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Session 66IF New Frontiers in Management

Track: Health

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Guest Presenter: ALICE JOHNSON†

Recorder: JOHN P. COOKSON

Summary: Traditional methods of managing medical costs that were effective in the past might no longer be worth the same level of investment. This session addresses new strategies that are being developed for tomorrow.

Panelists discuss the next generation of methods for managing medical costs. Session attendees are encouraged to participate in the discussion with questions and comments about these new strategies.

Mr. John P. Cookson: I am a consulting actuary with Milliman & Robertson. I spend a lot of time working on evaluating provider efficiency, primarily in the hospital area. I will make some comments about the environment that I think we're operating in with respect to managed care. I'll also give one or two ideas that I've been working on or that I have discussed with clients. Alison Johnson is an RN and MBA, and she can add a few comments about what she's doing.

I did also try and recruit some individuals from most of the large managed care companies without success. At least one of them told me that his company wasn't 'doing anything, so they didn't have anything to contribute. You can draw your own conclusions from the ability or inability of getting them to participate.

Ms. Alice Johnson: I also am a consultant with Milliman & Robertson. I have been with them for just a year. I have a strong clinical background with a variety of provider organizations, and I have also had my MBA for more than ten years now, so I also have a finance background. Like John, I spend a lot of time with both providers and insurers in working on medical management and in particular, on efficiency issues. What John and I are going to talk about today is some of the trends that we see coming, and some of the important things that we think are happening. I will talk about a model that I think is fairly powerful among provider organizations. I'll also talk about how they organize medical management. Then we will be looking to the audience to help us identify some of the new stuff that you're seeing out there. So I like to tell people I am a nonactuary, nonphysician.

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Mr. Cookson: As I said, I wanted to start out just going over some of the environmental issues that I think affect managed care at this time. These can also affect investments and where things are going. This is certainly not a comprehensive list and it could be added to. The first set of points includes the issue of provider, insurer, and patient relationships. You are all aware of the managed care push back issue right now. I'm seeing a lot of timidity on the part of carriers and risk takers right now with respect to dealing with providers. If we go back to the early and mid 1990's, there was a strong position that the payers had in terms of negotiating with providers, and I think the pendulum has swung back quite a bit in the last couple of years.

The second major point is legal issues. We have patient rights legislation and major class action lawsuits against some of the managed care companies. We also have provider inspired lawsuits on various issues about payments and incentives and so on. We have any-willing-provider legislation. And these are probably all related to the managed care push back issue. We also have patient confidentiality issues, and depending on where that goes, it affects how we identify patients for disease management programs. So these could all affect, in some way, managed care going forward.

The third item is the provider consolidation issue, which I think is part of the reason why the pendulum has swung back. It has given the providers a little strength in their bargaining with the insurers and managed care companies.

We also have the whole issue, from a patient perspective, of balancing freedom versus the affordability.

In terms of the second major category, I have the issue of managed care investment, the cost trends, the benefit design options and provider access. I think the higher trend in rate increases in the environment right now is an issue that's going to affect things going forward. Whether business can pass on the increased cost is an important issue. Does a good economy lead to greater desire for freedom of choice over the affordability issue? What would happen with a downturn in the economy? Will it swing back the other way? Will affordability become more important? What happens if the patient protection legislation puts liability on the employers for decisions made by managed care companies? Obviously, because of the low unemployment rate, employers are competing to get qualified employees, and it's a very difficult market right now. How much flexibility do employers have in terms of their benefit design and adding new managed care programs? One issue that has been discussed recently has been the potential of defined contribution for health care, where the employers would just get out of the business, give the employees a check per month and say "you can spend it on health care any way you want."

Second, the easy savings in managed care have been taken and the next steps are going to require much more work. The third issue is managed care investment and return on investment issues. What are the cost of the initiatives versus insurers' profit margins and competitiveness? In many respects, we've found, when studying hospital utilization patterns, that there's not a major advantage to the

HMO's in terms of their efficiency of length of stay within hospitals, unless they are denying a lot of days after the fact. There's a marginal impact but, in effect, the hospitals treat patients basically the same way. Whatever's done in the environment to change the utilization patterns, if somebody is spending money to cause that change, their competitors ultimately end up benefiting to a large extent, maybe on the delayed basis. This is not so with the retrospective denials, but they are causing a lot of resentment on the part of the providers. The cost is affecting their profit margin and their cost and the competitiveness of those who are spending to implement these programs.

There is the issue of employee turnover and employer investment. Employee turnover has been relatively high recently because of the good economy. The employer has to question what the payback is if I'm investing in these programs. Is it going to benefit the employer? Are these employees going to stay with him or is it going to benefit the next employer where these people move? Will he really get a return? The same question applies to the insurer. You have even faster enrollee turnover than you have employee turnover because people can switch plans easily, so the insurers have a similar issue with deferred payback on disease management effects. Where then do we go in terms of new managed care initiatives?

One implication that I see out of all this is the payer timidity in some of the provider hospital negotiations right now, reflecting a desire to get out of micromanaging patients on an individual basis. I see this area probably moving towards a benchmarking process, identifying what is best practice with valid statistical measures and developing incentive reimbursements based on aggregate performance. This is one way to get away from this issue that had contributed to a lot of this managed care backlash, which is the denial of care or the perception of denial of care, and the denial of "inappropriate" days by payers after the fact. That's really one of the things causing a lot of antagonism on the part of the hospitals. Some different mechanism, where the insurer isn't intruding in every individual patient decision, or in the large majority of patient decisions, makes more sense. But it requires really developing some measurers that are valid and that can be used to track and measure performance and develop reimbursement schedules. Based on my work with inpatient care, it's definitely doable on the inpatient side. Given what's coming with Medicare on the ambulatory surgical side, and once the ambulatory payment groups get implemented, it can be implemented. Probably a lot of people are going to start moving to these kinds of reimbursements. To key off of Medicare is what many payers did with physician fees. I think measurement of reimbursement and measurement of performance in those areas, is probably doable as well. In terms of the physician area, there are many reporting systems out there, and they try to do the job of evaluating performance. I question some of the statistical credibility of some of those results.

In terms of prescription drugs, I think that is more of a problem. I think setting reimbursement based on effectiveness and cost is important, but this means we're going to need to have measurement systems that are able to do that. If Congress passes some kind of a Medicare prescription drug program, that's going to have

implications for the private market and how prescription drug programs end up being developed in the marketplace.

I have a simple model that I developed. It's loosely based on some actual data in one community with 20 hospitals. Let's assume the average per diem is about \$1,000, and based on measured performance about 46% of the days are avoidable with a range of 38–65%. Obviously, any insurer or employer in this market is going to want to move those avoidable days down to a much lower level. To do that, there needs to be a system to reward efficiency and penalize inefficiency. Another alternative that some have been working with lately is using a diagnosis-related group (DRG)-based reimbursement with a minimal benchmark length of stay and then a low marginal cost per day as a way to incent providers to perform efficiently on the inpatient side. The example I developed reflects the history of the performance of the hospitals in the community. Three of the hospitals have over 50% days avoidable, 16 are in the 40–50% range, and one is in the 30–40% range. If we set up a system that pays a per diem that reflects that performance, then the objective would be to reward those who can or have moved their performance (days avoidable) down by increasing the per diem based on avoidable days and to move the whole community down. Those who don't improve would get a lower per diem. The hospitals now get \$1,000 per day; and every day they reduce care, they lose \$1,000. They don't get an increase on the upside for the increased intensity of their remaining days. So a system, as described, would tend to recognize that and would be somewhat correcting so that, in effect, as you drive down the avoidable day distribution, you would get more days at the higher per diem. But as the per diem goes up, you'd save more in terms of the days avoidable so that in effect, the payer could win by reducing days more significantly. At the same time, the hospitals would see that they would get some benefit from their improved performance.

Actually, I had some questions I want to ask. I wanted to just take a poll.' How many in the audience are either consultants or employees of managed care companies or insurance organizations? About two-thirds. How many are consultants to carriers? Only a small percentage are consultants, so most of you are with carriers. How many are representing employers or consultants for employers?

How many are consultants to employers first? How many are representing employers directly? Just a couple. Most of the rest are employee benefit consultants. How many of you have dealt with this issue of the payback, the cost of disease management, and the return? Do you find significant resistance from employers in paying for the cost of these programs?

Ms. Johnson: Are you being asked to demonstrate more often the value of managed care programs? Does it really result in lower cost or lower utilization? Are you being asked to value those things?

Mr. William A. J. Bremer: I could get into a great dialog on this because I represent both employers, and I've been involved with hospitals on this. The employers that I work with are demanding justification from the carriers for the

cost of the insurance company charges for "managing the care." At least one particular company likes to put this cost in their claims cost as if it was a substitute for claims cost even though it's arguably a piece of retention as well. The documentation supports that carriers are trying to make a bona fide effort to do something, but it's terribly soft and in terms of true hard savings, it doesn't even measure up, as a fraction of what they charge. If they convert to soft savings, they could certainly justify millions of dollars, which would be 10 or 20 times what their costs are. My experience is that the data or the savings or the value of the services are not being fully justified. They are just way too soft and I've been advising my clients to really challenge the fees for these services until such time as something reasonable, or a little more rigorous than just throwing darts, can be used to justify the cost.

Mr. Cookson: When rate increases are going up and becoming much more significant on top of that, and they see the fees they are paying, that sort of exacerbates the whole issue.

Mr. Bremer: That's absolutely the case. I also suspect that this particular insurance company likes to segregate the claims cost or segregate the cost of managing care and call it above the line, instead of, below the line. I suspect that they are attempting to slide some of their general administrative expense and claims administrative expense into this in order to keep the below-the-line numbers nice and low.

Ms. Johnson: So what methods are you seeing them using to evaluate things like a disease management program?

Mr. Bremer: Disease management is another issue, and I can't address that one. I'd like to address that after I hear what you have to say. 'We probably focus mostly on the catastrophic cases, the \$50,000 and higher cases in terms of trying to justify them. In many cases, especially if they don't have participating agreements with the provider, they say, "we negotiated this," "their charge was that," "we got this number of services and days, and here's the savings." It's not a bad way to make an estimate. Certainly there's some range of reasonableness around that, but at least you can multiply a couple of numbers together that make sense. The soft approach is really saying, if we didn't have these provider agreements, we would have paid this higher amount and we saved these many days. The sky's the limit in terms of how they want to manipulate that number to make it look like a tremendous savings. So, in a sense, I guess my observation is consistent with yours as far as the problem of getting quality data and good statistics that are reasonable. They certainly made efforts to come up with models that try to justify the costs, but the savings 'are huge. It's almost as much as what they charge for administering claims, so one might get suspicious.

Ms. Johnson: The drive is to look at not actually managing down utilization, but simply driving a better cost bargain.

Mr. Bremer: From my perspective, representing my client, the object is to reduce costs, whether it's on the claim costs side or the administrative expense side.

Ms. Johnson: The other thing that I see people do, as far as trying to estimate costs, is to present a "before profile" and then, after they've applied some sort of managed care, present an "after profile" and take the difference as savings between the "before profile" and the "after profile." It is a problematic approach. How do you know that your care management was the one thing that made a difference. With large case management, those costs would have come down naturally. Are people seeing that as far as evaluating programs? No.

Mr. Bremer: I can respond to that. Maine is a small state, so the groups are small. You don't really have a good before and after. The mix is never the same, so it's somewhat of an apples-to-oranges comparison or maybe granny smith apples-to-red delicious apples comparison. You never can really get a true, scientific experiment. Nobody wants to try. We're going to take a random group and not do something and take another group and do it. Unfortunately, there are so many dynamics of cost and utilization and technology shifts that it's very hard to look at data that are two years old before some of these things were implemented and then after the fact. I'm not talking about disease management where I think it's a little clearer.

Mr. Cookson: There could be double counting though, even on some of those issues where, for example, you have a disease management program for diabetes, and you have a disease management for heart and some of the people with diabetes have heart problems. Do you double count? You have to make sure they're not double counting the potential savings by counting the same person twice.

Mr. Robert M. Sackel: I'd appreciate it if you can help me understand your illustration a little bit better in terms of the practical sense. You talked about a 20-hospital network. I assume this is not the only provider you're dealing with and it's just one of your relationships. The hospital has relationships with many people, so you have to work out schedules with the hospitals, and it's the way they run the whole hospital. You don't have a captive situation, so perhaps you could work out some situations, but if you have a big population, maybe they'll pass the cost on to the other people. But I'm not sure how you get in and practically reorganize the hospital to be efficient.

Mr. Cookson: Obviously, the hospitals have to reorganize themselves to be efficient. They first have to admit that they're not efficient, which many of them are reluctant to do. When I put this example together, it was really in the context of a Blue Cross plan where they really have significant market share. They're really dealing with virtually every hospital in the community. They do negotiate contracts like this all the time, but they're getting a lot of antagonism, from claiming some days were inappropriate. "We're not paying for these days" and there needs to be some kind of a paradigm shift. This was a simple example. It illustrates that there are other things that can be done other than 'negotiating a DRG, 'a per diem, 'and a discount off the charges. Denying days of care is causing a lot of conflict, and it's contributing to a lot of what we're seeing in the environment, with this push back and all this legislation and legal activity. I think we have to find ways to show the providers that they can benefit if they do things to make themselves more efficient.

It shouldn't be a matter of, for everyday I cut, I lose \$1,200, or whatever my per diem is, but my costs go up. Obviously, the hospital is getting a larger and larger percentage of its patients concentrated in those very high cost areas, due to the first few days of care. So the example wasn't intended to be something that you could go out and take off the shelf and implement somewhere. When I put this together it was done in the context of a Blue Cross plan that can look at the environment differently and begin to have ways to reward those that do actually make significant cuts in their cost and their performance that do go hand in hand.

Mr. Sackel: But, of course, they also want to maximize their profits and certainly they have competing objectives. It's an interesting balance.

Mr. Cookson: That's right.

Ms. Johnson: For many hospitals, the starting point is realizing that a huge proportion of their payments come in via Medicare and that's a DRG payment. So the sudden realization is that if they simply gained efficiency in the way they deliver care, on the Medicare side, that stands to support their profit line. Other than Medicare, some of the payment comes in per diem or charges. One method creates the incentive to keep the patient longer. The other says get the patient out efficiently. When I work with hospitals, I talk to them about deciding what foot they want to lead with. Do you want to lead with the contracting foot or do you want to lead with the clinical efficiency foot? You eventually have to bring the two of them together. But if you lead with the efficiency foot, so that you're getting people out of the hospital faster, you stand to gain on the Medicare side, provided you do it carefully. You need to make your contracting strategy come around so that you have more case rates and you pocket more of that money yourself or that you bring your per diems up because you can demonstrate to your payers that you have shortened the length of stay.

Mr. Sackel: Do all the hospitals have the same exposure with Medicare, or do some hospitals have better arrangements with Medicare?

Ms. Johnson: In my experience, Medicare is the largest payer for just about everybody. If you really looked at 'your biggest payer, it's almost always Medicare and that's DRG payment. I am not sure how that varies state to state.

Mr. Cookson: The DRG payments are nationally based, but they do reflect some local factors. For example, there are wage differences by geographic area and some capital costs differences by geographic area. We found that typically 50% or more of hospitals' revenue or costs were tied up with Medicare, but it could range from less than 30% to more than 70%, depending on where they are located and the type of practice that they have. But in examining benchmark actual length of stay patterns, case mix and severity adjusted, 'we found that somewhere near 40% of Medicare days are avoidable when compared to benchmark length of stay (LOS). In other words, other hospitals are doing better with that amount by case mix and severity, so a lot of these hospitals are leaving a lot of money on the table. I mean they're not getting any more revenue from Medicare unless they happen to hit the outlier payments, which are a fairly small percentage, but their costs are being

driven by these extra days. In effect, their profit margins are significantly reduced from what they could be if they became more efficient.

Mr. Sackel: What you're describing is something that's fundamental to the hospitals. They have this big Medicare exposure; therefore, they want to maximize profits. This is something they've been dealing with for a long time so it's fundamental to their business. What do you offer that could be a revelation to them that they don't already know?

Ms. Johnson: One of the biggest things is that physicians are paid per visit to the person in the hospital and the hospital is paid a single rate. That's why there' are a lot of financial problems with getting the physicians to work with managing the patients. There' are a lot of issues with gain sharing between hospitals and physicians, and we know about the legal pitfalls there, but programs that help physicians and hospitals work together on efficient care are one of the single most untapped areas of improving the financial bottom line. But you have to make it worthwhile for the physicians.

Mr. Cookson: A couple of years ago, one of our physicians was working with a hospital network in the northeast. It had just taken over a large block of Medicare risk business from an insurer. The insurer was losing a lot of money on that block of business and the hospital network was going to lose money if they didn't change. So our physician showed them, for this type of patient, that you need to reduce your lengths of stay by this number of days. The chief medical officer of the hospital group said, "Oh, nobody can do that". This was his reaction. Our physician asked him to pick several DRGs, and we'd come back with a list of hospitals that are performing at these benchmark levels. He picked the DRGs, and we ran some analyses with results that demonstrated a number of hospitals that were performing at these levels for the DRGs specified. Our physician went back up to the medical officer and with the list of hospitals at benchmark. The reaction was "to ask, "Who's going to pay us to do all this work?"

In other words, they will say nobody can do this or they will obfuscate, but when it comes right down to it, it's work and they want to be paid to do it. I think that's really the issue. The physicians don't want to do more work without being compensated, and they do control an awful lot of what goes on in the hospitals.

They often don't know what's efficient. They've been doing this for 15 or 20 years. There's not a lot of information out there that says, for this diagnosis, this pattern of care is efficient, and for another that pattern is efficient. There isn't a lot of good information because they've been doing these kinds of things that way for many years and they are reluctant to change. Something is going to have to create a change that everyone can live with and buy into.

From the Floor: This is from a personal experience, but I think it bears on this. I went in for some tests, and I became very concerned as to what the tests were supposed to do. Nobody knew what they were going to cost. I have Medicare Part B so I'm paying part of the cost, and furthermore, they weren't able to tell me whether they are alternative tests that could generate the same information.

Furthermore, they couldn't tell me what the nature of the invasiveness of the tests was, i.e., what was going to happen. I kept trying to needle them to give me the results of the test. They gave me a bunch of "It could be this" and "It could be that" and "We really don't know." I said, "What is the chance of this?" I'm an actuary, I can understand probabilities." What I finally ended up doing was going to the University Medical Center, to the medical librarian and getting a huge number of printouts. I did the research myself. Most people wouldn't do that research. They wouldn't be willing to sit down in a medical library and go through all those papers. But if you can't get advice and all the doctors want to do is run additional tests, where does that leave the whole system? That patient can't do anything as far as trying to improve the efficiency, and I don't think the patient is getting very good care. I'd like your comments.

Ms. Johnson: Actually, I was just looking through my notes because I wanted to comment about one of the primary things that medicine has not done. I just came from a conference by the National Health Institute on Quality Improvement and they talked about that very issue, about what is the basis of medicine. How much do we actually know about the efficacy of what we do in order to treat patients. They always throw out the number 20%. That says there's only randomized control trials on about 20% of what medicine actually does.

There was another study that was reported that was very interesting. They followed physicians to determine how many times the doctor does not know what's going on. How many times for every 15 minute visit, does the doctor say (to himself), I don't know what's going on here? They discovered that it was an average of 16 times a day. I think that sounds pretty high when you figure an average physician sees somewhere between 25 and 40 patients in a day. Sixteen different times a day he's presented with a head-scratching situation. Now what do you suppose he does? Does he do what you do and go to the library and look it up? Does he go out in the hall and catch one of his colleagues and say, "I have the weirdest looking rash in this room. Can you come take a look at it with me?" Have you ever had a doctor come back to the examination room and say, "We can't figure this out?" But have you ever had a doctor come back to you and say, "We're going to do some additional lab tests?" They're buying time; it's what they're doing. Sixteen times a day the doctor doesn't know what's going on and doesn't have the time or the resources to be able to look up what's going on.

Let me give you another number. In 1964, when doctors were graduating from medical school, they prescribed an average of 50 different medications, and they could carry those medications around in their head. So there were 50 typical prescriptions that they might write and they knew what those drugs were, what they did, and what the usual strength was that they should prescribe and how many times a day you should take them. The entire American formulary of medications was 300 medications. Today there are 10,000 medications and there is no way that a physician, any physician, can carry that around in his or her head. There's no way anyone can do it. What we're seeing is a huge evolution that's happening in medical practice. So physicians have traditionally been trained to know all and be all to their patients and to rely on their own knowledge and their own sense of responsibility for the patient care. What we're seeing is a move to

needing to rely on services that sort, collate and summarize information and translate it into advice about how you should actually manage and treat patients and medical guidelines. There are a whole variety of places that are out there publishing. Milliman & Robertson publishes those same kinds of guidelines. What we're seeing is a huge shift in medical practice to reliance on guidelines, and because of the medical culture, we're seeing a huge resistance from physicians about doing that. Do you know what the average length of time is for a new discovery in medicine to make it into practice? What is that lag time? You'd like to think it was a week or maybe overnight. The doctor goes home, he reads the *New England Journal of Medicine*, and the next day he's treating his patients differently. That's what you'd like to believe. In actuality, in the 1700's, the treatment for scurvy in sailors was discovered, but it took 167 years to get that into practice.

We discovered in 1988 that thrombolytics could be used to treat patients with heart attacks. They are clot dissolvers. You can actually prevent damage to a person's heart. In 1996, only 36% of the patients that could benefit from that treatment were receiving it.

In the early 1990's, we discovered that ailments that had been diagnosed as ulcers or as heartburn (we were treating it with milk and antacids.) were actually caused by a bacterial infection that needed to be treated with antibiotics. Less than half the people that have that condition are being treated. We can't even drive new practices or new discoveries that have been proven by randomized control trials, much less standardize medical care. So I'm sorry to say that's the scope of the issue.

Mr. Sackel: So my experience is not atypical then?

Ms. Johnson: I'm sorry to say it's not. One of the most remarkable things that is happening in medicine is not on the finance side, but in the standardized medical practice side. So while they won't go out and do the same kind of study that you did, they need to have access to services that provide exactly that. So when the doctor walks out of his room scratching his head and says, "I do not know what this person's rash is," he needs to be able to turn immediately to a computer program that will provide him with the information he needs. He needs to be able to do it within a few minutes. He has only a 15-minute office visit scheduled with you.

Mr. Sackel: One of the things that's most frustrating is they won't provide advice. They won't say what they prefer. They say there's a variety of treatments. You end up with a bunch of nonsense.

Ms. Johnson: Let me take a little survey. How many of you have ever not followed a doctor's advice? Have you taken yourself off medication before you were supposed to, or didn't complete a treatment regimen, or ignored what a physician had told you to do, or decided not to go in and get an immunization?

Mr. Sackel: Or how many have decided not to lose weight?

Ms. Johnson: How many of us managed our own care? One of the problems with physicians not providing pointed advice about what we have to do is because we're in the middle of this evolution where physicians are beginning to realize that 80% of their advice is ignored. David Sobo has produced a study that says 80% of physician advice is ignored. What's the point of all the advice then?

Mr. Sackel: Then why are you going to the doctor?

Ms. Johnson: One of the things that I had wanted to talk to people about today was this whole idea of patient self-reliance and self-education, which is a relatively new thing that is being covered by insurance companies. It's a series of about six to seven visits where patients are assessed on their knowledge of whatever disease they have. They're also assessed on their ability and their confidence level about managing their own disease. Interventions are provided that help build the confidence level. So they don't just tell you what to do anymore, but they help you to actually do it and they recognize the fact that most medical care is managed by the patients themselves. How many of us have been to a doctor or have been hospitalized in the last month? How many of us have handled some sort of medical condition by ourselves in the last month? Every hand in the room will go up. Everybody has either taken an aspirin for a headache or been on some kind of medication or decided to handle a cold at home or evaluated a hangnail and decided it didn't need treatment. We've all handled something ourselves at home. However, how many of us have been under a doctor's care? Not many.

Mr. Cookson: How many people take herbal medicines or herbal supplements? Not that many. I'm surprised. How many of you tell your doctor? Some. There's been some statistics recently that a large percentage of the people will not tell their doctor about herbal medicines because they feel he'll discourage it and so in effect, they're treating themselves. They think they know more about certain things than their physicians.

Mr. Sackel: I'll pass one more thing along. I found that you can usually extract advice from the doctor by telling your doctor that another person has a certain condition. Then ask the doctor how he would treat that person. That usually gets the best response.

Mr. Cookson: Or, you could ask the doctor. "How would you treat yourself?"

Mr. Bremer: Just two questions. I see you are ready to move on to Alison's presentation, but I would like to get back to two questions that I was reluctant to ask. One of my clients is a hospital and is having a lot of fun with one particular insurer who is using the M&R guidelines as criteria. The insurer will claim every day that a patient exceeds the M&R guidelines, regardless of the condition of the patient, is an avoidable day, leading to a lot of fights between the insurer and the hospital. Could you comment on how you would define avoidable days in that study and would you care to comment on what is a response for a hospital 'that is confronted with a insurer who is using the M&R guidelines as a criteria?

Ms. Johnson: I'll get the second half of that.

Mr. Cookson: In terms of avoidable days, I don't define them based on the guidelines. They're either based on our physicians and some other clinicians doing chart audits on specific cases and they will identify days that they think are avoidable based on medical criteria, looking at the case notes, and so on. Those are usually relatively small samples. I have done a statistical analysis where we have built models by DRG and severity, so that we are trying to get down to homogenous levels of inpatient care. We built statistical models to take into account all the diagnoses and all the procedures and whether the patient comes in through the emergency room. Where is the patient discharged to that is statistically significant and effects the length of stay over a broad range of patients with similar type characteristics. We use broad national public data sets. We then extract from that data, most efficient practice using several levels of statistical analysis. We then benchmark everything, all the care in every hospital to the benchmark for each set of patient criteria. The difference between the actual performance and what the benchmark hospitals are doing is what we consider avoidable days.

Ms. Johnson: The other part of the question is, what do you do when you have a payer that's opening up the M&R book and says, 'an appendicitis should require a three-day hospitalization.' The doctor and the hospital are saying, "'The patient' is running a fever and this person needs to stay five days. We've never had anybody with an appendicitis get out of this place in less than five days". How do you get through that kind of argument? The Milliman & Robertson guidelines are unusual in that they are based on best practice. Many of the guidelines that are produced out there have been produced by a hospital. So they've taken into consideration that a certain number of patients will have complications and that there'll be a certain number of delays that always seem to happen in the hospital system. The hospital guideline says that an average length of stay for a fractured hip is approximately seven days. The Milliman & Robertson guidelines say you should be able to be out of the hospital in five days. The difference is they are based on best practice. If the patient's biology is perfect and your hospital system is perfect, you can get that patient out in five days. In addition, they also say that about 80% of the commercial population should be able to be a perfect case and about 50% of the Medicare population can be a perfect case. So when the payer calls you up and says five days is all you get, then you use the medical necessity argument. You say to them, "This patient is running a fever and has rheumatoid arthritis and is not able to ambulate as effectively with physical therapy; therefore, we need another day in the hospital." The kind of argument that you can't use is, "Our physical therapist isn't here on the weekends," or "The doctor only rounds once a day and he won't even see that lab work until tomorrow morning." It should have nothing to do with your hospital operations. That is the hospital's problem. Whatever your operations are, that's your problem. But if you're talking about a variation in the patient, that is the only reasonable reason for a length of stay to be longer.

Mr. Cookson: I can give you an example with an appendectomy. I don't know that I have the numbers exactly right. You might see the benchmark running for the least complicated severity level, which means they are just minor extra diagnoses that usually don't impact on the length of stay. For this example, you might see the benchmark LOS hospitals for appendectomies running in the 1.25-1.5- day range so that a large percentage of their patients will get out in a day and

then some percentage will get out in two days. Then as you move up to the second level of severity, you might see a two-day average LOS. Most of those patients are going to take two full days. Then, when you get up to severity level three, you might have some diabetes complications and then it might be four, five, or six days. Then if you go up to severity level four, it could be ten days or more depending on your mix of patients and the complications; it's going to affect your entire length of stay. Obviously, you can't treat patients in level four severity and expect them to get out in a day-and-a-half or get out in a day or two days at the most. It's just not going to happen. But, if you look at the complications and the co-morbidity, you can determine which classifications these patients belong in and do a better assessment of what their LOS might be.

Mr. Laurence C. Williams: I have one question and one comment. I have a question on your 46% avoidable days. What did hospital inefficiencies do to cost? Can you help me understand what the internal hospital cost drivers are? If, for example, you eliminated all 46% of those days, I don't believe their costs go down 46%. Do their internal costs change? They're not 100% variable cost, so what's a reasonable, actual cost reduction that would be associated with eliminating those avoidable days. The second thing I have is a comment on your reimbursement schedule that was based on efficiency. I am from Texas and the Texas Attorney General just took a pretty strong stance regarding what they call inappropriate incentives. Basically, they have potentially onerous implications where they presume that just about anything that's utilization based is inappropriate. So I don't know if you want to comment on that.

Mr. Cookson: I can't help the situation in Texas. What was the first part regarding the issue of the 46%?

Mr. Williams: It pertained to 46% of days and the hospital cost. What would the real savings be for hospitals? Obviously they won't save 46% of their total cost.

Mr. Cookson: Actually, we have a proposal in to do a study of that for someone. What we've been doing is looking at variable cost rates and letting them play "what if" games. Obviously, the hospitals are going to say there are no marginal costs or there's a very small marginal cost. When looking at the differences across hospitals, as I did in developing this proposal, I contrasted one geographic area with another much more efficient area. Even when you adjust for geographic cost differences and the wage differences between the two areas and other things like that, there were significant cost differences.

The one area was much lower in terms of its utilization and its avoidable days than the other area, and their cost per case (case mix and severity adjusted) was substantially less also. I would say, just based on that observation, that at least 50–60% or more of the cost is variable, but it obviously will vary from hospital to hospital. It depends on how much of their capital is fully used, how many of their beds are occupied, and how much is overhead. I think some of the problem is with all the administrators that work at the hospitals. If you can't get rid of any of those administrators, that's a fairly high fixed cost. On the other hand, if the payer could get out of having to manage every patient and the hospital could get out of

interacting with the payer on every patient and all the red tape and paperwork is eliminated, it seems to me there can be some savings there.

In addition, there is savings in the patient care area of the nursing and the cleaning and the feeding and everything else that goes on every patient day. But if I had to make a best guess, I would say it is somewhere in the 50–60% range or more, but it will probably vary a lot by area. I hope to have more solid information some time later this year.

Ms. Johnson: You also come up with questions about how much excess bed capacity there is and we see market after market go through hospital downsizing. Hospitals are closing or are becoming ambulatory campuses where some other place does the inpatient care too. It's also a long-range question about the fixed versus variable.

Ms. Barbara V. Scheil: One of our discussions has centered on individual service types-- hospital inpatient, hospital outpatient, professional, and drug. I wonder if any work is being done in terms of the interrelationships. For example, there is the explosion of new drugs. What effect does that have, or should it have, on hospital admissions?

Ms. Johnson: Are people seeing concerns about that out there? Is there the interrelationship among different places of services? There's a tremendous number of integrated delivery and financial systems (IDFS), where they're trying to connect the hospitals and the clinics. There are these giant organizations that have the hospital, the clinic, the nursing home and the home health services and pharmacies 'in one location. Steve Shortell out of Northwestern in Chicago has done a tremendous amount of work and study on what those integrated delivery systems look like. His latest conclusions that ' he published in the summer of 1999 are that they have not realized what they were intended to realize. The idea of being able to integrate well enough so that you provide a better experience for a patient and that you generate savings by having an integrated financial structure simply has not been realized. There is a lot of conjecture about why, but it doesn't look like anybody has done it efficiently.

Mr. Cookson: I think there has generally not been good data. One area is the connection between drugs and inpatient utilization, and during most of the late 1980's and early 1990's, drug utilization was going up and the drug companies were saying we're helping you reduce your inpatient utilization. I'd say drug utilization has gone up substantially more in the last two years, and the inpatient utilization has really leveled off. It's harder to draw that conclusion right now, and I think more work needs to be done in that area. You really need huge databases to be able to integrate all that information. I share your concern.

Mr. Timothy Michael DeLellio:* I want to talk about medical standards and guidelines. First, I'm a big fan of those. I just think that they are a good thing for everybody, and I think they are the kind of thing that they wouldn't apply in every

* Mr. DeLellio, not a member of the sponsoring organizations, is Chief Actuary at Lifeguard in San Jose, CA.

case. In 80% of the cases, we could figure out what to do. The advantage I see is that we could come up with better outcomes, at lower costs. The third thing, I don't know if it's talked about as much, is this could help protect a lot of doctors from medical malpractice liability because they could show that these studies suggested the right thing to do. It's not always going to be the right thing to do. 'If they could show that in most cases, I believe that would give them protection in court, if it ever comes to that. I think one of the reasons why doctors are hesitant to give advice is because there is so much information out there and they don't know all the answers. That's why it would help them to say, "This is what the studies are saying, and this is the best information that we have about this subject." With that in mind, I just have two questions. The first question is, why do doctors oppose standards and guidelines? It seems like it would be in their best interest in some ways. The second question is, what can we do to help convince them that guidelines and standards are the way to go?

Ms. Johnson: I can tell you why physicians resist standards and guidelines. It has to do with the way that they were trained. In medical school, physicians get a heavy-duty message that says they are responsible for people's health. 'As they work their way through residency, they develop a God-like persona in which they believe that if they are responsible for people's health, then they cannot make a mistake, and, they must always be right. I'm not just talking off of the top of my head. There have been studies that go back to 1977 that show that kind of personality evolution happens in physicians, and it's a direct result of the way that they are trained. It also has some very punishing side effects. Physicians have one of the highest suicide and divorce rates around because they feel like they are not allowed to ever make a mistake and that they are responsible for everybody and everything around them. That results in a tremendous resistance to any kind of external guideline. They have been trained to rely on themselves and to resist having to follow any sort of external guideline. That's what all the claims about cookbook medicine and protesting is about. We need to go directly after the physician culture, to help them understand how this can help them. It's not intuitive to a physician to take a guideline and say, "Oh, this will really help me." It's not intuitive to them. They need help with that.

Mr. Cookson: I think we also need to find better ways to communicate to them that efficient care is quality care. Look at what we call clinical flags, for example, diseases or infections acquired while in the hospital or electrolyte problems that are somewhat controllable within the hospital environment. We find that the benchmark hospitals have both lower frequencies and shorter durations of those problems than the inefficient hospitals. They have ways to screen for them; they intervene earlier and appropriately and, in effect, reduce these problems. The patients benefit by getting out more quickly and having fewer complications. So that kind of information really needs to get out and it really hasn't up to now.

Ms. Johnson: I'll also go through some specific steps as to what we can do to help.

Mr. E. Jay Coldwell: I would like to go back to something that came up regarding the perspective of an employer who's interested in buying disease

management or a population health management program and getting satisfactory feedback that this program has value for what they're spending. These programs are expensive, they're labor intensive, and the various kinds of savings reports just aren't very satisfactory. The soft savings we talked about, longitudinal studies have problems. There aren't good population-adjusted benchmarks to say what my population should look like specific to these things. So have you seen anything that really looks very satisfactory from the point of view of an employer, that says it would be worthwhile spending several dollars per employee per month to engage in these kinds of programs?

Mr. Cookson: I've fought the same battle for employers with hospital utilization review companies with the reports that they would give. I mean they've changed over the years, but we now do our own monitoring. If the employer is big enough, you can watch the days per thousand to see if things are performing as expected. But even there, you must account for random fluctuations that, from time to time, are going to have an impact. I have not seen anything that I find really satisfactory. Some helpful things that I've seen recently, though academic studies, might not help an employer in evaluating their own situation. For example, there have been a couple of studies on chronic heart failure, which would probably affect more the Medicare population than the employer population. But simple programs and administration of relatively inexpensive drugs can have an impact of reducing mortality rates substantially and inpatient utilization by 30–50% by very simple changes and very low cost drugs. At least you have something that you can point to and say, okay if we have a population with these problems, it may be worth investing in this and covering these things or trying to get our people into this kind of a program. Usually an employer is not going to have a critical mass of these patients, so they really have to be pooled in with other employers in a more broad community-wide program, and I think that's a problem. There are too many conflicting interests and costs and return on investment and the turnover of employees that it make it a much more difficult decision for our employer to be willing to pay for these kinds of programs. I think some of the comments that Alison has on these community-wide programs will help deal with those issues.

Ms. Johnson: In fact, there have been some studies done that show that there are certain programs that do have a good financial payback. But it depends on whether you're talking about a financial payback in terms of medical costs or whether you also factor in whether the person is able to stay at work. So when you're talking about an employer base, you also need to measure days lost at work. Work-based programs for diabetics help make it easy for them to both keep their blood sugar in check, including the combination of diet and medication and reduce the number of lost days at work due to diabetes. So there are pretty good studies out there.

There are no randomized control studies that prove beyond a shadow of a doubt that these things work, but the best guess so far is that work-based diabetes programs do work and diabetes is one of the most prevalent chronic conditions. There is also good evidence that asthma programs reduce emergency room visits and hospital stays and do it by a combination of outpatient treatment. That translates into fewer lost work days for employees who have a child with asthma

and fewer lost work days for adult asthmatics. So you have to measure the lost work time due to the kid that's sick at home with asthma treatment programs. Congestive heart failure, as John referred to, is another one where if you can get the better patient skills and self management, there is a positive outcome on the emergency room and inpatient side. Most of the studies that look at disease management concentrate on utilization of emergency services and on the inpatient side with a lot of support for the members and better medication use. It's kind of being studied disease by disease.

I have two things that I want to talk to you about. First, I want to run through a population health model because this is a model that has been out there about five years that we're beginning to see evolve into programs. Second, I want to talk to you about a new thing that is right in the face of every clinician right now and that has to do with medical errors and patient safety. The report came out from the AMA in November '1999, and I'll give you some of the numbers and information from that.

First, let me talk to you about a population health model. You know the way that we've typically delivered medical care was that we divided people up by whether you could walk or not. If you could walk, then you went to the clinic, and if you couldn't walk, then we treated you in the hospital or we came to your home to treat you. It turns out that that's not very patient based. It's not based on what you need; it's more based on your mobility. Medical practice was to divide things up according to what served the doctor best. So what helped the doctor organize his day? It helped organize his day if you came to the clinic. It helped the doctor if you specialize by body part. So you took your broken limbs to one place to be treated, but you took your lungs to another place to be treated and went to yet another place for your pregnancy.

What we're beginning to see is the evolution of models that ask, what are the groups of patients and what kind of care do they need? Healthy populations simply need things like immunization programs, exercise facilities, healthy options for eating and programs in this area. They typically fall outside of any kind of medical management and are more community driven. Health Partners has a very active program in Minneapolis. They work with restaurants to evaluate their meals and they have a little symbol that they use on all the menus to indicate a heart healthy menu item. So healthy populations need community and public health-based programs.

The second group of people that we see are the pre-symptomatic population. These are people that are either at very high risk or already have a disease or condition and they simply don't know it. This might be smokers who don't have any symptoms yet, or people with high blood pressure who have yet to be diagnosed. There's a whole arena of pre-symptomatic conditions. I'll also tell you this impacts obstetrics. We know that if you can get to women with medical care in the first trimester, this produces significantly better outcomes. But unless you know who they are in those first three months, you can't act.

In the pre-symptomatic population, the things that they need are early detection and they need to be able to do it themselves. Do you know what the most frequent way of diagnosing hypertension is right now? Drug store blood pressure testing devices. We also need a lot more self-testing kinds of situations. Do you remember when home pregnancy tests came out? Eighteen years ago was the first home pregnancy test. Do you know they're working on home testing for HIV? How would you rather find out that you're HIV positive? At home with the people who care about you? Or, would you rather get the news in the doctor's office? Would you rather get a telephone call? Most people prefer to find out those sorts of things at home.

From the Floor: With self-testing, why is the FDA dragging their feet on many of these tests which are proven effective?

Ms. Johnson: You know this a problem with the FDA. It also drags its feet on the evolution of AID'S medications. Look at the number of years that it took for us to get medications on the shelves. Europe has far more medications that swiftly move through their system and are on the shelf available for individuals. Virtually every other country has more over the counter medications than the United States. We're much more tightly controlled on what has to be prescribed, so I can't answer for the FDA. I think they're frustrating too.

Aggressive self-management is the other thing that pre-symptomatic people need. If you're overweight and you know it, you need to aggressively self-manage yourself. There's no doctor's appointment that is going to help you. You need aggressive self-management. Alternative therapies are something that the pre-symptomatic population is seeking out and community support and worksite support are the other things that help with this area.

The next group are people who are acutely ill. Modern American medicine really shines in acute illness because we focus everything around treating you when you are acutely ill. Now this came out of some real honest background, when the most frequent thing that any physician treated was infection and there were no antibiotics to treat it with so you treated everything as though it were an acute illness. That's what everybody died of-- not chronic conditions-- but acute infective kind of illnesses. People who are acutely ill typically need hospital care of some kind. They need transition back into those other groups. So after you have your acute exacerbation and you're diagnosed with diabetes, you need to be moved into a chronic disease program. Frequently acute illness needs follow-up in order to prevent the next exacerbation. They need very specific self-care and self-management and that was the program I was talking about earlier that helps boost people's confidence as well as their knowledge about their disease and how to manage it themselves. They also need coordination of services and benefits because we, unfortunately, have divided up health care into hospitals, clinics, home care, and so on, but we don't have good coordination. We don't acknowledge that the same patient that needed hospital services is the same one that has to be seen in the clinic and the same one that has to pick up their prescriptions at the pharmacy and has a nurse coming to their home. So we aren't tying together the system well enough for them.

The next one is chronic illness. The largest, growing area is people with chronic illnesses. What's the average age of the onset of chronic illness? What do you think? It's age 55. It's younger than you think. Most people think it's 65 because that's when Medicare kicks in. Age 55 is the average age of the onset of chronic illness. What's the most common chronic illness that people have? Arthritis. More than half of people 65 and older have arthritis. It is by far the most common condition. Diabetes follows but I think it's about 16% of the population. We're getting better and better about diagnosing it, so people who are chronically ill, need to be managed in a fashion that prevents them from becoming acutely ill. Instead, how do we treat people with chronic illness? We wait until they become acutely ill and then we get them into the clinic or to the hospital to treat them. We're trying to treat chronic illness as though it's an acute illness. "Make a clinic appointment when you're sick" "rather than" "I want to see you every month until I'm certain you're able to manage your diabetes by yourself. They also need very tight care coordination between places like pharmacies and doctor's offices.

The most common treatment for people of chronic illness is medication of some kind. They're beginning to transfer the responsibility for medication management to the pharmacies and the pharmacist instead of the doctor. Has anybody here not refilled his or her chronic medication on time? I know I've missed a few doses and didn't take my cholesterol medication. Does the doctor's office call up and say "Hey, you're five days late! Why didn't you get your refill?" Has anybody ever received a phone call like that? I never have. I don't know any clinic that tracks it that well. The pharmacist might call you and say, "So you haven't been in to pick up your insulin." So, that's one of the chronic illness programs that would be aimed at tight care coordination for these people. There is also community support, and medication management programs.

The last category is people who are at the end of life—needing palliative care. We treat people who are dying as though they were acutely ill, and they are not. We need a different way to treat people who are dying. Any chronic disease textbook that you pick up does not mention that this is the disease that this person will die from. There's a very innovative program that Dr. Dan Tobin is working with in the Veteran's Administration. It consists of six visits with a specially trained nurse or social worker following a set series of discussions with the patient and their family about the disease a person is dying from. Let's talk about some of the issues. So there are some innovative things going on. How do we treat people who are dying? We let them die in hospitals. The hospice movement is the one star in this area.

This is the basic framework that ' medical management is starting to look at. Are we talking about a presymptomatic or prevention program? Is this about chronic illness? Is this an improvement in the acute care side? Are there comments or questions about this model? It' has been out there since about 1994.

Ms. Scheil: Just one question. Approximately what portion of the population falls into each of these categories?

Ms. Johnson: 'I don't know. I don't know that we can even find that out. I know that there's recognition that a lot of chronic illness is undiagnosed so we often don't

know when people have chronic illnesses. I'm sure that we could come up with numbers that say how many people are acutely ill at any time and could get the population number of the percentage of people that die. My own impression is that most people are in the pre-symptomatic or the chronic illness category. We act as though most people are acutely ill, but I don't know the division.

I had one other thing I wanted to cover. It has to do with medical errors and safety. In November, the Institute of Medicine report came out, and it said that about 98,000 people die in hospitals as a result of medical errors. The total cost is estimated to be \$17–29 billion. That encompasses more in-hospital deaths than motor vehicle accidents, than breast cancer and than HIV. So we're actually killing people with medical errors. This is just the in-hospital side of the report.

This doesn't count outpatient kinds of errors. It is a huge problem driven by a variety of causes. They also believe that probably two-thirds of those are preventable. The other one-third is probably not preventable; an example of these unpreventable things would be a severe allergic reaction to a medication. The physician had no way of knowing what the patient was allergic to. One of the most studied areas has to do with medication errors and when you think about it, this is pretty perverse. What is more blatant than actually giving somebody a medication that does him or her harm? Out of every 100 medications that are given, what number do you think actually cause adverse drug reactions? 'Actually, 6.5% of the medications cause some sort of adverse drug reaction. Then they divide those into various categories. About 1% of adverse drug reactions ends up being fatal and about 12% are life threatening and another 30% are serious. The categories go down from there. Medication errors are the single most serious quantified category of the whole patient safety and medical errors issue.

The most common cause of fatal injuries in the hospital has to do with wrong administration of medications. There are several reasons for that. I'll just give you a couple of thoughts about why it happens that way. We talked about some of the ways that medical practice is put together. Physicians are solo practitioners. They are not accustomed to and they have not been trained to seek any sort of outside oversight on their practice whatsoever. In fact, they've been trained to be completely self-sufficient and that lack of oversight is probably one of the driving causes. The second thing is that we rely way too much on people to be vigilant and people to remember what to do rather than having systems in place that stop you from making mistakes. Pharmacies have better information systems that provide automatic alerts when a patient is about to take two contra-indicated medications. The hospital relies on the pharmacist's memory about medication. How many medications are out there? Ten thousand. Do you know all the interactions? You can see it's ridiculous to rely on memory but we have many systems that rely simply on memory and on vigilance. What we need to produce are better information systems. So patient safety issues are also coming, especially based on this report that came out last November.

Mr. Cookson: I would make one comment on that Alison. Those problems are all just general quality issues, but if those represent 98,000 deaths, how many patients who don't die are extended for longer stays and additional illness and

treatment and diagnostic procedures, and so on? There is a tremendous amount of potential cost tied up in these issues.

Ms. Johnson: Actually that has been quantified. If you have a medication error, 1.91 additional days can be added to your hospital stay and slightly more than \$2,000. That's if you don't die.

Mr. Richard G. Murdock: In listening to a number of things that we've been talking about, it just occurs to me that we have some pretty terrible medical schools because we are not training physicians in this kind of methodology. We're not training physicians to look for drug indications. I'm wondering what might be happening today to change the educational process for physicians and medical practitioners that you can share with us. I mean we have a problem today. We need to solve it going forward. It seems like things ought to be changing.

Ms. Johnson: Actually, they are. The most influential physicians out there have been out of school 25 to 30 years, so I'm talking about a former medical school system. Exhaustion results in more errors. Some of it has to do with the way our residency programs run. Residents are on call 24 hours a day, every other day, and exhaustion is a tremendous problem. Emergency rooms are often run by very exhausted people, so there has been some reformations about the way particular residency programs are run. Some provide the residents with ample time to rest, for one thing. The other thing is that there is a lot more training done in medical school around the use of standardized approaches to care and ways for doctors to keep themselves abreast of current changes in practice. No physician that graduated 25 years ago from medical school was ever exposed to a guideline during medical school. There is no physician today that gets out of medical school without plenty of exposure to guidelines and how to use them. I would tell you that nursing school is the same.

Mr. Sackel: I'm just curious. With the greater use of the Internet, is there any move to get centralized information that physicians can use to get advice or to tap into to better understand?

Ms. Johnson: There are two very powerful sources. One is called the Cochran Database, and you can subscribe to that. It's actually maintained in Britain, and physicians can subscribe to that database for \$300 a year. It is a compendium of all the articles, so you still have to sort through and read all your articles. The second place is an American institution called Grateful Med. You can just dial up into the Internet and it does searches for you. You can guess that it was developed in the 1960's. It is a huge compendium of all foreign as well as American medical journals.

Mr. Cookson: In the 1990's, there were some start up tech companies trying to develop expert systems where it would ask a series of questions. A patient would come in, you'd put in some history—the age, the sex, and the symptoms—and it would lead you through a decision tree. I haven't seen any implementation of that. I know there are people working on it, but it might be too complicated. They were

expecting that doctors would have PCs in their office so they could use this type of thing.

Ms. Johnson: The AMA just announced its intention to enter into the Internet sites. There's also a lot of junk on the Internet. You could find support for virtually anything you wanted to do out there.