

RECORD, Volume 26, No. 1*

Las Vegas Spring Meeting
May 22–24, 2000

Session 31OF The Quality Compass Model—Balancing Employer/Consumer Concerns

Track: Health

Moderator: DAVID V. AXENE

Panelists: GERALD G. SMEDINGHOFF
KATHY A. ZAHARIAS[†]

Recorder: CHRISTOPHER S. GIROD

Summary: This session introduces a popular new model, the Quality Compass Model, which seeks to balance concerns regarding consumer satisfaction, clinical outcomes, cost, and utilization. Panelists present the details of this model and allow time for session attendees to question and comment on this new approach.

Mr. David V. Axene: I'm with the San Diego office of Milliman & Robertson. I'm a partner in the firm, and I specialize in healthcare management consulting. I've spent a lot of time working with clinicians and other types of people trying to improve the quality of the healthcare system.

The second speaker is Kathy Zaharias. She's a nurse, RN, MBA. She works for Milliman & Robertson in our Irvine Office. She's a healthcare management consultant, and an expert on operational improvement. Her primary consulting area is re-engineering hospital and medical group operation for managed care purposes. She will present a perspective that we can all do something to increase the quality of healthcare.

Gerry Smedinghoff will be the third speaker, and he's an information technology consultant specializing in enterprise resource planning systems for Symtec in Wheaton, Illinois. He's a frequent speaker on economic healthcare and technology topics, and he's been on PBS. He's worked with the CATO Institute in Washington D.C. His writings have been published quite broadly, and there was an article about him in *Skydiving Magazine*. He's been featured on the Paul Harvey News program, and in several newspapers. Prior to joining Symtec he was with Watson Wyatt.

I'm going to first present some background or conceptual ideas about the whole issue of quality. Then Kathy will talk a little bit about the operational side, and give more specifics about the actual Quality Compass Model that National Committee

*Copyright © 2000, Society of Actuaries

[†]Ms. Zaharias, not a member of the sponsoring organizations, is a Healthcare Management Consultant at Milliman & Robertson in Irvine, CA.

on Quality Assurance (NCQA) has been involved with. Then Gerry will close with a contrarian perspective that asks the question, "Is this all going to do any good?"

Steven Covey in his soon-to-be-published book called *Leadership is a Choice*, had some surveys of 3,500 corporate managers, and he gave the top reasons why these 3,500 managers said that they had a quality problem at their organization. The number one reason was that people don't trust senior management. Reason number two was that there was poor communication. Reason number three was that people are not empowered to do their job. Reason number four was that there were politics and a lot of turf battles. Reason number five was that there was a lack of patience on everybody's part. The final reason in the top six was that there seemed to be a lack of deep motivation to do anything.

It's very interesting that one of the management gurus who is presenting all over the country is finding that those are the things plaguing corporate America today. If you look at your own organization, some of those reasons may ring a bell for you.

In the same survey, they talked to the staffs of those organizations and asked them what were the top reasons why they felt under-empowered. Reason number one was that the manager was afraid to let go. Reason number two was that there were misaligned systems. Reason number three was that the manager lacked the skills to do the job that they were trying to do. Reason number four was that the staff lacked the skills to do the job that they were supposed to do. Reason number five was that the staff didn't want the responsibility to do what they were being asked to do. The last reason was that the manager was too busy.

You're probably saying what does that have to do with our session. There's an interesting relationship to this in healthcare, and the applicability to healthcare is as follows: there seems to be a universal lack of trust of the healthcare manager. Oftentimes we have no idea who that healthcare manager is. Patients are not adequately empowered to take care of themselves. The healthcare system includes many turf battles. If it isn't a battle between the employer and the patient, it could be between the payor and the doctor. It could also be between the various physician specialties.

I find that most of the incentive systems within the healthcare system are misaligned. You may find doctors paid on a fee per service basis, which means they are motivated to do as many things as possible, and as expensively as possible. In response, carriers may introduce a capitation system. Physicians are then motivated to provide less care, and we end up talking about under-serving patients. So if we pay fee for service, the doctors are doing too much. If we pay capitation, they tend to do too little. We have misaligned incentives in either case.

Probably one of the most important problems in this discussion is that quality is not universally defined. In fact, if you talk to 20 people about healthcare quality you'll at least get 20 different definitions of it. So when we're talking about trying to balance the interests of consumers, employers and plan sponsors, and quality being a part of that equation, I think it's very important that we try to define quality before we go too much further. In order to help us understand how difficult it is to define quality, let's examine the role of the healthcare manager. Who is the healthcare manager? Some people might say it's the physician, and most of the

time I would agree. How are the physician's interests aligned with mine? What are they really responsible for? What are they really trying to do?

I've recently moved from Seattle to San Diego. In Seattle I was part of an integrated healthcare system for about 30 years. It was a very good system, and probably delivered the best quality of care I've ever had. When I moved down to San Diego, which I thought was a center of managed care, I signed up for what I understood to be the most integrated system in San Diego. I found it to be the most unintegrated system that I've ever seen in my life. Whenever I go to the doctor, I'm trying to figure out what the doctor is really trying to do. Is he trying to make money on the capitation payments, or is he really trying to take care of my health?

So trying to figure out what the doctor is really trying to do, and if he or she is truly the manager, is an important issue. How do I know they won't under-serve me, or over-serve me? Can they still be trusted? There are a lot of patients who aren't sure that they can trust their provider today. So if the physician is the manager, how do you develop that trust?

Is the health plan the manager? According to *The Wall Street Journal* and the *New York Times*, aren't they just trying to make a buck? So why would they be good managers? Why would they be someone I can trust? How do I know that their interests are aligned with mine? Do they really care about the quality of my care, or are they just trying to stop everything that I need to have so they can make more money?

Well if it's not the physician, and if it's not the health plan, then maybe it's the plan sponsor or my employer. Do they really care about my healthcare or my family's healthcare? Or are they just trying to offer benefits so that I'll be willing to work for them instead of another employer who might have a richer benefit program?

Is it the patient? Is the patient in charge? Do I as a patient know enough to effectively manage my own healthcare? Why doesn't somebody else do it for me?

We are trying to figure out who is the healthcare manager, and if there's anything worth doing. I believe that there are several chronic healthcare system problems that we're all faced with.

First of all, there's a very low trust by the stakeholders. Going back to Covey's survey, trust was one of the major discontinuities between management and employees. There is very low trust by the stakeholders in healthcare. Patients don't know who they can trust, so we developed the Patients Bill of Rights. Providers don't trust plans. We have provider groups that are canceling contracts right and left because they don't feel that they were treated fairly by the health plans they're dealing with. Plans don't trust providers. They're always sanctioning them, and taking other actions against them.

Second, there doesn't seem to be a consistent, common purpose in what we're really trying to do in healthcare. No shared vision. Again, one of the big, dark discontinuities that Covey identified was the lack of a shared vision. Until there's a shared vision between management and the employees you cannot have a

successful organization. Since the beginning of the healthcare system, we have never had a shared vision.

Third, there seems to be a systemic, misalignment problem. Most of the incentives in the healthcare system are misaligned. Yet, since we've had it this way for as long as we have, we just let it continue. So it seems that the system is crying out to get the incentives lined up.

Fourth, most stakeholders are unempowered, and many stakeholders act as if it's not their job. None of the stakeholders (the doctor, the provider, the employer or plan sponsor, or the patient) feel empowered to take the role.

A very interesting thing happened in Canada a few years ago when we were doing some consulting. We were in one of the provinces, and we were hired to help fix the budget problem that they had in this particular region of this particular province. We found out that half the care was potentially avoidable. Over half the care delivered in that province was medically unnecessary, and potentially avoidable. Yet we found out that nobody had the incentive to improve the situation. If the doctors became more efficient their budgets went down. If the budgets went down there would be a surplus in the provincial budget, but then the hospital would be accountable to manage its costs within a smaller budget. This is difficult for the hospitals because it is really the physicians who manage the healthcare. Therefore, there was no incentive for the hospital to manage care more efficiently. There was no risk being assumed by anybody that could control the system.

The same situation exists in the U.S., where we are highly unempowered to take action to improve the system. It seems that we need a new paradigm to fix this situation. There must be a better way to more equitably determine what should happen in the healthcare system. For the most part, plan sponsors want to be sure that they're spending their premium dollars wisely. Prior stakeholder abuses make everybody suspicious of other stakeholders. Patients are suspicious of the doctor. The doctors are suspicious of the health plans. The health plans are suspicious of everybody else.

The Quality Compass Model offers one potential solution. I liken this model to total quality management (TQM). Often there is a very simple paradigm that's presented in the TQM training classes that you can go to. With the ideal process model, there's basically a balance between cost, time, and quality, and you hope that you've caused no damage. The "no damage" part means that you didn't introduce new problems by overemphasizing leaning too hard in one of those directions. Then you probably have the ideal process.

For example, let's talk about claims processing. If you're trying to get the most efficient claims processing system in your insurance company, you're trying to get the most claims paid in the shortest period of time, with the highest quality possible, for the lowest cost, without patients or providers or the employers being damaged. By balancing those three items, and by having the least possible damage across the entire system, we get the best process. The goal is to balancing cost, time, and quality to create the best result with the least damage. If you focus on cutting time then cost and quality suffer. If you focus on cutting costs, the time

might improve, but the quality also often suffers. You focus on quality, the cost increases, and time grows, often hurting affordability.

Now, let's take that model and adapt it to healthcare. This is the gist of the Quality Compass Model. We are balancing cost, utilization, and clinical outcomes, and hoping we achieve patient satisfaction. That's the ideal process for healthcare. I'll provide a crosswalk from the manufacturing example to the healthcare example. Cost is cost. Time is being translated into utilization. Quality is being transferred over to clinical outcomes. The definition of quality under this model is an acceptable outcome, although quality can be defined in many different ways. No damage in the process is being transformed to patient satisfaction.

The Quality Compass Model is trying to balance all aspects to obtain an ideal result. However, it presents some key challenges. Can patients ever be satisfied if they don't obtain perfect results every time? I think from a patient's perspective, especially somebody with a chronic problem, the definition of good quality is elimination of their health problems, although it may be impossible to eliminate the problems. Anybody who has ever suffered from high blood pressure, or perhaps a cholesterol problem, might understand that it may be unreasonable to assume that you will have low cholesterol and no other problems just because the doctor visited you, or took care of you.

Another challenge is the ability of plan sponsors to afford meeting patient demands or expectations. The demands that patients and providers place on healthcare plans are greater today than they've ever been. Consequently, healthcare is becoming unaffordable. If you look at various parts of the Patient Healthcare Bill of Rights that is being talked about in Washington DC at this time, you will find elements that are probably unaffordable, and that we as a society might not want to pay for.

Where is quality defined? Who gets to define quality? What is quality? Until we really understand what quality is, and try to define it in a way that's acceptable to most of the stakeholders, if not all of the stakeholders, we're going to have a hard time implementing this kind of a program. What standards are used for clinical outcomes? Who's going to determine what are the appropriate standards? What tolerances are required or permitted?

You're probably familiar with ISO 9000 or ISO 9001. They are systems to assess quality. They use a sigma group that attempts to estimate the amount of errors that will happen, and the associated variances. They are looking for high quality, with limited tolerances. What are the tolerances that we're going to accept within the healthcare system? Is it OK that 1 out of 1,000 patients having a bypass operation dies? Is that good quality? Or should it be 1 out of 1,000,000? Or should it be 1 out of 100,000,000? What is the tolerance that you're going to accept in the system? Unfortunately, the person who's having the procedure has a different definition than the one that's paying for the procedure.

Several years ago a business partner of mine and I sat down and tried to come up with five basic principles that we call Health Status Improvement and Management. These principles have helped us resolve the issues that are being raised in this Quality Compass Model, and I'd like to walk through the principles with you.

Principle number one says that the services provided must not include any service that are not medically necessary, or that are more intense than is medically necessary to produce the improvement in health status that the patient has a right to expect. In other words, excessive or luxurious use of services to fix the problem is inappropriate.

Principle number two says that the care should not be provided by a provider with a greater level of expertise than is medically necessary to provide the medically appropriate care, unless the provider is willing to provide care at a cost that is equivalent to the cost of a provider having the appropriate level of expertise. In other words, if you need an immunization, you probably don't need a neurosurgeon to give you the shot. However, if the neurosurgeon is willing to give you the shot for the same price as the primary care doctor, then it's okay. The idea is to not use a more highly qualified provider than you really need.

Principle number three says the care should not be delivered in a setting that is more intense or costly than a medically necessary setting, recognizing there are non-clinical factors that may make a more intense setting necessary. Basically, if it can be done in an outpatient basis, or if it can be done in a doctor's office, don't do it in an ICU.

The fourth principle is that the prices for healthcare resources should be directly correlated to the appropriate level of provider expertise and intensity of the service and setting. In other words, the prices should also be competitive with other contracts offered by providers in the marketplace. In order to have the ideal match between cost, quality, and all the other different pieces, you need to be sure that the price is reasonably correlated to what's really required to provide the care.

I have found in my consulting work that if you go to a tertiary center or a teaching hospital, you'll probably pay a few dollars more than if you went to a community hospital for the same procedure. There is no point in paying the teaching hospital more than would be required to receive the care elsewhere.

The fifth principle says that the administrative costs added by those who provide financial and delivery management services should not be excessive. Administrative costs must be minimized, and directly correlated to the value added by those services. It's not enough to just look at the provider services side; we need to be sure that the administrative services are also reasonable.

In closing, I would define the Quality Compass Model as follows: It's the right cost balanced with the right utilization, balanced with the most realistic clinical outcome for the reasonably defined patient satisfaction. Without those extra adjectives in front of those words I think we have an impossible task in trying to balance anything.

Ms. Kathy A. Zaharias: I am going to give a brief background and history of the Quality Compass Model. Quality Compass 1999 database includes performance information covering approximately 70 million American enrollees, 247 healthcare organizations, and 410 individual health plan products. The database has three components. There is a HEDIS Component, there is an NCQA accreditation component, and there is a Consumer Assessment of Health Plan Study, which is

the CAHPS 2.0. The first one reflects the overall industry and regional performance from 1996 to 1998. They tried to link quality and member satisfaction as the second component, and then accountability is what the third component was.

The database is intended to serve a variety of uses. My presentation will be from the perspective of the NCQA and their perception of what they want people to get from this resource.

The first intended use is to streamline health plan evaluation by having similar measurements. This will allow us to compare the health plans nationally and regionally. This will also give people the ability to make health plan selection decisions based upon the quality.

Another intended use is to be able to manage the plan performance by looking at the regional and the national averages. This will allow health plans to set realistic performance targets. If you have your own performance targets, and you look at what is happening nationally as well as regionally, it gives you a much better reference for what your goals can be.

Another intended use is to analyze competitive data and set goals for improvement. So it's a good opportunity for folks, especially regionally, to see what their competition is doing, and to be able to then set their goals to improve what they're doing.

The data are provided in a narrative format, as well as in a database. There are CD-ROM programs available that can be purchased, and you can pretty much slice and dice the information any way that you want to. The data is also available to the media and to anyone else, so that anybody who is interested in the comparison of health plans can access the data. It is public information.

There are different comparative categories include access and service, behavior health, cardiac care, child and adolescent care, getting better and living with illness, maternity care, medical and surgical care, member satisfaction, qualified providers, staying healthy, and women's health.

The HEDIS domains identify what is actually being measured for each of the comparative categories. The intent is to assess the effectiveness of care. You can look at access and availability of service to see how quickly patients can get in to see a provider. You can look at member satisfaction, health plan stability, the movement of providers, and the utilization and the cost of services.

The third major component of the Quality Compass database is the Consumer Assessment of Health Plan Study. This component reflects questions related to claims processing, the treatment patients receive from the office staff, whether they're helpful, whether they're courteous. It is an examination of general customer service from the patient prospective. It tells how quickly that they receive care, how long it takes to make an appointment, or whether they felt that they received the appropriate care. This assessment involves a lot of the controversial issues related to referrals, and how quickly patients can, for example, see a specialist, or how well they feel that physicians communicate with them. It also assesses whether patients can understand what the physicians are telling

them, and whether the patients believe that physicians are spending quality time with them.

As far as the key findings, and there are five key findings, and this again is from the perspective of the NCQA. They felt that the health plans that reported the HEDIS data exceeded overall industry performance, and that there was a significant improvement over 2–3 years. This data is a trend of three years, from 1996 to 1998. They concluded that if health plans are willing to report their data publicly, that process in itself is an indicator of quality and lends itself to accountability. Once plans are involved and have submitted their HEDIS data for the entire three years, there is typically an improvement every single year.

Participation in the Quality Compass has grown substantially. There was kind of a slowing trend in 1998, and then it ended up increasing. In 1999, 85% of publicly reporting plans had their data audited.

Another of NCQA's findings is that the best clinical care reflects the most satisfied members.

There was also a substantial improvement in the plans when there was a new HEDIS measure introduced, probably because plans knew that they were going to be measured on that. Consequently, there were substantial improvements in the new measures once had been in place for approximately one year.

The NCQA also found a huge gap between the low and the high performing plans. New England had the highest performing plans. The lowest performing plans were in the south central states. The distribution of results resembles a bell curve, with a considerable difference between the high and the low. NCQA also felt that even the low performing plans were probably better plans than the those that were not willing to submit any of their HEDIS data.

The actual design of the Quality Compass Model is really to provide health plans, consultants, benefit managers, the media, and others easy access to comprehensive information about health plan quality, and performance.

Mr. Gerald G. Smedinghoff: I'm the one member of the panel who used to be an actuary, and now became an information technology consultant.

I had a lot of respect for David Axene and Milliman & Robertson for inviting me to speak at this panel to present the opposing viewpoint. But after I saw David's presentation, it appears that we probably don't disagree as much as I'd originally anticipated.

Like Sherlock Holmes in *The Hound of the Baskervilles*, I'm here to represent the dog that didn't bark. I discovered quality science and the quality movement back in the mid-1980s, a few years before I became an actuary, and a few years before the godfathers of quality, William Edwards Demming and Joseph Juran became popular in the media.

With all the knowledge and experience I've accumulated on quality over the past decade and a half, I must regrettably report that I have yet to see any healthcare

quality standards or measurements that are worth the paper they're printed on. Even worse than the fact that virtually all these healthcare quality efforts represent waste, more often than not they do serious and permanent damage to the healthcare delivery process.

When people started applying TQM to healthcare in the early 1990s I started to get nervous. When certified quality professionals enthusiastically stormed the gates of the healthcare industry with standards and procedures I sounded the alarm.

When I spoke on healthcare quality to the St. Joseph's Hospital in Tucson, Arizona, last month, I got the impression that this was the first time medical professionals were able to understand what was being done to them in the name of quality and why. Also they were able to understand why they are justified in resisting. The first question asked from a physician after I was finished was, "Why aren't you out giving your talk to hospitals all across the country? Every medical professional needs to hear what you have to say." My answer, unfortunately, is that I can't make any money doing this. Like the movie *The Wizard of Oz*, my message is: Pay no attention to the man behind the curtain. I'm saying don't spend six figure sums on quality consultants when they pass through your town. Health care quality consultants really have nothing to fear from me, as the odds are very slim that they'll ever run into the likes of me again.

The best one-sentence summary I can find to describe the application of quality to healthcare comes from the market researcher Ron Zemke, who said, "Left to their own devices we pay more and more attention to things that are less and less important to the customer."

As far as I can tell there are three primary uses for the NCQA Quality Standards, and in no particular order. The first is to generate revenue for healthcare quality consultants. The second is to serve as a public relations spotter, to defend the stupid practices of the managed care industry, as if to say healthcare is getting better, and we have the data to prove it. The third is to remove responsibility for corporate human resource personnel who must select the health plans they offer to their employees, as if to say, you can't complain about your healthcare benefits because this HMO is NCQA certified.

The only good news I have to report is that quality professionals are starting to come around and see the light. Last year there was no Malcolm Baldrige Quality Award Winner in the Healthcare Category. The one Baldrige examiner I spoke with used words like pathetic and abysmal to describe the quality of the applications they received.

Since the most important healthcare delivery takes place in the hospital, allow me to provide you with two snapshots of the state of the healthcare today, or the state of quality in healthcare today. The first quote comes from Michael Fadak, an ER trauma nurse in the Miami area, who's been a nurse with 18 years of experience. He says, and I quote,

"It is sad times in healthcare, and getting worse. Nurses are leaving the profession in large numbers because we simply cannot provide for our patients. Severe understaffing initially forced us to turn our backs on human suffering to get the

absolutely clinical essential things done. Now there's a severe competency shortage as the dollar continues to rule. "Anybody with a license" is the rule for critical areas that were once the domain of experienced and competent registered nurses. Young inexperienced nurses are thrown into the emergency room, intensive care unit, and recovery with only a one-week orientation course, taking more patients than a well-experienced nurse could safely, competently, and humanistically handle. I read that medical mistakes are now the fifth major cause of death in the United States, despite the fact that hospital errors are routinely and systematically covered up. The only reliable data comes from the required reporting on nosocomial infections, and that is climbing dramatically. In short, I am disgusted and outraged with what is happening in the hospital. Last year I was taking care of the chairman of the public health trust here in Miami. I asked him two questions. One, why the severe understaffing in the county hospital, as it is a non-for-profit facility? His answer, it would be extremely irresponsible of me not to adhere the cost-saving standards of care established by the healthcare corporations throughout the country. Second question: Aren't you concerned about the cost of increased suffering caused by your decision? His answer: Nationwide we save billions by current staffing patterns. Compare that to the few million we have to pay out due to lawsuit for deaths, which have a very favorable tax treatment, and it's a no-brainer. It's simply a business decision. Nationwide nurses are moving to revolt. Currently and increasingly rapidly in the next few years you will see unions. Real unions, not just professional bargaining units, moving into healthcare. I predict you will see a wholesale desertion of the healthcare business in the next decade. In essence they have strip-mined healthcare, and are now moving on."

The second quote comes from Dr. George Fisher, an endocrinologist in Philadelphia for the past half a century, as well as being a first-rate economist. He said to a medical colleague,

"The next time you happen to be at your hospital at 7 a.m., take a stroll over to the holding area for your operating room. If your experience is typical you will find about 50 patients lying on stretchers like logs of wood piled up to feed the operating room. Sooner or later an anesthesiologist will talk with each one, going down a checklist to see that all the lab work, pre-op clearance, etc., is attached to the chart. However, by the time that happens the options are only two, go ahead with the surgery or cancel. Lot's of people get canceled because some piece of paper can't be found, but by the time they are in the chute, it's too late to do anything but cancel and go ahead. Meanwhile, there's another waiting area where at least 50 relatives of these patients are waiting, anxious for some crumb of news, but they are required to be there to take the patient home if it is outpatient surgery with an anesthesia hangover.

This little scene repeated endlessly across the country has made necessary by HMOs and insurance companies refusing to pay for admission the day before surgery, thereby removing all the slack in the situation with it's opportunity to get consults, lab work, and other pieces of paper in time for surgery. It's also made necessary by the need-to-use midnight as the cutoff in hospital billing and reimbursement. As you cross midnight, the calendar says you have entered a new day. So the various clerks involved are deprived of any latitude in the financial part.

What is the difference in true cost between lying on a bed on the patient floor, and laying on a stretcher in the operating room waiting area? Maybe \$50, but the difference in charges often approaches a \$1,000. The hospital won't budge on this, and so the insurance companies apply brut force. The consequence is that the hospital residents in training are deprived of the opportunity to see the patients preoperatively. A large number of family members are severely inconvenienced, and unnecessarily alarmed by the protracted time "in surgery." A fair number of cases are cancelled unnecessarily, and very little true cost is saved. Now the American Association of HMOs, or whatever it's called, contends there is not one shred of evidence that managed care has damaged quality of care. Efficient care is better care, and black is white."

What's truly amazing as well as absurd is that any health plan with the highest NCQA ranking can feed into either of the hospitals just described.

Total Quality Management, or the concept of quality, is actually the antithesis of what healthcare is. Quality is essentially a front-end process. If I had to condense what quality is, or what Total Quality Management is down to one idea, here is how I would do it. The basic definition of quality is defined by Joseph Juran, one of the original quality gurus. He is now in his 90s, and was very popular in Japan in the 1950s and 1960s. Juran realized that every worker on any job plays essentially three roles. They're a customer, meaning that somebody gives them inputs to do their job. They're a processor, meaning they perform tasks on those inputs. They're a supplier. Whatever process they do, when they get done with it they give it to somebody else, and they're essentially somebody else's supplier. If we accept no bad parts means, if we let no defects or errors into the system or onto the factory floor, we've eliminated most of the problems to begin with.

The traditional quality view dating back to the World War II days is that quality was an inspection process. We would make a bunch of products, and then at the end we would inspect them, and weed out the good ones from the bad ones. But actually Total Quality Management is a front-end process, and we start by accepting no bad parts. The second principle is to make no bad parts. We investigate every process, and we verify every process. If we find that the process makes a bad part, we stop it immediately, and we correct the process. We don't allow ourselves to manufacture any bad parts. The third principle is to pass no bad parts. This means that if you see a defect going through the system, you stop the system immediately, find the defect and trace it back to its original source.

The assumption in quality management is that if any defect gets transferred to the next stage in the delivery process, it costs 10 times more to correct that error. However, healthcare, unfortunately, is a back-end process. Quality is designed to eliminate the exceptions, the outliers, the defects and errors. But what comes into the healthcare system? Exceptions, errors, defects, essentially sick patients. If we applied the rules of quality to the healthcare system, the system would operate under principles of accepting no sick patients, treating no sick patients, and referring no sick patients. Now that would be great from a Total Quality Management standpoint, but it would not be fulfilling the role of the healthcare industry.

I'm going to echo some of what David said on defining healthcare quality. No one can define it, and let me give you a perfect example. Following is actual healthcare

data that came from the British National Health Service in the early 1990s. It's a sample of 10 liver transplants that were performed by one surgeon in one hospital. Of those 10 patients, two of them died, one patient had a recurrence of cancer, one patient rejected the liver and required a second transplant, three of the patients remained bedridden and disabled, and three of the patients were able to resume normal, working lives. Now given this set of 10 patients and this set of outcomes, how would you define or how would you rate the quality of this surgeon, and of this hospital?

The answers varied all across the board. The physician who performed the operations said, he defined quality as survival, and since only two people died he said the quality of success ratio is 80%. In fact, for the one patient who rejected the liver, as soon as he performed another operation, a second transplant, he upped his success ratio to 9 out of 11.

The immunologist defined quality as the acceptance of the organ. So he threw out the one patient that rejected the liver, and he said the quality of success ratio is seven out of ten.

The hospital administrator defined quality as a patient that proceeded to the next stage in the healthcare delivery process. So he threw out the one patient that had the recurrence of cancer, and he said our success or quality ratio is six out of ten.

The nurses defined quality as ability to recover and resume a normal working life. Since only three out of the ten were able to do that, that was the quality ratio they assigned.

Now obviously there are two problems with this set of data, two problems with the quality scores. The first problem is there was a very wide variance of opinion as to what denoted quality, even among the experts. The second problem is that the patient's input was never even considered.

Getting back to Joseph Juran. Another key principle of Joseph Juran is that every worker should be an autonomous artisan, and he called this the Artisan Concept. The Artisan Concept has three principles: the worker knows the job; the worker knows when the result of his work is unacceptable; and third, the worker has the knowledge and the authority to bring unacceptable performance in line or in tolerance with acceptable performance. If these three conditions do not hold, you do not hire an inspector to watch the worker or watch over the worker as he does his job. What you do is redefine the past so that the three principles of the Artisan Concept apply.

But what are we doing in healthcare? With utilization review (UR) and managed care we require the physician to seek approval to proceed in every stage in the healthcare delivery process. Whether it's ordering a diagnostic test, referring a patient, admitting a patient into a hospital, performing a surgical procedure, or extending a patient's hospital stay. Essentially, UR in managed care is the wrong application of the wrong principle. What we have are less knowledgeable, less qualified people further from the situation—these would be the UR or managed care nurses on the other end of the phone line—who are overseeing, more

knowledgeable, more qualified people in direct contact with the patients, these would obviously be the doctors and the nurses.

The result here is a lose-lose outcome. We've added more inspectors—remember, I said earlier, quality is not an inspection process. We don't wait until the end, and then hire some inspectors to weed out the good from the bad. We've added more inspectors, we've added additional costs, but we've had no reduction in defects. I challenge you to find any other business or any other industry that operates on the principle of less knowledgeable, less qualified people further from the situation overseeing more knowledgeable, more qualified people in direct contact with the customers or the product.

In addition to Joseph Juran, William Edwards Demming is the other famous quality guru, and he had 14 essential points of Total Quality Management. One of the most important of those was to eliminate numerical quotas. Do not try to manage people by getting them to achieve some sort of numerical quota or a number. Demming's key phrase is: The most important numbers are unknown and unknowable. But what have we been doing in healthcare over the past decade? We've been trying to manage care by ratios. Examples of such measures include the rate of cesarean deliveries performed by an obstetrician, rate of hysterectomies performed, number of hospital admissions per 1,000 people, or the number of hospital bed days per 1,000 people.

What rate of cesarean deliveries denotes high quality? Doctors are always being measured against their rate of cesarean deliveries. Obviously nobody knows what the right or highest quality level of cesarean delivery should be. One thing doctors do know is that whatever rate of cesarean deliveries they happen to be performing, their ratio should always be lower. Nobody can say the highest quality ratio of cesarean deliveries is 16.7% or 21.2%. Obviously that makes no sense, but yet this is the way we seem to be managing healthcare. I don't know if we're doing it as much now as we used to, but that's been the landmark of managed care.

There are many examples of what I like to call numerical malpractice. This generally involves people who are not statistically knowledgeable, who are using statistical tools to try and achieve what they think is TQM, but yet their ignorance is just doing a lot of damage. The first example of such numerical malpractice is what I call random variance, or a lack of locus of control. For example, in the southwestern part of the United States this year, there was a pneumonia epidemic. Of course, you have a lot of cases pneumonia, hospital utilization rates shot up, and I guess probably prescription drugs, and other treatments for pneumonia shot up. Well, a doctor can't control this, and if you're going to judge a doctor based on what their utilization is, they're going to score poorly on something they have absolutely no control over.

There's also the problem with geographical variance. Actuaries don't have any problem understanding this concept. We all know that the demographics of people across the country varies greatly, especially in places like Florida and Arizona where you have higher retired populations. Of course, they also vary ethnically, and that different ethnic groups have different opinions and approaches to healthcare.

There's also a problem with sample size and data credibility. Doctors do not treat hundreds or thousands of patients with the same illness every year. Sometimes they might only have 5 or 15, but yet they're judged or scored on their utilization based on the small number that they have. Actuaries can usually understand or see problems that would come up there.

There's a problem with selection and progression. An excellent example would be with heart surgery. Imagine that you're the best heart surgeon west of the Mississippi River. If I'm also a heart surgeon, and let's say I'm relatively new or inexperienced, what am I going to do? I'm going to take the easier patients, and I'm going to refer the more difficult cases to you. Well, what's going to be the result of that? The result of that is that you're going to have more patients die on the operating table, or die within 30 days from surgery. But if you look at the actual numbers, I'm going to have a higher success ratio or a higher survivability ratio. So just looking at the numbers, I'm going to look like the higher-quality heart surgeon, when, in fact, I've already admitted up front that you're a better heart surgeon than I am.

You can also have problems with variable isolation. An example would be with cancer rates. All things being equal, rising cancer rates are a good thing because we all know that cancer affects people at older ages. Ideally, we'd all die of cancer. The only time cancer rates are a problem or an issue is if cancer rates are rising within the same age group. For example, if women in their 30s are getting breast cancer at a higher rate, that would be a problem.

There are also problems with variable misidentification. An example I can think of is with maternal mortality. If you look at mortality of mothers in childbirth, the U.S. government breaks it down into something like caucasians, African-Americans, and other races. But the mortality rate for African-Americans are two or three times that of caucasians. Now many people misinterpret this data, and they think this has something to do with the racial situation in this country. In reality, that's probably not the case. This is probably simply an economic situation related to access to healthcare, meaning that you can afford it, and whether people live in an area close to a hospital. A lot of African-Americans are poor, living in the rural areas, and don't have access to healthcare. But if you adjust for race, and you simply look at a similar group of people, there's probably no difference in maternal mortality rates.

There are problems with variable weighting. An example here would be recovery and length of stay from an operation. We all know that length of stays in hospitals have been decreasing over the past 30 years. By and large this has been a good thing for a couple of reasons. We've been able to improve recovery, and we've been able to improve surgical procedures. But if you take a surgery which 10 years ago required a six-day inpatient stay after surgery, and it now only requires a three-day stay, you can't just look at those numbers and say we've reduced the workload of the nurses by 50%. The reality is that patients who were staying there for six days were much easier to take care of on days four, five and six, than they were on days one, two and three when they were still recovering from the surgery, the anesthesia hangover, and really couldn't do very much for themselves. So the work reduction is not 50%, it's more like 25% or 30%.

Finally, there's a problem with Type I error bias, and ever since the Thalidomide scare back in the early 1960s when Thalidomide was not approved for use in the United States, the U.S. healthcare system has had a Type I error bias, and by that I mean we do not let errors into the system. We would prefer to reject something good than to accept something bad. An opposite example of this is the drug called Timalol, which is a beta-blocker used by heart patients. Timalol was available in Great Britain and Europe more than 10 years before it was approved in the United States. When it was finally approved in the United States the FDA admitted that if Timalol had been available in the United States it could have saved 10,000 lives a year. Now if you want to you can reinterpret the FDA's press release and say the FDA murdered 100,000 people by keeping Timalol off the market.

We all know as actuaries, or anybody who's a healthcare professional, that most healthcare decisions involve pluses and minuses. They involve tradeoffs of risk and reward. We can't simply say it's always best to do this, and it's always bad to do that, and I think we need to make patients understand that, and we need to make other disciplines in healthcare understand that. Probably a tougher problem is that we have to accept responsibility when we make one decision and the results don't turn out the way we wanted them to. We have to understand that based on the available data at the time it was the right decision to make.

So to sum up, I think that healthcare quality measurement overall is done by health plans and for health plans. It's really not taking into account what the patient wants. To me it looks like a lot of make-work that doesn't generate the things that the health plan members or the patients are looking for. One thing I found as a healthcare consultant, and one of the reasons I got out of the business of being healthcare consultant, was that it seemed like no matter what we did, whenever I would go back and talk to my family and friends they would have more and more horror stories about their interactions with the healthcare system. It was my job to tell people things were getting better and better, when the reality is, based on all the feedback I was getting from the people I knew, things are getting worse and worse.

Ms. Linda Bronstein: I'd like your perspective on the NCQA, the additional requirements, and what various plans are incurring or determining that they will incur to meet the additional requirements on producing information surveys, and the additional critical criteria that's required to meet NCQA. What is its value? Do you see that the industry will be able to use it, or do you see that the industry will look to something different, perhaps focusing on just HEDIS rather than the total scope of NCQA?

Ms. Zaharias: I've seen a high level of frustration with NCQA because it's become an absolute operational nightmare. Every time there's a new requirement, everybody has to change what they do in order to try to support the change. I'd say that maybe five or seven years back, NCQA was the *Good Housekeeping* stamp of approval, and everybody was interested in it. There were certain employers that would not contract with health plans unless they were NCQA accredited. I'm not sure that that's the case anymore because of the expense and frustration in trying to operationalize all the requirements and the amount of money that it takes to ready for NCQA accreditation and to maintain it.

HEDIS seems to be more important, especially since a lot of the health plans are requiring it. Physicians also like to be able to capture that information. I've seen things change so that now there's not as much of an interest in NCQA.

Mr. Axene: My reaction's very similar to that, and that a lot of plans are starting question the high cost. I still see them spending money pursuing quality approval, but they are also asking a lot of questions now that they're all under cost pressure.

Mr. Kevin Kenny: One of you mentioned the health industry's, or the HMO industry's contention that cost efficiency and quality of care are correlated. Is it possible with any of the quality compass data that's coming out to address that question, and determine to what extent it's true?

Mr. Axene: I haven't actually manipulated the new data set, so I don't know. Kathy, do you know?

Ms. Zaharias: No.

Mr. Axene: I'm familiar with other studies and analysis that show that the quality of care improved with the efficiency of the care, but I'm not familiar with any analysis with that particular data set.

Mr. Kenny: I guess I would need to track cost data from some of the plans that are responding. Do you know if that's included in the database?

Ms. Zaharias: When people explore the issue of quality and efficiency being convergent, they tend to examine how quality relates to utilization. You often hear the example of a patient that comes to the emergency room on a Friday night with chest pain, and the availability of services. If there's no availability for the needed services, the patient would be admitted and end up having the diagnostics on Monday, and some subsequent type of invasive procedure, which then means that the cost is higher, the utilization is higher. There is not a perception of having high quality care when patients have to lay there for two days waiting for something to occur.

Mr. Kenneth S. Avner: I have two related comments. First, we talk about the cost of NCQA, and about the cost to carriers. There's such a tremendous cost to the providers that we're seeing a tremendous backlash from them. They say that they can't absorb the cost as well as they've done in the past, and they've got to push it back through the system. We may be making those plans that try to demonstrate quality incur much more expense. In many cases, we may be putting them out of business in favor of plans that don't have to go through these kinds of demonstrations. This is one major issue that we see coming.

My second comment is related to the first part. Maybe we need to take a mirror back to the whole quality movement and ask whether we have really done a good job in terms of bringing quality into the system. I'm not sure I go quite as far as Mr. Smedinghoff did when he asked what's the right c-section rate. When you get a study that shows that the major determinant of whether a c-section will be done is the end of the shift and the doctors just want to go home, there's a problem. But that doesn't mean that you can measure directly by numbers, or determine it

by numbers. We may wonder whether there's a movement afoot to say that NCQA can no longer be the exclusive determinant of accreditation. I see some of that coming in the next couple of years.

For at least 10 or 15 years, as long I've been in this business, we've seen quality is important. That's what we say, and then under our breath we ask what's your price on that. For a while with the booming economy and the tight labor market price was no longer as important in terms of selection. When I look at it as a whole, it's pretty embarrassing where we ended up in terms of quality, and maybe what's happened is the whole thing's falling under its own weight.

Mr. Smedinghoff: I guess my reaction would be ultimately you really don't need any quality data. All you've got to do is look at what the people do. People vote with their feet. You look back in the 1970s and 1980s people stopped buying American cars, and they started buying Japanese cars. I'm sure that the Americans had quality data, they bragged about how great their cars were. They probably thought their cars were great because they were bigger, they had more trunk room, and they had more leg room. But the people disagreed and they bought cars on different criteria. So we shouldn't look to the NCQA. They have numbers, lots of numbers that they'll sell you. There's no shortage of numbers at the NCQA. Instead, why don't we go to the patients and ask the people who are actually the customers what they want. The quality data that's being created is being created by the healthcare industry. It's not looking at the customer, what the customer wants. It's numbers generated internally by hospitals, by either the NCQA or maybe by consulting companies. Maybe part of the problem is people don't have a choice. They're stuck with the health plan that their employer gives them.

Mr. Axene: I have a couple reactions. I think that my first exposure to variance among practice patterns in a real way dates back to 1976. I have anecdote I like to share with my clients because I happen to be a managed care advocate. I remember watching 10 different surgeons all operating at the same hospital, all orthopedic surgeons looking at the exact same chart that had been neutralized. The person's name and other identifying information had been deleted from that chart. I asked all 10 of those doctors if they could tell me what the appropriate, most cost-effective high-quality care would be to take care of that one patient. It happened to be a severe ankle sprain. The person was 6-foot-10, and you can imagine what the person did for a living. I asked these 10 doctors to quietly go away for a few minutes, go through the chart, look at all the x-rays, and determine what is the most cost-effective, high-quality way of treating the patient. Twenty minutes later they came back to the group and presented their findings. We also had the hospital staff figure out what would be the cost impact of the different recommended treatments. The costs ranged from 30% of the average to over 350% of the average. It turned out that the intended length of stay was everything from outpatient to five days in the hospital. All these doctors were practicing at the same facility, five of them in common group practice with each other, and they could not agree on how to treat this one patient.

To show some of the hilarity of this particular anecdote, the person who was recommending that the patient be there for five days was asked by some of his peers, why did you put this guy in the hospital, or why didn't you just let him go home? His answer was that this is a basketball player. There's no way that I can

get the patient to lay down long enough to recover. If I put him into a hospital bed, then I can be sure that he'll stay off of his leg and rest. This doctor's business associate, who happened to have recommended the shortest length of stay, in other words as an outpatient, said that he would just put a 50-pound cast on the patient's leg so that he could not get around anyway. So you can see that there were at least two very, very unique ways of solving the same problem, one incurring five days in the hospital, and the other one incurring about 50 pounds of plaster. My point is that I have a problem letting the fox rule in the hen house. Left to their own devices in a misaligned system, doctors may do things that might benefit themselves more than their patients.

I agree that micromanaging a UR system within a health plan is not necessarily the most useful expenditure of resources. However, I find that some of the alternatives are almost as atrocious. Quality has not been managed well at all within the healthcare system. I believe that quality has been so poorly defined that we're all managing it in different ways. I loved the example of the definition of quality on those 10 liver transplant patients. I see that all the time in facilities and organizations that I deal with.

I choose to define quality very simply. Quality is finding out what's wrong with the patient as quickly and as efficiently as possible, and trying to fix it as quickly and efficiently as possible. If you fix the problem you'll automatically have a good outcome, and then people will be happy. If you don't fix the problem you've got to find out how we can best fix it within the resources that we have. Efficiency is a major part of quality, and one very simple type of patient can illustrate this. You can go to an emergency room and find a patient who thinks he's going through a myocardial infarction (MI), and tell him that you can fix his problem in 6–12 hours, as the American College of Cardiologists tells people they can do. Then tell him that the alternative is to put him in the hospital for 5–6 days to rule out MI. If I was on my deathbed with a heart attack, I would sure like it to be fixed quickly. Getting the problem taken care of in the right way, with the right resources, in the most expeditious fashion, is the highest quality care.

Ms. Zaharias: I just wanted to make a comment in support of what Dave is saying regarding his example of the orthopedists and the ankle sprain. We're starting to see more and more of this approach to identifying best practices in healthcare. Instead of having a rigid UR process, plans are encouraging physicians to get together and define what is really best practice. The physicians decide as a group what is the best way to manage a particular type of patient. Often the doctors don't know what the various treatments cost. They don't know what drugs cost. They don't know what prosthetics cost. They don't know what supplies cost. Physicians want to do the best thing, but they just don't have enough information, and they often don't get into those types of conversations.

You can't assume quality. There has to be some way to measure it, but I'm certainly not sure what the right answer is. I'm certainly not saying NCQA is the best solution. I do think that defining appropriate care for patients is probably the best step, and then we should move forward from there.

Mr. Smedinghoff: I would challenge David's concept of variance being a bad thing. Take any other product or service that we buy, whether it's the clothes we buy, the

food we eat, or the cars we drive. You will find huge variance in products. Some of us buy 10-year-old Hondas, others buy brand new BMWs, same thing with the houses that we live in, the clothes that we buy, and the food that we eat. So a wide variance of products does not necessarily indicate poor quality. We all have our own standards of what we want in each of these categories.

If you consider a product that everybody uses in the same way, such as electricity, there should not be a wide variance in the price. But healthcare is a very highly personalized service. For example, in the case of cesarean delivery, there is an amount of risk involved. Some women have higher tolerance for risk than others. It's a very personal decision. A consultant may say that one form of care is high-quality, but the average customer's reaction may be, I don't care if you think a Honda Civic is a high-quality car. I want a BMW, or I want this luxury car. The same thing probably applies to healthcare. When you get something that personal, quality is an individual definition, and you can't set standards for everyone. You should ask people and let them determine what's quality and what's not.

Mr. George Calat: I don't agree with the Mr. Smedinghoff's comment about variance not being a key. If we're all paying for our own healthcare as we are with our own Hondas or BMWs, and I would perhaps more be inclined to agree with the Mr. Smedinghoff, but since we're not, I can't agree with that at all.

Since healthcare is becoming quite unaffordable to a lot of employers, and employees, and individuals, obviously cost is a key consideration. My gut tells me that defining and monitoring quality in some way is a good thing. But I'm not hearing how to do that, other than by defining treatment protocols for various types of patients. What is the panels' view on ways to define quality, and measure quality so that a patient or individual can decide which provider or network or health plan provides better quality. What would I consider when I make those choices? Is there something that's better than the current approaches?

Mr. Smedinghoff: You've hit on the very toughest question, and I'll admit I don't have an answer to it. I would ask, how do you determine what lawyer to use, or what guy that you have to remodel your kitchen? You generally ask your friends or you get referrals, and they're generally very personal referrals. You don't go look at a lawyer's list of the ABA, and they don't rank the lawyers by quality. You go by who you know, and what you know. If you don't know anything, well, you go to the yellow pages, and you close your eyes, and pick a name. I think healthcare is that kind of service, and I don't know of any other way to do it.

Ms. Zaharias: I think part of the solution is measuring and looking at outcomes. This involves defining how we want to manage each population of patients. For example, how do we want to manage diabetic patients? We should set up guidelines on the best approaches to managing them, and then monitor the patients over time to quantify improved functionality or complications. Part of that whole process should incorporate a consumer questionnaire. If you say that a diabetic should have certain types of lab work done on a quarterly basis, how do you insure that this occurs? If you keep those lab results within the norm, what happens to the population of patients? What do they look like six months from now, and a year from now? These are the types of studies that people are doing to justify whether the way they manage a population of patients is really effective.

These studies take a long time to do. You don't see a lot of them published because it takes a number of years to collect the data.

Mr. Axene: George, my response to your question is, is I don't see a lot of new stuff coming out right now. What I see is an increased emphasis on provider profiling in such a way that it's truly measuring something, not just seeing who's more expensive, like the average cost of a claim. I see people doing provider profiling, and distributing the findings to doctors, with the doctors' names on the results. This is a step in the right direction, but I don't see much else that is new going on right now. It seems to have been the same-old same-old for the past five years. There are litigious fears that if they start broadcasting results too widely, there will be an uproar by the physicians because statistics are inappropriately calculated. The examples that Gerry mentioned about error problems, I think he called it numerical malpractice, those are really serious issues with regard to physician profiling.

Mr. Calat: Am I to understand that profiling is being done by large health plans primarily, rather than by NCQA?

Mr. Axene: I don't see that much focus on the profiling of what's being done for NCQA. I see separate profiling activities.

Ms. Zaharias: Right. Many companies outsource provider profiling. There are companies that collect claims data, and encounter data, and do the provider profiling with measures that include case mix and severity adjusting, and putting in quality parameters. They also incorporate some of the HEDIS requirements on preventive health and such. It's not just a cost and UR.