



2014 National Healthcare Quality and Disparities Report

CHARTBOOK ON EFFECTIVE TREATMENT



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2014 NATIONAL HEALTHCARE QUALITY AND DISPARITIES REPORT CHARTBOOK ON EFFECTIVE TREATMENT

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EFFECTIVE TREATMENT

Organization of the Chartbook on Effective Treatment

- Part of a series related to the National Healthcare Quality and Disparities Report (QDR)
- Contents:
 - Overview of the QDR
 - Overview of Effective Treatment, one of the priorities of the National Quality Strategy
 - Summary of trends and disparities in Effective Treatment from the QDR
 - Tracking of individual measures of Effective Treatment:
 - ◆ Cardiovascular Disease
 - ◆ Cancer
 - ◆ Chronic Kidney Disease
 - ◆ Diabetes
 - ◆ HIV Disease
 - ◆ Mental Health and Substance Abuse
 - ◆ Musculoskeletal Diseases
 - ◆ Respiratory Diseases

National Healthcare Quality and Disparities Report

This Effective Treatment chartbook is part of a family of documents and tools that support the National Healthcare Quality and Disparities Reports (QDR). The QDR includes annual reports to Congress mandated in the Healthcare Research and Quality Act of 1999 (P.L. 106-129). These reports provide a comprehensive overview of the quality of health care received by the general U.S. population and disparities in care experienced by different racial, ethnic, and socioeconomic groups. The purpose of the reports is to assess the performance of our health system and to identify areas of strengths and weaknesses in the health care system along three main axes: access to health care, quality of health care, and priorities of the National Quality Strategy.

The reports are based on more than 250 measures of quality and disparities covering a broad array of health care services and settings. Data are generally available through 2012, although rates of uninsurance have been tracked through the first half of 2014. The reports are produced with the help of an Interagency Work Group led by the Agency for Healthcare Research and Quality (AHRQ) and submitted on behalf of the Secretary of Health and Human Services (HHS).

Changes for 2014

Beginning with this 2014 report, findings on health care quality and health care disparities are integrated into a single document. This new National Healthcare Quality and Disparities Report highlights the importance of examining quality and disparities together to gain a complete picture of health care. This document is also shorter and focuses on summarizing information over the many measures that are tracked.

Key Findings of the 2014 QDR

The report demonstrates that the Nation has made clear progress in improving the health care delivery system to achieve the three aims of better care, smarter spending, and healthier people, but there is still more work to do, specifically to address disparities in care.

- Access improved.
 - After years without improvement, the rate of uninsurance among adults ages 18-64 decreased substantially during the first half of 2014.
 - Through 2012, improvement was observed across a broad spectrum of access measures among children.
- Quality improved for most NQS priorities.
 - *Patient Safety* improved, led by a 17% reduction in rates of hospital-acquired conditions between 2010 and 2013, with 1.3 million fewer harms to patients, an estimated 50,000 lives saved, and \$12 billion in cost savings.
 - *Person-Centered Care* improved, with large gains in provider-patient communication.
 - Many *Effective Treatment* measures, including several measures of pneumonia care in hospitals publicly reported by the Centers for Medicare & Medicaid Services (CMS), achieved such high levels of performance that continued reporting is unnecessary.
 - *Healthy Living* improved, led by doubling of selected adolescent immunization rates from 2008 to 2012.
- Few disparities were eliminated.
 - People in poor households generally experienced less access and poorer quality.
 - Parallel gains in access and quality across groups led to persistence of most disparities.
 - At the same time, several racial and ethnic disparities in rates of childhood immunization and rates of adverse events associated with procedures were eliminated, showing that elimination is possible.
- Many challenges in improving quality and reducing disparities remain.
 - Performance on many measures of quality remains far from optimal. For example, only half of people with high blood pressure have it controlled. On average, across a broad range of measures, recommended care is delivered only 70% of the time.
 - As noted above, disparities in quality and outcomes by income and race and ethnicity are large and persistent, and were not, through 2012, improving substantially.
 - Some disparities related to hospice care and chronic disease management grew larger.
 - Data and measures need to be improved to provide more complete assessments of two NQS priorities, *Care Coordination* and *Care Affordability*, and of disparities among smaller groups, such as Native Hawaiians, people of multiple races, and people who are lesbian, gay, bisexual, or transgender.

2014 Chartbooks

The 2014 QDR is supported by a series of related chartbooks that:

- Present information on individual measures
- Are updated annually
- Are posted on the Web (<http://www.ahrq.gov/research/findings/nhqdr/2014chartbooks/>)

The order and topics of the chartbooks are:

- Access to care
- Priorities of the National Quality Strategy
- Access and quality of care for different priority populations

The new QDR and supporting chartbooks are further integrated with the National Quality Strategy (NQS). The NQS has three overarching aims that build on the Institute for Healthcare Improvement's Triple Aim[®] and that support HHS's delivery system reform initiatives to achieve better care, smarter spending, and healthier people through incentives, information, and the way care is delivered. These aims are used to guide and assess local, State, and national efforts to improve health and the quality of health care.

To advance these aims, the NQS focuses on six priorities that address the most common health concerns that Americans face. Quality measures tracked in the QDR have been reorganized around these priorities, and a chartbook will be released marking progress for each NQS priority. Healthy Living is one of these NQS priorities and the topic of this chartbook.

Priority populations are noted in the legislation that requires AHRQ to report on health care disparities (42 U.S.C. 299a-1(a)(6)). These populations consist of groups with unique health care needs or issues that require special focus, such as racial and ethnic minorities, low-income populations, and people with special health care needs.

Chartbooks Organized Around Priorities of the National Quality Strategy

- Making care safer by reducing harm caused in the delivery of care.
- Ensuring that each person and family is engaged as partners in their care.
- Promoting effective communication and coordination of care.
- **Promoting the most effective prevention and treatment practices for the leading causes of mortality, starting with cardiovascular disease.**
- Working with communities to promote wide use of best practices to enable healthy living.
- Making quality care more affordable for individuals, families, employers, and governments by developing and spreading new health care delivery models.

Effective Treatment is one of the six national priorities identified by the National Quality Strategy (<http://www.ahrq.gov/workingforquality/index.html>).

National Quality Strategy Priority 4



Priority 4: Promoting the most effective prevention and treatment practices for the leading causes of mortality, starting with cardiovascular disease

LONG-TERM GOALS

1. Promote cardiovascular health through community interventions that result in improvement of social, economic, and environmental factors.
2. Promote cardiovascular health through interventions that result in adoption of the most healthy lifestyle behaviors across the lifespan.
3. Promote cardiovascular health through receipt of effective clinical preventive services across the lifespan in clinical and community settings.



Improving the quality of American health care demands an intense focus on preventing and treating cardiovascular disease. The lessons from this effort will feed into efforts addressing conditions such as HIV/AIDS and other chronic illnesses. Future initiatives will address a broad range of diseases and age ranges.

This chartbook begins with measures of effective treatment of cardiovascular disease. This is followed by measures of effective treatment of seven other leading causes of death in the United States.

Chartbook on Effective Treatment

- This chartbook includes:
 - Summary of trends across measures of Effective Treatment from the QDR.
 - Figures illustrating select measures of Effective Treatment.
- [Introduction and Methods](#) contains information about methods used in the chartbook.
- Appendixes include information about measures and data.
- A Data Query tool (<http://nhqrnet.ahrq.gov/inhqrdr/data/query>) provides access to all data tables.

Rank of Leading Causes of Death by Age Group, 2010

| Cause of Death | Total | Age (Years) | | | | | Report Section |
|-------------------------------------|-------|-------------|-------|-------|-------|-----|--|
| | | 1-9 | 10-24 | 25-44 | 45-64 | 65+ | |
| Cancer | 2 | 2 | 4 | 2 | 1 | 2 | Cancer |
| Accidents | 5 | 1 | 1 | 1 | 3 | 9 | |
| Heart disease | 1 | 5 | 5 | 3 | 2 | 1 | Cardiovascular Disease |
| Homicide | | 4 | 3 | 5 | | | |
| Congenital malformations | | 3 | 6 | | | | |
| Suicide | 10 | | 2 | 4 | 8 | | Mental Health and Substance Abuse |
| Alzheimer's disease | 6 | | | | | 5 | |
| Chronic lower respiratory diseases | 3 | 7 | 8 | | 4 | 3 | Respiratory Diseases |
| Chronic liver disease and cirrhosis | | | | 6 | 5 | | |
| Cerebrovascular diseases | 4 | 8 | 7 | 8 | 7 | 4 | Cardiovascular Disease |
| HIV disease | | | | 7 | | | HIV and AIDS |
| Diabetes | 7 | | 10 | 9 | 6 | 6 | Diabetes |
| Influenza and pneumonia | 9 | 6 | 9 | 10 | | 7 | Respiratory Diseases |
| Kidney disease | 8 | | | | 9 | 8 | Chronic Kidney Disease |
| Benign neoplasms | | 9 | | | | | |
| Septicemia | | 10 | | | 10 | 10 | Patient Safety Chartbook |

Source: National Vital Statistics Report 2013 Dec 20;62(6). http://www.cdc.gov/nchs/data/nvsr/nvsr62/nvsr62_06.pdf.

- Consistent with the NQS priority “Promoting the most effective prevention and treatment of the leading causes of mortality,” identified in the *National Strategy for Quality Improvement in Health Care*, the conditions tracked in this chartbook include the leading causes of death in the United States for which significant health care quality measurement activity exists.
- Some leading causes of death, such as accidents and homicide, cannot be tracked in this chartbook because related performance standards and quality measures are not well defined.
- Other leading causes of death cannot be tracked in this chartbook because robust national data sources are lacking.

Leading Chronic Conditions Causing Limitation of Activity, 2010

| Cause of Limitation | Prevalence (Millions) | Report Section |
|----------------------------|-----------------------|-----------------------------------|
| Back/neck conditions | 7.5 | Musculoskeletal Diseases |
| Arthritis/rheumatism | 6.8 | Musculoskeletal Diseases |
| Heart condition | 4.2 | Cardiovascular Disease |
| Depression/anxiety | 4.0 | Mental Health and Substance Abuse |
| Musculoskeletal condition | 3.8 | Musculoskeletal Diseases |
| Diabetes | 3.6 | Diabetes |
| Hypertension | 3.6 | Cardiovascular Disease |
| Nervous system problem | 3.3 | |
| Lung/breathing problem | 3.1 | Respiratory Diseases |
| Fracture/bone/joint injury | 2.8 | Musculoskeletal Diseases |

Source: National Heart, Lung, and Blood Institute. Morbidity & mortality: 2012 chartbook on cardiovascular, lung, and blood diseases. Bethesda, MD: National Institutes of Health; February 2012. www.nhlbi.nih.gov/files/docs/research/2012_ChartBook.pdf

- Musculoskeletal disease is not a leading cause of death, but it is included in this chartbook because it is a leading cause of functional limitation in the United States.

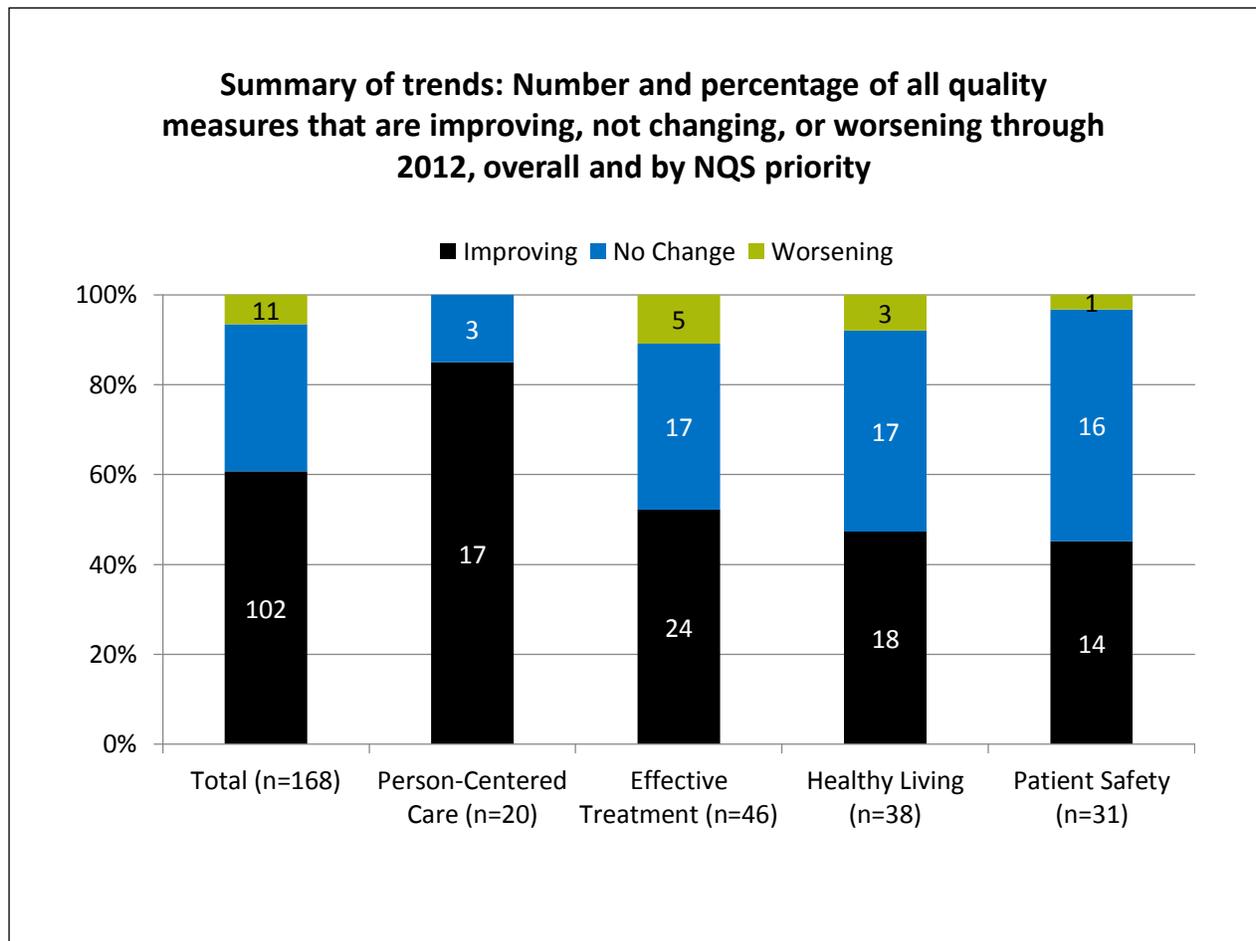
Most Costly Conditions, 2011

| Condition | Total Expenses (Millions) | Report Section |
|---|---------------------------|-----------------------------------|
| Heart conditions | \$116,308 | Cardiovascular Disease |
| Cancer | \$88,668 | Cancer |
| Trauma-related disorders | \$81,778 | |
| Mental disorders | \$77,641 | Mental Health and Substance Abuse |
| Osteoarthritis and other nontraumatic joint disorders | \$76,173 | Musculoskeletal Diseases |
| COPD, asthma | \$75,183 | Respiratory Diseases |
| Diabetes mellitus | \$55,224 | Diabetes |
| Hypertension | \$42,734 | Cardiovascular Disease |
| Normal birth/live born | \$39,381 | |
| Hyperlipidemia | \$38,905 | Cardiovascular Disease |

Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component Summary Tables. http://meps.ahrq.gov/mepsweb/data_stats/tables_compendia_hh_interactive.jsp.

- The conditions tracked in this chartbook are also prominent on the list of conditions with the highest health care expenses.

Summary of Trends Across National Quality Strategy Priorities



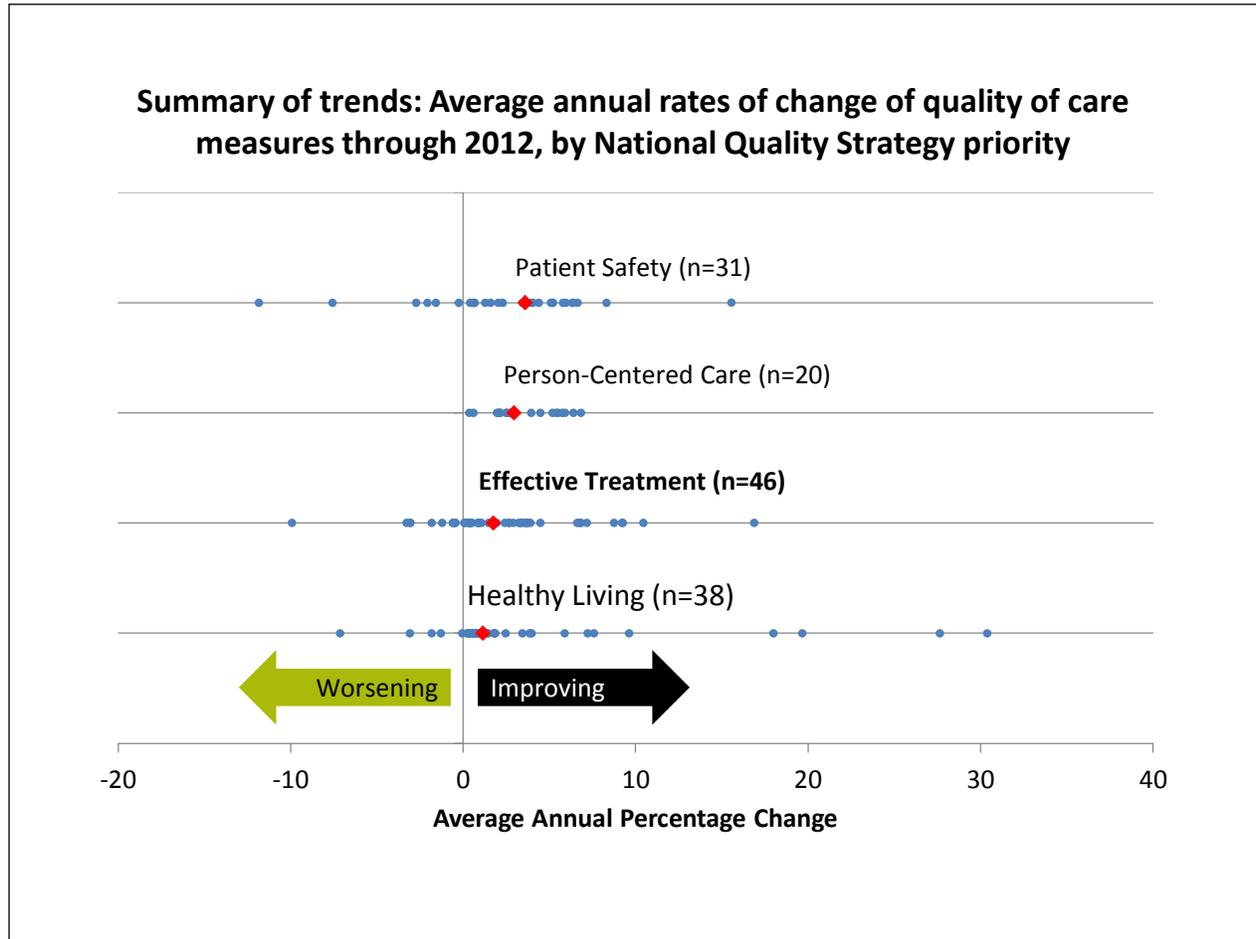
Key: n = number of measures.

Note: For the majority of measures, trend data are available from 2001-2002 to 2012.

For each measure with at least four estimates over time, weighted log-linear regression is used to calculate average annual percentage change and to assess statistical significance. Measures are aligned so that positive change indicates improved access to care.

- **Improving** = Rates of change are positive at 1% per year or greater and are statistically significant.
 - **No Change** = Rate of change is less than 1% per year or is not statistically significant.
 - **Worsening** = Rates of change are negative at -1% per year or greater and are statistically significant.
- About half of Effective Treatment measures improved compared with 60% of all quality measures.

Summary of Trends Across National Quality Strategy Priorities



Key: n = number of measures.

Note: Large red diamonds indicate median values. For each measure with at least four estimates over time, weighted log-linear regression is used to calculate average annual percentage change. Measures are aligned so that positive change indicates improved quality of care.

- Median change in quality was 1.7% per year among measures of Effective Treatment.

Effective Treatment Measures That Achieved 95% Performance This Year and Will No Longer Be Reported in the QDR

- Of 11 QDR measures that reached 95% performance in 2014, 9 were Effective Treatment measures, of which 7 were publicly reported by the Centers for Medicare & Medicaid Services (CMS) (bold):
 - **Hospital patients with heart attack given percutaneous coronary intervention within 90 minutes**
 - Adults with HIV and CD4 cell count of 350 or less who received highly active antiretroviral therapy during the year
 - **Hospital patients with pneumonia who had blood cultures before antibiotics were administered**

- **Hospital patients age 65+ with pneumonia who received pneumococcal screening or vaccination**
- **Hospital patients age 50+ with pneumonia who received influenza screening or vaccination**
- **Hospital patients with heart failure and left ventricular systolic dysfunction who were prescribed angiotensin-converting enzyme or angiotensin receptor blocker at discharge**
- **Hospital patients with pneumonia who received the initial antibiotic dose consistent with current recommendations**
- **Hospital patients with pneumonia who received the initial antibiotic dose within 6 hours of arrival**
- Adults with HIV and CD4 cell counts of 200 or less who received *Pneumocystis* pneumonia prophylaxis during the year

Effective Treatment Measures That Improved Quickly

- Two Effective Treatment measures improved quickly, defined as an average annual rate of change greater than 10% per year:
 - Patients with colon cancer who received surgical resection that included 12+ lymph nodes pathologically examined
 - Women with Stage I-IIb breast cancer who received axillary node dissection or sentinel lymph node biopsy at time of surgery

Effective Treatment Measures That Showed Worsening Quality

- Four Effective Treatment measures showed worsening over time, including three measures of management of chronic conditions (bold):
 - Suicide deaths per 100,000 population
 - **Admissions with diabetes with short-term complications per 100,000 population, age 18+**
 - **Adults age 40+ with diagnosed diabetes who had their feet checked for sores or irritation in the calendar year**
 - **People with current asthma who are now taking preventive medicine daily or almost daily**

Effective Treatment Measures With Elimination of Disparities

- One Effective Treatment measure showed elimination of a Black-White disparity:
 - Deaths per 1,000 hospital admissions with abdominal aortic aneurysm repair, age 18+
- Three Effective Treatment measures showed elimination of Asian-White disparities:
 - Adults age 40+ with diagnosed diabetes who had their feet checked in the calendar year
 - Adults age 40+ with diagnosed diabetes who received a dilated eye examination in the calendar year

- Patients under age 70 with treated chronic kidney failure who received a transplant within 3 years of date of renal failure

Effective Treatment Measures With Widening of Disparities

- One Effective Treatment measure showed widening of Black-White disparities:
 - People age 12+ who needed treatment for illicit drug use and who received treatment at a specialty facility in the last 12 months
- Two Effective Treatment measures showed widening of income-related disparities:
 - Adults age 40+ with diagnosed diabetes who received 2+ hemoglobin A1c measurements in the calendar year
 - Adults with chronic joint symptoms who have ever seen a doctor or other health professional for joint symptoms

Measures of Effective Treatment

- This chartbook tracks measures of Effective Treatment through 2012 and 2013, overall and for populations defined by age, race, ethnicity, income, education, insurance, and number of chronic conditions.
- Measures of Effective Treatment include:
 - Receipt of processes that reflect high-quality care
 - Outcomes related in part to receipt of high-quality care

Conditions Covered

- This chartbook is organized around eight conditions that are the leading causes of mortality and morbidity in the United States, starting with cardiovascular disease:
 - Cardiovascular disease
 - Cancer
 - Chronic kidney disease
 - Diabetes
 - HIV and AIDS
 - Mental health and substance abuse
 - Musculoskeletal diseases
 - Respiratory diseases