

Key Themes and Highlights From the National Healthcare Quality Report

The Agency for Healthcare Research and Quality (AHRQ) is pleased to release the fourth annual National Healthcare Quality Report (NHQR) on behalf of the U.S. Department of Health and Human Services (HHS) and in collaboration with an HHS-wide Interagency Work Group. Like previous reports, the 2006 NHQR also received significant guidance from AHRQ leadership and AHRQ's National Advisory Committee. The NHQR examines and tracks the quality of health care in the United States, using the most scientifically credible measures and data sources available. Measures of health care quality address the extent to which providers and hospitals deliver evidence-based care for specific services as well as the outcomes of the care provided. The measures are organized around four dimensions of quality—effectiveness, patient safety, timeliness, and patient centeredness—and cover four stages of care—staying healthy, getting better, living with illness or disability, and coping with the end of life.

The NHQR is complemented by its companion report, the National Healthcare Disparities Report (NHDR), a comprehensive national overview of disparities in access to and quality of health care among racial, ethnic, and socioeconomic groups, as well as among subpopulations such as children and the elderly. Both reports measure health care quality and track changes over time but with different orientations. The NHQR addresses the current state of health care quality and the opportunities for improvement for all Americans as a whole. This perspective is useful for identifying where the Nation is doing well and where more work is needed. The NHDR addresses the distribution of improvements in health care quality and access across the different populations that make up America. This perspective is useful for ensuring that all Americans benefit from improvements in care. Both reports' perspectives are needed for a complete understanding of quality of health care, and both reports support HHS Secretary Mike Leavitt's 500-Day Plan to fulfill the President's vision of a healthier America, specifically in the areas of better transparency of health care quality information and eliminating inequities in health care.

The NHQR comprises 211 measures. This large measure set is distilled to 42 core measures which are the major focus of the 2006 report; of these, 40 have data for 2 or more years. The measures are balanced across the four dimensions of quality and provide a more readily understandable summary and explanation of the key results derived from the data.ⁱ

Major additions to the core measures have been made this year. Among them are three new measures on prevention, including advice from health care professionals on eating, exercise, and vision care, and two new composite measuresⁱⁱ for patient safety, including measures on postoperative complications and adverse events. Also, new measures were added to the overall measure set in the areas of asthma, hospice care, and patient centeredness in hospitals.

ⁱ Data on all NHQR measures are available in the Data Tables Appendix at www.ahrq.gov. A list of core measures, divided into process and outcome measures, can be found in Table 1.2 of this report.

ⁱⁱ Composite measures combine closely related individual component measures. For example, the NHQR composite measure for postoperative complications includes measures for persons who develop pneumonia, bladder infection, and blood clots in the legs following surgery.

Highlights

The Highlights section offers a concise overview of findings from the 2006 NHQR. Four themes emerge from the 2006 NHQR:

- Most measures of quality are improving, but the pace of change remains modest.
- Quality improvement varies by setting and phase of care.
- The rate of improvement accelerated for some measures while a few continued to show deterioration.
- Variation in health care quality remains high.

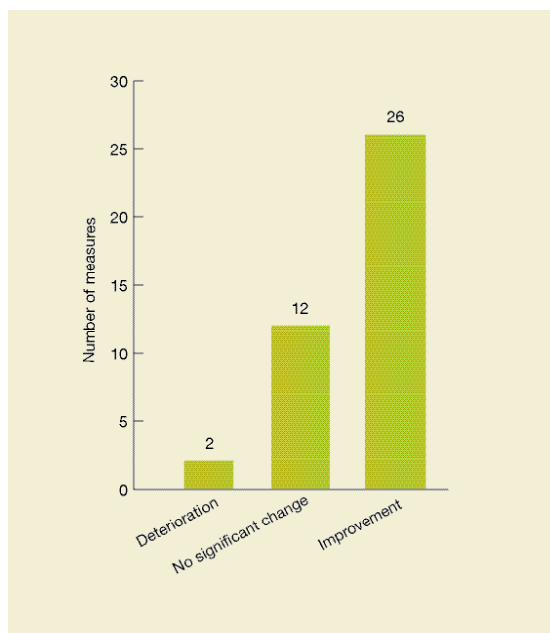
Most Measures of Quality Are Improving, But the Pace of Change Remains Modest

Most measures of health care quality continue to demonstrate improvement.ⁱⁱⁱ For example:

- Of the 40 core report measures with trend data, 26 showed significant improvement, 2 showed significant deterioration, and 12 showed no change (Figure H.1).
- Relative to last year's NHQR, a greater percentage of measures moved from the “no significant change” category into the “improvement” category.
- The median annual rate of change for the core measures is a 3.1% improvement.

It is noteworthy that for 3 consecutive report years, this rate of improvement has remained constant.^{iv}

Figure H.1. Number of NHQR core measures showing significant improvement, no significant change, or significant deterioration over 2 or more years (n=40)



ⁱⁱⁱ The terms “improvement” and “deterioration” are used when the rate of change achieves statistical significance with a p value of less than 0.05 and with an average change of 1% or more over 2 or more years.

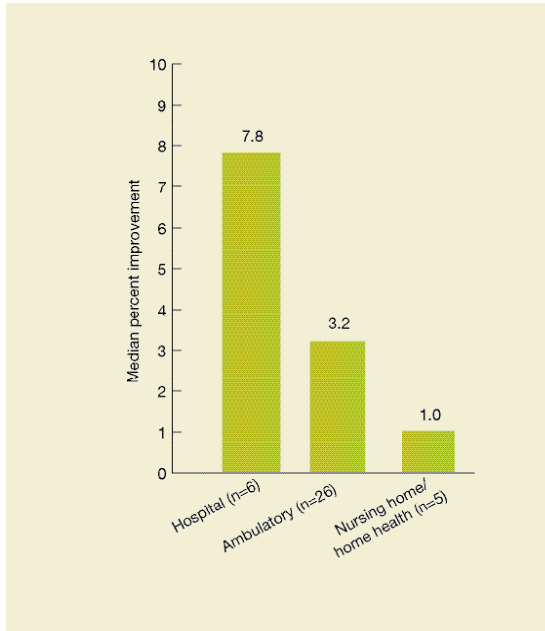
^{iv} The median rate of change reported in the previous two NHQRs was 2.8%. Readers should note that there were changes in the core measure set this year. When the same core measures are compared for the previous NHQRs, the median rate of change is the same at 3.1%.

Quality Improvement Varies by Setting and Phase of Care

Hospitals Demonstrate the Highest Rates of Improvement

- Hospital measures of quality, which include five composite measures and one individual measure, improved at a median annual rate of 7.8% (Figure H.2).
- The hospital measures improved at a much higher rate than did measures for other settings of care, including ambulatory care (3.2%) and nursing home and home health care (1.0%).

Figure H.2. Improvement rate by setting of care



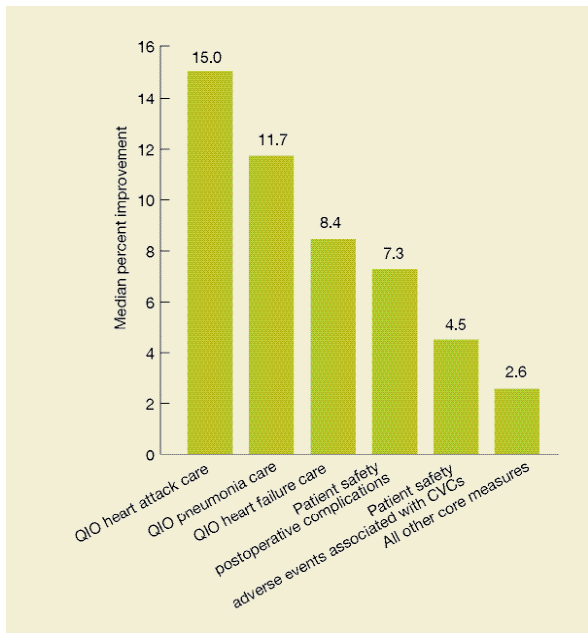
Note: Not all core report measures can be classified by setting of care.

Highlights

Improvements in hospital care may have resulted from public reporting of health care quality measures, focused quality improvement programs, and policies that support improvement initiatives. For example:

- The Centers for Medicare & Medicaid Services (CMS) Quality Improvement Organization (QIO) measures for good heart attack care showed the greatest improvement of all core measures at 15.0% per year. This rate of improvement is markedly better than the 9.2% rate reported last year and more than 5 times the 2.6% overall rate of improvement for all non-hospital core measures (Figure H.3).
- QIO measures of the quality of hospital care for pneumonia care and for heart failure also showed high rates of improvement compared with all other measures—11.7% and 8.4%, respectively.
- New core patient safety measures for postoperative complications from certain procedures and adverse events from central venous catheters (CVCs) improved 7.3% and 4.5%, respectively.

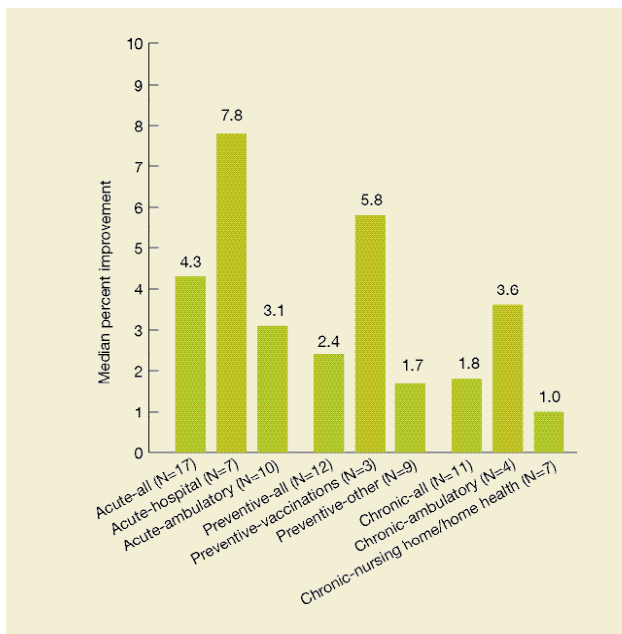
Figure H.3. Rates of improvement for five hospital composite measures and for all other core measures combined



Acute Care Measures Demonstrate Higher Improvement Rates Than Preventive and Chronic Care Measures

- The median rate of improvement for acute^v care measures of quality is 4.3%, about twice as fast as that for preventive^{vi} care and chronic^{vii} care—2.4% and 1.8%, respectively (Figure H.4).
- Improvements in the quality of acute care were more than twice as fast for hospital care (7.8%) as for ambulatory care (3.1%).
- Except for vaccinations for children, adolescents, and the elderly, which have demonstrated high rates of improvement overall (5.8%), the improvement rate for other preventive measures including screenings, advice, and prenatal care is relatively low (1.7%).
- Chronic care for ambulatory conditions such as diabetes, end stage renal disease (ESRD), and pediatric asthma improved over three times faster than chronic care for patients in nursing homes and home health care (3.6% vs. 1.0%).

Figure H.4. Improvement rate by phase of care



^vAcute care is short-term medical care. For example, the NHQR includes measures for heart disease, pneumonia, and patient safety.

^{vi} Preventive care includes counseling about healthy lifestyle behaviors and medical screenings to diagnose diseases at as early a stage as possible. For example, the NHQR includes measures for various screenings, counseling, maternal and child health care, and vaccinations.

^{vii} Chronic care is long-term medical care. For example, the NHQR includes measures for nursing home, home health, and hospice care and for chronic diseases such as diabetes, asthma, ESRD, and cancer.

The Rate of Improvement Accelerated for Some Measures While a Few Continued To Show Deterioration

Six core measures went from a flat trend in the 2005 report to a significantly improved trend this year:

- **Patient centeredness.** The composite measure of communication between adult patients and their providers measures when providers sometimes or never listened carefully, explained things clearly, respected what patients had to say, and spent enough time with patients. The proportion of patients reporting sometimes or never having good communication declined at an average annual rate of 9.3%.
- **Respiratory diseases.** Two measures showed a change in trend this year, from no change to improvement. The percentage of tuberculosis patients who did not complete a curative course of treatment within 12 months of initiation of treatment decreased at an average annual rate of 2.2%. The percentage of visits at which an antibiotic was prescribed for the diagnosis of a common cold for children decreased at an average annual rate of 7.0%.
- **Diabetes.** The percentage of adults with diabetes who did not receive three important screening tests for the management of diabetes decreased by an average annual rate of 3.9% per year. Also, hospital admissions for lower extremity amputation—which can result from suboptimal management of diabetes—decreased by an average annual rate of 7.5%.
- **Heart disease.** The percentage of smokers with a routine checkup who did not receive advice to quit smoking decreased at an average annual rate of 3.8%.

Two measures continued to show significant deterioration:

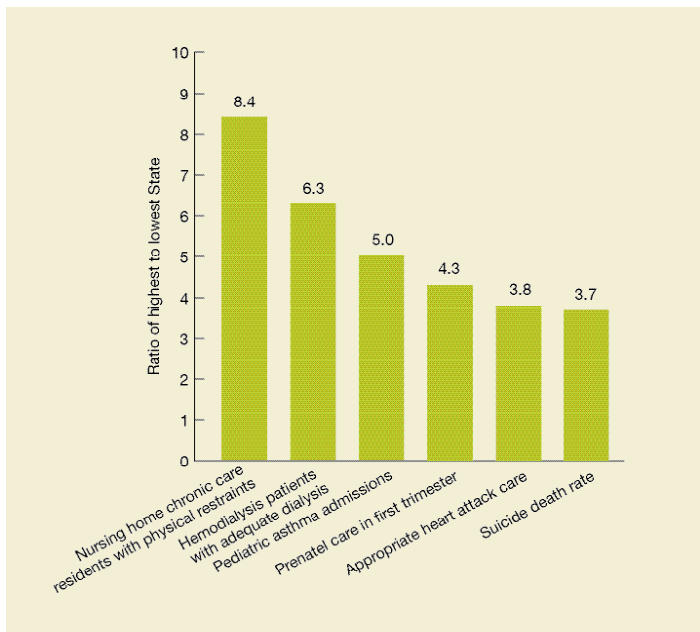
- **Timeliness.** The percentage of emergency room visits in which the patient left without being seen increased by 48% between 1997-1998 (1.21% of visits) and 2003-2004 (1.8% of visits).
- **Suicides.** The suicide death rate increased by an average of 1.3% per year between 2000 and 2003.

Variation in Health Care Quality Remains High

The NHQR collects data on health care quality for States and uses maps to present some of the data.^{viii} The State-level data provide an indication of the variation of the national measures. Core measures with the highest degree of variation among States, as computed by the ratio of the best performing State to the worst performing State, are presented in Figure H.5.

- The measure with the greatest amount of variation is the percentage of chronic nursing home patients who were physically restrained. It varies by a multiple of 8.4 across the States, ranging from 1.7% to 14.6%.
- Other core measures with at least a threefold variation across the States are hemodialysis patients with adequate dialysis, pediatric asthma admissions to hospital, prenatal care in the first trimester, appropriate heart attack hospital care, and the suicide death rate.

Figure H.5. Quality measures with at least a threefold difference between the State with the highest value and the State with the lowest value



Note: Only the 22 core report measures for which more than 30 States had data are included in this chart. All measure values are aligned in the same direction as a negative—e.g., not receiving prenatal care—in computing the ratio.

^{viii} In addition, AHRQ's annual State Snapshots provide a detailed analysis of quality for each State on all available measures.

Moving Forward

The NHQR continues to be the broadest analysis of the quality of health care undertaken in the United States. Overall, quality continues to improve, as the NHQR has documented over the last 3 years. An acceleration in improvement is evident across a wide range of diseases, including heart disease, diabetes, respiratory diseases, and colorectal cancer. Communications between providers and patients show marked improvements. Hospital care has shown demonstrable improvements relative to other settings, especially on the CMS QIO measures. However, the pace of change is slow overall, there is a high degree of variation among States on many measures, and there is a long way to go to achieve the best quality possible across most measures.

What is clear from this report and others is that sustained focus, public reporting, and active and persistent interventions seem to make a significant difference in the quality of health care, especially in the areas of patient safety and in hospital measures, as highlighted in this report. Examples of programs that appear to be making an impact in these areas include the Institute for Healthcare Improvement's successful campaign to reduce over 100,000 preventable hospitalizations; the public and private endorsement of hospital measures for heart attack, heart failure, and pneumonia by CMS, the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), and the National Quality Forum (NQF); implementation programs such as the voluntary public reporting of performance demonstration programs associated with the Medicare Modernization Act; and innovations in the private sector with aligning reimbursements to reward delivery of high quality care such as the Premier Hospital Quality Incentive (pay-for-performance) Demonstration.

To support quality improvement efforts, AHRQ has developed a variety of information products derived from data gathered for the annual production of the NHQR and NHDR. These products seek to translate information into practical applications for use by State and local health policymakers and include:

- **State Snapshots.** This interactive Web-based tool, produced by AHRQ annually using data from the NHQR and NHDR, is designed to help State officials and their public- and private-sector partners understand health care quality and disparities in their State, including strengths, weaknesses, and opportunities for improvements. The State Snapshots provide State-specific information on health care quality measures for each State using user-friendly graphs and customized tables.^{ix}
- **Diabetes Care Quality Improvement: A Resource Guide for State Action.** Designed in partnership with the Council of State Governments for State elected leaders, executive branch officials, and other nongovernmental State and local health care leaders, this *Resource Guide* provides background information on why States should consider diabetes as a priority for State action, presents analysis of State and national data and measures of diabetes quality and disparities, and gives guidance for developing a State quality improvement plan. A companion interactive *Workbook* presents review exercises for State leaders on the key skills and lessons from the *Resource Guide* to use in making the case for diabetes care quality improvement, learning from improvement efforts already underway, measuring diabetes quality and disparities, and implementing diabetes care quality improvement plans using a State-led quality improvement framework.^x

^{ix} Readers should consult the AHRQ Web site (www.ahrq.gov) for announcement of availability of the State Snapshots.

^x Available at: <http://ahrq.gov/qual/diabqualoc.htm>.

Highlights

- **Asthma Care Quality Improvement: A Resource Guide for State Action.** Like the diabetes resources, this *Resource Guide* and companion *Workbook* provide information about asthma quality and disparities and present exercises to hone skills useful for developing a State asthma quality improvement plan.^{xi}

Additionally, AHRQ supports dozens of State and community projects that engage public and private stakeholders to improve the quality of care for people with diabetes and asthma, to develop quality improvement action plans, and to evaluate innovative implementations of State and community efforts to improve quality and reduce disparities. These partnerships seek to go beyond collecting and reporting on quality measures to actively address problems with quality and disparities. They include:

- **National Health Plan Learning Collaborative to Reduce Disparities and Improve Quality.** This partnership with nine of America's foremost health plans (Aetna, CIGNA, Harvard Pilgrim Health Care, HealthPartners, Highmark, Inc., Kaiser Permanente, Molina Healthcare, UnitedHealth Group, and WellPoint, Inc.) is testing ways to improve the collection and analysis of data on race and ethnicity, matching these data to existing quality measures in the Health Plan Employer Data and Information Set (HEDIS[®]) and developing quality improvement interventions that close gaps in care. Lessons learned by plans in the collaborative will be shared with other health plans so that they too can improve the care they provide.
- **Aim setting and State plans for quality improvement.** This partnership with five States (Maine, Rhode Island, Massachusetts, West Virginia, and Arkansas) reviews the State Snapshots in the context of the needs of these States to develop new tools that help States use data for quality improvement.
- **Improving diabetes care in communities.** This partnership with three of the Nation's leading business coalitions (Greater Detroit Area Health Council, MidAtlantic Business Group on Health, and Memphis Business Group on Health) supports local communities in their efforts to reduce the rate of obesity and other risk factors that can lead to diabetes and its complications and work together to ensure that people with diabetes receive appropriate health care services. Each of the coalitions has convened stakeholders, including businesses, providers, health plans, insurers, consumers, and academics, to set priorities in their efforts to improve diabetes care, reduce disparities, and develop solutions that fit within the community's needs and capabilities.
- **Improving implementation of diabetes improvement programs through ongoing evaluation.** This partnership with the State of Vermont supports the State's Blueprint for Health to improve diabetes care by developing dashboards to continuously monitor activities and progress, by designing and conducting patient and provider satisfaction surveys of participants in the blueprint, by providing learning and collaborative opportunities to advance pay for performance, and by documenting knowledge learned so that it is available to other States.
- **Decreasing disparities in pediatric asthma.** This partnership with coalitions in six States (Arizona, Maryland, Michigan, New Jersey, Oregon, and Rhode Island) focuses on developing action plans to improve disparities in pediatric asthma by addressing racism and cultural competency; using data to target need, coordinate resources, and make the case for policy action; and increasing access and improving the quality of care for underserved populations.

AHRQ will continue to track information on the quality of health care for the Nation, provide tools for use in local- and State-level quality improvement activities, and facilitate an ongoing national discussion on improving health care for all Americans.

^{xi} Available at: <http://www.ahrq.gov/qual/asthmaqual.htm>.