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THE CHANGING FACE OF MANAGED HEALTH CARE

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This session will discuss the continuing evolution of the managed health care process.

DR. HOWARD LEVIN: I was a medical director of a 60-position multispecialty group in California for about 14 years. I was in charge of all the managed care operations, including a prepaid population of about 25,000. During the past six years, I've been with U.S. Health Care as a medical director in charge of corporate utilization and management and as a developer of software for USQA, the data analysis wing of U.S. Health Care.

The original title of this talk was a debate on whether managed care works. I don't know if some of you may think that you're being shortchanged, because of the topic change, so I've thrown in a little bit of lip service to that topic. I can refer you to an article that just came out a few weeks ago in the *Journal of the American Medical Association* on managed care performance since 1980 [May 18, 1994]. It's very difficult to get good evidence that managed care actually works, at least if you try to measure it scientifically. On the whole, however, the literature does show that there are incremental savings as a result of instituting managed care practices, but it doesn't always show it. The problem is that there is not a proper control for the study. We'll see later, as these programs are instituted, that they tend to filter out through the entire medical community whether or not the care is managed. We will now get on to the topic of the changing face of managed care.

When people learn new techniques, what are you comparing the managed care techniques and the performance to? It's a moving target and it continues to move. And there continues to be a rapid evolution. Unquestionably, there has been a dramatic drop in length of stay. Although savings are not in direct proportion with this, there is a drop in cost as a result of control of utilization, and length of stay is one measure of that. So, unquestionably, something is happening. And I think that more and more people are believing it.

I've had contact with a number of major employers. When the employers started to realize that the managed care company was starting to affect their costs, they start to be concerned about quality. Up until then, consultants told them that they were really not sure that managed care works.

Well, if it wasn't doing anything for utilization, it's unlikely to be causing any quality problems either. They're not changing any behavior. But when they recognized that there was changing behavior, then they concerned themselves with quality. I think that it's a testament to the fact that their utilization management and medical management work.

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Precertification, utilization review, retrospective review, case management—those were the ways that costs had been controlled early on in this movement. These have not been the same from the beginning to the end. Take something like precertification. Initially it was just to double-check to see whether that person was qualified for the benefits. It was then slowly expanded. Was the admitting facility the appropriate facility for the kinds of things that the patient was having done? If it was a hernia operation, could it have been done really in a short procedure unit and not in the hospital inpatient setting?

Then it expanded further to ask, was this facility participating? Now we have the participation aspect. Then it expanded further to say, was there an appropriate reason for doing the procedure? There's a whole technology to evaluate that. Finally, the precertification people now want to know, what is the entire plan for that patient during that hospitalization? Do you have a care plan? What are you committing to in terms of moving that patient along? So precertification is a moving target, too, if you want to evaluate what it is and how effective it is.

Utilization review, which is concurrent review, also has changed over the years. It is becoming more intensive, and broader in its application. Retrospective review tends to have been about the same, although the techniques, the sophistication, and which charts get reviewed has changed. And finally, case management, which was originally instituted for very complicated cases, such as when patients clearly were going to be in the hospital for a long time, has now expanded. And we'll talk about what case management is in the new era.

The reason for all that change is that, as with most products, medical management tools have a life cycle. And all these products were instituted originally with considerable resistance from the medical community. When they were instituted, significant savings, 10–15% or more, were achieved. Some of the fat from the really inappropriate uses of medical resources and services was cut out because it just simply wasn't allowed and it wasn't appropriate.

Then there's a period of fine-tuning the technique, and you start to see some incremental savings. Finally, you have the stage of maturity. At this point, most of the physicians and most of the hospitals understand what you're talking about. They understand that the hernia operation will not be done in the hospital. They don't even call it in. The physicians who don't want to deal with it give altered information to get by reviewers. They found a way of getting around the system. Things stabilized.

And finally, in the declining years of management techniques, there's no innovation. People start to ignore it. And the savings can actually decrease if there's no continued pressure and innovation. I think this is fairly typical of any kind of product that's introduced; it eventually runs its course.

There are at least three reasons why a managed care organization seeks out new techniques to control utilization. First, there's declining performance as mentioned above. Next, is the competitive pressure from other managed care companies, or other hospitals, that are starting to introduce new techniques that may make the other companies more competitive. And finally, employers or government, the people who pay the bills, want to see evidence that you're pushing the envelope, that you're

trying to do more—that you're really trying to get control of the utilization on a continuing basis. So there are many good reasons why this thing tends to move forward; however, there are some brakes which tend to slow the process.

Whenever you institute these programs, no matter how sophisticated or how softly, you're going to get a reaction from potential providers. The physicians who have said, "I've had enough, I'm not going to work with you anymore." HMOs don't want that kind of reaction. Members begin to think that their doctors are not getting their way and that they're not getting appropriate care. That could drive them away.

There's also the spillover effect. Let's say you're in a program and you introduce a new policy, let's say for endoscopies. "Endoscopies can't be done in a short procedure unit where there's anesthesia." They could be done at a lower level unit, such as a doctor's office. You would promote the activity to be done in a doctor's office, which is the least expensive place of service. At this point, very few doctors are doing it there. But because you started to do it, some doctors buy the equipment and now they do that procedure in their offices for you and all your competitors. So when you institute a new program, you feel the effect. Not only for your own program, but if you're sharing doctors in the community, all the other programs notice a similar kind of effect. So although you decreased your costs competitively, everybody's costs have decreased to a degree and you really haven't achieved what you want; that is a competitive advantage over the other managed care companies in your area.

And finally, when you introduce any new program, there will be some investment costs, such as educational costs, materials sent to physicians, talks that have to be scheduled at hospitals. Whatever it is, there are going to be some costs. The "brake" to innovation occurs in this case when you are reluctant to make an investment in new managed care techniques because the additional investment will not make you more competitive.

So where are people going now? Clearly, the pressures to change, to improve the management techniques, are greater than the brakes in many situations. Where are things going? I'm sure you've heard about medical guidelines and benchmarking, new ideas and provider management, and reengineering. We'll talk about those areas. Because what's happening now in the managed care industry is that the HMOs are getting more directly involved in what's going on at the bedside. Managed care companies are now managing care throughout the system rather than just serving as a watchdog on an 800 line.

Appropriateness review is looking at whether the procedure that's being proposed or the admission that is being proposed is really appropriate medically. Utilization benchmarks allow physicians and programs to compare themselves with high-performing organizations. Medical societies and government guideline development is, in part, leading the charge.

I don't know how many people here are familiar with the computer-generated appropriateness review technology. Examples of this technology are being marketed by companies such as GMIS and Value Health Systems. These systems have been developed based on an understanding of the medical literature, and they approach it

by creating a branched logic algorithm that asks the reason for the procedure. Does the patient have this or that? Based on the answer, it then asks the next question. Eventually, you end up in a series of end points whether the electronic algorithm thinks the procedure is appropriate, not appropriate or somewhere in between.

The basic problem is that these systems are relatively expensive to generate. And because medical literature is changing all the time, they really have to be updated regularly. So you have a high overhead, expensive system to develop and maintain. The only way to decrease the expense is to make it less defined. Instead of having 1,000 possible end points trying to get every possible selection of symptoms that the patient can have, you have maybe 50. What this does is make many situations jump to a review by a real physician, which can be very expensive. So, in this type of technology you're constantly trying to balance the expense of making a complete automated system that takes into consideration almost every possibility versus making it smaller and less expensive to develop and maintain. But you end up having to ask the doctor more often, which can also be expensive.

There are also maintenance issues with this kind of technology. We talked about the changing medical information database. A new article comes out and the whole algorithm doesn't make sense anymore. But these systems work best when, in fact, there has been a recent change in medical technology. It lets you see how fast these new techniques have defused into the medical system. Usually it takes time. So a specialty society can say that a particular procedure now is the appropriate one, given a set of circumstances. But it takes about 5–10 years before the physicians of that specialty adopt the new techniques. It's not overnight. And when you have that kind of situation, then an algorithm will show very clearly that a physician is not following the up-to-date recommendations.

It's also important to have well-documented criteria. And the big problem in medicine, today and for the past 25 years, is that much of medicine is practiced without science. That is, most of the decisions, in terms of resources, therapy or diagnosis, are really judgement on the part of physicians operating on an incomplete database. So it's really not grounded in science, but it is rough judgement. So when you want to set up criteria, it really is helpful to have, at least in that situation, a clear statement of the medical literature that one thing is right or wrong.

You also want to have the procedure or the admission that you're reviewing to be an expensive or frequently encountered one. Because these systems are expensive to develop, maintain, and run, you really don't want that expense to be more than the potential savings that you're going to accrue. And it's also helpful to have evidence that there's abuse of the particular thing that you want to investigate and measure the appropriateness for.

These things tend to be really quite varied in terms of their effectiveness. The main reason is because there are differences in physician practices across the country. Reports in one area say the inappropriateness of a procedure can be zero. That is, everybody seems to be doing it right. In another, 30% of the cases could be coming through and blocked because they're clearly inappropriate. You could institute a system and pay $50,000 to find out that everybody's doing it right. So it's

important to look at these before you go ahead and opt for going to an automated utilization or appropriateness review.

We'll talk about benchmarking, and I'm going to mainly use the Milliman & Robertson Health Care Management Guidelines. The Guidelines are a benchmarking tool to look at utilization control by using total quality management techniques. When I was working with U.S. Health Care, I was the U.S. Health Care medical director for the Xerox Health Link Program. Xerox really tried to inculcate in anyone who came in contact with the company its philosophy of total quality management. And it has a lot to do with using benchmarks. The employees told a story, and I thought it was interesting because it shows that when you think this way, you really can accomplish a great deal. They had an interested department that wanted to find out how to do things better. Their inventory control, shipping department thought they really were the tops, but were still looking to do things better.

Now when you're a company that makes copiers, obviously you can't go to a competing copier company to benchmark. The competitor more than likely will not be willing to share proprietary information. So where did they go? Well, they went to The Limited, which is a retailer. It is touted to have one of the best shipping inventory control systems in the world. And Xerox told The Limited it would like to benchmark its system, and Xerox sent a bunch of its people out. They looked at everything that The Limited was doing. They found that The Limited was 50% better than they were. They went back to Rochester and, within six months, they were equal to or better than that. But they didn't know beforehand how much they had to do or even exactly how to start to do it. The process of benchmarking made them realize that there was a goal they could shoot for. It was actually functioning in the real world and they could put their energies into trying to accomplish it.

How do these kinds of benchmarks work in medicine? Well, Dr. Dick Doyle, who's with Milliman & Robertson in San Diego, about ten years ago tried to look at this problem. And he saw that, in terms of length of stay in the hospital, physicians had a wide variation, even for the same kind of procedure. Length of stays to a specific illness, let us say, could be anywhere from two to eight days. When he tried to talk about this, he got the same response that doctors are still giving, which is, "My patients are different, you can't compare me with anyone and you can't give me a grade." And, of course, he did not buy this. To get a more uniform population and also to really see what was going on in terms of practice style, he looked at uncomplicated patients, patients who did not have any comorbidities or complications but who simply went through the system. What was the length of stay for that kind of patient? And who had the shortest length of stay? If there are no problems with the patient, physicians should do certain procedures on the first day, certain procedures on the second day, other procedures on the third, and the patient should go home. He would get the judgment of the panel of physicians, of specialists, to validate the fact that it would be appropriate for an admission of this type to be managed in this rapid way.

Some of this assumes, also, the availability of quality alternatives: home care, home intravenous infusion. It also assumes that a patient and family have an understanding of and cooperate with the kinds of techniques that you're going to use. The whole basis is that, given an optimum circumstance, how fast and how few resources can

you use for a given problem? And this is beginning to sound like total quality management.

When there is variation in length of stays, it raises the possibility of a process problem and that's exactly what the benchmarks force physicians to look at. They see that if some doctor's patients are going home in two days, and wonder why can't their patients? And the aim of the whole process of benchmarking is to move all the cases that can be managed with the least amount of resources, given their problem. When you first show some physicians these benchmarks, they're ready to take shots at you. They are appalled at the brevity of the length of stay that is suggested in the benchmarks, because they think about the most complicated cases that they've taken care of, not the simplest. But you tell them that these are not theoretical, that this is happening in California and in Minnesota; physicians actually get people out in this period of time. Then they start to realize that they had better take a look at this. They realize someone is trying to help them, not shoot them down.

In terms of managing from the inside out, benchmarking does not beat physicians and hospitals over the head to get people out when they don't think they need to be. They will start making that change on the inside. Physicians, nurses, and hospitals start understanding they can do it a different way if they rethink the procedure and rethink the ideas of what's supposed to happen on each day. And then you don't need utilization review because it goes on by itself.

There's another benchmark which is available in the M&R Health Care Management Guidelines. This is just to show people what they're shooting for. This is from 1992, and things have changed, but this is able to show to a program that is fully capitated, what, in fact, is happening at the most efficient groups in the country in terms of days per 1,000. Days per 1,000 is the basic measure in terms of inpatient utilization that HMOs benchmark themselves against. How well are you doing in days per 1,000? In a well managed group the days per 1,000 were 178. Utilization, before there was any managed care, showed a figure anywhere from 650 to 750. At the current time, an average HMO, in terms of utilization, is down to about 300. Unmanaged care runs about 450 days per 1,000. As you can see, a couple of years ago, there were high performing groups at 178.

I just talked to the physician who took over for me at the medical group that I was at in California. He told me during the first quarter of 1994, my old group was at 128 days per 1,000. And this is not set. This is moving down. So every time we look at this we say, well, we hit bottom now. But it's continually moving because the physicians at that group, and many groups across the country that are trying to cope with finding ways of being more efficient, are looking at their practice and constantly questioning what they're doing; is it appropriate, can it be done better, and can it be done more efficiently. It's coming from inside the group because they realize, in order to compete in the marketplace, they have to do better.

I can give you a number of examples, but I think that one is indicative. I've gone out there and have talked to some of the doctors. "Tell me what you're doing. Is there a formula?" There's no real formula. Everybody is looking at what everybody else is doing. I talked to a urologist. He said there are two urologists in the practice and

they looked to see what they could do to improve their efficiency. They noticed after checking with some groups in Southern California that their own length of stay for prostrate cancer surgery was about 40% longer than other groups. They looked at their own cases and felt they discharged the patients as early as they could. Patients were sick; it's a major operation. Then they looked at the numbers again and they found that length of stay was roughly correlated with the length of time in the operating room and the amount of blood that the patient received. Now this wasn't a scientific study, but clearly there is trauma associated with a longer length of time in the operating room and blood does present potential complications. So they tried to determine how to shorten the length of stay. At that time, they often would operate with the general surgeon as an assistant. The payment system encourages this, because when you are the primary surgeon you get a full rate. If you operate as an assistant you get 20% of the payment. The urologist doesn't want to make 20% of the fee by being an assistant, so they each operated independently.

But because this group had 60–70% capitated managed care, this incentive did not apply. So what did they do? They decided that they were going to operate together. They spent several weeks going over moment by moment what happens during surgery, and how they could operate simultaneously, each in his or her own field. And then along with this, they said if they were going to do this, they would make sure that the fields that they were going to go through were less vascular because their other aim was to decrease bleeding. Well, they did it. They stopped using general surgeons as assistants. They have been performing their surgery for the past year and a half, and they halved the time in the operating room. They also have shortened their length of stay because the patients are healthier.

Some people say that when you concentrate on utilization and you want to decrease costs, but quality will suffer. "You're too interested in money." It certainly doesn't have to be so. In this case, a concern for the length of stay for utilization produced what is now a better procedure, a safer procedure, and a better quality procedure.

There are other ways now that managed care programs try to control utilization. They do this by recredentialing. Just because you participate in a program, in a Physician Hospital Organization (PHO), in an HMO for one year, doesn't mean you're going to be in for the next. A number of criteria have been developed for recredentialing. Performance-based incentives, data analysis, and physician profiling are the new directions in provider management. So what are they looking at? They're looking not just at how they handle one case, but what's the practice pattern? How are they handling all the cases that they get, adjusting for severity and complications? In many situation you can now get a good example of what a physician's practice is like using administrative and claims data. You can even make quality profiles along with the satisfaction surveys. If you're in the competitive marketplace, one of the major concerns you should have is how people are viewing what the plan, the hospital, and the individual physician are doing. Satisfied customers mean repeat business. Repeat business means survival. So if you're going to recredential based on their patient satisfaction, it's a good criterion. Look for grievances. This list has been expanded in terms of the criteria for recredentialing; it's appropriate as long as it's beneficial for the program as a whole to see the individual physicians and hospitals perform in a certain way. Then it's fair game for credentialing.

Many organizations have begun to use claims data to evaluate care and profile physicians. Most companies that pay claims for medical care have an enormous database, which is extremely useful in terms of understanding not only the utilization practices, but also the quality of an organization. Much work is being done in places such as U.S. Health Care, USQA, United Health Care, which are looking at data. A number of the criteria can be obtained if you have it in your database. You don't have to go to the charts or medical records. If you are a company that pays for each procedure or requires encounter information, you can look and find out how many children under age two got all their immunizations and when. And you don't have to open a single chart. So this is very powerful, and you can do physician profiling. You can see what the utilization status is of individual members. And you could identify problems, where they are and how to fix them. So using claims databases can be a very useful technique to understand the utilization characteristics and the quality characteristics of a given system.

Finally, these data can also be used for incentives and recredentialing. The relationship between the providers and the managed care company has been changing. The old standby in terms of physician management was based on the performance of the whole plan. That is, the physicians would get 75% of approximately what they were supposed to get. And if the plan did well and there was money left over in the pool, then they got the rest, or they got pure capitation.

The interesting thing about both of these is they say nothing about how well that physician individually performs either for quality or utilization. More and more interest has been developed and has now been implemented in using the data in terms of providing incentives. So it's not just whether you participate in the program, but how you perform now will determine how much money you get and how many patients you get. Managed care organizations can look at utilization profiles, quality, profile satisfaction, and use that information to modulate the amount of payment. Performance means increased money, and those are appropriate incentives and have been shown to be effective.

Another term is reengineering. And I really like to use this term mainly when looking at a system globally as opposed to individual procedures and performances. Reengineering in managed care is found in the area of disease management, proactive case management, and quality management. Up until now the main interest has been directed to try to understand a given hospitalization, how you could get someone out earlier, or do things differently on different days. It has been directly related to an individual admission, an individual stay in the hospital, or an individual episode. This is starting to change as the sizes of organizations that are managing care increase; as the numbers get larger, you can start looking at larger pictures. When you start looking at large populations, you can start seeing ways to change the way care is given to classes of patients and problems.

I like to tell the story of an endocrinologist who says to the hospital CEO, "You have an endocrinology ward that takes care of diabetics. It has four beds in it. I have six or seven diabetic ketoacidosis patients (diabetics in coma) in the hospital at any one time. I'm running around like crazy. I don't have the space. I don't have the time. I need more beds. I need an associate. And if we had the associate and a ten-bed ward, we'd have the biggest, most sophisticated endocrinology ward in the city, and

we really could do a lot with that." Now, 15 or even 10 years ago, a CEO would puff out his chest and say, "Wow, we're going to go for that. It would only cost a couple of million dollars and we could really use this in our marketing program. This fulfills the mission of the company. It's great."

Now imagine that this CEO runs a hospital where most patients are capitated; (50–60% of his business.) He or she now says to the endocrinologist, "I've been thinking about this because I've seen this come up on the reports. I have talked to some other people and I've decided to allocate $150,000 to a video production company." And the endocrinologist says, "What?" He says, "Well, we're going to develop a series of directed tapes for diabetics for exercise and for nutrition. We're going to hire a nurse at about a fourth the salary of a doctor. The nurse will go out to the individual diabetics whom we know of. The nurse will go through their medicine cabinets and through their refrigerators. The nurse will emphasize the tapes and do this at regular intervals, depending on how these diabetics perform. And we think that we can cut the number of ketoacidosis patients down by half. So I think as we institute this program, we're probably going to have too many beds, and you're probably going to have to do some general internal medicine." This is what's going to happen. Because the way people are looking at the problem is beginning to change.

Some drug companies are saying to Milliman & Robertson, "Look, we're sort of at the end of the system here. We're vendors. We're being forced to compete as a commodity, and that means reduction of price and smaller margins. We really want to be players in the system." A drug company, for example, that makes diabetic medication wants to get involved with these management aspects. It wants a full partnership with the managed care company.

The drug companies are saying, "Give us a capitation. Let us manage your diabetics. You don't even have to worry about the video production company. You just total up your costs for diabetes. You can reduce them by a fraction. Let us take the risk. We know how to communicate with physicians. We have a network of detail people who go out throughout the country; they know everyone. We know about advertising. We know about influencing behavior. We're going to use those techniques to see if we can educate the population and manage diabetics more cost effectively. We have all the disease management techniques that people are talking about, whether it's in the chronic medical illness areas such as diabetes or asthma, or chronic pulmonary disease, or in the mental health area. We are trying to direct it as low in the chain as possible, at the level of prevention, at the level of patient education; or if it can't be done there, then at the level of the primary care physician. Try to keep it in the earliest, the least expensive stage as opposed to giving more sophisticated treatments at hospitals and tertiary medical centers at a later time."

One of the most interesting and exciting areas of medical management is proactive case management. This is an area in which a specific disease can be managed and illnesses in patients can be identified. The case manager does not respond to a particular episode of illness, but responds to a particular illness. The patients are followed along, recognizing the kinds of problems that they get into, and recommends ways to prevent an acute episode of the illness. They know the community

resources. They really are able to deal with the patient's problems in the community as opposed to in the medical facility.

We mainly have been talking about the utilization side of the management equation, the cost side. Increasingly, PPOs and HMOs are looking at more selective contract networks. On one hand, the employer and the potential member look at a program and see the selection of providers as the greater number meaning the higher quality of network. Let's say a given network has every provider in the community. To the employer, that is the highest level of quality in a network, mainly because no one will ever go into the benefits office of that company with the directory, slam it on the desk, and say, "This network stinks. It doesn't have my doctor." So the employer thinks if you have every provider, you don't have that problem and you have a quality network. But that really is counterproductive in terms of management. It's very expensive to manage many providers. You're unlikely to have a significant share of their practice to be able to effect any kind of change. So you really don't have a quality network. You have just a community network. Some employers are willing to trust managed care companies as they start to weed out some of the poor performers. And in doing that, you can decrease the number of providers that you have to manage and also, you're able to drive more patients, more volume, through a given facility or given physician and you're able to probably cut a better deal in terms of the cost of service.

I have some general rules that I think are appropriate in contracting, and many people use them. The provider and the insurer should share interests. Here is an appropriate example. In a flat per diem for a hospital, for example, what are the interests of the hospital and what are the interests of the HMO or the managed care company? Well, it's very simple. The managed care company wants to have as few days in the hospital for each episode as possible. So it has a staff that tries to get people out quickly. What about the hospital? Well, because its costs are front-loaded on the first day, it makes its profit on the second or third. It wants patients to stay the extra day. And so it is not going to tell the utilization review (UR) people to really cooperate. When you set up the incentives, they should work for everybody.

Risk should be given to those who have the greatest potential to manage it. And the inappropriate example that I like to give for that is for radiology. Many HMOs and managed care companies capitate radiologists in terms of outpatient care. Well, radiologists really have very little say as to whether a procedure gets done. In fact, usually in an individual practice association (IPA) situation, the radiologist does X-rays not only for the managed care side of the business for a given primary care doctor, an internist, but also a fee-for-service business. If that radiologist kept calling up and saying, "Listen, you don't do an X-ray for that," that doctor would no longer do it for the managed care or the fee for service. Or he or she may lose that primary care doctor as a referral source. So there's a great resistance for the radiologist to say anything to the doctor who is ordering. And certainly the radiologist has no discretionary authority, or very little, to decide on what test gets done and what doesn't. Nonetheless, he's capitated. So in this situation, you're giving a capitation to someone who doesn't really have any control over it.

Also in contracting, a long-term commitment should be sought. If this is going to work, it's going to work because these are long-term associations. The more

successful organizations are the ones that are going to learn to live with partners and work with them to develop an integrated medical system and not pick one up and drop it as soon as there's a small price differential.

Finally, we're talking about integrated medical systems. An integrated medical system is one that has responsibility for the entire range of care. It's a fully capitated facility that can move resources from one side of the equation to the other. This is the ultimate way in which managed care will operate. It's tied together with information technology. None of these organizations are going to be able to run unless they know what's happening. I have done some consulting in other countries. A lot of these national health services run extremely inefficiently and have no idea where their money is being spent. And they're looking at what's happening in this country in terms of the rationalization and industrialization of medical care as a way of really getting a handle on their costs, because with information, we're going to start understanding what's happening, how it's being done, and how you can improve it.

There's going to be continuous quality and utilization improvement in real time. I think that information systems eventually will allow that. People have been talking. They are now starting to build systems that operate in real time and give physicians advice based on medical literature and based on conditions of the patient that are entered into the computer. And there will be the integrated continuing care that we talked about.

MS. LEEANNA M. PARROTT: As a rule of thumb, what percentage of the provider's practice do you need in order to change its practice patterns?

DR. LEVIN: Well, there are different levels. You need at least 10% to get their interest. In terms of major practice changes, you probably need about 50%.

I can give an example of the medical group I practiced with in California. I was there up until about six years ago. We were running about 270 days per 1,000, and it leveled off around that point. The competitive pressures started to get great because many medical people in California know how to do reduce utilization. And we couldn't reduce it further. The competition did. The capitation didn't go up. And they experienced a year in which everybody's income went down dramatically, and they had a meeting. At this point, they were about 60% capitated. The medical director who took over for me called that meeting the Clinic's Near Death Experience. It was at that meeting that they decided they had to look at everything that they were doing. If they were going to survive, they had to understand what the care was, why they were doing what they were, and how they could improve. Otherwise, they'd all be looking for new jobs. So there are various levels of recognition of how hard you have to work. At 10% they start reading your mail. At 30–40%, they start responding to what you want them to respond to. With respect to my old group, they were then able to cut inpatient days by 50%.

MR. ROBERT J. DYMOWSKI: Howard, I have two questions that are somewhat related. The first is one that we talked about very briefly the other day, and that was a question that came up recently in some conversations about concerns about potential malpractice claims, and whether the rigorous application of things like the guidelines and benchmarks would lead to an increase in malpractice claims and

whether that's a real issue. Related to that, of course, are some concerns that employers have had about the liability that they might incur by directing people to certain networks or organizations. I wonder if you could comment on that.

The second aspect of that is you talked about the movement downward. You showed the lengths of stay and the number of days per 1,000. Currently the average is around 450 unmanaged, and in the 170–180 range for the best managed care groups. Where do you think the low is? And how low can it go? You know, obviously, that relates again to the issue of quality of care. And so what's the biological bottom?

DR. LEVIN: In terms of guidelines and benchmarks, it has been noted that the anesthesiologists and, to a certain extent, now the emergency room, developed very clear guidelines. And as a result, their malpractice situations have improved because it's clear what the right thing to do is and what it isn't. So benchmarks don't necessarily create a bad malpractice situation—they can improve it. I think that one could look at California in terms of a state where utilization has dramatically dropped ahead of the country. There have been no dramatic increases in malpractice claims, despite the fact that it's a fairly litigious society.

FROM THE FLOOR: How low can it go?

DR. LEVIN: How low can it go? You know, I've second-guessed myself on this, and so I'm reluctant to say how low it can go. When we were at 270, I thought well, maybe a little lower. Maybe we can get it to 210. Then I just saw the floor sort of open up. And it keeps moving down. I don't know if there's an absolute low number. Certainly, I think, that it will hit 100 and I think that we will start seeing more, as we see in California, ambulatory births. If you are well, you go home.

I think that the technology for maintaining people at home will improve. In terms of how these doctors in California reengineered an operation, I think that that's just the tip of the iceberg. Operations such as the laminectomy or diskectomy back surgery are being performed on an ambulatory basis in some parts of the country, like in South Dakota. When it was an open procedure, a 7–10 day hospital course was common, but through a little scope, it's ambulatory. The coronary artery bypass graft is another procedure. Fifteen years ago people were in the hospital ten days. But as techniques are improving in terms of the speed of the operation, there's less trauma because the doctors have gotten more sophisticated in how they go about it. The stay can now be as short as three days.

And there was an article about eight or nine months ago that stated some of the patients were discharged after three days. The guidelines in terms of Milliman & Robertson say four. But we're always watching what's happening on the outside. The interesting thing about this report was that it said when they looked at the outcome of people who were aggressively managed, kicked out of bed, and encouraged them to walk and move, their outcomes were better than the ones who were allowed to recuperate and recover.

The cardiovascular surgeons, who at one point had sort of a boutique service, find themselves now really in vigorous competition with every other cardiovascular

surgeon in the country. Doctors can send their patients anywhere in the country to have this done. When they talk to a managed care company, the company wants to know two things. What's your outcome and what does it cost? And so it stimulated these surgeons to reevaluate the procedure to respond to what the marketplace wants.

The article was an example of how managed care works and how it ends up in the medical literature. It turns out that not only do you reduce the length of stay and you reduce the resource cost, but you improve care because people do better generally, assuming there are no complications. Patients are being forced to move after surgery rather than allowed to sit and let the clots form in the leg. So I think that this is going to be a continuing process, and I do see levels of 100.

Also, there is reduction in use of the hospital; 450 is what we're talking about currently. If it moves down to 100, that's less than a fourth of the hospital beds occupied, and it's certainly appalling to think of what's going to happen to all these hospitals if you reduce their occupancy by 75%. Most of them are not fully occupied now. But that's going to happen.

One other thing that's happening with respect to births is the shortened length of stay. And now our guidelines are saying one day for a vaginal birth and two days for a caesarean. It used to be, as you know, much longer. There has been a lot of resistance, and the areas of resistance come from unusual places. I think one of the major areas has been the delivery floors. These delivery room, obstetrical nurses got into obstetrical care because they liked it. It offered professional satisfaction for them. They could meet the mother. They could help her with the baby. They could show her how to breast-feed. They could show her how to diaper. You get a lot of satisfaction out of that. Now they're not going to have time to do that because that woman is going to be moved through the system so fast. The inpatient obstetrical nurse will not have that satisfaction. And the one who is going to do it is the person who is going to go to the mother's home before she has the baby to see what the home setup is like and to make sure the mother knows how to breast-feed and diaper a baby. That's going to create problems for not only the hospital in terms of utilization, but problems for its staff who have to find another job to achieve job satisfaction. They are going to have to get used to the new system.

MR. WILLIAM H. DILLOW: With regard to provider management, you suggested that we're starting to question whether having all of the providers is necessarily the best way. There are, in a number of states, any willing provider laws, in which there are questions about or there is resistance to allowing companies to pick and choose providers. Is that going to frustrate the efforts of possibly going out and picking the best doctors and restricting some others from networks?

DR. LEVIN: Unquestionably. Depending on how the individual statutes are crafted, it's going to have more or less effect on the ability of managed care companies to create the kind of change that's necessary.

Some of the legislation that has been passed does have loopholes. This is clearly a law to protect the provider. The medical societies are supporting it. I think that it's going to happen, but I also think that it's a passing phase. I do not think that if the

states that don't have this legislation end up with lower health care costs and better care, those laws will be repealed in the states that them.

MR. THOMAS H. ATTAWAY: I'm kind of fascinated by the appropriateness review software. Who is purchasing those? Is it primarily physician groups, or are individual physicians purchasing those?

DR. LEVIN: Primarily these are being purchased by managed care companies. Many Blues plans have purchased the program. Some HMOs have purchased the program. The medical groups have purchased them less frequently. Generally they're more effective in a more distant type of arrangement. But some medical groups have purchased them. If you are in the industry and you want to do it better, then whether you're a medical group, or HMO, or a managed care company, you're looking at every way. I gave some examples of what makes an appropriateness review system attractive. You have to sort of set it up in terms of the community, how the doctors are organized, and a whole set of things. But generally, the people who are purchasing are insurance companies and HMOs.

FROM THE FLOOR: It just seems like it would be more appropriate for an individual physician to have that type of tool or software. It would make it a lot less expensive if you could design it for practices; for a cardiovascular surgeon, for example, or for people who are using it as a diagnostic tool.

My only exposure to that was in college. Somebody set up a software program to guess which animal you were thinking of. You thought of an animal and then the software sort of guessed what it was. And it would start off with the basic questions, how many legs does it have? Does it eat vegetable or does it eat other animals? It was fascinating because somebody set that up, and when you got down to the end and it started guessing at your animal, if it wasn't correct, it would ask another question. And then it would save that question. It was amazing because after three or four days, you could not think. Many users were tapping into this. So you couldn't think of an animal, whether extinct or mythological or whatever, that the system couldn't guess at, so it was kind of an artificial intelligence system. And I would think that something along those lines would be very powerful as a learning technique for physicians to kind of share practice patterns and what have you.

DR. LEVIN: I agree. I think we talked about the coming information revolution. I think what's going to be happening is that the medical record is going to be electronic, and it's going to be intelligent. The systems are going to be intelligent. So when in real time you put down that the patient probably has a strep throat, the system may question that. Have you asked blank? If you put down, give a certain medication for the treatment, the system could say, haven't you considered penicillin? If you put down penicillin, the system might say, are you aware that this patient had a reaction 18 years ago?

And there's no question that as these systems become more sophisticated, the appropriateness review algorithm can be incorporated into that physician's system. Right now, those systems are fairly expensive to maintain, to run. You need dedicated equipment. But there's no question that as computers get larger and gain more

memory, more capacity, on every doctor's desk will be a CD-ROM of all the latest algorithms, and they'll just pump it in and they'll get information back in real time.

MR. ALAN N. FERGUSON: You talked about modifications and reinvestment methods and referred to old standbys like withholds and capitation and then described incentive plans. And maybe you could just expand on that a little because I was puzzled by it. Is it something that's being done now?

DR. LEVIN: Yes.

FROM THE FLOOR: You talked about what sort of ranges it will have, ups and downs. It seems to me it would be a nightmare to collect quality utilization review. Some of it seems very subjective; satisfactory surveys, for example.

DR. LEVIN: Okay. A number of independent Blues, United Health Care, U.S. Health Care, a number of other programs have, over the past ten years, got into reimbursing based on performance. I pick satisfaction, and everybody picks it. And the quality movement picks it. The scientific evidence has shown that satisfaction is often linked to other quality measures. So I'm satisfied with the satisfaction as being a measure and something that we can pay people for. There are a number of other criteria.

FROM THE FLOOR: Do you mean you're making surveys of patients?

DR. LEVIN: Yes.

FROM THE FLOOR: When do you do that? What percentage do you get back?

DR. LEVIN: Well, U.S. Health Care has about a 25% return rate on a mailed survey. Some companies do telephone surveys on a more random basis. And they have a 90% return rate. Statistically, if the individual practice has 300 or more patients and you get a full survey, you have statistical information that is valid in terms of being able to assign a performance level to a physician.

In terms of how it's used, the people who finish high on the survey at U.S. Health Care get 3% more in terms of their capitation. That's how it flows through the system.

FROM THE FLOOR: So can it be based either on capitation or fee for service?

DR. LEVIN: Yes. It works better in capitation because you can just say 3% more when you're at such a level in the hierarchy of responses. The system at U.S. Health Care rewards people for participating in seeing new courses, which they develop themselves. It also rewards, in part, for utilization, but only about 25% for good utilization statistics.

FROM THE FLOOR: So you're waiting for a quality measure.

DR. LEVIN: There are other measures. I'm trying to think off the top of my head. Several short reviews occur; we actually go into the medical record to look at

documentation of immunization rates, screening for cholesterol, those kinds of things. You perform at that level. Again, more percentage for your capitation.

FROM THE FLOOR: Typically when would this be done? Within three months? Six months? At the end of a period? A year, say?

DR. LEVIN: These are done yearly, and you can do it every six months. You're right. It's a tremendous data problem in terms of being able to collect all this information, process it, and figure it out so that it is accurate enough to be satisfactory to an individual doctor, not to just 1%. But that's what's being done. It must be viewed as being fair by the physician. Otherwise, it's not; it won't fly.

In terms of looking at the measurements for other specialties, a lot of data analysis has been done. You can look at, let's say, in women, whether the doctor uses newer techniques for evaluating vaginal bleeding. What's the first procedure that he or she does when a woman comes in bleeding? Will it be a D&C, which is the old procedure? You can look at the claims database if you have a fee-for-service system and see what the procedure is, and you can create rewards based on whether the doctor is using the latest techniques. In many ways that you can look at evaluating performance, quality and utilization. There are many methods of rewarding it. When you're in a capitation system, it gets to be simple.

MS. JEAN M. WODARCZYK: You mentioned that drug companies are now trying to get involved in the whole managed care effort, and I've seen that as well. However, I've also seen in recent history many employers carving out the prescription drug services, and everyone trying to get involved in capitation. The actual management of health care, though, may call for more drugs being used properly, which would then end up with less health care services needed on the other end. And it seems like these things need to come together. Have you seen anybody put these things together and do it well yet? Or are they still sort of operating in their own circles?

DR. LEVIN: I think they're still operating in their own circles. I think that this new movement is sort of throwing a curve at many managed care companies. We have thought of them as being the ones that sort of put the pieces together and not really subdivide that pie, which, in fact, crosses people's turfs along the way. But I think that's the excitement to the field. There are changes.

There are risks involved in pursuing these newer techniques. Which are the ones that are going to be the most effective? At this point, I have no idea. If a drug company comes up with a technique that, in fact, makes the whole system work well, then do you know what? Everybody's going to end up doing it that way and people's turfs will get shoved, and they'll move ahead for the time being by using that technique. Will that be the permanent one? Maybe, but maybe not. Maybe someone else will come up with another way of doing it and things will get rearranged again.

The exciting thing is that people are looking at these issues and trying to figure out ways of doing them better in a global way rather than patient by patient.

FROM THE FLOOR: Well, I do worry about the drug companies, though. They need to get involved in capitation and not have control really of the use of the drug, which

is really at the patient level, and the prescription of the drug, which is at the physician level. You mentioned they may believe that they have some control at the physician level.

DR. LEVIN: Yes. No one in this area, unless you're an insurance company, should take risks unless you can manage it. And if the companies believe that they have a better understanding of the use of the drugs, a better ability to change behavior, and the capacity to do certain things within a managed care setting, I would hope that the contract, the HMO, would allow them access, so they could change the system to function more efficiently and with better quality.

I think that most systems would rather do it themselves and not subcontract medical care and management. But every one of these new programs has investment costs and management costs. The power of being a drug company is being able to come in and say that this won't cost you anything. "All you do is split out the cost of a given management of a certain illness and to the extent we manage it better, we both win." And then if the drug company can make the case that, in fact, it can manage it better, and it has the expertise, and the physicians, and the educational staff, and the marketing staff that could, in fact, appropriately change physician behavior, then I could see a medical director and a CEO of an HMO saying, "Well, let's give it a try. It doesn't cost us anything and we could end up with systems that we never had before." So that's the way I see it happening. That is only good until some other organization or the HMO comes up with a better way of dealing with it than they have now.

MR. J. MARTIN DICKLER: There's a theory that if more people paid for their health care out of their own pockets, there would be a drop in demand for health care services. Do you believe that this is true? And if so, would this be as efficient a way to control morbidity as the methods you described?

DR. LEVIN: Well, yes, I think that. Certainly, when hospital stays cost $15,000 a day and a woman would have to pay for it out of her family's budget to stay an extra day to recuperate after delivery, we wouldn't have to have any utilization control. There's a problem with that and I think it is useful that people have that incentive. But the question is, do they have the information to manage it appropriately?

I'm old enough to have experienced uninsured people without Medicare and without Medicaid. People managed on the basis of how much they could afford, and that wasn't a system that worked particularly well either. You need an element of that, but I don't think that that's the answer.

FROM THE FLOOR: How would you blend an element in? You know and I know that we've advanced during the last 40 years. It's very hard to take away insurance, but it's a novel idea to think of people paying for more of it, not all of it, but a portion.

DR. LEVIN: Well, some of this is evolving, even in the HMO industry. A few years ago HMOs would have repelled in horror to the idea of deductibles and copayments, and now they're, in fact, dealing with them. There is clear evidence to show that

when you have a copayment for an inpatient or a short procedure, utilization goes down without physicians having to figure out ways of making it go down. That may be a way of creating some of that incentive. Again, when you start dealing with people who simply do not have $250, but who need an operation, you're back to the same kind of situation of people who aren't getting the kind of care that they need. I don't know how you integrate those two successfully. At least not now. I'm standing on one foot.

FROM THE FLOOR: Just to follow up on that question a bit, suppose a patient comes in who has fallen and has banged his head. In California, I think you do a brain scan. You do a lot of tests. You spend a lot of money on what might be really a trivial thing. Do you need to charge the $50 copayment? Will that be enough of a disincentive to avoid doing what may be many unnecessary, redundant tests? What does that do to malpractice?

DR. LEVIN: Well, you get into the area of guidelines, and there are some guidelines for evaluating head trauma. Everyone who bumps his or her head does not get an MRI scan, particularly in California. Algorithms can be followed. In that situation, it is relatively clear-cut in terms of the safety of allowing time to evaluate whether this is a serious problem, whether you need to admit that patient. Again, this follows an algorithm in terms of what kind of home management is available, and whether a parent or a family member will check that person at regular intervals.

One of the things that does occur, and this is where management is going is that the decision on what you do for a given class of problems is made before the doctor even sees the patient. So this kind of situation is something that the doctor doesn't struggle with. Was there any loss of consciousness? Any nausea or vomiting? Any neurologic signs? Okay. None of those. Is there someone to watch the patient during the next 24 hours? What is the situation? It just flows. You can go home. Here's the information that the family member needs to evaluate that patient. Leave a phone number so that I can reach you at a certain time. All those things are covered.

Does this guarantee that you're not going to have any malpractice or a good outcome? Of course not. But you all deal in risk. The system cannot eliminate risk. It has to create some judgements of expenditure for a kind of outcome. What the physician and everyone is responding to is some sort of appropriate response to each condition, so you're not spending $1 million for every bump on the head.

MR. JOSEPH A. ROLLING: You had mentioned benchmarking. You gave a plug for M&R. I just wanted to clarify. When you mentioned benchmarking, you said you should have a benchmark that was for uncomplicated cases. Would M&R health cost guidelines have the average mix of complicated and uncomplicated?

DR. LEVIN: Health cost guidelines include everything; but the health care guidelines, when we're talking about the critical and the clinical pathways that are looking at uncomplicated cases, do that for two reasons. Number one is that it gives a uniform population. They're all at the same level of sickness. And it also uncovers what is really most closely linked to a given physician's practice style. You have no problems and now that physician has no problems. You see what that physician was trained

to do. That no-problem patient always gets a seven-day admission. That's the way it is. Whether the patient is sick and then gets better during that time, or whether the patient was never sick, it's seven days. So that kind of a technique uncovers real changes in practice style in addition to giving a uniform patient population in which they're compared.

FROM THE FLOOR: Okay. So the cost guidelines is the average mix of complicated and uncomplicated?

DR. LEVIN: Right. Health care guidelines, and we're talking about the clinical pathways, are uncomplicated. And then we talked about the benchmarks.

FROM THE FLOOR: Okay.

DR. LEVIN: For managed care, 178 days is obviously a mix. That's real world, both complicated and uncomplicated.

FROM THE FLOOR: So M&R publishes both?

DR. LEVIN: Yes.