What is health care quality? Why should you care about it?

The Institute of Medicine (IOM) defines health care quality as “…the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge.” Furthermore, good quality of care means providing patients with appropriate services in a technically competent manner, with good communication, shared decision making and cultural sensitivity. The Agency for Healthcare Research and Quality (AHRQ) simplifies the definition into doing the right thing for the right person at the right time and in the right way and having the best possible results. There are different levels of health care quality: individual (self-perception of well-being and satisfaction with the care experience); practice (providing the best treatment and prevention); and systems (access to the best resources and technology in a quality- and efficiency-focused environment and culture). High-performing health systems have low rates of the following indicators:

- Underuse: Failing to provide a service that would have produced a favorable outcome;
- Overuse: Providing a health service whose risk of harm exceeds its potential benefit or that is not cost-effective;
- Misuse: Avoidable complications of appropriate health care; and
- Variation: Wide deviations in care for similar diagnoses across the county and within communities.

How do various stakeholders view and monitor quality?

How is quality measured?

Is quality always the same?

What is the role of states in assuring and improving health care quality?

What is value-based health care purchasing?

How has managed care affected quality and quality measurement?

What are the differences between quality assurance and quality improvement?

How does the medical malpractice crisis affect the quality of health care?

Do certain groups of people receive better health care than others?

How does technology improve health care delivery?
As a nation, we have become concerned during the last 20 years about access to and rising costs of health care, but recently we have focused attention on patient safety and the quality of health care that our valued resources buy. Current research demonstrates that quality of care falls short of desirable levels. The IOM has published several reports that review literature about health care quality in the United States and shed light on the need for health care quality improvements. An IOM publication, To Err Is Human: Building a Safer Health System, highlighted ongoing problems and reported that thousands of Americans die each year from preventable medical mistakes they experienced during hospitalization. The literature review found that medical errors can lead to permanent disabilities, extended hospital stays, longer recoveries, additional treatments and/or even death. Figure 1 presents some of the disturbing results.

IOM's 2001 sequel report, Crossing the Quality Chasm: A New Health System for the 21st Century, offered explanations about factors that contribute to poor health care quality, underlining that errors often result from problems with resources and the environment in health care systems as opposed to individual mistakes. Figure 2 highlights major findings.

Crossing the Quality Chasm provided recommendations for improving major problems in the health care system.

### Figure 1. To Err Is Human Major Findings

1. 44,000 to 98,000 Americans die each year from preventable medical mistakes during hospitalizations.
2. 50 adverse drug events per 1,000 person-years in outpatient care.
3. 227 adverse drug events per 1,000 resident-years in nursing home care.
4. Patients receive 55 percent of recommended care.

### Notes

1. Person-years describes the length of time of experience or exposure of a group of people who have been observed for varying periods of time. It is the sum total of the length of time each person has been exposed, observed or at risk.
2. Resident-years describes the length of time a group of nursing home residents has been observed for varying periods of time. It is the sum total of the length of time each resident has been receiving services.

### Source: Institute of Medicine, 2000.

### Figure 2. Crossing the Quality Chasm: Factors that Contribute to Poor Quality of Health Care

1. Medical science and technological advances have given Americans longer life expectancies, which increases the incidence and prevalence of chronic conditions.
2. These advances have surpassed our ability to utilize them to deliver care safely, effectively and efficiently.
3. The health care delivery system is poorly organized, complex and fragmented, which interrupts continuity of care, wastes resources and decreases safety.
4. Potential of information technology to improve the quality of health care is not being fully realized.

### Source: Institute of Medicine, 2001.
care environment. Key proposals include developing evidence-based quality measures for priority health conditions, investing in information technology (particularly patient-specific clinical information), building stronger payment incentives for quality improvement, and preparing the workforce to create a smooth transition into a revamped health care system.

Although IOM and others identified problems, solutions to facilitate system transformation were missing. IOM responded in 2003 with the release of Patient Safety: Achieving a New Standard for Care, a detailed improvement plan. The plan includes recommendations for developing data standards for the collection, coding and classification of patient safety information and for implementing an error prevention system from which stakeholders may learn when errors do occur. Patient Safety touts the development of an information technology infrastructure in every health care setting as essential to improving the safety of health care.

How do various stakeholders view and monitor quality?

Many stakeholders have a role and an interest in promoting health care quality, but different stakeholders have separate priorities. Stakeholders include health care consumers or patients, providers, purchasers (such as employers and health plans) and the health care industry. The government plays multiple roles as a purchaser for Medicare, Medicaid, SCHIP and their employees; as a provider for state hospitals, the Veterans Administration and military hospitals and clinics; and as a monitor of quality.

As patients continue to become better informed, health care quality—traditionally defined from a provider’s reference point—is moving toward patient terms. Patients tend to evaluate care by how well it responds to their individual needs or interests. Patients care about protection from unsafe products and procedures, good communication, timely and appropriate care, affordability, respect for personal rights and culturally-competent care. Providers may place greater emphasis on following correct clinical processes. They may perceive quality as the application of evidence-based medical knowledge and place value on adhering to medical guidelines. One complicating factor is that providers report to many authorities, such as licensing, accreditation, public and private contracts, and group offices or facilities.

Managed care organizations and other health plans may value the use of preventive services, the most cost-effective treatment decisions and patient satisfaction. The government’s focus is twofold. As regulators, it establishes health plan standards, and as purchasers, it sets minimum care standards by contracting for services. Government health care administrators may be concerned that public health care quality is held to the same standards as the private industry: the government’s overriding concern is the system’s ability to detect and correct problems. The federal government requires states to meet specific quality standards in their Medicaid and SCHIP programs, and Medicaid managed care regulations require states to have a written “quality assessment and improvement” strategy. Federal law requires that states with mandatory Medicaid managed care programs contract with an external quality review organization (EQRO) to independently assess the quality of care using established protocols. State legislators may be most concerned about patient safety and managed care plans’ accountability for meeting their contractual obligations to children and their families.

Various private, state and federal organizations monitor quality. Figure 3 highlights groups that
Figure 3. Monitoring Organizations

- **Centers for Medicare and Medicaid Services (CMS)**, a federal organization within the Department of Health and Human Services, monitors quality of care provided in Medicare and Medicaid. CMS supervises the care delivered by various Medicare provider groups—such as hospitals, nursing homes, Medicare managed care organizations and home health agencies—and is the final authority for state Medicaid agencies. CMS provides information publicly to consumers and others through the Internet and has made important investments in educating consumers about how to use their information.

- **The Agency for Healthcare Research and Quality (AHRQ)** is a federal public health agency within Department of Health and Human Services that initiates and supports research and programs designed to improve the outcomes and quality of health care, reduce its costs, address patient safety and medical errors, and broaden access to effective services. AHRQ also has played a substantial role in educating consumers.

- **The Institute of Medicine (IOM)**, a national advisory organization within the National Academies, creates reports and programs with objective and scientifically balanced information for policymakers, professionals and the public. Its mission is to serve as advisor to the nation to improve health.

- **The National Committee for Quality Assurance (NCQA)**, an organization of and for managed care organizations, primarily monitors health care quality of public and private health plans for consumers. It is a voluntary program for which plans pay to be evaluated for accreditation. NCQA evaluates health care quality in three different ways: accreditation, an on-site review of key clinical and administrative processes; the Health Plan Employer Data and Information Set (HEDIS®), a tool used to measure health plan clinical and utilization performance in key areas; and a comprehensive member satisfaction survey.

- **Joint Commission on Accreditation of Health Care Organizations (JCAHO)** evaluates and accredits more than 16,000 health care organizations and programs (chiefly institutional providers such as hospitals) and is the primary standards-setting and accrediting body in U.S. health care. To earn and maintain accreditation, an organization must undergo an on-site survey by a JCAHO survey team at least every three years. The 1965 Medicare Act deems JCAHO-accredited hospitals to be compliant with Medicare conditions of participation. However, a July 2004 General Accounting Office report found that JCAHO's pre-2004 hospital accreditation process was lacking: it did not identify many deficiencies in Medicare requirements that CMS's annual validation survey recognized.

- **Foundation for Accountability (FACCT)** is a national organization that advocates for accountable, accessible and consumer-driven health care systems. FACCT develops and tests consumer-centered educational materials and communication tools that are designed to help people make decisions. FACCT created the Child and Adolescent Health Measurement Initiative (CAHMI), another entity that develops, tests and disseminates measurement tools for child and adolescent health care.

**Sources:** Centers for Medicare and Medicaid Services, The Agency for Health Care Research and Quality, The Institute of Medicine, The National Committee for Quality Assurance, Joint Commission on Accreditation of Health Care Organizations, Foundation for Accountability, 2004.
play a major role in assuring and improving health care quality, and in disseminating information about health care practices. The resource list at the end of this document contains Web sites.

Why and how is quality measured?

**Figure 4. Quality Measurement Tools**

- Health Plan Employer Data and Information Set (HEDIS®). Developed and updated by the National Committee on Quality Assurance, this measurement set provides quality standards for most private and public health plans and providers. It measures five major areas of health plan performance: quality, access and patient satisfaction, membership and utilization, finance, and descriptive information on health plan management.
- Consumer Assessment of Health Plans (CAHPS®). Originally funded by AHRQ and now incorporated into HEDIS by the NCQA, the CAHPS® measurement set is a patient satisfaction survey that asks consumers about their experiences with health care.
- National Quality Forum (NQF). NQF endorses various measurement sets to provide a broad base for standardized measurement data to compare performance. A private, nonprofit membership organization, NQF strives to develop and implement a national strategy for health care quality measurement and reporting. NQF has already endorsed measurement sets for inpatient care, nursing home care and reporting medical errors.


Quality in health care is measured to learn what is working in a current system and to determine where to focus improvement efforts. Standardized quality measures allow for meaningful comparison of health plan performances, which helps state health officials reduce variability across health plans and hold plans accountable for meeting specific health targets. Figure 4 provides examples of validated measures and measurement sets (sets are groups of measures, determined by professional consensus, that taken together will give a comprehensive picture of the quality of health care delivered) currently used.

Quality measurement involves four dimensions:

- Structural measures include the professional and organizational resources associated with the provision of care, such as staff credentials and facility operating capacities. The measures evaluate the program’s or plan’s ability to provide care to patients when they need it. An example is the number and availability of health care providers that are contracted to meet the needs of enrolled patients.
- Process measures require the establishment and observance of protocols, based on the best medical evidence. The central question in process measures is: if we know something
works, is it being done for all patients (or patients with a specific condition)? Specific process measures include the percentage of children who receive immunizations or the amount of services provided based on scientific evidence.

- Outcome measures evaluate the performance of plans and providers in achieving specific results. These include the rates of hospitalization for specific diseases, the number of patient injuries when receiving care, and patient and population health status.
- Patient experience is defined as a patient’s satisfaction with a plan or provider. Measures could include the patient’s perception of a provider’s cultural competency or the ease of setting an appointment.

**Is quality always the same?**

Children's Health Care

Quality health care is important for people of all ages, but child quality measures are distinct from adult measures. When considering the appropriate measurement instruments for children, AHRQ created the “four Ds” to distinguish child health from adult health:

1. Developmental changes modify children’s health care usage, such as increasing use of preventive services, and require appropriate measures for each stage of development.
2. Differential epidemiology, including fewer chronic conditions, and basic children’s physiological differences that may affect diagnosis and treatment.
3. Dependency on adults to receive consistent care, including parental obligations to make and keep appointments and efforts to coordinate care between practitioners across public, private and school health settings.
4. Demographic patterns of children differ from the general population. Children are the most ethnically and racially diverse population in the country and are more likely than adults to receive health coverage through public systems of care.

**Figure 5. Quality Measurement Tools for Children**

- **Health Plan Employer Data and Information Set (HEDIS®) and Consumer Assessment of Health Plans (CAHPS®).** Both HEDIS® and CAHPS® measurement sets include specific measures for children.
- **The AHRQ Quality Indicators.** The quality indicators, designed for the Title V Maternal and Child Health Program, use hospital administrative data to highlight potential quality concerns, identify areas that need further study, and track changes over time. They are organized into three indicator groups: prevention, inpatient quality and patient safety.
- **The American Academy of Pediatrics SCHIP Evaluation Tool.** When states evaluate their SCHIP programs, they must include a component that describes their progress in ensuring access to quality health services. This tool provides 30 indicators that measure the effect of Title XXI on three dimensions of quality: access, process and outcomes.

Figure 5 lists several examples of existing, validated measurement sets that measure quality in children's health care.

Long-Term Care
Individuals with long-term care needs, particularly the elderly and people with disabilities, require additional quality measures to account for more extensive health care needs and service utilization. According to the Kaiser Family Foundation, long-term care needs usually are measured by the extent to which an individual requires assistance in performing basic activities of daily living (ADLs), such as bathing and dressing, or instrumental activities of daily living (IADLs), such as preparing meals and managing money. Quality measures in long-term care facilities focus on treatment of chronic clinical conditions and outcomes, the ability of the staff and facility to assist in daily functioning, and overall quality of life. For some adults with disabilities for whom self-direction is vital—particularly young or middle-aged adults—quality issues should address personal preferences, autonomy and respect.

Risk adjustment is another issue to consider when evaluating quality. Although this issue affects most populations, patients who require long-term care generally are sicker than others; therefore, quality indicators may need to be adjusted to account for differences between "avoidable" patient outcomes caused by poor care and "unavoidable" outcomes that reflect natural progressions of patients' preexisting conditions.

Some improvements have occurred in measuring long-term care quality. In 2003, CMS updated its Nursing Home Compare Web site and enhanced the previous quality measures, making it easier for consumers to compare quality and staffing information about Medicare and Medicaid-certified nursing homes. Increases in home and community-based long-term care programs also raise other concerns about quality. Most states have Medicaid waivers to finance alternatives to institutional long-term care. Because these programs are located in various settings, including individual homes, it is difficult to monitor these programs. A 2003 General Accounting Office report found that federal reporting requirements for state quality assurance systems in waiver programs were limited.4 Waiver applications and annual waiver reports often contained little information about state mechanisms for assuring quality. In response, CMS has recently developed the Quality Framework for home and community-based services that lays out the expectations for quality. This framework and other protocols emphasize accountability for Medicaid programs to monitor and report on their waiver programs.

What is the role of states in assuring and improving health care quality?

Quality is of particular concern to state governments, especially concerning Medicaid recipients who do not have the freedom to simply go somewhere else if they receive poor care. Medicaid agencies require health plans that contract with the state submit utilization data and performance measures. Most states (90 percent) require plans to collect HEDIS measures, and nearly three-quarters collect additional state-designed measures.5 Medicaid and SCHIP managed care organizations (or Medicaid and SCHIP administrators, if children are in fee-for-service arrangements) have responsibility for more detailed quality issues through monitoring individual providers.

The state legislature directly regulates aspects of quality through the laws it promulgates and the
requirements it imposes on funded agencies. State legislatures may develop minimum require-
ments and standards for contracting with public and private organizations or the state (e.g., for
state employees), sanctions for failure to abide by standards and mechanisms to ensure fair pro-
cesses for consumer recourse and confidentiality. The legislature also acts by authorizing and
funding quality-related research, information gathering and dissemination on health outcomes
and services; by exercising oversight that demands accountability for quality and cost; and by
raising issues of quality in legislative debate and before the community. As purchasers of health
care, states have a responsibility to contract for and monitor quality in the state employee health
plan. Legislatures help set priorities to determine what health information is meaningful to collect
and the extent to which accreditation from outside entities—such as JCAHO for hospitals and
NCQA and others for managed care organizations—will appear in its quality assessments.

One state government priority is to ensure the collection of timely, consistent and meaningful
information from its health care system to detect problems and improve care. Some state agencies
or state private-public partnerships—such as the New Mexico Health Policy Commission, the
Pennsylvania Cost Containment Commission and the New Jersey Department of Health and Hu-
man Services—collect, analyze and publish information about quality of health care delivered in
their state. State governments can mandate data collection and disseminate information to buyers
and consumers and may provide information to Medicaid enrollees to help them choose among
plans. This underscores the importance of not only collecting performance measurement informa-
tion, but also of publicly reporting the information. Publishing reliable, comparative information
has been shown to motivate significant provider improvement activity. States have been instru-
mental in facilitating public reporting; for example, New York regularly reports information about
cardiac care, and California, New Jersey and Pennsylvania regularly report quality information.
Arkansas Medicaid, which does not use managed care, nevertheless contracts with a quality im-
provement organization to collect and publish HEDIS® and CAHPS® information.

State governments set licensing requirements for hospitals and other institutional providers, such
as Medicaid long-term care facilities. States are responsible for the “survey and certification” pro-
cess for Medicaid-funded long-term care facilities, during which they inspect and evaluate facili-
ties to ensure CMS federal requirements and any specific state requirements are met. States also
can increase the regulations that state medical boards, which are responsible for provider licensing
and to which negligence is reported, exercise over providers.

State health departments play a role in improving health care quality through public health moni-
toring. Examples of public health monitoring include studies to identify the incidence of lead
poisoning in children (which has resulted in some states incorporating lead testing requirements
into their health plan contracts) or examining the disparity in treatment among different popula-
tions. State health departments have used census or regional data to identify high incidence of
certain conditions—such as asthma, premature births and diabetes—that may prompt special
provider awareness and care improvement initiatives.

What is value-based health care purchasing?

Current budget realities bring the cost-quality trade-off to the forefront. Budget constraints often
raise demands for objective evidence that dollars spent on health care yield the best possible re-
results. Value-based purchasing means getting the best care for the best price. Value-based purchas-
ing relies on the transparency of data that allows both the purchaser and consumer to assess a provider's performance for informed decision making.

Value-based purchasing attempts to reduce the percentage of money that employers and other purchasers spend for poor quality health care in the form of overuse, misuse and waste. AHRQ defines “purchasers” as public and private sector entities that finance, organize and contract for—and in many cases bear the risk for—the cost of health care. The Wisconsin Public Health and Health Policy Institute has six strategies for achieving these goals:

- Collecting and analyzing information and data on quality.
- Selective contracting with high-quality plans or providers.
- Partnering with plans or providers to improve quality.
- Promoting health care programs that reduce waste and improve the quality, cost and time demands of a procedure in order to reach a high performance standard.
- Educating and reporting to consumers on quality issues so they can make informed choices.
- Using incentives and/or disincentives to reward or penalize plans or providers.

Report cards, which contain public information about provider and health system performance, offer one common method of communicating about health care quality. Managed care organizations, employer groups and outside agencies produce report cards for consumers to compare the quality of provider performance, quality of care and member satisfaction among various health plans they offer their employees.

The Leapfrog Group began as a group of employers who used their purchasing power as a lever for improving quality of health care. Today, it has more than 150 members, including state public purchasers and Medicaid programs, which provide health benefits to 34 million Americans in 50 states. It recommends that large purchasers recognize and reward plans and providers that show improvements in patient safety and customer value with preferential use and other intensified market reinforcements. To improve patient safety, Leapfrog members ask that hospitals implement evidence-based, measurable practices and examine the resulting outcomes, such as:

- Using computerized physician order entry systems.
- Staffing of intensive care units (ICUs) with physicians who are certified or eligible to be certified in critical care medicine.
- Implementing the National Quality Forum’s endorsed 27 safe practices.

How has managed care affected quality and quality measurement?

Managed care—a general term for organizing doctors, hospitals, and other providers into groups in order to enhance the quality and cost-effectiveness of health care—challenges state agencies to transform their role from payers of claims to purchasers of health care delivery systems. States must understand how to use competitive contracting, identify benefit packages and carve-outs, set capitated rates and risk adjustment methodologies, and, at the same time, ensure quality of and access to care. Primary care case management (PCCM) is the fast-growing Medicaid arrangement for which a provider—usually a physician or physician group practice—contracts to locate, coordinate and monitor a covered patient’s primary care (and, sometimes, additional services).

Both problems and benefits exist with managed care arrangements. Managed care organizations
attempt to control costs through financial incentives such as capitated provider payments or shares in reserves that shrink and grow, depending on whether providers successfully control utilization. Potential problems include the disincentive to provide additional services and possible pressure to provide less care than is needed. More often, however, the profit incentive influences care in more subtle ways. Managed care organizations may be more likely to push high-cost patients with ambiguous diagnoses into carved-out services, such as substance abuse counseling, that state agencies typically omit from the Medicaid managed care benefit package. When physicians are uncertain about a diagnosis or appropriate treatment, they may weigh treatment decisions that require less outlay.

Before the rise of managed care, quality measures were most commonly applied in healthcare facilities, such as hospitals or nursing homes. The diffuse nature of fee-for-service medicine made it difficult to perform meaningful tracking of physician office visits and other individual encounters. Managed care expands the ability to measure the quality of care delivered; now, managed care organizations’ performance are judged by their effectiveness in achieving specified quality goals for a covered population. Most organizations have a formal quality improvement or management program that promotes organizational efforts and programs to measure and improve quality for all covered members. Managed care emphasizes preventive care, increased access to primary care, and outcome measurements. Managed care plans also have played a role in winning provider acceptance of measuring quality. For example, if a plan receives low scores on a HEDIS® measure, it can, in turn, analyze the performance of its provider groups and share information with providers. Often, a provider is unaware that their performance is weak and, once informed, may be motivated to remedy the problem quickly. Some states may reward providers through payment incentives or other devices for improved quality performance. Medicaid is conducting a demonstration program in this area for hospital care. Michigan recently awarded its Medicaid managed care contracts on the basis of scores on a set of access and clinical performance measures, while New York pays its managed Medicaid plans a modest bonus for quality performance.

A major issue states are facing is determining how to pay for long-term and behavioral health care, two major areas that contribute to state expenditures and for which Medicaid is the principal spender. States must make decisions about the optimal treatment setting (such as moving payment incentives from institutional to home and community-based services) and implementing standards of care where few exist.

**Figure 6. Plan, Do, Study, Act Model**


**What are the differences between quality assurance and quality improvement?**

Quality assurance identifies and corrects problems as they appear. Quality assurance focuses mainly on adverse outcomes or sentinel events—or on areas upon which to focus after problems are iden-
tified—and monitors providers and organizations to ensure that minimum thresholds for licensing, contracts and patient safety are met. Quality assurance programs generally review or audit medical records to uncover errors after the fact. Quality improvement organizations (QIOs) (formerly peer review organizations), the most common review entity, concentrate on overuse and misuse, such as admission appropriateness, medical errors, adverse outcomes of care, critical incidents and mortality. Many quality assurance programs require a provider's corrective action to find a solution to deal with problems and then track which corrective actions were imposed and completed.

Quality improvement programs use data analysis to find processes that are in need of improvement, work to improve underlying processes and systems, and then measure the outcome of those activities. The focus changes from identification and correction of individual mistakes to improving the processes that cause them. Many health care-related quality improvement programs are built around the continuous improvement concept to best meet the needs of patients and customers and to provide a holistic approach to quality improvement. Continuous quality improvement is both a philosophy and a management technique that examines how tasks are performed and how tasks can be systematically refined. The approach involves identification (through data collection, discussion with stakeholders, and development of indicator measures) and implementation of measurable interventions to evaluate outcomes for a certain process or population. Figure 6 shows one way that states can approach their continuous quality improvement responsibilities: the “Plan, Do, Study, Act (PDSA)” model is a systematic approach to problem solving and a widely recognized four-step process for continual improvement. The PDSA cycle is repeated continuously.

How does the medical malpractice crisis affect the quality of health care?

The malpractice crisis has contributed to increased health care costs and threatens to reduce access and to hinder quality care improvement. Fueled by the departure of many insurance companies from the medical malpractice market and the skyrocketing number of malpractice lawsuits, insurance companies have generated huge increases in physician malpractice premiums. In the United States, considerably more is spent per person on the costs of litigation than in any other country. In some areas and among some medical specialties, malpractice insurance premiums and participation in malpractice litigation are unaffordable. This has created a contentious environment: insurance companies, medical professionals and trial lawyers are polarized in the debate about how to solve this emergency.

Increasing premiums and concern about

**Figure 7. Selected Results from “Fear of Litigation Survey,” 2002**

- 76 percent of physicians are concerned that malpractice litigation has hurt their ability to provide quality care to patients.
- 79 percent said that they had ordered more tests than they would have based only on professional judgment of what is medically needed, and 91 percent have noticed other physicians ordering more tests.
- 74 percent have referred patients to specialists more often than they believed was medically necessary.
- 41 percent said that they had prescribed more medications than they would have based only on their professional judgment.

*Source: Harris Interactive, “Fear of Litigation Study,” April 11, 2002.*
the consequences of medical malpractice could affect the quality of health care and access; if providers cannot afford insurance, they will be less likely to pursue high-risk medical specialties such as obstetrics and neurosurgery, or to practice in communities that are considered medically underserved. Providers may also feel threatened. If providers fear the consequences of lawsuits, they may be less willing to report problems and medical errors and refrain from discussion about how to improve them. In states with high premiums and unorganized legal systems, physicians have threatened to retire early, to move to states with lower premiums, or to refrain from performing the high-risk procedures that are largely responsible for higher premiums. A 2003 General Accounting Office report found that actions taken by health care providers in response to rising malpractice premiums have contributed to localized health care access problems in the five states reviewed.9 Figure 7 contains troubling survey results that reported on physicians' responses to the threat of malpractice lawsuits.10

States struggle with the desire to make quality care and hospital services available to all residents and medical liability insurance affordable to all physicians. They both want to eliminate medical errors, and to ensure that patients who suffer avoidable injuries are fairly compensated. State attempts to tackle the crisis have been hindered by a lack of conclusive data on causes and effective solutions to the problem. Few published studies exist on quality and medical malpractice that provide scientific evidence about the overlap of poor health care quality and medical malpractice costs. Instead, a national focus on improving patient safety might more effectively respond to the crisis and improve care.

A growing number of states are addressing the cost of medical malpractice insurance by establishing patient safety systems that attempt to reduce medical errors and increase accountability. Many states collect data on medical errors through patient safety centers that conduct research and evaluation to help reduce errors; to promote collaboration between state agencies and private organizations; to develop provider profiles of practicing trends for the public; and to provide education and training for providers and consumers. In 2000, the Iowa Department of Health created the Iowa Patient Safety Program to develop a collaborative strategy to improve patient safety and health outcomes in Iowa. The program focuses on improving patient safety, developing and implementing evidence-based practices, and sharing information.

Other states have implemented reporting standards. State requirements for reporting errors by managed care organizations, providers and hospitals vary; currently, 20 states have mandatory reporting of medical errors and adverse events.11 For example, New York requires hospitals to report adverse incidents to the New York Patient Occurrence Reporting and Tracking System, which the Department of Health uses to issue hospital advisories and public reports, and for statewide and regional council quality improvement activities. In 2003, the Minnesota Legislature enacted a medical error reporting law that incorporates the entire set of measures recommended by the National Quality Forum. New York and Pennsylvania also have developed and

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**Figure 8. Seven Key Findings from the National Health Disparities Report**

1. Inequality in quality persists.
2. Disparities come at a personal and a societal price.
3. Differential access may lead to disparities in quality.
4. Opportunities to provide preventive care are frequently missed.
5. Knowledge of why disparities exist is limited.
6. Improvement is possible.
7. Data limitations hinder targeted improvement efforts.

installed electronic systems for reporting of adverse events.

Do certain groups of people receive better health care than others?

Disparities are an important quality indicator; if different groups receive different care, then good care is not uniformly provided. Health care disparities are present in all areas of health care, for all populations and for all medical conditions. Racial, ethnic, geographic and socioeconomic differences are associated with varying levels of health care quality. In 2003, the Agency for Healthcare Research and Quality issued the National Health Disparities Report. The report asserts that disparities are pervasive in our health care system, and certain ethnic and racial groups (such as African Americans and Latinos), geographic populations (such as those in rural areas) and those from poor socioeconomic classes have less access and receive a lower level of quality of care. Figure 8 highlights the report's seven key findings. In addition, the report found that health care disparities are costly. Poorly managed care or missed diagnoses result in expensive complications, which can cause morbidity, disability and lost productivity and could potentially be avoided.

The report also has positive findings. Targeted improvement efforts could significantly reduce health care disparities. The report includes examples of positive results—from community-based screening, education and quality improvement programs that are specifically tailored to reduce disparities—that improved clinical and service outcomes.

It is difficult to separate how the individual contributions of race, income, education, culture or care-seeking behavioral norms affect disparities. For example, the report cited significantly lower rates of smoking cessation programs offered to minority patients. However, the report did not determine how much different levels of patient income, education, quality of care received or types of insurance affected these rates. Further research and a better understanding of the underlying factors that cause disparities could better target improvement efforts aimed at reducing disparities.

Lack of English proficiency can contribute to disparities in access and treatment. In several states, Medicaid agencies are working to capture and share with health plans information about languages spoken in enrollees' homes to allow staff to more appropriately match new enrollees and providers.
How does technology improve health care delivery?

According to IOM’s report, Crossing the Quality Chasm, “... 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.” By instituting health care technology infrastructure and automated systems, health care systems can increase quality, safety and efficiency.

The Internet is the groundwork for information technology (IT) to improve health care quality. The Internet allows patients to search for health care information themselves. Understandable and informative Web sites and online support groups increase patient knowledge. Internet-based communications can increase the timeliness of care because clinicians can quickly retrieve information. Online systems provide clinicians with immediate information about evidence-based practices and shorten the time for dissemination of important health care research. Table 1 provides examples of how the Internet can improve health care quality.

Automating clinical information makes it easier for physicians to monitor various illnesses and to provide ongoing patient support. Clinical data repositories (CDRs) store historical data across episodes of care, ensuring that patient information gathered by one clinician is available online, which alerts them to potential problems and eliminates redundant charting. Computerized physician order entry (CPOE) systems help providers to apply clinical evidence at the point of care and fully utilize IT as a part of comprehensive quality improvement. CPOE applications alert physicians to possible adverse drug interactions, use evidence-based medicine to perform diagnostic tasks and recommend treatment protocols, manage current patient loads, and provide clinicians with appropriate access to real-time clinical information throughout the care process. A 2002 report estimated that nationwide adoption of advanced CPOE systems could save the U.S. health care system about $44 billion per year in reduced medication-, radiology-, laboratory- and adverse drug error-related expenditures. Point of sale drug utilization systems, embedded in every state Medicaid system by law in 1990, has made it possible to flag and avoid many potentially harmful drug interactions or abuses. Standardized electronic medical records, readily accessible to multiple providers, hold potential for avoiding treatment errors and making the collection of diagnostic and treatment information both cheaper and faster.

Challenges exist, however, to implementing sophisticated technological systems in the health care setting. These systems are expensive and, as states and health systems struggle with tight budgets, investment capital is limited. The health care workforce’s knowledge of and comfort level with IT applications varies, and some providers resist implementing these applications. Despite obvious benefits to patients who can easily access information, physicians may resent patients who constantly question clinical decisions. Finally, there are privacy concerns; although some privacy requirements are necessary protections for patients, severe restrictions could limit the development of IT systems. Most organizations must comply with the Health Insurance Portability and Accountability Act (HIPAA) of 1996, which requires health organizations and providers to meet standards for privacy and confidentiality when coding and exchanging electronic health information.

Despite some obstacles, information technology currently is recognized as a major priority for improving health care quality. The 2003 Medicare Modernization Act authorized a federal grant program for physicians to implement electronic prescription drug programs, and Congress has introduced several bills that encourage further IT investment in the medical community. As recommended in IOM’s Patient Safety, the federal government initiated the planning and develop-
ment of standards for the deployment of a National Health Information Infrastructure (NHII). The goal of a national system is to improve care quality and save money by using comprehensive, electronic reporting systems to reduce medical errors. The NHII will provide users with real-time access to accurate, up-to-date medical information and connect all health care system stakeholders. The Department of Health and Human Services and the newly appointed National Coordinator for Health Information Technology released a report in July 2004 that outlines a national health IT strategic framework.14

Notes

8. “The Leapfrog Group Fact Sheet.”
Glossary

Adverse event. An event that results in unintended harm to the patient by an act of medical commission or omission rather than by the underlying disease or condition of the patient.


Computerized Physician Order Entry (CPOE). A software application that supports orders for medication, lab tests, radiology studies, nursing interventions and referrals. A key component of CPOE is clinical decision support, which provides clinicians with a range of diagnostic and treatment-related tools aimed at improving patient care and reducing medical errors and costs.

Evidence-based practice. Practice supported by research findings and/or demonstrated as being effective through a critical examination of current and past practices.

Electronic Medical Record (EMR). Paperless medical record that can be remotely accessed and that provides the mechanism for longitudinal data storage and access. Also known as computerized patient record or computerized medical record.

Health Information Portability and Accountability Act (HIPAA) of 1996. HIPAA (Public Law 104-191) requires the Department of Health and Human Services (HHS) to publish new rules that address electronic health transactions, which include health claims, health plan eligibility, enrollment and disenrollment, payments for care and health plan premiums, claim status, first injury reports, coordination of benefits, and related transactions. HIPAA increases efficiency in health care delivery by standardizing electronic patient health, administrative and financial data and by protecting the confidentiality and security of health data through setting and enforcing standards.

Near miss. An act of commission or omission that could have harmed the patient, but did not do so as a result of chance, prevention or mitigation.

Patient's Bill of Rights. Refers to the Consumer Bill of Rights and Responsibilities, a report prepared by the President's Advisory Commission on Consumer Protection and Quality in the Health Care Industry in an effort to ensure the security of patient information, promote health care quality, and improve the availability of health care treatment and services. The report lists a number of “rights,” subdivided into eight general areas, that all health care consumers should be guaranteed and describes responsibilities that consumers need to accept for the sake of their own health.

Quality improvement organization (QIO). Organization under contract with The Centers for Medicare and Medicaid Services (CMS) to review quality and cost issues for Medicare. In a more general sense, QIO refers to any independent quality review organization that reviews quality of care and appropriateness of admissions, readmissions and discharges of patients. These organizations are held responsible for maintaining and lowering admission rates and for reducing lengths of stay, while insuring against inadequate treatment. Formerly known as a peer review organization.

Quality assessment. An ongoing process to monitor and evaluate aspects of patient/medical care.
against already established criteria and standards to determine the medical necessity, appropriateness and effectiveness of the services provided.

Report Card. Information about health plan performance presented in a consumer friendly manner to facilitate cross-plan comparisons.

Sentinel event. An unexpected occurrence involving death or serious physical or psychological injury or the risk thereof. Serious injury specifically includes loss of limb or function. Such events are referred to as “sentinel” because they signal the need for immediate investigation and response.

Utilization review. Evaluation of the use of hospital services, including the appropriateness of the admission, length of stay and ancillary services. Review of medical services and/or records for medical necessity, quality, appropriateness of place of service and length of stay (inpatient hospital). Review may be conducted concurrently, retrospectively or in combination. The process uses objective clinical criteria to ensure that the services are medically necessary and provided at appropriate levels of care.
Other Sources


To read or order Institute of Medicine Reports on Health Care Quality:

Quality Measurement Tools:
- Health Plan Employer Data and Information Set (HEDIS®), http://www.ncqa.org/Programs/HEDIS/index.htm.

In conjunction with the National Health Disparities Report, the Agency for Healthcare Research and Quality (AHRQ) produced the National Healthcare Quality Report, found at http://www.qualitytools.ahrq.gov/qualityreport/download_report.aspx.

The Center For Studying Health Systems Change site has information about quality in managed care. This site is at www.hschange.com.