

RECORD OF SOCIETY OF ACTUARIES 1990 VOL. 16 NO. 4A

HEALTH CARE TRENDS UPDATE

Moderator: FRANCIS E. KEENAN
Panelists: ROY GOLDMAN
RONALD M. WOLF
Recorder: FRANCIS E. KEENAN

- o Current experience
- o Measurement problems
- o Effect of selection
- o Variation by size of group

MR. FRANCIS E. KEENAN: Both Roy Goldman and Ron Wolf have a great deal of experience in the health care field, particularly in looking at health care trends, and I think that they'll be able to share some interesting ideas. Roy is going to talk about the problems involved in measuring trends and about some of the components of trends. Then Ron is going to talk about the kinds of trends we're seeing today, and what carriers are using. He'll talk about the components of trend and some of the things that influence trend. Then I will wrap up with a little bit about the new physician fee schedule that Medicare will be implementing shortly, and I'll also make a few predictions about what I think plans might be doing in the future.

MR. ROY GOLDMAN: I work for the Prudential Insurance Company of America and I'm going to talk about how we look at trend, at least in cases with 20 or more employees, and how we analyze the data and the components we look at to try to predict future trends. Every month we do a study of trends and loss ratios, splitting the business between our medical business and our dental business. This is the way we study overall trends for all health care business.

In order to avoid the incurred claim problem, we compare the ratio of paid claims to the number of lives for the same period in different calendar years. Whenever I say "lives" I mean employees. And to approximate incurred claims we use a 3-month setback. Each month we look at a rolling 3-month and a rolling 12-month trend calculation. Rolling 12 months means that we look at the last 12 months of data and compare that to the previous 12 months of data. Rolling 3 months means that we look at the most current 3 months of data and then compare that to the same 3-month period a year earlier. We exclude the ASO business, LTD business, and canceled cases. In fact, if we're going to look at rolling 12 months, we need to have at least 24 months of claim data, and then if we're going to set back the lives three months, we really need 27 months of data. So we're really not even including any new cases in the study. We split it by insured business and minimum premium business, but most importantly, we split it by size. We look at the trend for fewer than 100 lives, between 100 and 250, 250 and 500, 500 and 1,000, 1,000 and 5,000 and over 5,000 lives.

We study the smaller cases, under 500 lives, monthly. Although we're looking at the trend in our indemnity business, our traditional business, that doesn't mean we don't

PANEL DISCUSSION

have any pieces of managed medical. When I use the term "managed medical," I mean a situation where we have contracts with providers and we're helping to direct care. We have second opinion surgery on almost all our traditional business for what that is worth anymore, and we have preadmission and concurrent review on hospital admissions, catastrophic case management, and by January 1991, total psychiatric management will be available throughout the country.

We look at our large cases quarterly, and for this study we look at about 100 cases from around the country with at least 1,000 lives. Again, we look at rolling 3 months, and we look at rolling 12 months of data. We also look at the trend from one quarter to the next, first quarter to second quarter, second to third and so on. We require at least seven quarters of data, and because the results can be affected dramatically if there are radical changes in the plan, we first try to get only those cases that are relatively stable groups and have relatively stable benefits. When there are changes in the plan, we ask the case underwriters to evaluate the plan change, and then we go back and adjust the historical data for that case so that it's all on the same basis.

Chart 1 graphs the results of 3-month rolling averages and 12-month averages. This is for the monthly trend study that we do, and it includes all cases combined. I should point out that one of the things that we have found every year since we've been studying trend is that the trend is a lot higher on cases with fewer than 100 lives and not quite as high on cases between 100 and 500. In other words, it decreases with case size. For many years we have noticed this in our business. We really can't explain it, and because we couldn't explain it we just used one trend factor for all case sizes. In 1988, after many years of seeing these results continue, we decided to differentiate the trend we use by case size. The difference naturally swings from time period to time period, but the difference between the large case trend and those cases with fewer than 100 lives is between 3% and 8%.

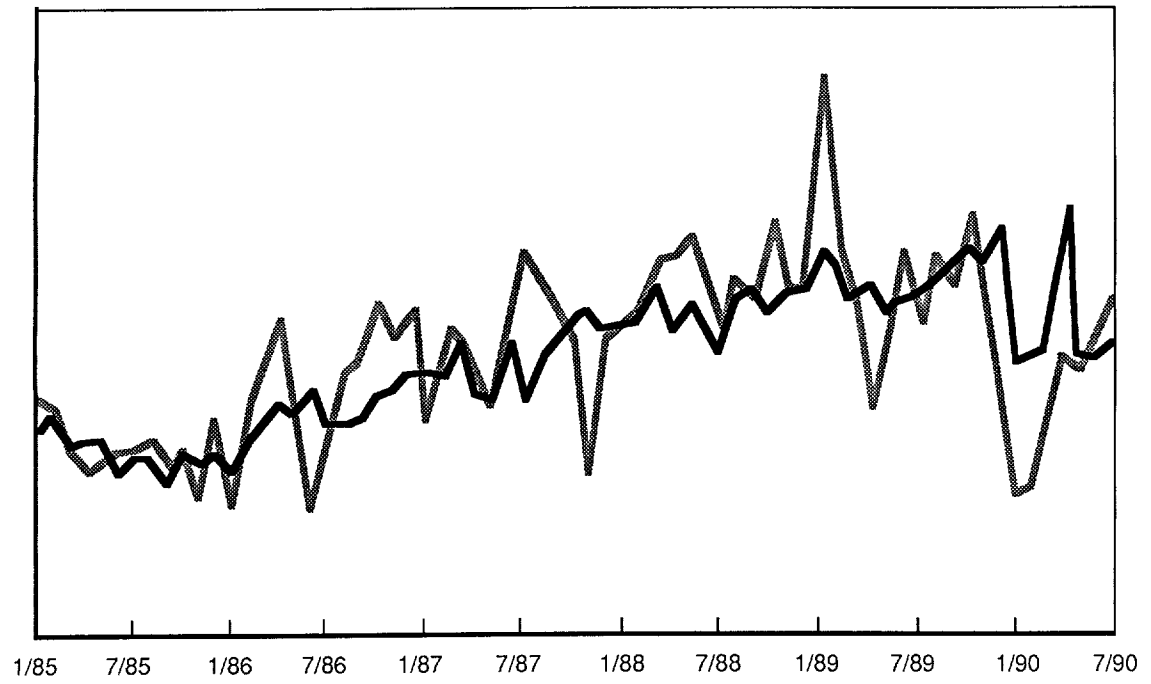
When you compare the 3-month averages and 12-month averages you can see that the 3 month rolling averages are a lot more volatile. To some extent they're useful because you're using your most recent three months of data, but you have to recognize the volatility. Chart 2 shows a linear regression of the 12-month rolling averages and you can see that from January 1985-July 1990 the trend has been increasing. The same thing is true with the rolling 3 months in Chart 3, although the fit is not as good. The R squared for the 3-month rolling averages is about 26%. For the 12-month rolling averages, it is about 60%.

What are you going to do with this information? What have we learned here? We want to use this information to forecast trend, and Chart 4 illustrates the process for the 12-month rolling average. Let's look at the experience between July 1988-July 1989, and compare that with the experience from July 1989-July 1990. Now the midpoint of the prior 12-month period is January 1, 1989 (indicated by the star), and the midpoint of the most recent 12-month period is January 1, 1990 (also indicated by a star). We basically know what the trend was from January 1989-January 1990 (see the second row).

Let's say we're studying a trend in September 1990. We're going to make a decision on what the trend factor is, and then we're going to disseminate this to hundreds of

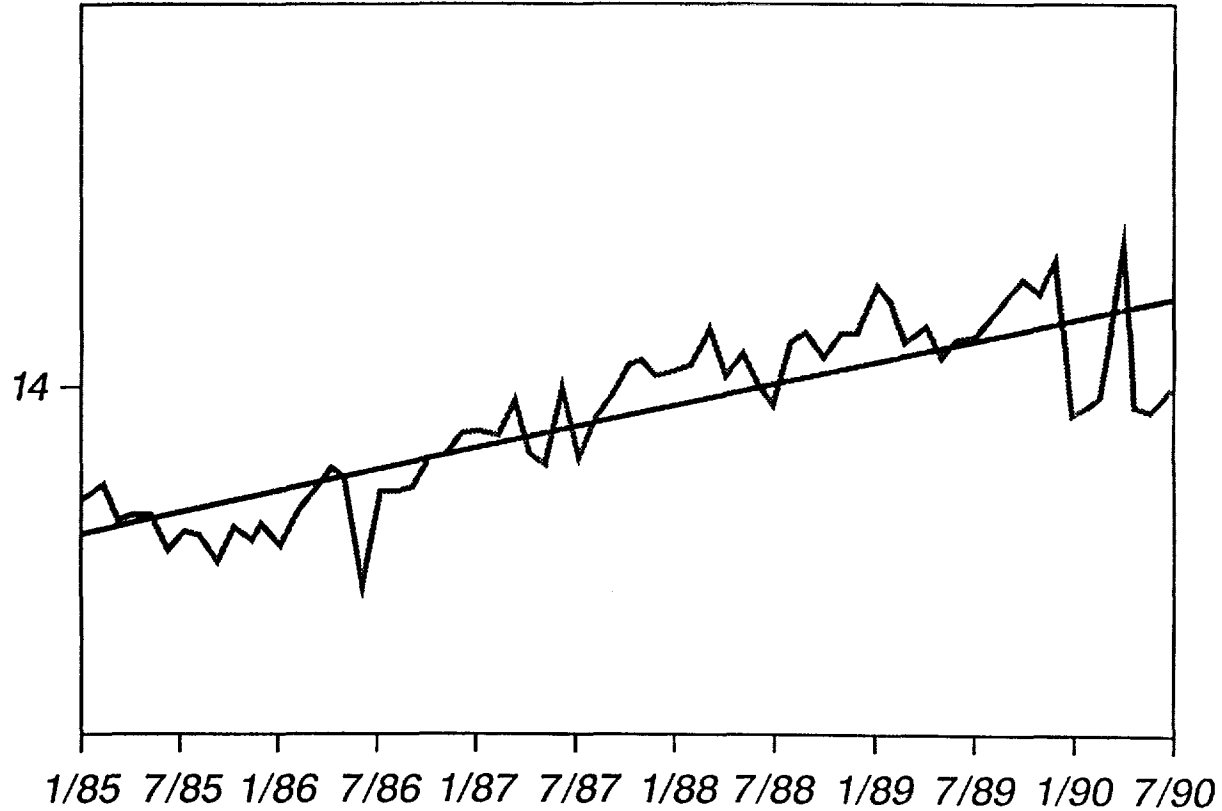
HISTORICAL TREND

— Rolling 3 months
— Rolling 12 months



HEALTH CARE TRENDS UPDATE
CHART 1

Rolling 12-Month Trend

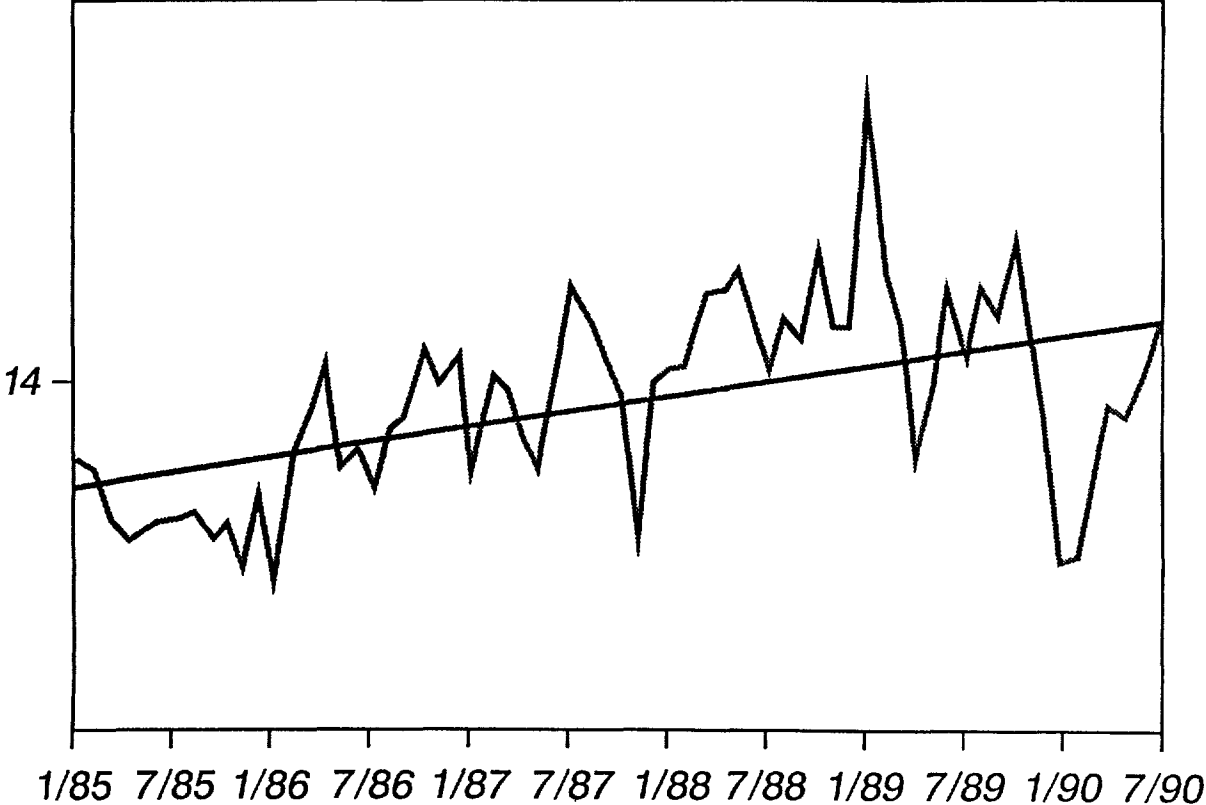


2292

PANEL DISCUSSION
CHART 2

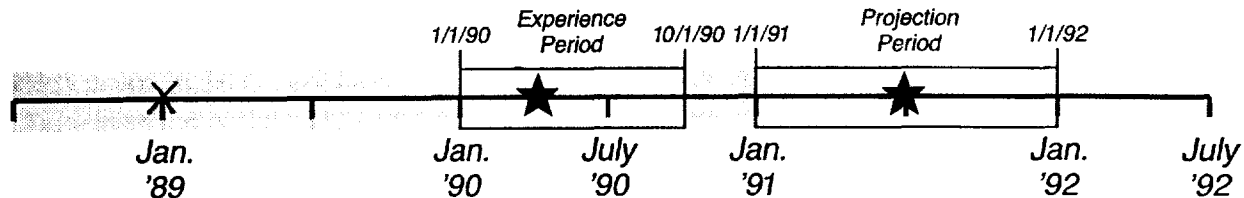
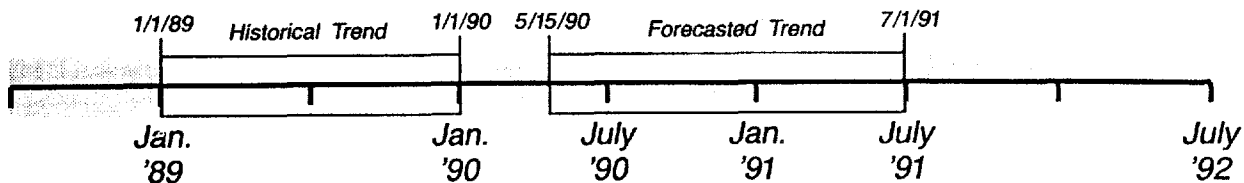
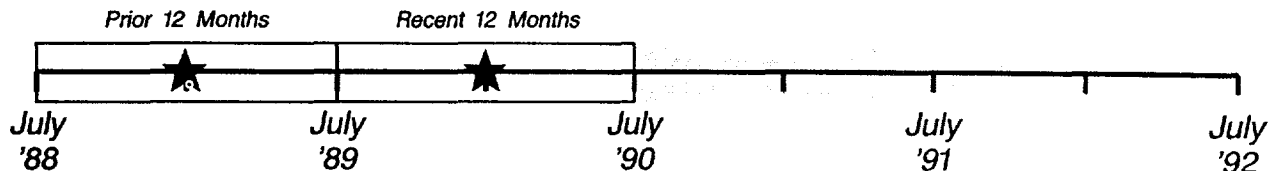
Rolling 3-Month Trend

2293



HEALTH CARE TRENDS UPDATE
CHART 3

Lag in Forecasting Trend*



* This exhibit shows that the lag in rolling 12-month data is 16 months. For rolling 3 months, the lag is 12 months.

HEALTH CARE TRENDS UPDATE

underwriters all around the country, and they're going to use it to rerate cases. They won't do anything until October.

Well, in October they're going to be rerating cases that are effective in January. So let's say it's around October 15, just to pick a date at random, and the underwriters are doing a rerate for a January anniversary. So what kind of data do they have to work with? The underwriters will have claim experience from January 1990 through September 1990. The midpoint of that experience period is May 15. They are doing a rerate for a case that's renewing January 1, 1991; it is going to be effective for 12 months. The midpoint of the forecasting period is July 1, 1991. So basically they have experience for May 15, 1990, and they have to project to July 1, 1991; that's 13.5 months of trend. So they will take some trend factor to the 13.5 power. Well, what trend factor will they use? We know what the trend was from January 1989-January 1990. What we really want to know is what the annual trend is from May 15, 1990-May 15, 1991. Well, May 15, 1990 is 16.5 months beyond January 1989. So while I know the historical trend, what I really want to know is what the answer's going to be 16.5 months from now when I calculate the rolling 12-month average?

If I go back to Charts 2 and 3, I see lines of regression. Why don't I just extend those 16 months? If I do that, for the 12-month rolling average I obtain a value of 25% trend to use. And the rolling 3 months, which actually is a flatter line, comes out to about 18%. But maybe I could do better than a straight line. The graph is going up and down, and maybe I could fit it with some other kind of curve. I've got a nice fit on Chart 5. This happens to be a polynomial to the fourth power and, lo and behold, look at the end point. It's now going down. And if I project that forward 16 months, I get a trend of 8%. Well, let's try something else.

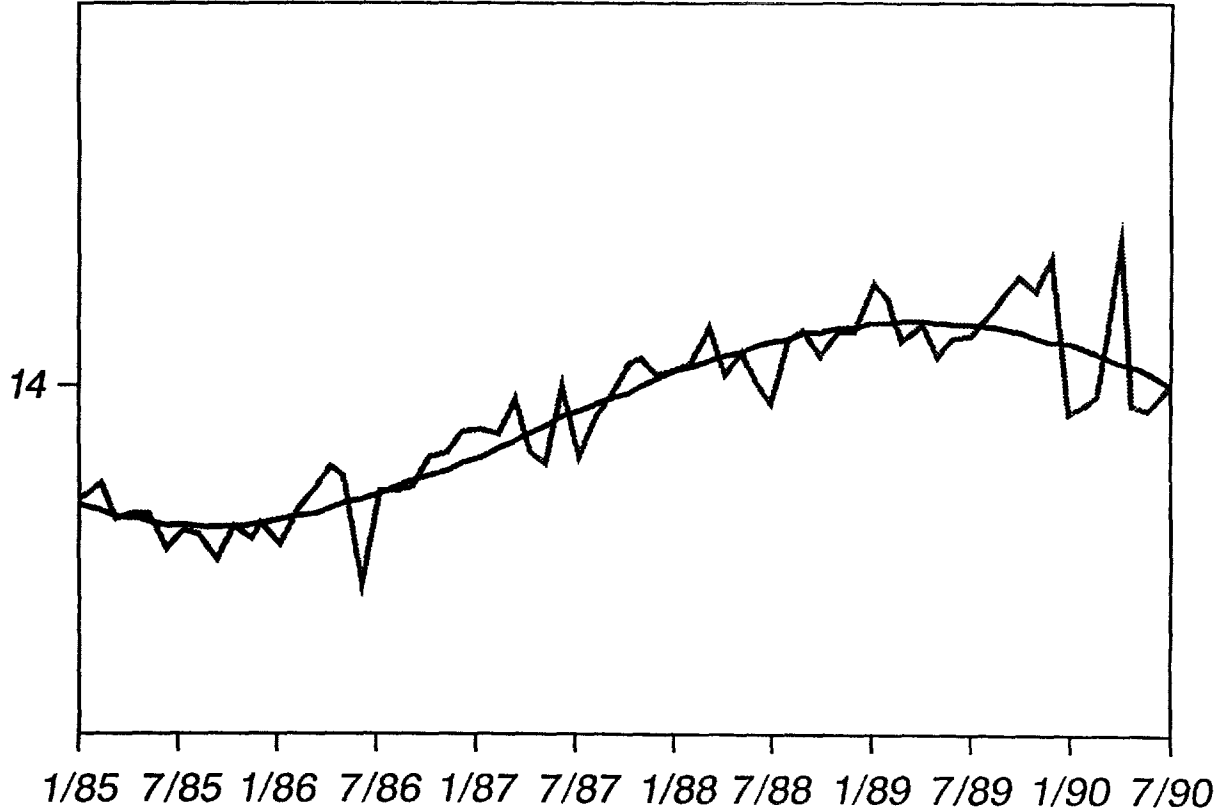
Let's go to the rolling 3 months in Chart 6. One thing good about the rolling 3 months is that I only have to project forward 12 months. That means we go through the same analysis I did before, but it's only a 12-month lag instead of 16 months. But this curve is rather steep at the end and if I project that forward 12 months, I get a trend of 40%.

Well, this curve fitting doesn't seem to be the answer. But one of the things that I notice about Charts 5 and 6 are the cycles -- look at the end of Chart 6 and compare it to the beginning. And if you believe in cycles, it looks like we have the start of another cycle here. In fact, *RSA* Vol. 15, No. 3A for last year's annual meeting in New York contains a session entitled, "Health Care Trends." Charles Fuhrer had done some studies using time series, and he concluded that there is a cyclical period of about four years. If you look at July 1985 on Chart 6, you will see that the curve dips and it again dips in July 1990; so it looks like a five-year cycle.

I decided to put some more points on there to see if that would help me make a decision. Chart 7 includes data back to January 1983 for the 12-month rolling average, and, sure enough, back in January 1983 the trend was pretty high. It came down and it's possible that at the right end point it's going to start going up again.

In Chart 8 we see the same thing for the rolling 3-month average. If you believe that that's the start of another cycle, we can use the cycle to project trend.

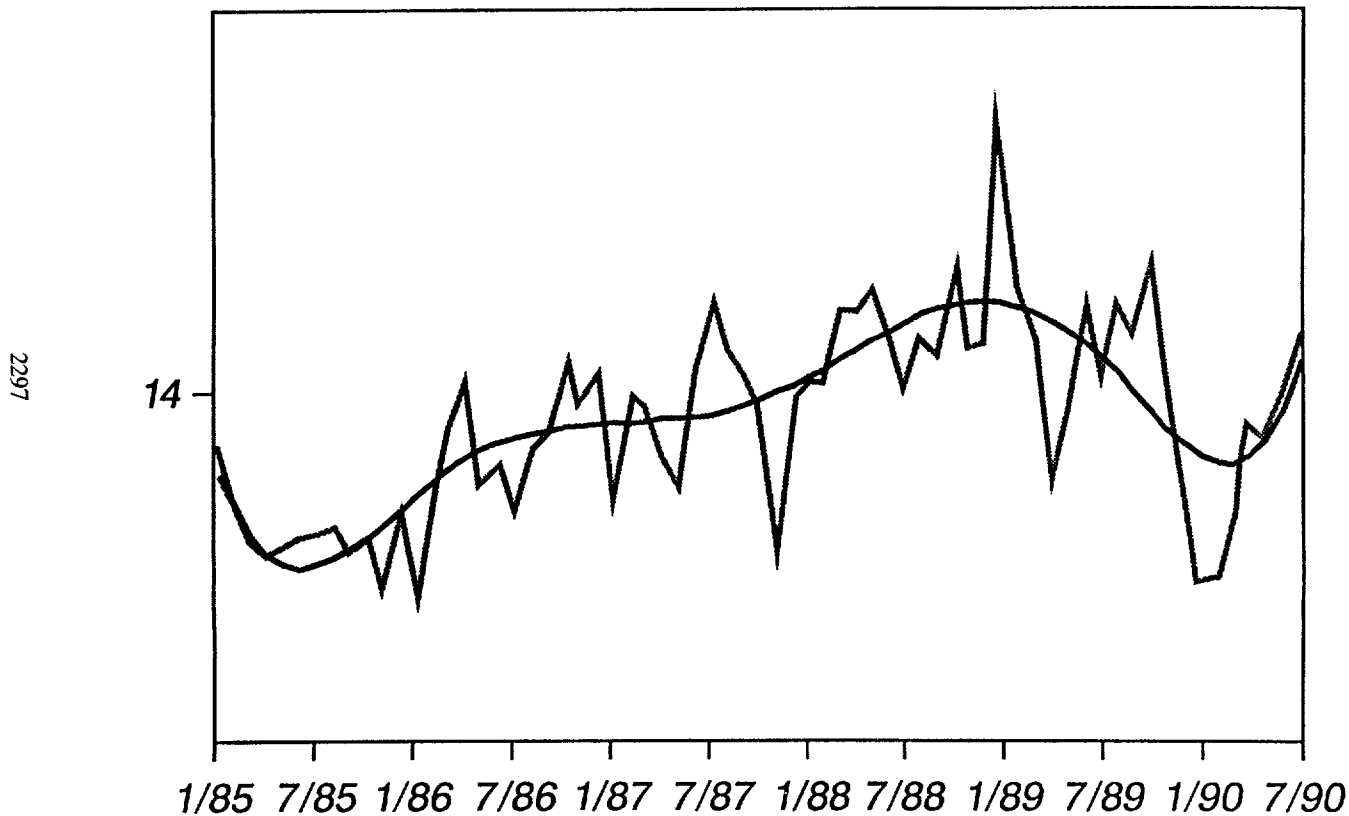
Rolling 12-Month Trend



2296

PANEL DISCUSSION
CHART 5

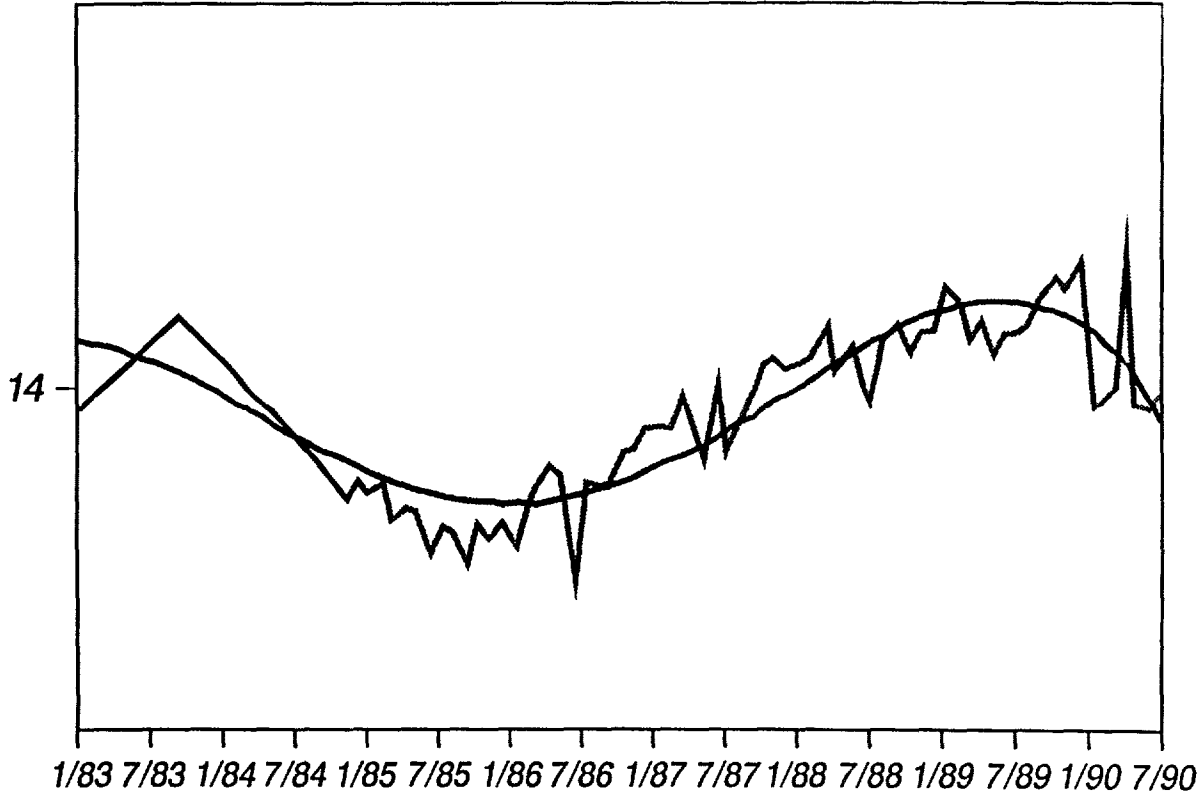
Rolling 3-Month Trend



2297

HEALTH CARE TRENDS UPDATE
CHART 6

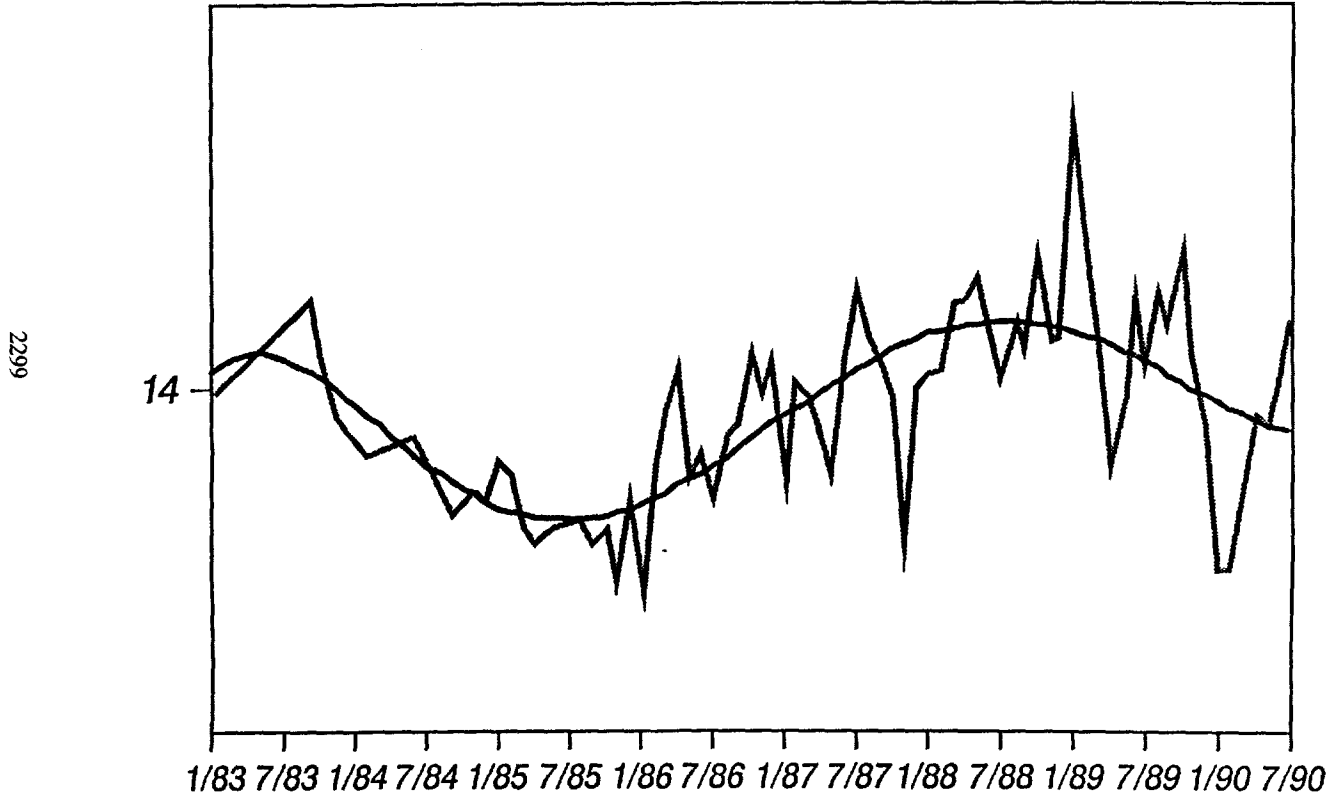
Rolling 12-Month Trend



2298

PANEL DISCUSSION
CHART 7

Rolling 3-Month Trend



HEALTH CARE TRENDS UPDATE
CHART 8

PANEL DISCUSSION

The point on the right end, July 1990, is about three percentage points higher than July 1985. And since the lag is 12 months, I need to project forward 12 months. All I have to do is go out 12 months from July 1985, and add three percentage points, and I come up with a number of approximately 20%.

Obviously, there's got to be something else behind this. I can't very well go to my boss with these graphs and say that it's obviously going to turn up again. Because the first thing that anybody asks is, "What's the competition doing?" Well, that's how we get into underwriting cycles. I think Charles Fuhrer used the word "lemmings." In the *Record*, he says he didn't believe that we're all lemmings, that we all do the same thing and get ourselves into trouble. But it is nice to know what the competition is doing because you do have to sell. Although you do have to make a trade-off of market share and profitability, I think that the only way out of an underwriting cycle is to decide there's a point where you're not going to follow the crowd.

The other major factor is what's happening economically. You have to begin thinking about the components of trend and not just a bunch of dots on a slide or a LOTUS spreadsheet. Hewitt Associates published an article in 1988 when we thought trend was about 24%. Out of that 24%, the article said 9% could be attributed to inflation, 6.5% to cost shifting, 4% to increases in utilization, 2.5% to changes induced by technology, and 2% for catastrophic care. Let me just explain these a little bit because I know Ron's also going to be talking about components of trend.

Let's start off with inflation. I think we all know that you can't measure inflation just by the cost of the CPI, the cost-of-living increase. That's just a market basket of goods that changes very slowly over time, and one of the goods that is not in the basket is the premium paid by employers for medical care. The thing you want to measure is not in the CPI. Now there's the CPI medical component. That begins to measure things like the cost of hospital stay and prescription drugs, but the weighting given by the government agencies is according to the dollars spent by an individual who's purchasing these goods for himself or herself. And since most people are covered for insurance by their employers, they're not paying for the hospital care. So the weighting in the CPI, for example, is quite different than the weighting that we would use to calculate trend for a major medical policy. Table 1 shows these weights. The CPI weighting for prescription drugs, for example, is 50%, whereas it's probably only 5% of the weighting of major medical. Hospital room and board, while 3% in the CPI, is about a quarter of the insurance weight. So if the CPI is running around 5%, and the CPI medical is running about 7%, the components in the CPI medical, weighted according to a typical major medical plan, come to about 9%. The components of cost shifting include Medicare, Medicaid, HMOs, and uncompensated care. We have seen a lot of documented cases at the Prudential of individuals moving from the indemnity world to HMOs.

Utilization components include preventive medicine, dual coverage, aging, mandated benefits, increased outpatient benefits and increased length of stay. An increasing number of tests are given for preventive medicine. Dual coverage exists when husband and wife are both employed and one plan picks up the deductible on the other plan. (So as a family they don't really have a deductible or they don't have coinsurance, and any incentive in putting deductibles in their plan is eroded.)

HEALTH CARE TRENDS UPDATE

TABLE 1
Medical CPI -- Weighting

Components of CPI-Medical*	CPI-Medical Weighting	Insurance Weighting
Prescription drugs	50%	5%
Physicians' services	7	36
Hospital room and board	3	24
Other inpatient services	2	24
Outpatient services	1	11
Nonprescription drugs, medical supplies, dental, eye care, and individual health insurance	37	0

* CPI does not include premiums and benefits paid by employers. This is a weighting of medical charges paid by individual consumers.

Aging is another component; there are slightly fewer people entering the workforce now and I think the workforce is getting slightly older. Mandated benefits, again, is a big problem on insured business with the states continuing to ask insurance companies to cover more and more benefits. And when you compare a prior 12-month period with a current 12-month period, the current one may have more coverage than the prior. There's been lower hospital frequency, but if you look at the results, the more serious cases are going to the hospital, so stays in the hospital are slightly longer. But even more importantly, there's been a great deal of emphasis in the last five years on having things done on an outpatient basis. Actually there are some places where having surgery done on an outpatient basis is more expensive than if the individual went to the hospital. Of course, the physicians are the ones controlling the costs. At conventions of dentists and physicians, they learn how to code their claim forms so they get the maximum amount of benefits. It's sort of like when the IRS changes some tax rule and all the accountants and actuaries then run around and figure out how to beat it. The physicians are doing the same thing with us, but I think they're better at it.

Technology is constantly coming out with new, better, more expensive ways of treating illnesses which the hospitals then purchase. More staff training is needed to run this equipment and probably even more workers per patient.

Now I rate the last component, catastrophic care, at about 2%. We're all familiar with organ transplants. The cost of premature babies easily could be a quarter of a million dollars, and the drug problem certainly contributes to the premature baby problem. And, as we all know, we can still get new illnesses. In fact, I guess it's possible for new illnesses to increase in frequency as people move to different parts of the world (particularly the way people travel today). It's easy to pick up some kind of disease that nobody ever had before and transmit it around the world very quickly.

So how do we set our trend factors? We draw some graphs to see where we think trend might be headed, and then we look at the components of trend and try to project them. I don't know about you, but if I look at each one of these components, I don't think any

PANEL DISCUSSION

of them are going to go down in the near future. I don't think that's going to happen with inflation and, certainly, not in cost shifting.

MR. RONALD M. WOLF: This is a presentation on health care trends put together by Paul Fleischacker, who was unable to come. There are four things that we want to talk about: (1) recent and projected health expenditures data, some broad figures from our nation in total; (2) some idea as to where we see currently used trend rates standing; (3) some discussion of the elements impacting trends; and (4) I guess I'll have to call it the Fleischacker forecast for trend rates in the future.

Chart 9 shows the percentage increase in health expenditures for the nation in total. Health expenditures is defined broadly here. It would include medical, dental, nursing care, nonprescription drugs, and the like. This represents just the raw percentage change in dollars from year to year for health care expenditures for the years shown. Now, 1987 and 1988 show actual numbers and 1989 through 1991 show estimates. As a reference point, 1980 through 1985 on a comparable basis averaged about 11%. Then 1986 slowed to something like 7.2%, but we're seeing numbers here for the years shown in the range of 8.5% to about 10.6%.

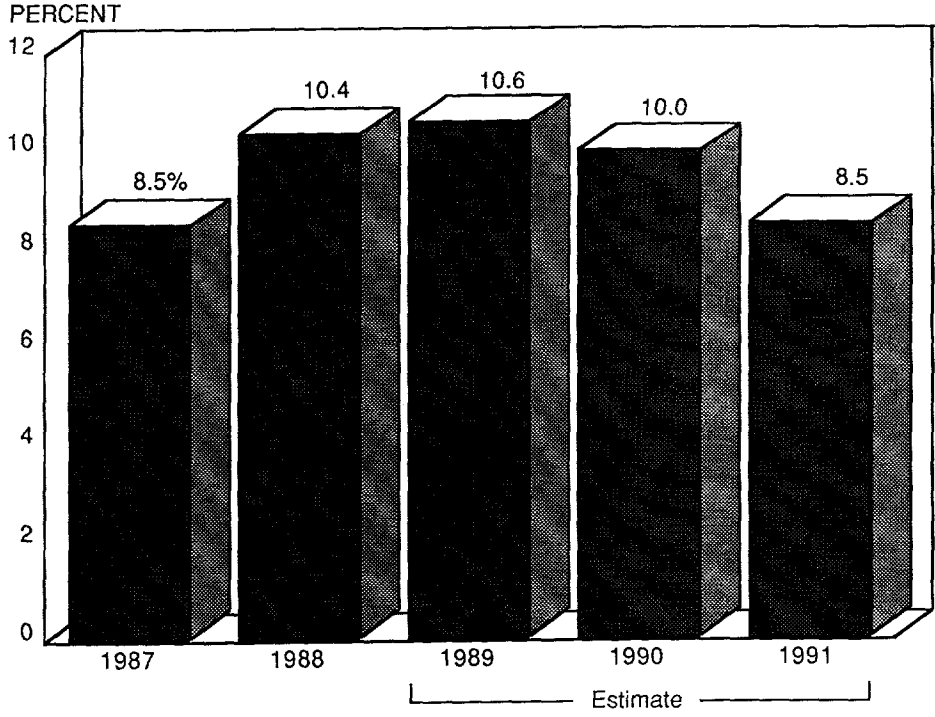
Chart 10 shows a history of health expenditures as a percent of GNP. These numbers are not inflation adjusted. Again, 1987 and 1988 show actual figures and a forecast is shown for 1989 through 1991. We're seeing slowly increasing double digit numbers in terms of health expenditures as a percentage of GNP. If the rate of increase in this statistic was to increase into the future at the rate that it has or that it's forecasted to do from 1987 through 1991, it's interesting to speculate what the figure would be at various years in the future. That number would be 22% if I did the arithmetic right, in 2010 if roughly that trend line continued. If that were to happen, \$1 out of every \$5 that we produce in goods and services in the country would be allocated towards health care expenditures. That kind of number has appeared in various articles and is probably the highest in the world. We have to say to ourselves: this really can't continue and something fundamental is going to have to change. That's interesting to contemplate.

Roy talked a little bit about medical CPI figures. Table 2 has some CPI statistics for 12-month periods ending with the dates that are shown. Medical means medical in total and some of the various components of medical are also shown -- hospitals, physicians, and prescription drugs. Roy, I think you had a number something like 7% where we have 9.2%. Maybe they aren't quite the same numbers, but in the same ball park.

TABLE 2
Medical CPI -- National

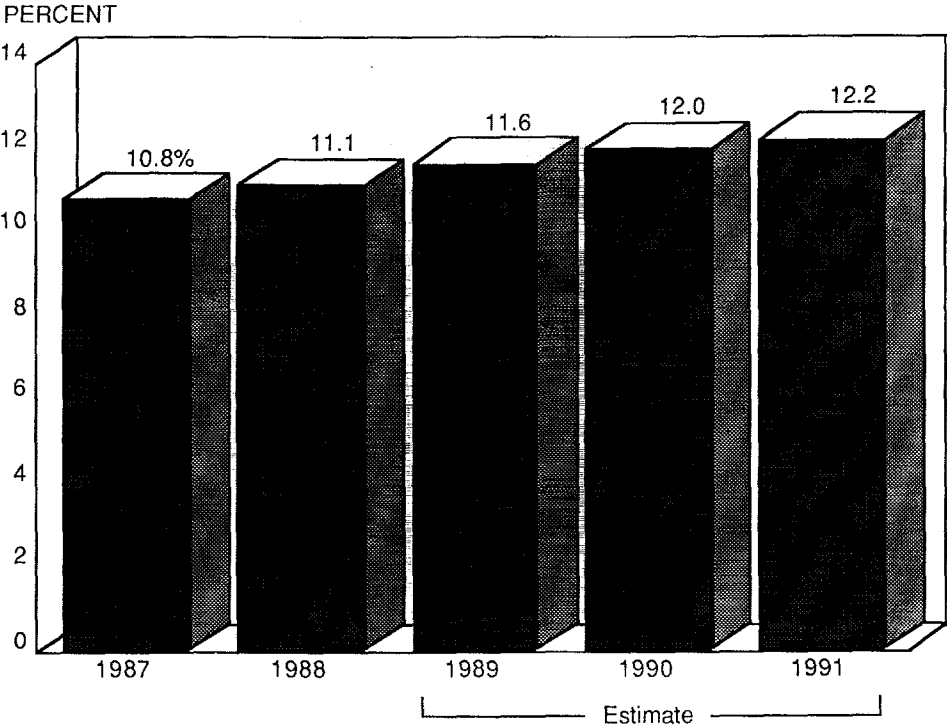
	12 Months Ending	
	July 1989	July 1990
Medical	7.5%	9.2%
Hospital	11.4	10.8
Physician	7.0	7.4
Rx	8.7	10.2

PERCENTAGE INCREASE IN HEALTH EXPENDITURES



HEALTH CARE TRENDS UPDATE
CHART 9

HEALTH EXPENDITURES AS PERCENTAGE OF GNP



PANEL DISCUSSION
CHART 10

HEALTH CARE TRENDS UPDATE

MR. GOLDMAN: Yes, I used 7% but that was probably the number a year ago. I would say it's closer to nine now.

MR. WOLF: Table 3 shows a little bit more detail on medical CPI numbers for selected cities. Over on the left you see various cities in alphabetical order. Three years are shown. This is a calendar year change in medical CPI. What can we glean out of this? Let's look at the range for 1986. It looks like the lowest was Seattle at 5.2%. The highest was Dallas-Ft. Worth at 11.5%. That is a pretty wide range. I think it's interesting to note the change as we move across to 1988, where the low is Houston at 5.2% and the high is Atlanta at 10%. These statistics certainly support varying your trend rates by area. We need to look closely at our geographic areas frequently.

TABLE 3

Medical CPI -- Selected Cities

	1986	1987	1988
U.S. city average	7.4%	6.7%	6.8%
Atlanta	9.7	10.2	10.0
Boston	9.5	6.3	9.1
Chicago	6.4	7.5	7.4
Dallas-Ft. Worth	11.5	6.3	5.9
Detroit	6.9	6.2	6.3
Houston	5.7	5.6	5.2
Los Angeles	6.9	6.9	7.8
Miami	7.2	7.9	5.8
New York City	8.3	8.7	6.6
Philadelphia	6.1	5.1	6.6
Seattle	5.2	6.6	6.7
Washington, D.C.	7.0	5.6	6.9

Roy talked briefly about dynamics of the change in the trend rate. The time lag for analysis and implementation is something with which most of us are familiar. We try to measure trend from experience period to experience period and we forecast ahead to a rating period. And almost always there's a pretty long time lag, 18 maybe 20 months over which we're doing that. The way I view the process, setting trends is probably as much an art and judgment as it is a science. It's kind of a unique combination and that's because of the time lag factor. We also have the impact of things like competition, the rating cycle, people trying to buy market share, and changes in provider reimbursement arrangements and mechanisms.

Table 4 shows underwriting trends; that is, trends used in rate making or in underwriting and not necessarily the trends measured. Hopefully, there's some correlation between the two. These are trends used for premium calculation purposes, and we see them as measured over a couple years. This is based on a couple of surveys that Tillinghast did, and it was done differently for various types of settings or delivery systems (HMO, indemnity or comprehensive major medical, and managed care). Indemnity shows the

PANEL DISCUSSION

highest trend and HMO the lowest at 16%, but they still are some pretty significant numbers.

TABLE 4

Underwriting Trends

	1989	1990	1991
HMO	18%	16%	?
Indemnity (CMM)	24	23	?
Managed care	20	19	?

Table 5 has a little bit more detail on the HMO trend rate. The 16% total is down at the bottom right, but some components are split out. Across the top is utilization and the fee or cost of services and on the left is the type of service. Other influencing factors like AIDS, the need for more surplus, etc. are on the bottom. The components at the top yield roughly 14%; add two for the other kind of incidental items and the total is 16%. At some point in time, you'd like to think that maybe the utilization curve would turn down and we could lower utilization, but at least according to these numbers there's none of that here. It's all heading north rather than south.

TABLE 5

HMO Underwriting Trends -- 1990

	Utilization	Fee	Total
Hospital inpatient	1%	15%	16%
Hospital outpatient	5	15	20
Physician	3	8	11
Drugs	8	12	20
	3%	11%	14%
Other (AIDS, COBRA, Surplus)			2%
Total			16%

Let's look at the indemnity setting and the trend rates used in rating. Table 6 shows the results of a survey that Tillinghast did three times during 1990. The same companies, or the exact same sources, were not used at each of these points in time, so it might be a bit like comparing apples and oranges, but it should not be too distorting.

TABLE 6

Indemnity Underwriting Trends -- Surveys

	January 1990	March 1990	September 1990
Range	22.0-24.0%	19.9-26.0%	18.6-23.2%
Linear average	23.3	23.0	21.5

HEALTH CARE TRENDS UPDATE

Table 7 shows a little bit more detail on this 23% indemnity trend. This is comparable to what Roy mentioned: 9% for inflation, 4% for utilization, and 6.5% for cost shifting. We would combine COBRA with cost shifting to produce a number like 4.5%. While there are a number of factors at work here, the big three seem to be inflation, utilization, and cost shifting.

The elements that impact trend are government, providers, technology, demographics, benefit design, and employers. As far as the government is concerned, the various things that are important include Medicare reform, the uninsured, mandated benefits, surplus requirements and federal employees health and benefit plans (FEHBP).

Medicare is going to introduce the resource based relative value scale (RBRVS), and that's something that Frank is going to talk about in a little bit more detail. Apparently, one of the effects of this will be higher payments on what we would call cognitive services; that is, office visits and things like that, as opposed to acute services like surgery. From what I have understood about the budget negotiations going on right now, there probably will be some continued pressure on providers to restrain their fees and that will be a further Medicare impact.

The uninsured is an area that I happen to be doing some work in. You're probably aware that an increasing number of states are putting into effect risk pools for people who are uninsurable but who can still pay a fairly significant premium. I know of one particular case where one of these programs has been up and running for a couple years. The state is going to try to lean pretty hard on the providers, and this may cause some cost shifting.

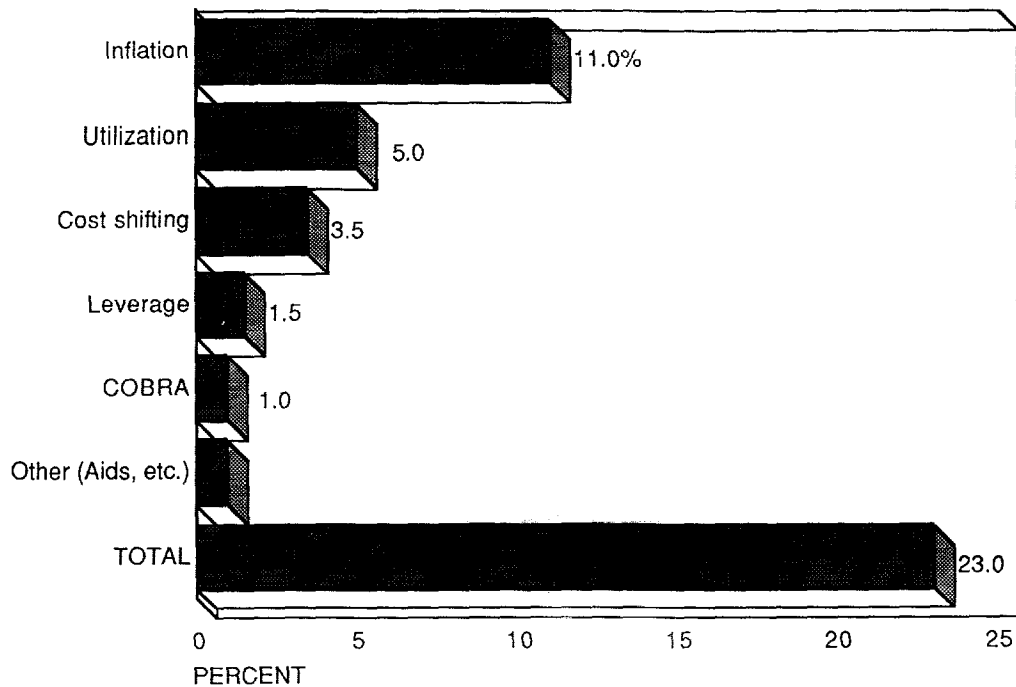
It seems like mandated benefits are always with us. They continue to add to the cost of benefit plans.

Whether it's for HMOs or insurance companies, maintaining a reasonable level of profit or a level of capital to support business over time is something that can drive an extra provision in premiums. Sometimes insurers load something in their premiums to increase their profit margin or their capital and they don't quite make it, but they probably need to keep trying.

The federal employees health and benefit plans regulation from 1987 restricts HMO rates. Whenever an HMO that is doing experience rating as opposed to community rating is participating in the federal employees health plan, it must offer its lowest price to the federal employees. If that price is not the right price, then the costs are probably going to shift over to someone else.

Providers are doing some unique things, too. Number one is the unbundling of services. Think of something as simple as the drawing of blood as an example. Apparently, sometimes instead of that being one service, one charge, there might be one charge for the actual drawing of it, a kind of surgical procedure, and then a charge for doing the analysis. It sounds extreme but apparently someone's aware of some of that.

INDEMNITY UNDERWRITING TRENDS 1990



PANEL DISCUSSION
TABLE 7

HEALTH CARE TRENDS UPDATE

Second is procedure code creep and it is a little bit more realistic. An example of that might be the doctor turning in an office visit as an intermediate visit as opposed to a limited office visit. This is a hard thing to control.

Third, malpractice insurance continues to be with us as a cost driver, but my knowledge indicates that it is slowing down somewhat.

Fourth, providers can have salary pressures from their staff, particularly as regards nursing professionals.

Fifth, likewise, the intensity of services may increase due to technology.

The components of technology include neonatal care, transplants, AIDS, diagnostic tests, experimental drugs, therapy and research costs. Neonatal care has been a cost driver for a long time. Probably more in the public sector as opposed to the private sector is the problem of cocaine babies. It is really a dreadful problem for us as a nation. As I think about neonatal care, I am reminded of a recent situation in St. Louis. The story appeared in the weekend paper about a young child who weighed less than one pound at birth. It was now coming home from the hospital after 25 weeks, and apparently, doing quite well. But the article said that the father had good group insurance with a maximum of \$1 million, but he had gone through it. It's very tempting for me to ask myself: Can we as a nation afford to do something like that? But how would I answer that question if that were my child, and how would you answer if it were your child?

Transplants are becoming more commonplace. That's a technology driver. Things like kidney transplants are becoming more common now. We also hear about multiple organ transplants. We hear more about bone marrow transplants, and I think that's going to continue.

AIDS will continue to be a cost driver as we continue to research for a solution.

Diagnostic tests are being used more frequently for early diagnoses of certain types of illnesses. I read an article not too long ago that had to do with mammograms and the machines that are used to give them. In this article the author stated that there were four times as many of those machines to do mammograms as were needed for the entire country. I'm not sure of the source of that data, but if that is right, we could see how that would drive up the number of unit services.

Experimental drugs and therapy are being used to treat AIDS. Transplant drugs would be another example.

We have the large teaching universities and medical centers that continue to want to do research, and this adds to the cost of care.

Demographics is an interesting concept. We're all getting a little bit older. You know our best friends are all aging. We're all moving forward with a greater life expectancy. Early retirees is an interesting factor. We're seeing more and more early retirement

PANEL DISCUSSION

windows and early retirement programs, and we can ask ourselves a question. Is experience on those people going to be better or worse than what we otherwise might expect? Will those people be healthier, or will they be antiselective? I guess my judgment is that they would be antiselective. It is something that we need to at least consider.

I will quickly mention benefit design issues. As the cost of rich benefit plans moves up, we see more of a trend towards low-option plans, high deductibles, and high out-of-pocket expenses. Those plans are more leveraged for inflation and, with other things being equal, tend to have a higher trend rate. Point-of-service plans, where we switch the service mix from out-of-network to network, have a salutary effect on our trend rate. Underwriting, particularly for small group business, will impact trend. When we're doing medical underwriting and moving out of the select period, or if we're moving out of the preexisting condition period, we can expect additional trend. Our definition of what is meant by experimental is changing, I think mainly in the transplant area. Also, I think we're seeing some of the larger employers carving out special services in the areas of mental health/chemical dependency, drugs, and utilization review/case management. As they do that there's probably some cost shifting that might be involved for the services that are left.

Let me briefly talk about some of the things going on with employers. As mergers and acquisitions occur or as big companies get bigger, employers who may have tended to have multiple plans for their different plants or divisions are now combining them. Perhaps this is helpful. Employee contribution strategies include trying to provide the people real economic incentives for moving to an HMO setting. We're seeing more and more cafeteria plans or flexible benefit programs, where the risk pool is changing almost every year as people move in and out of different plans according to what they need, according to what their personal circumstances are. For self-insured plans I think we're seeing some pressure on administrative fees as well as on the pure cost of benefits. Finally, direct contracting is where an employer who is big in a certain area of the country, or certain city, might go to a hospital in that area and try to cut its own deal. And if it's a good one, costs may shift to everybody else.

Table 8 shows what Paul Fleischacker forecast for underwriting trends. Looking at 1991 and 1992 we see trends are decreasing. How likely do you think it will be in 1992, for example, that for indemnity plans we might be looking at a trend rate of 14%? The number we looked at a little while ago was 23%, and I think that was pretty consistent with what Roy had. I would offer this as an optimistic scenario. For indemnity we're going to see a declining volume of business, and I think it will become more antiselective. So even though it's the highest number in 1992, frankly, I think it's the softest. In Table 8, Paul may well contemplate an underpriced market in the underwriting cycle. Notice we're talking about underwriting trends here, that is, trends used in rating and not necessarily trends actually emerging. So maybe what Paul had in mind here in 1992 was somewhat of an irrational market, and that may explain some of the numbers. I think it would be nice if we could decrease trend in 1992, but I think it's optimistic.

HEALTH CARE TRENDS UPDATE

TABLE 8

Underwriting Trends

	1989	1990	1991	1992
HMO	18%	16%	11	10%
Indemnity	24	23	16	14
Managed care	20	19	13	12

MR. KEENAN: Roy talked about the actual trends being observed, and Ron and Paul's projection referred to underwriting trends being used by the carriers. I've got some projections too, but I'm projecting the underlying trends for a particular benefit plan and not necessarily what people will be using for pricing.

I'm with the Metropolitan Life Insurance Company, and I'm going to talk about some preliminary work that we've done trying to get a handle on the new physician reimbursement schedule that Medicare is going to introduce. Then I'm going to get into the projections or predictions, if you will, that I was just referring to.

The new physicians' reimbursement schedule that was mandated by the Budget Act of 1989 will be implemented by the Health Care Finance Administration (HCFA) starting on January 1, 1992. This schedule is referred to as the RBRVS. I'm pretty sure that most of you have heard or read something about it, so I'm not really going to go into all the details. What I'd like to do is just talk about a few general things and then go into my example.

Generally, following up a little bit on what Ron said before, the resource based relative value schedule is designed to redistribute Medicare reimbursements to different categories of physicians. We expect that surgeons will see their incomes going down, because their reimbursements per unit will go down. And general practitioners, or primary care physicians, will see their incomes going up. We do not have all of the information on exactly what the reimbursements are going to be under this new schedule, but we have some preliminary indications.

As I said before, we have done a few studies and I'd like to share some results with you. Rather than go through the details, what I've tried to do is condense these preliminary studies into a very simple example that illustrates the point. The point really is the physician's reaction to the Medicare fee schedule, and essentially it's more cost shifting. I've tried to simulate what might happen with two physicians. I've taken some liberty with the numbers, and I've rounded things to keep it simple. I'm trying to emphasize the point that I mentioned earlier -- the cost shifting mechanism.

My example starts with Table 9. Let's pretend we have two doctors: Doctor Surg and Doctor GP. This is a rough approximation of what their incomes are. We have it split into Medicare, private, and total. Doctor Surg has \$60 of income from Medicare, \$120 from private, and \$180 in total. Doctor GP has \$40 from Medicare, and \$80 from private. In this example "private" means just third-party pay or reimbursement. It doesn't include individuals' out-of-pocket expenses.

PANEL DISCUSSION

TABLE 9

Physician Reimbursement Before RBRVS

	Medicare	Private	Total
Dr. Surg	\$ 60	\$ 120	\$ 180
Dr. GP	40	80	120
Total	100	200	300

We can look at what's going to happen after RBRVS is phased in Table 10. And what happens is that Doctor Surg's Medicare reimbursement goes from \$60-45 and Doctor GP; Medicare reimbursement goes from \$40-55. Now what I've done is assume that the RBRVS implementation happens at one instant. Actually this will be phased in over four years, but in the interest of keeping it simple, I'm assuming everything happens at one point in time.

TABLE 10

Physician Reimbursement After RBRVS

	Medicare	Private	Total
Dr. Surg	\$ 45	\$ 120	\$ 165
Dr. GP	55	80	135
Total	100	200	300

Table 11 illustrates what the doctors might do in reaction to RBRVS. I'm illustrating two things here. Doctor Surg has decided to raise his private sector reimbursements from \$120-135 so that he maintains his level of income at \$180. Doctor GP says that since Medicare has raised his prices and it is reimbursing at a higher level, he should get that from his private patients. So he's raised his prices proportionately to his private patients. Now if this were to happen, you can see that the private pay reimbursement would go from \$200-245 or would increase 22.5%.

TABLE 11

Possible Physician Response to RBRVS

	Medicare	Private	Total
Dr. Surg	\$ 45	\$ 135	\$ 180
Dr. GP	55	110	165
Total	100	245	345

Now let's think about what I said before, private includes only the third-party reimbursement and not the out-of-pocket that individuals might pay. To be more exact maybe I should take that into account. If I wanted to factor in some of the out-of-pocket

HEALTH CARE TRENDS UPDATE

expenses that individuals might have, that would increase the base that the providers have to cost shift to, so the \$200 might go up a little bit for that. On the other hand, a lot of the income that these providers will be getting through the private sector will be coming through some type of managed care program. Under those managed care programs there will be negotiated fee arrangements, and because of those negotiated fee arrangements, the providers will be a little constrained, let's say, from increasing their prices to that sector. So that would have the tendency to decrease the base that providers could shift to. I ignored both of these items because they tend to offset each other. I encourage all of you who are dealing with trends at your respective companies and those who are interested in trying to figure out what's going on to try and do some modeling like this. The bottom line really is that right now we don't have enough information to do a very precise model, and something like this is the best we can do. However this example provides some idea of what we can expect in the next few years.

The second thing that I get from this example is that the news is not good. We're going to see some fairly substantial increases in the private sector physician reimbursements over the next few years. And this is where I get into the crystal ball section of my talk.

The RBRVS and the pressure on the federal budget is going to cause much more cost shifting to the private sector. I see increases in the indemnity trend that are going to encourage employers to move more toward strongly managed care. I've used the word "strongly" managed care to mean something rather specific. The way I look at the managed care today, we have a continuum of different types of benefit plans, going from a pure HMO to very limited management which would be an indemnity plan with a second surgical opinion program or a preadmission review program. I am saying strongly managed care to mean plans that are close to the pure HMO. I think that employers are going to be seeing the merits of the strongly managed programs, and they'll be moving in that direction. In addition, in response to this resource based relative value scale, insurers and very likely consultants will be recommending scheduled plans to employers. We have been thinking about this at Metropolitan, and I'm sure many other people have also.

Again, following up on what both Roy and Ron mentioned before, the uncontrolled fee-for-service sector, if you will, becomes smaller and smaller as schedule plans become implemented. People migrate more and more to "strongly" managed care, and we have what call the cross shift spiral. Providers will be trying to shift more and more to a base that is smaller and smaller, and there a spiral effect.

Table 12 contains my projections for the future. If you remember Ron's (or Paul's) prediction (Table 8), you might say that this is perhaps the worst case as opposed to the best case. And, again, let me remind you that this is what I think the underlying trends in benefit plans will be, not necessarily what people will be using for pricing. Fee-for-service indemnity means essentially no controls. By strongly managed I mean essentially HMO-type benefits. And following through on what I was saying about the resource based relative value scale, and the cost shifting, I believe that the indemnity sector will see trends rising from 20-22% currently, to somewhere in the neighborhood of 26-28% by the time that the resource based relative value schedule is completely phased in.

PANEL DISCUSSION

TABLE 12

Projected Medical Care Trend

	1990	1991/1992	1993/1994	1995/1996
Fee-for-service/Indemnity	20-22%	22-24%	24-26%	26-28%
"Strongly" Managed/ HMO	14-16%	12-14%	10-12%	10-12%

I have tried to illustrate the implications of my predictions in Chart 11. In this illustration I have projected \$1 of medical care benefits in 1990 under two different scenarios -- an indemnity plan and a "strongly" managed plan. If my projections were to materialize, this illustration shows what would happen to a dollar of benefits over the next few years. As you can see, by 1996 it would cost the typical employer virtually twice as much to provide medical care benefits for his employees through the fee-for-service/indemnity-type plan as opposed to the "strongly" managed care type. I think that this kind of analysis is going to prompt employers to think seriously about moving more and more towards more "strongly" managed care.

MR. HOWARD D. ALLEN: I'm really contrasting these projections for 1991 and later. We saw two projections, one optimistic and one more pessimistic. But I guess my question is really, what is going to happen to rates? I am with a small company and we worry. We have to compete and if, in fact, trend is going to be at 26% and yet the rates are going to be based on 14% or something, companies that compete in the 14% area are going to be in trouble. I guess that's my question. What do you two fellows think about that?

MR. KEENAN: I don't necessarily think we're saying that that's what's going to happen. I think we're just looking at scenarios and I think that each of us looked at things a little differently.

MR. ALLEN: But Ron did talk about rates.

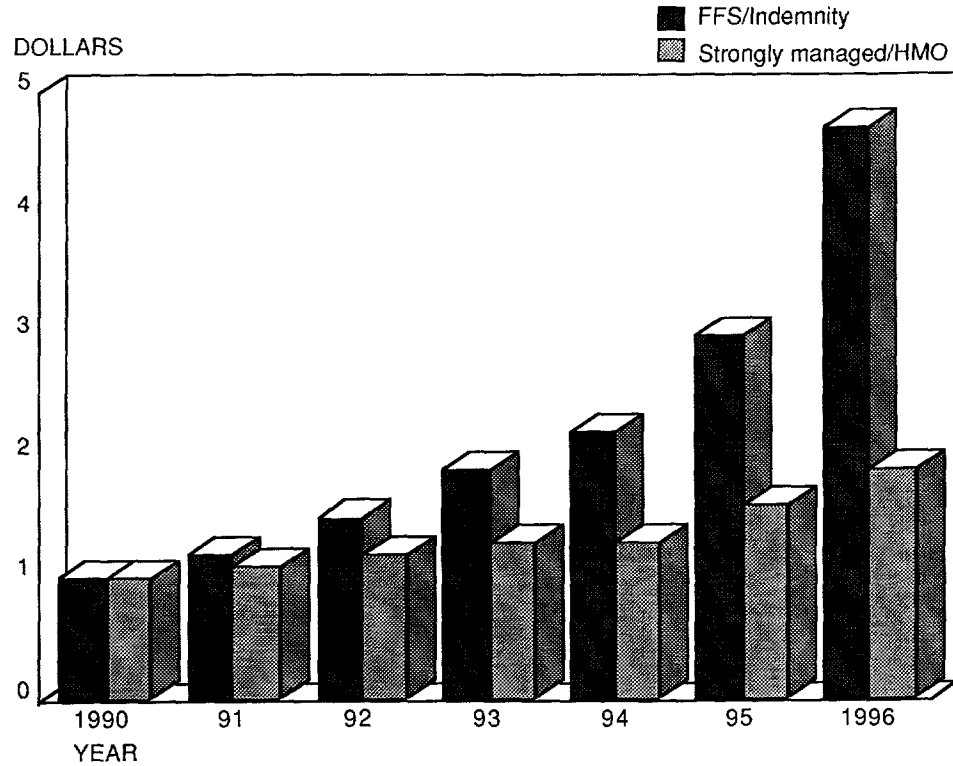
MR. WOLF: Yes, I would respond to that by saying that I would tend to agree that maybe at face value that doesn't make sense. Although looking backwards, I think we can identify or could identify pretty quickly a number of companies or enterprises that did exactly that -- that were kind of irrational in their rate trending and are no longer with us at the current time. And are we smart enough now to say that won't happen again?

MR. ALLEN: I hope so.

MR. WOLF: I'm not sure we are.

MR. EARL DIRK HOFFMAN: I am with one of the companies that does regional trending. By the way, one of the things we look at is the percentage of the Medicare population within each area, to look at the extent that Medicare cost shifting might be important in a particular area. Mr. Wolf, when you talk about regional trend, it's true

GROWTH IN MEDICAL CARE COST Fee-For-Service/Indemnity vs. "Strongly" Managed/HMO



HEALTH CARE TRENDS UPDATE
CHART 11

PANEL DISCUSSION

that at a given point in time one area may be high, another area may be low. But do you find that, as the providers in a particular area try to play catch-up, maybe a low area becomes high in the following year?

MR. WOLF: I think to the extent we've had a chance to study it, that's true. Maybe you're suggesting you need to take a longer view. While some do vary quite a bit from time to time, when you take a longer view it evens out. Is that what you're suggesting?

MR. HOFFMAN: Yes. In other words, I don't know how many areas there are that are regularly low over several years.

MR. CHARLES S. FUHRER: I have four comments. The first one was touched on by the last person's question. I think the traditional reason why most of us have not used different trends by area is because we felt that the area differences that we saw over a couple of years would not necessarily continue into the future. Maybe one area lagged behind another one in its cost changes, but eventually it would catch up. The other three things I want to mention have to do with Roy Goldman's remarks. First of all, in your breakdown of trend I seem to recall that you had 6.5% for cost shifting. Although I wouldn't doubt that maybe it could be 6.5% at certain times, to think that we would get 6.5% more cost shifting every year for a very long time seems to be a little bit on the high side, but who knows?

MR. GOLDMAN: That was meant to be at one point in time.

MR. FUHRER: That would make me feel better anyway. You mentioned AIDS (it was one of the new diseases that were part of catastrophic) and I think it was only 2% for the total. I think that AIDS probably has not, nor will, be a major source of big problems for the group health insurance industry. Finally, I want to also mention the breakdown that you did do among the causes. First of all, it may not be too important to identify the causes. The only use I can see for breaking it down is to figure out how much the trend should be leveraged by deductibles, particularly when you're working with a very high deductible major medical plan. Even more importantly, if you have specific stop-loss or pooling charges, you're going to want to use much higher trend rates. But there you need to break down the trend between the increase in costs and increase in number of claims. It's not quite the same thing as breaking it down into inflation and other causes, because some of the other causes that you mentioned would also have the effect of increasing the size of claims as opposed to the number of claims.

MR. GOLDMAN: I would agree. It's a good point.

MR. KEENAN: Just another comment. Looking at the pieces can be very helpful. We found that going through the thought process of assigning a value to each component can be very helpful in figuring out what you're doing when setting trend factors. It helps you understand, and it helps you sort of rationalize.

MR. ROBERT E. WILCOX: Just one more comment relative to the discussion on geographical differences in rating trends. I think that it becomes obvious that there has to be some catch-up again after a period of time when one area of the country may have

HEALTH CARE TRENDS UPDATE

had a slower rate of increase, but that itself speaks to the fact that you have to address those regional trends. Many of the insurers are operating in a limited geographical area and will certainly take those regional trends into account. And you have to know where you are in the cycle with regard to the specific geographical area that the employer is dealing in to make sure that you're rating competitively and also not underrating. I don't think you can afford, whether you're a small regional carrier or a large carrier, to ignore all those geographical trends, because we operate in a business where being off for one or two years has a very dramatic effect on the results.

MR. TED L. DUNN: I work for the same organization as Chuck Fuhrer, which is known as Health Care Service Corporation. We seem to have had two scenarios given to us. One of them is what I'd call an optimistic trend scenario, and the other one is a somewhat pessimistic scenario. Based on my experience, whenever I was faced with a problem to which I did not know the solution but I felt like I had the outer limits, I would always guess in the middle, on the theory that I could not be more than half wrong.

MR. JOHN A. HARTNEDY: You basically seem to be working off the past. In one of the articles that I've read about where we're going, I saw a proposal that companies get the individual more involved in the actual cost of medical care. I've seen this from Heritage Foundation. So as I look at your projection, Mr. Keenan, and I wonder where we will be if we continue indemnity the way it is. I'd probably be more inclined to agree with you except I don't know how long it will last before we have government intervention. On the other hand, if we really do something about it, and I don't suggest this as my own suggestion, if we get the individual thinking more in terms of spending his own money rather than spending his employer's money, maybe we would see some of the downward trend. I make that as an observation. I'd sure be curious to know your reactions to that.

MR. WOLF: Yes, I think that is an appropriate comment, and it makes me think back to the six elements that Paul had that impact trend. I think we could add another one, and that could be us as individuals as we consume health care. Are there ways that we can consume it more efficiently and maybe manage it ourselves a little bit better for the long run? I think we can. I think that's going to require a lot of education and awareness on our part as an industry, and I think it's a tough road to hoe. Can we realize some benefits from that in the future? I'd like to think so. But if I had capital to invest in a venture like that and wanted to bank my capital on a significant benefit from that in the future, I'm not too sure I'd do it or I'd want a pretty good return on my capital before I'd do it. I think it's a very relevant point. I think that is a missing piece of the pie that we need to add.

MR. KEENAN: Yes, I would agree, but I think it's going to be tough, because I view it as a cultural change. We can sit here in the abstract and talk about questioning the need for various tests. But I know myself, and if my physician said I had to have a Magnetic Resonance Imaging test, I know I would have it. I think it goes back to the whole issue of deductibles and coinsurance which would encourage that kind of thinking. I think we should certainly work hard at it, but I really wouldn't bank on it in the next few years as doing a lot to turn things around.

PANEL DISCUSSION

MR. WOLF: I think there is one more thing I would add here. You had a comment, Frank, that insurers and consultants will recommend scheduled plans. Probably over the last year or two I've tried to recommend scheduled plans more and more, but I haven't had too many takers. So I think we have some educating to do there.

MR. KEENAN: Yes. I think that the scenario that I painted was kind of bleak, but if that starts to develop I think that there will be more and more people looking at scheduled plans and similar things to keep the costs down.

MR. WOLF: I have another comment in response to the comment from the floor about AIDS. I think the comment was that AIDS will not be a big problem for the group health industry in the future. If that is true, is it because that's going to be in the public sector as opposed to the private sector? Perhaps, but I think it would be interesting, Frank, to ask the group here as to an opinion on that. Is AIDS going to be a big problem for our private industry or is not?

MR. KEENAN: Can we have a show of hands? Who thinks AIDS is going to be a big problem for the group health industry? So about a third think it will be. Okay, who thinks it's not going to be a problem?

FROM THE PANEL: Looks even to me.

MR. KEENAN: It looks even. We have some abstentions.

MR. WOLF: We have to average the results.

MR. KEENAN: I'd like to go back to the AIDS issue and just throw my opinion in for what it's worth. I believe that AIDS is an important factor, and while it's small now, it's growing and with respect to trend I think it's an important issue. But overall for the health care insurance industry, I think it's going to be increasing gradually enough so that we'll be able to manage it within the rating process. So I see it as being an important factor because it's growing, but I don't see it as being something that's changing so rapidly that we'll be unable to deal with it.