DOI: 10.1111/j.1475-6773.2007.00736.x

AHRQ Update

AHRQs National Healthcare Quality and Disparities Reports: An Ever-Expanding Road Map for Improvement

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In my April 2006 AHRQ Update (Clancy 2006) I discussed enhancements to the *National Healthcare Quality Report* (NHQR 2006) and the *National Healthcare Disparities Report* (NHDR 2006), annual reports produced by the Agency for Healthcare Research and Quality (AHRQ).

In this issue, my colleagues and I would like to continue our conversation with you about these reports which have become vitally important tools in our efforts to eliminate heath care disparities and improve the quality of health care services. Since I last wrote about them in this journal, we have an additional year of trend data for many of the measures included in the reports, and we released a new website which provides quality, and some disparities data by state, and we are poised to release a new online resource that will make national health care quality and disparities data even more accessible.

For those of you who are new to these reports, a little background: the *NHQR* and *NHDR* are congressionally mandated reports that have been produced by AHRQ since 2003. The latest versions were presented to Congress in January 2007. The quality report, examines the quality of health care system, as indicated by quality measures such as the proportion of heart attack patients who receive recommended care when they arrive at a hospital. Its companion, the disparities report, summarizes the same information according to various racial, ethnic, and income groups that are most likely to benefit from improvements in health care. The two reports—the fourth annual reports—are published together because it is important to consider overall health care quality improvement in conjunction with the disparities that continue to plague our health care system.

Prevention Message

When the reports were conveyed to Congress and publicly released, AHRQ's press materials emphasized some critical public health messages. The reports clearly demonstrated that providers continue to miss important opportunities to help Americans avoid disease or serious complications. Of particular concern, the use of proven prevention strategies lags significantly behind other gains in health care. These include:

- Only about 52 percent of adults reported receiving recommended colorectal cancer screenings.
- Fewer than half of obese adults reported being counseled about diet by a health care professional.
- Only 49 percent of people with asthma said they were told how to change their environment.
- Only 48 percent of adults with diabetes received all three recommended screenings to prevent disease complications.

According to the *NHDR*, access to and quality of care varies widely among racial, ethnic, and economic groups. Unfortunately, minority populations tend to receive poorer quality care. For the core measures included in the disparities report, blacks received poorer quality care than whites on 73 percent of the measures; Hispanics received poorer quality care than non-Hispanic whites for 77 percent of the measures; and low-income people received lower quality care than high-income people for 71 percent of these measures.

The AHRQ reports characterize two major health care public policy challenges—to improve the quality of health care, and to make sure that no communities or populations are left behind in our quality improvement efforts.

Based on the data presented in the reports, we know that we can improve quality at both the state and national levels—quality improvement works. Sustained focus, public reporting, and active and persistent interventions make a significant difference in the quality of health care, especially in the areas of patient safety and in hospital care processes. We can conclude that health care quality improvement is not only possible but is, in fact, inevitable if it is the subject of a serious, rigorous, persistent, and coordinated improvement effort. If our approach to quality improvement is haphazard or lacks vision, however, certain areas of health care quality will suffer and patients will be harmed as a result.

Finally, these reports give us direction for our quality efforts, and the trends tracked over the last 4 years of reports give us a gauge of our progress. A focus on preventive services would benefit all patients, particularly minority patients: African Americans are more likely to experience insufficient preventive services for colorectal cancer, children's vaccinations, and pneumonia vaccinations for the elderly; and Hispanic women are less likely than non-Hispanic white women to seek prenatal care during the first 3 months of pregnancy. These are disparities that should, and can, be addressed.

KEY THEMES

While these prevention messages are important to the nation and provide a "hook" to engage Congress and the public, the reports provide a breadth of information for health care researchers and policy makers. Each report is organized around four key themes that provide a road map to using the report for quality improvement, health care research, and decision making.

The Quality Report's themes are:

Most measures of quality are improving, but the pace of change remains modest: Most measures of health care quality continue to demonstrate improvement. For example: of the 40 core report measures with trend data, 26 showed significant improvement, two showed significant deterioration, and 12 showed no change.

Relative to the 2005 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 percent improvement—a rate that has been constant in the report for 3 consecutive years.

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 percent.

The hospital measures improved at a much higher rate than did measures for other settings of care, including ambulatory care (3.2 percent) and nursing home and home health care (1.0 percent). 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 percent per year. This rate of improvement is markedly better than the 9.2 percent rate reported last year and more than five times the 2.6 percent overall rate of improvement for all nonhospital core measures. 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 percent, respectively.

New core patient safety measures for postoperative complications from certain procedures and adverse events from central venous catheters improved 7.3 and 4.5 percent, respectively.

These improvements are likely directly attributable to initiatives sponsored by the Department of Health and Human Services' Centers for Medicare and Medicaid Services, which has worked with Hospital Quality Alliance and other stakeholders to foster appropriate and timely care and provide quality measurement information to consumers.

Acute care measures demonstrate higher improvement rates than preventive and chronic care measures: The median rate of improvement for acute care measures of quality is 4.3 percent, about twice as fast as that for preventive care and chronic care—2.4 and 1.8 percent, respectively. Improvements in the quality of acute care have been more than twice as fast for hospital care (7.8 percent) as for ambulatory care (3.1 percent). Except for vaccinations for children, adolescents, and the elderly, which have demonstrated high rates of improvement overall (5.8 percent), the improvement rate for other preventive measures including screenings, advice, and prenatal care is relatively low (1.7 percent).

Chronic care for ambulatory conditions such as diabetes, end stage renal disease, and pediatric asthma improved over three times more rapidly than chronic care for patients in nursing homes and home health care (3.6 versus 1.0 percent).

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 percent.

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 percent. 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 percent.

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 percent 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 percent.

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 percent.

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 percent between 1997–1998 (1.21 percent of visits) and 2003–2004 (1.8 percent of visits).

Suicides. The suicide death rate increased by an average of 1.3 percent 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. The State-level data provide an indication of the variation of the national measures. 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 percent. 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.

Disparities Report

The Disparities Report's themes are:

Disparities remain prevalent: Consistent with extensive research and findings in previous *NHDR*, the 2006 report finds that disparities related to race, ethnicity, and socioeconomic status still pervade the American

health care system. Although varying in magnitude by condition and population, disparities are observed in almost all aspects of health care, including:

- Across all dimensions of quality of health care including: effectiveness, patient safety, timeliness, and patient centeredness.
- Across all dimensions of access to care including: facilitators and barriers to care and health care utilization.
- Across many levels and types of care including: preventive care treatment of acute conditions, and management of chronic disease.
- Across many clinical conditions including: cancer, diabetes, end stage renal disease, heart disease, HIV disease, mental health and substance abuse, and respiratory diseases.
- Across many care settings including: primary care, home health care, hospice care, emergency departments, hospitals, and nursing homes.

Within many subpopulations including: women, children, elderly, residents of rural areas, and individuals with disabilities and other special health care needs.

To quantify the prevalence of disparities across the core measures tracked in the 2006 report, racial and ethnic minority groups and socioeconomic groups are compared with an appropriate reference group for each core measure. Each group could receive care that is poorer than, about the same as, or better than the reference group. To facilitate comparisons across racial and ethnic groups, contrasts this year focus on 22 core measures of quality and six core measures of access which support reliable estimates for whites, blacks, Asians, American Indians and Alaska Natives, and Hispanics. Comparisons by income group focus on 17 core measures of quality and six core measures of access which support reliable estimates by income.

Some disparities are diminishing while others are increasing: The Department of Health and Human Services leads many initiatives aimed at reducing health care disparities and improving health care quality. Many private organizations also work to improve care and reduce disparities. To quantify the success of such efforts to reduce disparities, the 2005 NHDR began tracking changes in core measures over time. This year, methods for tracking trends in disparities have been improved. For each core measure, racial and ethnic minority

groups and socioeconomic groups are compared with a designated reference group at different points in time:

- Core measures for which the relative differences are changing less than 1 percent per year are identified as staying the same.
- Core measures for which the relative differences are becoming smaller at a rate of more than 1 percent per year are identified as improving disparities.
- Core measures for which the relative differences are becoming larger at a rate of more than 1 percent per year are identified as worsening disparities.

To facilitate comparisons across racial and ethnic groups, contrasts in the 2006 NHDR focus on 20 core measures of quality and five core measures of access which support reliable estimates for whites, blacks, Asians, American Indians and Alaska Natives, non-Hispanic whites, and Hispanics at more than one time point. Comparisons by income group use these same five core measures of access. However, the income contrast uses 12 core measures of quality because less information is available by income group for quality measures and only 12 of the 20 core measures of quality support estimates by income group at more than one time point.

For racial and ethnic minorities, some disparities in quality of care are improving and some are worsening. For the poor, most disparities are worsening.

Of disparities in quality experienced by blacks, Asians, American Indian/Alaska Natives, Hispanics, about a quarter were improving and about a third were worsening. Two-thirds of disparities in quality experienced by poor people (8/12) were worsening.

Opportunities for reducing disparities remain: Although some disparities are diminishing, many opportunities for improvement can still be found. For all groups, measures could be identified for which the group not only received worse care than the reference group but for which this difference was getting worse rather than better.

All groups had several measures for which they received worse care and for which the difference was getting worse. For blacks, Asians, and Hispanics, these disparities involved all domains of quality that could be tracked: preventive services, treatment of acute illness, management of chronic disease and disability, timeliness, and patient centeredness. For American Indians/Alaska Natives, these disparities appeared concentrat-

ed in the treatment of acute illness and the management of chronic disease and disability.

Some disparities in quality of care were prominent for multiple groups; these disparities include:

- Colorectal cancer screening.
- Vaccinations.
- Hospital treatment of heart attack.
- Hospital treatment of pneumonia.
- Services for diabetes.
- Children hospitalized for asthma.
- Treatment of tuberculosis.
- Nursing home care.
- Problems with timeliness.
- Problems with patient–provider communication.

The 2006 NHDR also finds that Hispanics and the poor faced many disparities in access to care that were getting worse: for Hispanics, not having health insurance and a usual source of care were getting worse. For the poor, not having a usual source of care and experiencing delays in care were getting worse.

Information about disparities is improving, but gaps still exist: The 2006 NHDR provides more information about disparities than previous reports. Improvements include the addition of new data sources and new measures that have allowed analyses of new disparities.

Obesity. New measures of counseling of overweight and obese persons from the National Health and Nutrition Examination Survey and the Medical Expenditure Panel Survey have been added to this year's report. One of these measures—obese adults who were given advice about exercise—is a new core measure.

Asthma management. Supplemental measures from the 2003 National Asthma Survey, coordinated by the National Heart, Lung and Blood Institute at the National Institutes of Health, have been included in the 2006 NHDR.

Hospice care. New supplemental measures of hospice care from the National Hospice and Palliative Care Organization's Family Evaluation of Hospice Care survey are included in this year's report.

Patient safety. The patient safety section has been redesigned this year to accommodate the availability of a new measure from the CMS's

Medicare Patient Safety Monitoring System and another adopted by the Hospital Quality Alliance from the CMS Quality Improvement Organization program.

Patient centeredness in hospital care. Supplemental measures from the CAHPS® Hospital Survey have also been included for the first time this year.

Workforce diversity. New supplemental measures of the health care provider population by race and ethnicity from the U.S. Census and Community Tracking Study have been added.

Hispanic subpopulations. Analyses by Hispanic subpopulation have been added to the NHDR to begin to shed additional light on disparities among the highly heterogeneous U.S. Hispanic population.

Language assistance. A new supplemental measure of adults with limited English proficiency with and without a usual source of care that offers language assistance from the Medical Expenditure Panel Survey has been added to this year's report.

Uninsurance. Analyses of health care by health insurance status and income category are also included in the 2006 NHDR

New Developments

In addition to increasing the breadth and granularity of the *NHQR* and *NHDR*, we have also improved how they can be used by creating better web tools with increased access to data and graphs and presenting future reports in a new format that will allow us to go deeper into the measures.

Last year, AHRQ issued the second edition of State-based quality and disparities data. The 2006 data is available on the AHRQ website at www.ahrq.gov. The State Snapshots are a tool for states health policy makers to inform quality improvement efforts in their state.

The NHQR/NHDR State Snapshots are based on data from the NHQR and NHDR and present state-level data in graphical displays, or dashboards, which indicate the status of health care for selected topic areas. Each state can find how it compares with the national level or the regional level for a type of care (preventive, acute, chronic), health care setting (hospital, ambulatory, nursing home, home health) or in a specific clinical area (cancer, diabetes, heart, maternal and child health, respiratory). Users can also explore the measures behind the dashboards to find out the quality measures their state performs the weakest and strongest. The State Snapshots are intended to provide state health policy makers a more in-depth and interactive view of

health care quality in the United States. The State Snapshots are updated each year after the release of the NHQR and NHDR.

AHRQ also has issued a new tool on its website: QR–DR Net provides improved online access to the hundreds of data tables and measure specifications that make up the quality and disparities reports. QR–DR Net can provide policy analysts and researchers alike a source for hypothesis-generating in areas of study that relate to the quality of health care. In this way, the broader topics covered in the reports can guide analysts to consider more specific questions that may be suggested by the contents of the reports. While the Reports provide many indicators of varying scope about the status of health care quality, more focused investigation may be often needed to explain the factors that influence various measures.

Looking to the Future

The health care quality improvement movement has matured this decade, but still remains in its infancy. We need to continue to study quality shortcomings and disparities, and to allow the data to drive our quality improvement efforts.

Work on the 2007 Reports is well underway. In addition to preserving consistency in the Reports over time, which enables meaningful analyses of trends, current efforts include further development to more optimally characterize health care quality. In planning for production of the Reports each year, AHRQ strives to keep pace with the development of new health care quality measures while maintaining their primary purpose—to provide a comprehensive summary of the quality of health care provided to the American people.

Specifically, the 2007 Reports will provide a benchmark for the Nation to examine its progress over the past 5 years of national quality and disparities reporting. In keeping with that theme, next year's reports will present more a developed discussion of trends in quality and disparities. Moreover, next year's reports will provide the opportunity to report on new areas of performance, specifically in areas such as quality and disparities for the disabled, cancer quality of care, and efficiency of health care among others.

In recent years, health care quality reporting has demonstrated a clear contribution. AHRQ recognizes that it not only imparts a more complete understanding of the health care, but it also fosters improvements in the quality of care delivered.

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