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Clinical Issues in Actuarial Analyses for Managed Care Organizations (MCOs)

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Summary: Actuaries who work in managed care can benefit from the medical expertise of clinicians. How are actuaries working with physicians and nurses? What are the advantages and drawbacks? What is the clinicians' perspective?

Ms. Susan K. Albee: Dr. Richard Doyle is a physician and senior healthcare management consultant from Milliman & Robertson's (M&R) San Diego office. Dr. Doyle has been involved in health care for 35 years, both as a clinician and as a medical manager. He was in private practice for 18 years in single specialty groups. He is a clinical professor of medicine at the University of California, San Diego, and is the former chief of staff of Mercy Hospital, San Diego. While in practice, he was involved in peer review and utilization review for medical organizations, including serving as medical director of a health management organization and an indemnity review program. He has been the national medical director of a large carrier. Dick played a major role in developing M&Rs Healthcare Management Guidelines and began work in protocol or critical pathway development in 1984. Dr. Doyle will be giving his perspective on how clinicians and actuaries can serve as resources to each other.

I'll be going through a number of examples to illustrate how actuaries and clinicians are working together today. These will include a few case studies which will provide more detail on how the knowledge and the skills of these two professions can enhance each other in dealing with health care issues. I'll talk specifically

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about the role of clinicians in these processes. Then Dr. Doyle will present the clinical perspective, including physicians' current views of managed care, physicians' reactions to working with actuaries, and how actuaries can benefit from the expertise of physicians.

Prior to managed care there was little tie-in between insurance organizations and providers. A physician simply submitted a bill for services performed and hoped to receive reimbursement from the insurance company. With managed care that has changed. It's clear to all of us that actuaries can't do their jobs in a vacuum. Health care actuaries spend a lot of their time projecting future costs. We know that the changing managed-care environment will result in significant changes from historical trends. The question is, to what extent will the changes be felt? We can't answer that just by looking at the numbers, but clinicians have the insight and the knowledge to help actuaries answer this type of question.

As health care providers and insuring organizations come closer together, for example through integrated delivery systems and partnerships of MCOs and providers, the opportunities for actuaries and clinicians to work together are expanding. Within M&R, an early motive for bringing clinicians on board came from HMO clients. While the actuaries were able to adequately advise clients on the utilization targets they needed to meet to reach their budget goals, they weren't very good at advising them on how to actually go about reducing utilization and health care costs. The clinicians were brought in to replace the missing piece between past experience and the potential for the future. Likewise, I think that actuaries have much to offer to clinicians, in particular to those struggling to understand the impact of taking on risk. We're used to dealing with insurance concepts, but these concepts are often new to physicians.

I'm going to walk you through some examples of actuaries and clinicians working together. I think there are three main forums where this is taking place. The first is with the actuaries and clinicians combining their resources to provide consulting services to providers or to managed care organizations. Together, they can provide these organizations with a wider range of solutions than either could on their own. I find the physicians in my firm to be extremely helpful in reviewing my assumptions and my results to make sure that they are reasonable from a clinical perspective. They are also very valuable for the credibility that they add to the results. A physician group is usually more open to our ideas if it knows that we've had a physician review what we've done. We also often find actuaries consulting to physicians. As I mentioned before, as physicians take on risk traditionally held by insurance companies, actuaries can help them to quantify that risk and put it into terms that they can understand. Finally, actuaries and clinicians within MCOs are working together in setting and achieving organizational goals.

There are a number of specific examples. Actuarial and clinical consultants might work together to assist hospitals or MCOs in determining their current level of medical efficiency. As providers consider taking on risk, they need to be able to assess their current efficiency level to determine what levels might be achievable in the future. I will go through a case study of such a project shortly.

Actuaries and clinicians assist health care systems in assessing resource needs and projecting those needs in future years under greater managed care penetration. The resource needs on the hospital side might be expressed in terms of bed days or types of bed days. On the physician side they may be expressed in terms of the number of physicians needed by specialty and number of specialties needed.

Another area in which clinicians' and actuaries' skills can both be used is in package pricing or case rate development. I'm familiar with one HMO that is developing case rates for a number of different conditions. Their actuary, medical director, and an operations person work out the details of the pricing on each of these conditions together. The physician advises on the appropriate course of treatment, and the actuary applies cost figures and develops a structure for cost projections. My understanding is that they will also use an expert panel of physicians to review their assumptions and assign probabilities to various treatment paths. We have done a similar project which I will explain in a moment.

Actuaries and clinicians are also teaming up to develop capitation structures and to evaluate capitation contracts where clinicians supply input on the scope of covered services considered appropriate under the capitation. Both professions can lend their expertise in the development of incentives and risk-share arrangements and in the setting of pricing assumptions and targets. Within HMOs, the medical directors are often in executive roles with bonuses dependent on the experience of their plans. In that case, they're usually heavily involved with the actuaries in the setting of target utilization and budgets.

An interesting project M&R worked on a short time ago was the development of a cancer carve-out product. An oncology group anticipated contracting with HMOs to assume risk for its members diagnosed with cancer. We developed separate package prices for four different types of cancer. The contract included all professional services related to the cancer treatment and did not include things such as routine health care services, facility charges, or prescription drugs. The payment covered a two-year term from the date a member was diagnosed with cancer and also included a provision in the case of reoccurrence of the cancer for a shorter period, such as six months.

The first step in pricing the product was to develop treatment paths for each type of cancer. You can think of these paths as decision trees. For example, the first step was the initial referral of the patient to the medical oncologist for treatment. From there a decision needed to be made as to the next treatment step, with a number of options possible. Some portion of the patients may go on to further testing, then chemotherapy, while some may go on to surgery or radiation therapy. Each of those options was assigned a probability. In this way multiple branches of potential treatment paths were created along with the probability of following along each path. We started with a thousand hypothetical patients with each type of cancer being referred to an oncologist. The patients branched off from there, based on the assigned probabilities. Next, the client developed price-per-service assumptions based on their experience of negotiated rates in the market. Weighted average claim costs were then calculated for all treatment paths under both a high and a low cost set of assumptions. The pricing up to that point was focused only on the oncology services. However, the group was also taking on risk for other specialty services associated with the cancer such as radiology, pathology, and home health care so an estimate of these claim costs was added on. Finally, the costs were loaded for administrative expenses and profit to arrive at a premium rate.

Clearly the expertise of both the physicians and the actuaries was critical to this project. The actuary provided project management and advice on product design. When the medical group first came to M&R it knew that it had something to offer to HMOs, but it really didn't have a good sense of how it could be structured or the type of analysis and information needed to price it. The actuaries provided that guidance. The project included days of interviews between the actuary and physicians with the actuary guiding the process and the physicians providing the needed medical expertise. The actuaries put the assumptions together and developed the final prices based on the assumptions. The physicians in the client organization were instrumental in setting the clinical assumptions such as treatment paths, number of services required in each treatment path, and price-per-service assumptions. Physicians within M&R, including Dr. Doyle, served as a resource for evaluating the reasonableness of the client's assumptions and the approach to the process.

Another type of project we often do for providers in which actuaries' and clinicians' skills complement each other is in performing efficiency analyses for hospitals. The actuaries review historical utilization for the hospital and put together a statistical analysis. This provides one measure of efficiency. The clinicians, on the other hand, evaluate the efficiency by performing chart reviews and medical management reviews. These can lead to very effective action plans and training programs. The statistical review entails reviewing the average lengths of stay by diagnostic related group DRG, for various categories of payers. We compare these lengths of stay to

norms that have been developed by our clinical consultants. The actual case mix for the hospitals as represented by the mix of DRGs is taken into account in the evaluation. However, this approach does not account for severity within each DRG. It also does not provide practical solutions or attempt to find the reasons behind the results. Therefore, the statistical analysis often goes hand-in-hand with chart reviews in which the clinicians choose representative samples to review. For each chart they determine the "unnecessary" days from a clinical perspective. The clinical consultants summarize the results by type of admission, such as medical, surgical, obstetrics, etc. For each type of admission they provide the client with percentages of avoidable days and admissions, and compare the actual average length of stay with the average length of stay that would have resulted with no unnecessary days. They also do detailed critiques of each case, pointing out how care may have been delivered more efficiently. These chart reviews can then be used to train the providers in how health care management can be improved.

The medical management review assesses, operationally, how well an organization is prepared to efficiently deliver care. This is done through extensive interviews with key personnel and reviews of standard procedures such as the steps taken when a patient is admitted. The results of the assessment are brought back to the client and used to develop an action plan and a training program. The assessment consists of a list of observations with recommendations for each. For example, an observation from one of our reviews was that there was minimal communication between the admissions area and the utilization review area. Utilization review was generally not notified of an admission until the following day so it could not prevent unnecessary admissions. The associated recommendation was that the hospital utilize a nurse in the admissions area to implement criteria for inpatient admissions.

We performed an efficiency analysis on two rural Midwestern hospitals about a year or so ago, and the results and contrasts between the two were very interesting. The clinicians gave us insights that actuaries normally don't see. We had first done the statistical analysis, and we didn't find the results too surprising. Both of the hospitals were the only facilities in town, and there was very little managed care, so they didn't have much incentive to aggressively control costs. The results of the statistical analysis were very consistent with their situations, showing little utilization control.

Medicare DRG payments provided some incentive for them to control lengths of stay, so the results were a little bit better in that area. While the statistical analysis did not show a great deal of difference between the two hospitals, the medical management reviews and the chart reviews definitely did. One of the hospitals was clearly setting a vision and recognizing that things were going to change in the future while the other was holding on to the belief that it didn't need to think about

these things because it did not have any competitors in town. The more forward-thinking hospital had a physician who was ready for change and championed it while the other hospital did not have an individual in that role. The second hospital was also very traditional in its organizational structure; basically whatever the physician said went. Our clinical consultant, a nurse, said her jaw dropped when she walked into this hospital and saw that the nurses were still wearing their little nursing hats like it was the 1950s. I think it will be interesting if we can go back to these hospitals in a couple years and see how things have progressed. In this project the clinicians really added the human, operational side to the project while the actuaries helped the hospitals understand the financial impact of moving to managed care.

I've given you just a few examples of how actuaries and clinicians are working together. I'm sure that there are many more examples. In the future, the opportunities for the two professions to combine their expertise are going to expand.

Dr. Richard L. Doyle: What value do actuaries have to clinicians as clinical practitioners and risk takers, not as consultants? The main thing is that actuaries think of populations, and medical practitioners and nurse practitioners have never been trained to think of populations; nor for that matter have they thought about efficiency. It's never part of the formal education program, medical school residencies, nursing school, or continuing medical education, whereas it is a major thrust of managed care. One of the things we have to remind them is that efficiency and quality are convergent. That if you do things right the first time, you don't bear the costs or the wasteful process of fixing something later.

The other thing to know about physicians is that they do respond to data but that they try to be "normal." One of the things they often need is competitive information about what they are able to do, and what some competitors may be able to do. If you just try to standardize what is normal for them (and that will happen if you just give them data), they may come up with processes that are not, in fact, competitive. My first experience with actuaries was after I had an unhappy experience in an HMO where little or no actuarial work had been done. We knew that the days-per-thousand were about 80% of what we were told they needed to be. Despite that there were losses. There were increased withholds. There were all kinds of bad things happening, and there obviously wasn't very good control of ambulatory services. When I came into contact with some of my current colleagues, I saw detailed examples of what they call cost models. It was evident that the cost models consisted of price models and utilization models. From the perspective of medical management, practitioners at risk under managed care need

to think of utilization models as a utilization budget. Utilization needs to be tracked against that budget just like financial people would track expenses against a budget.

What an actuarial development can provide are both aggregate, and perhaps clinically detailed, benchmarks for what needs to happen not only in major categories but also in every specific category that you can measure with the data that you are getting. Those benchmarks can also support physician profiling. It is a powerful tool in influencing physician change when they know that other people in their system are doing things somewhat differently, and apparently doing them as well and more efficiently. That's one area of actuarial value to clinicians.

When I was asked to consult with actuaries, one of the issues was always of the clinicians or the providers saying that their patients were sicker. I guess in actuarial terms the question is: "Is it selection or is it inefficiency?" I know that you can do some assessment by looking at age/sex calculations, just like Health Care Financing Administration (HCFA) does on the Medicare plans, but I'm not sure that even today there are reliable health status measuring points under which enrollment can be risk stratified. What we have tended to do is chart reviews. We do them on inpatient and outpatient care to determine whether it is, in fact, a truly sicker population that's being treated or whether there is inefficiency. When we do chart reviews we can't be absolutely sure that there isn't some adverse selection, but we can be about 99.44% sure that there's some inefficiency because of the fact that the professionals have never been taught what is efficient. Even though in many instances they are rewarded for being efficient, they don't know how to do it, which is where we get into some of the protocol issues.

We can also interpret to providers what they are missing when they are inefficient, noncompetitive, and getting into losing situations. Sue described the example of an inpatient chart review in which we would not only say that a percentage of days were unnecessary, that a percentage of admissions were unnecessary, but we can tell people why they're unnecessary.

The cumulative results from many of these reviews, thousands and thousands over the years, is that about 50% of all unnecessary days during hospitalization are simply due to the failure of the physician to send the patient home in a timely fashion. Usually there wasn't even any particular need for home health care, although in certain instances home health care would support earlier discharge, or the avoidance of admission altogether. About 20% of all of the unnecessary days during hospitalizations are due to delays in appropriate service. Again there is this rhetoric out there about efficiency being against quality. Not so. Delaying an appropriate service is bad care, and getting the appropriate service done expeditiously is good care. You shouldn't have these 20% unnecessary days

because the pathology lab couldn't take another case somebody couldn't get to the operating room, the computer tomographic (CT) was down, or physical therapy doesn't work on the weekends. Again, if you can point those things out, the providers can make some constructive changes.

In the commercial population about 20% of the unnecessary days are due to unnecessary admissions and about 10% are due to difficulties in placing people in long-term care or subacute or rehabilitation facilities. In Medicare it's the opposite. About 20% of the unnecessary days are due to placement problems, and only about 10% are due to unnecessary admissions. By identifying the problem from a clinical perspective you can begin to let people start to fix something, whereas the input from the actuaries would be: "I know you say your patients are sicker, but you are probably noncompetitive and inefficient."

Another thing that you will understand the math on is that in terms of hospital efficiency assessments it's very important to look at the necessity of admission rather than the average length of stay. We've had a lot of groups who will say that their average length of stay seems to be OK, but that their admissions are too high. Well, that may be true, but what we have learned from chart reviews is that unnecessary admissions have an average length of stay of about two days, perhaps up to two-and-a-half days. This means that if they didn't happen at all, and remember they're not necessary, the average length of stay would have gone up, perhaps to where it would look like a problem. So both length of stay and admissions may tend to be a problem. When we have been asked to look at surplus admission data, among the issues that surface is that there may have been quality problems with the antecedent care, even when the admission was necessary. We had an example in one place where they said they had too many admissions. We did 100 chart reviews just from the point of view of necessary admissions, and only five of the admissions were unnecessary at the time of admission. There were another 20 admissions in which the antecedent care was suboptimal. If the antecedent outpatient care had been better, some of those admissions would not have occurred. That's one aspect of admission pattern.

Another aspect of admission pattern is what some people have called "observation status" and some call "rapid treatment sites." They go by a variety of names such as "clinical decision-making unit," or "adult triage" in a variety of systems. It's a key term for hospitals under Medicare where the payments by DRG, HCFA, or the peer review organizations (PRO) are audited to see that the admissions were necessary because admission is the only controllable factor with respect to the payer. Since the DRG payment is fixed, length of stay is irrelevant to the payer, and the use of ancillary services is irrelevant to the payer, but if an admission is unnecessary, and

this includes readmissions, they would be paying money for something that should not have occurred.

After the PROs have been in the business of sanctioning people for a while, providers have begun to use the term "observation status" which means it's not an admission, and thus it's not controlled by DRG payments and could be retail. My clinical observation of "observation status" as a term used by many hospitals is this: Patient has arrived at the hospital. Patient has not gone home from the hospital. Patient has not been admitted to the hospital. Patient is somewhere in the hospital. Patient is not under DRGs. Patient may not have been seen by the attending physician yet. The patients may not even be being observed, but they're there. They are a nonadmission, and they're probably going to be retail. Those things are often called 23-hour observation stays, even though sometimes we've heard of them staying for up to three days, and we submit that there is no clinical condition for which a 23-hour observation is appropriate care.

The term "rapid treatment site" is now being used for some centers. They will often take people with chest pain, rule out myocardial infarction, heart attack, or unstable angina, observe them for eight hours, get a couple of cardiograms, a couple of enzyme tests, do a stress test, and, if it's negative, maybe send the patient home within 12 hours without admitting them at all. This is obviously more expeditious care—arriving at an accurate diagnosis in a timely fashion, whatever day of the week or whatever time of day or night it might be.

We have had clients set up these rapid treatment sites. One of our clients has told us that a large rapid treatment site is really a nursing unit and that 60% of the people sent there are never admitted to the hospital. Let's start out by saying that maybe an arbitrary top time limit for emergency room care is four hours. If you don't know for sure that a patient can go home from the emergency room in four hours and you don't know for sure that he or she doesn't need to be admitted to intensive care within four hours, the patient can go to this rapid treatment unit where, in fact, you could provide intensive treatment.

We don't use the term “rapid treatment unit” because somebody told us that it sounds like something that ought to be regulated, and we're not in favor of more regulation. We call it a” rapid treatment site,” in any case it's a place in which people will typically be treated for from 8 to 16 hours and go home at the appropriate time with appropriate improvement in their clinical status by being treated aggressively and early. Again, we have convergence of quality, efficiency, and change. One of the points I would make is that if one is working with a client, and the physicians say that a change is impossible and we've never done it that

way, you need to get a second opinion because change is occurring fantastically not only as a result of technological changes but also as a result of attitudinal changes.

We also do chart reviews on outpatient care. One of the reasons for chart reviews on outpatient care is that the group tells the health plan that the capitation is inadequate. Maybe this is a total professional capitation; maybe it's a specialty capitation. Suppose the group says it has to have 15% higher capitation. We're asked to do chart reviews, and we find out that about 25% of the services were not medically necessary, 15–20% of the visits were not medically necessary, and 35% of the ancillary services were not medically necessary. It's probable that the capitation is OK. The health plan can say. "We'll give you 2% or 3% for goodwill or inflation, but 15% is not justified."

In some instances we're engaged to talk to the providers to try and advise them about ways that they could be more efficient, whether the issue is excessive referrals, followup visits, imaging, or physical therapy. We can give them advice when we actually look at the care rather than just at the numbers.

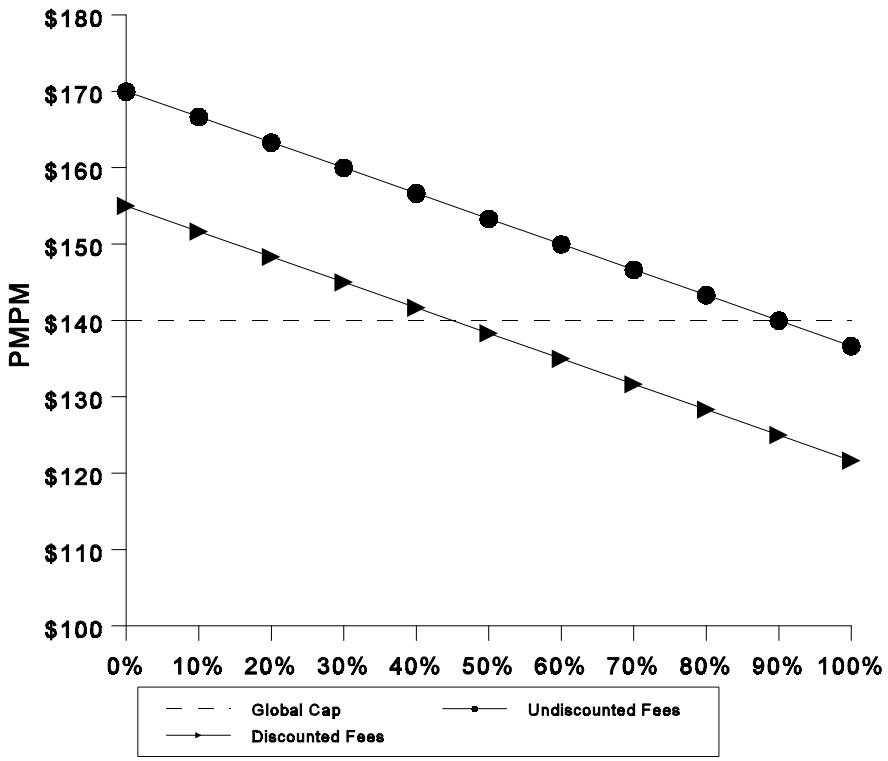
We show the degree of health care management going from 0–100%. The degree of health care management could be measuring hospital days, hospital admissions, specialty referrals, laboratory services, pharmaceutical costs, or number of prescriptions per member per year. A variety of things might be the point of the degree of health care management. The constant line you see at $140 is what the global cap is. That's not merely a target; that's all the money there is. The top line represents undiscounted fees while the other line represents discounted fees.

Chart 1 shows that if the degree of health care management is at or near 0%, the undiscounted fees that you'd like to get are substantially higher than the funds that are available. This means that a discount (the space between the two sloping lines) is absolutely necessary. The difference between the top and the bottom line means that the withhold isn't going to be able to be returned even if the discount is met. When you get to about a 50% degree of health care management, you still need a discount, but the withhold is available. Then as you get towards optimal management, there is not only return of withhold up to the top line, but where 100% is realized there is a bonus. When they start to see that, they start to understand why efficiency is actually in their interest. Obviously, if the practitioners are not at risk, they don't particularly want to have high levels of highly efficient health care. This reinforces people's incentives to take risk.

Sue also asked me to discuss what the current physician mind-set is in regards to managed care and the answer is anger, although those who are taking risks successfully are usually quite happy. Mentally, the doctors are in general denying

that there is an oversupply of doctors. They have to learn about actuarial assessments of the need for providers per enrollment, capitation as a method of reimbursement, and how the capitation is going to be divided. They are obviously angry about their loss of autonomy and, in many instances, not being busy. One of the doctors who works for us as a physician advisor had occasion to talk to some doctors. He told them that they were pretending to be busy by stretching out a half a week's work over five days because they could not accept the fact that they were not busy and many of them agreed with him. They are concerned about market share, and one way for some of them to expand market share is to take capitation successfully. Their perspective of actuaries is that, aside from being nerds with numbers, they really don't know anything about health. We as clinicians can help with the communication between actuaries and physicians.

CHART 1
DEGREE OF HEALTH CARE MANAGEMENT



Another aspect that we see—one of the thrusts that we see from the west coast—is doctors moving away to underserved areas where they think they may hide from managed care. A prominent physician in San Diego not too long ago moved to Montana. He is now the only pediatric orthopedic surgeon in a huge geographic area. He is doing things that really need a pediatric orthopedic surgeon—things that were not available in that geographic area until about a year ago. This phenomenon of moving to underserved areas is generally a good thing.

Another area of physician concern is the potential use of the services of nurse practitioners and physician assistants (PAs). Some plans or systems make extensive use of PAs, and some have none at all. Generally, you might have them in a primary care setting, having perhaps one PA along with three doctors working as a team. The premise is that if you've got a capitation for a larger population, with the nurse practitioner or PA serving, there's more money for the system with maybe three-and-a-half doctor equivalents in terms of cost. That may be good, but obviously some doctors are threatened by that concept as well. Medical schools turn out about 14,000 U.S. medical graduates every year, and by the end of the century the nurse practitioner and PA programs will be turning out 20,000 people a year. The PAs may replace some of the foreign medical graduates. There are also practices using PAs and nurse practitioners for inpatient care just as some people are using dedicated physician rounding teams for inpatient care.

What are doctors doing about managed care? What are they opposed to? What is their program? What are their proactivities? It generally comes down to two things that reflect where they are. The first is that the states should have "any willing provider law," and that hasn't been too successful with doctors, although it has sometimes been successful with mom-and-pop pharmacies. It is like an organized medicine program.

The second is that utilization management should be controlled by the State Medical Society so that you can't get criteria from medical directors or someone else who tells you what won't be covered or what can't be done. Those are the two issues: They want to control utilization review, and they all want to be guaranteed to be in the ball game. Some of them, of course, want to compete with one another, take risk, take capitation, and gain a large market share. That's typically happening in the multispecialty groups or large groups that are heavily primary-care oriented.

The status of various proposed mandates shows that doctors unfortunately are much like lawyers. With lawyers the story is: If the facts are against you, argue the law; if the facts are with you or if the law is against you, argue the facts. Utilization variation, both regionally and within different systems, shows that the facts are against them, because huge utilization variation does not result in quality differentials. Numerous studies of the quality of prepaid health care organizations show that it is essentially equivalent to other traditional financing. Because the facts are against them, they are running to the law. They are running to the legislatures for relief.

How can managed care organizations get along better with doctors or partner better? The first thing I would say is that we use the term “hyper communicate.”

You can't over communicate. You need to increase communication to the practitioners. You need to consult with the practitioners about what they want and what they need. You need to discuss the treatment plans that the managed care organization may have with the practicing physicians well in advance of any patient getting caught in the middle. There should not be arbitrary denials where the doctors don't know what the basis is for the denial or what the positive expectation is. That should be the general strategy for a managed care organization.

I would also say that, in general, our western experience has been that smaller is better in terms of provider networks. We often see MCOs saying they need a big network to sell to a big client or a big company. The client wants a big network so they have to get a big network. The problem is it is harder to get rid of people than to not take them in the first place. Again, the doctors want an "any willing provider" provision, but I would say smaller is better.

When risk is shared with the doctors or hospitals there should be enough financing in the risk that there can be some wins. There is some reluctance to capitate hospitals or put doctors at risk because they know that hospital utilization is not down to the 120 days that we are aware of in mature, successful systems. However, I think they should offer some wins to the doctors, and they need to be sure that they contract with an efficient infrastructure and should hear about that from the doctors. For example, if they're going to contract with skilled nursing facilities, they need to require the skilled nursing facility to take new patients 24 hours a day, seven days a week. If they are going to contract with home health care, the same thing should be true. They need to discuss things with doctors and hear from the doctors where efficiency could be improved and try to contract or build a network that will support efficiency.

What is it like to work with actuaries? Do I like it? I guess I am respectful of actuaries, and I have liked working with them a great deal. I've been in a large corporate carrier, and I think working with actuaries is better. My perspective on actuaries is that, first of all, they want to get things right, and, second, they want to keep clients viable. Whether they work within that organization or whether they're a consultant to that client, they do want to keep clients viable. I have not gotten that sense from corporate marketing types or corporate operations types for whom power is central. For marketing types, at the right or wrong price, growth is right. I think actuaries are better than that. The targets and benchmarks that they set are also useful for providers.

We have done some guidelines on specialty use, specialty referral, and how many referrals there should be. It is never going to be easy, but an operating system should have a policy or standard on that. There's extreme variability in the way

primary care physicians (PCPs) perform, particularly from the perspective of how comprehensively they may practice. The Academy of Family Practice will tell you that a good family practitioner can take care of 80–85% of the problems that are presented by the commercial population. Some doctors may practice like that but more doctors do not. Some may have certain hobbies. Some may have certain aversions. Some may not have current knowledge in some subspecialty areas. Having standard policy that is set by the PCP in the system is an appropriate way to monitor, benchmark, and profile the performance of the doctors.

I mentioned feedback from the American Academy of Family Practice. We've also had interaction over the past two years with many specialty professional associations such as the Access to Specialty Care Coalition. There are also specialty professional organizations including many of the well-meaning, do-good organizations such as the Epilepsy Society, Diabetes Association—all people without professional backgrounds who are interested in some particular disease. If you ask specialty professional associations who should be referred to specialists, their answer is that patients with a whole list of conditions should be referred to a specialist unless the PCP happens to be confident in the care of those problems. In effect, they basically list everything.

We have had constructive experience, in terms of improving our guidelines, by talking with the California chapter of the American College of Cardiology. It addressed a number of issues in a paper that it developed and shared with us. The first two items on its list were hyperlipidemia, which is too much fat circulating in your blood, and hypertension or high blood pressure. Those are key parts of the practice of primary care of adults or at least middle-aged adults. Thus, it would be attempting to preempt everything remotely referable to the specialty, not to mention the most sophisticated tertiary type services. That's a problem.

Somebody needs to bring PCPs and specialists together to codify an operating policy. That could be a function of the MCO or advisors to the MCO. You have to set standards for referral and specialty care. Then you need to be able to measure it, monitor it, and profile the practitioners. Another area is various types of management. Again, it reinforces our philosophical view of the convergence of quality and efficiency.

Case management started with catastrophic cases and now involves many other cases. Disease management is special attention to subpopulations with particular diseases, for which you might have diagnosis-specific data about occurrences and costs. Then there is demand management which includes wellness services before a disease has been identified. The goals that can be achieved with effective disease management programs are marvelous. We have been seeing, in a variety of papers,

how much waste there is. This is evident if you measure traditional utilization features in unmanaged care versus traditional utilization features in standard managed care, or in a highly competitive environment. We call those loosely moderately managed care and well-managed care. What is the best that's possible? We have said that often 50% of hospital days are unnecessary. There are a whole host of things like that.

Let me give you an example of a recent publication in medical literature from the Michael Reese Medical Center in Chicago. One of the things it has done is to work with heart failure patients. The heart is damaged, it doesn't function well, fluid builds up in the system in the chest, and people are short of breath or their ankles swell. When people are doing very badly they may become candidates for heart transplants. Michael Reese established a program of four-hour infusions of cardiotonic heart-strengthening medication twice a week on an outpatient basis. It followed a subset of these people for a year, and found that the hospital days for that population, even later in their life, and later in the course of disease, had been reduced by 87%. Special attention to high-risk people has really had extraordinary payoff. That is something that MCOs need to do, and actuaries could certainly look at disease-specific data and advise where disease management attention should occur, and, of course, our clinical consultants could participate in the same practices.

Let me mention one thing about credentialing. I consider that credentialing should be restrictive, competitive, and expect the best. One of the best markers (although people talk about things like board certification) is malpractice experience, partly because profiling and evaluation of practitioners is increasingly moving in the direction of providing quality care.

Nobody always knows how to measure quality. You can measure mortality rates and have very adverse outcomes. You can also measure patient satisfaction.

Some specialties are more prone to suits, but a typical primary care doctor should be ruled out of credentialing in a MCO if that doctor has had one large settlement or judgment; or two settlements or judgments of any size; or three claims, even if all were dismissed. When you get sued repeatedly there is something wrong about the way that doctor relates to patients and their families. The doctor is in a hurry. And is not taking enough time to explain. The major reason people sue doctors is because the doctor didn't explain. The doctor didn't take time. The doctor didn't listen. It's not whether the result was medically bad or not—that's almost a given; but that happens some of the time in the best of hands. In terms of quality, I would emphasize limiting the credentialing to people whose quality, in terms of

malpractice history, is as impeccable as you can get it in the U.S., in the last quarter of the 20th century.

I had the experience of sitting on a health plan's quality management committee as a consultant when it went through their credentialing. The health plan was under pressure to get a big network fast, so its bureaucracy and the doctors on the committee who were good practitioners within the system had a permissive attitude about credentialing. I was advising that it should not accept some of these physicians, particularly when it is the forty-third gastroenterologist who wants to endoscope everybody in the world. Why do you need another one of those if he or she had four suits? A couple of years later the health plan was recredentialing everybody and the committee was saying: "Gee, this person has acted badly. Look at this. Why did we take this doctor in the first place?" I could say: "I told you so." I think that's another area where clinically experienced consultants can be useful within a MCO.

From the Floor: You're both certainly proponents of managed care. I attended a session on measuring managed care effectiveness in which we heard about a project at the SOA preparing a monograph on managed care effectiveness. What was shown there is preliminary. It is looking at cost, quality, and access, and looking at it at the same time from the point of view of many stakeholders. I just wondered whether you happen to be aware of what's going on with this, or whether you have any comments on that.

Dr. Doyle: I don't know anything about the internal work of the SOA. I would say that the buzzword from the marketplace, and I think for all stakeholders, is "value," which is quality over cost. Cost containment is necessary but not at the sacrifice of quality. We would define quality as both health status outcomes and patient satisfaction. This means that you need to do a lot of communication with the patient. I would say that effectiveness is health outcome plus satisfaction, followed by cost containment. Webster defines efficiency as producing the desired effect with minimum waste, expense, or effort. As I said earlier, if it's not effective, it's going to be inefficient. Obviously everybody is against waste. If you're at risk, you're against expense. The other aspect that doctors need to understand is that you need to be against effort. If you capitate, the only way you can take care of more people, which is the only way you get more revenue, is to limit the effort or have the effort at the appropriate level, say at the level of a PA, rather than at the level of a specialist.

My only perspective on this is that there is great variability in the effectiveness of what calls itself managed care. We have seen report cards in *Consumer Reports* or *Business Week* or *Fortune* about your MCO; but they're very limited because, in

many instances, they only measure the delivery of preventive services or access to specialists. They can measure patient satisfaction fairly well, though. I'm not against that at all, but measuring health outcomes versus health status input is not there yet.

Mr. Ronald E. Bachman: In the areas of clinical and medical management, you touched on many different things that can be done and areas to look at. Can you give the top two or three areas for an organization that is, say, losing money and is looking for some early hits to have some positive financial impact? What would be the first couple of areas you would suggest it ought to look at?

Dr. Doyle: The first thing the organization should do is go back to its actuaries and find out where the cost variances are. Somebody who has apparently good control of hospital days may have runaway specialist medical costs. Nowadays people are over budget on pharmaceutical use. We are certainly aware of people putting groups at risk with caps for pharmacy costs, particularly in Medicare.

You have to identify (and this is part of the value of the actuary) the variances at some clinical level. I would prefer to do it at a service level rather than saying Group A is OK, Group B is bad, so let's kick out Group B. You can distinguish by providers, but I would prefer to distinguish by service. Look at the types of delays or the types of unnecessary days.

Obviously the largest place where money is spent is acute inpatient care. The second largest place is professional specialty. The third place where money is spent is PCPs, particularly if they're not capitated. The fourth place is pharmaceuticals. Within the specialty area the fifth place is imaging. That's where an enormous amount of the money is spent. A lot of the unnecessary services that we see tend to be for clinical laboratory services in an outpatient setting, and that's just a no-brainer. It's got to be capitated.

The information available to us suggests that at usual, customary, and reasonable fee paid, an unmanaged utilization clinical laboratory for a commercial population would cost somewhere between $5 and $6. If you put managed care discounts in place, it's probably going to be around $3. You can get any large, automated, commercial lab to capitate for 50 cents or less. I've heard some groups tell me that they're happy to do it at 42 cents because it costs them 27 cents. However, that's a relatively small amount of all the money.

Mr. David W. Reimer: One area that some plans in my area are trying to deal with is with emergency care. I was wondering whether you could comment on the effectiveness from what you've seen of dial-up programs, such as Dial-A-Nurse or

telephone access 24 hours a day. Is that helpful? Is it effective in controlling care management?

Dr. Doyle: That would come under the general framework of demand management, one of the terms that I used earlier. It may be effective, but it's not something that can be applied arbitrarily. First, when the patient arrives at the emergency room (ER), they have to see him. They don't necessarily have to do a lot, and you can abort services by an interaction at that time by getting the at-risk provider involved.

I think that, again, the general principle is that you can't beat something with nothing. You need to have extended hour outpatient access whether it's urgent care under contract, or the doctors' building or the group's medical offices staying open late. You want to get emergencies treated expeditiously at an emergency room that is not cluttered up with people who don't have emergencies at all.

There is the issue of the ER physician organizations upset about having retrospective denial, and I don't like that either. I would say that the nurse concept on the phone is OK if it has the support of the physicians in the system and if they have rigorous protocols that they follow. The protocols need to be flexible enough and not arbitrary. In other words, if the nurse can say "I'll get you an appointment at 9:30 tomorrow," that has a good chance to satisfy the patient, assuming that things work OK; but the nurse should not be in a position to turn people, who really want to go there, away from an ER. I think there's potential risk in relying on 24-hour telephone service too heavily out of hours, but then you need to have outpatient nonemergency access.

The second thing we would recommend is case management involvement when and if a patient gets to an ER to see the patient doesn't get a brain scan for a tension headache and other treatments which can run up the costs, while you still have effectiveness. An example is the Harvard Community Health Plan. In one of their suburban areas they had a 16-doctor primary care site which had extended office hours to 10 P.M. A couple of the doctors would come in midafternoon and work till 10 P.M., seeing their regular schedule plus urgent walk-ins. A nurse practitioner came in at 6 P.M. to support those evening office hours. When the clinic site closed at 10 P.M., the nurse practitioner went to the local hospital and slept in the emergency room overnight. If one of the Harvard patients showed up between 10 PM and dawn, they would be seen not by the ER doctor but the Harvard nurse practitioner who might involve the Harvard PCP, the Harvard specialist, or somebody else to assume continuing care rather than having the ER doctor provide many services or call some other doctor to admit the patient. We're not in favor of denials. We're in favor of planning service.