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Session 31PD
Purchasing and Quality Initiatives of the Leapfrog Group and Other Large Employers

Track: Health

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Summary: Employers have become increasingly concerned about the cost of health care benefits for their employees. Measurement of quality and performance are considered important for gaining control of future costs. This requires accountability and visibility in the delivery of health care services. In this session, participants learn the issues large employers face with respect to increased health care costs, the goals and objectives of the value-based purchasing initiative and similar initiatives and the different methods used to implement these initiatives.

MR. JOHN P. COOKSON: This session is entitled "Purchasing and Quality Initiatives of the Leapfrog Group and Other Large Employers." My name is John Cookson. I am a consulting actuary with Milliman. Our other speaker is Jon Conklin, vice president of performance and measurement at Medstat. He is responsible for Medstat's research and consulting activity related to measurement and reporting of provider and health plan performance, quality improvement, patient safety, disease management and treatment effectiveness. This is the stuff that we need right now in this day and age.

He also oversees Medstat's role as a program administrator of the "Bridges to Excellence" program, a physician reward-for-performance program sponsored by large employers in several major U.S. markets. He is also a principal investigator of the Alpha Project, a physician recognition and

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

feedback program undertaken by the New Jersey Medical Society, and was instrumental in helping to design and manage the early phases of the California Cooperative Health Care Reporting Initiative now in its 11th year.

His research group, and I noticed there are no actuaries listed in this group, includes economists, policy researchers and program analysts, with projects ranging from evaluation to the Leapfrog Group Initiative, an assessment of patient safety data systems, the medical cost offset studies of new drug therapies and the design of National Senior Risk Reduction program. I think this is the next phase necessary to get control of the cost of health care in this country.

Our third speaker is a late scratch, so we each added a few slides, but we may also be able to end a little bit early for you, if you want to choose that option.

MR. JONATHAN E. CONKLIN: Thanks, John. I wanted to spend a few minutes talking with you about a couple new initiatives that are sponsored by employers that are also taking big strides forward in the direction of incentivizing and rewarding quality and patient safety. I do not know how many of you are familiar with the Leapfrog Group. Probably fewer of you are familiar with Bridges to Excellence. Both of them are getting a lot of visibility across the country in employer circles, and I wanted to raise your awareness of them.

One thing you probably have heard about is the current movement in pay per performance. Pay per performance is a simple concept. Reward providers for excellent care, which will provide an incentive for other providers to seek excellence and those rewards. A lot of pay-per-performance programs are currently being implemented across the country. A vast majority of them are sponsored by health plans and are focused on their own networks of physicians. I will talk to you about two programs that are sponsored by employers, and I think that in many ways they stand as examples of excellence in this arena.

Let me start by giving a little bit of motivation from the employer perspective. From the employer perspective, change is necessary. Employers' concern is about quality and safety. There are a lot of reports. Reports from the Institute of Medicine in the past few years have been strong in their documentation and their quantifying of clear patient safety problems and medical error problems, and at the same time employers recognize that costs are out of control. They pay $13,000 every day for 1,000 members. That is almost 10 percent more than it was a year ago, and a good portion of that is unnecessary.

As I mentioned, the Institute of Medicine has released a couple of reports in the past four or five years. The first one that most of you have probably heard about came out in 1999. It was called "To Err Is Human," and it made

a big splash in the media. It documented the high volume of medical errors that are common across the United States. They followed up with another report two years later, "Crossing the Quality Chasm." Both of these reports went out of their way to identify the significant quality and safety shortcomings of the U.S. health-care system, and the latter report recommended alignment between the payment policies and quality improvement. This is the background or the baseline on which most of the big employers in the country are trying to build and develop new programs.

From their perspective, the current system is in a state of gridlock. Purchasers are not buying correctly. Plans are not letting the provider value show through to consumers. Providers do not see the business case for reengineering, and consumers and patients are not yet in the provider comparison game. Transparency is necessary. You are going to hear that word a lot in this field and in this movement right now. The word "transparency" basically means that information needs to be open and available publicly to consumers, to health plans and to employers so they can make better choices with information about quality and cost of care.

From an employer perspective, looking at the work they have done trying to ratchet down costs and improve quality over the past few decades, they feel like the largest potential areas for health-care cost savings right now are at the provider level. If they can improve the effectiveness and the efficiency of care at the provider level, they can still achieve significant cost savings. The research shows that there is not a lot of room that they can play with on health plan administration or design. They did a lot of work in that area over the years.

The basic underlying concept, then, of this whole concept of pay for performance is that improved effectiveness leads to cost savings. By introducing incentives, care is going to be more effective, that is, there will be more preventive screening and more proactive care of populations through disease management and through the use of clinical information systems. This will result in healthier patients who have fewer complications. There are fewer medical errors. As a result, there will be cost savings in that these patients themselves will cost less to treat, and overall they will be on the work force and be more productive in generating revenue for the employers. Overall, this is a win-win program.

As a result of this line of thinking, two large employer-driven initiatives have been introduced to try to stimulate change in this direction. Both of them involve performance measurement and rewarding of programs that target health-care providers. The Leapfrog Group targets hospitals and at least right now focuses on three patient safety types of initiatives. I will talk a little bit more about these in a second. The first is computerized physician order entry (CPOE). An easy way to think of that is electronic prescribing by physicians. Then there is staffing of intensive care units with certified intensive care

professionals, and finally, evidence-based hospital referrals for high-risk surgeries.
On one side of the funnel you have Bridges to Excellence, which is a program that is also sponsored by employers, but it targets physicians and physician offices. Bridges to Excellence focuses on physician performance in the following three particular areas: diabetes outcomes, cardiac outcomes and the use of electronic systems and processes in the office by physicians. Both of these programs, Leapfrog Group and Bridges to Excellence, have some common features. One is that they both use a set of standard measures, meaning that all of the employers who participate in these, all of the physicians and all of the hospitals, use a common set of measures.

Each employer is not introducing its own set of measures. They all use a common set of measures. There are rewards being introduced to encourage physicians and hospitals to try to improve their performance on these measures. These rewards can be in the form of actual financial bonuses, and they can be in the form of nonfinancial types of rewards such as public recognition for high-performing hospitals and physicians. At the consumer or patient level, information coming out from public dissemination gives them the ability to voluntarily select, or employers can steer the selection of programs by employees by adjusting their co-payments and contributions. They have co-pay waivers and coinsurance.

On the other hand, physicians and hospitals react to these rewards by trying to improve themselves. That is the ultimate underlying framework for sustainable change that justifies both of these programs. Let me step back and give you a brief overview of each program in turn.

First, let me start with the Leapfrog Group. Right now, about 150 employers nationwide, most of them large employers, participate in Leapfrog. The underlying purchasing principles educate and inform employees, give them the information they need to make better decisions, make comparisons at the provider level, reward superior provider value and reward in a variety of ways. By adjusting contracts, co-payments and coinsurance, they can influence patient volume at the provider level. By introducing bonuses and rewards, they can introduce incentives, paying at the unit price level. Ultimately, like I mentioned a few minutes ago, public report cards have been introduced to make sure that there is public recognition of physicians and hospitals who are doing a good job.

Leapfrog Group initially focused on what it calls three tangible leaps. There are those of us who, when we first heard the name Leapfrog Group, thought it was kind of cute and funny, but I think the implication here was that these employers were getting fed up and tired of all the little, incremental steps that were being made. They wanted to make some giant leaps. It has been a popular initiative that is growing dramatically every day. In fact, Leapfrog Group, as I will explain in a few minutes, is also expanding beyond hospitals

and beyond the three measures, and we will see more and more evidence of this program over the next few years.

Here are the three specific leaps or measures that Leapfrog Group is implementing right now, and based on the literature, the research and the actuarial estimates that are quantified and published, if all hospitals in the United States adopt these types of systems, there are significant benefits in terms of lives saved or reduction in medical errors that could result. The first measure is the hospital should install computerized prescription systems. The second is the hospital should staff intensive care wards with intensive care specialists. Third, employees should have certain high-risk surgeries performed at high-volume hospitals.

If individual hospitals report on the third set of standards, they have to quantify how many surgeries they've performed in each of, I think, six areas over the past year. If, in fact, they do not hit certain thresholds, they have to attest to the fact that they are referring patients to other local hospitals that provide that surgery at that high-volume level. Why? Research shows that hospitals with higher volumes of those high-risk surgeries have much better outcomes.

You can see the employers were asking, "Do you want to do business with us as hospitals in these local communities? You need to report on this, and you need to tell us when you will start to meet these standards." Let me make a point here without going into details. Health plans and employers are both lining up and introducing rewards and incentives based on hospitals' achievement of the Leapfrog Group standards. For example, Pacific Business Group on Health places 2 percent of health plans' premiums at risk. They must meet targets to obtain the full amount.

IBM, PepsiCo, Verizon and Xerox are cooperating and pooling funds with Empire Blue Cross/Blue Shield to reward hospitals, and so on. A lot of employers and health plans out there incentivize hospitals to move forward. Each one of those three things that I mentioned requires a certain amount of investment on a hospital's part. In particular, CPOE is a pretty expensive thing for a hospital to invest in, and so these kinds of incentives help to build a value proposition at the hospital level to incentivize hospitals to make those kinds of investments and move themselves forward in that direction.

In addition to those financial rewards, I mentioned earlier public disclosure of the Leapfrog Group results. If you go home tonight, and you go to www.leapfroggroup.org, and you go down to hospital survey results on the left side, that link, you will eventually be able to put in your own location, your own area, and you will get a list of hospitals that have submitted their results to Leapfrog. The hospital names will show up. You can see how far along they are in implementing the CPOE system, and you can see what the circles mean along the side. Empty circle means did not even submit it. Quarter-filled circle means willing to report publicly but does not yet meet it.

Three of these hypothetical hospitals have not yet met the criterion. Half-filled circle is good, an early-stage effort in implementing the recommendations, and so on.
There is intensive care unit staffing, and then number of procedures. You can drill down on number of procedures and get a little bit more information on the six procedure categories as to what kind of volume a hospital is providing in that procedure in your area. If you are an employer, you might want to steer your employees to the hospitals that have high volumes because you know they have better outcomes.

Leapfrog Group is a national movement, but it has been targeted in certain regions of the country. The regions where it had been targeted are called rollout regions, and of those 22 rollout regions there are over 150 purchasers representing a lot of covered lives and a large amount of overall annual health-care expenditures.

As of April of this year, 1,163 hospitals nationwide have responded to the Leapfrog survey. A lot of hospitals are responding to it, but on some of the criteria they can respond, but are not yet there. They plan to be there in two years, or something like that. Sixty-one percent of the hospitals targeted by Leapfrog's regional rollouts have responded. Hospitals responding to this is a big, strong statement in favor of this program because it means that they recognize that there is purchasing power behind it, and they need to do something. Thirty-seven percent meet at least one Leapfrog standard for the safety practices. Although CPOE is small right now, it is growing fast. Twenty-four percent of the responding hospitals are fully implementing the intensive care requirement, and more of them are enlisting them next year. Consumers clearly have a choice in urban areas of hospitals with adequate experience.

Ultimately, employers are considering this program now, in its third or fourth year, as a major success. The numbers of purchasers that are signing onto the Leapfrog approach and the hospitals disclosing active health plan support are growing rapidly. In fact, a lot of the employers are now starting to require health plans to document and keep in their contracts with providers evidence that they are participating in Leapfrog Group. So this is starting to cascade down from employers to health plans and then to hospitals.

In addition, to close on the Leapfrog Group here, the Leapfrog Group initiative is also evolving. The next three stages—I try to avoid the words the next three leaps, but that is what all the Leapfrog Group participants term them—are coming. Leap number 4 is going to embrace all of the National Quality Forum's measures. I do not know if you are familiar with those. There are about 27 or 30 measures out there. There are a lot more measures that they will start embracing, and they will start requiring these hospitals to report all of the National Quality Forum's measures. A lot of them are clinical and quality-oriented. A lot of them are safety-oriented.

For leap number 5, they will start focusing, much like Bridges to Excellence is right now, on clinical office systems, meaning clinical information systems in the office, the use of disease registries and the use of electronic medical records in a physician's office. That will be an important fifth leap. Leap No. 6, which is probably at least one or two years out, is to start to introduce health plan performance criteria. It will no longer focus on providers only. It will start to focus on health plans as well.

Let me shift gears now. We have been talking about hospitals. Let me talk about a program that focuses on physicians and physician offices. Bridges to Excellence is an initiative that was started off by four or five large employers. GE, Ford, UPS, Procter & Gamble, Verizon and Raytheon are the core group of large employers that put their heads together and also engage the support and input from large provider organizations like a couple in Boston—Partners and Leahy—and several large health plans—Tufts, Harvard Pilgrim and others—to try to come up with a program that allows them to introduce incentives for quality at the physician and physician office level.

Bridges to Excellence is a multistakeholder approach to creating incentives for quality. Its mission is to improve the quality of care through rewards and incentives that encourage physicians to deliver optimal care, but it does not stop there. It goes a step further and introduces rewards and incentives, encouraging patients to seek evidence-based care. I will talk about that in a little bit. It is the only program that I know of out there that is a collaborative effort across employers and that tries to target employees and their dependents, as well as the physicians they see.

I think I mentioned earlier that Bridges to Excellence focuses on three different program areas: office practices or systems, diabetes care and cardiac care. The program has rolled out in selected markets, and I will identify those in a few minutes. All of the program costs are paid by the participating employers. No health plans are paying anything, and no consumers are paying anything. Here are the three programs that I mentioned. Physician office link (POL) focuses on practice sites. You might think of a local group practice of five, six, 10 or 12 physicians as a practice site. That practice site probably has certain office systems, practice management systems and processes that it uses. This program focuses on those. It has a maximum annual reward of up to $50 per patient that that office is treating, per patient that is covered by one of the participating employers in the local area.

The diabetes care link program targets individual physicians who are primary care physicians (PCPs) or endocrinologists and have patients with diabetes and patients who are associated with the employers in the local community that are participating in the program. The program focuses on an increased preventive screening and improved outcomes for patients with diabetes.

The cardiac care link is the same kind of focus but again focuses on patients with cardiovascular disease and cardiac care. Both the diabetes and the cardiac programs focus on individual physicians and have a maximum annual reward of $80 per cardiac care patient associated with one of the employers. Let me step back. What does that mean when I say, "associated with one of the employers?" If a physician sees in his practice 100 diabetic patients, it may be that 30 of those diabetic patients are employees or dependents of employees of five employers who happen to be participating in Bridges to Excellence in the local community. Those 30 qualify the physician for up to $80 per patient, or $2,400 in rewards that year. That reward is just for the diabetes program. If physicians are also able to show that they have some office systems, they are able to get more reward, and I will show you that in a second.

At Medstat, we are part of the Thompson Company. Medstat is the general contractor for Bridges to Excellence. The National Committee for Quality Assurance (NCQA) is a key partner in that it is responsible for all of the measurement of physician and officer performance. Physicians and offices fill out application forms with the NCQA and send them in. WebMD manages the patient or consumer Web site where diabetic patients can go and self-manage their own care.

The NCQA has physician recognition programs that are labeled a little bit differently from Bridges to Excellence, but these are the programs the physicians go to, and you can see that under the physician practice connection. You can see that the measures in that program are looking at patient safety, electronic prescribing, electronic health records, care coordination and disease management, whereas the diabetes, physician recognition and heart/stroke recognition programs look at both process and outcome measures.

I do not know if you are familiar with these types of tests. HbA_1C is a hemoglobin test. LDL is a test for low-density lipoprotein cholesterol. There is blood pressure testing. We say "tested and controlled" here. That means that the actual test results are documented and submitted as well. A practice or a physician gets a better score if a larger percentage of diabetic patients maintain lower levels of these danger signs. If they are effective in achieving good outcomes, those physicians achieve higher levels of performance and get higher rewards.

The program has rolled out in three different areas. Cincinnati and Louisville, Ky., are pretty close together, and the programs were rolled out in both of those communities at the same time last year. Boston was rolled out in February, and the capital region of New York—Albany, Schenectady and Troy—was just rolled out in May. Cincinnati and Louisville started with just the diabetes care link. Boston has rolled out the diabetes and the physician office program. Albany and Schenectady have now rolled out the physician office, diabetes and cardiac care programs.

The reason why this has progressed this way is that the POL program was developed partway through last year. The cardiac care program was developed at the end of last year. There was a huge amount of interest in other markets across the country. I am spending a lot of time talking with employers and business coalitions in those other markets, and in those other markets they will implement most likely all three of the programs. The three programs are intertwined and linked. A number of prominent employers and plans are represented in each of these communities, and what is interesting to note is the total number of covered lives represented by these employers.

In Cincinnati and Louisville, the 200,000 covered lives that those participating employers represent are approximately 10 percent of the population. That is a huge penetration of a program in a local market, and that whole concept, number of covered lives, is critical because if a particular physician is getting rewarded based only on the count of covered lives that he see, you want those rewards to be big to incentivize physicians to change their behavior.

Therefore, you want a lot of employers that tend to have their employees clustered in the same areas of the urban market so that they see similar physicians, and those physicians' rewards can be high enough to incentivize them to change their practices. The underlying concept of Bridges to Excellence is that employers need to commit within the market. They need to collaborate. Probably four or five employers need to decide that they will jointly start up this program. They agree to the principles.

By the way, Bridges to Excellence is incorporated as a not-for-profit organization. It has its own bylaws and its own participation agreement. Employers have to commit by signing up to this program and agree that they will use those measures, principles and processes. They need to represent a critical mass in the market. We have a rule of thumb that says that any market, unless it is a small market, should probably not think about participating in the program unless collectively the employers represent at least 50,000 covered lives. That does not mean 50,000 employees. Usually the ratio of employees to covered lives is about 2.5 or 2.4 covered lives per employee.

It is important that we have enough critical mass in this program to be able to make a difference at the physician level. The employers need to engage their plans because the health plans have the data that can be used to count how many patients are being seen by each physician. Based on those counts, which Medstat then puts together by assimilating the data across these plans, we notify all the physicians—the PCPs, the endocrinologists, the heart specialists and so on—in a local community about what their reward potential could be. If you participated in this program, you could get up to $8,000 in reward each year for the next three years. The physicians and their practices

then go to the NCQA's Web site. They pay an application fee. They collect the data on their own practices. They submit their applications.

The NCQA scores those and recognizes those practices. "Recognized" is a formal term here. They post those on NCQA's Web site. They let the program know what's going on. We post them on the program's Web site, and we administer a rewards program whereby an individual physician or a practice gets a single check. Now all the employers that are responsible for those covered lives that that physician is seeing are going to have to pay into that, but as their payments are consolidated, a single reward check goes out to that physician or the practice from Bridges to Excellence. We had one practice in Boston, I think, qualify for a $45,000 reward.

That is a multiphysician practice, but that is not peanuts, and that will motivate other practices to sit up and take notice. Any fees that they have had to pay to the NCQA are reimbursed by the employers as well. Individual physicians can earn up to $20,000 annually. A group practice that has 10 or 20 physicians can certainly earn a lot more than that. There is no limit other than the individual physician level. I said physician rewards are based on a count. Rewards are $80 for each diabetic or cardiac patient and $50 for each overall patient, regardless of disease.

Here is an example of a reward for a hypothetical five-PCP practice that has 1,000 patients covered by the program. One thousand patients is a lot for five PCPs. A typical physician has perhaps 1,500 to 2,000 patients in his panel. One thousand patients constitute 10 percent of the practice that consists of employees and covered lives of these employers. Say that these are big employers that happen to have their employees clustered in the same area where these physicians are practicing, and assume that we see, in most of the data, about 3.5 percent are identifiable based on claims data as having diabetes and about 2.5 percent are similarly identifiable as receiving cardiac care.

Assume that this practice meets maximum performance goals. This practice would receive a total of $54,800 in rewards each year for three years. I am not going to go into the math here. We have $40 on this first line. There is a withhold of $10 on the POL reward until the doctors demonstrate that they have used those systems, the electronic medical record or the disease registries or electronic prescribing to perform better on diabetes care. Doing POL is not enough. They have to do POL on diabetes or cardiac to be able to qualify for the extra $10. Of course, the purchaser is motivated because the patients are going to be healthier, and they will cost less. There is a real return on investment here, a financial return on investment that is quantified for employers. That is the reward side. That is the physician engagement side. Let me briefly touch on the consumer engagement side of this program.

Bridges to Excellence engages consumers to better manage their own condition. Chart 1 is an example of what the Web site looks like. This is not

exactly what it looks like. This is an early template that was used as a guide. Consumers create a profile to establish a baseline here. What is their body mass index? What are their blood sugar levels? They set goals for themselves. I want to lose this amount of weight in this amount of time. I want to exercise every day. I want to bring my blood sugar levels down to this in six months. They set their own goals. They use a journal to log their progress. It is all confidential. It is their own little Web site where they log this information in, and it also gives them information about how they should dialogue with their physician, what things they should ask for, and what things they should do.

They can earn rewards by answering self-care questions. Here is an example. Did I monitor my blood sugar level three to four times per day? Yes. You get 250 points and so on. The big one is if their HbA_1C level happened to come down by a full percentage point from a prior reading, they get 5,000 points for that. Now this is all self-report, but the rewards are not huge. The whole point here is to motivate the consumers to stick with it.

Bridges to Excellence worked with consumer focus groups back in the fall of 2002 and asked, "If you had this kind of tool and this kind of Web site, would you use it? What would make a difference?" They said that a little bit of an incentive would help. It does not have to be big but enough to make it worth staying in the game. That makes it a sort of game. When you achieve certain thresholds, you get 5,000 points. You get a $5 electronic or e-mail coupon that you can then cash in for purchases through a vendor by the name of Diabetic Express for diabetes-related products. Even the rewards help to better manage the condition.

In addition to those two sets of rewards—physician rewards and consumer rewards—Bridges to Excellence is engaging consumers through the use of public report cards. Chart 2 is a mock-up of the report cards. Those report cards will go online probably in the next couple of months, but this identifies individual physicians, how they're doing on some of the measures, and it gives those physicians an opportunity to give more information about their own practices so that consumers will know a little bit more about them.

Ultimately, with patient experience of care, consumers are encouraged when they go to the Web site to identify their physician and to fill out a survey on their own experience of care. There is a Harvard-developed patient experience of care survey that is used by a lot of federal agencies and so on. Once the sample size gets up to 10, the results are quantified on this Web site for future viewers of that physician's practice. Patients can then see what other patients have said about their experience of care with this physician.

I do not want to pretend that Bridges to Excellence is a snap. There are some operational challenges. Working with the employers is pretty easy. Probably the bigger challenge has to do with dealing with health plan data. I do not know if any of you have had to work with health plan data, but health plan

data tend to be messy. Maybe they are not as bad on the financial side, but trying to use them for clinical purposes, trying to identify patients with certain diseases and trying to identify which physicians those patients are seeing is almost impossible. We have to work closely with those plans, and those counts that we generate are critical to this program because they dictate the size of the rewards.

We have also found that it is important to ensure that the physicians in the local community are actively aware of the program. A single mailing is not enough. We have started to institute a newsletter. We have follow-up mailings. We engage the medical societies. We are trying to engage some of the specialty societies so that they know about the program and that it is credible. Physicians hear about a lot of these programs, and they do not trust that anybody will get any money out of it. They think it is a ploy. When rewards are given out to physicians, we try to make sure that they are publicized. We try to make the first rewards in a community into media events where the press picks them up, and there are articles. Is there a question in back?

FROM THE FLOOR: Are the rewards annual or are they a onetime thing?

MR. CONKLIN: No, the NCQA implements two different programs for Bridges to Excellence for diabetes and cardiac treatment. Physicians can apply for one-year recognition by reporting a smaller set of outcome measures, including HbA_1C, LDL, blood pressure readings and that type of thing. If they qualify for one year, they will have to reapply a year from now if they pass this year. They will get a reward this year but are going to have to reapply next year. We have not had any physicians yet, or practices, apply for annual recognition. They have all applied for three-year recognition. They have to report about 10 or 11 measures. You would think that the reporting burden is a little bit higher, but they do not have to go back and recollect the data next year. They will qualify for three years, and they will get an annual reward each year for three years. With that $54,800, if that practice qualified for three years, they will get it again next year and the year after.

The POL is an annual remeasurement program and is unique among the three programs. It requires that practices show a little bit of improvement next year to qualify for the same level reward. They cannot simply say they had the same program again. If they say they have a disease registry for these three diseases and still have not gotten electronic medical records or CPOE and are not doing much on disease management, their reward would probably drop down the next year because you have to keep showing improvement to be able to stay at the same reward level. Are there any other questions about rewards?

FROM THE FLOOR: It seems to me that a lot of these large companies also have to be management vendors.

MR. CONKLIN: Yes. Most disease management programs look at the whole spectrum of care, but they focus on patient improvement, and the one area of overlap that we see is that they also have a patient self-care or self-management component to the program. A number of employers have opted out of the patient engagement or consumer engagement portion of Bridges to Excellence because they have an active disease management program that already does that. On the physician reward side, one of the things that the employers had decided early on in this program, and it might not be the case three or four years from now, is to be liberal in the dissemination of rewards.

They want there to be adequate incentives. They understand that there is some overlap. A question that has been raised in a lot of audiences involves a patient who can see a lot of physicians during a year. Do we try to identify one physician for that patient? The answer is no. The employers recognize that not all physicians that see that patient are actively managing his care, but they are willing to make a small error in the liberal direction to be able to encourage enough incentives out there in the marketplace.

Let me start wrapping up by telling you a little bit about the evaluation and the results of Bridges to Excellence. Before Bridges to Excellence was introduced in these markets, few physicians had obtained recognition for meeting NCQA performance standards. I think in Cincinnati something like eight or nine physicians total had gone through the NCQA's program. Small percentages of the employer's covered lives were being treated by those recognized physicians. On the positive side, most physicians believed that NCQA program recognition was a good thing. It was a good indicator of quality.

After the program was out for the first six to nine months, in Cincinnati we saw a threefold increase. Already there are over 40 recognized physicians in the program. It went from about nine up to 40 already in the first six months. We also see a lot of applicants. They are lining up. A lot of group practices are interested. In Boston, there are probably 25 or 30 group practices that are in the application process right now, and that is where we think we will have a huge impact. More than $100,000 in rewards have been paid. In May, all $100,000 in rewards were paid, and these rewards are paid on a quarterly basis to the physicians who were newly recognized in that quarter.

There has been a lot of interest in other markets. I would say that probably over the next year, we will see between five and 10 new markets introduce this program, and it is important that CMS is introducing a demonstration program. It's one of the demonstration programs that were authorized by the Medicare Modernization Act. It is called Care Management Performance, a program that will be patterned directly after Bridges to Excellence with the same measure and same level of rewards, but implemented by CMS. Think about a physician's practice. Ten percent of the patients may be covered

lives of the local employers, but how many of the patients are Medicare patients? Now we are talking about big-time rewards that will incentivize physicians, especially in those markets where these two program overlap, and they are going to overlap in at least two markets.
This program, by the way, is going to be introduced. The first phase is going to be launched in September. Preliminary estimates of cost savings have been conducted by two of the participating plans, and for diabetes care they have specifically tried to differentiate for endocrinologists and general PCPs. They have tried to differentiate between physicians who are recognized by the NCQA for their performance and those not recognized, and you can see the physicians recognized by the NCQA, meaning they are the higher performers, happen to have lower average costs per patient than the physicians who are not recognized. I know this is a preliminary thing. There are questions about cause and effect and whether or not other factors are controlled for, but this is an active part of our evaluation as the program is going forward.

What's next for Bridges? I think I mentioned earlier with regard to Leapfrog Group the same thing is happening in Bridges to Excellence. Bridges to Excellence purchasers are starting to write into their request for proposals for health plan contracting that those health plans need to adopt and work on this program. Employer coalitions, as I mentioned, are interested, and we have been approached by a lot of them about how they can roll out the program in their markets. I mentioned the CMS demonstration. Ultimately I think the next step that we are starting to see employers interested in is connecting quality improvement with cost reduction and being able to prove the return on investment.

Both of these initiatives confirm that incentives do motivate physicians, practices and hospitals to improve and move in the direction of quality improvement. Bridges to Excellence success factors include a critical mass of employer participation, active employer and health plan participation in each market, a high level of awareness among the physicians, engagement of large physician groups and integrated delivery networks and visibility of physician recognition to consumers. If you have any questions about the Bridges to Excellence program, I mentioned the www.leapfroggroup.org site. The Bridges Web site is www.bridgestoexcellence.org, and Medstat is the general contractor. If you are interested in asking questions about the program, send e-mail to bridgestoexcellence@medstat.com.

MR. COOKSON: That was a lot of excellent information. It seems like these large employers have not heard our keynote speaker speak today. He seems to think they should not be so concerned about the cost to do all this.

This was an excellent overview of what I think some of the large employers are thinking and doing. I want to try to show how some of these types of factors would apply in the risk-taker's environment. From a financial perspective, how can you look at these things? Earlier on, the employers

were calling them value-based purchasing, looking at them as integrating quality, efficiency and cost. As you can see, most of the carriers or most payers do not have sufficient claim data on their own to evaluate statistically solid information by provider. What you see is a lot of pooling of information, particularly in the areas of out-of-network. Even on in-network, in a lot of cases they do not have sufficient claim detail.

If we go back in terms of historical perspective, with the gross domestic product flattened out in the mid-'90s, managed care probably went a little too far with the wrong approach with rigid controls, restriction of choice and expensive administration. I see the evolution, as a lot of what Jon has been showing, as using technology, not just data, but getting the information out of the data to be able to do provider evaluations on the cost, the quality and the efficiency.

You have all heard probably a lot of the studies on the variability of practice patterns and small area variations, but even within the areas there are provider-specific variations. The difference in the cost between those that are recognized and not recognized is an example of the variations in cost between providers. That whole issue is tied to the supply-induced demand, particularly for specialty services, and does not follow evidence-based practice. I think that a lot of those things are drivers of some of our excess costs in this country, and I believe there are excess costs. In effect, from an actuarial pricing perspective, area cost factors are not precise enough. Provider-specific pricing factors must distinguish between them on an apples-to-apples basis, and the tools must be applicable in the actuarial and financial cost estimates.

I am going to try to blend for hospitals some quality measures, some efficiency measures and some reimbursement or cost measures. I will start out talking about the quality and patient safety indicators to set the stage for the basic quality measures, and you can add additional ones. You could add the Leapfrog measures. Medicare is coming up with its own program of incentives for hospitals. In fact, I believe beginning next year those hospitals that do not report or do not sign up for their quality programs will receive less of an update in their diagnostic-related group (DRG) payments. This is a big movement that is taking shape.

On the efficiency side, the hospital inpatient side, we have a hospital efficiency index that measures the efficiency of delivering inpatient care. On the cost side, the charge side, we have case mix–, severity- and geographic-adjusted charges, more or less like a relative value scale. This allows, with simple application of average discounts or reimbursements, comparison of the reimbursements by carrier and hospital.

We will start with the inpatient quality and patient safety standards. The Agency for Healthcare Research and Quality has contracted with Stanford and the University of California–San Francisco, I believe, to develop this

software. It is freely available. You can download it through the Internet. It applies to administrative hospital data. There are a number of quality indicators. On quality indicators, there are 13 mortality indicators, nine procedure utilization rates, and some of them are similar to or are the same ones that Jon is talking about, and then volume of procedures.

On patient safety indicators at the hospital level, there are three indicators of acquired infections, seven indicators of postsurgical complications, two indicators of medical accidents, four indicators of mortality and other services and four indicators of birth and obstetrical trauma. There are 20 individual patient safety indicators all together.

There are additional aggregations at the geographic area level and some prevention quality indicators looking at area utilization rates for 16 subcategories. We have taken these measures, applied them to administrative data and then gone a little farther by taking national norms by case mix and severity to use as a benchmark so you can compare how any particular facility that you are looking at compares to the national average.

We are not trying to make a hospital look like the average hospital. We are taking the national norms by case mix and severity and using that to compare that hospital with its own mix of services. If you are just using Medicare data, you can adjust the volumes to approximate the impact on full volume to get from just the Medicare data to a total hospital facility throughput rate.

The reason we standardized using Medicare admission data is because it is clean and audited data with consistent reporting across all the states. We have tested for up and down coding on the data. We found no correlation to the quality results, but we have found that the quality measures that we look at here explain about 20 percent of avoidable length-of-stay days, even before accounting for the differences in procedure volumes, which would probably explain additional impact on the avoidable length-of-stay days. These are results from actual hospital data in one large metropolitan area. This is not all of the hospitals in the area; it is just the larger hospitals.

For illustration purposes, we aggregated four of the patient safety indicator categories in Chart 3. There are several different measures in each of those categories: the postoperative complications, the medical accidents, acquired infections, the mortality and any other category. If the hospital was between the lowest 15 percent and the highest 15 percent in that scale relative to the national average, it was considered average. If it was below; on the low end; had lower quality; or had more errors, more infections or more complications, it was ranked as an L. If it was in the better 15 percent, it was ranked as an H.

In the later exhibits you will see that we collected this information for display purposes. Hospital A we will show as three L's. A hospital that had all A's we

will show as A. Hospital L, for example, has one H and three A's. We'll show it as a one H so you can tie back the other measures to the quality indicators.
On the hospital efficiency side, we compare inpatient utilization patterns to national benchmarks. The benchmarks are derived from actual hospital performance. They are adjusted for case mix and severity. We developed models for statistically significant variables, all procedures, diagnoses, age, sex, source of admission and discharge disposition, and we also look at any of the significant cross-correlations and adjust those variables as appropriate for cross-correlations and the variables that come out as significant.

We summarize this data within hospital by admission type, by specialty and by body system for surgery, medical, psychological, substance abuse and so on. We also have separate measures for invasive cardiology and neurosurgery and at the all patient refined diagnosis related groups* (APR-DRG) and severity level.

Again, using Medicare data almost all hospitals have a uniform data set. Children's and maternity hospitals are underrepresented. We have also applied this data in the 18 states where we have commercial data or complete hospital reported data, and you could use them to supplement the maternity and neonatal data in those states. We have also found that there is a high correlation between the Medicare performance on the efficiency of managing the length of stay (LOS) and the commercial with over 90 percent correlation on the medical-surgical cases. Avoidable LOS days nationally average about 36 percent. Some of the better, more efficient hospitals get below 10 percent. They tend to not be good at everything. You look by specialty. You will find they may be good in orthopedics and in cardiology but may not be good in neurology. There tend to be some areas within the hospitals, even the better hospitals, where they are not efficient.

In terms of avoidable admissions, we have a similar measure that we use that reflects unnecessary admissions and admissions that would be considered necessary but that could be avoided through appropriate ambulatory management before getting to the point that they have to be admitted. To go back to the process in a little more detail, the length-of-stay process groups the data by DRG and severity, removes the extreme length-of-stay outliers and also removes early deaths and discharges. We do not want hospitals to look good because they have a lot of early deaths and early discharges, such as people leaving against medical advice. For the over 90 percent of the admissions remaining, we do a stepwise regression using all the variables mentioned earlier, and one of the key variables in that model is an efficiency variable for each hospital.

For example, we find the typical regressions within an APR-DRG severity combination are usually explained from 70 percent to over 90 percent of

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variance for most of the models. For low-volume groupings, we might group some of the severities and then use that as one of the variables. We identify some of the diagnoses and procedures that are indicated as quality problems, some of these acquired infections and so on, and then we exclude those when we do the benchmarking and what is allowed for the hospital because we cannot allow these things to be counted as appropriate lengths of stay. They explain differences in LOS, so we exclude them when we do the analysis so that a hospital does not get credit for, in effect, having higher infection rates and higher surgical mishaps.

We also perform a statistical analysis of the efficiency overall of the hospitals for each of these categories and identify those that are statistically better than average and whittle that down to a statistically identifiable best or most efficient practice. We rebase all the results to the benchmarks, and using that, we use that differential between the actual performance of the facility and the benchmarks that we have chosen as the avoidable LOS. When you get down to that level, even the benchmarks have avoidable days, because it represents a range. Because we have a high to low within the benchmarks, we use the average, so that some are performing at better than average there. They all do not have 100 percent best performance, so there is still even more room than what is even developed in this. Again, as I mentioned earlier, there is a greater than 45 percent correlation between the lower quality measures and higher avoidable lengths of stay.

In '01 we had more than 580 different categories that we were measuring or developing models on for Medicare, as shown in Chart 4. Among these hospitals, they had at least 20 cases that would fall within the statistical confidence levels of the benchmark, and in that case, in the '01 data. I think they are still up there in the '02 data. I have not updated this chart. Sarasota Memorial Hospital had 172 within the statistical confidence levels of the benchmark, and then it drops off, through the University of Virginia and so on.

If you will notice, there are a lot of well-known, respected facilities in this list. Even when you get down below seven, in the top 20 you've got University of Massachusetts, Cleveland Clinic, the Mayo Clinic in Arizona, University of North Carolina, Duke, Vanderbilt and so on in the Top 50. There are a lot of well-known, well-respected institutions that are achieving, at least in a number of the benchmarks, within a statistical level of the benchmark.

You can look at this over time, and you can see performance change. I have an example of an actual hospital. We went back and tracked its data from baseline. It had hired a clinical consultant beginning in late '97 to improve its efficiency using protocols, and we went back and looked at its avoidable days in LOS for medical-surgical a year before the baseline. The U.S. average in '96 was 36.2 percent avoidable. This particular hospital had 32.3 percent at that time. It had about a 3.9 percent advantage compared with the U.S. average.

In '97, toward the end of the year when the consultant came in to work on this program, it had improved slightly to just over a 5.5 percent advantage relative to the U.S. average. You can see dramatic improvement after that time in the performance of the avoidable days because of LOS. While it dropped to 22 percent, 16.5 percent, 13.1 percent and 12.4 percent by '01, the U.S. average dropped only moderately during that time, down to 29.8 percent, so that, in effect, the advantage of 4 percent over the U.S. average increased to about 17.5 percent over a four- to five-year period. That is a significant impact.

As I mentioned, the benchmark hospitals are not efficient at everything. There are usually some inefficient specialties where they could use some improvement, and even the benchmarks can improve. We find over time that, if you have an optimal recovery guideline of a two-day stay for something, you might find that the benchmark hospitals might be at two-and-a-half days, with half of their cases coming in at two and half coming in at three days, and then over time they might move up to 80 percent coming in at two days and only 20 percent coming in at three days, so there is a process improvement going on there.

Chart 5 is a color representation of where the days avoidable because of LOS are in comparison to the benchmark. The national average here was 34.3 percent. Blues are good. Pinks and reds are relatively average. Greens need work. New York, Mississippi, Louisiana and Miami are, as you can see, high areas in terms of LOS. The Northwest and some of the Mountain States tend to be on the more efficient side, and Wisconsin sticks out, as well as some of the areas in Florida.

On the admission-appropriateness side, we do the analysis by specialty by major diagnostic category, separately from surgery and medicine, and use unavoidable admission type as baselines. These include transplantations, surgeries to repair ruptured aneurisms, open reductions of broken bones, other major surgeries and severity 3 and 4 cases, which are the high-severity cases that do not result from quality problems that the hospital created. We do some statistical analysis of the ratio of the avoidable to the unavoidable, look at benchmarks using the lowest ratios and split it by high-volume hospitals versus low-volume hospitals and by teaching institutions.

If we take the combined efficiency of all the days avoidable, including avoidable admissions and length-of-stay days without double counting, we have the representation of the geographic areas (see Chart 6). The national average is about 54 percent of the days that are avoidable. Again, the blues are the better areas. The reds and pinks are the average. The greens that you can see a lot of in the South are high levels because they have much higher admission rates and avoidable admissions in terms of where the potential excess days are.

We talked about the quality. We talked about the efficiency. The third item is the charge and the reimbursement analysis. We are trying to compare reimbursement levels between providers. We need to adjust for homogeneity of services so we can do it on an apples-to-apples basis, and we need to recognize geographic cost differences between providers. We have standardized to a relative value scale adjusted by case mix and severity. On the commercial cases, we have over 1,400 commercial categories because you have a lot of maternity and neonatal cases that you do not find in the 1,270 Medicare combinations. Some do not have a lot of volume, but that is the total potential categories available.

For the geographic adjustment we used the Medicare cost factors for capital and labor, and we have looked at it on both a per-day and a per-case basis. I like to use the per-day because you could get distortions in the results on a per-case basis if you have one or two long stays in a hospital owing to certain complications, so we look at it on a per-day basis and then adjust for the efficiency of their LOS, which is then adjusted to a per-case basis.

Type of hospital is important in that it affects the differences in charge structures. Long-term-care hospitals, rehabilitation versus acute care, and psychiatric and substance abuse hospitals versus your traditional medical-surgical hospitals can have differences in their charge structures that need to be recognized, but the point is getting down to the relative charges by provider. We have also looked at the Medicare versus commercial. Simple regression equations can explain 94 percent of the variance between the commercial charges and the Medicare charges per day. Adding a few other variables could improve that even further so that basically it is the same charge master. The Medicare is indicative of the commercial charges and vice versa.

For additional information, if you want to know some of the things behind some of the differences in hospitals' charges and cost structure, you can get from the Medicare data what they pay for indirect medical education. This gives you an idea of the cost structure of teaching involved in certain hospitals, and the disproportionate share where they have a lot of bad debt or a large Medicaid population. It also gives you an idea if they are trying to get more from the commercial insurers. You can get an idea by looking at disproportionate share, the reimbursement levels from the Medicare data.

As for outliers, this is a game that has been played by some hospitals. Medicare has finally caught on to it and made some substantial changes in the past couple of years. In fact, in some cases some hospitals were generating more than 100 percent additional payment beyond the DRG payment itself from the outlier payments. The question is, as a payer, how much are you willing to pay for these items? You can also use Medicare discounts as a benchmark in terms of comparison of what you might be paying. Chart 7 shows the relative charges per day with the same schematic as before. The high charges are the greens, and here California sticks as do

New Jersey and Florida. With the blue, a lot of the Midwest and more rural states end up being more modest in terms of case mix–, severity- and geographic-adjusted charges. Alaska has a high geographic adjustment, which brings it down to a low level.

To give you a feel for what's produced from this, in Chart 8 I picked out from '01 the highest charges for medical-surgical care from the top 10 or 15 hospitals. I did not identify the hospitals to protect the guilty. These hospitals all had at least a couple thousand admissions. The top hospital's case mix–, severity- and geographic-adjusted charge per day was almost five times the national average. Its actual average charge per day for medical-surgical cases was just under $19,000 a day. The range here was basically from just above $8,000 to over $18,000 a day, and these hospitals range from 2.86 to almost five times the relative charge per day, not taking into account their avoidable LOS.

The next to last column shows their avoidable length-of-stay percentages. When I adjust for that, putting them all on a common basis, most of these were less efficient than average, and so their actual efficiency-adjusted charge per days mostly went up. I think a few of them went down. Hospital A actually went above five times the national average when adjusting for both efficiency of LOS and its relative charge structure. You can do a similar thing for outpatient services. Some of the services are much easier than inpatient services—certainly laboratory procedures, X-rays and so on. It is not as easy to compare intensity and mix of services and combination of services. However, now you can use the Medicare Ambulatory Patient Classifications to bundle some services and look at common area-wide prices and develop some apples-to-apples comparisons.

Basically we did a similar thing as for the inpatient side and looked within each area. I will show you examples of how you can then take this into account in terms of what your reimbursements are and how it fits within the market. I put in an intensity mix factor into the outpatient charge index or comparison. It is derived from inpatient charges, excluding the room-and-board charges, which implies a similar physician pattern of using tests and ancillary services. I am not sure I would use it straight up at 100 percent, but it is an indicator, at least in that facility, of how much it uses ancillary services.

Here in Chart 9 is your first example: the 10 or 15 hospitals I showed before with the quality measures. This is the inpatient charge and reimbursement analysis. Hospital A had the three low-quality indicators and one average. Hospital B had two low and two average indicators, and so on. These are all large hospitals in one relatively large geographic area. Hospital A's charges were 324 percent of the national average. The relative charges are all based relative to the national average. The discounts for these hospitals are not exact, but they are close. They were rounded down, so the actual discounts

of this payer were slightly higher than shown here, but these are all within a couple percentage points of the actual levels.

We then took the discounts and applied them to the relative charge to identify the relative reimbursement, but in doing that we wanted to index to the hospitals in this facility or in this area so that we could compare them all with each other and take out the difference from the national average. We indexed them all to hospital K. We set that equal to one. Relative to hospital K that was average on the quality, the reimbursement for hospital A was 157 percent; for hospital B it was 149 percent. Hospital L was 85 percent and had slightly higher quality. Again, that is without the avoidable length-of-stay adjustment.

If we take LOS into account, as shown in the next-to-the-last column, apply that to the results and then reindex, with hospital K as one again, it means the reimbursements to hospitals A and B, which were lower in quality on average, were almost 70 percent higher than those to hospital A and certainly higher than those to a lot of the other hospitals on the list. This carrier had never looked at the data in this way, and this is what is going on out there in the market. This is the variability that we are talking about.

On the outpatient side, we performed a similar analysis, again with the same quality indicators looking at the relative charges, the hospital discount and the relative reimbursement. If you use the intensity measure that we came up with, and maybe we would temper that by 50 percent, you still see a significant range of reimbursement levels going out between the various providers. If you look at tiers of providers in terms of additional benefit levels or higher co-payments or something, this is the kind of information you need to get, and you can get this from public data sources. You can derive this data from publicly available data sources and apply it into your processes.

One of the things that I think has become important in the networks of today is the out-of-area distribution. You could obviously use this kind of information for judging the providers in your network, but I think a lot of people are getting hurt on the out-of-network cost and reimbursements because typically you have a penalty. If you look at the differences between the reimbursement levels and what the charges are, if you reimburse based on anything close to charges, out of network is costing you a tremendous amount of money, particularly if you have an out-of-pocket limit. On the big cases it can cost you a substantial amount.

Based on the analysis of these relative charges, I have taken here medical admissions, the fifth percentile. The lowest fifth percentile is about 53 percent of average charge. The 100th percentile on medicine admissions is 513 percent of average charges. In the state of Maryland, which controls charges and in which hospitals make a profit, its average charges, adjusted for case mix and severity, on this same scheme are 50.8 percent of the national average. You can begin to use this kind of information in terms of

interpreting what you might want to use for reasonable and customary-type reimbursement levels. They are similar across different patterns. Some of the psychiatric and substance abuse levels get even higher than the medical and surgical relativities.

In terms of interpreting that for a reasonable and customary charge, I took two hospitals. A Philadelphia teaching hospital's relative charge was 4.15, and a California teaching hospital was at 1.62. In terms of applying a reasonable and customary limit, if you pick the 60th percentile, for example, that would say that the Philadelphia teaching hospital would require over a 76 percent reduction on its charges for reasonable and customary. On the California teaching hospital, it would be just under a 40 percent reduction. If we use the Maryland results with controlled charges, and we know what the profit margins are in the state and recognize that there is a higher markup on commercial than there is on Medicare data, if we use the 111 percent average markup on the state of Maryland's relative charges, that would increase its 0.508 index on medicine by 11 percent.

In that case, using that benchmark of 0.56 would say that the discount on the large Philadelphia teaching hospital for reasonable and customary charges would be 86.5 percent, and on the large California hospital it would be 65.4 percent. You can do as many different thresholds as you want in terms of determining that, but I think a lot of payers are losing a lot of money or it costs them a lot without having some reasonable and customary programs in their hospital reimbursement. You can apply similar things to outpatient charges.

What do we do now? Analyze these to classify the providers. You can use them in benefit design, contract negotiation and network selection. Employee education, as Jon mentioned, is important. They need to know. They do not know these things. They use the providers who they think are the best, but they have no idea what the relative costs are. You can integrate it with other Leapfrog data and other sources to Medicare quality information that will be coming out. On the quality side you need to think through how you rank this. How do you put this together?

I have seen some who want to use a continuous scale, that somebody is 5 percent better than average, and somebody is 5 percent worse than average. I do not think that makes a lot of sense. I think you are looking at most of the providers being average, and you need to identify those that are statistically better than average and those that are statistically poorer than average. Maybe you do that by looking at quartiles or something like that, but you need to think through the process of how you want to use it in the way you run your business and with your clients and your users.

In terms of the price and efficiency levels, you have to consider relative reimbursement for tertiary care and separately for acute medical-surgical care, for psychiatric care and substance abuse and for other specialty

hospitals; you need to think about the efficiency adjustment; and you need to look at inpatient versus outpatient. The decision for the payers is what are the break points for classifying providers? What are the interactions of the price, the efficiency and the quality? The whole spectrum is important. What are you paying for? It goes even beyond these issues. When you start looking at efficacy, I think that is another important thing that will affect the plan design and reimbursement levels in the future.

As for additional issues, I mentioned the out-of-pocket limits, the out of network and the usual, customary and reasonable charges for hospitals. In terms of timing, some changes can probably yield immediate results. Others may require changing behavior over time. You need to consider that in terms of all three and the quality, efficiency and cost aspects and how you can recognize those over time and incorporate incentive payment structures—incentive or disincentives—and your benefit structures and so on.

Are there any questions for either of us?

FROM THE FLOOR: Inaudible question.

MR. COOKSON: I have heard that, but, for example, when you compare statistically the Medicare payments per case with the commercial data, and you find a very high correlation on the efficiency, I would say on the margin there probably is some of that, but I do not think it is a general practice.

Chart 1

BTE engages consumers to better manage their condition

- **Four-step process**
  1. Create a profile to establish baseline
  2. Use CareGuide with doctor to set long term goals
  3. Use CareJournal to track progress
  4. Earn CareRewards by answering the self-care questions

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Chart 2

BTE engages consumers to more objectively select their physicians

Provider Listing

The following providers meet the criteria you entered.

Name	Address	Miles	Effectiveness of Care	Patient Experience of Care
Dr. Robert Smith	997 Glen Cove Avenue Glen Head, NY 11545	0.24		
Dr. John Doe	339 Hick Street Brooklyn, NY 11210	0.24		
Dr. Jane Doe	98 Princess Lane Scarsdale, NY 11201 additional addresses	0.13		

Doctor Information	Address & Hours	Staffing	Credentials	Hospital Affiliation
Dr. Robert Smith *FAMILY PRACTICE* ID NO: 000466888333 03 My Philosophy of Care 518.472.4584 518.472.4620 fax dr.smith@aol.com	997 Glen Cove Avenue Glen Head, NY 11545 Monday - Thursday 10-5 Friday, Saturday 11-4	• 2 Nurses • 3 Technicians • 1 on-call doctor	NY Medical College, M.D., 1989 St. Lukes - Roosevelt, 1992 AM Board of Internal Medicine, 1994	Mt. Sinai Medical Center Westchester Medical Center Columbia Presbyterian Medical Center

Peformance Report:

Effectiveness of Care			Patient Experience of Care
Overall	Diabetes Care	Cardiac Care	Overall
Doctor: Average Score: 5 6			Doctor: Average Score: 4 5

Doctor Patient Interactions		Access and Office Systems	
Communication		Organizational Access	
Interpersonal Treatments		Visit-based Continuity	
Knowledge of Patient		Clinical Team	
Health Promotions			
Integration			
Patient Trust			
Relationship Duration			

Key	
	Your Provider
	Average Provider

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Chart 3

AHRQ Inpatient Quality and Patient Safety Indicators

Hospital	Post-Op Complications	Medical Accidents	Acquired Infections	Mortality and Other
A	L	L	L	A
B	L	A	L	A
C	A	A	L	A
D	L	A	L	A
E	L	L	L	A
F	L	L	L	A
G	A	A	L	A
H	A	L	L	L
I	A	A	L	A
J	A	A	A	L
K	A	A	A	A
L	A	A	H	A
M	L	A	A	L
N	L	A	A	A
O	L	A	L	A
P	A	A	A	A
Q	A	A	A	A

L = Below Average Quality

A = Average Quality

H = Above Average Quality

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Chart 4

HEI LOS Benchmark Example

Hospitals Most Frequently Within Benchmark Range

Rank	2001 Medicare Out of 580
1. Sarasota Memorial	172
2. University of Virginia	133
3. Lutheran General (IL)	120
4. Beth Israel Deaconess (MA)	118
5. University Hospitals of Cleveland	116
6. University of Michigan	101
7. Barnes-Jewish (MO)	97

U-Mass, Cleveland Clinic, Mayo Clinic (AZ), University of North Carolina in Top 20

Duke University, Vanderbilt University, Stanford, St. Mary's (MN - Mayo), Dartmouth-Hitchcock in Top 50

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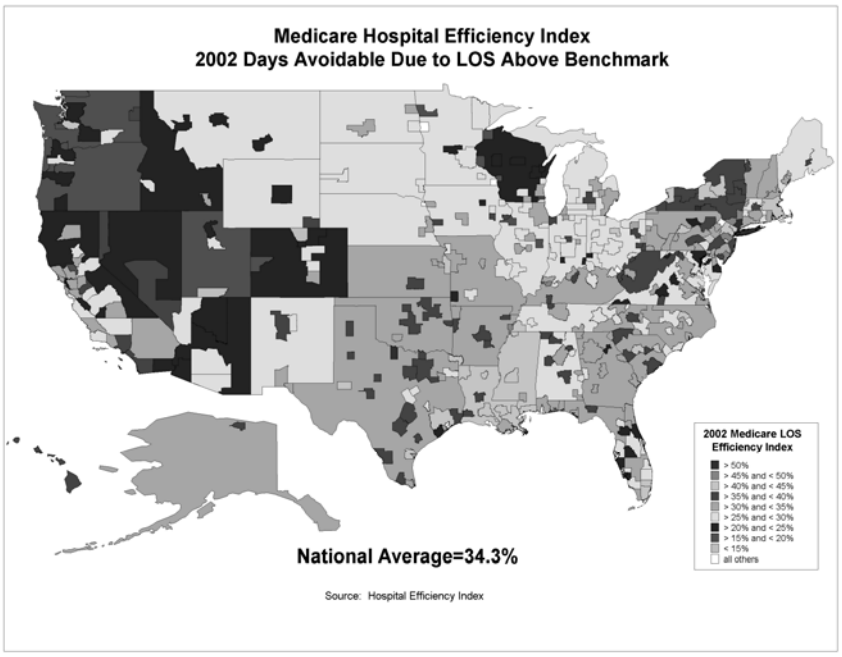
Chart 5



839 18 Milliman

Chart 6

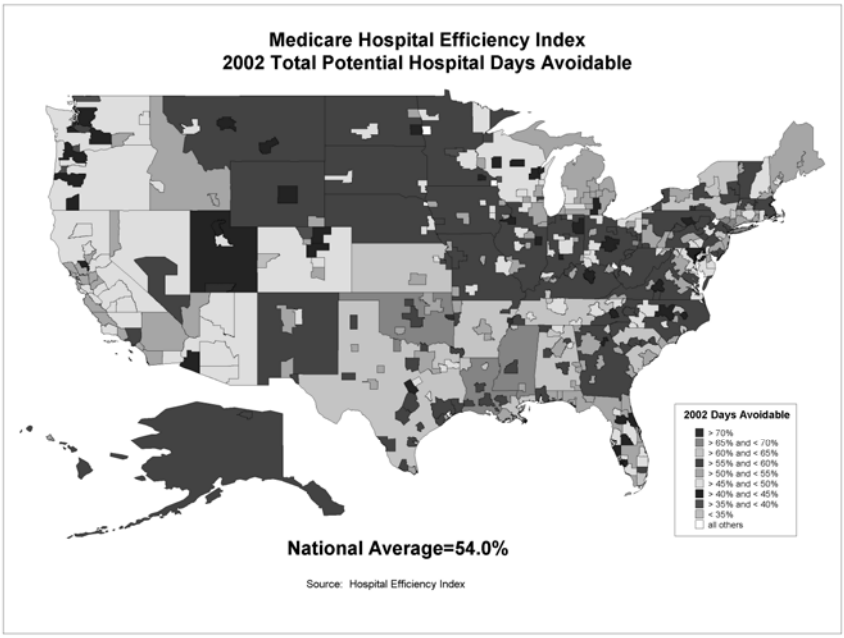


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Chart 7

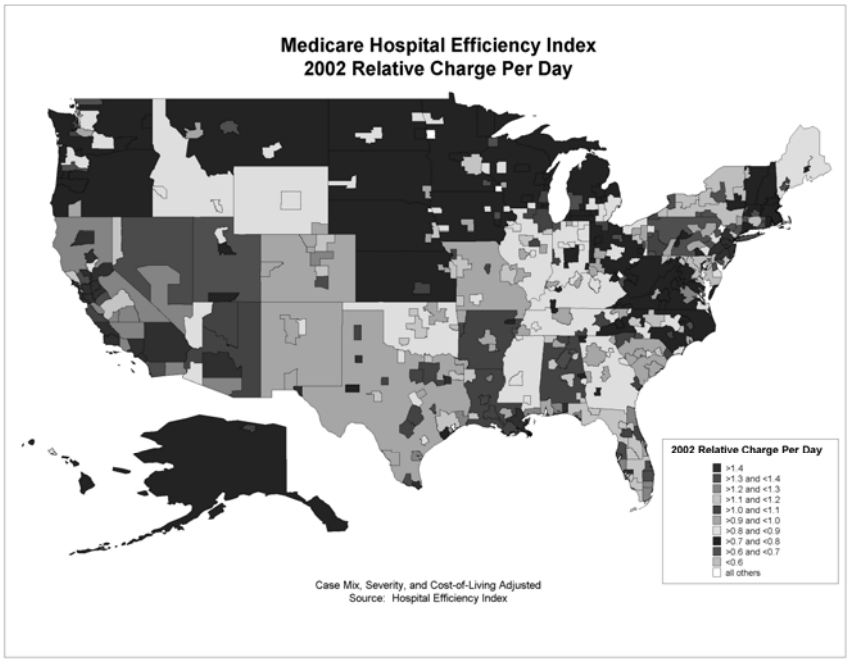

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Chart 8

Comparison of Top Charging Hospitals 2001 for Medical Surgical Charges

Hospital	STATE	ADMITS	Relative* Charge/Day	Average Charge/Day	HEI Avoidable % LOS	Relative** Charge/Day
A	California	4,075	4.90	$18,899.29	31.86%	5.05
B	New Jersey	5,867	3.47	$10,554.54	42.86%	4.27
C	California	5,573	3.36	$15,409.62	27.86%	3.27
D	Pennsylvania	4,019	3.23	$14,163.16	35.26%	3.50
E	California	1,799	3.13	$11,070.34	35.66%	3.41
F	California	2,223	3.12	$10,546.93	39.32%	3.61
G	New Jersey	4,230	3.10	$9,719.78	35.47%	3.37
H	California	4,239	3.06	$12,466.21	26.12%	2.90
I	California	2,343	2.98	$9,671.53	28.92%	2.94
J	New Jersey	15,351	2.96	$9,159.82	40.55%	3.49
K	California	2,112	2.95	$10,187.84	39.76%	3.44
L	Pennsylvania	2,901	2.92	$10,337.33	33.16%	3.07
M	Texas	3,322	2.91	$8,232.24	39.40%	3.37
M	California	1,977	2.88	$13,623.72	38.81%	3.30
O	Pennsylvania	2,213	2.86	$10,652.15	35.80%	3.13

*** Based on 1000 minimum admission, case-mix, severity and geographic adjusted.**

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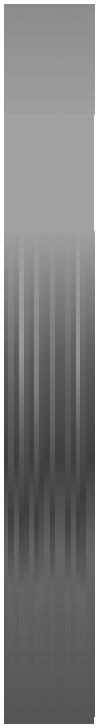
Chart 9



HEI Inpatient Charge and Reimbursement Analysis

Hospital	Quality	Relative Charge	Discount	Relative Reimbursement	Avoidable % LOS	Efficiency Adjusted Relative Reimbursement
A	3L	324%	80%	157%	36%	169%
B	2L	205%	70%	149%	38%	166%
C	1L	185%	75%	112%	36%	120%
D	2L	134%	65%	114%	41%	133%
E	3L	165%	70%	120%	39%	136%
F	3L	114%	70%	83%	36%	90%
G	1L	157%	70%	114%	36%	123%
H	3L	221%	75%	134%	27%	126%
I	1L	256%	80%	124%	38%	137%
J	1L	120%	70%	87%	32%	89%
K	A	118%	65%	100%	31%	100%
L	1H	117%	70%	85%	34%	89%
M	2L	230%	80%	111%	37%	122%
N	1L	113%	70%	82%	40%	94%
O	2L	149%	70%	108%	26%	101%
P	A	119%	70%	86%	39%	98%
Q	A	116%	65%	98%	32%	99%

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