

## Reviewing the quality of care: Priorities for improvement

by James S. Roberts

*Rapid and substantial change in our health care system has prompted careful analysis of the quality of health care and the effectiveness of the methods used to review and improve quality. Although welcome, those applying this scrutiny must recognize that improvement in the quality of health care will take the concerted and cooperative efforts of health policymakers, health care practitioners, health care organizations, consumers of care, purchasers of care, and those organizations that define the state of the art and monitor the quality of care.*

*Particular attention should be devoted to:*

- *Gaining a common understanding of the definition of high quality care.*

- *Utilizing review programs that are continuous, priority-oriented, and effective.*
- *Assuring that the indicators and criteria used in monitoring care are consistent with the practical state of the art.*
- *Recognizing the importance of and improving the effectiveness of peer review.*
- *Investing in improved diffusion of current clinical knowledge to practitioners.*
- *Being properly circumspect about how one best achieves improvement in areas of substandard care.*

### Introduction

Quality is on the minds of our society today. To meet the challenge of foreign competition, U.S. industry must produce competitively priced products that are of high quality. In an increasingly complex and stressful society, there is a growing awareness of the importance to each of us of attending to the quality of our day-to-day lives. As demonstrated by the rapid growth of hospice care in the United States, many in our society are concerned about the quality of death, and they have prompted the health care field to rethink its single-minded concentration on cure and prolongation of life.

As this last example illustrates, health care has not escaped this societal interest in quality. Long considered an issue that should be the sole domain of health care professionals, the quality of our health care system is now a matter of public debate. The stakes in the outcome of this debate are high, for the results will help to shape how health care will be delivered, by whom, to whom, and at what cost.

Moving quality to center stage raises some fundamental questions. What is the rigor of the scientific underpinning of the health care that is being provided? Whatever our level of knowledge, is it being applied properly? What is the relative importance of high quality health care to a society struggling to address important problems in our welfare, education, industrial, and agricultural systems?

Further, the importance of health care in our economy has made it a target for those seeking

efficiencies in industrial and governmental operations. The efforts to control costs of health care are well chronicled, and they range from exclusion of services from reimbursement to cost sharing, prospective pricing, managed care, and expansion in the options of health plans from which employers and employees can choose.

The broad scope of these efforts to control health care costs and the vigor with which they are pursued are now prompting questions about the resulting impact on quality. Also, faced with the need to make choices between a number of health care plans, employers and employees want to know the differences in quality between the competitors, and they are beginning to clarify the parameters of health care that are most important to them.

Once focused on the quality of care in hospitals, we now are witnessing growing attention to the quality of care in nonhospital settings. It is recognized that a substantial and expanding proportion of care is provided outside the inpatient units of hospitals and that the care in such settings greatly impacts on the ability of the hospital to provide high quality inpatient care and vice versa. The most effective way to review and improve the quality of care is to track patients through an episode of illness rather than to concentrate attention on just one setting in a continuum of care.

To provide a proper perspective, it is necessary to indicate a basic precept that underpins the content of the rest of the article. This fundamental principle is that the responsibility for assuring the quality of care rests with the organization providing that care. The fact that no external organization can or should try to assume that basic responsibility helps one to understand better the manner in which to design review mechanisms internal and external to the health care organization and the relationship between the internal and external review processes.

For purposes of this article, attention will be given to the following areas of organized settings of

---

The views in this article do not necessarily represent those of the Joint Commission on Accreditation of Healthcare Organizations (formerly the Joint Commission on Accreditation of Hospitals).

Reprint requests: James S. Roberts, Senior Vice President for Research and Planning, Joint Commission on Accreditation of Healthcare Organizations, 875 North Michigan Avenue, Chicago, Illinois 60611.

care: hospitals, ambulatory care, home care, nursing home care, hospice care, and the noninpatient component of mental health care. Although one could devote volumes to a discussion of quality in each of these settings, the focus here is on general principles that should guide the review of care in all of these settings, and then some of the most important issues unique to the review of care in each will be highlighted.

## Definition and elements of quality

Debate exists over whether quality can be defined and, if it can, what the definition should be (Schenken, 1986; American Medical Association, 1986; Palmer, 1983). Each of these perspectives has merit, but their divergence highlights the need to be clear about one's viewpoint when discussing quality in health care. Thus, so the reader can understand the author's perspective, the following definition of high quality health care is provided:

High quality health care is care by which the health care needs (educational, preventive, restorative, and maintenance) of an individual or group are identified fully and accurately and the necessary resources (human and other) are applied to these needs in a timely manner and as effectively as the practical state of the art allows.

This definition focuses on the basic purpose of health care—to meet human needs—and allows one to measure quality across many dimensions for either an individual patient, a group of patients, or a population. These measures or attributes of quality care include availability, accessibility, acceptability, degree of conformance to the current state of the art, continuity of care, or the safety of the environment.

When quality is viewed in the context of a health care organization, several important elements of structure and function must be considered. These have to do with the organization's ability to clearly define its mission and scope of services, to organize, and to provide its services in a competent manner, to commit itself to high quality care, to coordinate services within its organization and across organizations and time, and to identify and correct quality problems.

Although each of these characteristics is important, the balance of this discussion will be on the one concerning the monitoring and improvement of the quality of health care—quality assurance.

## Quality assurance

Health care is a complex process. The services actually received by a patient are the end product of a complicated interplay of the application of relevant information and skills by the patient, individual practitioner, and teams of practitioners with the policies and procedures of health care organizations and agencies that finance and regulate health care. Each of the major participants in this process (patient, practitioner, health care organization, purchaser, and regulator) views health care from a

different perspective and, therefore, they vary in their definitions of quality and how quality should be monitored and improved. The sharpest contrast may be between the view of the patient-practitioner duo and the purchaser of care. The former views quality in a very personal and individualized way, and the purchaser (whether government or private) tends to look at quality in the aggregate and as a part of a larger set of policy and economic issues. If one is to design a quality assurance approach that is to be viewed as effective by these parties, one must take into account their differing views of quality.

Likewise, it is important to recognize that health care has a scientific base that is still evolving. Although often perceived otherwise by the general public and sometimes portrayed differently by the health professions, the services provided to patients are, at times, of uncertain or unproven efficacy. Further, even where efficacy has been demonstrated, there often is inappropriate individual application of effective diagnostic and therapeutic procedures.

Beyond the need for appropriate individual clinical performance is the importance of the effective performance of the health care team. Because health care often involves multiple practitioners providing care to a patient in several settings over time, it is essential to monitor and assure the effectiveness of the team (Knaus, 1986).

Given existing differences in perspectives on quality, an incomplete and evolving scientific base, and the importance of effective performance by both individual practitioners and by health care teams, it is no wonder that there is debate over how best to monitor the quality of care and the effectiveness of existing approaches to quality assurance. Yet there is also no doubt that quality assurance is needed in health care. For decades, the quality assurance literature has been replete with studies indicating that reasonable standards of care are not being met fully.

Given this need, but recognizing the complexities, one is led to conclude that quality assurance programs must be practical, flexible, fair, and designed to achieve improvement in a priority fashion. Outlined below is an approach that has these characteristics and that is based on the following assumptions:

- It is impractical and unnecessary to monitor all care all the time.
- Priority should be given to those aspects of care that are high volume, high risk, and problem prone.
- Priority setting should reflect the unique mix of services and problems of each organization.
- Judgments concerning quality must be as objective as current knowledge allows and must grow out of a combined process of screening and peer review.
- The results of quality evaluation processes are essential in judging the fulfillment of organizational purpose, determining the competence of managers and practitioners, and in designing (or redesigning) the organizational scope of services and how these services are organized and provided.

- To succeed, quality evaluation must be an integral component of the operation of any health care organization and must receive the consistent attention and support of the leaders of governing body, management, and clinical staff.

These assumptions lead one to the design of a quality evaluation system that has the characteristics outlined in Table 1. This generic model for quality assurance has, for several years, guided the development of the quality assurance standards of the Joint Commission on Accreditation of Healthcare Organizations; and it resulted in the development of surveyor guidelines and the publication of examples of monitoring and evaluation approaches for several

**Table 1**  
**Essential characteristics of a program to monitor, evaluate, and improve quality of care**

- Responsibility is assigned for the conduct of the program and for resolution of identified problems.
- The full scope of the organization's clinical services is described and analyzed for possible inclusion in the monitoring activity.
- Those aspects of care that are high volume, high risk, or are believed to be problem prone are chosen for monitoring.
- Indicators of high or low quality are identified for each of these aspects of care.
- Thresholds for evaluation are established for each indicator.
- Data are collected for each indicator; and problems are identified by data analysis, comparison with thresholds, and peer review.
- Actions are taken to resolve identified problems.
- Monitoring continues to assure problem correction.
- Information concerning the quality of care is utilized by governance, management, and practitioners to judge competence and improve organizational and individual performance.

settings (Joint Commission on Accreditation of Hospitals, 1986a, 1986b, 1986c).

This straight-forward approach to the design of a quality assurance program is directly supportive of the definition and characteristics of high quality care noted earlier. It is an approach that seeks organizational commitment to quality, is priority oriented, can be designed to encompass the full spectrum of parameters of quality (from accessibility to satisfaction to conformance to contemporary scientific standards of care), and encourages effective correction of problems. Some examples of indicators and criteria for important aspects of care in several settings are shown in Table 2.

## Current status of quality assurance

To its credit the health care field has, for decades, pursued the belief that it has a professional responsibility to monitor and continually improve the quality of care. Issued in 1918, the first set of standards for the voluntary accreditation of hospitals contained a requirement that the “. . . staff review and analyze at regular intervals their clinical experience in the various departments of the hospital. . . .” (Davis, 1973). Even though changing somewhat with time, this requirement has been contained in all versions of voluntary accreditation standards during the intervening 69 years (Roberts and Walczak, 1984).

In addition to accreditation standards, the courts and the regulations of State and Federal Government agencies have, more recently, reinforced the expectation that health care organizations are responsible for the quality of care they provide and that they should fulfill this responsibility through effective programs of quality assurance.

**Table 2**  
**Example of indicators and criteria for important aspects of care, by type of care**

Component of monitoring system	Type of care					
	Ambulatory care	Inpatient care	Home care	Long-term care	Hospice care	Alcoholism treatment
Important aspect of care	Adequate prenatal care	Adequate intra- and post-partum care	Adequate foot care in diabetic patients	Providing the least restrictive environment that is feasible	Effective control of the symptoms of cancer	Continuity of care
Indicator	Initiation of prenatal care in the 1st trimester	Resuscitation with intubation in term infant	Adequate instruction in foot care	Residents are free from unnecessary restraints (chemical or physical)	Adequate control of pain	Patient receives post-discharge services
Thresholds for evaluation	At least 75 percent of patients have prenatal care initiated in the 1st trimester	Less than 2 percent incidence	No patients develop foot infections after admission to the home care program	Restraints are used only after less restrictive alternatives have been tried	For each patient reviewed, pain is adequately controlled or another therapeutic approach is being considered	At least 80 percent of patients initiate care as planned after discharge

**Table 3**  
**Percent of organizations with major quality assurance deficiencies, by type of organization and deficiency**

Organization	Inadequate quality assurance plan	No evidence of action taken
Ambulatory care organizations	5	39
Hospice programs	47	56
Hospitals	7	29
Mental health organizations	55	57
Nursing homes	35	50

Yet, despite honest professional commitment to this concept and growing external pressure for quality assurance, the nature and effectiveness of such mechanisms are disappointingly inadequate. Others have articulated some of the reasons for this (Komaroff, 1985), and Joint Commission surveys illustrate the breadth and depth of the problem. For example, data are provided in Table 3 for organizations surveyed from March 1986 through February 1987 concerning two important components of effective quality assurance—the development of a complete plan for the quality assurance program and evidence that actions are taken when problems with quality are found. With the exception of the written plan in hospitals and ambulatory care, fully one-third to nearly 6 out of every 10 organizations had contingencies in these areas—that is, problems that are serious enough to warrant correction prior to the next full survey.

What are the reasons for this apparent lack of progress? They are numerous, and they span a spectrum from professional resistance, liability concerns, and technical problems. The next section of this article outlines some steps that should be taken to create an environment more conducive to effective quality assurance.

### Next steps

It is with tight-lipped determination that many pursue the measurement of the quality of our health care system today. Business is intent on knowing how much quality it is getting for its investment in health care. Government agencies want to be certain that they are receiving value for the expenditure of precious tax revenue. Consumers are increasingly aware that health care quality is less certain than they once perceived.

This new attention to quality is, for the most part, a welcome event to the leaders of health care. Yet it is also clear that, given the problems noted earlier, there is no easy way to answer the demand for a more accurate and open display of the quality of health care in this country. Outlined in the next section are suggestions as to how we might proceed in the next few years—a period during which expectations concerning the quality of care, the ability of data

systems to produce accurate information concerning quality, and the effectiveness of quality assurance efforts will assuredly not be met fully.

### Acknowledge existing limitations

Although not tempering the insistence on assuring quality, let us also acknowledge the following limitations concerning the state of the art of health care and quality assurance:

- There are fundamental limitations in the scientific base of health care.
- Problems persist with the diffusion of new knowledge to practitioners and health care organizations.
- Most health care information systems have been constructed to track the costs of care. Uniform clinical data useful in quality assurance are not collected universally.
- There is a lack of data concerning important outcome measures.
- Practical standards of practice are lacking for many areas of health care.
- Normative performance data related to clinical outcomes or clinical processes are often lacking; and where they exist, they are usually related to narrowly defined populations.
- Peer judgment, though necessary, is hindered by liability concerns and is prone to subjectivity.
- We lack solid research to guide us on how to most effectively utilize the various possible corrective actions (e.g., feedback, targeted education, and sanctions).
- There are no mechanisms by which to adjust reliably for differences in case mix or severity of illness across populations or organizations.

### Expect improvement not perfection

For the reasons noted earlier, health care quality on occasion will not meet our expectations. Immunizations will not be received by all. Many will receive inadequate prenatal care. Infections will be acquired unnecessarily in the hospital. Complications will arise from ambulatory surgery. Terminally ill patients will die with unnecessary physical and psychological pain, and their families will not be helped to adjust adequately to their loved one's death. We are in the very early stages of understanding how often these sorts of things happen and why. We do know that, even in the best of organizations, these unwanted and often unwarranted events occur. Reducing their incidence will require a combination of patience and pressure. The challenge is to gauge when to apply each.

For example, as business and government insist on a fuller accounting of quality, how should they deal with poor quality when it is encountered? In most instances, a business or a government agency purchases care from a health care organization (hospital, health maintenance organization, nursing home, home care agency), not an individual.

practitioner. Poor quality care, when it occurs, is usually a characteristic of one component of an organization—not the entire operation. How far should one go in sanctions on an entire organization when its problems are in one component? In addition, it is apparent that health care organizations change with time. As in all organizations, health care organizations have a continuous ebb and flow relative to optimal quality care. Thus, today's excellent home care agency will, tomorrow, have problems with one or more of its services. Likewise a problem nursing home can improve dramatically with a new director of nursing.

Given these realities, the philosophy that will usually be most effective in improving quality will be to expect diligent, professionally sound and continuous monitoring of quality and expeditious identification and correction of problems where they are found. Understanding that perfection in health care is impossible to achieve, our constant goal should be to do better today than we did yesterday.

### Keep relative responsibilities clear

There are many players in the health care game—patients, families, practitioners, insurers, regulators, purchasers, and review agencies. Each has a role in helping to assure the provision of high quality care. In the desire to assure quality, there are times when these roles are not understood or are blurred and when expectations go beyond that which is possible. Of particular importance are the following:

- Health care professionals should set the technical standards of care used to screen actual performance, and they must do so in a way that demonstrably links the standards to the best available research and experience.
- Society's agents should define the level and extent of the resources they will devote to health care. This should be accomplished openly and should not be left to the variation of patient-by-patient clinical decisionmaking.
- All should insist that practitioners will single-mindedly advocate for the services legitimately needed by their patients.
- External review agencies (peer review organizations, Joint Commission, State licensing agencies) should construct their work in a way that encourages constant and priority-oriented review of care by the organization providing care. External agencies cannot and should not be expected to replace the internal quality assurance activities of health care organizations.

### Foster and protect effective peer review

As noted earlier, health care, though based on science, still lacks a complete scientific base. The gaps in knowledge range from ignorance of the basic pathophysiology of many diseases to a lack of

rigorous analysis of how best to use many of the existing diagnostic and therapeutic procedures. These gaps make it difficult for those involved in quality evaluation to utilize proven standards of practice that would help to objectify their review. Thus, one observes the understandable use of first-level review activities, screening criteria, and normative performance data to identify outliers or those who appear to deviate from the norm. This screening process is followed by peer review in which experienced peer clinicians make judgments concerning the quality of care. In the end, it is these judgments that give us our best assessment of quality. Yet in health care, as in all human endeavors, judgment is subject to inconsistency and mistakes. This in turn implies the need to be circumspect about the harshness of the penalties for poor quality, to have available fair and expeditious appeal processes, and to monitor carefully the competence with which reviewers make their judgments.

As we focus more on the importance of effective peer review, it is well to have in mind the characteristics of peer review that are described in Table 4.

**Table 4**  
**Characteristics of effective peer review of quality**

- 
- Conducted by clinicians knowledgeable in the practice being reviewed.
  - Characterized by an objective analysis of the clinical facts of a case or cases.
  - Focused on evaluating the quality of care.
  - Protected from unwarranted legal intrusion and resource control objectives.
  - Removed from decisions concerning corrective actions.
- 

### Invest in quality improvement

Though the United States has a fine health care system, there is ample evidence that we can improve substantially the quality of care in this country. To do so will take an investment in quality improvement that will be offset in part or in whole by reduction in waste and improvement in health and productivity. Several difficult steps will be required.

- Improve the diffusion of clinical knowledge to practitioners and to those responsible for quality evaluation programs.
- Provide better mechanisms to identify practical criteria and collect accurate normative data that can be used with confidence in quality evaluation programs.
- Enhance clinical data collection and use. There is a need for a uniform clinical data set for each major component of care and to improve the routine collection of data concerning the quality of care. Such data should focus on the principal indicators of quality and should be designed to evolve over time.

## Conclusion

For a variety of compelling reasons, the quality of care provided in our health care system is a public issue. Review mechanisms that were once focused on hospital inpatient care are now moving into other settings and types of care as well, and there is an expectation that such review will shortly provide answers to questions about quality.

On closer examination, it is clear, however, that there are fundamental limitations in our current mechanisms of quality assurance. They cover a broad spectrum from a limited scientific base on which to develop realistic standards of care to data insufficiency and a natural reluctance to judge one's colleagues. With concerted attention, these technical and interpersonal obstacles can be overcome, but it will take an unusual mix of persistence and patience.

## References

- American Medical Association, Council on Medical Services: Quality of care. *Journal of the American Medical Association* 256:1032-34, 1986.
- Davis, L.: *Fellowship of Surgeons: A History of the American College of Surgeons*. American College of Surgeons. Chicago, Ill. 1973.
- Joint Commission on Accreditation of Hospitals: *Monitoring and Evaluation of the Quality and Appropriateness of Care: An Example for Ambulatory Health Care*. Joint Commission on Accreditation of Hospitals, Chicago, Ill., 1986a.
- Joint Commission on Accreditation of Hospitals: *Monitoring and Evaluation of the Quality and Appropriateness of Care: An Example for a Hospice Program*. Joint Commission on Accreditation of Hospitals, Chicago, Ill., 1986b.
- Joint Commission on Accreditation of Hospitals: *Monitoring and Evaluation of the Quality and Appropriateness of Care: An Example for a Residential Treatment Center*. Joint Commission on Accreditation of Hospitals, Chicago, Ill., 1986c.
- Knaus, W. A., Draper, E. A., Wagner, D. P., and Zimmerman, J. E.: An evaluation of outcome from intensive care in major medical centers. *Annals of Internal Medicine* 104:410-18, 1986.
- Komaroff, A. L.: Quality assurance in 1984. *Medical Care* 23:723-34, 1985.
- Palmer, R. H.: *Defining Quality of Care. Ambulatory Health Care Evaluation: Principles and Practice*. Chicago. American Hospital Publishing, 1983.
- Roberts, J. S., and Walczak, R. M.: Quality assurance: The evolution and current status of the Joint Commission on Accreditation of Hospitals Quality Assurance Standard. *Quality Review Bulletin* 10:11-15, 1984.
- Schenken, J. R.: Medical care: quality assessment and quality assurance. *Archives of Pathology and Laboratory Medicine* 110:876-78, 1986.