CHAPTER ONE

Overview

What Measures Measure

Imagine that hospital rankings have just been released in the local newspapers and made available on the Web. Members of the health care organization's board of trustees begin calling its senior leadership and asking questions—hard questions, such as why wasn't the hospital's cardiac mortality rate the lowest in the state? They want to know what the problems are and what is being done to improve the situation. Chief executive officers (CEOs), senior leadership, and administrators often try to ignore the data and to assure the community that negative reports do not reflect what is actually happening in their hospital. They stress that their excellent, well-trained physicians and nurses are doing a great job. But this response is not always convincing in the face of the numbers.

Health care administrators, managers, policymakers, and executives are expected to have the information to respond intelligently to negative data. That's part of their job. In order to respond, they need to be able to use broad enough brush strokes to create a high level of understanding, yet they must also offer enough specific detail to encompass the complexity of the questions—and the answers.

If, for example, the news media report a high infection rate in a hospital, what does that mean? In other words, what exactly is the measure *infection rate* measuring? Interpreting such measures for the general public can be a challenge for health care leaders because the data that describe complex medical phenomena may not be congruent with the assumption that there is a straightforward relationship between cause (treatment) and effect (outcome). To understand this infection rate measure, leadership should have information about whether the problem is limited to one hospital unit or is running rampant across many units, or whether the infection is connected to a single procedure, physician, staff member, operating room, or technological process. Perhaps the infection occurs only in patients who have been transferred from a specific nursing home or who live in a particular neighborhood. Data can reveal whether the infection rate has increased over time (and if so, by how much) and can identify the group of patients or staff involved. Data can expose how severe the infection is, where the cases are located (which department or unit in the hospital), how long the length of stay (LOS) is for those patients with the infection, and what costs are associated with their care.

The data to address these and many other questions are available through quality management and various other databases, and health care leaders need to acquire the familiarity and skill to interpret the data and must also be able to communicate about the issues with the clinical staff, the media, and the community.

The successful health care professional is committed to running an efficient organization, and that entails understanding data from quality indicators and measurements and how these data can be used to link clinical results and policy formation. Because most administrators are concerned with how to do damage control when the public reads about poor outcomes in the local newspapers, it is essential that they become familiar with the dynamics of care and position themselves to introduce changes that will improve the reports—and the care.

Recently I attended a meeting of the medical board of a small community hospital and spoke to two staff cardiologists who were understandably upset that they both had fared poorly on the mortality ranking published in their local newspaper. They said they were reluctant to go to the supermarket because people were asking them questions they couldn't answer. These physicians didn't know what was wrong with the care they delivered and in fact were convinced that their care was excellent and that the rankings were faulty.

The CEO of the hospital, also being questioned, didn't know where to look for explanations of the high mortality. In such circumstances it is easy to make excuses: the coding was inaccurate; the patients were sicker than average, with complications; the physicians do great work but are too busy to document the charts and therefore the measure is a reflection merely of inaccurate paperwork and not the inadequate delivery of care. Excuses, which may calm some people in the supermarket, don't take the measure seriously, or worse, they prevent leadership and physicians from analyzing their processes, the delivery of services, or the gaps in their care. This denial and blame mentality does not lead to self-criticism or self-improvement. Outcomes analysis, such as an examination of the reasons for a high mortality rate, requires data that can explain a clinical phenomenon, such as death. Data can help to determine whether the intervention (or lack of it) contributed to the mortality or whether the existing clinical and organizational environment is appropriate for preventing poor outcomes.

Familiarity and comfort with quality measures encourage leaders, administrators, and policymakers to understand important variables in clinical areas as well as in organizational processes. Measures can focus attention on potential problem areas; measures can specify small issues before they result in major incidents; measures can monitor improvements. Most important, measures provide a method of communication among medical staff and hospital administrators.

MEASURES AND THE MEDICAL STAFF

Paradoxically, the very physicians on whom a measure depends do not always feel obligated to meet the expectations of that measure. For example, the federal government, through the Centers for Medicare and Medicaid Services (CMS), has developed a measure that is based on evidence from research, clinical trials, and medical expertise showing that patients suffering heart attacks (technically referred to as acute myocardial infarctions, or AMIs) have a more positive outcome when they receive an aspirin (ASA) within four hours of coming to the emergency department (ED). The CMS collects the data about the rate of aspirin administration to AMI patients in order to monitor, and one hopes improve, patient outcomes. However, it is the physician who controls whether or not a patient is administered an aspirin, and it is the physician's responsibility to

document the medical record so that the CMS indicator can be aggregated for the hospital. Without physician acceptance the intent of this measure cannot be met.

> The Centers for Medicare and Medicaid Services (CMS) is the governmental agency responsible for administering the Medicare program, and it also works with the states to administer Medicaid. In addition to providing health insurance, the CMS is involved in quality standards. State surveyors visit a number of health care organizations annually to determine compliance with CMS quality standards and to investigate complaints. The CMS contracts with medical organizations to ensure that the medical care paid for with Medicare funds is reasonable and necessary, meets professionally recognized standards, and is provided economically. The CMS is working to improve the quality of health care by measuring and improving outcomes of care, educating health care providers about quality improvement opportunities, and educating the public to make good health care choices.

Typically, administrators have relied on physicians to explain medical phenomena, and physicians have done so by discussing the characteristics of their patients' illnesses. However, more and more research points to the realization that explanations for medical phenomena can be found in aggregated data about global process issues and not solely in the analysis of individual patient problems. Measurements that reflect aggregated processes of care objectively, as well as outcomes of that care, help physicians move past their own patients to understand how to improve outcomes and performance for all patients.

In other words, measures can be used by administrators and physicians to generalize across the patient population and to develop policies and make decisions based on aggregated data. Measures can provide a common language for physicians and administrators by interpreting objective variables. Through a shared language—that is, the measures—a hospital can be transformed from a collection of groups with specific and differing agendas to an integrated working team with similar goals.

MEASURES AND PATIENTS

Patients today are reacting to the media attention to medical errors and the dangers involved in hospitalization. Having been informed by such an august body as the Institute of Medicine (IOM), an independent organization of medical experts who study the health care industry, that almost 100,000 deaths occur unnecessarily every year in the United States due to medical mistakes, the public is scared, where once it was trusting. Reinforcing this fear, the Institute for Healthcare Improvement (IHI) has launched a campaign to save 100,000 lives by enlisting hospitals to commit to implementing changes in care that would avoid preventable deaths. Although this campaign is laudable, it underlines the lack of patient safety in hospitals and the fact that senior administrators seem unable to fix existing problems that affect patient safety.

People have begun to approach health care services in a new way—informed, suspicious, and eager to take responsibility for their own care. Patients ask questions of their physicians and of health care leaders as they have never done before. Today's baby boomers are not about to settle for a patronizing pat on the head, and a leave-it-to-the-expert attitude that perhaps worked well in the world of their parents. Patients are eager to be well informed and to research solutions to their health care problems. They look further than their personal physicians for information. They find answers by examining the data available: how many procedures has a specific specialist performed; what was the mortality rate on those procedures, for the hospital and for the physician; how many disciplinary actions are recorded for the physician and how many malpractice claims? In addition, hospital and individual physician profiles are now available for public scrutiny. Public pressure is mounting, as can be seen by the increase in drug advertisements on television and in magazines, and by the technological innovations that patients demand as solutions to medical issues. These types of social forces shape organizational change.

The following selected Web sites provide information about health care services:

webapps.ama-assn.org/doctorfinder	Provides background information and achievements and certifications of physicians

bestdoctors.com	Offers peer review of physicians who have met standards of care
compareyourcare.org	Rates quality of care with national guidelines
healthfinder.gov	Provides ratings of hospitals and nursing homes
healthgrades.com	Ranks physicians, hospitals, and nursing homes
jcaho.org	Presents comparison information for health care organizations
leapfroggroup.org	Reports on and compares hospital quality outcomes
ncqa.org	Ranks health plans, including information about their performance
qualitymeasures.ahrq.gov	Compares quality measures across institutions
ratemds.com	Provides patients' ratings of doctors

Responding to the needs and interests of the modern patient, the state and federal governments are providing the public with research-based information about appropriate disease management (evidence-based medicine) and making available algorithms of care—what should be done, when, why, and to whom. Patients are encouraged to partner in their health care decisions, to get second opinions, and to learn the details of appropriate expectations through informed consent forms that describe the risks and benefits of procedures. It is insufficient to provide patients with excellent, hotel-like services (as many institutions are now doing to try to bolster their patient satisfaction rates); the hospital must also be able to report good patient outcomes.

MEASURES AND HEALTH CARE LEADERS

In order to meet the new challenges head-on, today's health care professionals need to equip themselves to evaluate the *product* delivered in their organization. Through using measures an organization can

prove that its product is *good,* reassuring the public about safety and thus maximizing revenue. Achieving this goal requires an understanding of how to measure, what to measure, how to interpret measures, and how to monitor care through measures on an ongoing basis. Most important, information from the analysis of measures should be applied to improve the delivery of care and increase patient safety.

For example, how would you, as a senior administrator, respond if the chief finance officer reports that the intensive care units (ICUs) are costing the hospital a fortune and should be reevaluated? What criteria should be used to make improvements and change practices? The physicians will tell you their patients need to be in an ICU because they require specialized care. Are they right? How would a nonclinician evaluate what the physicians say? Have standards been established for admission to the unit? Are there other units in the hospital that might be as appropriate for caregiving? Most important, are there any data to support the physicians' stance, or are any data available to indicate that expensive ICU care may not improve the health and well-being of their patients?

Of course health care managers and administrators are in no position to argue medical care with physicians. But they can put themselves in a position to understand utilization issues, to document the patient population, to develop policies about end-of-life care, to track the relationship between processes and outcomes, and to evaluate how money is being spent. If an administrator has data that show that the ICU is not necessary for patients to receive appropriate care, that the outcomes are the same in less resource-intensive units, that, for example, it is unnecessary for patients to be in an ICU while awaiting a stress test that could be administered in a physician's office, physicians and the governing body will take notice. Availability of data permits the administrator to see beyond the individual physician's patients and to evaluate the bigger organizational picture.

Professionals involved in health care administration, services, and policy formulation can ill afford to be uninformed; it puts them at too much of a disadvantage. Policy and financial decisions must be based on information, such as data describing the patient population or data defining appropriate levels of care based on acuity of illness or condition. Because medical care influences the budget, administrators and health care managers have to provide themselves with the tools and the education to understand that care. The separation of powers between the clinical and the administrative staff, typical of the late-twentieth

century, is not useful today because a silo approach to information and communication cannot explain how care is delivered or improved, nor can outcomes be predicted.

Health care, like other industries, uses specific techniques to better the competitive edge, to increase production, so to speak, and maintain financial viability. Administrators need to use innovative methods for balancing the number of beds and the turnover of patients, moving patients through the continuum of care, managing appropriate length of stay, defining the scope of service, introducing technology, determining patient-staff ratios, and managing many other variables—all the while maintaining a safe environment, reducing pain and suffering, and improving satisfaction. Measurements can provide administrators with the infrastructure necessary to make informed decisions so that the organizational tightrope they walk becomes sturdier. Moreover, objective measures can promote improved communication with their governing bodies, their staffs, and their patients.

Hospital leadership has come a long way from a focus on balancing the budget and has moved away from considering the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) surveys as inconvenient interruptions to the business-as-usual running of the organization. Because health care has changed, and because the social underpinnings of medical care have changed, health care professionals need to prepare themselves to meet these changes and not only to meet them but to greet them with an extended and welcoming hand.

The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) is an independent, not-for-profit organization established more than fifty years ago to evaluate the quality and safety of care delivered by health care organizations. Its board of commissioners is made up of representatives of such nationally recognized professional organizations as the American Hospital Association, the American Medical Association, the American College of Physicians, the American Society of Internal Medicine, and the American College of Surgeons. JCAHO sets standards that measure health

care quality in the United States and around the world. For a health care organization to be accredited, a team of JCAHO health care professionals must do an extensive on-site review of the organization's performance at least once every three years. Accreditation is awarded based on how successfully the organization meets JCAHO standards. Organizations are evaluated through a review of their policies and procedures, medical record reviews, performance improvement initiatives, visits to patient care settings, interviews with staff and patients, and staff competency evaluations.

Administrators mediate between the organization's governance committees and the hospital employees, including the clinical staff. To best do their job, administrators need experience in working with quality measures in order to cope with the immense volume of statistical information related to their organization and to prioritize and discriminate among different measures, as well as to use the information to set expectations for the staff. Administrators read financial reports with comfort, and they need to become comfortable with quality reports in the same way. When they do, they will be able to help the members of the board of trustees or other governance committees evaluate services appropriately.

MEASURES AND MONEY

Administrators have always had to think about money, but today's health care administrator needs to understand that profit is linked to the quality of care being delivered. Years ago administrators did not question clinical care; that was the exclusive purview of the physician. And because physicians brought patients into the hospital and more patients meant greater revenue for the hospital, administrators and other health care managers were not eager to risk antagonizing physicians in any way by overseeing the way they treated their patients.

For many years reimbursement for services focused solely on the volume of patients and the services given those patients. The issue was always how much volume came in and what services were performed rather than how successful the outcomes of that care were and what

the benefits to the patient were. If a patient had a long LOS and required surgery or additional support services, then Medicare reimbursed the hospital and the physicians for the number of days the patient was hospitalized and the services rendered.

Payment is related to the case mix index (CMI). Medicare introduced this classification system to encourage cost efficiencies in hospital care. Hospitals are paid a predetermined rate, depending on diagnosis and procedures required. Each Medicare patient is classified into a diagnosis related group (DRG), based on information from the medical record. The CMI is very useful in analysis because it reflects the relative severity of illness in a patient population. Surgery, for example, has a higher rate of reimbursement than most medical treatments have. Patient outcomes are not considered in determining case mix and payments. In fact hospitals can be paid more if a patient requires more surgery, even if it's due to a fall or an inappropriate initial treatment.

Today the major shaper of health care policy is the CMS, because that agency has been demanding answers to questions about quality of care and accountability for the delivery of services and because it provides the main economic force for hospitals and physicians. Today reimbursement depends not solely on volume but also on how good the delivered product is. Not all performance is equal, according to the CMS and JCAHO; payment and accreditation are related to good processes and outcomes. The way performance is evaluated is through objective measures. More than accreditation, meeting the CMS and JCAHO standards helps health care professionals to focus on improving operational and clinical processes.

The CMS evaluates hospitals and services on an ongoing basis and as moving targets. To increase reimbursement and to receive financial incentives the health care organization has to be in the top decile in the country in complying with quality indicators (such as giving aspirin to patients who come into the emergency department with AMIs). If one organization improves and another doesn't, then their respective rankings move accordingly up or down the scale. Profit is integrally connected to the measures that reveal quality of care. Therefore a good administrator needs to be familiar with quality indicators and with organizational processes associated with clinical care. Measures can identify areas of weakness in the delivery of care; measures can then monitor the improvements implemented; and measures can be used to correlate clinical, organizational, and financial performance.

MEASURES AND EVALUATING CARE

In years past, when defining a good hospital, no one considered accountability for the quality of care delivered. No one asked if the surgeries were successful or if the technological tests were appropriate or if there was efficient and effective use of resources. Only now are regulatory agencies and medical boards struggling with the concept of competence and privileging, a process that evaluates physician performance. Today these kinds of evaluations, which reveal quality, are reported and discussed in such public forums as newspapers and Web sites. Quality indicators, such as mortality rates, which had traditionally been discussed behind the closed doors of mortality and morbidity conferences or in medical journals or professional meetings, are now easily available to the public. Data open the door so that all can see what is happening at the bedside and demand accountability.

In today's health care climate, hospitals are watched and monitored as never before by regulatory and governmental agencies as well as the public. Therefore it behooves administrative leadership to learn how to use the processes of evaluation to improve care in the hospital. Objective information is a powerful weapon for reconciling the often conflicting agendas held by the organization, the medical staff, the regulatory and governmental agencies that monitor health care, and the patient. Today's administrators need to understand it all. They need to be able to define their product in order to sell it. Today's administrators need to know where the defects are in order to correct them.

If the physicians in your hospital are not giving beta-blockers or aspirin when the CMS standards say they should, leadership should know the reasons. If there is a serious event or an unexpected death, administrators need to know why it occurred and which processes should be improved to prevent a recurrence. Information is key, and not the subjective information that interprets medical care as an art form, understood by only a few well-credentialed and -schooled physicians. If a physician error results in patient harm, administrators need to understand what happened and be prepared to answer questions regarding services and maintaining safety. If patients are in danger, then the hospital, and the administrator, may have to face the consequences of dealing with the media and the community.

In addition to governmental agencies, private advocacy groups are also applying pressure on health care organizations to measure their care and monitor specific quality indicators. These groups also want

proven value in return for their health care spending. Why shouldn't they? Health care used to be thought to be beyond the grasp of mere mortals, but no longer. Hospital administrators therefore have to be prepared to examine their organization's quality of care in the aggregate and use defined measurements to gather reliable data so they can prove that their organization is better than the competition.

What does it mean to be better? It means that when similar organizations are compared—with similar measures, risk adjusted to account for patient-specific information—one organization has a better ranking than another. Such rankings, which rely on compliance with evidence-based measures of quality, are being published as report cards and are available to the public so that patients can determine where they want to go for service and where they want their health care dollar to be spent. Patients taking on the role of informed consumers, industry and business organizations demanding specific services in return for their spending, and governmental and regulatory agencies focusing on quality indicators have created a revolution in the way health care is evaluated.

Through an understanding of process indicators (such as surgery) and outcome indicators (such as infection), the health care professional will become educated in the interrelationship of interventions and outcomes. For example, if a patient has to be readmitted after being discharged, it is important to analyze the reasons and to determine whether this event was due to a problem with technical skill, a lack of appropriate discharge planning, or random chance. With an understanding of measures, health care professionals will be better able to interpret data reports and then ask relevant questions. Through deliberate analysis an administrator can learn where to implement improvements or increase resources. Familiarity with quality management methodologies will promote accountability for quality care and enable leaders to meet the new challenges of the new health care competitive marketplace.

SUMMARY

To best manage their responsibilities, health care professionals should become familiar with the use of measurements to

- Evaluate the processes of care.
- Manage the interaction among physician, organizational, and patient needs and services.

- Balance the quality and cost of health care services.
- Promote accountability and improve communication among the professional and administrative staff.

Things to Think About

You are in a position to create and finance a hospital department.

- What questions would you want the answers to?
- Whom would you ask?
- What measures could you develop to get the answers to your questions?
- Why those measures and not others?
- How would you argue for or against this department to the governing body?
- What resources do you need (human, technological) to produce the best outcomes within a financially sound framework?
- What measure can you use to show that your service has an edge over the competition?