

Who Has Star Quality?

Jon A. Chilingerman

Consumers can help to transform the way health care is delivered. Indeed, consumers have already effected important changes in the health care system. For example, patient expectations have influenced the architecture of hospital wards, the concerns of the women's movement have led to more family-centered care in obstetrics, and the needs and buying behaviors of individuals with diabetes have changed product-line and research and development strategies in the worldwide insulin business.

Patient expectations are the reason today's hospitals have many small, private rooms. To achieve nursing efficiency and lower construction costs, modern hospitals were originally built with large, impersonal wards, most containing as many as forty beds. However, throughout the world and at different points in time, ward patients complained bitterly about the lack of privacy, amenities, convenience, and information.¹ Despite the benefits of large wards, consumer forces helped to shift the architecture of hospitals. In the United States, hospitals built before 1880 had very large wards only; however, by 1908, private rooms grew to account for 40 percent of all U.S. beds, and large wards declined to account for only 28 percent. By the year 2000, the number of private and semiprivate rooms had grown to account for nearly 100 percent of the

I am very grateful to Dianne Chilingerman, Regina Herzlinger, John Kimberly, and Leon White for their encouragement and thoughtful comments.

beds in almost every economically developed health care system. Owing to consumer feedback, the large *Nightingale wards* have faded into health care's distant past.²

The second example of patient behavior effecting change goes back to the 1970s, which saw the blossoming of the consumer movement in the area of obstetrics. Family-centered care was introduced when members of the *women's movement* began to question "routine clinical treatments" that neglected the emotional needs of the family and assigned pregnant women the role of passive recipients of medical care.³ Within a few years of consumers' raising their voices against standard operating procedures, such things as drugs, general anesthesia, enemas, and surgical incisions became optional medical interventions. The consumer movement allowed fathers to participate during the birth and babies to stay with their mothers after the delivery. Rigid care programs were unbundled, and new choices became available to the new obstetrics consumer.

The *market for diabetes care* is a third example of the consumer movement at work.⁴ Eli Lilly, a pioneer in diabetic products, competed by developing purer forms of insulin. Although Lilly was responsive to endocrinologists, it was less responsive to the diabetic consumers who longed for greater convenience and reduced costs. A consumer-oriented company, Novo Nordisk, that made handy disposable insulin injection pens (Novo Pen I, II, and III) began to attract European consumers to its product. Although Eli Lilly knew about injection pens, it was not ready to abandon the time-consuming and less convenient needles and injection kits. Once this implicit consumer movement gained momentum, however, Lilly was forced to rethink an R&D strategy that aimed at perfecting insulin and ignored consumer demand for convenience and reduced costs.

These three examples demonstrate that health organizations do respond to consumers. How fast consumers can effect change, however, depends on the resolution of a great barrier—the lack of consensus on a definition of quality of medical care. Health care providers can help the consumer revolution to improve the delivery of health care by developing a clinically relevant and widely accepted consumer-driven definition of quality. After all, what gets measured gets managed. The remainder of this chapter will focus on a consumer-centered definition of quality.⁵

WHAT IS QUALITY IN HEALTH CARE?

Throughout the twentieth century the ostensible challenge in health care management has been to find a theoretically correct way to assess quality of care, but the real challenge has been to uncover and understand the many factors underlying quality. Although philosophical arguments have seldom delayed

business leaders from finding solutions to practical, bottom-line problems, philosophical debates over health care among policymakers, clinical leaders, and managers have paralyzed the measurement of quality.

If quality could be treated as a unidimensional variable, some subjective means of combining multiple measures (or a theory-based mathematical formula that yielded a single, summary measure of quality) could be applied. For example, if variables such as mix of staff, methods of peer review, decision-making efficiency, convenience, patient satisfaction, health status, and mortality were highly interrelated, it would be possible to develop a single concept based on the general features or common elements of quality. But the evidence suggests they are not.⁶ Whether these features are unidimensional or multidimensional remains a research hypothesis that requires further empirical work.⁷

Managers know that quality never becomes a simple concept (this is one of the many important lessons they have learned from the economists). Because individuals have widely diverging tastes and preferences, there can never be *one best way* to assess the quality of services.⁸ The assessment of service quality is always subjective—people will weigh and rank the characteristics of services in inconsistent ways. Absent a guiding theory of quality, at best we can identify some critical features, components, or underlying dimensions of quality, rank (or grade) them, and report the results. In this sense, measuring quality requires evaluating performance by means of a multidimensional scheme.

The most promising direction is to assume that quality is not as complex as the vast enumeration of variables and indicators that the extant literature implies but rather that quality, as a construct, is best understood in terms of a few underlying dimensions. According to the literature, at least five important dimensions of quality have emerged.⁹ These five dimensions are outlined in the following list:

Five Leading Dimensions of Quality of Care

1. Patient satisfaction

- Percentage extremely satisfied and why

- Pain management: discomfort time

- Percentage willing to recommend the provider again

2. Relationships: information and emotional support

- Amount and clarity of information

- Degree of trust

- Time spent encouraging

- Time spent listening

3. Amenities and convenience
 - Clean, fast, and timely
 - Service available when needed
 - Time spent waiting
 - Experience of hospitality and respect
4. Decision-making efficiency
 - Clinical resources used to achieve constant quality outcomes
 - Quick routes to health (diagnosis to treatment)
5. Patient outcomes
 - Mortality and morbidity rates
 - Readmission rates
 - Adverse events and errors
 - Falls, nosocomial (that is, hospital-acquired) infection rates
 - Changes in functional or health status and severity of illness

Although there is scant evidence to suggest that these five dimensions are highly intercorrelated, they are not mutually exclusive factors, as the following discussion demonstrates.

Patient Satisfaction

Recently, as the orientation to health care began shifting from scientific mandates and medical techniques to markets and the more human side of the health care service delivery system, patient satisfaction became an important dimension of quality of care.¹⁰ In part, the discovery of patient satisfaction was an artifact of clinical work on patient-centered care¹¹ and of the influence of strategic marketing on health care management. Clinicians learned that throughout the service process, patients and their families experienced hundreds of *clinical moments of truth*. Research on the *satisfied patient* suggested that patients' overall evaluation of quality depends on the results of the processes, as an *experience*, at every point of contact.¹² Quality measurement from this perspective requires mapping and surveying the patient's entire experience with the delivery system.

Medical care tasks produce feelings in patients of satisfaction and dissatisfaction. On the one hand, strong feelings of satisfaction develop when patient (or consumer) expectations are met and exceeded.¹³ On the other hand, dissatisfaction may be related to an insufficient rate of uncertainty reduction throughout the care process.¹⁴ There are many different indicators of patient satisfaction, ranging from the patient's overall experience to the patient's willingness to use and recommend the service in the future. To understand the

patient's overall experience, we need to pose several questions: Was the patient treated rudely? Did the patient expect less waiting? Did the patient experience unnecessary uncertainty? Was there a focus on the patient as an individual?

Although defection rates (that is, the percentage of patients who change providers) are sometimes used as quality indicators,¹⁵ some critics suggest avoiding such global measures and focusing instead on the specific sources of satisfaction and dissatisfaction that might cause a defection. For example, rather than report a 90 percent satisfaction rate, report that 10 percent of the patients were dissatisfied because their physician never told them what to do or what not to do after they left the hospital and went home.¹⁶ Patient information about extraordinarily good and bad services is captured in satisfaction or dissatisfaction. To avoid losing this information, patient satisfaction should be included in the medical record so all caregivers can regularly monitor each patient's experiences during the service encounters.

Although patient satisfaction is a critical dimension, the knowledge difference between patients and health care providers is so large that *substantial client satisfaction* cannot be the only indicator of quality. The practice of medicine often involves hidden actions and equivocal information, so it is difficult for most patients to know whether diagnostic tests and other treatments were appropriate and the outcomes reasonable. Therefore measures of quality from other vantage points are required to review whether or not a process was adequate and outcomes were acceptable.¹⁷ For these reasons the dimension of information and emotional support and also the dimension of amenities and convenience should be considered.

Relationships: Information and Emotional Support

The second dimension of quality focuses on the relationship between providers and patients in terms of the amount and clarity of information and the degree of emotional support provided. Though related to patient satisfaction, this dimension is treated separately because it gives rise to another fundamental expectation in health services—increasing (or perhaps even optimizing) the patient's control. Good clinical care necessitates task-oriented provider behavior focused on diagnosing symptoms, setting treatment goals, and monitoring recovery. But quality care also requires that providers promote the involvement of the individual and family and support informed choice, offer encouragement, provide clarification, and ensure confidentiality. Therefore good clinical care also requires behavior aimed at building trusting relationships.

Some would argue that caregivers who involve patients and families in decisions, coach patients, and give emotional support reduce uncertainty—the clinical experience then becomes more manageable by the patient and less frightening. Benner reports that teaching patients to prepare them before surgery can actually expedite their recovery.¹⁸ In fact, research suggests that providing

better patient information and more effective emotional support can lead to shorter stays, less medication, fewer side effects, better compliance, and higher levels of satisfaction.¹⁹

Some questions to pose to ascertain quality are these: To what extent do the caregivers educate patients, clarify the treatment regimes, and spend time listening and encouraging? Are patients told when and how to take their medications and what to eat? Are illnesses discussed not only with privacy in mind but tactfully as well? To what extent are the diagnosis, results, and care plan explained? Although some of these factors may be measured by patient surveys, others should be assessed through audits of the medical records.

Amenities and Convenience

Convenience of care and perceived amenities make up a third important dimension of quality of care, and measurements of these items can reflect individual patients' preferences in technology, people, facilities, and coordination behaviors. Measuring these variables implies discovering choices among courses of clinical action and clinical decision making. Herzlinger has stated that there are two new market segments, or new consumers: those who want convenience and those who demand more information.²⁰ Today's hard-working patients lead busy lives. They demand and deserve convenient and comfortable access to medical services. One could argue that technological advances in minimally invasive surgery were spurred by these demands.

Donabedian has argued that "convenience, comfort, quiet, and privacy" are merely desirable attributes of the health care delivery system.²¹ If that position is correct, then they may be covered under patient satisfaction and do not belong in a separate quality dimension. I have separated amenities and convenience from overall patient satisfaction for two reasons. First, researchers have reported that when patients have been asked about their overall satisfaction, they do not emphasize aesthetics, better food and parking, amenities and convenience.²² Because individual tastes differ, the value of convenience depends on individual needs and preferences. Cultural preferences are also often at work here. A second reason that amenities and convenience should be a separate dimension of quality is that service inconveniences have opportunity-cost implications for patients, and offerings of greater convenience have cost implications for caregivers. As health care becomes increasingly competitive, trade-offs may be necessary to stem the health care cost explosion. By measuring this dimension separately, clinicians can serve the unique needs of individual patients, and patients can request an amenity when it seems to them to add value.

Decision-Making Efficiency

The fourth dimension of quality found in the literature is decision-making efficiency,²³ which is the least developed of the five dimensions of quality and perhaps the most controversial. In the past, physicians were trained to do

everything possible for the patient regardless of cost; moreover, physicians tended to equate more intensive medical care with better services. As Harris explains, “doctors have an almost inexhaustible repertoire of things that will make patients better off.”²⁴ But what does “better off” really mean? Providing superior clinical service today requires rapid information processing for diagnosis and treatment. There is growing evidence that quick and accurate diagnosis that expedites treatment increases a patient’s chances of success by reducing cycle times for hospitalization, recovery, follow-up treatment, and return to a normal life. Conversely, there is ample evidence that *too many* tests, needles, and x rays may do more harm than good.²⁵

Because it makes no sense to evaluate the efficiency of a medical service process that results in morbidity, mortality, or a readmission to a hospital, decision-making efficiency must focus on the resources used in order to *achieve a satisfactory outcome*. Inefficiency in the provision of clinical services occurs when physicians and other care providers use an excessive amount of resources to achieve a satisfactory result. The overutilization of medical services (such as ancillary tests) not only carries patient risks but also increases patient anxiety. This dimension of quality is often overlooked.

Patient Outcomes

Assessment of patient outcomes, the fifth dimension of quality, expresses the degree to which the observed clinical performance approached its potential. According to Donabedian, outcomes record the effects of the care process on the health status of the population.²⁶ Outcomes include serious clinical results such as death, medication errors, postoperative loss of an organ or limb, and hospital-acquired infection. As one physician has argued, “quality is not how well or how frequently a medical service is given, but how closely the result approaches the fundamental objectives of prolonging life, relieving distress, restoring function, and preventing disability.” Many argue that outcomes are the leading indicator of quality and that the outcomes of greatest significance are the changes in health status attainable given current technology, clinical knowledge, and management practices.

Because outcomes vary considerably among clinical providers and systems of care, comparing the outcomes of providers can be difficult. Various reasons have been advanced to explain outcome variations, such as prior health status, poor patient compliance, lack of diffusion of medical technology, poorly coordinated care, lack of provider competence, weak clinical leaders, and ineffective management practices. The development of measures that incorporate these variables, such as case-mix measures or indicators of health status, functional improvement, and severity of illness, has advanced considerably. When case-mix measures are available, it is possible to develop summary measures of the clinical benefits achieved based on changes in functional status or other measures of patient outcomes.²⁷ For example, measuring the change in severity of

illness for a given diagnosis from admission to discharge would be a very good measure of effectiveness of the care process in attaining outcomes in relation to implied clinical objectives.

TOWARD A CONSUMER-DRIVEN DEFINITION OF QUALITY

A few years ago, during a health care lecture I gave for an international audience of clinical leaders, a participant asked, “Is there the equivalent of a bottom line in health care?” The medical profession and the policymakers can enjoy debating this issue for a few more decades, or we can enter the twenty-first century ready to measure quality in ways that allow consumers to ask which providers have star quality and to get meaningful answers. Figure 38.1 summarizes a balanced, consumer-driven approach to the measurement of star quality, based on the dimensions discussed in this chapter. The two legs of star quality are patient outcomes and decision-making efficiency. At the apex, we see patient satisfaction, with information and emotional support on one flank and amenities and convenience on the other. Despite the difficulties of defining and measuring health care outputs, this model can make quality management a more tractable problem. Further progress depends on developing equitable quality *report cards* that make significant comparisons on each of these five dimensions.



Figure 38.1. Five Dimensions of Star Quality.

Ultimately, the management of quality has one fundamental goal: to benefit patients who need health care services. A consumer-driven definition of quality has a deeper meaning—it can be understood as an indicator of the overall degree of excellence of an individual provider or a care program. Health care delivery systems will change when measurement systems use these five quality dimensions to benchmark providers against the best care observed in practice. When the consumer revolution is armed with appropriate measures of star quality for every provider—individual physician, ambulatory clinic, hospital, nursing home, and so on—at every level of care, the health care system will improve. And perhaps faster than we might otherwise expect.

Notes

1. As one Hungarian chief of obstetrics and gynecology said to me during a recent site visit, “Hungarian citizens no longer tolerated staying in large wards. They demanded private rooms.” I have heard this story repeatedly from dozens of clinical leaders in major health care systems around the world.
2. One exception among Western health care systems is the National Health Service in Britain, where one can still find very large wards, with eight to twenty or more beds.
3. Kelley, G. “Special Delivery: A Consumer Guide to Giving Birth in Boston.” *Boston Magazine*, Apr. 1978, p. 74.
4. A more complete history of the market for insulin can be found in Christensen, C. M., *Eli Lilly & Co: Innovations in Diabetes Care*. Harvard Business School Case No. 9-696-077. Boston: Harvard Business School, 1996. Much of the information on the market for insulin comes from Christensen, C. M. *The Innovator's Dilemma*. Harvard Business School Press, 1997, pp. 224–226.
5. A mathematical approach to measuring various dimensions of quality by locating best-practice frontiers is discussed in Chilingirian, J. A., “Evaluating Quality Outcomes Against Best Practice: A New Frontier.” In J. Kimberly and E. Minvielle (eds.), *The Quality Imperative: Measurement and Management of Quality in Healthcare*. London: Imperial College Press, 2000.
6. Chilingirian, J., and Sherman, H. D. “Managing Physician Efficiency and Effectiveness in Providing Hospital Services.” *Health Services Management Research*, 1990, 3(1), 3–15; Chilingirian, J. “Exploring Why Some Physicians' Hospital Practices Are More Efficient: Taking DEA Inside the Hospital.” In Charnes, A., *Data Envelopment Analysis: Theory, Methodology, and Application*. Norwell: Kluwer, 1994; Chilingirian, “Evaluating Quality Outcomes Against Best Practice.”
7. Donabedian, A. “The Quality of Care: How Can It Be Assessed?” *Journal of the American Medical Association*, September 23–30, 1988, 260, pp. 1743–1748; Chilingirian, “Evaluating Quality Outcomes Against Best Practice.”
8. Hemenway, D. *Prices and Choices: Microeconomic Vignettes*. (Rev. ed.) Cambridge, Mass.: Ballinger, 1984.

9. See, for example, Donabedian, "The Quality of Care"; Chilingierian and Sherman, "Managing Physician Efficiency and Effectiveness . . ."; Delbanco, T. L., "Enriching the Doctor-Patient Relationship by Inviting the Patient's Perspective." *Annals of Internal Medicine*, Mar. 1, 1992, 116, 414-418; Herzlinger, R. E. *Market-Driven Care: Who Wins, Who Loses in the Transformation of America's Largest Service Industry*. Reading, Mass.: Addison-Wesley, 1997; Eddy, D. "Performance Measurement: Problems and Solutions." *Health Affairs*, July-Aug. 1998, pp. 7-25; Lang, F., Floyd, M., and Beine, K. "Clues to Patient's Explanations and Concerns About Their Illness: A Call for Active Listening." *Archives of Family Medicine*, Mar. 2000, 9, 222-227; Shelton, P. *Measuring and Improving Patient Satisfaction*. Gaithersburg, Md.: Aspen, 2000; Chilingierian, "Evaluating Quality Outcomes Against Best Practice."
10. Gold, M., and Wooldridge, J. "Surveying Customer Satisfaction to Assess Managed Care Quality: Current Practices." *Health Care Financing Review*, 1995, 16(4), 155-173; Berwick, D. "The Year of 'How': New Systems for Delivering Health Care." *Quality Connections*, 1996, 5(1), 1-4.
11. Delbanco, "Enriching the Doctor-Patient Relationship . . ."
12. Recent research on service organization profitability suggests that the study of satisfaction must focus on the outliers—those who are "extremely satisfied" and those who are "extremely dissatisfied" (Heskett, J. L., Sasser, W. E., and Schlesinger, L. A. *The Service Profit Chain*. New York: Free Press, 1997). Delivery systems that merely "satisfy" service customers are headed toward mediocrity; in the long run, mere satisfaction is a formula for failure.
13. Heskett and others, *The Service Profit Chain*.
14. Schauffler, H. H., Rodriguez, T., and Milstein, A. "Health Education and Patient Satisfaction." *Journal of Family Practice*, 1996, 42(1), 62-68.
15. Struebing, L. "Customer Loyalty: Playing for Keeps." *Quality Progress*, 1996, 28(2), 25-30.
16. Delbanco, "Enriching the Doctor-Patient Relationship . . ."
17. Acceptable outcomes require expert judgments, a priori standards, or explicit expectations (Brook, R. H., McGlynn, E. A., and Cleary, P. D. "Measuring Quality of Care." *New England Journal of Medicine*, Sept. 26, 1996, 335, 966-969).
18. Benner, P. *From Novice to Expert: Excellence and Power in Clinical Nursing Practice*. Reading, Mass.: Addison-Wesley, 1984.
19. Levitan, S. E. "Providing Emotional Support." *Picker/Commonwealth Report* (Beth Israel Hospital, Boston), Winter 1992, 1.
20. Herzlinger, *Market-Driven Care*.
21. Donabedian, "The Quality of Care," p. 1744.
22. Delbanco, "Enriching the Doctor-Patient Relationship . . ."
23. Chilingierian and Sherman, "Managing Physician Efficiency and Effectiveness . . ."; Chilingierian, J. "New Directions for Hospital Strategic Management: The Market for Efficient Care." *Health Care Management Review*, 1992, 17(4), 73-80.

24. Harris, J. E. "The Internal Organization of Hospitals: Some Economic Implications." *Bell Journal of Economics*, 1977, 8(2), pp. 467-482.
25. Eisenberg, J. M. *Doctors' Decisions and the Cost of Medical Care*. Ann Arbor, Mich.: Health Administration Press, 1986.
26. Donabedian, "The Quality of Care."
27. Chilingirian, J. "Evaluating Physician Efficiency in Hospitals: A Multi-Variate Analysis of Best Practices." *European Journal of Operational Research*, 1995, 80, 548-574.