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Session 17PD Medical Trends

Track: Health

Moderator: Lisa F. Tourville

Panelists: John M. Bertko
Gordon Russel Hugh
Lisa F. Tourville

Summary: Recent health-care cost trends have exhibited significant variability by insurer, geographic area and type of benefit. Employers and insurers are increasing co-pays and reimposing managed care provisions. How have these factors affected the measured trends? What effect is the economy having on emerging trends? What are the panel's expectations concerning the direction of future trends? What are the trend results by major benefit component?

MS. LISA F. TOURVILLE: I'm Lisa Tourville. I'm moderating. I'm also one of the speakers. I'll give you a little information on each of the speakers. Russel Hugh will be presenting first. He's covering the effects of the economy on emerging health-care trends. Russel is with General Re LifeHealth Corporation, Stamford, Conn. He's a second vice president. He manages the first-dollar and portfolio access line of business for the group division. Prior to joining Gen Re in March 2001, Russel worked in the health consulting field for 11 years with insurance, reinsurance and health and welfare clients.

I'll be going second. I'm Lisa Tourville. I'm going to be speaking on trend results at the health cost category level. I'm vice president at Ingenix, and there was a slight change there fairly recently. I went on vacation in March to find out that the company merged with Reden & Anders, so now I'm with Reden & Anders, which is an Ingenix company. I assist clients in gaining a better understanding of historical

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Note: The chart(s) referred to in the text can be found at the end of the manuscript.

trend drivers, developing techniques to mitigate unfavorable impacts and forecasting medical expense trends.

John Bertko will be the third speaker. He's covering the effects on trend, the consumer-driven health plans (CDHPs) and other new ideas. John's a vice president and chief actuary at Humana. He works with consumer-directed health products and the Medicare Modernization Act (MMA). Prior to joining Humana, John was with the consulting industry for 20 years. With that, I'll turn it over to Russel.

MR. GORDON RUSSEL HUGH: A recent study revealed that 75 percent of economists forecasted nine of the past five recessions. That's pretty good. What is more dangerous than a professional economist is an amateur economist, a role I'm going to be playing today. After agreeing to participate and give this presentation on economic effects, I had some grand thoughts about graphing economic variables against health-care spending and looking at trends over time. I thought that was a cool, unique idea. During the course of my research I discovered that John Cookson and Peter Reilly came up with my cool, original ideas 10 years ago. I have to give them credit for a nice report that was more scientifically rigorous than what I'm going to be talking about today. A few of the slides in the data will have affirmed some of their conclusions.

The first part of the presentation is going to focus on historical data comparisons by looking at some economic variables such as interest rates, stock market, unemployment rates and changes in these variables over time against changes in national health expenditures per capita and I'll try to draw some inferences from the data.

The second part of the presentation's going to go over expectations of future trends, notably the Centers for Medicare & Medicaid Services' (CMS) future projections. One factor to mention in particular is aging of the population. I'll talk about other factors that I think will have an impact.

Finally I'll have sources of information, including excellent government Web sites, to get information about health account statistics, production and income.

I'll be using some abbreviations and assumptions. I'll refer to national health expenditures per capita as NHE. The graphs are going to show changes in NHE per capita. Regarding the Consumer Price Index, I'm using the all-urban consumers, which is not seasonally adjusted, and 82 to 84 is the base. All items will be referred to as CPI-All. The medical care component will be CPI-MC all using arithmetic average numbers over the 12 monthly numbers. One slide will have Medicare, private and Federal Employees Health Benefits Program (FEHBP) expenditures I'll refer to as MPF, for lack of a better acronym. Those benefits are shown on a per-enrollee basis. Disposable personal income will be on a real 2000 year dollar-per-capita basis, and out-of-pocket expenses as a percent of NHE will be OOP as a percent.

Chart 1 shows changes in NHE versus changes in the medical components of the CPI and changes in spending on benefits. Let's say that the differences between what MPF is looking at are benefit values as opposed to investment expenditures on capital improvements. Where the magnitudes year after year are different, the magnitude of the changes in NHE doesn't necessarily have predictive abilities with the CPI. The trend pattern here is that the trends move up and down together over time. Similarly, with the CPI, to a lesser degree, the MC component of the CPI is about 6 percent. Other factors come in to play (Chart 2).

With general core inflation you still see some movement in the changes together, either up or down, though the magnitude can be different, as the data suggest. A little bit of a change from the historical pattern occurs in '03, where the change in NHE from '02 to '03 decreased, and the CPI increased. This could be due to several factors. I think the likely one is increases in housing costs and transportation costs, including fuel. That creates a little bit of an anomaly from the historic pattern.

Chart 3 shows NHE versus interest rates and it moves much in the same way as the CPI changes. Larger increases in the NHE correlate with larger increases in the interest rates. Magnitudes are off, but, again, in a long-term trend pattern they tend to move together. For interest rates, a one-year Treasury note represents a short-term measure, and AAA corporate bonds represent the longer term. It makes sense to me that interest rates are moving with the CPIs. Bond market values are going to tend to represent expectations of future inflation.

Chart 4 shows real NHE in '00 constant dollars versus changes in real disposable personal income. There's a little bit of noise here. It doesn't work together. This was one of the charts that John Cookson and Peter Reilly looked at, and they found a lag in a three- to five-year period. Changes in income correlate better with changes in NHE three to five years later. That study was using data through 1992 or '93, and you see in Chart 5 that you shift the NHE over, and it tends to move fairly well. The inference I draw from this is that increased wealth leads to greater dollars for investment spending to realize greater advancement in health care.

Chart 6 compares changes in NHE versus individual OOP payments as a percentage of the NHE. The historical trend tends to reflect an inverse relationship, almost a mirror relationship, and that is increases in OOP payments tend to correlate with lower increases in changes in NHE. A couple of data, in particular '86 and '88, point to decreases in the OOP in the late '80s correlating to higher increases in the NHE. In the '90s looking at the dashed OOP line, that has a lot to do with \$10 co-payments, and as you move into the mid- and late '90s increases, there are shifts to some higher deductibles away from higher co-payments and higher coinsurance.

The spike hits in '98 and drops off, which I attribute to a competitive job market, costs going up and employers holding the line with respect to their employee cost sharing. To me this makes sense because if it's your money, you're going to treat it differently from how you treat the employer's money. It's the third-party payer

mentality, and I think we're all familiar with that. For instance, how many people go to Morton's on their own dime? You take clients there. You don't take your family there.

Chart 7 is NHE versus the proportion of public spending relative to total spending. In the late '80s, public spending increases correlated with lower overall spending increases and a lower rate increase. Moving into the early '90s, relatively higher public spending coincided with reduced overall spending, and then there was a shift again in late '90s and into the early part of this century.

Regarding NHE versus stock market values in Chart 8, unfortunately I had data only through '89, so this graph doesn't give as good of an historical perspective as the other graphs do. With a little bit of noise with the technology boom, stocks rising fast, the bubble collapsing, the corporate earnings scandal, the recession in '00 and '01, this graph doesn't show a lot of correlation. If we were to look at it over a longer period, my suspicion is that we would see the stock market move with changes in wealth, but probably not to the same degree as disposable income. Because of the stock market, I think it's going to reflect some unrealized gains and losses.

Finally, Chart 9 shows NHE versus the unemployment rate, The NHE curve looks something like a regression line through the unemployment. I think that NHE does have a mild correlation with the unemployment. There is some noise, but the general movement has tended to be together.

To wrap up the backward look, changes in CPI have movements up and down and have been consistent with NHE. I'd say the same is true for interest rates, which move up and down with NHE. Increases in disposable personal income have been correlated with increases in health spending with an approximately four-year delay, and that was consistent with findings from the earlier report. Increases in OOP spending appear to have the effect, or at least the coincidence, of slowing the rate of health-care spending. Finally, I see changes in health-care spending moving over time with unemployment, perhaps because of better management spending in covered plans as opposed to uncovered plans and uninsured populations.

Looking ahead, the CMS projects NHE changes as being between 6 percent and 7 percent over the next 10 years, through '13, and it's hard to gauge. Six percent's a flat line going forward. Many factors influence these predictions. We don't know what's going to happen with the economy. Is growth going to continue to happen? Are we going to slip back into a recession? Will Iraq or oil prices continue to be a drag on the economy? There are a lot of effects that we don't know yet, but 6 percent to 7 percent might be a fair assumption. If the market continues to become more efficient, you could see a continued decline in the trend rate year after year.

One of the factors is aging of the population. Chart 10 shows real national health-care expenditures in '00 per capita and overlays it with average age. This is trying

to show that with increasing aging of the population, costs increase throughout our lifetime, and that that's going to continue to have an impact on health-care expenditures over time. There are more seniors. They're living longer and have a lot of political clout. They have increasing health-care needs, and spending will increase as a result.

Looking at it another way, the next two charts show the population pyramids. Chart 11 shows the July '00 census, and Chart 12 shows a projection of '25. That pyramid is becoming a box. Keep going out to '30 or '50 and you'll see the 60-64 and 65-69 bars extend up, so they extend the top of the box.

Aside from aging of the population, I think additional cost drivers in the future will include new technologies and treatments. A fact sheet put out by the BlueCross BlueShield Association stated that medical technology, and I'm quoting, "while critical to the advancement of health care, is a significant contributor to rising health-care costs." The association cites four reasons as indicated by its data. First, new technology is being added to older technology rather than replacing it. The example given is that MRIs and CAT scans are being used in addition to X-rays and ultrasounds as opposed to replacing them.

Second, patient satisfaction is higher when technology is used. Anecdotally, the association is saying that although there's little evidence to suggest that imaging tests are needed for patients with low back pain, for instance, they commonly are used, and patients who have them say they're more satisfied. It's not an efficient use of the system, but it's satisfying to the patient.

Third, technology continues to be used where it's not clinically effective. The example is treatment of prostate cancer. Almost one-fourth of patients with low risk and more than half with intermediate risk continue to undergo CAT scan, MRI or bone scan tests that are not indicated by current recommendations.

Finally, safer, less invasive technology also increases consumer usage. A study of patients undergoing gall bladder surgery shows the spectrum of patients increased when less invasive procedures were introduced. A less invasive procedure is not as troublesome, and it's not as bad going.

The next item is professional liability costs. For medical malpractice cases, the jury verdict research found that the '02 median award for jury cases for both economic and noneconomic damages was just more than a million dollars. It was half of that number five years earlier. To give you some more statistics, in childbirth cases physicians lose three out of five jury cases. For brain injury cases the median award is \$5.5 million. That's a lot. It's having an impact on medical malpractice claims, leading to higher medical malpractice premiums, contributing to continued use of defensive medicine and resulting in a less efficient use of the system.

An Aon study notes that, regarding medical malpractice costs for '04, hospital professional liability costs are going to be \$6,600 per bed, up about 10 percent from prior years. For physicians, the amount is going to be about \$13,600 per physician for tort costs. In a broader sense tort costs are estimated to be about 2 percent of overall gross domestic product (GDP). You're seeing the significant impact that this is having, and unless there are changes in terms of use of best practices, quality measures and increased transparency to improve quality and reduce awards, for lack of changes in the legal system, I think we'll continue to see this as a factor in trend projections.

The next item is business insurance costs for employers. The question asked is whether these costs are crowding out allocable funds for health benefits. Here are some statistics. Homeowners' mold claims totaled \$30 billion last year. That's for homeowner insurance, not health, but in the context of business insurance, mold is becoming an issue for employers as well in the workplace. You've have dollars for claims leading to higher workers' compensation costs. It's well-documented in the news that asbestos claims are driving up workers' compensation costs.

Silica, which is a man-made material still readily used in manufacturing, is another potential asbestos. Business was interrupted after 9/11. Costs are increasing. There's relative potential terror in the United States. There are umbrella excess covers as a result of high-dollar torts. These business costs are increasing. Are they going to crowd out health insurance? Current surveys say no. Employers are generally keeping their plans. However, there has to be a breaking point, and I think we've seen it to some degree for smaller employers.

Another issue is regulatory burden. There are costs associated with complying with government regulations, whether it's the Health Insurance Portability and Accountability Act of 1996 (HIPAA) privacy or the Sarbanes-Oxley Act of 2002. Regulation impacts your administrative costs and your overall costs in the private market to your employer. I think that if large regulatory attempts are ongoing, there will continue to be costs associated with complying and dealing with them.

The last issue is consumer behavioral changes. The question I put to you is will greater or fewer numbers of consumers weigh the cost-benefit implications of staying well, choosing the right course of treatment, choosing the right provider and choosing the right treatment options? Are they going to appreciate quality and transparency efforts that are underway? Will the quality and transparency ever succeed? To the extent that they do, consumers I think will change their behavior as a result of increasing focus and attention and the favorable impact of consumer-driven plans such as health reimbursement accounts (HRAs) and health spending accounts (HSAs).

Economists like making predictions. I'm not an economist, but I'm playing one today. What's my prediction? I agree with the predominant opinion that consumer-driven plans will continue to provide the opportunity and impetus for consumers to

change their behavior, weigh these cost-benefit implications and act to temper or reduce future spending increases, allowing for a better, more efficient use of the system and using the dollar more wisely.

Finally here are some sources that I've used for these slides and that I found helpful. A consolidated source is the White House Economic Statistics briefing room at <http://www.whitehouse.gov/fsbr/esbr.html>, which has links to the Department of Health and Human Services (HHS), Department of Labor, Department of Commerce, Bureau of the Census, the Federal Reserve and so forth. You also can go directly to those sites. The Federal Reserve has a lot of good information both in terms of historical context and from a projection standpoint.

MS. TOURVILLE: I'm going to be talking about trend results at the health cost category level and what type of variations we can see in them. I'm going to touch lightly on the NHE trends but get into the health cost category level, talk about some trend components that vary at the health cost category, talk about some of the '03 trend drivers, take a special look at pharmacy and then touch on some outlook bullets going into '04 and '05.

For our NHE graphs (Chart 13) we pulled out specifically the private health insurance and personal health-care components, taking out dental and personal vision. In the total medical you'll see that the projections and the history vary from what Russel showed and talked about, but it is interesting to look historically at the differences at the health cost category level. In '01, prescription drug cost was almost 20 percent. Physician, clinical and other professional costs totaled about 10 percent. The hospital and home health and durable medical equipment (DME) costs were down well below 8 percent. These differences are large.

Talking about some of the trend components, when we're forecasting trend and when we try to break it up historically into the same buckets, the categories that we consider in our trend forecast model are demographics, geographics, product mix, underwriting wearoff, industry mix, benefit plan change, leveraging, baseline utilization, core unit cost/price, intensity/mix, policy process, regulatory, workday and health technology pipeline.

When we do the forecasting process, there are a couple that we do at a high level because there's not enough information or they're small enough that it probably wouldn't matter whether we got them to the health cost category level. However, many of them have some large differentials, and in our forecasting process we get down to the level where our client wants to know what we are projecting their days-per-thousand to be on the inpatient side. If we don't have a good feel for how these components are impacting the different health cost categories, it's difficult to give an intelligent answer.

Talking about some of the specific components and how they can vary, let's start out with the baseline utilization and how we define baseline utilization. We start

with total units per thousand for each health cost category. We calculate several of the other components (such as the value of the components, demographics, whatever impact on geographic mix and market share changes), pull those all out and get to what's considered a baseline utilization projection. It weeds out a lot of the garbage or the mix influences on the utilization numbers that we're looking at. When we get down to that level we still see some large differences at the health cost category level. Advertising can have a big impact, as can consumer demand. Katie Couric has the colonoscopy done on television, and it impacts the physician versus lab, however you're calculating your claims.

On the price side, contract negotiations are different for facility versus physician. You can see how that would vary. CPI comes through in the CPI numbers. Intensity includes the advertising and the consumer demand but also includes shifting from one type of facility to another. Processes that are moving out of the inpatient arena and into the outpatient arena can impact the mix of services or the intensity on both of them.

The health technology pipeline is trying to identify the new and emerging technologies that are hitting the marketplace and what kind of an impact they will have. In general the new technologies hitting the facility side equate to about four times the impact of those hitting the physician side. That's not a surprise because we're talking about technologies like implantable defibrillators and drug-eluting stents. There's always a professional cost attached, but it's smaller than on the facility side. Pharmacy has been a different story when you look at the health technology pipeline.

A couple of major changes have occurred in the past couple of years with the Claritins and the Prilosecs going over-the-counter, some of the big drugs losing their patents and generic equivalents being introduced in the marketplace. When you look at the aggregate pipeline, you've seen some slightly negative numbers over the past couple of years, but when you separate them between medical and pharmacy, medical is positive. Pharmacy is the one that's pulling it down.

Regarding benefit plan design, 40 percent to 50 percent of the total OOP expenses come from pharmacy. Many changes and pushes have been made over the past several years toward the high co-pay plans, and sooner or later we're going to lose the ability to continue to funnel dollars that way. The rate at which members are switching is expected to slow down, lessening the dampening impact, and net trends could jump ahead of allowed trends in the near future.

We see the same thing with leveraging and the impact of the co-pays and how they are going to change in the future. Because of the percentage of co-pay versus claim cost on the pharmacy side, the leveraging impact is larger for pharmacy than it is with the other health cost categories.

Regarding demographics, the impact on pharmacy can be double or triple that of a physician as the population moves up through the years and the average age of the working population changes.

In the area of geographic market share, diverse utilization patterns and contract negotiations can drive large differences from region to region, and that gets down to the health cost category.

Workday calendar year is taking a look at the makeup of the calendar itself. How many Mondays are in a calendar quarter? Where does Leap Year fall? Is it a Monday? Is it a Friday? Is it a Saturday? What kind of an impact could that have on health-care costs? The slope of the weekday per member per month (PMPM) weight charts differs at the health cost category level. Depending on the calendar makeup from time period to time period, the trend impact at the health cost category level can vary in upwards of 50 basis points.

Here are a couple of slides showing some examples of what I'm talking about. Chart 14 is a geographical marketing graph of physician, inpatient, outpatient and pharmacy. It's from a tool we have called TrendAlert™, but it shows the bubble charts. The size of the bubble is the size of the market. The x-axis is the 12-month trend, and the y-axis is the three-month trend, the most recent quarter. You can click on the arrow and see how the bubbles are moving, but the amazing thing is looking at the geographic distribution. The 12-month trends on the physician side range anywhere from 3 percent to 13 percent or 14 percent. It's a different distribution at the geographic level. Outpatient is the one that seems to be clustered the most, but the rest of them are all over the board.

This is the weekday PMPM weight by health cost category. Outpatient is in the light blue. The PMPM costs in outpatient for a Monday are not all that different from those on a Friday, but look at pharmacy. It starts out high. The index is somewhere around 140 percent. By Wednesday, it's down closer to 110 percent to 115 percent. If you're wondering why all of these are above 100 percent, it's because Saturdays, Sundays and holidays are not being shown, which drives that down to the average of a 100 percent. You can see a big difference. For inpatient, physician and pharmacy, the highest cost is on a Monday, and there is a difference. When you look at the calendar makeup, the impact it can have for each calendar quarter is interesting.

I mentioned the health technology pipeline. One of the specific examples we have is the OvaCheck™ test for ovarian cancer, something that is probably going to be one of the biggest blockbusters that we've seen in a while, and this is a screening for ovarian cancer. There's nothing like it out there right now. It's easy to do and easy to increase the utilization. The expected release date is the first quarter of '05, graded in linearly over four quarters. The ultimate utilization is 97 per 1,000 members. We're coming up to a peak PM of a PMPM of \$1.33. We have to go in and estimate what portion of that we feel will hit professional versus facility, taking a

look at the ancillary side. Here's an example with each technology coming down and how it's being priced. There's a difference in weighting between the different health cost categories.

Chart 15 shows some of the historical CPI numbers. The difference between the different health cost categories is obvious, with outpatient peaking high in early '03 and coming back down closer.

Here are slides looking at some of the trend drivers (Chart 16) and what's driving the historical trend. We find on these graphs, which again are physician, inpatient, outpatient and pharmacy, that each scale is the same. It was tempting to enlarge them so you could see better which service categories were driving it, but I wanted to be able to show that when you look at outpatient, outpatient surgery is three times higher than the largest driver on the physician side. What we're doing is calculating the change in PMPM. For physicians it's specialists. On the inpatient side it's major diagnostic category. Outpatient is service type. Pharmacy is therapeutic class.

On the physician side, they're anesthesiology, hematology and oncology, which probably is not a big surprise. On the inpatient side, circulatory system is the leader. Radiology continues to be a driver. In pharmacy, the interesting thing is that the leading driver is unclassified, which might be disturbing, and a lot of people might think there's a problem with the data, but a lot of the new drugs and new biotech coming out don't have a code associated with them yet. Often the unclassified will lead the categories.

There are hot topics. For influenza, the '03-'04 season started earlier. It was more severe and more centered in the fourth quarter than in recent years. Generally the peak tends to come toward the first quarter of the following year. The percentage of deaths because of pneumonia and influenza was 70 basis points higher for this season to date compared to last year. If the '04-'05 season is closer to normal, the '04 trend impact from influenza could be negative, and that's because it hit in the fourth quarter of '03. If it doesn't hit until first quarter of '05, we could get some relief on the trend side.

Regarding obesity, the costs to treat the overweight and obese account for an estimated 8 percent to 12 percent of total medical costs. MDs and hospitals are increasingly promoting bariatric surgery, as we're all well aware. Randomized clinical trials are inconclusive on long-term effectiveness of the treatments. One thing that may or may not lead to changes in the overall system is that BlueCross BlueShield of Florida has announced it would stop covering gastric bypass surgery by the end of the year citing safety concerns.

The first couple of graphs talking about trend drivers were focusing on the service category itself, whereas these are looking at the actual condition. It's going across the different health cost categories. Leading the pack is lower back pain and

the treatment for chest pain and live newborns. We do a lot of digging to try to understand where all the different drivers are coming from. On the low back pain side, the leading driver by condition, there was a minor increase in the number of patients, a significant increase in cost to treat the patients and an increase in intensity of services within physician offices (a lot of that is because of the sophisticated diagnostic imaging, the CTs and the MRIs, and the use of the Cox-2 inhibitors such as the Celebrex and the Vioxx drugs).

Chest pain and coronary artery disease are the second driver by condition. The number of patients decreased, while the cost to treat the patients increased significantly. There was an increase in noninvasive diagnostic procedures, inflation of existing facility services, increase in intensity and number of physician services per patient and few cost controls as many of these services are paid on a percent-of-charge basis.

The third trend driver is live-born infant care. The cost to treat the patient increased. Admits per patient have gone up. The average length of stay has increased, and the cost per day has increased. There's a trend associated with the decrease in U.S. infant mortality. As survival improves more services and dollars are consumed in the newborn or the neonatal intensive care units.

On the pharmacy side many companies have fairly large departments that focus solely on pharmacy, being 15 percent to 20 percent of the net claim costs that a company will experience. Sometimes you have to wonder why there is so much emphasis devoted to it. There are many good reasons. The pharmacy market share is continuing to increase. It's now upwards of 20 percent, and I think it wasn't that long ago when it was about 15 percent. There are rapid changes in the product mix, new product launches, generic availability and quick switch rates and over-the-counter availability of some of the different drugs, and clinical studies can also have an impact. Economic-based plan design management can have a big impact on your outcomes. The same is true for formulary management. It is the most manageable from a cost perspective of all of the health cost categories.

I have a couple of examples. Here's a situation where a drug went over-the-counter. In the tiered plan design (Chart 17) the drug that went over-the-counter is not on this graph. It's the two primary competitors, and it shows some of the formulary management here. The drug goes over-the-counter. In the tiered plans Brand 1 is placed in Tier 3, and Brand 2 is placed in Tier 2. You can see the increase in utilization of Brand 2. Obviously by moving it into Tier 2 they also moved utilization toward Brand Name 2. And there's the tiered plan versus the open plan. You can see there's a differential in the utilization.

Chart 18 shows another example. A generic equivalent is introduced to the market. Total scripts reduce for the brand name significantly. The generic hits the market and automatically jumps up and receives some of the utilization and the market share. Overall costs are reduced significantly.

In another example (Chart 19), taking some of the detailed therapeutic class categories, in the first line we show that in the low co-pay plan, the generic usage is 42 percent. Move over to the medium co-pay plan. It jumps up to 49 percent. In the high co-pay plan the generic usage is 57 percent. What's interesting is when you look at the PMPMs in each of these categories and the cost savings that goes along with it. It's compelling evidence that there's money to be saved.

What's the outlook for '04 and '05? Where are we headed? As far as the medical technology pipeline, future trends will be impacted more heavily than current, and I say the current because I'm including the past several years where we have had some of the large drugs going over-the-counter and driving the impact into negative in some cases if you're combining the medical and the pharmacy. We do know several that are losing their patents, so generic equivalents will be introduced.

Workday calendar impact is higher in '04 because of Leap Year. We're expecting a drop-off in '05 because of the makeup of the calendar alone. The trend should be 1 percent lower in '05 than it is in '04, all things considered equal.

Aging of the population will continue to contribute positively to trends. Baseline utilization patterns have slowed in the recent years, and we're expecting them to continue in the low single digits. There always will be some outliers to that. Similar to '03, underlying medical expense trends are expected to remain in the low double digits for both '04 and '05, and depending on business product mix, market share changes and benefit plan design efforts that you're doing within your own organizations, net trends could easily fall into the single digits.

MR. JOHN M. BERTKO: I'm going to put myself in great contrast first to Russel, who is macro. He's basically forecasting hurricanes for the next 10 years. Second, Lisa's done a great job on still a macro level looking at big pictures on this but perhaps forecasting weather for the State of Minnesota for the next two years.

My job is to predict claim costs and trend for a company for next year. I'm at the micro level, maybe even the microscopic level to some degree. What I want to do is to talk a little bit about one specific aspect. Lisa covered part of this when talking about plan designs and giving some good facts about how plans change. The bigger question is can plan design make a difference, and can it make enough of a difference to pay attention to? I'm going to focus on a couple of things. First, CDHPs because they're popular. Russel was nice enough to make a nice plug about them. We'll then talk about high-performance networks and perhaps a couple of other issues that have come up, at least in policy circles.

My definition of a CDHP is one that has a spending account of some type, which I'll get to in a minute; provides a lot of information (Russel referred to information on transparency of both price and quality, which is still to emerge, of course); has an

HR contribution strategy that's different from the old "everybody gets the same percentage premium contribution"; and requires lots of support on communications.

What types of CDHPs are there? I had to add this because the MMA had a little part at the end that said people under 65 now can have HSAs. HRAs popped out about two years ago. They're notional, which means there's no real money in them, but they can be rolled over from year to year, unlike flexible spending accounts. They're not portable generally. There are some with spending accounts that don't roll over, and they're a little less expensive, and then HSAs, which you can think of as medical IRAs. They do use cash contributions. They are portable but have some fairly severe restrictions on the plan design.

I'm going to share a couple of observations based on factual data, empirical, but by no means is it meant to convince you. It's merely to offer some early evidence. We have it in a couple of places. The main one I'm going to talk about is what we call SmartSuite, which is bundled plans that include a spending account. We have a more advanced plan, a build-your-own one, the SmartSelect, which also has spending accounts. This one in particular has no rollover. There's a \$500 benefit allowance and then a big deductible. There are co-pays in there. Because it doesn't roll over it is less expensive than either HRAs or HSAs in our experience, and I won't say more about that today. There are other sessions to cover these kinds of things.

What are the results? I'm going to talk to you about two types of results: the pilot on our own employees (a total of almost 14,000 employees and an equal number of dependents) and then early experience emerging about our customers, a decent block but not a huge block. One thing I have to mention that Russel more or less inferred is that CDHPs are important. I don't know if you meant to infer that or not.

My measurement so far says that there are probably fewer than a million Americans who have what I would classify as a CDHP out there today. That's out of an insured commercial population base of about 150 to 160 million. It's trivial today. The question becomes how big does it get and how fast does it get big? In the first year our test was on 10,000 employees and dependents. In the second year it became a more expansive and complex product to 14,000. We expanded it to outside of Louisville, and we've done a pre/post claims analysis to give you these facts. It's going to perhaps be a slow update. In year one we had 6 percent migration into the CDHP program coverage first, but we were happy with that. That was better than the early results of 2 percent to 5 percent, at least as I can measure it by our competitors at the same time period. In year two we had great word-of-mouth. We did a better job of communications. It rose to about a 20 percent penetration in the CDHP option. That seems to be following through as this becomes a little more popular.

First of all, employers have to buy it. Second, it's an employee choice of joining it. We're now up to about 28 percent of our outside customers' employees choosing

this, and I think that's a good start. It makes an impact when the employer decides to offer it. The contribution strategy is incredibly important, so that people see the full value of buying down or the cost of buying up.

I want to make the point that this is fairly difficult to assess in what I would call an accurate fashion. The people who initially join CDHPs are not only healthy, but they are very healthy, about half of the average cost, at least in our experiment. I've seen some information by researchers at the University of Minnesota, and, while it's not exactly the same, there is positive selection by people who choose these in year one. The good news is the actual experience is even better than that. These healthy people use even less in the following year because they seem to be paying attention to it. When you're thinking about trend and whether it has an effect, there is an indicator, not a quantification, that it seems to do something to reduce the health-care expense.

Here are some numbers from a couple of years (Chart 20). Louisville year one came in at about 5 percent. Louisville year two shifted to another product but with the same group of people. The question was whether the 5 percent was a single one-year impact that then would pop back up? It turns out, no, it came in again lower than 5 percent. The right number to use is to say it's mid-single digits. Those numbers can bounce around. In year two when we expanded outside to non-Louisville and got a bigger penetration, we got an even remarkably lower first-year impact.

The big question is was this just your employees? They knew what you were doing. They are health insurance workers. They paid a lot of attention to it. We'll get to that answer in a moment. Another question that's asked of me is why did this happen? One of the whys, at least on the group of 10,000 people, is that hospital inpatient admission usage dropped considerably. We looked at it. We couldn't see any reason. It wasn't a big change in catastrophic claims. It wasn't a big change in maternity. It just dropped. Hospital outpatient usage was flat compared to the market. The market went up 8 percent utilization, and, Lisa, in the '01-'02 timeframe that 8 percent struck me as being a common utilization increase.

Physician usage was higher than market a little bit, and drug costs, of course, are connected to physician usage. The more times you visited a doctor, the more times more scripts will be written.

Let me give you my theory. You make people think about going to the emergency room. They don't go to the emergency room. They visit their doctor. They don't go to the emergency room. The hospital doesn't capture them and send them in. Admissions drop. Maybe this is the case. The good news was we saw more primary care physician (PCP) visits which is perfect for me. I'll take an exchange of a \$50 PCP visit for a \$500 total emergency room package any time.

For year two and our non-Louisville, we again saw utilization drop on inpatient. Outpatient continued to be flat, although the market was flat in that particular year, a year later. We saw an increase in office visits and the utilization being under our market average, and these are all connected, as best we can, apples to apples on this. Something is happening. This is a relatively small number. Most of us would like to have a block of 100,00 members upon which to draw this, and it's not. This is roughly 15,000-or-so members. It gives you an indication.

Regarding claim results, outside of us we have about 138 clients. As of April when I had to submit the slides, we had about 56 groups of varying sizes, all of them with more than a 100 employees, but from a 100, 150, to 1,000, to as many as about 10,000 employees, and a total of 60,000 members, variations on the number of months of data. We annualized it, and we were getting trend rates in the mid-single digits again. This is a pretty good result, and so far, so good on this. Maybe CDHPs will help, and maybe people will join them, and maybe they'll have an effect on NHE.

Can you affect trend by plan design? Yes, if you incent people with co-pays and make them aware of the cost of insurance, of course they use a little less. This is a different type of mechanism that consumers with increasing amounts of knowledge might employ to reduce the use of inappropriate amounts of technology.

What's another new plan design topic that's emerging? I've chosen to use the phrase "high-performance networks" that one of the big consulting firms uses. I think there are half a dozen different names for this. It offers the promise of lower costs without needing to adjust, manage or otherwise control utilization and focuses on efficient and effective providers. I would hope that most of you might have at least heard of the work by Elliot Fisher and David Wennberg published about a year ago in the *Annals of Internal Medicine* which showed that across the country the quality of care on Medicare people didn't matter in terms of how much was spent on it, and there were huge variations. There's a lot of wasted care.

Getting effective care doesn't mean getting poor care. It means getting less care. In this high-performance network most of us working on these are focusing on the use of episodes, not on unit costs and not on controlling utilization per se. You need to have episode groupers. Sign up for these. This is a lifetime of guaranteed employment for actuaries because we're the only ones who will be able to grind away at all this work. I think a number of us in here could talk for ages on the types of enterprise data warehouses you need to handle this, but that's yet another subject.

Once you know what the episodes are and group them, you look at them and find which providers are efficient. We chose to concentrate on specialists because they seem to have the biggest bang for the buck, and most parts of the country have about twice the number of specialists they need as measured by various types of degrees of specialists, such as surgeons per thousand. We kept most of the PCPs

because we need PCPs. We also kept all of the hospitals because dealing with hospitals is problematic. That's a funny word for saying we can't do anything with them.

Last, the question that's emerging is whether this is going to be a one-time reduction or, by choosing efficient specialists, do you get people who use fewer MRIs when X-rays will suffice? A couple of physicians who were not invited into our high-performance network complained about not being included. We did a report card on them and measured them against their specialty and their peer group in a market, and what emerged in a couple of cases was that Dr. X used twice the number of diagnostic tests that his peer group used. It's not as though we're measuring whether people are a B+, a B or a B-. If they're a D- on this particular scale, we don't want them anymore.

Let me wander off the subject a little bit. Paul Ginsburg at the Center for the Studying of Health System Change asked me to speak last December at a session of policymakers in D.C. and asked where this might go beyond the normal things that we think about on a day-to-day basis. We might try to use episodes to purchase care. There are easy ones, like purchasing deliveries, and then there are other people who shall remain nameless who have tried to build products around this and have flopped. That's hard.

Second, maybe we need greater specificity for co-pays, and imaging is my favorite bad guy. We might have low co-pays for X-rays. For medically indicated MRIs we might have medium co-pays because they're more expensive. For sports injuries, of which I have a few occasionally, we might have a high co-pay. You can still have the MRI, but if that ankle is bad on a 54-year-old guy, maybe you need Vitamin I and a little bit more Ibuprofen tonight, not an MRI to look at it.

Third, we might purchase facility-specific types of services. This is futureland. Could we get cardiac care from hospital number one, which is recognized and measured as being efficient and high-quality, and oncology from system number two? That's not something we can do tomorrow or even next week, but it's probably a good idea.

Other alternatives exist, some of which are problematic. At least at the podium I'm the only one who probably had real experience working with scheduled benefit plans in the '70s when I was with Metropolitan. We worked on plans that said you get 40 units of the California relative value schedule for this kind of surgery and up to \$2,000 of hospital coverage. Are we going back to this? Plans out there exist with provisions like this, and major medical got rid of them a long time ago. Problematic again is a favorite word of mine.

Wrapping this up, to me there is a lot of inappropriate use of new technology, and Lisa and I at lunch were talking about off-label use of drugs. I clearly believe drugs contribute to the survival rates of men my age, but a lot of those drugs are used by

five times the number of people who need them. Needless to say the lifestyle drugs are probably used by a hundred times the number of people who need them. There's a lot of supply-sensitive research that says in the United States, at least, if you have a lot of supply, you're going to have more MRIs than you could ever have imagined, and should we do something with consumers, with others, with evidence-based medicine, with measuring efficient providers to try to reduce that? Maybe use cost sharing and better quality care and reduce trend.

I'm a modest optimist in this, and when we were preparing for this presentation, Russel, Lisa and I exchanged some views on these issues. I know there's at least one person from CMS in the audience here. Regarding those little graphs that show NHE dropping off over the years, that's not going to happen. We're going to have bumps down the line, and there's no current prospect for drop-off. We are a rich country. I'll go back to one of Russel's slides, which I agree with, and it's disposable personal income. The United States has a lot of it, and we have a huge appetite for health-care expenditures. Uwe Reinhardt has argued that intensively in the public policy debate, and as long as the economy is moving along at some rate, even if it's a little bumpy, we're going to buy a lot of this stuff.

MR. STEVE CLAY: I have a question for Mr. Bertko. You stated that the early enrollment or choice of the CDHPs was 2 percent to 5 percent, 6 percent for Humana and maybe 20 percent the second year and that there was positive selection. Utilization was low. What happened to the utilization of the people who didn't choose the plan?

MR. BERTKO: I'm glad you asked that leading question. First of all, I needed to expand more because I kept my time on the products short. We offer this as a total replacement product, and we consciously blend the rates to adjust for the dynamics of the situation. The more people you have in the consumer-directed product, the more selection dynamics you'll have. The graphs that I showed that I didn't explain completely were not of the consumer-directed. Those trend numbers in the mid-single digits reflected everything, that is, all the people in the traditional plans as well as the consumer-directed ones.

Also it's my belief, but not our opinion at this stage, that the advent of more information, the buy-down and the product's being available made everybody think about things so that in contrast to what normally happens in a choice environment, we got the counterintuitive result that lots of choice with lots of information brought those down to those mid-single-digit levels. I think that normally in a regular choice environment with 10 years or 15 years of experience in the California market, choice costs money—2 to 3 percent more if you offer more plans.

To specifically answer the first of your questions about what happened to the people in traditional plans, there was adverse selection in the sense that people who are sicker made great choices. They went into the traditional plans with lower co-pays, but they paid for it upfront with generally a little bit higher payroll

deductions, but overall they were probably better off as a system if you think of the total risk pool being that employer group, us first, and now those 130 employers. That was probably more than you thought you asked.

FROM THE FLOOR: Could you address what are you seeing as a trend for high dollar claims?

MS. TOURVILLE: Yes. It's one of the areas in our own modeling that we've always looked at separately but have never itemized within, and now we're starting to do that because there are some larger trends going on. I think a lot of the claims have to do with some of the live-born infant care that's taking place. It's geographically dispersed. We're seeing certain regions that have higher-than-normal catastrophic claims. I don't know if you guys want to add anything to that.

MR. HUGH: I would add from a reinsurance standpoint on stop-loss business, for instance. I'm not giving credit for consumer-driven plans on the spec side, but I am giving credit on the ag side. I would expect a reduction in unnecessary or inappropriate care, but from an individual catastrophic side I would keep it flat, and, pending additional data, part of my thinking or inclination might be even to bump it up a little bit in that you're going to maybe get a greater bimodal distribution.

MR. BERTKO: Let me get down in the trenches, as my job is, at the micro level and remark that as you get big claims, a number of hospital contracts have been clever. As you march through and burst through a contract attachment point where you return to a charges basis, that jumps up, and then the hospitals have been well-reported to have been incredibly aggressive on their charge masters. One question is are we having more large claims? The second question is do we manage them better or worse? There's a lot more intensity with these new services. The third what I'll call dumb question is are we paying more for big claims?

MR. TOM LEIBOWITZ: I have a question for Russel. Russel, one of your slides addressed the correlation between member cost sharing and the overall medical trend, and I was wondering which you felt was driving which: whether increased member cost sharing was the result of a reaction to high trends, whether increased cost sharing was then reducing overall utilization or whether it's a combination of the two driving one another.

MR. HUGH: Yes and no. Intuitively I would say increased OOP. Thinking about it more would drive lower expenditures. That my personal belief. I think part of the OOP expenditure line reflected more of an economic reality. For instance, in the late '90s and early '00 and '01, a sharp rise in OOP was moving away from managed care back to more PPO-type plans, which increased cost sharing relative to the overall spending.

In '99, '00 and '01, the chart showed a reduction in the OOP, and I believe that was as a result of a highly competitive marketplace for employees. Costs went up. OOP stayed flat. As a result, the change was a lower rate of increase or a flatter rate of increase, but I think intuitively over a longer period of time — maybe it's the optimist in me, but I'm trying to be realistic about it — the behavior and the finances are going to drive the behavior. Does that answer it?

MS. SUSAN MATEJA: I have two questions about the consumer-directed plan. You stated that the physician trend went up, you saw a rise, and you felt that was because people were not going to the ER. They were more connected with the cost, so they were going to the physician. My first question is did you do any studies to see whether the ER was affected or have you gotten that far yet? My second question is if these connect the people to the true cost of their care, it seems like you'd want unhealthy people in there because they will be more connected and will be more conscious. You would get a bigger bang for the buck by having people who are unhealthy because it's going to drive their behaviors more than having healthy people. What's wrong with that logic? If nothing's wrong with that logic, are you doing anything to try to get unhealthy people in these plans?

MR. BERTKO: Let me answer the first one, which is easy but has only a partial answer. We did look at ER usage. It did go down slightly. The group is too small to have credible results on ER with this. Regarding your second question, which I didn't talk about, is that the choice of the CDHPs by the study we took is driven more by economic status. We couldn't measure household income, but there was a clear predilection of people who made more than \$50,000 a year in our company to choose the CDHPs, and from a personal point of view I think that's great. People who live paycheck to paycheck needed to choose traditional plans (being an insurance company, we have more than a few of those) and their budgeting came automatically through higher payroll deductions. Trying to drive unhealthy people into CDHPs, while perhaps admirable as a theory, fails in the test of whether they can write a check for \$1,000, \$1,500 or \$2,000 when they get sick. I personally don't want to tell people they need to do that. I would like to have them make their own choice.

MS. JULIE MALIDA: My question is primarily directed at something that Lisa said. When you were talking about two of the big trend drivers being low back pain and live-born infant care, what are some of the strategies that are best used to help control those costs or steer them in a different direction if they are that big of a trend driver? Certainly disease management-type programs for low back pain might come to mind, but what can you do about live-born infant care and how to manage that better other than traditional case management? Are there any other strategies that we should discuss?

MS. TOURVILLE: Yes. On the newborn issue, I agree with you. That's more difficult to discuss. We have the medical management programs that we'll help clients try to implement, but they are far more traditional. It's more difficult. You

need to give the care. On the low back pain, it's a bit different, and it gets into more of the MRI versus the X-ray. We think that some needless services are performed, and that's where even having — this may not be a good example — the nurses in the hospitals help with some of this. We have seen some help there, but on the low back pain side, it's more a matter of dealing with the provider community and educating it. Of the different drugs that are being tried, don't prescribe four of them. Let's take a look at some of them and see what their benefits are.

Chart 1

Current Trends in the Context of Economic Data

NHE vs. CPI-MC vs. MPF

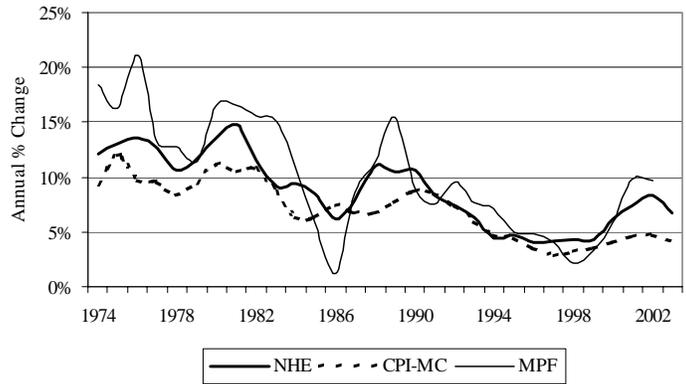


Chart 2

Current Trends in the Context of Economic Data

NHE vs. CPI-AII

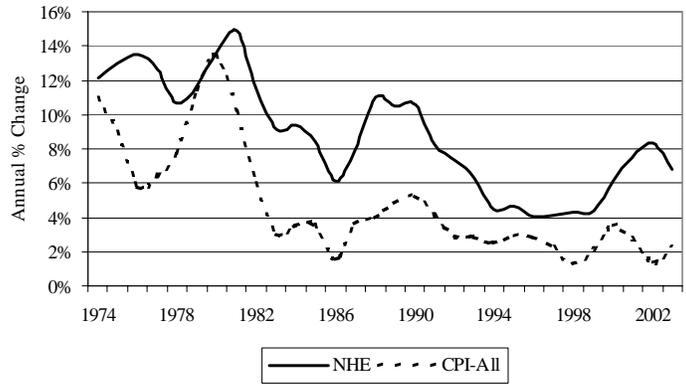


Chart 3

Current Trends in the Context of Economic Data

NHE vs. Interest Rates

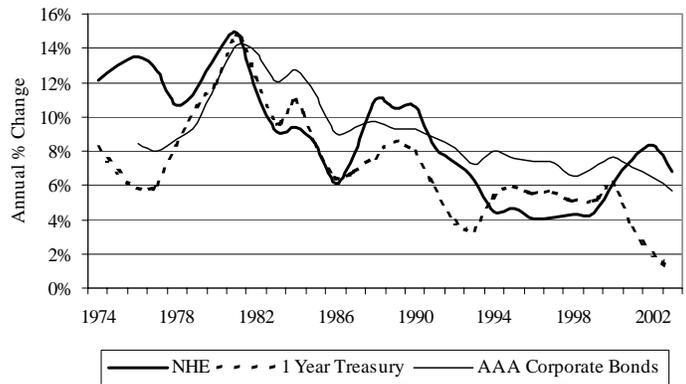


Chart 4

Current Trends in the Context of Economic Data

Real NHE vs. Real Disposable Personal Income

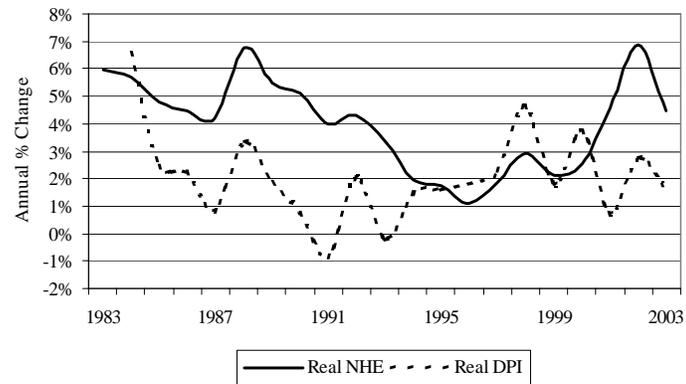


Chart 5

Current Trends in the Context of Economic Data

Real NHE vs. Real Disposable Personal Income

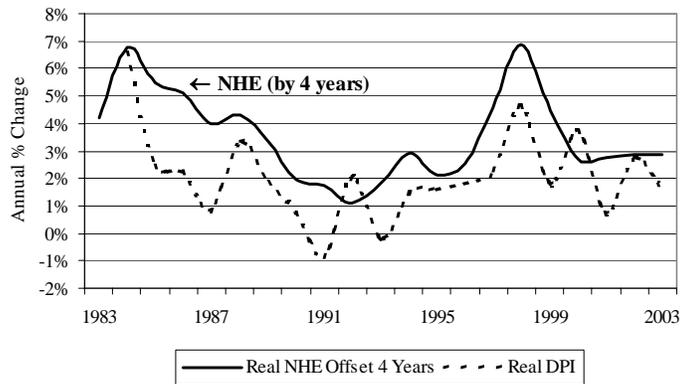


Chart 6

Current Trends in the Context of Economic Data

NHE vs. Out-of-Pocket (OOP as % of NHE)

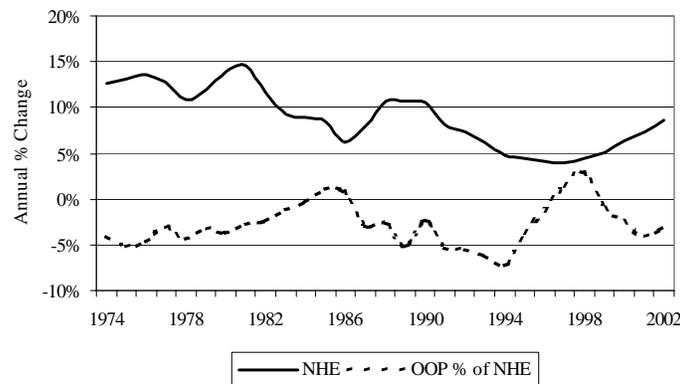


Chart 7

Current Trends in the Context of Economic Data

NHE vs. Proportion of Public Spending

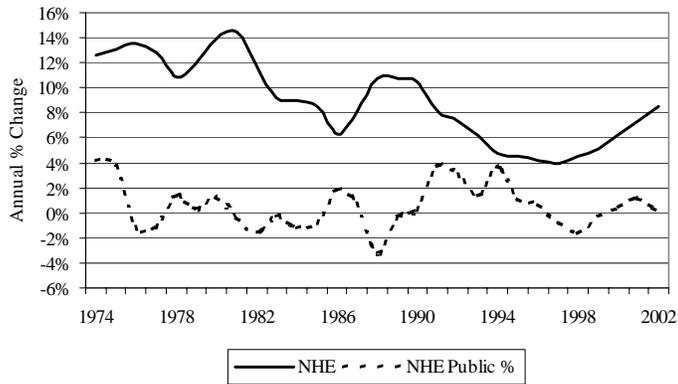


Chart 8

Current Trends in the Context of Economic Data

NHE vs. The Stock Market

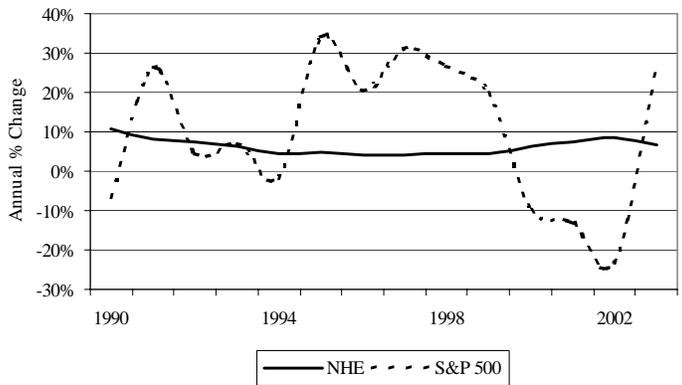


Chart 9

Current Trends in the Context of Economic Data

NHE vs. Unemployment Rate

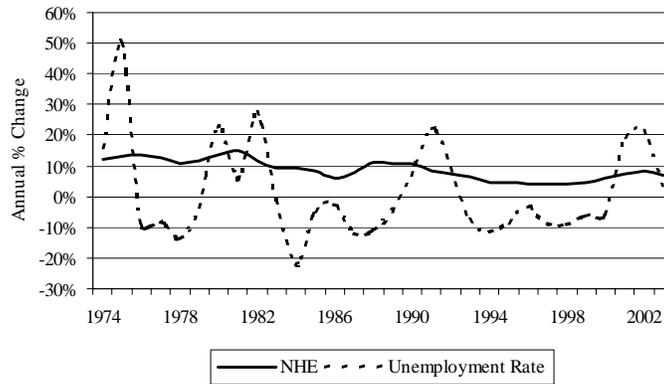


Chart 10

Future Trends

Aging of the Population

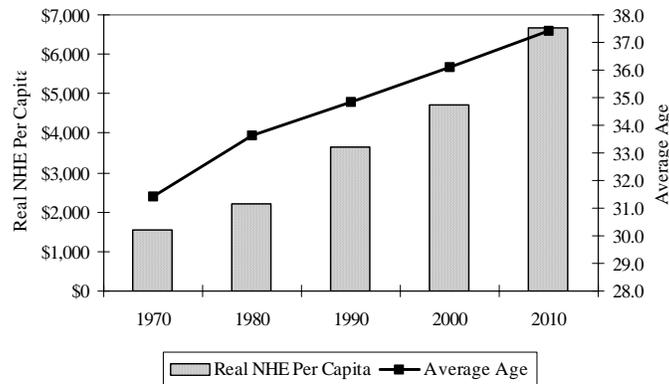
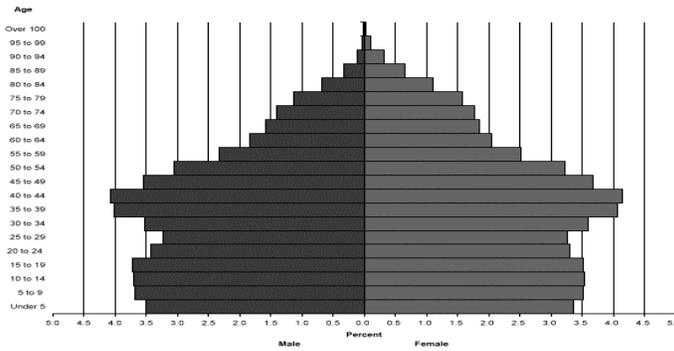


Chart 11

Future Trends

Demographic Realities: Today

(NP-P2) Projected Resident Population of the United States as of July 1, 2000, Middle Series.



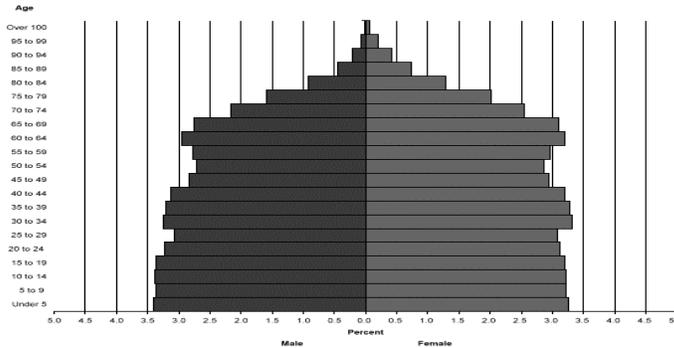
Source: National Projections Program, Population Division, U.S. Census Bureau, Washington, D.C. 20233

Chart 12

Future Trends

Demographic Realities: Tomorrow

(NP-P3) Projected Resident Population of the United States as of July 1, 2025, Middle Series.



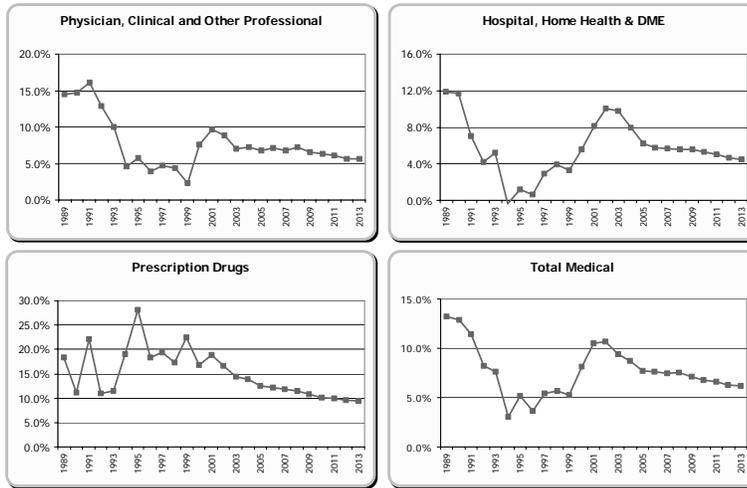
Source: National Projections Program, Population Division, U.S. Census Bureau, Washington, D.C. 20233

Chart 13

National Health Expenditure Trends



Includes Private Health Insurance and Personal Health Care components less Dental & Nursing Home.



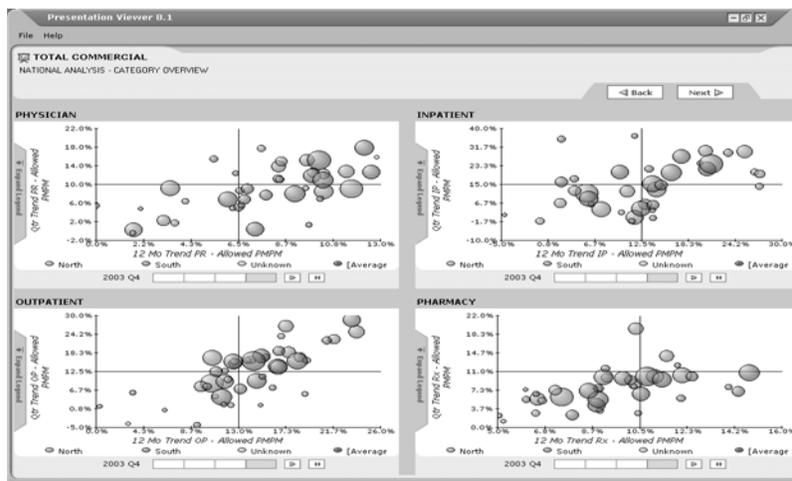
National Health Expenditure projections are made by the Office of the Actuary in the Centers for Medicare and Medicaid Services. The NHE projection model attempts to capture the causal relationships between major macroeconomic variables and private health spending, as well as interactions among major causal variables within the health sector. Updated 2/11/04.

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Chart 14

Variation by Health Cost Category and Geographic Region



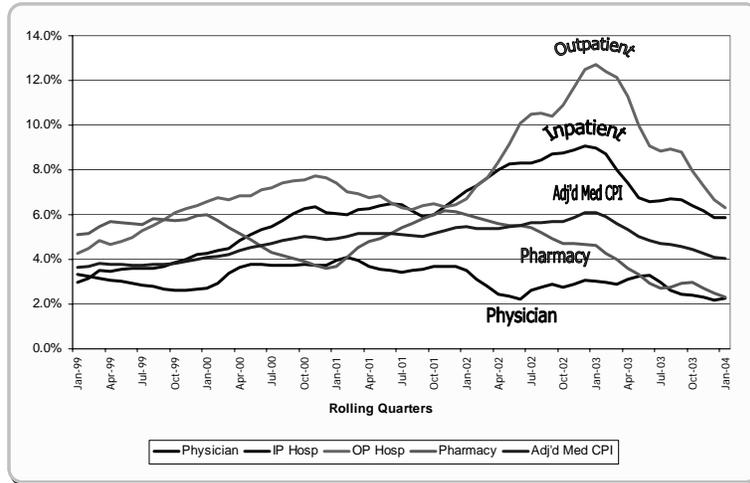
Source: Ingenix TrendAlert™

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Chart 15

Medical Care CPI
Rolling 3-Month Averages

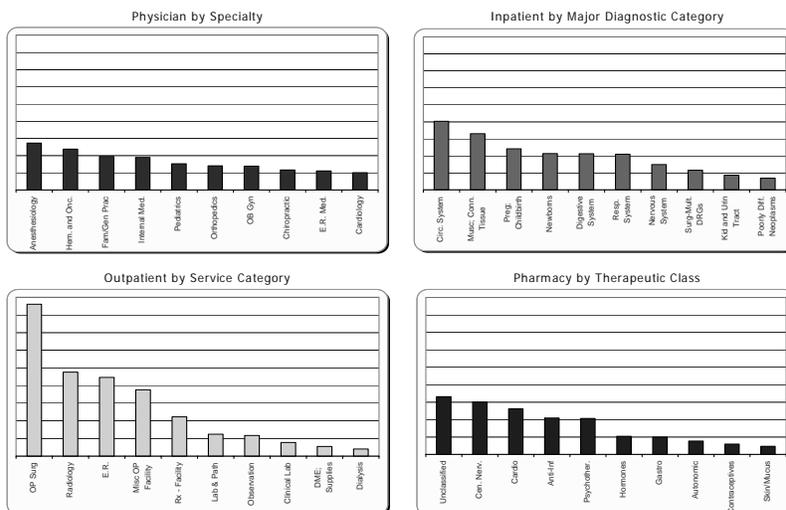


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Chart 16

Top 10 Trend Drivers by Category
Contribution to Trend based on Change in PMPM



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Chart 17

Impact of Tier Placement

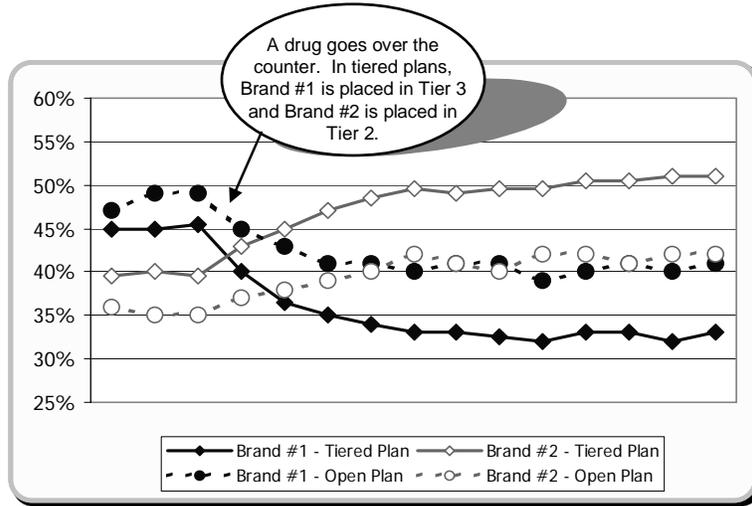


Chart 18

Impact of Generics

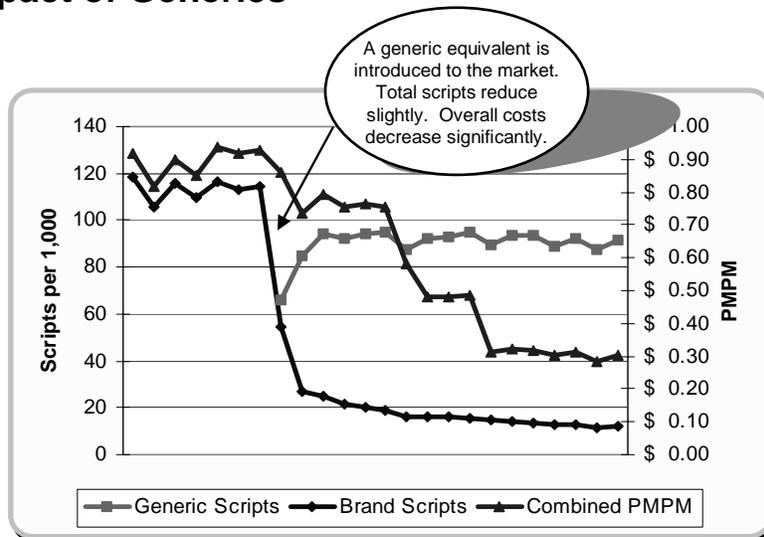


Chart 19

Impact of Benefit Plan Design



As higher copays are implemented, utilization shifts towards generic equivalents, lowering overall costs.

	Low Copay Plan		Medium Copay Plan		High Copay Plan	
	% Generic	Ttl PMPM	% Generic	Ttl PMPM	% Generic	Ttl PMPM
NSAIDS	42%	\$2.73	49%	\$1.48	57%	\$1.08
Antihistamines	10%	\$2.64	9%	\$1.94	17%	\$1.03
Lipotropics	3%	\$5.22	5%	\$3.97	7%	\$3.43

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Chart 20



Exhibit 1

Humana's Consumer-Centric Solution:
Early Evidence on Trend and Savings

