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COMMENTARY

Prevention Health Care Quality in America: Findings From the First National Healthcare Quality and Disparities Reports

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Introduction

The Agency for Healthcare Research and Quality (AHRQ) released in December 2003 the first National Healthcare Quality Report (NHQR) and National Healthcare Disparities Report (NHDR) on behalf of the U.S. Department of Health and Human Services (1,2). In this commentary, we summarize the main findings of the reports on preventive care for both primary prevention of disease and secondary prevention of increasing acuity of existing disease and discuss the implications for quality measurement and improvement efforts.

Federal partners within the U.S. health care system have recently focused on increasing the use of preventive care services. Tommy G. Thompson, Secretary of Health and Human Services, issued a challenge in April 2003 at the launch of the *Steps to a HealthierUS* national initiative:

"Approximately 95% of the \$1.4 trillion that we spend as a nation on health goes to direct medical services, while approximately 5% is allocated to preventing disease and promoting health. This approach is equivalent to waiting for your car to break down before you take it in for maintenance. By changing the way we view

our health, the *Steps* initiative helps move us from a disease care system to a true health care system."(3)

Good quality preventive care holds the promise of greatly reducing the nation's health care costs and overall burden of disease. Numerous studies and reports have examined the general quality of preventive care services in the United States (4-7). Others have explored the performance of the U.S. health care system in delivering specific preventive care services such as immunizations (8,9), cancer screening (10-12), and cholesterol and blood pressure screening (13-15).

The NHQR and NHDR provide the first national baseline views of the quality of health care services and of differences in how at-risk groups in America use the services. The reports provide one of the broadest examinations to date of prevention health care quality for the nation and among key priority populations, measuring quality of care across a range of dimensions, including the degree to which care is safe, patient centered, timely, and effectively delivered. They track more than 50 primary and secondary prevention quality-of-care measures in five clinical areas, including cancer, diabetes, heart disease, maternal and child health, and respiratory disease.

Findings of the NHQR and NHDR

Table 1 summarizes the major conclusions of the two reports: the promise of high-quality health care is not a given, gaps in quality are particularly acute for certain racial, ethnic, and socioeconomic groups, and improvement is possible.

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NHQR findings

In general, progress has been mixed at best in preventive care service quality. For example, performance has deteriorated or not improved for three quarters of the 21 prevention quality measures in which trend data are available. Similarly, the reports track a set of measures assessing the rate of hospital admissions for conditions that often can be managed in an ambulatory care setting with proper primary and secondary preventive care. Seven of the ten preventable hospitalization measures with trend data have either not improved or deteriorated. In addition, while hospital discharge rates declined from 1997 to 2000 for uncontrolled diabetes (by 30%) and for pediatric gastroenteritis (by 16%), pediatric asthma discharge rates did not change in a statistically significant way (18).

In some areas, however, prevention health care quality has improved. For example, the incidence rate of new cases of cervical and colorectal cancers detected at an advanced stage has been declining for decades. The percentage of institutionalized adults (persons in long-term care or nursing homes) who have ever received pneumococcal vaccination, while still low at 33% (1999), has improved from 25% (1997). More than 73% of children aged 19 to 35 months have all their recommended vaccinations. And 83% of women obtain prenatal care in their first trimester.

NHDR findings

Significant differences exist in the use of evidence-based preventive services for certain populations, particularly people of lower socioeconomic status (SES) and some minorities. For example:

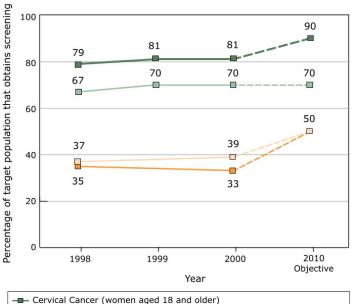
- People of lower SES and some minorities are less likely to have colorectal and breast cancer screening.
- People of lower SES and Hispanics are less likely to have blood pressure and cholesterol screening in addition to counseling and treatment for some cardiac risk factors.
- People of lower SES and blacks are less likely to have recommended childhood immunizations before the age of four years.
- Children of lower SES and some minority children are less likely to have dental care.
- Lower-SES, black, and Hispanic adults are less likely to have recommended immunizations for influenza and pneumococcal disease.

Preventive care for specific diseases

NHQR and NHDR findings for cancer, diabetes, and heart disease are presented below.

Cancer

Cancer screening allows for the detection of precancerous abnormalities and the early detection of disease and, when followed by appropriate treatment, can lead to a reduction in the likelihood of illness and death. The reports track performance in cancer screening for breast, colorectal, and cervical cancer (Figure). A majority of women 40 years and older (70%) is screened with mammography for breast cancer, which already meets the *Healthy People 2010* objective, although this clearly does not approach the theoretical limit of 100%. The rate of screening for colorectal cancer (33% for fecal occult blood testing and 39% for flexible sigmoidoscopy) is less than half that for cervical cancer screening (81%) and has a long way to go to meet the *Healthy People 2010* goal of 50%.



Cervical Cancer (women aged 18 and older)

- Breast Cancer (women aged 40 and older)

Colorectal Cancer – Flexible Sigmoidoscopy (adults aged 50 and older)

Colorectal Cancer – Fecal Occult Blood Testing (adults aged 50 and older)

Figure. Cancer screening rates, 1998–2000, National Healthcare Quality Report. Data not available for colorectal screening rates for 1999. Data from National Health Interview Survey, 2000 (19).

Diabetes

High quality of care for diabetes requires that people with diabetes receive the tests, exams, and treatments that can help them and their providers manage their condition.

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Table 2 shows variability in the rate of delivery of services across the five process measures of care, ranging from a low of 54.8% for influenza immunization to a high of 94.3% for a lipid profile test. Of particular note is that only 23% of people with diabetes get all recommended secondary preventive services.

Heart disease

The reports track performance in screening for high blood pressure and high cholesterol and in delivering smoking cessation counseling.

Blood pressure screening. Ninety percent of Americans reported having their blood pressure checked in the past two years. According to 1998 data from the Centers for Disease Control and Prevention's National Health Interview Survey (NHIS), women (93%) and older adults (92%) are more likely to be checked; Hispanics are screened at lower rates (84%) (21).

Cholesterol screening. Cholesterol screening rates have increased in the last two decades. According to 1998 NHIS data, 67% of adults had their cholesterol checked within the previous five years and more than 80% of adults aged 45 or older had their cholesterol checked (21).

Counseling smokers to quit. In 2000, 62% of smokers who had a routine office visit reported that their doctors had advised them to quit. According to 2000 NHIS data, individuals who report poor to fair health are more likely to be counseled to quit (75%) than those who report good to excellent health (58%) (19). Furthermore, less than half (42%) of acute myocardial infarction (AMI) patients who smoke are counseled to quit while in the hospital. AMI patients who are counseled to quit smoking while in the hospital are more likely than those counseled in other settings to be abstinent from smoking a year later (20).

Conclusions and Implications

The NHQR and NHDR are two of the most comprehensive national assessments of preventive care quality in the United States. They show that the U.S. health care system is missing numerous opportunities to provide evidencebased preventive care and that usage rates for a number of preventive care services are not improving. Significant progress is needed in areas such as colorectal cancer screening, delivery of the full complement of diabetes secondary preventive services, and cessation counseling for smokers, particularly when they are admitted to the hospital for heart attacks.

The purpose of the reports, according to the Congressional mandate that created them, is to document the state of health care quality for the nation. The reports do not address the determinants of health care quality, nor do they prescribe how quality of care could be improved or suggest a national agenda for improving quality. Many public and private entities address these important research, policy, and quality-improvement questions.

The reports contribute to the quality-improvement cycle by providing national information on the state of health care quality, potential benchmarks, and changes that have occurred over time to support a broad community of concerned quality-improvement professionals. Information is critical to helping this broad community understand how gaps and opportunities apply to their own local needs and facilitate their move from data to action. The reports offer more than 525 tables that provide essential information for researchers to analyze the important questions about why performance is the way it is. The reports can help policy makers formulate an agenda for quality by creating understanding about the greatest needs among a wide variety of concerns. Similarly, the reports can serve as a scorecard on the collective performance of all those involved in quality improvement.

In addition to tracking health care quality through the reports, the AHRQ supports quality improvement for the nation by conducting research to determine evidencebased prevention practices, translating research into knowledge, and facilitating the use of knowledge toward the goal of improving the quality of prevention services for all Americans.

Author Information

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References

- 1. U.S. Department of Health and Human Services. National healthcare quality report. Rockville (MD): Agency for Healthcare Research and Quality; 2003. Available from: URL: http://www.qualitytools.ahrq. gov/qualityreport/download_report.aspx.
- 2. U.S. Department of Health and Human Services. National healthcare disparities report. Rockville (MD): Agency for Healthcare Research and Quality; 2003. Available from: URL: http://www.qualitytools. ahrq.gov/disparitiesreport/documents/DisparitiesLtr. htm.
- 3. U.S. Department of Health and Human Services. Steps to a healthier U.S. Washington (DC): Office of Public Health Promotion; 2001. Available from: URL: http://www.healthierus.gov/steps/steps_brochure.pdf.
- 4. Chassin MR, Galvin RW. The urgent need to improve health care quality. Institute of Medicine National Roundtable on Health Care Quality. JAMA 1998;280 (11):1000-5.
- McGlynn EA, Asch SM, Adams J, Keesey J, Hicks J, DeCristotaro A, et al. The quality of health care delivered to adults in the United States. N Engl J Med 2003;348 (26):2635-45.
- 6. Leatherman S, McCarthy D. Quality of health care in the United States: a chartbook. New York (NY): The Commonwealth Fund; 2003 Apr. 164 p.
- Janes GR, Blackman DK, Bolen JC, Kamimoto LA, Rhodes L, Caplan LS, et al. Surveillance for use of preventive health-care services by older adults, 1995-1997. MMWR Surveill Summ 1999 Dec 17;48 (8):51-88.
- 8. Centers for Disease Control and Prevention. National, state and urban area vaccination coverage levels among children aged 19-35 months — United States, January-December 1995. MMWR Morb Mortal Wkly Rep 1997;46 (8):176-82.
- Kottke TE, Solberg LI, Brekke ML, Cabrera A, Marquez MA. Delivery rates for preventive services in 44 midwestern clinics. Mayo Clin Proc 1997;72 (7):515-23.
- 10. Hawley ST, Vernon SW, Levin B, Vallejo B. Prevalence of colorectal cancer screening in a large

medical organization. Cancer Epidemiol Biomarkers Prev 2004 Feb;13 (2):314-9.

- 11. Goel MS, Wee CC, McCarthy EP, Davis RB, Ngo-Metzger Q, Phillips RS. Racial and ethnic disparities in cancer screening: the importance of foreign birth as a barrier to care. J Gen Intern Med 2003 Dec;18 (12):1028-35.
- 12. Janz NK, Wren PA, Schottenfeld D, Guire KE. Colorectal cancer screening attitudes and behavior: a population-based study. Prev Med 2003 Dec;37 (6 Pt 1):627-34.
- State-specific cholesterol screening trends United States, 1991-1999. MMWR Morb Mortal Wkly Rep 2000 Aug 25;49 (33):750-5.
- 14. Lin T, Chen CH, Chou P. Impact of the high-risk and mass strategies on hypertension control and stroke mortality in primary health care. J Hum Hypertens 2004 Feb;18 (2):97-105.
- Sheridan S, Pignone M, Donahue K. Screening for high blood pressure: a review of the evidence for the U.S. Preventive Services Task Force. Am J Prev Med 2003 Aug;25 (2):151-8.
- 16. Soumerai SB, McLaughlin TJ, Spiegelman D, Hertzmark E, Thibault G, Goldman L. Adverse outcomes of underuse of beta-blockers in elderly survivors of acute myocardial infarction. JAMA 1997 Jan 8;277 (2):115-21.
- Ries LAG, Eisner MP, Kosary CL, Hankey BF, Miller BA, Clegg L, et al, editors. SEER Cancer Statistics Review, 1975-2000. Bethesda (MD): National Cancer Institute; 2003. Available from: URL: http://seer.cancer.gov/csr/1975_2000/.
- Centers for Disease Control and Prevention, National Center for Health Statistics. National Hospital Discharge Survey. Hyattsville (MD): The Centers;1998-2000.
- 19. Centers for Disease Control and Prevention, National Center for Health Statistics. National Health Interview Survey. Hyattsville (MD): The Centers;2000.
- 20. Agency for Healthcare Research and Quality. Medical Expenditure Panel Survey (MEPS). Rockville (MD): The Agency:2000.
- 21. Centers for Disease Control and Prevention, National Center for Health Statistics. National Health Interview Survey. Hyattsville (MD): The Centers;1998.

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Table 1.

General Summary of Health Care in the United States, National Healthcare Quality Report and National Healthcare Disparities Report, Agency for Healthcare Research and Quality, 2003

High-quality health care is not a given in the U.S. health care system.

- Thirty-seven of 57 areas with trend data presented in the NHQR have either shown no improvement or have deteriorated.
- Only 23% of individuals with hypertension have it under control. Control of hypertension is essential to continued successes in reducing mortality from heart disease, stroke, and complications of diabetes.
- Half of the people with depression stop using their medicines within the first month, far shorter than is recommended by experts and scientific evidence.
- In terms of patient safety, about one in five elderly Americans was prescribed medications that may have been inappropriate for them
 and potentially harmful.

Gaps in health care quality are particularly acute for certain racial, ethnic, and socioeconomic groups.

- Blacks and Hispanics experience worse quality of care for about half of the quality measures reported in the NHQR and NHDR.
- Hispanics and Asians experience worse access to care for about two thirds of access measures.
- Poor people experience worse care for about two thirds of the quality and access measures.

Improvement in quality and disparities is possible.

- Chosen as a national priority for improvement by the Medicare QIO program, the use of beta blockers for heart attack patients rose from 21% of eligible patients in the early 1990s (16) to 79%^a. In addition, improvement on this measure has been relatively universal. Fully 45 states are at or above 70% on this measure.
- A majority of women older than 40 years (70.3%) is being screened by mammography for breast cancer, exceeding the *Healthy People 2010* objective.
- Black women have higher screening rates for cervical cancer, perhaps related to significant investments in community-based cancer screening and outreach programs for cervical cancer. This data may help explain why death rates among black women, although still more than twice those of white women, have been decreasing at about twice the rate (17).
- Quality improvement efforts have resulted in demonstrable reductions in black/white differences in hemodialysis. A targeted intervention within a quality improvement culture may offer important lessons in disparity reduction.

^a This measure is the percentage of AMI patients that are prescribed beta blockers at discharge.

Table 2.

Process Measures of Quality Care for Diabetes in Adults Aged 18 and Older, United States, 2000^a

Measure	Estimate	SE
Percent of adults age 18+ with diabetes who reported receiving influenza immunization in past year	54.8	2.2
Percent of adults age 18+ with diabetes who reported having a foot examination in past year	66.4	1.73
Percent of adults age 18+ with diabetes who reported having a retinal eye examination in past year	66.5	1.76
Percent of adults age 18+ with diabetes who reported having a hemoglobin A1c measurement at least once in past year	89.8	1.27
Percent of adults age 18+ with diabetes who reported receiving a lipid profile in past two years	94.3	0.87
Percent of adults age 18+ with diabetes who reported having all five major tests done in the past two years	23.1	1.5
^a Data from Medical Expenditure Panel Survey, 2000 (20).		

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