

*Quality of Health Care***PART 4: THE ORIGINS OF THE QUALITY-OF-CARE DEBATE**

THE current concern about quality of care in the United States is deeply paradoxical in many ways. From a technical and scientific standpoint, the capabilities of the nation's health care system are extraordinary. Decades of biomedical research have culminated in new forms of technology that have greatly improved the health of Americans. Two examples (benefiting very different demographic groups) are neonatal intensive care units and new inpatient treatments for coronary artery disease. Neonatal intensive care units account for a substantial portion of the recent decline in neonatal and infant mortality rates in the United States.¹ Improvements in the inpatient care of acute coronary heart disease, including thrombolytic therapy, seem to account for more of the recent decline in mortality from that illness than do preventive measures.²

This raises an obvious question: Why should Americans be bothered now, of all times, about the quality of their health care? A number of factors have pushed quality to the fore in the current health care debate. These forces are worth analyzing for the light they shed on how health professionals can and should respond to concern about the quality of care. Physicians' responses may appropriately range from opposing certain developments on principle to wholeheartedly embracing legitimate opportunities for improvement.

QUALITY AND COST CONTROL

The first and most obvious source of anxiety about the quality of care in the United States today is that many Americans, professionals and nonprofessionals alike, worry that quality will be jeopardized by efforts to reduce the cost of health care services. Set in motion over the past decade by private and public purchasers of services, these efforts employ various devices, among them reductions in insurance coverage for patients (the denial of coverage, reduced benefits, and increased sharing of costs),³ the organization of providers into competing managed-care organizations,^{4,5} specialized forms of coverage for particular high-cost illnesses,⁶ reductions in payments to providers,⁷ incentives to providers to assume financial risk for the cost of services,⁸ increases in the authority of primary care physicians over the provision of specialty care,⁹ various forms of utilization review,¹⁰ and the rating of providers' use of health care resources.¹¹

Certain of these approaches have not been ade-

quately studied with respect to their effects on quality.¹² Among the most important of these is the increasing reliance on the sharing of financial risks by physicians,⁸ which creates potentially substantial conflicts of interest between patient and provider.¹³ Even more troubling is the fact that many private and public purchasers are plunging headlong into arrangements that have previously been found to have potentially adverse effects on the quality of care received by certain populations. It is well documented that the termination of insurance affects patients' health adversely^{14,15} and that increased cost sharing causes patients to receive fewer appropriate health care services, as well as fewer inappropriate ones.¹¹ Yet reductions in coverage and increases in copayments are common as employers seek to contain costs.³

As early as the mid-1980s, the Rand Health Insurance Experiment published data showing that poor patients with chronic illnesses had inferior outcomes when they received care from the Group Health Cooperative of Puget Sound, a highly regarded health maintenance organization, as compared with fee-for-service practices.¹⁶ Nevertheless, state governments throughout the United States are requiring Medicaid patients, including the disabled, to enroll in managed-care systems whose reputations come nowhere near the excellent one that Group Health Cooperative enjoyed at the time of the Rand study. In Tennessee, the sudden imposition of such a requirement through the TennCare program resulted in dramatic cost savings, but also brought a precipitous decline in Medicaid patients' satisfaction with their care.¹⁷

The need to reduce the cost of health care, which now exceeds 14 percent of our gross national product, is a compelling one, and physicians' failure in the past to participate in controlling these expenditures has contributed to the sense of crisis that surrounds the radical changes now under way.¹⁸ When Congress rejected comprehensive health care reform in 1994, purchaser-driven efforts to contain health care expenditures became inevitable, and it would be futile for physicians to reject them wholesale. Nor must cost reduction always jeopardize quality. Quality experts have argued convincingly that cost reduction and quality improvement are compatible goals when pursued appropriately.¹⁹

In their efforts to reduce costs, however, some purchasers are likely to pursue options that pose unacceptable threats to the quality of care. In such situations, physicians may legitimately have a new kind of gatekeeping role: waving through some cost-saving reforms while closing the door on others that unduly compromise their professional obligations and the welfare of their patients. Gatekeeping of this sort will require physicians to become more skilled in assessing the effects of cost-control interventions

on quality, to stop the blatantly self-interested behavior that has undermined their credibility with the public,¹⁸ and to form new alliances with consumers, whose political influence and support are essential if physicians are to moderate the excesses of the cost-control movement.

THE NEW SCIENCES AND TECHNIQUES OF QUALITY MEASUREMENT AND IMPROVEMENT

Even if national expenditures for health care were not an overriding concern, the quality of care would very likely be a topic of lively debate at present. As our biomedical knowledge has increased dramatically in recent years, so has our knowledge of methods to measure and improve the quality of care.¹⁶ New sciences and techniques of measuring and improving quality have yielded information and opportunities that create their own pressure for reform. In the final analysis, these developments may well have a much more enduring effect on the quality of health care worldwide than will our obsession with cost containment.

One of the most important new sciences of quality measurement and improvement is clinical epidemiology, which uses the statistical tools of classic epidemiology to clarify the implications of differing patterns of clinical practice. Pioneered by Wennberg and Gittelsohn²⁰ among others, clinical epidemiology made its first contribution in identifying the wide variation in the processes and outcomes of care among patients who received routine treatment for the same health care problems in different places and health care settings.²¹⁻²³ Such variation has had enormous effects on the health care debate in the United States. Politically, it has created the impression that much medical practice lacks scientific foundation, and it has emboldened purchasers and policy makers to challenge physicians' claims that they know authoritatively what constitutes optimal health care.²³ The consequent erosion of the scientific credibility of the profession has opened the way for the rapid changes in the organization and financing of health care that now make physicians fearful for the quality of their patients' care.

Of more lasting importance, however, is the fact that the wide variation in the processes and outcomes of care has created opportunities for learning and improving their daily work. After all, some variation in an activity as complex as medical practice is inevitable. The challenge is to identify the variations that produce the best outcomes. From this standpoint, failure to learn from the variation would be a far more serious indictment of the profession than the variation itself.²³ Clinical epidemiology has provided some of the tools with which physicians can meet this challenge.²⁴

The second scientific development that has set the

stage for the current debate on quality is the growth of outcomes research. This new field sprang from the confluence of several intellectual and policy currents. The awareness of variation in practice patterns created the need to understand better how such variation affects outcomes. Our tools for measuring outcomes were primitive, however.²⁵ At the same time, sociologists and psychometricians had developed better methods of assessing not only patients' functioning, but also their values and preferences for various functional states.^{26,27} It was natural that enterprising investigators should reach for these tools in order to learn from the variation in health care practice. The Medical Effectiveness Program of the Agency for Health Care Policy and Research, which set up interdisciplinary Patient Outcome Research Teams in the late 1980s and early 1990s, spurred the practical application of outcomes research.

Outcomes research has created new measures of quality that will change clinical practice, especially the treatment of chronic illnesses, in which improved functioning is a primary objective. This is already apparent with regard to such conditions or procedures as back pain,²⁸ benign prostatic hypertrophy,²⁹ and hysterectomy.³⁰

Quality measurement and improvement have also been strongly affected by progress in information systems, computer technology, and communication techniques. These advances have made it cheaper, easier, and faster for researchers, clinicians, and managers to accumulate and analyze multiple types of data — including billing data, data on encounters with patients, and data from automated medical records, now increasingly common. Even more important, the spread of computer technology into physicians' offices through desktop equipment and the Internet has created opportunities to gather new and timely information about providers' performance and the clinical choices available to them and their patients.³¹ This information ranges from advice about drugs and their side effects to consultation with specialists in distant places.

Another intellectual development that is stirring the debate about quality and creating new chances to improve it is the opportunity to use techniques of quality management that have been valuable in other sectors of the economy. In 1991, the Harvard Medical Practice Study showed that adverse events occur in 4 percent of hospitalizations, that 14 percent of these events are fatal, and that as many people are dying from preventable causes each year in the United States as would die if three jumbo jets crashed every two days.³²

Such mistakes have led quality-improvement experts to look hard for new ways of preventing errors, and they have found an array of tools that have been used successfully to improve performance in complex, technical, nonmedical fields, such as avia-

tion and nuclear safety.³² For years, advanced industrial organizations have used methods adapted from psychology, statistics, and operations research to avert predictable human errors, eliminate unnecessary and harmful variation, and improve the production of goods and services.³³ Despite skepticism on the part of physicians, there is reason to believe that such techniques may be useful not only in preventing error, but also in managing chronic diseases, such as asthma,³⁴ hypertension,³⁵ and other illnesses.³⁶

Physicians' ability to harness these new sciences and techniques, as they mastered the methods and products of biomedical research earlier in this century, will profoundly affect their ability to retain control of their own work. It may be appropriate for physicians to resist untested, radical efforts to reduce the costs of care because they pose threats to quality. But it would be self-defeating to resist a revolution in quality assessment and management that has its roots in the scientific traditions on which the legitimacy of the medical profession rests.

THE CHANGING NATURE OF MEDICAL PRACTICE

Besides cost-control efforts and changes in science and technology, a third force is raising the issue of quality of care. The criteria for optimal care are changing. New circumstances of medical practice call for new methods to measure and improve quality.

Sociologists and historians might describe the changes by saying that health care is being transformed from a cottage industry into a large and sophisticated sector of the economy or that its various components are becoming better integrated with one another.¹⁸ To the practicing physician, however, the relevant changes result from the growing complexity of medical care and the increasing need for responsible physicians to collaborate with other health professionals and with health care institutions. A hundred years ago, everything physicians needed to treat their patients was found between their own two ears or in a small black bag. In the next hundred years, physicians seeking to provide the best possible care will have to orchestrate the delivery of health care by large systems that encompass personnel as diverse as home health aides and genetic engineers.

One symptom of the complexity of modern medicine is that physicians are leaving solo practice and joining groups of doctors, institutions, or both.^{4,5} Competitive pressure contributes to this trend, but there are other advantages to working in groups: They can aggregate the human resources and capital that physicians increasingly need to do their jobs. These resources include access to specialists, support staff, and complex services, ranging from outpatient

surgical and diagnostic care to hospice care, home care, and nursing home care.

Very soon, physicians will need computers on their desks in order to practice medicine optimally. Without such work stations, they will not receive the most timely scientific data or the most current information on their patients (from the laboratory, the radiologist, or the consulting specialist). To purchase and maintain this equipment, they will need the help of organizations.

When health care is so complex and physicians and patients must both deal with so many other people and institutions, the processes that ensure continuity of care become vital and are thus a primary concern of quality measurement and management. Making integrated processes of care work well is one imperative behind the growing interest in industrial methods of improving quality.³⁷

Earlier in this series, we noted that various definitions of quality were legitimate and reasonable, depending on one's position in the health care system. Physicians tend to see quality in terms of the excellence of the services they provide ("doing the right things right") and the quality of their interactions with patients. Organizations and health plans emphasize the optimal functioning of systems when they define quality of care. The changing nature of medical services is forcing physicians also to pay increasing attention to systems of care, for such systems are increasingly important to both technical excellence and optimal interaction with patients. This is a challenge for which few physicians are prepared.

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