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WHAT EMPLOYERS CAN DO TO REDUCE MEDICAL COST

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- Setting financial goals
- Benefit levels
- Contribution levels
- Wellness incentives

MR. JOHN K. AHRENS: The panelists will share specific examples of approaches that have been effective in order to help dispel some of the hopelessness that many employers feel about this issue. I will quote from the May 30, 1991, *Kansas City Star*, by Humphrey Taylor, president of Louis Harris & Associates. "Employers tend to be cranky, confused, aimless, and spineless. They are getting more and more angry because their health costs are going up, but they really don't understand why the things they've been told to do by consultants to reduce costs haven't worked."

Although there are no easy answers, there are many effective strategies. All of us on the panel believe there are four main approaches for employers to use in combatting increased costs. These are:

1. Managed care
2. Appropriate benefit levels
3. Effective employee contribution strategies
4. Wellness approaches

This discussion will not deal with managed care issues, but we will address the other three.

I'm a consulting actuary from Kansas City. My first 11 years were as an insurance company actuary with Mutual of Omaha, Lincoln National Reinsurance, and a Blue Cross plan. I've been consulting with employers since 1987. Most of these employers have about 2,000 employees or less. I will comment on the need for employers to set financial goals.

As we know, long-term planning is not one of the major hallmarks of American business. I often ask employers to develop a target employer cost for health care as a percentage of covered payroll, not as a cost per employee or as a percentage increase in costs. I suggest this type of approach for several reasons. First, it helps the employer to recognize that providing medical care is part of the cost of compensation of their employees. Second, it's a single number that can be easily determined

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and remembered. That's important for focusing senior management. Third, it's possible to get figures going back 10 to even 20 years to provide a good, historical perspective. Fourth, it gets the employer thinking about reducing the number of persons who are covered, even if that means that the cost-peremployee or the rate trends are much higher. And, fifth, it provides a number that is easily compared with other employers in the same industry or location.

A second major financial planning tool is to develop target costs as a percent of payroll for a three- to five-year forecast period, and then build that into the bonus determination for the company officers who are going to be held accountable for the benefit costs. I like to see a team approach from the employer for managing health costs. The major areas to be represented are finance, risk management, and human resources. The finance area should be responsible for setting the goals and tracking actual results against budget. The human resources area should be responsible for implementing and administering the plans and bringing the employee relations issues into the planning process. However, the major decision-making authority should be the risk management area. It should be responsible for overseeing the administrators and carriers, hiring consultants if needed, and determining the actual approach to be used on the benefit plans. It should make final recommendations. Risk managers serve as ideal mediators between the finance area, which doesn't want costs to go up at all, and the human resource area, which doesn't want employees to be unhappy. Most benefit decisions are still controlled by human resources.

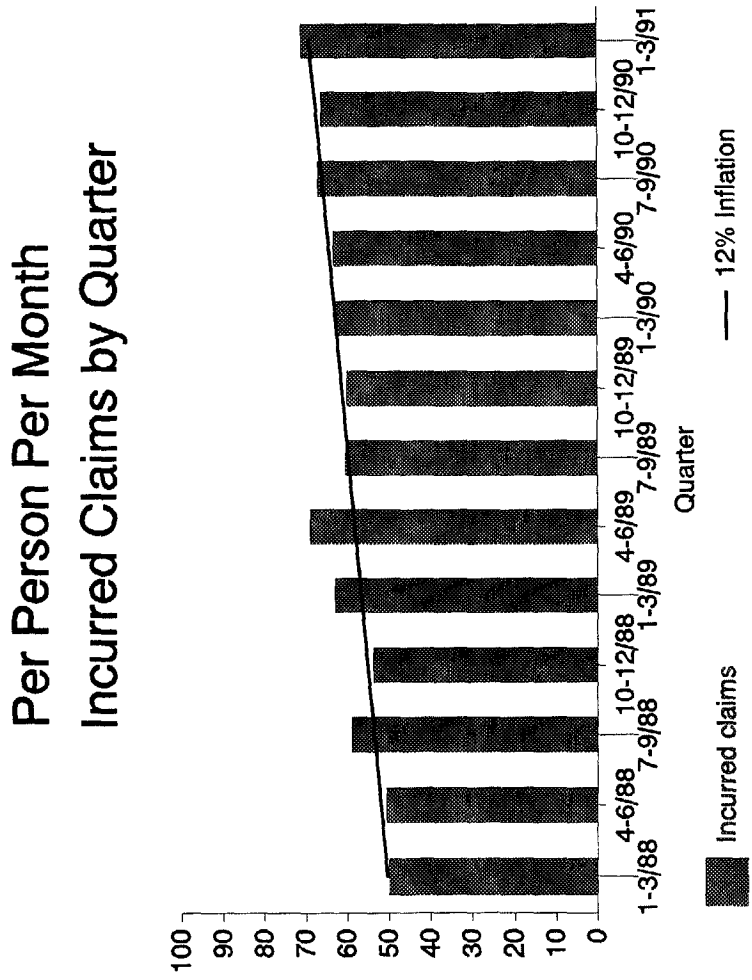
If you want to know why employers have had problems containing costs, let me leave you with one thought. Letting the human resources department manage medical costs is the equivalent in an insurance company to letting sales make the pricing and underwriting decisions. Now, with that scary thought, we'll move on to a discussion of benefit level strategies.

Our first panelist is Joan Ogden of Joan Ogden Actuaries. Joan worked with two Blue Cross plans from 1976 through 1985 and, for the past six years, has been consulting to employers in Salt Lake City. Her clients range in size from 100 employees to 70,000 employees. Joan will be commenting on successful benefit strategies that her clients have used.

MS. JOAN P. OGDEN: There was a short article in *The Wall Street Journal* last week regarding a survey of 15 major insurance companies that indicated that increases in medical care costs and utilization for 1991-92 would be somewhere in the 24% range. I'd like to tell you about a client I work with, with 70,000 employees, who wanted to control medical claim costs. The following chart shows the actual per-person, per-month claim costs and also a 12% trend, starting with the first quarter of 1988. (Chart 1)

This company began with a per-person, per-month claim cost, in the first quarter of 1988, of $49.16. By the end of that year, it had hit $55.16, an annualized trend rate in excess of 17%. Things deteriorated, and by the second quarter of 1989, it was experiencing an annualized trend rate of 29%. Once this company began to take some action, it made a major change in the per-person, per-month claim cost, beginning in the third quarter of 1989. It did this without major benefit changes.

CHART 1


Per Person Per Month
Incurred Claims by Quarter
100
90
80
70
60
50
40
30
20
10
0
1-3/88
4-6/88
7-9/88
10-12/88
1-3/89
4-6/89
7-9/89
10-12/89
1-3/90
4-6/90
7-9/90
10-12/90
1-3/91
Quarter
Incurred claims
12% Inflation

The first thing that the client did was establish goals. Goals might be financial, utilization-based, education-based, or related to the health status of the working population. There is a wide variety of potential goals, but they must be articulated in order to be measurable.

The first change this company introduced was a change in the copayment. Its existing benefit structure was quite rich. There was a $5 office visit copayment, 100% coverage for in-patient services, and nominal coinsurance for out-patient services. An analysis of claims showed there had been six and a half office visits per person, per year. That's a lot of office visits. It moved the copayment from $5 to $10, on the assumption that it really should cost more to go to the doctor than it does to buy a sandwich and a beer for lunch. This nominal increase of $5 for the office visit copayment reduced the number of office visits by one-third. Not only did the number of office visits drop, but the associated ancillary services, such as x-rays, laboratory, and even the number of prescriptions, also dropped. There was a ripple effect, and that effect has not worn off. Implemented in July 1989, the level of office visits for that population today is the same as when it was first introduced. There has not been a deterioration of the effect of that $5 increase over time.

The company also looked at that portion of the expenses that was subject to a deductible. It had the standard $100 deductible for major medical expenses. A $100 deductible was originally established in the early 1970s to represent one week's take-home pay. The concept was that one week's take-home pay was an appropriate risk for that person to bear. With the rate of inflation experienced since the early 1970s, $100 is no longer appropriate. This company moved the deductible up to $200. While that was not as high as it might have been raised, the client desired to maintain this as a very rich plan with a lot of up-front services.

The company also changed the coinsurance percentages, but not uniformly. The original coinsurance was 90%. It reduced the coinsurance most in those areas that appeared to be abused or misused, particularly in areas where the care was being provided for a condition that might be described as "not ill."

Temporo mandibular joint treatment was reduced from 90% coinsurance to 50%. Treatment of infertility was reduced from 90% for anything other than physician office visits and hospital services to 50%. The employer felt that individuals who are infertile don't have a medical condition that jeopardizes their health. A number of limits were also introduced in areas of abuse. One of the targeted areas was chiropractic services. It was experiencing 2.5 chiropractic visits per person, per year, for a stable population of which 48% is children. By moving to a 20-visit limit per year and a $30 maximum payment for each visit, it saved 1.3% of its total medical costs.

The employer also looked at reimbursement maximums. One of its most controversial changes involved bone marrow transplants. The company had funded a number of bone marrow transplants for leukemia in recent years. There had been no survivors beyond two years. Given that the average bone marrow transplant was costing $300,000 per individual, it decided to put a $50,000 lifetime limit on bone marrow transplants. It was a tough decision, and yet it felt that it was more appropriate to

spread the benefits across a wider block of individuals, rather than to have so many dollars being spent unsuccessfully on so few.

The company also moved from the 90th to the 60th percentile of usual, customary, and reasonable for reimbursement of physician services. Its intent was to provide as full a coverage as possible for those individuals who were using what they described as cost-effective physicians. Those individuals who were using high-cost physicians were the ones affected most by the reduction. This change saved 2.5% of its total health care costs.

The company also made changes in its approach to contractual reimbursement. For example, a global approach is typically used for maternity charges. All of the prenatal visits, the delivery, and the postnatal visit are included in one global fee. This company took it one step further. It agreed to reimburse the physician a fixed amount for all professional services associated with a delivery, including any ultrasounds, laboratory examinations, or additional services. It has one global fee for normal delivery and one global fee for cesarean section. Physicians agreed to this approach.

The company also wanted to deal with the unbundling that sometimes occurs in outpatient settings. It changed to a global reimbursement for outpatient services, such as knee arthroscopy. There is one global fee to cover the facility, laboratory, surgeon, assistant surgeon, anesthesiologist, x-ray, pre-, and postcare. It contracted with providers who were willing to make these sorts of arrangements and then told their employees that if they used these providers, their charges would be covered in full. If they used other providers, they'd get the same dollar amount, but it would have to be distributed among all the providers providing services.

During this process, a lot of education was going on. Part of the education was of the employer, who watched the medical community try to generate more income for itself. For example, a large hospital chain, used by many of the employers, started charging for nursing services by the minute. The hospitals eliminated nursing charges from their normal room-and-board rate and said they were holding the room-and-board level. What really happened was an increase in nursing costs. So again, the employer made contractual arrangements with hospitals. This only works for large employers with a geographical concentration. This is not going to work for an employer with individuals scattered across the country.

The employer also concentrated on the management of care. Length of stay for normal delivery in this geographic area was normally 3.6 days. It managed to get it down to 1.7 days by aggressive education of the providers. It started establishing type of service, place of service, and provider of service limitations. For example, putting tubes in kids' ears is often done in California in the physician's office under local anesthesia, rather than in an outpatient setting. The employer said if they can do it that way in California, they can do it that way here.

With regard to extracontractual benefits, it began to require prenatal care and closer tracking of pregnant women to avoid premature births. Its premature birth rate was cut in half during this period.

Finally, it concentrated on the control of mental and nervous costs. By actively moving services from an inpatient setting to an outpatient setting, it eliminated 2.1% of its total medical benefit cost.

Education is obviously a key to all of this. The areas of concern were understanding the goals, cost-sharing premium, copayments, deductibles and coinsurance limits, payment reimbursement maximums and contractual reimbursement, management of care, level of service, type of service, type of provider, extracontractual benefits in the nontraditional sense, management of particular services or diagnoses, mental and nervous, substance abuse, and employee education.

The bottom line was that after a period of annualized rates of increase of 28% and 29%, it was able to hold costs at the same level with no increase for the next year. It is continuing to monitor and to fine-tune the benefits, trying to reduce the expenditures that benefit the least number of individuals.

Next, I'd like to talk about the effect of education, when employees are put in charge of the selection and implementation of their health insurance benefits. My client was a bargaining unit which, in 1987, had PPO coverage with a $10 office visit copayment, a staff model HMO, and an individual practice association (IPA) HMO. The rates of increase in a single year, from 1987-88, were 11% in the PPO, approximately 5% in the staff HMO, and approximately 12% in the IPA HMO. In 1989, the PPO proposed a 42% rate increase. The IPA HMO requested an increase of 22%. At that point, management arranged to make a fixed contribution per employee to a joint trust fund managed by three members of the bargaining unit, three management representatives, and a neutral third party. The bargaining unit was involved in public transportation. These were bus drivers, not sophisticated consumers of health insurance, nor sophisticated in any technical areas. However, they learned in a hurry. Before and after results are shown in Table 1.

First of all, it introduced an indemnity product with a $250 deductible, something that wouldn't have been well thought of if management had introduced it. The staff HMO was kept in place. The IPA HMO was eliminated because the bargaining unit decided if it could not deliver care in an HMO setting, at better than a 22% rate of increase, it was off the mark.

In the first year, the increase in the indemnity product was nominal, something under 2%. The staff model HMO was busy playing catch-up. In 1990, it introduced a new IPA HMO at very attractive premium rates. In 1990, a single employee indemnity rate for the $250 deductible was $111. The rates were $93 for the staff HMO and $85 for the IPA HMO.

In 1991, the indemnity program got a 25% increase. There's a lot of antiselection involved, but the plans are purchased by the joint insurance committee as a package, and the fixed amount from the employer is used to pay for it. The staff HMO asked for a 6% increase. The IPA, after starting at a level that we believe was too low, increased rates by 17% but were still under $100 for single coverage, $330 for family coverage.

TABLE 1

Premium History

Year	Indemnity		PPO		Staff HMO		IPA HMO	
PRIOR TO FORMATION OF JOINT INSURANCE COMMITTEE								
1987								
Single			$72.95		$75.80		$78.00	
Dependent			$151.55		$166.50		$172.00	
Family			$201.50		$210.95		$232.98	
1988								
Single			$80.98	11.0%	$77.30	2.0%	$90.38	15.9%
Dependent			$168.24	11.0%	$169.37	1.7%	$187.77	9.2%
Family			$223.68	11.0%	$223.32	5.9%	$257.98	10.7%
FORMATION OF JOINT INSURANCE COMMITTEE								
1989								
Single	$109.18				$83.48	8.0%		
Dependent	$229.31				$185.78	9.7%		
Family	$349.45				$259.26	16.1%		
1990								
Single	$110.67	1.4%			$93.00	11.4%	$85.10	
Dependent	$232.41	1.4%			$200.00	7.7%	$187.22	
Family	$354.14	1.3%			$298.15	15.0%	$280.83	
1991								
Single	$138.34	25.0%			$96.85	4.1%	$99.58	17.0%
Dependent	$290.51	25.0%			$214.17	7.1%	$219.05	17.0%
Family	$442.68	25.0%			$316.50	6.2%	$328.57	17.0%
ANNUALIZED RATE OF CHANGE SINCE 1987 OR FIRST COVERAGE								
Single	12.6%				6.3%		6.3%	
Dependent	12.6%				6.5%		6.2%	
Family	12.6%				10.7%		9.0%	

The employees instantly had to become educated, instead of just complaining about management. They talked about how the company really needed to put a $5,000 limit on inpatient mental and nervous services and introduce an employee assistance program (EAP), because funding an EAP was a more cost-effective way of prescreening the need for health care services for psychiatric illness.

The annualized rate of change, since 1987, in the indemnity product has been about 12.5%; the staff model HMO, about 8%; and the IPA, also about 8%. The experiment proves that you can delegate the intelligent selection and evaluation of insurers and funding mechanisms for health care coverage to a large block of employees and have a favorable result.

MR. AHRENS: Our next panelist is Chuck Rysz, Vice President with Miller, Mason & Dickinson in Chicago. He began his actuarial career with Allstate in 1973 and, since 1978, has been consulting to employers ranging in size from 40,000 to as low as 100, with an average employer size in the 1,000-10,000 range. He will be discussing contribution strategies.

MR. CHARLES J. RYSZ: My role will be to discuss how employers are helping to control their health care costs through management of participant contributions. Unlike the benefits design area, some of the things that employers are doing today are not that much different than what they were doing 10 and 20 years ago. There are some other things that are very different, though, because our industry has changed so much. The challenges that the employer faces in this area are sometimes overlooked, and we thought it'd be interesting to focus on exactly what they're doing. The backdrop here will be, for the most part, medical plans, but some of this also applies to other health plans and plans that are nonhealth.

Most employers today are looking for quick fixes. They see the costs going up each year. Management's telling them to hold down the cost next year. Most of the people who talk to me are not only interested in quick fixes; they want to be around to have their jobs for a few years, so they are looking at both short-term and long-term strategies. We're finding that many employers don't really want to talk about their overall benefits philosophy. If there's a single thing that employers hesitate to do, it's to sit down in a room and make really hard decisions about their benefits philosophy. Contribution strategy often gets overlooked. Plan design strategy usually takes the forefront, but employers are finding that the savings that they can derive from the benefits design are getting smaller and smaller each year. Some of the managed care strategies that we talked about years ago are not reaping as many benefits anymore. Meanwhile, the contribution strategy is really not getting the attention it deserves. Significant savings are possible. An employer must be willing to pay the price to actually increase those contributions each year, and to do some things with their HMOs to change the contribution structure. However, many employers tend to look at this on a rather oversimplified basis, and that can lead to some problems and some wrong conclusions.

First, there are a few myths. Very often the benefits managers, when they have to answer to top management about the cost of the plan, indicate that costs are increasing 15-20% each year in the industry, and that's about what theirs are increasing. That's bad news, but we're right in there with the rest of the industry. The fact

is that if the employer is not managing the employee contributions, the costs could actually be larger than average for the employer's share of that plan.

Chart 2 is an example of a case where costs have increased by 20% in total for one year, but if the employer leaves the employee contributions at the same flat dollar amount as last year, the actual increase in employer costs is, of course, much higher.

Another myth is looking only at average costs per employee. For example, in Table 2, average costs have only increased 10%. However, the fact is that the employer portion of total costs have increased by 18%. Part of the reason is that the work force grew by 5%. Also, all 50 of the new employees chose to get into the plan. The number of covered dependents is 60 greater than the prior year. So on an average cost basis, the increase is 10%, but in total, the increase is 18%. If the employer is not managing the contributions, there will be more dependents coming into the plan each year.

TABLE 2
Myths About Costs and Contributions

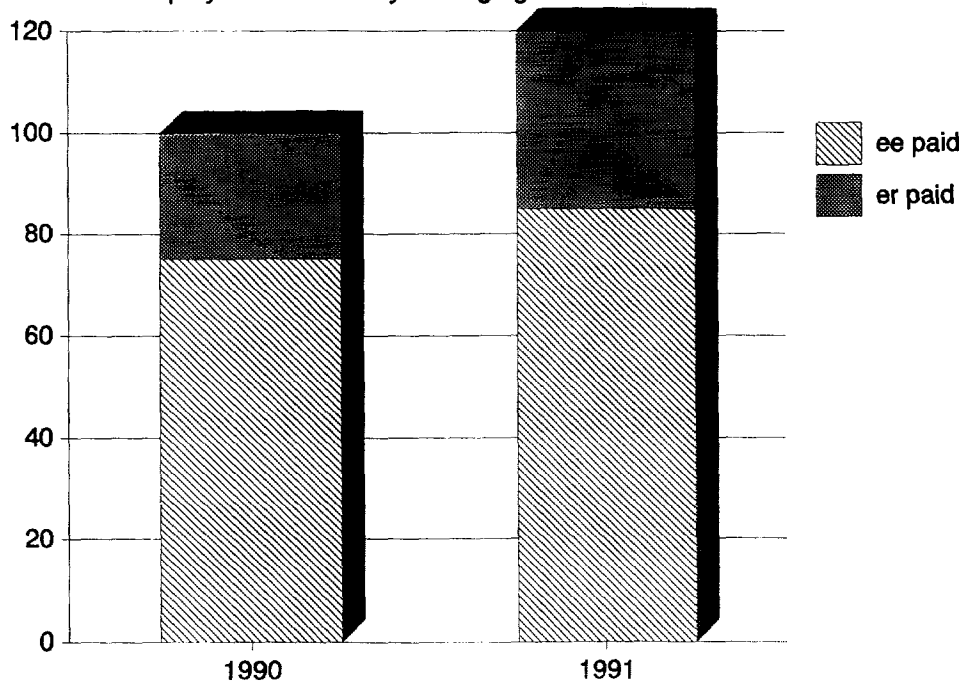
	Actual 1990	Projected 1991	% Increase
Total eligible employees	1,000	1,050	5.0%
Total participating employees			
covered employees	950	1,000	5.3
covered dependents	650	710	10.8
Average annual cost per employee			
employee	$1,000	$1,100	10.0
dependent	1,500	1,650	10.0
Total costs	$1,925,000	$2,271,500	18.0%

There are also some other problems that affect employers' plan costs. One is requiring the same contributions in all locations. There are many large employers who have multiple locations and don't reflect it in their contribution structure. That's a mistake, because costs really vary in different locations. Another is charging less for HMOs than the indemnity plan. In many locations, the rates for HMOs can be lower than for the indemnity plan. An employer who is charging less to the employee for those HMOs is providing them with: (1) a package of benefits that's considerably better; and (2) a lower contribution structure.

Also, many employers assume that there will be savings for every employee who moves from an indemnity plan to an HMO. They assume that if the rates are lower in the HMO, everybody who moves over there must be saving some money. That isn't necessarily true. Many employers have found that migration to an HMO precipitates higher costs. Some employers simply don't want their HMOs to be taking all their employees. These employers have self-funded indemnity plans that they like to have identified with the company. Some of that identification is lost when employees move to the HMO. Some employers will fine-tune a plan design every year, year in and year out, but they ignore the contribution structure.

Average Monthly Cost Per Employee

The effect of trend on employer costs may be higher unless the employer is effectively managing contributions



Many employers are making a real investment to get to the bottom of the problem, by developing a contribution strategy. Sometimes employers have a benefit strategy. It may be unspoken or unwritten. A contribution strategy should be a part of it. Progressive employers are shifting costs to employees not only through plan design but through contributions, and in managing those contributions, employers are actually shifting costs to other employers' plans.

And, finally, employers are recognizing that they've got multiple risk pools. Large employers have self-funded indemnity plans and fully-pooled HMOs. With multiple risk pools, there is the potential for selection in costs and for employers' costs to be accelerating each year. If they're not keeping track of it closely, they won't recognize what's going on.

A common scenario with medium-sized employers is the perception that the HMOs are cost-efficient. The HMO contributions are often very close to, or even less than, the contributions required for the indemnity plan. Younger employees, males, couples with young children, essentially all the lower cost employees, choose HMOs. Then, at the end of a year, the employer finds that actual medical costs are rising more than the industry trend, and very often the indemnity plan costs are really accelerating.

Smart employers aren't giving rate information to the HMOs. Instead, what they should be looking for is information back from the HMOs, information on claims and experience data and other cost data. Very few HMOs will provide this information unless the employer is very large. Employers should also be reconsidering the number of HMOs. Many employers are cutting down from five HMOs in a location to two or three and, in some cases, one. If an employer is looking for data from the HMOs, one sure way to get it is to make sure that the HMO knows that next year they may not be offered by this employer.

Employees should also reevaluate the number of coverage tiers. Some employers are still out there with different coverage tiers for HMO and indemnity plans. It might be single and family for the indemnity plan and a three-rate structure (employee, employee plus one, employee plus two) for the HMO structure. The HMO is smart enough to know that this is going to help them get some of the healthy risks. Employers should also be analyzing the expected health characteristics of participants in the HMOs and indemnity plans and trying to limit the employee's ability to select against those plans.

A quick-and-easy demographic analysis can be used to compare the demographics of the HMO and indemnity plans' participants. It is not always correct to assume that the demographic distributions imply projected costs, but an employer should make some assumptions about that. The information on comparative demographics can be analyzed, for instance, with regard to all the HMO participants versus the indemnity participants. If there are multilocations, look at the HMO versus the indemnity in each location. Also look at the costs separately, by HMO and by coverage tier.

The next step is to consider possible remedial actions, which might mean reducing the employer contribution toward the HMOs. If the HMO is a better risk pool than the indemnity plan, the employer might negotiate with the HMOs to lower the rates or simply pass along the difference to the employees, so that the employees end up

paying less for the HMO than they were before. The more common situation is that the employer doesn't have a whole lot of leverage with the HMOs and has to do something in between.

Let's look now at a case study. In this case, the employer has one location. It offers a self-funded indemnity plan with managed care features and five HMOs. So the employees have a choice of seven different health plans. The indemnity plan experience has been very poor. In 1988 and 1989, there were a few large claims that affected experience leading to higher rates and, in 1990, utilization increased.

During this time, there was an increase in the percent of participants in HMOs from 11% to 22%. This employer was trying to retain the identity of its own self-funded plan but was losing participants to the HMOs. The opt-outs as a percent of the total decreased from 10% to 6%, indicating that employees were coming back into the plan. This was clearly a case where the employer wasn't managing the contributions properly. The employer's response might be to assemble some data and look at the demographics, attempt to stop opt-outs from coming back into the plan, and try to move healthy HMO participants back into the indemnity plan.

Let's focus on the goal of moving healthy HMO participants back into the indemnity plan. Step number one would be an analysis of age distribution. Table 3 shows the number of participants by indemnity versus HMO and by age and sex.

We can see that 78% of the people are in the indemnity plan and 22% are in the HMOs, distributed as shown.

TABLE 3
Demographics: Before Open Enrollment

	Indemnity		HMOs	
20-29	300	105	80	45
30-39	145	30	40	35
40-49	75	45	10	10
50-59	30	25	0	0
60+	10	15	0	0
Total	560	220	130	90
	780		220	
Age Sex Cost Index	1.073		0.918	
Index Ratio			0.856	

The next step uses a chart of relative values as shown in Table 4. A table such as this can be developed for employees and dependents, based on claim data. These relative values are used to develop a weighted age/sex index for the HMO and indemnity plans.

TABLE 4
Relative Cost Indices

	Male Employees	Female Employees
20-29	0.73	1.02
30-39	1.00	1.67
40-49	1.39	2.15
50-59	2.11	2.31
60+	3.06	2.95

The age/sex cost index for the indemnity plan is 1.073. The age/sex cost index for the HMO plan is 0.918. The index ratio is the HMO index divided by the indemnity index. The ratio of 0.918 to 1.073 is 0.856. If this number is below one, an employer will know that healthier employees are choosing the HMO coverage over the indemnity plan.

The next step is for the employer to try to change the behavior of the HMOs that are setting fully-pooled rates or the employees who are making the choices in coverage, or both. The ultimate goal is to effect some savings for the company. The contribution schedules are shown in Table 5.

TABLE 5
1991 Contributions

	Total Cost	Employee Portion	Employer Portion
Indemnity Plan	$130.00	$15.00	$115.00
HMO Plan A			
With no adjustments	120.00	5.00	115.00
Adjust employer contributions	120.00	21.56	98.44
Adjust total rates	102.72	4.28	98.44
Compromise solution	110.00	10.00	100.00

The indemnity plan rate, because of the recent poor experience, is $130 for a single employee. The employee portion of the contribution is $15 and the employer portion is $115. A typical way for employers to set the contributions is to allocate the same employer dollars toward the HMO coverage as the indemnity plan, resulting in an employee contribution that's lower for the HMO. An alternative is to use the results of the age/sex demographic analysis to adjust the contributions. The index ratio of 0.856 is an estimate of the expected risk characteristics of the people who are in the HMO before the open enrollment. The $115 normal contribution could be lowered by multiplying it by 0.856. The employer contribution would be reduced from $115 to $98.44. The employee pays the balance, which has gone from $5 to $21.56, and would evaluate this option in a different way than before.

Another alternative would be to change the overall rate by approaching the HMO and pointing out that the risk characteristics are really only 85.6% of the indemnity plan, and the rates should be correspondingly lower. Not many HMOs would readily agree,

but employers are trying to negotiate in this way. A more realistic solution might be somewhere between these approaches. Most employers are simply increasing the employee contributions, and that is usually enough to get employees back into the indemnity plan.

Table 6 shows what happened after the enrollment. There are a few more employees than the previous year, and employees have moved out of the HMOs and into the indemnity plan. There was an increase of 100 people in the indemnity plan and a decrease of 50 in the HMO plan. Recalculation of the index shows that it has gone from 0.856 to 0.906, indicating that some of the healthier employees have moved back into the indemnity plan.

TABLE 6
Demographics: After Open Enrollment

	Indemnity		HMOs	
20-29	345	140	60	30
30-39	160	35	30	30
40-49	75	45	10	10
50-59	30	25	0	0
60+	10	15	0	0
Total				
After	620	260	100	70
(Before)	(560)	(220)	(130)	(90)
	880 (780)		170 (220)	
Index Ratio			0.906 (0.856)	

One other thing to examine is how the total employer costs have changed as a result. This is shown in Table 7. The employer portion of the cost actually went down because of the strategy that the employer used on employee contributions.

TABLE 7
Results of Open Enrollment

	Without Changes	With Changes	Difference
Projected 1991 Costs (in Thousands)			
Total	$1,611	$1,558	(3.2)
Employee Contributions	−161	−178	10.6
Employer Portion	$1,450	$1,380	(4.8)
Participation			
% in HMO	22%	16%	(27.3)
% in Indemnity	78%	84%	7.7%

Employees will complain about this, especially the ones who have chosen the HMO and gotten used to it. But this is a way of cutting the employer's portion of the

costs each year. Another thing that happened was that participation in the HMOs went from 22% to 16%. The employer at least has the perception of being back in charge of the plan. However, this is a continuing process and, at each open enrollment, the contribution strategy should be reexamined.

MR. AHRENS: Our third panelist is Dr. Don Vickery, a Harvard Medical School trained physician. He was the medical director for an HMO before starting the not-for-profit Center for Consumer Health Education. In 1984, the Center became a for-profit organization called Center for Corporate Health. Dr. Vickery is the Chairman of the Board of this organization, which is now a subsidiary of the Travelers. It provides employee support services for all sizes of employers. He is well known for authoring the book *Take Care Of Yourself*, which has been endorsed by a number of employer coalitions. Don will discuss the impact of wellness programs.

DR. DONALD M. VICKERY: I will be talking about wellness and how it affects the cost of medical care. I'm going to first define the terms, then talk about how wellness becomes an issue for corporations, in terms of the prediction and prevention of unnecessary costs. I will also discuss predictors and interventions in the wellness area. Finally, I will try to broaden your perspective a little bit by going beyond what you might expect in terms of lifestyle and wellness, into some practical implications.

The concept of wellness came about quite simply. A number of bright people decided that illness was only part of a health continuum. The health continuum spans from a point of illness to a point of wellness. There's a midpoint somewhere where a person has no disease, but may not be optimally well. Now, what would optimal health be? Experts have suggested that it has multiple characteristics: physical health, mental health, spiritual health, social health, professional health, and so forth. That's an intriguing and useful thought, but in terms of programs that are called wellness programs, it soon falls apart. When you look at both the goals and the evaluation of those programs, it turns out that what we're really dealing with are the risk factors for disease. All measurements have to do with the absence of disease. There have been some efforts to define the wellness portion of the continuum and methods of measurement. One might think that we would turn heavily toward the idea of productivity or performance. But, the industry is going in a different direction, and I would suggest that it's going toward self-care.

There are two types of self-care. One is health self-care, which is what most people would think of in terms of wellness. It is prevention. Prevention really means lifestyle. It is those things that individuals do for themselves to preserve health. That's different from medical self-care, which is what individuals do to help themselves in reference to minor, and even major, medical problems. The industry will probably keep using the term *wellness* because we're used to it, but the direction employers are going is towards the prediction and prevention of unnecessary cost. Employers, when looking at their expanding wellness programs, will ask what the risk factors for unnecessary medical care are. What do the risk factors tell us about what medical care costs are going to be? How do the interventions influence the risk factors, and how do they influence our cost?

Wellness programs tend to center on the risk factors for disease and injury. But, there are also psychosocial and access issues when considering the risk probability of

using medical care. Health status is a predictor, as are previous claims. Most actuaries use previous claims to predict next year's medical care costs. What I'm going to suggest is that you start shifting interest toward other predictors of medical care costs. One tool is the health risk appraisal. I think that before very long, health risk appraisals will actually be medical care risk appraisals. They will go beyond the risk factors for disease and injury mostly centered on lifestyle and begin to consider other factors, such as those above.

Much of the interesting work is in the area of psychosocial issues. Interestingly, one scale for measuring psychosocial issues had its origin in Auschwitz. Dr. Heimler, who was a prisoner, found that those prisoners who were able to develop some method of developing satisfaction, given all the horror around them, whether it was killing rats for food or whatever else, had a much better chance of surviving the experience than prisoners who simply gave up. Almost two decades ago, researchers at Kaiser showed that the Heimler Scale of Social Functioning was the best predictor of the utilization of medical care services within the Kaiser plan.

Self-reported health status, what people think their own health is, is a far better predictor of morbidity and mortality than anything the medical profession can offer. In the classical juxtaposition, if you take what an individual says their health status is and compare it to what the doctor says their health status is, if they disagree, the individual is right and the doctor is wrong. Individuals know a great deal about their own health. If we had a perfect Health Risk Appraisal (HRA), costs could be better predicted. We know of one company that is using an HRA, not only to predict its costs, but also to hold its managers accountable for the prediction. The cost predictions are now built into the performance appraisal of the managers.

What is the relationship between the risk factors that we usually think of as being in the wellness category and health care costs? There have been many studies, but one of the best known is an analysis of employees at Control Data for nonmaternity claim costs. This study shows that if you take some of the well-known risk factors, such as exercise and weight, and divide the employees into those who have low, medium, and high risk, based on that risk factor, you will find that the people who are at low risk have lower medical claims. However, there are a few confounding risk factors, such as alcohol use. The study showed that the low- and moderate-risk employees seem to be doing worse than employees who have high risk, according to their alcohol use. We could propose all sorts of explanations. One is that those costs get shifted over into workers' comp costs, disability costs, employee assistance program (EAP) costs, and so on, and therefore, just don't happen to show up in the medical claims costs.

I also performed a study of my own. We looked at eight companies in Ohio for whom we happened to have the Blue Cross/Blue Shield rate. The reason we chose these eight companies was that they happen to have used a very simple health risk appraisal that I had developed. It consisted of only five questions about exercise, smoking, weight, and so on. We looked at the correlation between the average score based on that health risk appraisal and the Blue Cross/Blue Shield rate. We also looked at two other variables that were known to be correlated: number of employees and average age. All of those variables were correlated, but the highest correlation was between the health score from this very simple health risk appraisal and the

Blue Cross/Blue Shield rate. The health score tells us as much as we're going to find out about these interrelationships. If it were used as a predictor, it would essentially tell us the whole story.

A number of questions arise regarding wellness programs. What do we know about interventions that are either targeted at traditional wellness or health self-care plus medical self-care? What do we know about their effectiveness? Do they make any difference in terms of the costs? About five years ago, we ran a study called the Cooperative Health Education Project (CHEP) at an HMO, the Rhode Island Group Health Association (RIGHA). We used this HMO because, first, we had access to all of the records that we needed, and, second, there were no financial barriers to utilization. There were three different types of intervention used: communications, books, and newsletters. All the interventions were mailed to the home. This was a randomized, controlled, perspective study. It was as rigorous a scientific study as you're ever going to see with human beings. The results of the experimental groups versus the control group were interesting. Overall visits were decreased by 17%, minor illness visits by approximately 35%, and the savings/cost ratio was 2.41:3.43. These savings estimates are based only on the saved visits. They do not include the fact that this program also resulted in decreased smoking, increased exercise, decreased average weight, and so forth. One can conclude that in this very rigorous experiment, there seemed to be substantial evidence of savings.

These results were for the Rhode Island Group Health Association participants who were under the age of 65. We also studied participants who were over the age of 65 and noted essentially the same result.

CHEP taught us a simple lesson. There is evidence to support the notion that a relatively simple, straightforward intervention has impact. Other studies have also been conducted. As actuaries, you should be aware that there is a body of data that exists. We would like to enroll you in an effort to try to explore that data and understand how it impacts what you do.

A related experiment of interest took place in a company with multiple sites in California and looked at the effect of a communications intervention on doctor visits. In this case, the indemnity plan visits went down 17%, exactly the same amount as in the RIGHA study. However, the HMO plan visits actually went up by 2.2%. We believe this is because these HMOs have advice nurses who are available over the telephone, so there was no additional impact from the communications intervention.

Another study was performed at Blue Cross and Blue Shield of Indiana. This was an intervention that included a health risk appraisal with feedback, screening, and some group sessions on smoking cessation. The results, on the basis of benefit payments, revealed a benefit/cost ratio of 1.45:1. The intervention cost was approximately $98 per person. The savings was approximately $142 per person.

The Prudential study involved a facility-based fitness program. A comparison was made of participants in that program versus the company as a whole. It reported a benefit-to-cost ratio of 3:1. Bill Hembree at health research information also does surveys of companies with and without health promotion programs (HRI) or wellness

programs. Interestingly enough, he also comes out using the companies' own estimates of an average benefit/cost ratio of 3:1.

The Dallas City Schools study involved an HRA, screening, fitness tests, counselling, and group sessions. The variable of interest was absenteeism for participants versus nonparticipants. Here, the estimated savings were 1.25 days or $150.

In the Johnson & Johnson study, the intervention included screening and group interventions, smoking cessation, and weight control. It looked at in-patient claims for a test group versus a control group and showed savings of $32. The Canadian Insurance Companies study involved a facility-based fitness program and showed savings in medical claims of $84.50. This study included an independent estimate of the impact of a fitness facility on productivity, using a variety of measures besides absenteeism. The interesting results suggest that the facility had a major impact on productivity.

The Travelers Taking Care Program consists primarily of two components. In the field and at the home office, there is an intensive communications program. In the home office there's also the Taking Care Center (TCC), a fitness facility. This is a facility-based program that goes far beyond fitness and addresses a myriad of health and medical self-care issues. The Taking Care Program, as a whole, shows a benefit/cost ratio of 3.4. If we look at the field, it's somewhat higher. If we look at the home office program without the Taking Care Center, it's 5.5. It is interesting to note that these numbers cluster around 3:1 as a benefit/cost ratio.

I hope my quick review of the existing research has at least convinced you that it's worthwhile to look further at the numbers. These programs are going to have an impact in the future. Companies that understand the potential for savings will be asking you for more information and you will need to know where to find it.

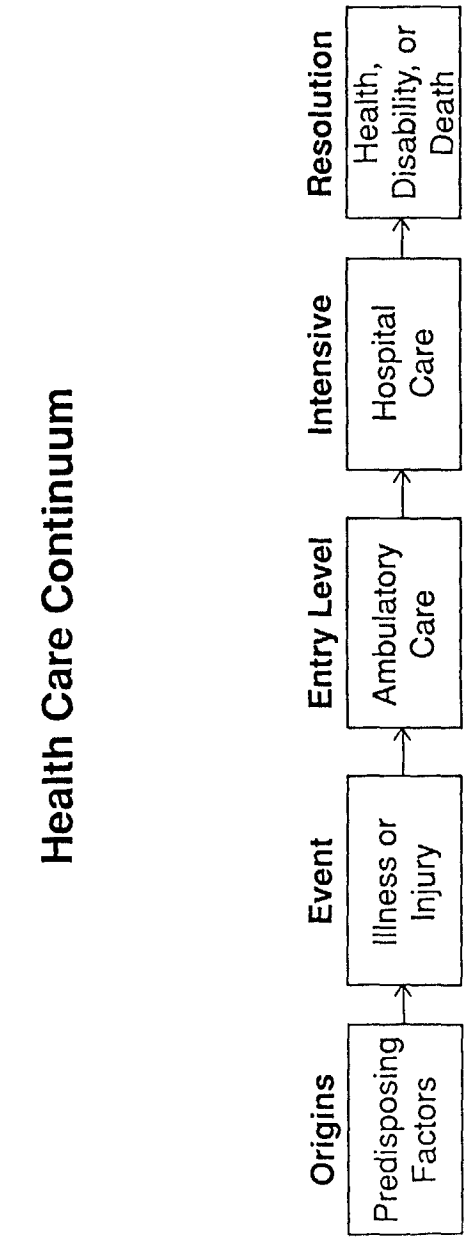
There are a lot of reasons for rising medical care costs, including the following:

- Increasing utilization
- Inflation
- New technology
- Medicalization of psychosocial problems
- Aging of population
- AIDS

Which of those costs are unnecessary? I would argue that the major reason we have unnecessary costs is that we don't have a good way of answering this specific question: Is the benefit worth the risk and cost?

Chart 3 shows a simple model called the health care continuum. There is a set of variables called risk factors that predict the probability of an event that causes a health problem. Once that event occurs, the person moves into the entry level of medical care. In some cases, there is then a transition to an intensive level of medical care, usually to a hospital. And, finally, the last transition is out of that acute situation back to some kind of steady, safe situation, or death.

CHART 3


Health Care Continuum
Origins
Predisposing Factors
Event
Illness or Injury
Entry Level
Ambulatory Care
Intensive
Hospital Care
Resolution
Health, Disability, or Death

The most important elements of the continuum are the transitions. The first transition involves risk factors related to individuals making decisions about their own lifestyle and how illnesses and injuries can be prevented. Professionals have very little to do with it. The second transition involves the initial response of whether or not to go to the doctor or the emergency room. Again, individuals make that decision on their own. In the rest of the transitions, we have either the myth or the reality of shared decision making. Legally and ethically the patients give their consent to a choice, and presumably, they do this on the basis of trying to find the greatest benefit for the least risk and cost; i.e., appropriateness. Appropriateness care can be defined as that which provides the greatest benefit at the least risk and cost. Unfortunately, medical science often doesn't tell us very much about benefits and risks, so decisions may not seem to be made this way (Chart 4).

When we use old methods of managing health care, we emphasize the cost and obscure risk and benefit. We say outpatient is cheaper than inpatient and that is the basis of the decision. In reality, you can't use the outpatient department unless you can demonstrate that the benefit and risk are the same, inpatient versus outpatient.

Even more important, the patient is, ultimately, the only one who can make the benefit and risk valuations. When do you get your hernia fixed? When you think it hurts enough to get it fixed. If you're only interested in morbidity and mortality, you would never get it fixed because the risk of the procedure is greater than the risk of doing nothing. When do you get your cataract done? You do it when your vision makes it worthwhile to do it. The vast majority of medical decisions are in this gray area, where benefit and risk valuations depend on patient preference.

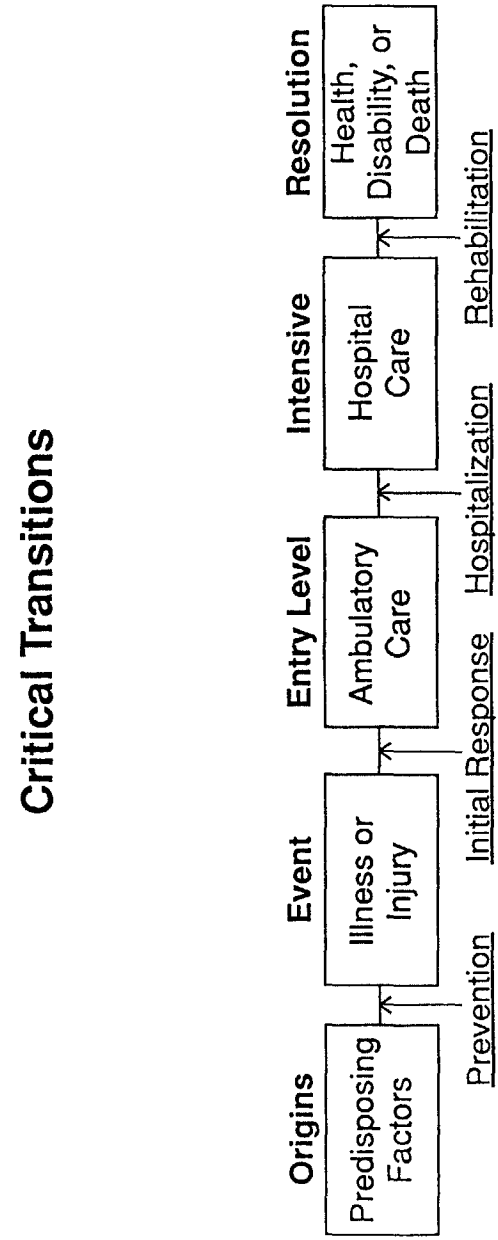
We've been talking about the demand side of the health economic equation. On the supply side, what you've seen in the past in terms of managed care is ultimately going to lead to rationing. The individual is ignored as the key decision maker. If you're going to ignore the key decision maker, attempts to make decision making more appropriate are not going to work. It will come down to some simple rule that says people over the age of 65 don't get dialysis. That's called rationing.

I think there's an alternative to rationing. It's called the employee support alternative. What you need to do is to help individuals (not only patients, but doctors also) understand what the costs, risks and benefits of various choices are. Employee support services means helping people with their health and medical care decisions.

There are a number of technologies that we currently use. We have an 800 telephone number where people can talk to nurse counsellors. We do some face-to-face counselling. We can use more advanced technologies like video disk and computer. For example, educational use of the video disk, with respect to prostatectomies at Kaiser in Denver, has shown that just informing the patients and allowing them to understand what their options are can cut the surgical rate by about a half.

What would an employee support system look like? It would include prevention, medical self-care, and psychosocial components. It would also include a provider support interface. The providers need the same information that patients need. They need cost, risk, and benefit information. There is no systematic way of providing that

CHART 4


Critical Transitions
Origins
Predisposing Factors
Event
Illness or Injury
Entry Level
Ambulatory Care
Intensive
Hospital Care
Resolution
Health, Disability, or Death
Prevention
Initial Response
Hospitalization
Rehabilitation

to providers or to patients at this point, other than some of the experimental programs we've talked about.

What does all this mean? First of all, I think if you accept the notion that these relationships are real, it means that the risk rating of individuals and groups is going tobe in for a change. The major purpose of the changes will be to create incentives for individuals to change the way they make decisions. That leads to the practical implication that benefit plan designs need to change in order to reflect incentives that are appropriate. Some companies have differentials in terms of premium contributions for people with better risk factors. Obviously, the purpose is not simply to redistribute the same premium year after year, but to give people incentives so that the premium changes.

In summary, I would say that our ability to predict in the area of wellness is expanding rapidly. Our interventions are known to work. The implications for the work that you do and the work that I do is that benefit plans for corporations are going to have to change to reflect that the individual employees and their dependents are the key decision makers in matters of health and medical care.

MR. HOWARD ATKINSON, JR.: Mr. Rysz, your analysis of HMO versus indemnity equated wellness with age and sex and not necessarily wellness, per se. Had you given any thought or any recommendations on varying contributions by age, given that's what it really represents?

MR. RYSZ: I think varying contributions by age is a definite possibility, but I don't think it's a reality. I don't think most employers are going to want to complicate their plans by changing the structure so that contributions vary by age. I've seen some plans use percent of pay. Typically, employees make more money as they grow older, and usually those programs have bottom and top limits on them.

MS. OGDEN: Let's face it. The CEO is much more likely to be 60 than 30.

MR. STEVE HAYES*: Ms. Ogden, you talked about the premium history for your large employer. You said that in 1991, the indemnity cost increase was about 25%. That was due to antiselection. I was just wondering what that was based on.

MS. OGDEN: The other options offered by the employer are both managed care options, that is, the staff model and the open panel HMOs where an individual has a more restricted level of choice. The traditional indemnity product, although it has a front-end deductible, has no such restrictions on providers of care. The individuals, for whom an established relationship with a physician is very important, tend to select the indemnity product rather than change providers of care. Typically, an individual who has a well-established, long-term relationship with a provider is an individual who's been seeing that provider a lot. The individuals who are moving over from the indemnity product to the staff model and the open panel HMOs are the ones for whom continuity of care is not as important.

* Mr. Hayes, not a member of the sponsoring organizations, is Manager of Special Projects of Kaiser Foundation Health Plan in Oakland, California.

FROM THE FLOOR: Mention was made of contribution levels based on percent of salary. Have you seen any move to put the deductibles and the coinsurance maximums on a percentage of salary? This would do two things: it would index those values every year, and it would also be based on the employee's ability to pay that deductible or the coinsurance maximum. And if you haven't seen it, why don't you think it's happening?

MR. RYSZ: I've seen some interest in that, but I think that the claims administration gets very complicated. A lot of employers have enough trouble explaining multiple options to their employees without talking about percent-of-pay deductibles and percent-of-pay copayments. That's the major impediment.

MR. DIXON: So, you would say it's the computer administration that's the main deterrent. Is there any discrimination testing on the federal level that has prevented that from happening?

MR. RYSZ: Well, to the extent you've got a self-insured plan.

MR. DIXON: You don't have a problem.

MR. RYSZ: Typically, it's the older employees with higher salaries, and if you're indexing deductibles up with percent of pay, you shouldn't have a problem. It's really the reverse of discrimination there.

MR. DIXON: Could a solution to the administration problem be to just have two or three tiers?

MR. RYSZ: Certainly, and I've seen interest in this. I just haven't seen a lot of employers trying to go to that and making life tougher than it already is on the administration side.

MS. OGDEN: The administration problem is just part of it. The communication problem is probably the more daunting for anyone who's explaining this to the employees. I see employers still struggling over whether to make the contribution for single and family the same, let alone adjusted to income levels.

MR. LAURENCE R. WEISSBROT: Until recently, I was with a small consulting firm, and we put in a lot of flex plans for small employers. When I say small employers, we went down as low as 11 lives. I didn't hear Mr. Rysz mention the use of flex plans to adjust contribution rates. I think one of the big problems is going to the higher deductible, and I'm a firm believer in high deductibles. I think $1,000 is probably the minimum of where we should be, but there's no way of getting there. I'm not sure that a week's pay was the initial determinant of the $100 deductible. I think it was a day or two of hospitalization, and a day or two of hospitalization now is worth $750-1,500, depending on what area of the country you're in. The problem is, you can't get people to make that jump from a $100 deductible plan or a first-dollar plan to a $1,000 or $1,500 deductible plan. A lot of the plans we put in provided the high-deductible plan free, but if employees wanted to retain the plan that they were used to, they had that option. What we found is by using spending accounts and by careful employee education over a period of three or four years, a

large segment of the population moved to that high-deductible plan with very little complaint.

MS. OGDEN: I have to comment. I had one client who thought it had the world's greatest solution and moved to a flexible benefit plan that allowed an opt-out scenario after not having had an opt-out scenario. Its health care costs increased 3% due solely to the opt-out feature because it had employee contributions towards the health care premium, and suddenly all the young immortals, the men under age 25 who are never going to die and never get sick, all opted out. Consequently, they were not assisting in the subsidy of the individuals who are not young immortals, and so the health care costs actually increased. They took a third of the normal contribution away in cash, having been taking no benefits away and contributing in part to the premium.

MR. RYSZ: I'd just like to add that if you try to bring all the things we brought together into a plan, you would go directly into flex. More and more employees will be going into flex, especially the more they understand how all these areas interrelate.