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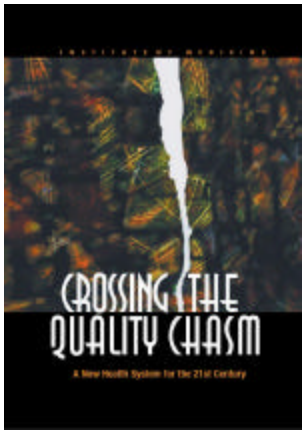
INSTITUTE OF MEDICINE

Shaping the Future for Health



CROSSING THE QUALITY CHASM:
A NEW HEALTH SYSTEM FOR THE 21ST CENTURY

The U.S. health care delivery system does not provide consistent, high-quality medical care to all people. Americans should be able to count on receiving care that meets their needs and is based on the best scientific knowledge--yet there is strong evidence that this frequently is not the case. Health care harms patients too frequently and routinely fails to deliver its potential benefits. Indeed, between the health care that we now have and the health care that we could have lies not just a gap, but a chasm.

A number of factors have combined to create this chasm. Medical science and technology have advanced at an unprecedented rate during the past half-century. In tandem has come growing complexity of health care, which today is characterized by more to know, more to do, more to manage, more to watch, and more people involved than ever before. Faced with such rapid changes, the nation's health care delivery system has fallen far short in its ability to translate knowledge into practice and to apply new technology safely and appropriately. And if the system cannot consistently deliver today's science and technology, it is even less prepared to respond to the extraordinary advances that surely will emerge during the coming decades.

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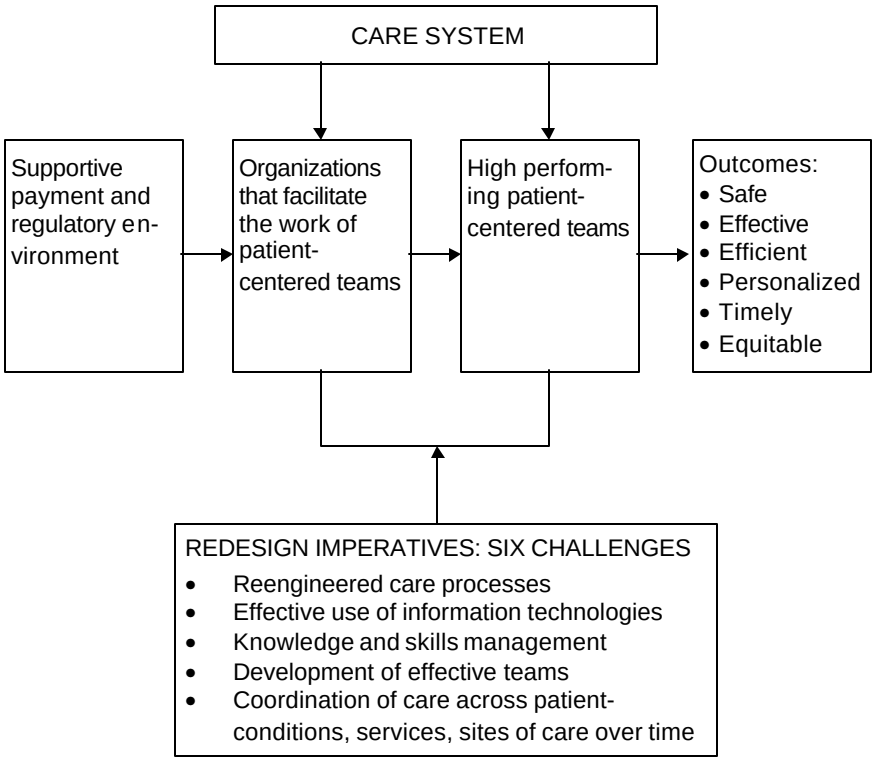
The public's health care needs have changed as well. Americans are living longer, due at least in part to advances in medical science and technology, and with this aging population comes an increase in the incidence and prevalence of chronic conditions. Such conditions, including heart disease, diabetes, and asthma, are now the leading cause of illness, disability, and death. But today's health system remains overly devoted to dealing with acute, episodic care needs. There is a dearth of clinical programs with the multidisciplinary infrastructure required to provide the full complement of services needed by people with common chronic conditions.

The health care delivery system also is poorly organized to meet the challenges at hand. The delivery of care often is overly complex and uncoordinated, requiring steps and patient "handoffs" that slow down care and decrease rather than improve safety. These cumbersome processes waste resources; leave unaccountable voids in coverage; lead to loss of information;



Making change possible.

and fail to build on the strengths of all health professionals involved to ensure that care is appropriate, timely, and safe. Organizational problems are particularly apparent regarding chronic conditions. The fact that more than 40 percent of people with chronic conditions have more than one such condition argues strongly for more sophisticated mechanisms to coordinate care. Yet health care organizations, hospitals, and physician groups typically operate as separate "silos," acting without the benefit of complete information about the patient's condition, medical history, services provided in other settings, or medications provided by other clinicians.

Strategy for Reinventing the System

Bringing state-of-the-art care to all Americans in every community will require a fundamental, sweeping redesign of the entire health system, according to a report by the Institute of Medicine (IOM), an arm of the National Academy of Sciences. *Crossing the Quality Chasm: A New Health System for the 21st Century*, prepared by the IOM's Committee on the Quality of Health Care in America and released in March 2001, concludes that merely making incremental improvements in current systems of care will not suffice.

The committee already has spoken to one urgent care problem--patient safety--in a 1999 report titled *To Err is Human: Building a Safer Health System*. Concluding that tens of thousands of Americans die each year as a result of preventable mistakes in their care, the report lays out a comprehensive strategy by which government, health care providers, industry, and consumers can reduce medical errors.

Crossing the Quality Chasm focuses more broadly on how the health system can be reinvented to foster innovation and improve the delivery of care. Toward this goal, the committee presents a comprehensive strategy and action plan for the coming decade.

Advances must begin with all health care constituencies… committing to a national statement of purpose…

Six Aims for Improvement

Advances must begin with all health care constituencies--health professionals, federal and state policy makers, public and private purchasers of care, regulators, organization managers and governing boards, and consumers--committing to a

national statement of purpose for the health care system as a whole. In making this commitment, the parties would accept as their explicit purpose "to continually reduce the burden of illness, injury, and disability, and to improve the health and functioning of the people of the United States." The parties also would adopt a shared vision of six specific aims for improvement. These aims are built around the core need for health care to be:

- *Safe*: avoiding injuries to patients from the care that is intended to help them.
- *Effective*: providing services based on scientific knowledge to all who could benefit, and refraining from providing services to those not likely to benefit.
- *Patient-centered*: providing care that is respectful of and responsive to individual patient preferences, needs, and values, and ensuring that patient values guide all clinical decisions.
- *Timely*: reducing waits and sometimes harmful delays for both those who receive and those who give care.
- *Efficient*: avoiding waste, including waste of equipment, supplies, ideas, and energy.
- *Equitable*: providing care that does not vary in quality because of personal characteristics such as gender, ethnicity, geographic location, and socioeconomic status.

A health care system that achieves major gains in these six areas would be far better at meeting patient needs.

A health care system that achieves major gains in these six areas would be far better at meeting patient needs. Patients would experience care that is safer, more reliable, more responsive to their needs, more integrated, and more available, and they could count on receiving the full array of preventive, acute, and chronic services that are likely to prove beneficial. Clinicians and other health workers also would benefit through their increased satisfaction at being better able to do their jobs and thereby bring improved health, greater longevity, less pain and suffering, and increased personal productivity to those who receive their care.

Ten Rules for Redesign

To help in achieving these improvement aims, the committee deemed that it would be neither useful nor possible to specify a blueprint for 21st-century health care delivery systems. Imagination abounds at all levels, and all promising routes for innovation should be encouraged. At the same time, the committee formulated a set of ten simple rules, or general principles, to inform efforts to redesign the health system. These rules are:

…the health care system must be responsive at all times, and access to care should be provided over the Internet, by telephone, and by other means in addition to in-person visits.

1. *Care is based on continuous healing relationships*. Patients should receive care whenever they need it and in many forms, not just face-to-face visits. This implies that the health care system must be responsive at all times, and access to care should be provided over the Internet, by telephone, and by other means in addition to in-person visits.
2. *Care is customized according to patient needs and values*. The system should be designed to meet the most common types of needs, but should have the capability to respond to individual patient choices and preferences.
3. *The patient is the source of control*. Patients should be given the nec-

essary information and opportunity to exercise the degree of control they choose over health care decisions that affect them. The system should be able to accommodate differences in patient preferences and encourage shared decision making.

Reducing risk and ensuring safety require greater attention to systems that help prevent and mitigate errors.

4. *Knowledge is shared and information flows freely*. Patients should have unfettered access to their own medical information and to clinical knowledge. Clinicians and patients should communicate effectively and share information.

5. *Decision making is evidence-based*. Patients should receive care based on the best available scientific knowledge. Care should not vary illogically from clinician to clinician or from place to place.

6. *Safety is a system property.* Patients should be safe from injury caused by the care system. Reducing risk and ensuring safety require greater attention to systems that help prevent and mitigate errors.

7. *Transparency is necessary*. The system should make available to patients and their families information that enables them to make informed decisions when selecting a health plan, hospital, or clinical practice, or when choosing among alternative treatments. This should include information describing the system's performance on safety, evidence-based practice, and patient satisfaction.

8. *Needs are anticipated*. The system should anticipate patient needs, rather than simply react to events.

9. *Waste is continuously decreased.* The system should not waste resources or patient time.

10. *Cooperation among clinicians is a priority.* Clinicians and institutions should actively collaborate and communicate to ensure an appropriate exchange of information and coordination of care.

Taking the First Steps

To initiate the process of change, Congress should establish a Health Care Quality Innovation Fund

To initiate the process of change, Congress should establish a Health Care Quality Innovation Fund--roughly $1 billion for use over three to five years to help produce a public-domain portfolio of programs, tools, and technologies of widespread applicability, and to help communicate the need for rapid and significant change throughout the health system. Some of the projects funded should be targeted at achieving the six aims of improvement.

The committee also calls for immediate attention on developing care processes for the common health conditions, most of them chronic, that afflict great numbers of people. The federal Agency for Healthcare Research and Quality (AHRQ) should identify 15 or more common priority conditions. (The agency has requested guidance from the IOM on selection of these conditions, and the Institute expects to issue its report in September 2002.) The AHRQ then should work with various stakeholders in the health community to develop strategies and action plans to improve care for each of these priority conditions over a five-year period.

Changing the Environment

Redesigning the health care delivery system also will require changing the structures and processes of the environment in which health professionals and organizations function. Such changes need to occur in four main areas:

- *Applying evidence to health care delivery*. Scientific knowledge about best care is not applied systematically or expeditiously to clinical practice. It now takes an average of 17 years for new knowledge generated by randomized controlled trails to be incorporated into practice, and even then application is highly uneven. The committee therefore recommends that the Department of Health and Human Services establish a comprehensive program aimed at making scientific evidence more useful and more accessible to clinicians and patients.

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It is critical that leadership from the private sector, both professional and other health care leaders and consumer representatives, be involved in all aspects of this effort to ensure its applicability and acceptability to clinicians and patients. The infrastructure developed through this public-private partnership should focus initially on priority conditions. Efforts should include analysis and synthesis of the medical evidence, delineation of specific practice guidelines, identification of best practices in the design of care processes, dissemination of the evidence and guidelines to the professional communities and the general public, development of support tools to help clinicians and patients in applying evidence and making decisions, establishment of goals for improvement in care processes and outcomes, and development of measures for assessing quality of care.

- *Using information technology*. Information technology, including the Internet, holds enormous potential for transforming the health care delivery system, which today remains relatively untouched by the revolution that has swept nearly every other aspect of society. Central to many information technology applications is the automation of patient-specific clinical information. Such information typically is dispersed in a collection of paper records, which often are poorly organized, illegible, and not easy to retrieve, making it nearly impossible to manage various illnesses, especially chronic conditions, that require frequent monitoring and ongoing patient support. Many patients also could have their needs met more quickly and at a lower cost if they could communicate with health professionals through e-mail. In addition, the use of automated systems for ordering medications can reduce errors in prescribing and dosing drugs, and computerized reminders can help both patients and clinicians identify needed services.

Information technology…holds enormous potential for transforming the health care delivery system…

The challenges of applying information technology should not be underestimated, however. Health care is undoubtedly one of the most, if not the most, complex sectors of the economy. Sizable capital investments and multiyear commitments to building systems will be needed. Widespread adoption of many information technology applications also will require behavioral adaptations on the part of large numbers of clinicians, organizations, and patients. Thus, the committee calls for a nationwide commitment of all stakeholders to building an information infrastructure to support health care delivery, consumer health, quality measurement and improvement, public accountability, clinical and health services research, and clinical education. This commitment should lead to the elimination of most handwritten clinical data by the end of the decade.

- *Aligning payment policies with quality improvement*. Although payment is not the only factor that influences provider and patient behavior, it is an important one. The committee calls for all purchasers, both public and private, to carefully reexamine their payment policies to remove barriers that impede quality improvement and build in stronger incentives for quality enhancement. Clinicians should be adequately compensated for taking good care of all types of patients, neither gaining nor losing financially for caring for sicker patients or those with more complicated conditions. Payment methods also should provide an opportunity for providers to share in the benefits of quality improvement, provide an opportunity for consumers and purchasers to recognize quality differences in health care and direct their decisions accordingly, align financial incentives with the implementation of care processes based on best practices and the achievement of better patient outcomes, and enable providers to coordinate care for patients across settings and over time.

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To assist purchasers in their redesign of payment policies, the federal government, with input from the private sector, should develop a program to identify, pilot test, and evaluate various options for better aligning payment methods with quality improvement goals. Examples of possible means of achieving this end include blended methods of payment designed to counter the disadvantages of one payment method with the advantages of another, multiyear contracts, payment modifications to encourage use of electronic interaction among clinicians and between clinicians and patients, and bundled payments for priority conditions.

- *Preparing the workforce*. Health care is not just another service industry. Its fundamental nature is characterized by people taking care of other people in times of need and stress. Stable, trusting relationships between a patient and the people providing care can be critical to healing or managing an illness. Therefore, the importance of adequately preparing the workforce to make a smooth transition into a thoroughly revamped health care system cannot be underestimated.

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Three approaches can be taken to support the workforce in this transition. One approach is to redesign the way health professionals are trained to emphasize the six aims for improvement, which will mean placing more stress on teaching evidence-based practice and providing more opportunities for interdisciplinary training. Second is to modify the ways in which health professionals are regulated and accredited to facilitate needed changes in care delivery. Third is to use the liability system to support changes in care delivery while preserving its role in ensuring accountability among health professionals and organizations. All of these approaches likely will prove valuable, but key questions remain about each. The federal government and professional associations need to study these approaches to better ascertain how they can best contribute to ensuring the strong workforce that will be at the center of the health care system of the 21st century.

No Better Time

Now is the right time to begin work on reinventing the nation's health care delivery system.

Now is the right time to begin work on reinventing the nation's health care delivery system. Technological advances are making it possible to accomplish things today that were impossible only a few years ago. Health professionals and or-

ganizations, policy makers, and patients are becoming all too painfully aware of the shortcomings of the nation's current system and of the importance of finding radically new and better approaches to meeting the health care needs of all Americans. Although *Crossing the Quality Chasm* does not offer a simple prescription--there is none--it does provide a vision of what is possible and the path that can be taken. It will not be an easy road, but it will be most worthwhile.

For More Information…

Copies of ***Crossing the Quality Chasm: A New Health System for the 21st Century*** are available for sale from the National Academy Press; call (800) 624-6242 or (202) 334-3313 (in the Washington metropolitan area), or visit the NAP home page at **www.nap.edu.** The full text of this report is available at **http://www.nap.edu/books/0309072808/html/**

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