RAND HEALTH

RESEARCH HIGHLIGHTS

The First National Report Card on Quality of Health Care in America

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WORKFORCE AND WORKPLACE

How good is the quality of health care in America? To answer this question, Elizabeth McGlynn led a team of experts in the largest and most comprehensive examination ever conducted of health care quality in the United States. Called the Community Quality Index Study, it assessed the extent to which recommended care was provided to a representative sample of the U.S. population for a broad range of conditions in 12 metropolitan areas. *The bottom line: all adults in the United States are at risk for receiving poor health care, no matter where they live; why, where, and from whom they seek care; or what their race, gender, or financial status is.*

Key findings:

- **Overall, adults received about half of recommended care.**
- **Quality of care was similar in all of the metropolitan areas studied.**
- **Quality varied across conditions, and across communities for the same condition.**
- **No community had consistently the best or worst quality.**
- **All sociodemographic groups were at risk for poor care.**
- **Systemwide investments in health information technology, performance tracking, and incentives for improvement are needed to improve care.**

Designing a National Report Card on Quality of Care

The Community Quality Index Study differed from previous assessments of quality because it was more comprehensive, examined quality across the nation rather than in one geographic area, and included people from diverse socio-

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This Highlight summarizes RAND Health research reported in the following publications:

Asch SM, Kerr EA, Keesey J, Adams J, Setodji CM, Malik S, and McGlynn EA, "Who Is at Greatest Risk for Receiving Poor-Quality Health Care?" *New England Journal of Medicine*, Vol. 354, No. 11, March 16, 2006, pp. 1147–1156.

Asch SM, McGlynn EA, Hogan MM, Hayward RA, Shekelle P, Rubenstein L, Keesey J, Adams J, and Kerr EA, "Comparison of Quality of Care for Patients in the Veterans Health Administration and Patients in a National Sample," *Annals of Internal Medicine*, Vol. 141, No. 12, December 21, 2004, pp. 938–945.

Kerr EA, McGlynn EA, Adams J, Keesey J, and Asch SM, "Profiling the Quality of Care in Twelve Communities: Results from the CQI Study," *Health Affairs*, Vol. 23, No. 3, May/June 2004, pp. 247–256.

McGlynn EA, Asch SM, Adams J, Keesey J, Hicks J, DeCristofaro A, and Kerr EA, "The Quality of Health Care Delivered to Adults in the United States," *New England Journal of Medicine*, Vol. 348, No. 26, June 26, 2003, pp. 2635–2645.

Clinical Conditions Included in the RAND Quality Assessment Tools System

Alcohol dependence
Asthma
Atrial fibrillation
Benign prostatic hyperplasia
Breast cancer
Cancer pain and palliation
Cataracts
Cerebrovascular disease
Cesarean delivery
Chronic obstructive pulmonary disease
Colorectal cancer
Community-acquired pneumonia
Coronary artery disease
Depression
Diabetes mellitus
Dyspepsia and peptic ulcer disease
Headache
Heart failure
Hip fracture
Hyperlipidemia
Hypertension
Hysterectomy
Low back pain (acute)
Menopause management
Orthopedic conditions
Osteoarthritis
Prenatal care
Prostate cancer
Urinary tract infections
Vaginitis and sexually transmitted diseases

Examples of Related Preventive Care

Breast cancer screening
Cervical cancer screening
Colorectal cancer screening
Cigarette use counseling
Family planning/contraception
Immunizations
Screening for problem drinking

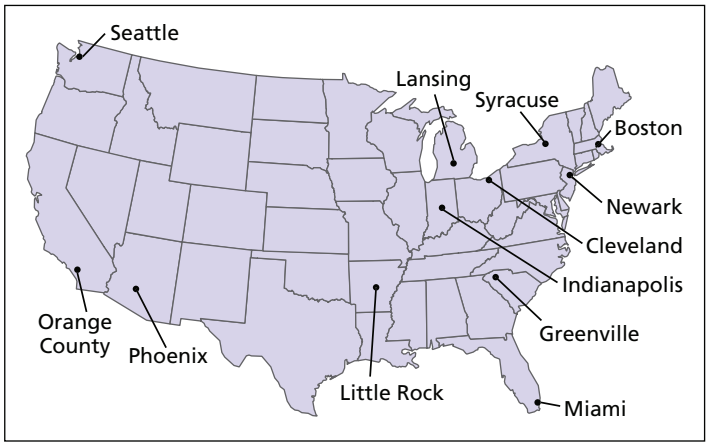
economic groups with all types of insurance and a wide range of conditions. The research team used random telephone surveys to interview more than 13,000 adults in 12 metropolitan areas regarding their health care experiences (see Figure 1). About 6,700 individuals provided written consent for researchers to review their medical records and use the information to evaluate performance on 439 clinical indicators of quality for 30 acute and chronic conditions, such as diabetes, asthma, high blood pressure, pneumonia, and heart disease, and for related preventive care.

Measuring Quality of Care

To define and measure *quality*, the team developed a set of quality indicators, known as the RAND Quality Assessment (QA) Tools system. RAND staff selected 30 clinical areas representing the leading causes of death and disability, as well as the major reasons that people seek care. They developed specific standards, or *quality indicators*, within each clinical area, based on a review of national guidelines and the medical literature. Multispecialty physicians, nominated by their specialty societies, evaluated the proposed quality indicators. (All of the quality indicators, including the literature reviewed and the panel's recommendations, are available on the RAND Health Web site at www.rand.org/health/tools/qualist.html.) The researchers developed computer-assisted medical-record-abstraction software to facilitate data collection by nurses.

The researchers constructed a quality "score" for each patient. The score was the number of times in a two-year period that the patient received the care recommended across all of the conditions that the patient had, divided by the number of times that the patient was determined to need specific health care interventions. The team then aggregated

Figure 1
Metropolitan Areas in the Community Quality Index Study



the individual scores to obtain quality scores for various dimensions of performance.

Study Highlights

- Overall, participants in the study **received about half of recommended care**.
- **Performance was strikingly similar in all the communities** studied. Overall quality ranged from 59 percent in Seattle to 51 percent in Little Rock (see Figure 2). The researchers found the same basic level of performance for chronic, acute, and preventive care.
- **Quality varied substantially across conditions.** For example, people with high blood pressure received about 65 percent of recommended care; persons with alcohol dependence received about 11 percent (see Figure 3).
- **Quality also varied across communities for the same condition.** For example, care for diabetes ranged from 39 percent in Little Rock to 59 percent in Miami. Care for cardiac problems ranged from 52 percent in Indianapolis and Orange County to 70 percent in Syracuse (see Figure 4).
- **All communities did a better job of preventing chronic disease through screening tests (e.g., measuring blood pressure) and immunizations** than in preventing other types of disease, such as sexually transmitted diseases, and in providing other types of preventive care, such as counseling for substance abuse.
- **No single community had consistently the highest or lowest performance** for all of the chronic conditions. The relative rankings of the communities changed with the aspect of care being examined. (See quality ratings for each community at http://www.rand.org/news/press.04/05.04table.pdf.)
- **Everyone is at risk for poor care**: Race, gender, or financial status makes only a small difference in the likelihood of receiving recommended care. For example, women were more likely to receive recommended preventive care, but men receive better-quality care for acute conditions. Previous studies have demonstrated disparities in care for blacks associated with invasive and expensive procedures, such as coronary-artery bypass graft surgery. However, on the broad RAND measures, which assessed more-routine care, blacks were slightly more likely than whites or Hispanics to receive recommended care for chronic conditions, whereas Hispanics were more likely to receive recommended screening.

But these variations pale in comparison with the gap between the care that each patient receives and the recommended care that he or she should receive. For example, individuals who had no health insurance received about 54 percent of recommended care, compared with 55 percent for those on Medicaid and in managed care, 57 percent for Medicare enrollees, and 54 percent for those enrolled in private non–managed care plans and for individuals without insurance. Figure 5 highlights similar findings based on race and income.

The finding that having insurance does not guarantee good-quality care is supported by assessments of health care quality in other systems. For example, in the United King-

Figure 2
Quality of Care Was Remarkably Similar Across the Metropolitan Areas Studied

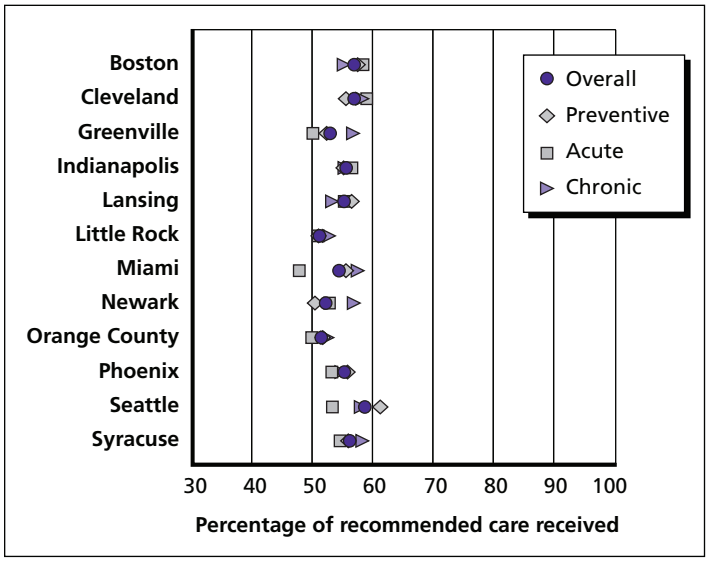


Figure 3
Quality of Care Varied Substantially Across Conditions

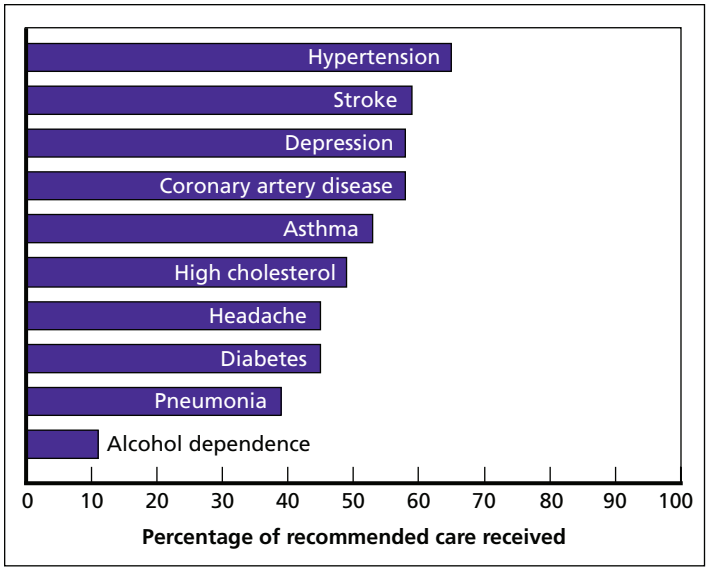


Figure 4
Quality for Selected Chronic Conditions Varied by Community

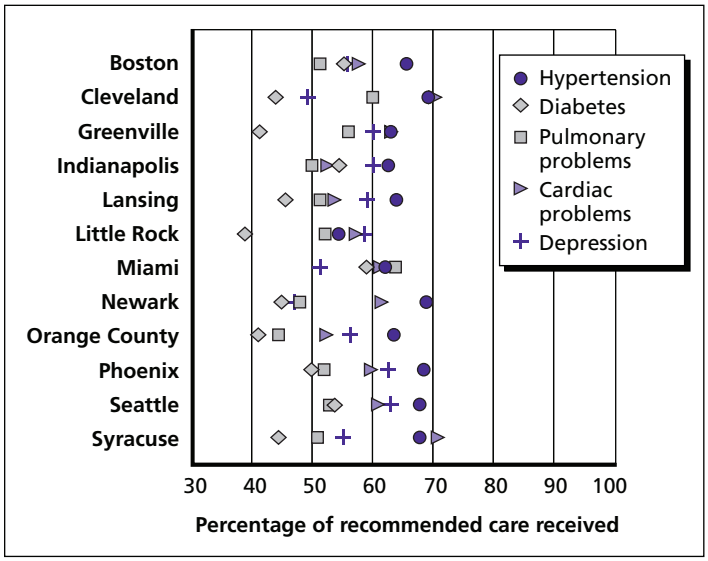
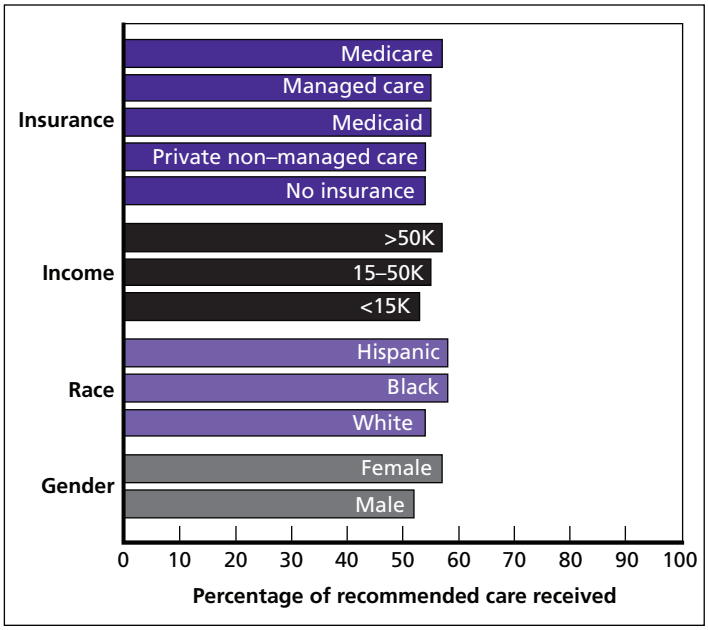


Figure 5
All Groups Face Gaps in Care



dom, which provides universal health care coverage, a study using our methods found that the overall proportion of recommended care received was similar to what we have reported.[1]

[1] Marshall MN, Roland MO, Campbell SM, Kirk S, Reeves D, Brook R, McGlynn EA, and Shekelle PG, *Measuring General Practice: A Demonstration Project to Develop and Test a Set of Primary Care Clinical Quality Indicators*, Santa Monica, Calif.: RAND Corporation, MR-1725-NT, 2003.

Does Poor Quality Matter?

The deficits in quality of care documented in this national assessment pose serious threats to the health of the American public. Below we present estimates of some preventable complications and deaths annually that could be attributed to poor care:

- People with diabetes received only 45 percent of the care they needed. For example, fewer than one-quarter of diabetics had their average blood sugar levels measured regularly. Poor control of blood sugar can lead to kidney failure, blindness, and amputation of limbs.
- Patients with hypertension received less than 65 percent of recommended care. Poor blood-pressure control is associated with increased risk for heart disease, stroke, and deaths and contributes to more than 68,000 preventable deaths annually.
- People with coronary-artery disease received 68 percent of recommended care, but just 45 percent of heart attack patients received beta blockers and 61 percent got aspirin—medications that could reduce their risk of death by more than 20 percent.[2]

A recent study has established a clear link between poor quality and patient outcomes. Colleagues from RAND and the UCLA David Geffen School of Medicine developed a method similar to ours to evaluate the quality of care delivered to vulnerable elderly persons. They found that, after three years, 28 percent of those who had received an average of 44 percent of recommended care had died, compared with 18 percent of patients who had received on average about 62 percent of recommended care.[3]

What's Needed to Improve Care?

This study provides the best estimates ever available about the quality of health care in the United States. The study reveals substantial gaps between what clinicians know works and the care actually provided. These deficits persist despite initiatives by both the federal government and private health care delivery systems to improve care.

Our study is not the first to identify poor-quality care. Studies stretching back over more than four decades have documented similar levels of poor performance. However,

[2] Woolf SH, "The Need for Perspective in Evidence-Based Medicine," *Journal of the American Medical Association*, Vol. 282, 1999, pp. 2358–2365.

[3] Higashi T, Shekelle PG, Adams JL, Kamberg CJ, Roth CP, Solomon DH, Reuben DB, Chiang L, MacLean CH, Chang JT, Young RT, Saliba DM, and Wenger NS, "Quality of Care Is Associated with Survival in Vulnerable Older Patients," *Annals of Internal Medicine*, Vol. 143, No. 4, August 16, 2005, pp. 274–281, w70–w79.

most people still do not believe that there is a quality problem. Many think that the care delivered by their doctor or in their community is better than the care delivered in the nation as a whole. Our study shows that everyone is at risk of receiving poor care, no matter what their condition, where they live, from whom they seek care, or what their gender, race, or financial status is.

The policy implications of these findings can be underscored by an example using profiles of two hypothetical, stereotypical patients:

- A 50-year-old white female college graduate, with private health insurance and a household income above $50,000.
- A 50-year-old black male with less than a high school education, no insurance, and a household income under $15,000.

Many would assume that the insured, female college graduate would receive substantially better care. However, given the results of our study, she would receive about 57 percent of recommended care, compared with 51 percent for the black male patient. The difference in care between these two patients is statistically significant. *However, the gap between the care that each of them receives and the recommended care they should receive dwarfs the difference between them.*

This example underscores the systemic nature of the quality problem in U.S. health care. To substantially improve the quality of health care available to all patients, we need to focus on large-scale, systemwide changes.

Our previous study of the quality of care delivered in the Veterans Affairs health system, led by Dr. Steven Asch and Dr. Eve Kerr, illustrates some of the potential for systemwide improvement. In that system, with one of the country's most mature electronic medical-record systems, decision-support tools at the point of care, automated order-entry systems to guide prescribing, and routine measurement of and reporting on quality, as well as managerial accountability and financial incentives for good performance, we found that participants received about two-thirds of recommended care—considerably better than the 55 percent observed in this study. Investments in performance-tracking systems and health information technology are necessary if we are to make significant progress in improving quality.

Our study should also motivate patients to take an active role in obtaining the care they need. They should seek information from trusted sources—such as their physicians, health care agencies specializing in their condition or disease (e.g., the American Diabetes Association), and organizations specializing in preventive care (e.g., the U.S. Preventive Services Task Force)—to learn what kind of preventive care or treatment they should be receiving, then work with their physicians to ensure that they get recommended care. Patients should not assume that their physicians will remember all that needs to be done. They can help their physicians provide good care by being active advocates for it.

Finally, the nation must invest in making information on quality performance more routinely available at all levels. Patients facing increased financial and personal responsibility must demand adequate information to make informed choices. Physicians, hospitals, and nursing homes that are being held accountable for performance must also demand that the metrics used are comprehensive, clinically detailed, and representative of the type of care provided. ■

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