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HEALTH CARE TREND UPDATE

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Recorder: AMY S. ZIFF

- Current experience
- Measurement techniques and problems
- Uses of trend projections
- Other considerations such as:
  - Impact of selection
  - Impact of initial and renewal underwriting practices

MR. DARRELL D. KNAPP: I am with Ernst & Young. Former Governor Richard Lamm, in his presentation, dealt with the long term: what he sees happening from a public policy angle and the future of health care trends. It is good for us to think in terms of public policy and where we're going to be headed in the long term, but we still have products that are out on the street. We have to deal a little bit more with the short term and try to look at exactly what trends we expect to happen. After that session, there were two sessions that I talked to people about; one on the new Medicare reimbursement system Resource Based Relative Value Schedule (RBRVS) and the other on changing medical technology. Both of these are going to have a fairly significant effect on our projected trends in the future.

Recently, there was a clipping in *The Wall Street Journal* that had a survey of 15 leading insurers by a benefit consultant. They were reporting that the average comprehensive corporate medical plans expected to increase their costs 24-30% over last year. The clipping said that if you have a preferred provider managed care network, costs are likely to increase 20-25%. A lot of numbers are being thrown around. That brings us to this session – looking at where trends have been and where they might be heading.

In this session, we hope to go beyond just quoting percentage numbers and try to discuss the issues that are facing each of your organizations in the measurement of historical trend: how you develop a projected trend, and then, once you decide on what you think the costs are going to do in the future, what you are really going to do with that information.

Our panel has been constructed to discuss the issue from the different viewpoints that actuaries face in today's health marketplace. Those viewpoints are from an insurance company with a national emphasis, a Blue Cross/Blue Shield plan with more of a local emphasis since business is usually written in a limited geographic area, and HMOs that offer a local emphasis as well as a provider-based approach to trend projecting.

Marty Rosenbaum is with Great West Life in Denver. Marty is a vice president in employee benefit products. Some of his responsibilities include product development,

pricing, and financial analysis for Great West Group Life and Health Division. He is also responsible for their 401(k) products.

Dave Terry is with Aetna Health Plans in Dallas. Dave heads the southern region actuarial department with responsibilities including maintaining a national database to analyze medical cost patterns, maintaining medical pools, pricing and underwriting support, developing provider pricing and reimbursement criteria, and preparing and determining provider risk-sharing agreements and provider budgets.

Terry Kellogg is with the Blue Cross/Blue Shield Plan in Alabama. Terry is the chief actuary and he assured me that his responsibilities included all of those things that a chief actuary normally does.

MR. MARTIN ROSENBAUM: If you were in Washington, DC, and somebody came up to you and asked you, "Where are the SOBs?" they probably aren't looking for Dan Quayle or Teddy Kennedy. They are probably looking for the Senate Office Buildings. And if you were in a hospital and you were overhearing physicians and nurses referring to a patient's SOB, they aren't lacking for bedside manners, but rather they're referring to the patient's shortness of breath. Now, if you and I were referring to an SOB, I think we all have our own special definitions as to what that would mean to us. Exactly the same thing is true of trend. We all have our own very special definitions when we talk about trend.

What I wanted to do first was to list a number of issues referring to the definition of trend: unit cost inflation; changes in utilization; "cost shifting," which is not just cost shifting from the government sector but is also cost shifting from other negotiated arrangements that the providers may be working with; leveraging, the factor that comes from fixed dollar copayments and out-of-pocket maximums; and something called "technological advances in the medical care field."

Now those first five issues would tend to be what many people think is the conventional definition of trend, but it doesn't stop there. There are other factors that individuals might include when they are referring to the subject of trend. One of those is something called "antiselection." Antiselection often occurs in the multi-option environment, where individuals have a choice among plans. Another issue they may be referring to and including in trend is mandated benefits, or for that matter, other benefit changes in a plan. In trend, they might be referring to and trying to take account of durational differences, particularly in a minigroup environment where you have select and ultimate morbidity that takes place. They might be sweeping into the definition of trend demographic changes, changes in the composition of a particular group, or they may be trying to anticipate the general aging of the population with which we're all becoming familiar.

Finally, I include an issue called "margin." When we talk about trend, there is a way of calling trend what the carrier or third party payer is putting into the price or the expected claims for the respected trend. That is one way to talk about trend. Another way to talk about trend is to ask, What are the underlying medical care claims doing? Those two are not necessarily the same. What's going into the price may be higher or lower than expectations with respect to the underlying medical care

cost. As a result, you could end up with a positive or negative margin as a part of a trend definition.

Now my purpose for going through this is not so that we establish one trend definition, because I don't think we are ever going to get to that point, but rather just to recognize that there are multiple definitions and that we need to be clear as to exactly what we're including in that definition.

I want to turn next to how we attempt to measure retrospectively what trend we have seen at Great West, and what some of our most recent figures are showing. Now these figures come from our book of business which is list billed. We do that because we have our best information with respect to exposure for that block of business. Also, that block of business is now in excess of a half a billion dollars of equivalent premium. What you see on Chart 1 is information that goes back to 1986 in full calendar years through 1990, and also includes the first quarter of 1991. What the chart is measuring are covered charges as opposed to paid claims. These are covered charges after negotiated discounts. Now because it is after negotiated discounts, the true trend, if there is such a thing, is understated by 1-1.5% per year because in our block of business there has been an increasing penetration of managed care.

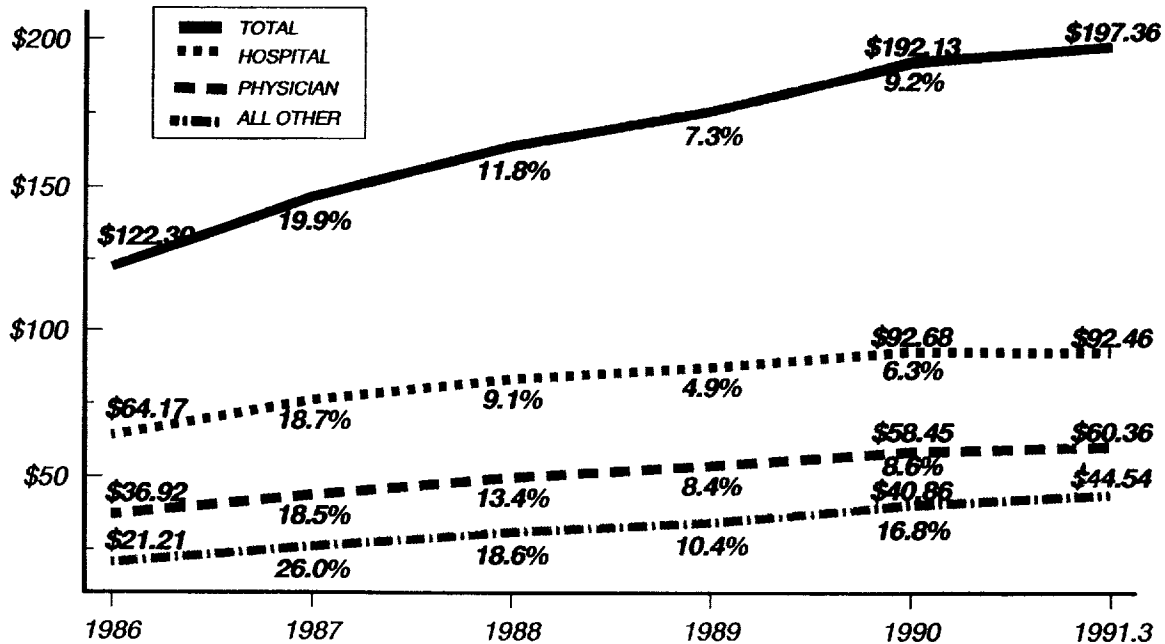
As we look at these charts and figures, we recognize that there are all kinds of pitfalls in what we've done here. The major pitfall is that this is monitoring our entire national book of business. The problem with that is that it becomes open to changes in the mix of our business. Even though the mix of our business does not change dramatically, it does change over time. It changes with respect to geography, where we are writing and renewing business, with respect to the age and sex composition of our business, with respect to the benefit composition, the average group size, and the duration of our business. All of those factors are melding into that total national block result.

Overall, we could make adjustments to these figures. We could have a geographic adjustor and an age/sex adjustor and so on, but then we get into over-complications of the whole process. So we should take this for what it's worth in terms of information, recognizing the pitfalls and the changes in our mix of business. The point of all this, again in terms of the pitfalls, is that you need to be aware of what you are trying to measure, what the trend is measuring, and what the underlying data are telling you so that you can understand what is polluting the purity of what you are trying to understand and project.

What we have in Chart 1 is an overall medical cost. It is then broken down into the three large components of hospital care, physician care, and all other costs. What I find particularly instructive about this is that you see that the rate of increase (the percentages underneath each of the lines) for the hospital care is the smallest of all three. That's telling me that our efforts with respect to managed care, which are so heavily focused on the hospital side and particularly on the inpatient hospital side, are beginning to take hold and to bite.

If you go to the other end of the spectrum and look at the "all other" category, which includes roentgenograms, laboratory, and prescription drugs, you see exorbitant rates

MEDICAL COST PER EMPLOYEE/MONTH



of increase from year to year. Look at 1990; you see a 16.8% rate of increase versus 6.3% for the hospital side. It is the all other category that carriers have had the least success in controlling. Without any control measures in place, these costs are moving up very rapidly.

In the middle, I think also predictably, you have the physician side that is increasing faster than the hospital side but slower than the "all other" category because there are utilization control efforts that fall somewhere in the middle as well. We are fairly good with respect to utilization control in the inpatient setting, but when it comes to ambulatory care, our ability to control reduces. So I think the results that are coming out of this are fairly reasonable and predictable in terms of the managed care setting in which we live. I want to take each of these in turn and discuss them in more detail.

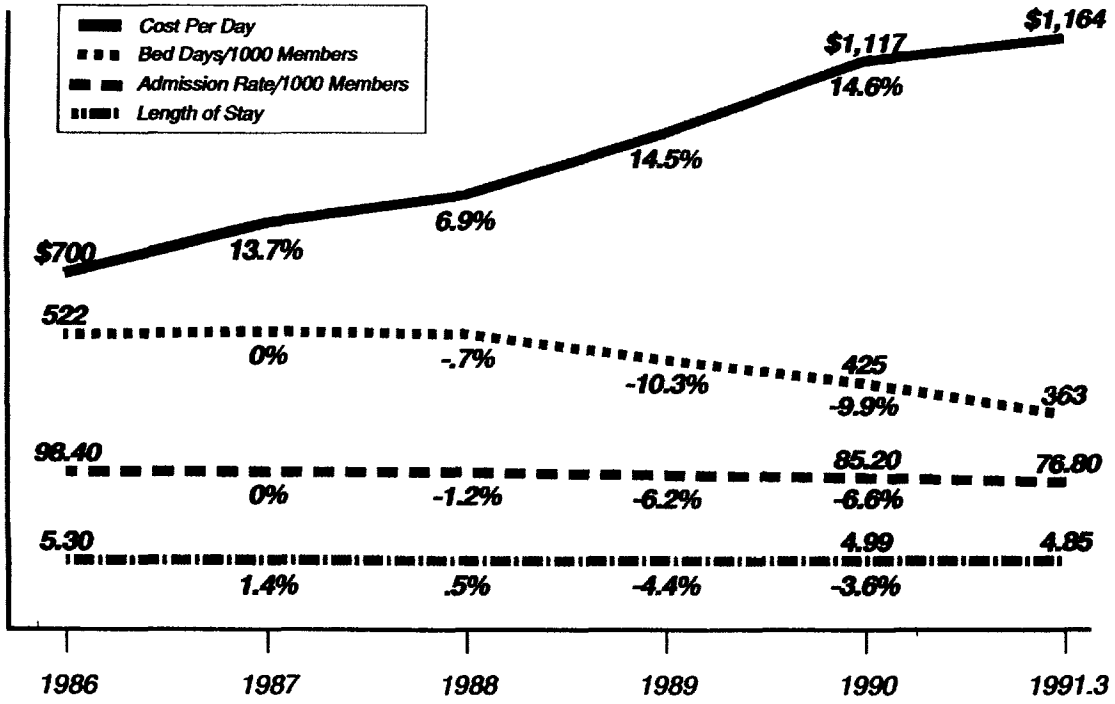
First let's look at the hospital side of things. Chart 2 is taking the overall hospital trend and breaking it down to look at the components of length of stay, the admission rate per thousand members, bed days per thousand members, and the cost per day. Again, a fairly predictable result in terms of what's happening with respect to utilization review and how it's biting with respect to the days of care. You can see that the length of stay has been on a downward tilt since 1989, going down steadily, and continuing to go down in the first quarter of 1991. You can see that the admission rate has also been falling since 1988 and continues to fall in the first quarter of this year. Those two things together compound to make a fairly dramatic statement with respect to the days of care or the bed days per thousand members which is falling as the compound effect of those two factors.

Now unfortunately we haven't escaped the ravages of trend, and that shows up in the cost per day in the hospital which is skyrocketing. In the last year it went up 14.6%. Of course, that is a compound factor of inflation, utilization, and cost shifting. It is also reflecting managed care. It is reflecting the fact that the individuals in the hospital, those who aren't being diverted to outpatient care are on balance sicker than they have been historically. It is also reflecting the fact that the early days in the hospital are more expensive than the later days because the early days are when most of the activity goes on, particularly on the surgical side. So we see a hospital overall trend which is reasonably moderate but is made up of these two very different components going in very different directions.

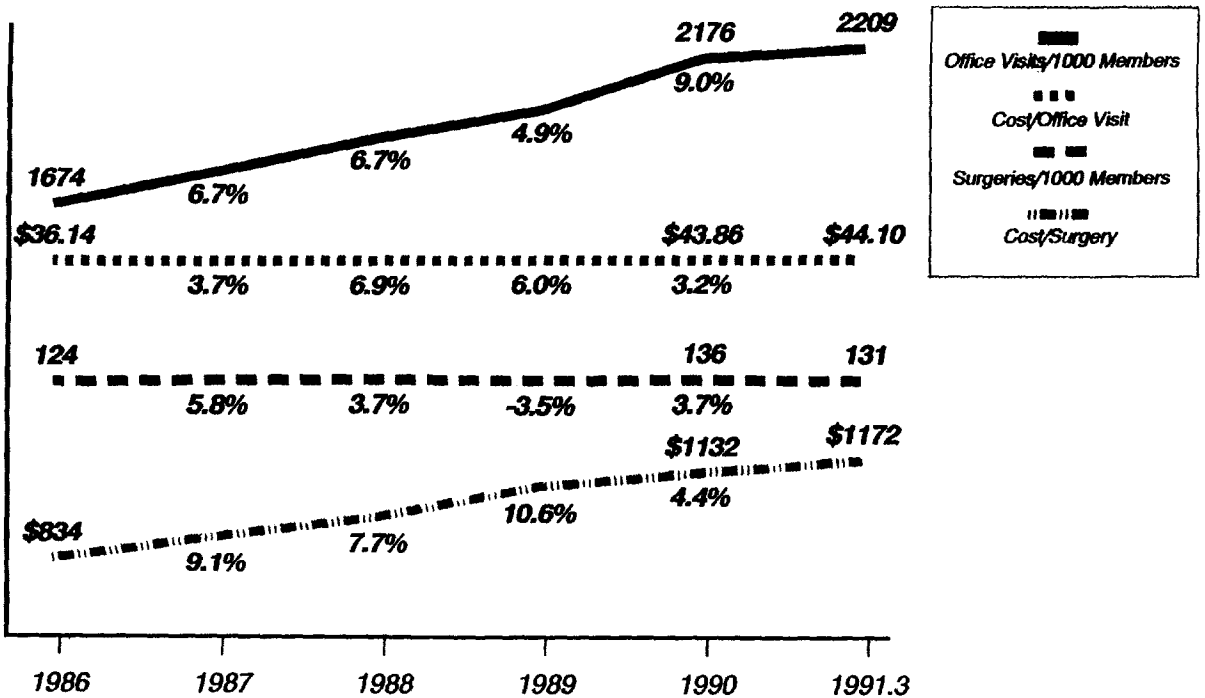
Next we turn to the physician side and look at some detail there. Chart 3 shows that the office visits per thousand members, the utilization if you will, is going up very dramatically -- 5% in 1989 and up to 9% in 1990. We then see a further rise in the first quarter of 1991. Now that is going on at the same time as physician cost per office visit is also rising. Again, these numbers are after our negotiated discounts. When you compound the two, what you observe is that physicians are experiencing a rather handsome increase in their gross income.

Now we step down to look at the surgeries per thousand members; this includes inpatient and outpatient surgeries combined. The rate of increase does not approach that of office visits. However, the cost per surgery is rising much faster than the cost per office visit. What I read out of this is that physicians are doing as they always

HOSPITAL TREND ANALYSIS



PHYSICIAN TREND ANALYSIS



have done, and that is being very good at income maintenance. As the volume of their work is constrained, the unit cost of their work will go up.

I want to turn next to the all other category in Chart 4. Here you see an outrageous curve or pattern. You see a dramatic increase in the number of roentgenograms (X-rays) per thousand members and in the cost per roentgenogram. When you compound these two things, you see a very rapid increase in our cost of roentgenograms. If you look at the laboratory side, you see a rather peculiar result where the laboratories per thousand members are going up very dramatically, 31% in 1990. At the same time the unit cost went down 13%. My explanation for this would have something to do with our claims coding and how we code individual laboratories and split them and so on. But what I would take out of this more so is the compounding of the two. When you take the 31% up and the 13% down, you still get a rather dramatic increase in laboratory, which is somewhat parallel in total to where the roentgenograms are going. I'm sure if we were to chart prescription drugs, we would see a very similar pattern in terms of exorbitant increases in this all other category.

Next I want to talk about what the outlook is for trend. To do that, I thought I might step back a year and refer to this panel from a year ago. A year ago, I believe in March or April, John Cookson was up here with a survey he had done in early 1990. He had asked 36 carriers some questions, with 12 of those carriers having a billion plus in equivalent premium. So we are not talking about the small players, but rather a pretty good cross section of players and certainly many of the largest players. He asked them to predict where they believed trend was going in 1990 and 1991. Seventy-one percent believed that trends were decreasing, were going to decrease, i.e., that come 1991 their trend factors would be lower. Thirteen percent thought that they would be about the same, and 16%, which would be about six of those 36, thought the trend would increase. So now with the benefit of hindsight, what happened?

As a proxy for what happened, I put together some information with respect to some industry trend surveys in which we play a role and also extrapolated those results looking at some of our own trend factors, going back historically. You see in Chart 5 a trend factor that, back in the early, 1980s, was exorbitantly high at 27%. Then it came crashing down into early 1986, where these figures bottomed out at 11%. Early 1986, by the way, was about one year preceding the crash with respect to our financial results, which at the low point would have come in 1987 of the six-year cycle. Then you see a steady increase of those trends into the late 1980s, and you see by the time that the survey was taken, which would have been in late 1989, the trends would have been in the order of 22%.

So now what's happened since that time? The line is relatively flat. The trends since late 1989 really haven't changed. They are staying in that 21-22% range in a very stubborn pattern. So the minority seem to win this survey; the 13% that said it would be about the same were about right in their call of trend. So the question then becomes, "Where is it going to go from here?" Is it going to follow the traditional six-year underwriting cycle and precede it by a year and come crashing down, such that at the beginning of 1992 we'll be back into the low teens with respect to trend? Or is it going to continue to be the same? Is it going to go up?

ALL OTHER TREND ANALYSIS

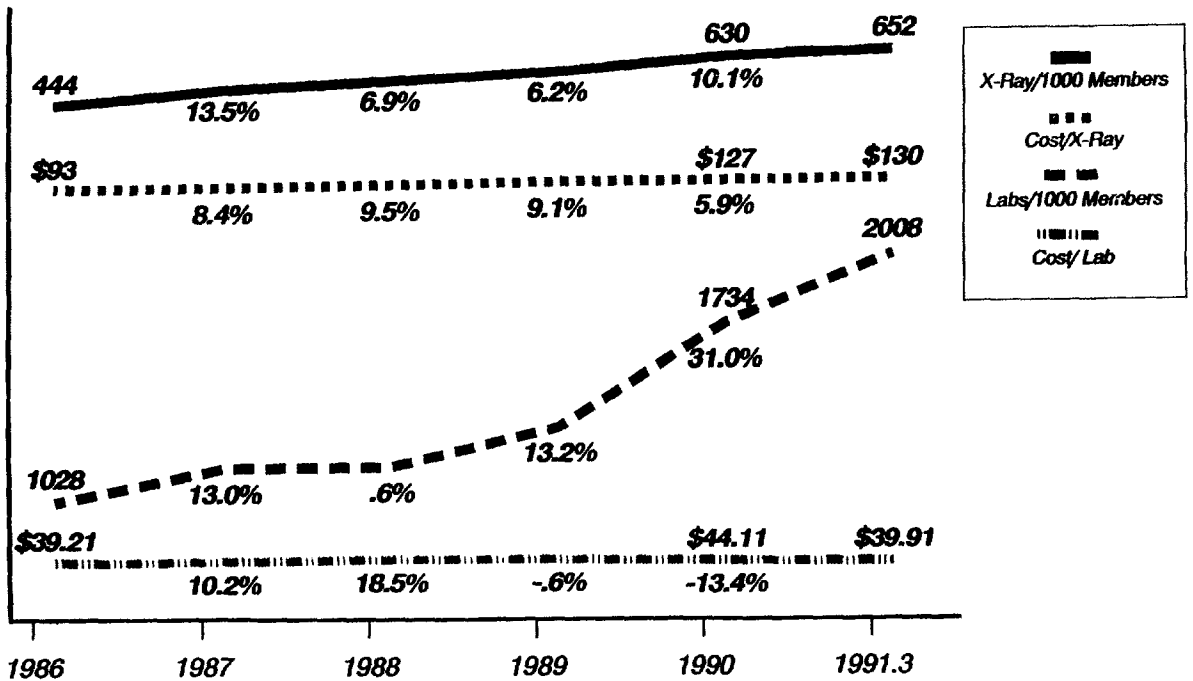
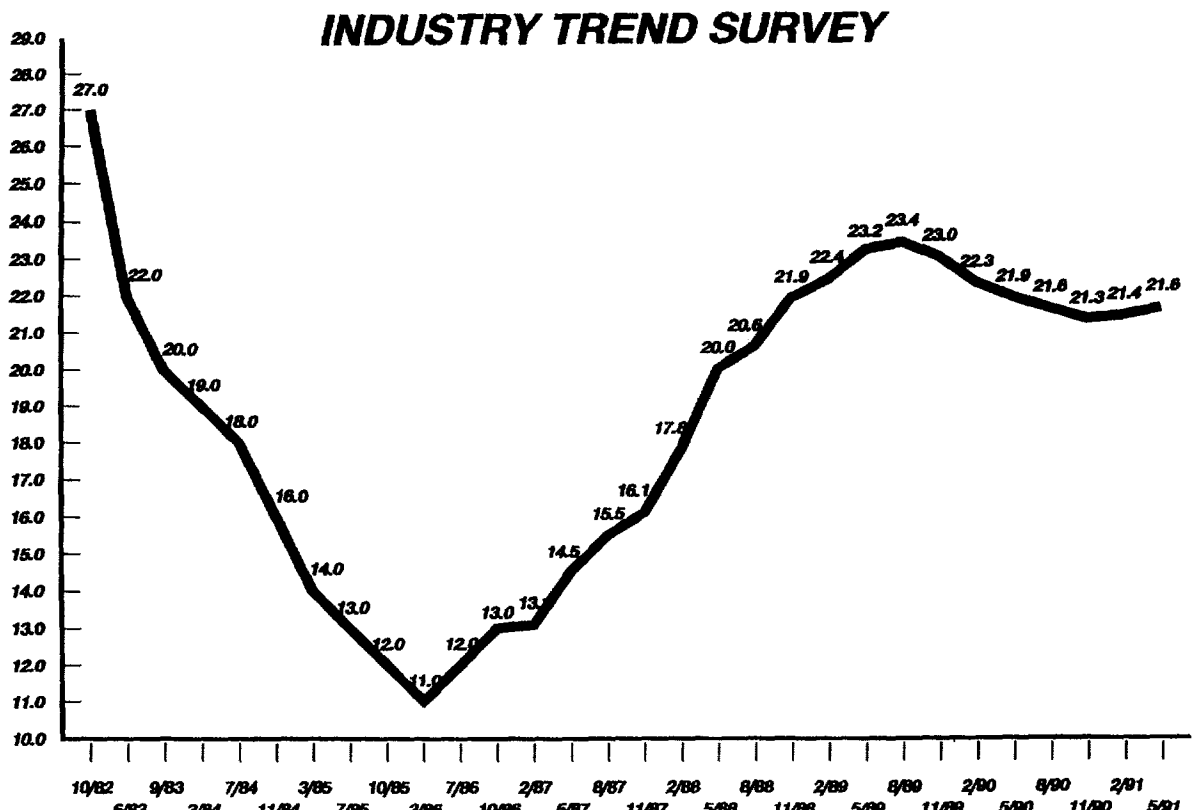


CHART 5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To try and answer those questions and provide some perspective, I wanted to look first at the environment in which the carriers find themselves. I think the carriers find themselves in a position where they are still looking back at the previous financial trough and trying to recoup some of those severe losses. I think they are looking to rebuild surplus. And I think as importantly, they are looking for ways to finance the very exorbitant costs of participating in managed care. There is a tremendous need for capital on the parts of carriers.

Number two, I think that the carriers, like never before, are acutely aware of the six-year underwriting cycle that afflicts our business. I think the carriers are increasingly sensitive to that cycle, and I think the carriers are increasingly looking for ways to avoid the cyclical repeat of those losses.

Number three, I think there's a competitive "me too" attitude in the world. I think that competitor trend information is far more widely available than it ever has been in the past. There are all kinds of surveys conducted by consultants, brokers, and carriers that make it pretty clear where the trend factors that are being used in the industry are. And because of the other factors that surround the financial condition of insurance companies, there tends to be a bunching together of trend factors, and a tendency for carriers not to break away from the pack. If the pack is sitting somewhere, there's no need from the customer's perspective or from the broker perspective for you to be out in right field or left field. You can more or less move along with the pack, particularly if you think that pack is on the conservative side and is allowing you to rebuild your surplus and finance your managed care.

I think there is an issue with respect to the general insurance company environment in which we find ourselves. We've got an environment where the property & casualty business is rather soft. We have an environment where many carriers are facing asset problems, particularly in their annuity lines of business or any asset accumulation line of business. The individual business isn't any great shakes either. So I think that the last thing that senior management wants is for the health business to go into the tank at the precise same time as many of their other lines of business are also in the tank. I think that what this adds up to in my mind is that insurance carriers are not in the mood and not in the financial shape to become aggressive with respect to their trend factors. I think you're going to see conservatism from this point of view.

I want to look next at the health care market, health care factors. I'm not in any way trying to be exhaustive with respect to all the factors in the health care world, but rather just to try to capture some of the straws in the wind that I would observe.

The first is a quote out of *The Wall Street Journal* on May 8, 1991, where it was said that, "By the year 2000, the number of doctors per capita is expected to have jumped 22% from 1986 levels." Now that 22% jump over that period is about a compound rate of 1.5%. If you believe as I do that physicians are adept at creating demand, including the increased demand by the aging population, then that 1-1.5% is going to be something that is going to need to be a part of our trend factors as we go forward.

Another factor in the health care world is technology. As a small indicator of technological changes, we have moved over the past years from roentgenograms

costing us $100 to computed tomographic (CT) scans that cost us $300-400, to magnetic resonance imaging (MRIs) scans that are costing us $700-800, to the newest gizmo, positron emission tomography (PET), which is supposed to be wonderful with respect to imaging and color imaging and diagnostics, but is also exorbitant with respect to price at more than $1,200. People say you can't do it for $1,200; it needs to be much, much higher. Darrell referred to some of the medical technology changes occurring that suggest that medical technology is not going to go away and hide and stop advancing. Nor do I think as a society we want it to. It is going to be a factor that continues to be with us.

Another straw in the wind is some introduced legislation that is attempting to overturn the Pilot Life versus Dedeaux decision on the issue of ERISA pre-emption. If that Supreme Court decision were overturned, carriers and payers would be exposed yet again to the ravages of punitive damages and bad faith suits which, inevitably in the end, not only go into attorneys' pockets and claimants' pockets but also end up increasing the overall cost of medical care.

Another big factor is government intrusion, which is not going away. Mandated benefits continue unabated. They continue to increase, both in terms of numbers and in terms of cost in our business. The one bright light is that there is increasing recognition at the state level that mandated benefits are increasing the cost of care. There is some glimmer, at least with respect to the small case market, that states are allowing experiments where mandated benefits do not need to be included to allow medical care insurance to be provided at lower cost. This would encourage more employers to offer insurance to their employees.

States are coming out with limits on risk selection which again are very good for covering the uninsured or the uninsurable. However, they are not particularly good in terms of keeping down health care trends. There is the issue of broader coverage as we seem to be moving toward an environment where the government will potentially mandate the employers to provide medical care to their employees. Again, we have a situation that is very positive with respect to the uninsured, but with respect to health care trends, I believe the situation will result in an increase in health care demand and therefore an increase in overall health care costs.

There are many facets to government intrusion, but the last issue I want to discuss is the subject of restrictive payments. Darrell referenced RBRVS, which is going to result in some cost shifting. The Medicare program and the Medicaid program are not becoming any more generous with respect to their reimbursement to providers. As a result, I think we can look forward to continuing rounds of cost shifting from the government sector.

The last straw in the wind is a quote from the *Journal of Commerce*: "Health management organizations and their contractors face a rising tide of legal liability in light of recent court rulings and patient injury cases." In terms of the facet of our business that seems to be working, that seems to be controlling costs, here we have an attack on managed care. An attack with respect to the need to be far more careful, in terms of how managed care programs are implemented, or otherwise face an incredible legal liability.

So those straws in the wind suggest to me that there is going to be a continuation of high health care costs into the future. The question then becomes, "Is there light at the end of the tunnel?" To try and answer that question, I go back to some surveys. Twenty-four carriers participated in a trend survey using results as of May 1991. The average trend for indemnity plans with $100 deductible that those 24 carriers reported was a 21.6% trend factor.

Those same carriers were asked to respond to what their PPO trends and their Exclusive Provider Organization (EPO) trends were. Seventeen carriers responded to the PPO question, and 11 of those 17 said their trend was the same as indemnity. Six of them said that on average, their trend was 2.5% less for PPO business than for indemnity business. That is coming about for reasons having to do with their belief as to how they are going to be able to renegotiate their contracts with providers, their belief as to how they are going to be able to deal with cost shifting in terms of the renewal of the contracts, and their belief in terms of how they have selected their provider network, that in fact they have preferred providers. The carriers believe that those preferred providers are going to play a role with respect to controlling the changes in the utilization. Now that 2.5% is a bit misleading because it would tend to apply to the overall PPO plan. Since the PPO plan is a plan that allows the claimant to make a decision at the point of service, what you have in a PPO plan is a whole blend of PPO care and indemnity care. When you are looking at a decrease of 2.5% in trend, if you were to try and isolate that on just the PPO providers and the PPO care, I think you would find that the bet that these carriers are making on the PPO by itself is much larger.

That issue is borne out when you look at the EPO. We had 12 carriers responding to what their EPO trends were. Six of them said that their EPO trend was the same as their indemnity. The other six said their trend was going to be 5.5% less. I believe the interpretation of that should be that the 5.5% is on the EPO segment of the managed care program. Those carriers are looking at the kind of providers they are doing business with, their ability to contract, their ability to control the cost shifting, and betting that they're going to be able to control the utilization.

So to the question, "Is there light at the end of the tunnel?" I think the answer is yes. I think it very much lies on our continuing to press for managed care, to evolve managed care, and to make it stronger. And I think through managed care is how we are going to move this trend factor down into more reasonable territory.

MR. DAVID L. TERRY, JR.: In the past, most trend discussions have focused around traditional insurance products, i.e., indemnity products. Most indemnity products have reimbursed providers using providers' normal charges that have been coined in the managed care industry as "fee for service" charges. Sometimes those charges have been adjusted based on reasonable and customary limits. In the HMO industry and in the managed care industry, there has been very little fee for service. Predominantly they have all contractual arrangements, except for minor ancillary services. My portion of this program is to discuss what effects HMOs have on trends? Is that trend different from indemnity? If yes, how and why?

Following is an overview of what I will be presenting. First of all, I think Marty did a very good job of explaining the trend components. I will be discussing some of the major HMO trend components associated with that product line. Next I thought I would discuss HMO rating versus indemnity rating to see if there are any differences in methodology, because if there are, it would be important to recognize them in determining the trend. I would also like to look specifically at how HMO contractual arrangements affect trend. Next, we will get into the problems in measuring trend. Is there any effect from selection and underwriting that HMOs do? Another question: do HMOs even underwrite? Finally, I will summarize conclusions with HMO historical trend experience from my point of view, and actually try to give you an idea of where I think it's going in the future.

The five major trend components for an HMO or even in a managed care environment are the same in the HMO industry as they are in the indemnity industry; inflation, utilization, leverage, technology, and cost shifting. I imagine that doesn't come as a surprise to anyone.

In terms of pricing, though, I think there are some fundamental differences in the approaches that the HMO industry has taken to pricing versus indemnity. Having been involved in the indemnity side for awhile, the predominant methodology, and it could be changing since I left, was to develop a national rate book. Even outside consultants seem to have national rate books in which they develop utilization and unit cost factors and then adjust them for benefits, demographics, industry, and area factors.

In the HMO environment, however, the HMOs really focus heavily and on a very frequent basis into looking at unit cost and utilization frequency. They do this at a very detailed level. It is usually by type of service. Type of service is usually surrounding the type of contracts they have. To give you an example, HMOs will get very detailed about the specific inpatient bed types: medical, surgical, intensive care unit (ICU), pediatrics, and other types of service. They will be very detail oriented in coming up with unit cost values and utilization for each one of those types of service. This way they will have a historical trend line that will help them in further developing their provider-negotiated arrangements.

Depending on the type and maturity of the HMO, most HMOs go through this on an annual basis. Most large insurance companies might look only at those detailed level cost patterns in their national rate book on a two- to five-year cycle. From what Marty was showing, it appears that they're doing it much more frequently than that. One of the major distinctions, though, between HMOs and indemnity is not so much in the pricing. Again, it's the same basic underlying philosophy in terms of how HMOs price versus indemnity. The only difference is the HMOs take a much more detailed level look at it on a much more frequent basis.

I believe where the difference really comes into play is when the HMO gets into provider risk sharing, which is where most of the trend analysis occurs in an HMO environment. These types of services – and they can range anywhere from 20-line items maybe up to as many as 60-line items, depending on the level of contracting that's going on – will be used to develop provider budgets on a monthly basis in some of our larger plans or quarterly on some of our smaller plans. We continually

show at a provider level the actual experience (utilization and unit cost) of the plan. Those are rolled up into broader categories that become very important to the plan. Predominantly, the providers are being reimbursed based on that, not only through the unit costs, but also through the risk sharing in that if actual costs produce a surplus opposite the budgets, providers will share in that surplus. On the other side, if there are deficits, the plan will use withholds to offset deficits.

Another key difference is the employees of the health plan themselves, the people who are doing provider negotiations and people like myself who are involved in setting rates. Our direct compensation is based on how well we predict those unit cost values and utilization practice patterns. So with such an emphasis on provider reimbursement and cost sharing and our own salaries being directly tied to that, we take trend very seriously and make sure that we are looking at it on a very frequent basis. We want to make sure we are estimating unit cost and utilization cost factors to the closest possible extent.

Basically, how do HMOs affect trend? As we have just seen, the trend components between the various products are not that much different, and the methodologies for pricing are not that much different. So then what distinguishes HMO trend from indemnity trend?

Well, I've listed the five major categories: inflation, utilization, leveraging, technology, and cost shifting. The major effect on each of those categories is how effective an HMO is at doing provider contracting to get the lowest possible unit cost, and their ability to do effective utilization management. Inflation is controlled almost exclusively through provider contracting. You are not going to be able to eliminate inflation, but HMOs, and this would also be true for PPOs, are getting a very good handle on what the prospective ideas are as to where you are going to be in the following year's contract. Right now I can go to almost any of our provider negotiators and talk to them about what is going to happen in 1992. They could tell me probably within 90% accuracy what our increases are going to be in our unit cost by July of this year.

Another area in which HMOs have been very aggressive during the last several years is multiyear rate guarantees. I have been surprised at the willingness of the providers to jump into this, but it is becoming more evident all the time that providers are going into two- and sometimes even three-year guarantees. Usually they are through some type of formula based off of the consumer price index.

As for utilization, I believe I have already touched on that. Utilization is very important for the HMOs, if they are going to be a player in the industry. If they are not controlling utilization well, then they are not going to be around for very long.

During the last three to four years, HMOs were experiencing higher than expected cost increases. One of the ways the HMOs have responded to this is to increase the level of deductibles, co-pays, co-insurance, and out-of-pocket limits to the member. In so doing, leveraging will become more of an effect as HMOs move into employee cost sharing.

Another area that HMOs are moving into is the point of service product. This is more like a PPO product. As Marty mentioned, the HMOs will have a very strong handle on the in-network unit cost and utilization. However, they have no historical database to analyze out-of-service expenses. Since most HMOs are only local, they do not have a national database from which to derive that information. The other point of difficulty is that they are not going to get a lot of experience in that area. It is going to be hard for them to really get a handle on what their out-of-service trend is going to be for the point-of-service product unless they have the ability to tap into other resources.

I do not think HMOs have any major leg up on the indemnity side in terms of technology other than for major new items like the PET radiology services. HMOs reimburse most of these services based on negotiated rates. If providers believe those negotiated rates are going to hinder their ability to make a profit, before they implement or even purchase those services they will try to renegotiate their contracts. So one of the advantages through having contractual arrangements is you will usually find out about large technology issues before they actually hit your financial results.

As for cost shifting, that is one of the major benefits behind being in a contractual arrangement. It is very difficult for the providers to shift additional cost into your contracts.

I made it sound fairly simple, and I believe most of the time when you think of trend it is a fairly simple concept. But as Marty mentioned, understanding trend is one thing but being able to calculate it and use it is another. Even though the HMOs have a very strong understanding of what their unit costs and utilization are, they still have the problems with many issues, including the following: employee turnover, multiple products offerings, changing benefits, changing products, changes in medical care, modifications to the delivery system, changes in government programs, previous year losses and gain, and underwriting and selection.

The first two are due to the open enrollment environment. HMOs predominantly go after the larger employers where they are competing against membership with indemnity carriers and with other HMOs. How the employer structures its contribution strategy and how many other HMOs are in the market from year to year dramatically affect the demographics of the given HMO. So if an HMO is not looking at how its demographics are changing from year to year, it could get a distorted picture of what the true underlying trend is.

I believe I've already talked about changing benefits. HMOs are going through a dramatic change in their benefit offerings. Without taking that into account, there will be distortions in their results. HMOs are moving into alternative products, such as point of service. Again, without the ability for an HMO to separate its experience, it could pollute the database in which it is making calculations.

I believe that modifications to the delivery system affect new HMOs more than mature HMOs. For those of you who have not been in the industry, the typical approach for a new HMO coming into a marketplace is to select only a handful of physicians and a handful of hospitals, and then go out and bring in as much membership as possible. You direct these members to those providers so that you have a

great deal of clout with those providers. As your membership starts to grow, you add providers continually to meet the demand.

As small HMOs and new HMOs come into a marketplace, it is going to be important for them to recognize the fact that over a period of time they are going to be achieving new unit cost and utilization practice patterns as they add new providers. This is quite different than in the PPO environment where you usually go out and bring in the whole network and then bring in the membership trying to get enough membership to go along with the goals you have set with your providers.

Predominantly HMOs have been very active in government programs. Therefore, it is extremely important for them to make sure that they understand the effects of what the government is looking to in terms of future changes. Historically it shows up in the data, but in terms of the effect it is going to have in the future, HMOs usually have a very large proportion of their membership in government programs. So they have to be well aware of the future changes in those programs.

We have been talking about measuring trend based on underlying medical costs. Most people, especially actuaries who have been involved in the group health side, think of it along that line. But when you get into the HMO industry, if the HMOs have not had a solid group health actuary helping them, you will find that most HMO people talk about trend as the change in revenue or the change in premium from one year to the next. Unfortunately, that is not a good indicator of what is really going on in the plan underneath the skin. So if you are talking to people about HMO trend, be sure you ask them the question, "Are they talking about revenue or are they talking about medical claims?" You will find that the reason that HMO-reported trends in the past have been low is because they were making a lot of money. Those gains were being offset in terms of revenue projections from year to year. The publicized losses and the high trend over the last couple of years have been on the opposite side, where they have been making up for deficits.

As I mentioned in my opening remarks, some of you may have asked the question, "Do HMOs ever underwrite?" And the answer is, "Sometimes." In the beginning, HMOs were purely community rated and had no need for underwriting. As a matter of fact, the initial federal laws even prohibited any form of underwriting. Since then, the rules have been relaxed, and HMOs have moved into certain forms of underwriting, but it is still very unsophisticated. In your traditional HMO products, the major underwriting is focused around contribution strategies to avoid antiselection. As long as they are fairly consistent in applying those underwriting standards, selection tends to stay very constant. Therefore, for most HMOs, it is not necessary for them to look at their experience by duration of contract with the employer to look at trend. It has a tendency to stay fairly stable from year to year. However, that is not going to remain true for HMOs in the future.

Most large employer groups have anywhere from 2-5 HMOs that they offer to their employees. As larger employer groups become more sophisticated, they will be looking to cut back on the number of offerings. With that, the HMOs are saying, "Gee, we're going to have to find another marketing area in terms of bringing in people because we are coming to a saturation point in many larger companies." So a lot of HMOs are moving into what I call small group. They are moving into

employers that have 2-10 lives. Some HMOs extend their small group definition up to 25 lives, and you'll find a few that extend it up to 50. These HMOs will actually go in and request an individual medical questionnaire on each member, dependent, and employee. This has a major impact on the underlying medical claims experience. In the very first year, for a couple of our plans that have been providing these types of services, we are seeing up to a 20-30% decrease in first-year medical costs compared with the normal traditional HMO offerings.

The most interesting piece is that this selection wears off extremely fast. We used to think that selection had a tendency to wear off in three years, but we are finding that it wears off in approximately 18-24 months. Therefore, it is going to be extremely important for the HMOs to be able to look at duration. I do not know of any HMO that I have been associated with that is currently doing that. As we move into these products, it is going to be important to make that adjustment.

In conclusion, I would like to point out that we have looked at the trend components that are similar in nature to indemnity, and we have looked at the rating methodologies that are not that dramatically different either. The key points that HMOs differ from in indemnity is in their ability to apply contractual arrangements to the unit cost values, and their ability to effectively manage the utilization. They do that by working through the provider community and building those strong ties.

I have looked at our specific historical experience over the last four years. As you see in Table 1, I have included a range and an average trend. The average is more in line with what you see publicized in the periodicals. However, I think it's really important to point out that the reason I didn't bring a lot of graphs like Marty brought is we have 30 HMOs. When I started putting numbers together, one HMO had trend lines like Marty's, one HMO had trend lines going way up, and another HMO had trend lines that were actually decreasing. I sat and looked at those numbers for a long time and said, "How do I bring something and show you what the results are?" I finally concluded that it was going to be very difficult to do, and let me go into the reasons why.

TABLE 1
HMO Experience

Year	Range	Average
1991	8 - 17%	13%
1990	12 - 22	17
1989	10 - 20	15
1988	6 - 15	10
1987	3 - 10	6

I mentioned earlier that mature plans are not affected by a lot of different criteria because they are getting the providers to work with them. They are getting strong contracts. They are getting providers to work with them on utilization management. You will find that HMOs that are able to work in those areas have a tendency to be on the low range of the spectrum. New HMOs and plans that are struggling have a tendency to not be working well with their provider community, not getting good

negotiated rates, and the utilization management is not working effectively. They will tend to be on the high side, which parallels more with the indemnity side.

The problem here is that in any one given market, you will have anywhere from 5-15 HMOs in the market, and any one given HMO can be on the low side of this range or on the high side, depending on how effective they are in terms of being able to negotiate and produce effective utilization management. In terms of what is really going on in the HMO, it is an HMO by HMO decision, and it is very difficult to come up with the norm that says all HMOs operate this way, like you do in indemnity, where it's done on a fee-for-service basis.

For 1991, I have given you my best guess as to what the range is going to be for HMOs. For 1992, I agree with all the points that Marty brought up, and I believe that there is really no incentive in the HMO industry to lower that trend. I also believe that it will stay at about the same level. As for the future beyond that, I think we will just have to wait and see what happens. Right now if we were going to be looking that far ahead, we would have to pull out our crystal balls.

MR. TERRY D. KELLOGG: The previous panelists did an excellent job of describing all of the things that we tend to observe in our actual claims experience and mistakenly call benefit plan cost trend. Many times you come to these sessions and a lot of data magically appears from the air. I want to explain the source of the data that I am going to present. I think most carrier practicing actuaries certainly know that medical data do not magically appear from the air. We have actuarial students manufacture it for us.

The data I am going to show is Blue Cross/Blue Shield of Alabama data. We are a very large plan with our business exclusively located in one geographic area. I am going to look at the period from calendar 1988 through calendar 1990, and we are going to use four months of run-out so completion error presumably should have been minimized. I have chosen three categories of groups: self-funded large groups, experience-rated underwritten accounts that are a little larger, and then some book-rated underwritten accounts. They are all group accounts, but in no case group experience under 25 lives.

The good news is I have tried to accommodate most of those caveats about the things that debunk our trend analysis. That is, all of these groups have had relatively low turnover in terms of their covered lives. There have not been any significant changes in benefits. The demographics of the state of Alabama are not particularly dynamic. They are traditional benefit levels, probably very rich compared with what many of you are currently pricing. That would be one difference. It does represent about 360,000 covered employees and just a little less than a million covered lives.

Over this period (36 months), annual rates of change averaged have shown the traditional good news and bad news story of trends. We made some very serious provider incentive type of interventions to attack inpatient days per thousand and inpatient admission rates. Alabama is the home of Senator Lister Hill. There are slightly more hospitals in Alabama than there are Baptist churches.

I have permission to talk in nebulous terms about a survey that is done of all of the 53 Blue Cross/Blue Shield plans every six months. A couple of things that I gleaned out of that latest survey is that outpatient facility utilization trend is at its lowest level in 3.5 years, but that overall combined hospital inpatient and outpatient trend is at its highest level in 4.5 years – that same old phenomenon of if we squeeze the balloon in one place it pops out at another.

Chart 6 shows how the dollars of health care paid by the benefit plan has changed from two years ago until now. Hospitals in Alabama now have declined to a 44% share. We get significant inpatient hospital discounts, so that 44% hopefully is a smaller portion than some of those benefit plans with which many of you work. Physicians have garnered 40% of the pie at this point. Prescription drugs have risen to 12%. And that "other" category of things has risen to 4%. This "other" category includes chiropractors, home health agencies, suppliers, psychologists, and who knows what other essential medical services. Those two smallest pieces, the "other" and the prescription drugs, are growing at the fastest rate.

In strict mathematical terms then, how did those providers competing for the benefit plan dollar fare over that 36-month period? Hospitals lost 9% and that loss was balanced out by physicians gaining almost 5% and prescription drugs gaining almost 4%. The other category increased 1%.

Going into cost shifting, if you will indulge me, I have to describe briefly how we reimburse hospitals at Blue Cross/Blue Shield of Alabama. Not because I think that will be relevant to your business, but because I think it will be critical to your understanding of how I have tried to measure and quantify charge shifting. I do prefer the term "charge shifting" because it is the charges that get shifted around.

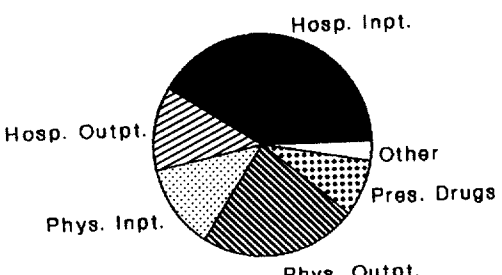
If any of you are familiar with the way Medicare used to reimburse prior to diagnostic related groups (DRGs), I think you will be very much in tune to what these data contain. We audit each participating hospital annually. We take their allowed inpatient costs based on our audit guides. We then divide it by the total inpatient days and arrive at the Blue Cross inpatient cost per day. That is our reimbursement basis. We do add some margin factors to allow the hospital's return on their investment.

I have tried to capture the increase in hospital cost of services per day. Again, the implications of those data are not the unique reimbursement scheme of Blue Cross/Blue Shield of Alabama, but to get us on track about how we could use these data to quantify charge shifting. I would tell you that all hospitals in Alabama are participating hospitals. To that extent, out of area usage is included in my numbers.

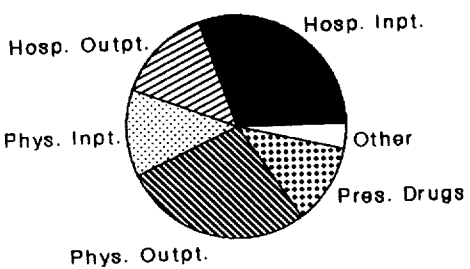
Charts 7 through 9 show the quarterly charges trend as well as the quarterly cost trend. I charted cost plus, demo-rated, and merit-rated business separately, mostly just to validate that they were exhibiting similar trend characteristics. Then I eliminated that distinction and averaged the three together.

While utilization has been going down 5% or 6% per year, the charges trend for inpatient services has been in the range of about 6-17% over the last 12 months and leaning toward the higher side of that range in the most recent experience.

CHANGE IN BENEFIT PLAN COST



2 YEARS AGO



NOW

CHART 7

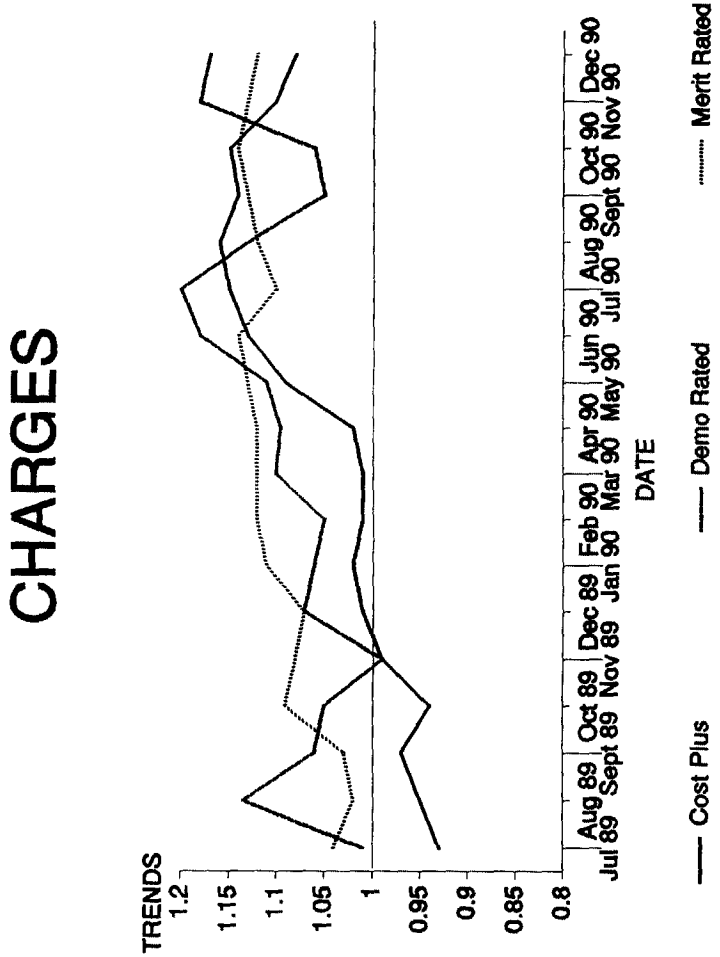
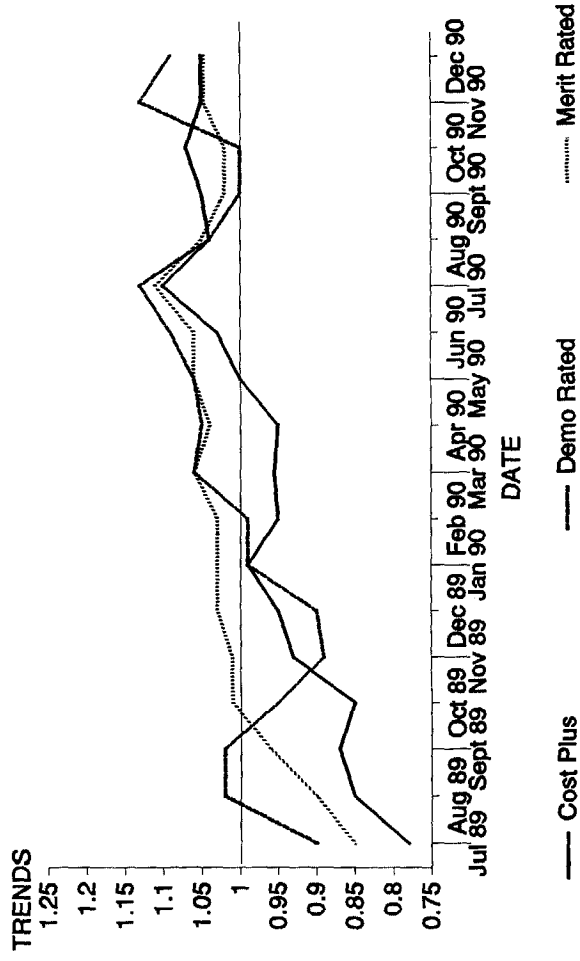

CHARGES
TRENDS
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8
Jul 89
Aug 89
Sept 89
Oct 89
Nov 89
Dec 89
Jan 90
Feb 90
Mar 90
Apr 90
May 90
Jun 90
Jul 90
Aug 90
Sept 90
Oct 90
Nov 90
Dec 90
DATE
Cost Plus
Demo Rated
Merit Rated

CHART 8


COSTS
TRENDS
1.25
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8
0.75
Jul 89
Aug 89
Sept 89
Oct 89
Nov 89
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Mar 90
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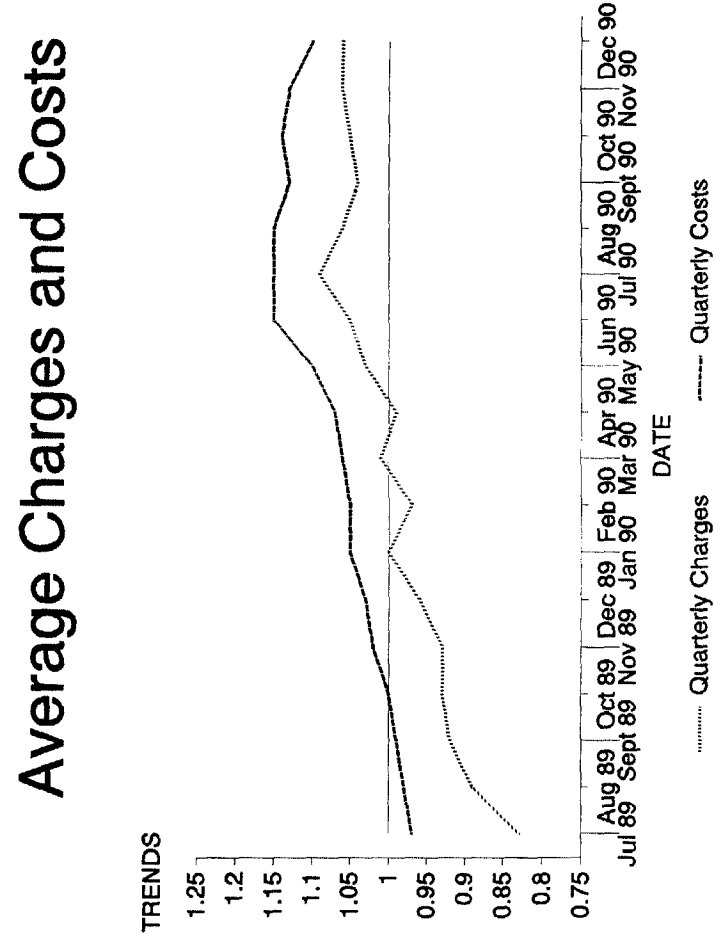
Sept 90
Oct 90
Nov 90
Dec 90
DATE
Cost Plus
Demo Rated
Merit Rated

CHART 9


Average Charges and Costs
TRENDS
1.25
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8
0.75
Jul 89
Aug 89
Sept 89
Oct 89
Nov 89
Dec 89
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Feb 90
Mar 90
Apr 90
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Jul 90
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Oct 90
Nov 90
Dec 90
DATE
Quarterly Charges
Quarterly Costs

The counter suit to that is the cost trend. Actually what we reimburse is tied to the facility's cost of providing an inpatient day of care. I would make a point about cost per day. In our allowed cost, we do not include items that we do not believe are germane or directly related to inpatient care. So the heliport, the advertising campaign, the sandwich shop, and in many cases exorbitant executive salaries and consulting fees are eliminated in our audit process. We are trying to get to the cost of care.

What is interesting is that the segment analysis certainly validates that we are seeing generally the same kind of trends throughout the business. The direction is about the same. The only thing that is different is the magnitude and the range on our cost transfer. Inpatient cost has been about zero to positive 10%, again leaning toward the higher side of that range in the most recent experience. Over this time, the cost per day, that number by itself without the utilization included, has been about 9.5%.

Simply putting these things together, I got a result that I did not expect. While we talked about charge shifting throughout the 1980s, and we talked about it more when DRG reimbursement came along, I suspected that charge shifting accelerated very recently; that it really had gotten more severe in the last two or three years. It took the providers time to begin to react to government reimbursement and try to get their margins from private payers.

What I concluded from this is that charge shifting adds about 2.5-4% points to trend for inpatient costs. That 2.5-4% range has been relatively constant, at least over the last couple of years. I would also submit that if you are paying discounted charges and those discounts are calculated as a percentage of charges, then you are still in the hands of the profit margin needs of the provider, and you probably have similar trends even if the magnitude of your pure premiums has been reduced by the discount.

Although physicians have access to other sources of revenue and other places of treatment to purvey their goods and services, looking at the inpatient side alone, I constructed some numbers from the same data. While surgical admissions per thousand have shown a 6% increase, inpatient surgical physician services per thousand have shown a 16.2% increase, and the cost to employees has increased 10.4%. The surgeons have billed more services and they have billed a few lower-cost services. They have unbundled their charges and have unbundled using maybe a little lower dollar value current procedural terminology (CPT) code.

On the medical side, medical inpatient admissions have shown a slight decrease (−0.1%), but medical inpatient physician services per thousand have had a 5.2% increase. On the thinker side as opposed to the cutters, the services that have been added (the coding of structures) have actually served to create greater than a 5.2% increase in cost. So they have added more expensive procedures.

The most outrageous abuse of the system is exhibited in maternity where admissions are down 8.6%, but inpatient maternity physician services per thousand have shown a huge 34% increase. In their search for revenue, they have had to unbundle and use some relatively low dollar value codes because the cost per employee has risen only by 9%.

MR. ROBERT E. CIRKIEL: I am with Noble Lowndes in Philadelphia. The question has to do with HMO antiselection. There seems to be a theory or philosophy that when HMOs go out to solicit business, they go into employer groups and aggressively select people who they believe are the healthier group -- the younger, single, lower utilization people. So that instead of there being antiselection, it's just actually the opposite. My question is, Do you feel there's a degree of truth to that? Is that just a fallacy?

MR. TERRY: There's some truth to it, and I think I can go through quite a few of our HMOs and prove either side of it to be true. In terms of trend, I didn't address that in the presentation because what happens is, whether there is antiselection or whether you are getting the favorable people coming in, it has a tendency to stay very consistent in the HMO. It doesn't flip flop from year to year. So in terms of a trend, it has very little impact. But as HMOs mature, I would like to put my two bits into that argument in that HMOs in the beginning when they're small, have very small panels. Therefore the type of people that are in their panels usually select the more healthy people. As HMOs grow and get big, they bring in all the specialists and they have a very wide distribution of panelist. The opposite has a tendency to happen as an HMO matures in that we now have all the specialists, we have a very good reputation, and we usually have a tendency, because of the first dollar coverage, to pick up the people who are sicker. So it could happen either way. It depends on where the HMO is in the cycle.

MR. KNAPP: I have a question for Marty. You presented basically some national numbers. How do you then go about changing that to the specific state-wide, region, or geographic area?

MR. ROSENBAUM: Even though we have the capacity to look at trends by state, we have not done that, primarily because even though the book is a half a billion, by state it would tend to lose credibility tremendously. We don't differentiate our trend factors by state. In setting our book rates, however, we do have systems that give us the information by zip code. So we are able to look at the evolving actual experience against expected experience. However, in projecting that forward, we use just the national trend as opposed to a state trend. So as the state trends evolve, we will see that fall into the actual expected results as opposed to projecting differential trends.

MR. HARVEY SOBEL: I have a question specifically for Terry on the increase in maternity services. Could that have something to do with unbundling? Could that simply be the fact that physicians are now billing each trimester rather than globally, or do you tie that all back if there is a separate billing by trimester?

MR. KELLOGG: I don't think I can address that because I didn't think to look at that. I can tell you what I did see is an extreme increase in the number of consult visits that are taking place in the hospital. A lot of neurologists and prenatal specialists are being called in to examine babies. I think those really accelerated in the last couple of years.

MR. SOBEL: I've seen that phenomenon elsewhere. For example, a few years back, New York State passed a law that basically required unbundling. The physicians

could no longer wait until the end for one global fee on the delivery. They had to bill each trimester. You could see that the services went up and the unit cost dropped. You still got some sort of high trend on the cost per member, but it was nowhere near as high as you might think by looking at what was going on with the services. Next, I had a general question for the entire panel. Has anyone detected any sort of effects of the recession on the trend? What I'm thinking about is the possibility that you might see your enrollment drop but yet because of COBRA you're still seeing claimants stay on as a COBRA beneficiary.

MR. KELLOGG: I have been looking at that issue because we have relatively large number of blue collar worker, manufacturing sector in our group. I have not detected what I feared, which was a big increase in utilization in the fall of last year.

MR. ROSENBAUM: We haven't observed a huge increase in that regard. What we have observed, though, is an acceleration of a number of cases going bankrupt on our book of business, and adopting conversion policies. Our conversion experience has been going bad in the last 6-12 months.

MR. TERRY: From an HMO point of view, I have hardly seen any effect at all in the HMO side.

FROM THE FLOOR: Dave, you had mentioned that HMOs are getting into the individual medical underwriting on small business under 25 employees. I was just wondering what do they do? Is it just initially up front? How does it apply at open enrollment or with regards to new employees coming on?

MR. TERRY: In our plan, we have only one or two plans that are doing individual medical underwriting. I do know that there are other HMOs out there that I have talked to who have jumped into it more. They are actually doing the screening on a yearly basis to control the cost and keep a handle on them. As for us, we are doing it just in the first year.