetts makes me pretty discouraged because they've passed this basic health insurance program for all residents of Massachusetts which will be in place by 1992.

In response to all these environmental forces, there's a lot of activity going on in our companies trying to decide what we can do about it without raising the rates so high that nobody can afford to buy coverage anymore. There are a couple of specific ways we can do that: one is product redesign and the other is tighter underwriting rules. With regard to product redesign, I think it's time for all of us to start taking a second look at those cost containment provisions. The mandatory second surgical opinions seem to have cost us more than they

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saved. In this particular benefit the medical care community certainly out-smarted us. Another thing we need to take a look at is our outpatient treatment benefits. At Mutual of Omaha we've seen cases where outpatient surgeries have cost more than inpatient surgeries. We may want to consider putting some limits on these benefits, although we have to be very careful on how we do that because we don't want to force people back into the hospital. We're experimenting at Mutual of Omaha with a \$50 deductible on each inpatient treatment, but we don't know if that's going to work. We're trying to force people back to the doctor's office for small things rather than back into the hospital. Utilization review programs seem to be working, but we need to watch the cost of administering these programs because that really eats into the modest savings that we do get.

One trend that has been noticed in group insurance benefit design over the last few years is the movement toward higher deductibles. The percentage of employers with \$150 or higher deductibles has risen from 10% in 1982 to almost 40% in 1986. So there is a growing movement toward higher deductibles. However, research performed at Mutual of Omaha of our competitors shows that almost everybody is still offering a \$100 deductible. It's not as popular to the buyer anymore, but it is still available. We're not so sure that is still a good idea, and because of that we're moving to a \$150 minimum starting June 1st. We know that produces only a one-time savings, but it shifts more of the cost to the insured. An added environmental influence here is that with the rise in the number of working spouses with two insurance plans that pay almost all of the benefits, there is very little incentive to keep expenses down.

There are a number of different actions being taken with regard to the AIDS problem. The North American Reinsurance Company survey that I mentioned earlier showed that a significant number of companies are considering curtailing the marketing of group insurance in areas where AIDS claims have risen the fastest. The areas mentioned most often were Washington D.C., California, Texas and Florida. Nearly half of the surveyed companies said they are asking AIDS-related questions on their applications, and a few companies said they were beginning to use blood tests for group life insurance, but not yet for health insurance. Another way that AIDS has impacted our claims cost is through the cost of the drugs used to treat it, specifically the drug AZT, which from our experience is costing about \$1,400 per month. We are experimenting with a \$12,000 limit on prescription drugs in our new product. I'm not sure that's going to work, and you have to be very careful that you don't drive these people into the hospital because they can get it there, and it's going to cost a lot more.

With regard to psychiatric care and substance abuse, I think over the last couple of years we've seen a trend toward tightening up the benefits for these causes wherever we can. There are some states that won't allow you to do that. It appears that a 30-day inpatient maximum is becoming more common, and outpatient is limited typically to \$1,000 per year with 50% coinsurance. Very often there are lifetime limits which are getting lower, around \$50,000 or even \$30,000 on some.

In response to the deterioration of the marketplace, tighter underwriting rules are necessary. Some companies have begun asking health questions on larger groups. At Mutual of Omaha we've experimented with this over the last 4 or 5 years by asking health questions on groups up to 35 lives. We started in certain geographic areas, and because it was successful we expanded it

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nationwide. Starting in June we're going to be asking a few basic health questions on groups up to 75 lives. Whether that's going to work or not remains to be seen, but those health questions give us at least a feel for the overall health of the group. We reject only those groups which have a disproportionately large number of uninsurables. We are beginning to use what we call a prequote questionnaire which asks questions regarding the number of prior carriers and the rate of turnover. We also ask questions about any large claims that may have occurred in the group over the last few years. All of that information is used to determine whether or not we even want to go so far as to have the employees fill out the applications.

COBRA continuances are a problem. That's something that we know a little about but not a lot. It appears that COBRA continuances don't stay with us very long. There is some antiselection going on. Typically the continuations are short unless maternity is involved, and we see a lot of those.

To summarize, I would say that there are a lot of environmental influences impacting the way we do business right now. It certainly is to our advantage to stay aware of what's going on in the world around us.

MR. NOHL: Ms. Leif, you mentioned you've been experimenting at Mutual of Omaha with asking some short form type questions of larger groups and that was a successful undertaking. When you say successful, are you talking from a market acceptance standpoint or experience standpoint?

MS. LEIF: It was successful in both regards, but the success is limited to the extent that it only affects the first-year experience. The way it works is that we ask the health questions of all the employees and have a point system whereby we determine what the overall health of the group is and then we either accept or reject the group. That works fine at first but later on as you get add-ons into the group, the health of the group can change significantly from that original point of issue. So we see very good first-year experience and then a gradual deterioration over the next year or two.

MR. ROBERT H. MAYER*: Mr. Baedeker, how were you estimating the traditional indemnity/HMO participation mix when you were applying your adverse selection factors and how did you apply your health status factors to new sales cases? Was it based upon the average of your statistical studies or based upon the participation mix that you were anticipating? What percent of the population is going to go to the HMO?

MR. BAEDEKER: That was primarily a marketing/underwriting judgment. There's no set formula to it. It was based on our best perception of what the situation was with that particular group account.

MR. MAYER: And after you got that, how did you apply your adverse selection factor? Did you use your statistical average or was that subjective by group?

MR. BAEDEKER: That was based on the total of all the groups that we had studied at the time.

* Mr. Mayer, not a member of the Society, is Vice President and Chief Financial Officer at QUICOR in New York, New York.

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MR. MAYER: You used the average for all groups?

MR. BAEDEKER: That's correct.

