

2016
National Healthcare
Quality
and **Disparities**
Report



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2016 NATIONAL HEALTHCARE QUALITY AND DISPARITIES REPORT

**U.S. DEPARTMENT OF
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Primary AHRQ Staff: Sharon Arnold, Jeff Brady, Erin Grace, Karen Chaves, Nancy Wilson, Darryl Gray, Barbara Barton, Doreen Bonnett, and Irin Azam.

HHS Interagency Workgroup for the QDR: Girma Alemu (HRSA), Nancy Breen (NIH-NIMHD), Victoria Cargill (NIH), Hazel Dean (CDC), Kirk Greenway (IHS), Chris Haffer (CMS-OMH), Edwin Huff (CMS), DeLoris Hunter (NIH-NIMHD), Sonja Hutchins (CDC), Ruth Katz (ASPE), Shari Ling (CMS), Darlene Marcoe (ACF), Tracy Matthews (HRSA), Ernest Moy (CDC-NCHS), Curt Mueller (HRSA), Ann Page (ASPE), Kathleen Palso (CDC-NCHS), D.E.B Potter (ASPE), Asel Ryskulova (CDC-NCHS), Adelle Simmons (ASPE), Marsha Smith (CMS), Caroline Taplin (ASPE), Emmanuel Taylor (NCI), Nadarajen Vydelingum (NIH-NCI), Barbara Wells (NIH-NHLBI), and Ying Zhang (IHS).

QDR Team: Irin Azam (CQuIPS), Barbara Barton (CQuIPS), Doreen Bonnett (OC), Cecilia Casale (OEREP), Xiuhua Chen (SSS), Frances Chevarley (CFACT), James Cleeman (CQuIPS), Diane Cousins (CQuIPS), Noel Eldridge (CQuIPS), Camille Fabiyi (OEREP), Zhengyi Fang (SSS), Ann Gordon (BAH), Erin Grace (CQuIPS), Darryl Gray (CQuIPS), Kevin Heslin (CDOM), Bara Hur (BAH), Anil Koninty (SSS), Lan Liang (CFACT), Emily Mamula (BAH), Kamila Mistry (OEREP), Atlang Mompe (SSS), Heather Plochman (BAH), Susan Raetzman (Truven), Margie Shofer (CQuIPS), Lily Trofimovich (SSS), and Nancy Wilson (CQuIPS).

HHS Data Experts: Cuong Bui (HRSA), Lara Bull (CDC), Frances Chevarley (AHRQ), Robin Cohen (CDC-NCHS), Joann Fitzell (CMS), Elizabeth Goldstein (CMS), Irene Hall (CDC-HIV), Norma Harris (CDC-HIV), Jessica King (NPCR), Amanda Lankford (CDC), Denys Lau (CDC-NCHS), Lan Liang (AHRQ), Sharon Liu (SAMHSA), Marlene Matosky (HRSA), Tracy Matthews (HRSA), Robert Morgan (CMS), Richard Moser (NIH-NCI), Kathleen Palso (CDC-NCHS), Robert Pratt (CDC), Neil Russell (SAMHSA), Asel Ryskulova (CDC-NCHS), Alek Sripipatana (HRSA), Reda Wilson (CDC-ONDIEH-NCCDPHP), Emily Zammitti (CDC-NCHS), and Xiaohong (Julia) Zhu (HRSA).

Other Data Experts: Mark Cohen (ACS NSQIP), Ashley Eckard (University of Michigan), Sheila Eckenrode (MPSMS-Qualidigm), Michael Halpern (American Cancer Society), Clifford Ko (ACS NSQIP), Vivian Kurtz (University of Michigan), Robin Padilla (University of Michigan KECC), Bryan Palis (NCDB, American College of Surgeons), and Yun Wang (MPSMS-Qualidigm).

Other AHRQ Contributors: Cindy Brach, Iris Mabry-Hernandez, Edwin Lomotan, Karen Migdail, Pamela Owens, Wendy Perry, Mary Rolston, Bruce Seeman, Randie Siegel, and Michele Valentine.

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EXECUTIVE SUMMARY

Key Findings

- **Access:** While most access measures (65%) tracked in this report did not demonstrate significant improvement (2000-2014), uninsurance rates (measured as uninsured at the time of interview) decreased from 2010 to 2016.
- **Quality:** Quality of health care improved overall from 2000 through 2014-2015 but the pace of improvement varied by priority area:
 - **Person-Centered Care:** About 80% of person-centered care measures improved overall.
 - **Patient Safety:** Almost two-thirds of patient safety measures improved overall.
 - **Healthy Living:** About 60% of healthy living measures improved overall.
 - **Effective Treatment:** More than half of effective treatment measures improved overall.
 - **Care Coordination:** About half of care coordination measures improved overall.
 - **Care Affordability:** About 70% of care affordability measures did not change overall.
- **Disparities:** Overall, some disparities were getting smaller from 2000 through 2014-2015, but disparities persist, especially for poor and uninsured populations in all priority areas:
 - While 20% of measures show disparities getting smaller for Blacks and Hispanics, most disparities have not changed significantly for any racial and ethnic groups.
 - More than half of measures show that poor and low-income households have worse care than high-income households; for middle-income households, more than 40% of measures show worse care than high-income households.
 - Nearly two-thirds of measures show that uninsured people had worse care than privately insured people.

About the National Healthcare Quality and Disparities Report

For the 14th year in a row, AHRQ is reporting on health care quality and disparities. The annual *National Healthcare Quality and Disparities Report* (QDR) is mandated by Congress to 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 and socioeconomic groups.

The report assesses the performance of our health care system and identifies areas of strengths and weaknesses, as well as disparities, for access to health care and quality of health care. Quality is described in terms of the National Quality Strategyⁱ priorities, which include patient safety, person-centered care, care coordination, effective treatment, healthy living, and care affordability.

ⁱ More information on the National Quality Strategy is available at <https://www.ahrq.gov/workingforquality/about/nqs-fact-sheets/fact-sheet.html>.

The report is based on more than 250 measures of quality and disparities covering a broad array of health care services and settings. Selected findings in each priority area are shown in this report, as are examples of large disparities, disparities worsening over time, and disparities showing improvement. The report is produced with the help of an Interagency Workgroup led by AHRQ.ⁱⁱ

OVERVIEW OF QUALITY AND ACCESS IN THE U.S. HEALTH CARE SYSTEM

The *National Strategy for Quality Improvement in Health Care* (National Quality Strategy, or NQS) (U.S. Department of Health and Human Services, 2011) identified three aims that form an overarching framework for this discussion of health care quality: Achieving Better Care, Achieving Healthy People/Healthy Communities, and Making Care Affordable. Although progress is being made toward these aims, variations persist among states and across health care settings.

Three Aims for Improving Health Care

The three aims for improving health care are used to guide quality improvement efforts and are used as the framework of the *National Healthcare Quality and Disparities Report* (QDR).

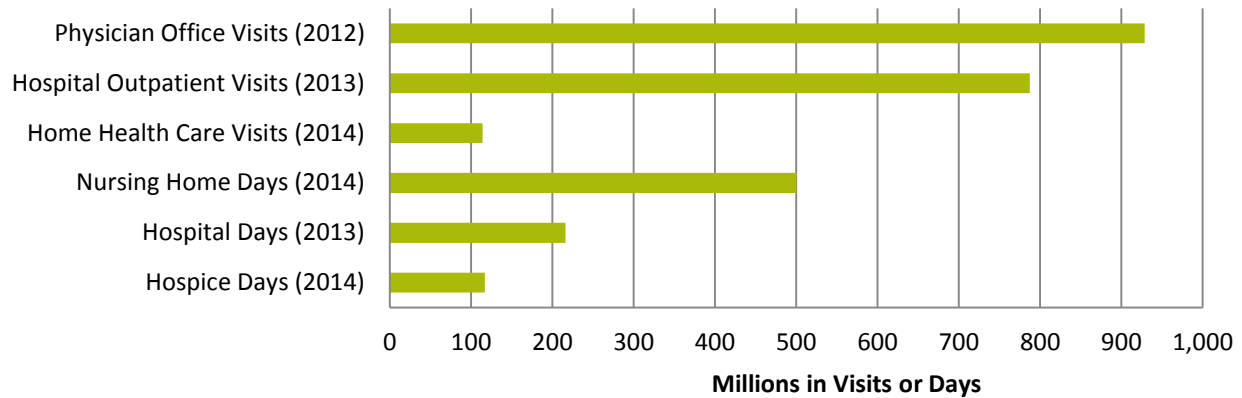
Aim 1: Achieving Better Care

Achieving Better Care requires coordinating services across a complex health care system. The health care industry employs millions of workers providing billions of services each year. Improving care requires facilities and providers to work together to expand access, enhance quality, and reduce disparities.

The QDR tracks care delivered by providers in many types of health care settings. While health is affected by many factors besides health care, receipt of appropriate high-quality services and counseling about healthy lifestyles can facilitate the maintenance of well-being and functioning.

ⁱⁱ Federal participants on IWG: AHRQ, Administration for Children and Families, Administration for Community Living, Assistant Secretary for Planning and Evaluation, Centers for Disease Control and Prevention, Centers for Medicare & Medicaid Services, Health Resources and Services Administration, Indian Health Service, and National Institutes of Health.

Figure 1. Number of health care service encounters, United States, 2012, 2013, 2014

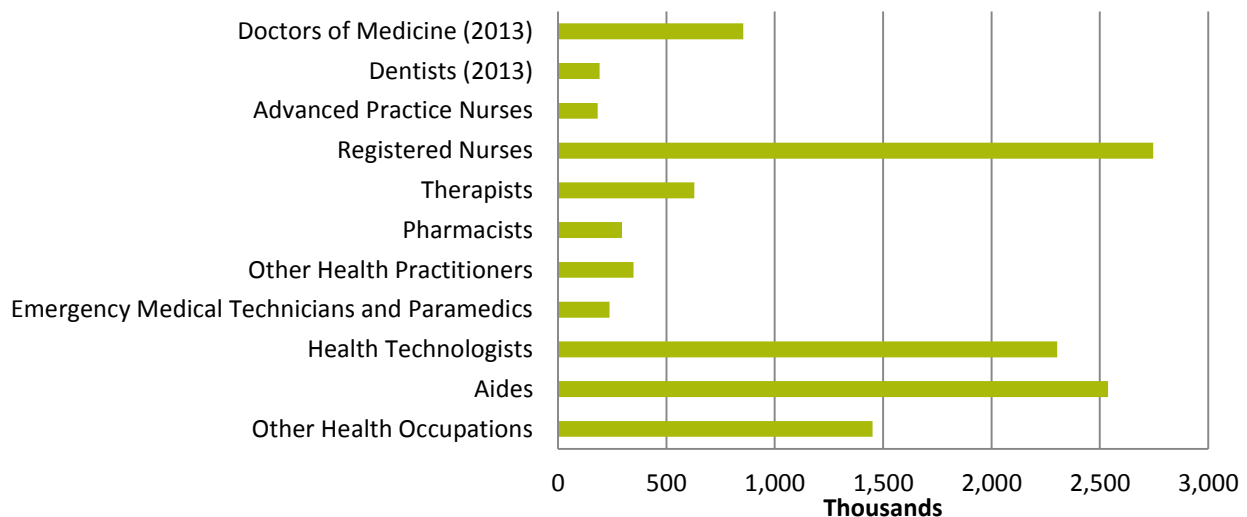


Source: National Center for Health Statistics (NCHS), *Health, United States, 2015* (physician [Table 76] and hospital visits [Table 82]) (<https://www.cdc.gov/nchs/hus/index.htm>); NCHS, Long-term care providers and services users in the United States: data from the National Study of Long-Term Care Providers, 2013-2014 (https://www.cdc.gov/nchs/data/series/sr_03/sr03_038.pdf) (nursing home days); Medicare Payment Advisory Commission (MedPAC), *Health care spending and the Medicare Program: a data book, June 2016* (<http://medpac.gov/docs/default-source/data-book/june-2016-data-book-health-care-spending-and-the-medicare-program.pdf?sfvrsn=0>) (home health [Table 8-9]) and hospice data [Table 11-7]).

Note: Hospital outpatient visits include visits to the emergency department, outpatient department, referred visits (pharmacy, EKG, radiology), and outpatient surgery. Data shown represent the latest year for which data were available.

- In 2012, there were 929 million physician office visits, including visits to physicians in health centers (Figure 1).
- In 2013, there were 787 million hospital outpatient visits, and 114 million home health visits.
- In 2014, patients spent 500 million days in nursing homes, 216 million days in hospitals, and 117 million days under hospice care.

Figure 2. Number of people working in health occupations, United States, 2015



Source: National Center for Health Statistics, *Health, United States, 2015* (<https://www.cdc.gov/nchs/hus/index.htm>) (doctors and dentists); and Bureau of Labor Statistics Occupational Employment Statistics (<https://www.bls.gov/oes/>), 2015 (all other occupations).

Note: Doctors of Medicine includes Doctors of Osteopathic Medicine. Other health practitioners include physician assistants, chiropractors, dietitians and nutritionists, optometrists, podiatrists, and audiologists. Aides include nursing, psychiatric, home health, occupational therapy, and physical therapy assistants and aides.

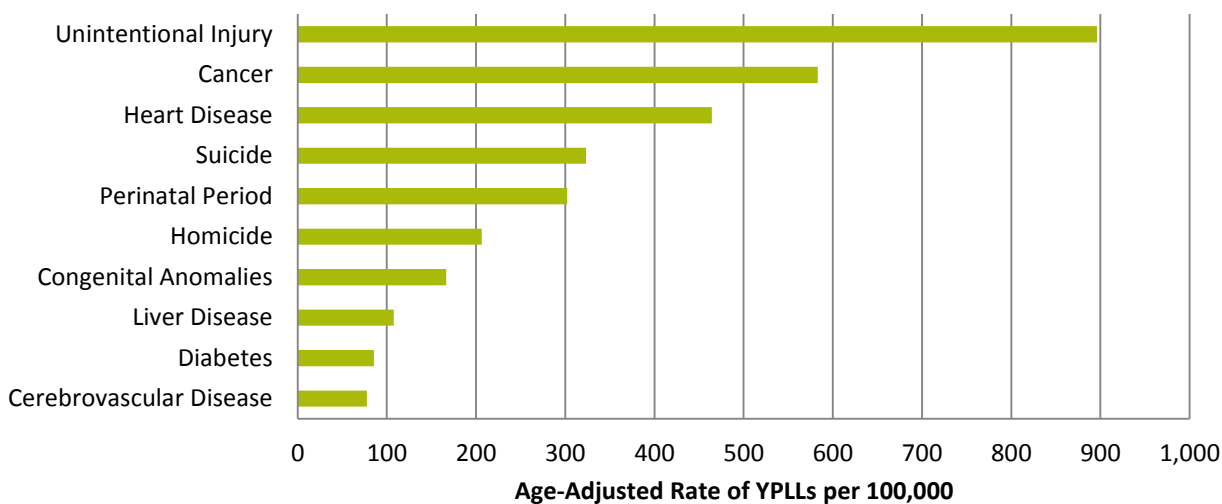
- In 2013, there were 855,000 doctors of medicine, which includes active doctors of medicine and doctors of osteopathy, and 191,000 dentists working in the United States (Figure 2).
- In 2015, there were also 2.7 million registered nurses, 2.3 million health technologists, and 2.5 million nursing and other aides.
- In 2015, 349,000 other health practitioners provided care, including more than 98,000 physician assistants.

The numbers of health service encounters and people working in health occupations illustrate the large scale and inherent complexity of the U.S. health care system. The tracking of health care quality measures in this report, notably in the Trends in Quality section, attempts to quantify the progress made in improving quality and reducing disparities in the delivery of health care to the American people.

Aim 2: Achieving Healthy People/Healthy Communities

Achieving Healthy People/Healthy Communities requires optimizing population health by mitigating the effects of the leading causes of morbidity and mortality. Care for most of these conditions is tracked in the QDR. Variation in access to care and care delivery across communities contributes to disparities related to race, ethnicity, and socioeconomic status.

Figure 3. Years of potential life lost before age 65, 2015

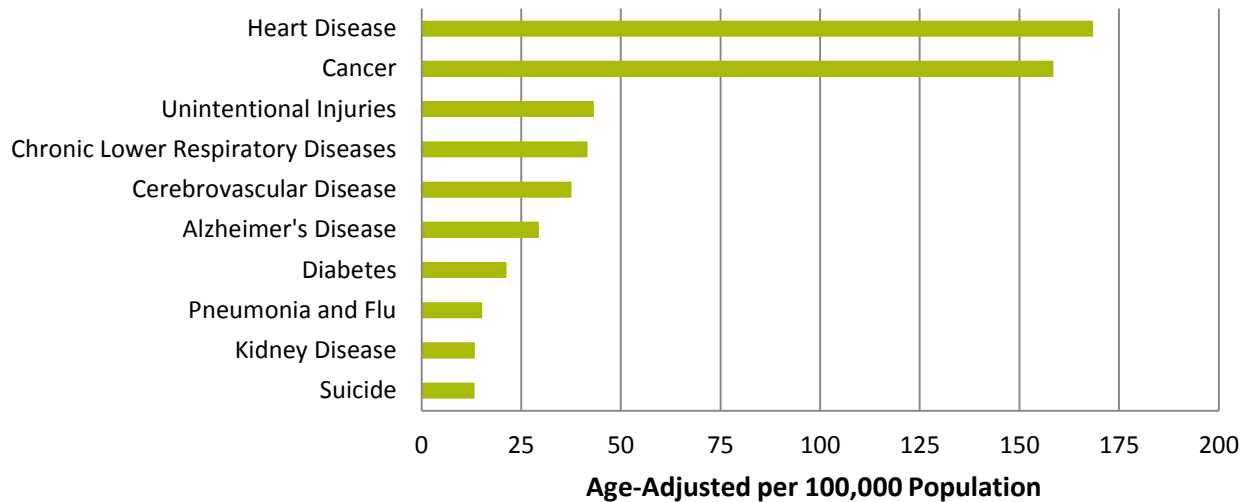


Key: YPLL = years of potential life lost.

Source: Centers for Disease Control and Prevention, [National Center for Injury Prevention and Control](https://webappa.cdc.gov/sasweb/ncipc/ypll10.html), Years of Potential Life Lost (YPLL) Reports, 1999 – 2015. <https://webappa.cdc.gov/sasweb/ncipc/ypll10.html>.

- The three leading diseases and injuries contributing to years of potential life lost (YPLLs) (unintentional injury, cancer, and heart disease) did not change between 2005 and 2015 (Figure 3).
- From 2005 to 2015, there was a 22% increase in YPLLs caused by suicide, moving its rank from number 5 to number 4.
- From 2005 to 2015, YPLLs caused by HIV decreased by 65%, moving from 8 to 11 in the ranking (data not shown). Diabetes moved from 11 to 9 in the ranking.

Figure 4. Leading causes of death for the total population, United States, 2015



Source: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System - Mortality. https://www.cdc.gov/nchs/data/databriefs/db267_table.pdf#3.

- Heart disease, cancer, cerebrovascular disease, chronic lower respiratory diseases, unintentional injuries, and diabetes were among the leading causes of death for the overall U.S. population (Figure 4).
- Causes of death vary by population. For example, suicide is the second leading cause of death for American Indian and Alaska Native populations for ages 10-14, 15-19, 20-24, and 25-34 (data not shown).

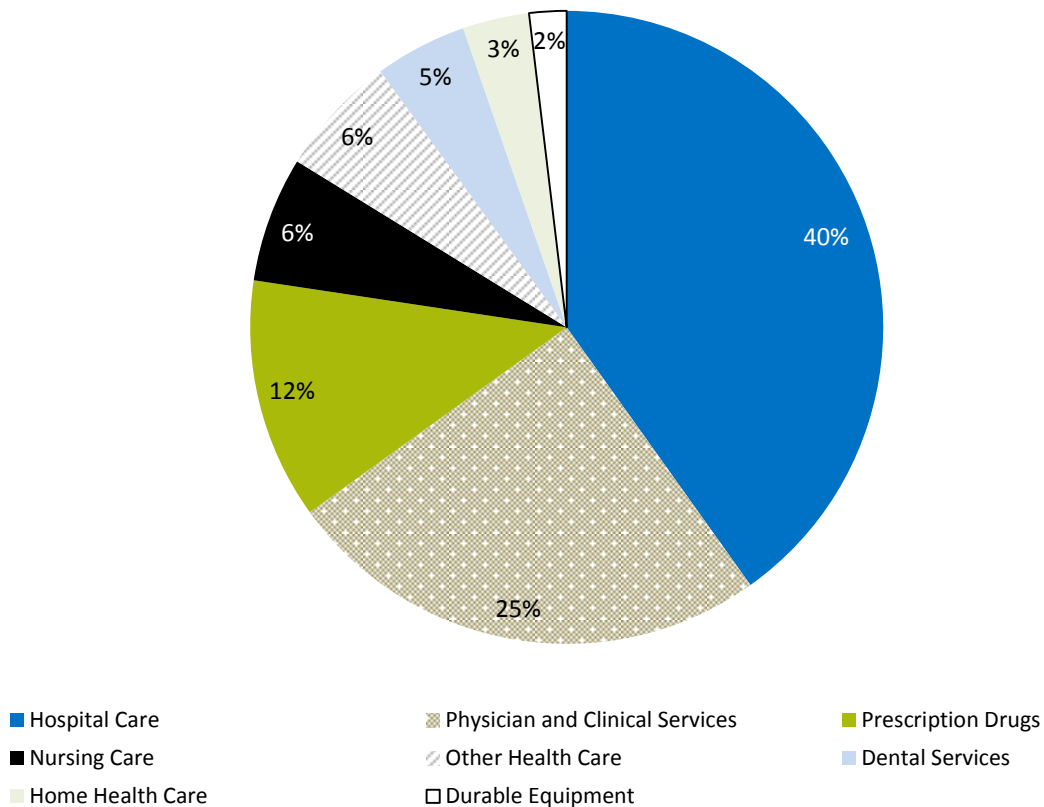
The years of potential life lost and leading causes of death illustrate the burden of disease experienced by the American people. Findings highlighted in the Trends in Quality section of this report attempt to quantify progress made in improving the quality of care and reducing disparities in health care and ultimately reducing disease burden.

Aim 3: Making Care Affordable

Making Care Affordable requires smarter spending of limited health care dollars. Health care is costly. In 2015, U.S. health care spending increased 5.8 percent to reach \$3.2 trillion, or \$9,990 per person. In addition, the overall share of the U.S. economy devoted to health care spending was 17.8 percent in 2015, up from 17.4 percent in 2014 (CMS, 2015).

Multiple sources of fragmented expenditures channeled to both the public and private sectors of care make it challenging to control growth in health care costs. New delivery system models such as the patient-centered medical home (PCMH) have been developed that coordinate care across sectors and may help ensure that money is spent efficiently.

Figure 5. Personal health care expenditures, by type of expenditure, 2014

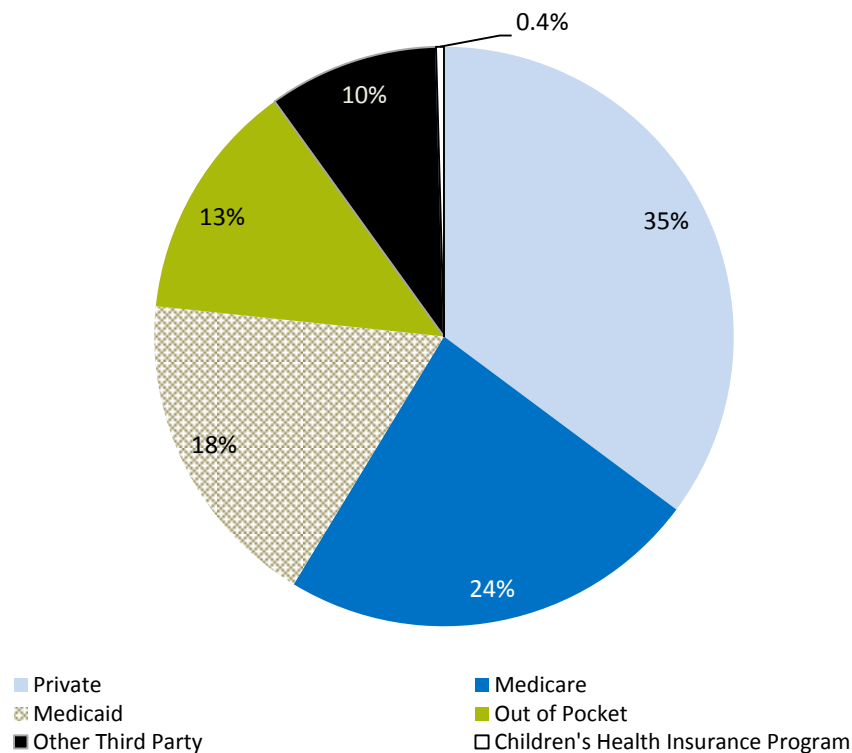


Source: CMS, National Health Expenditures Account, as reported in NCHS, *Health, United States, 2015*. <https://www.cdc.gov/nchs/hus/index.htm>.

Note: Personal health care expenditures are outlays for goods and services related directly to patient care. These expenditures are total national health expenditures minus expenditures for investment, health insurance program administration and the net cost of insurance, and public health activities.

- In 2014, hospital care expenditures were \$971.8 billion, 40% of personal health care expenditures (Figure 5).
- Expenditures for physician and clinical services were \$603.7 billion while expenditures for dental services were \$113.5 billion, 25% and 5% of personal health care expenditures, respectively.
- Prescription drug expenditures were \$297.7 billion, 12% of personal health care expenditures.
- Nursing care facility expenditures were \$155.6 billion and home health care expenditures were \$83.2 billion, or 6% and 3% of personal health care expenditures, respectively.

Figure 6. Personal health care expenditures, by source of funds, 2014



Source: Centers for Medicare & Medicaid Services, National Health Expenditures Account, as reported in *Health, United States, 2015*.

Note: Personal health care expenditures are outlays for goods and services related directly to patient care. These expenditures are total national health expenditures minus expenditures for investment, health insurance program administration and the net cost of insurance, and public health activities.

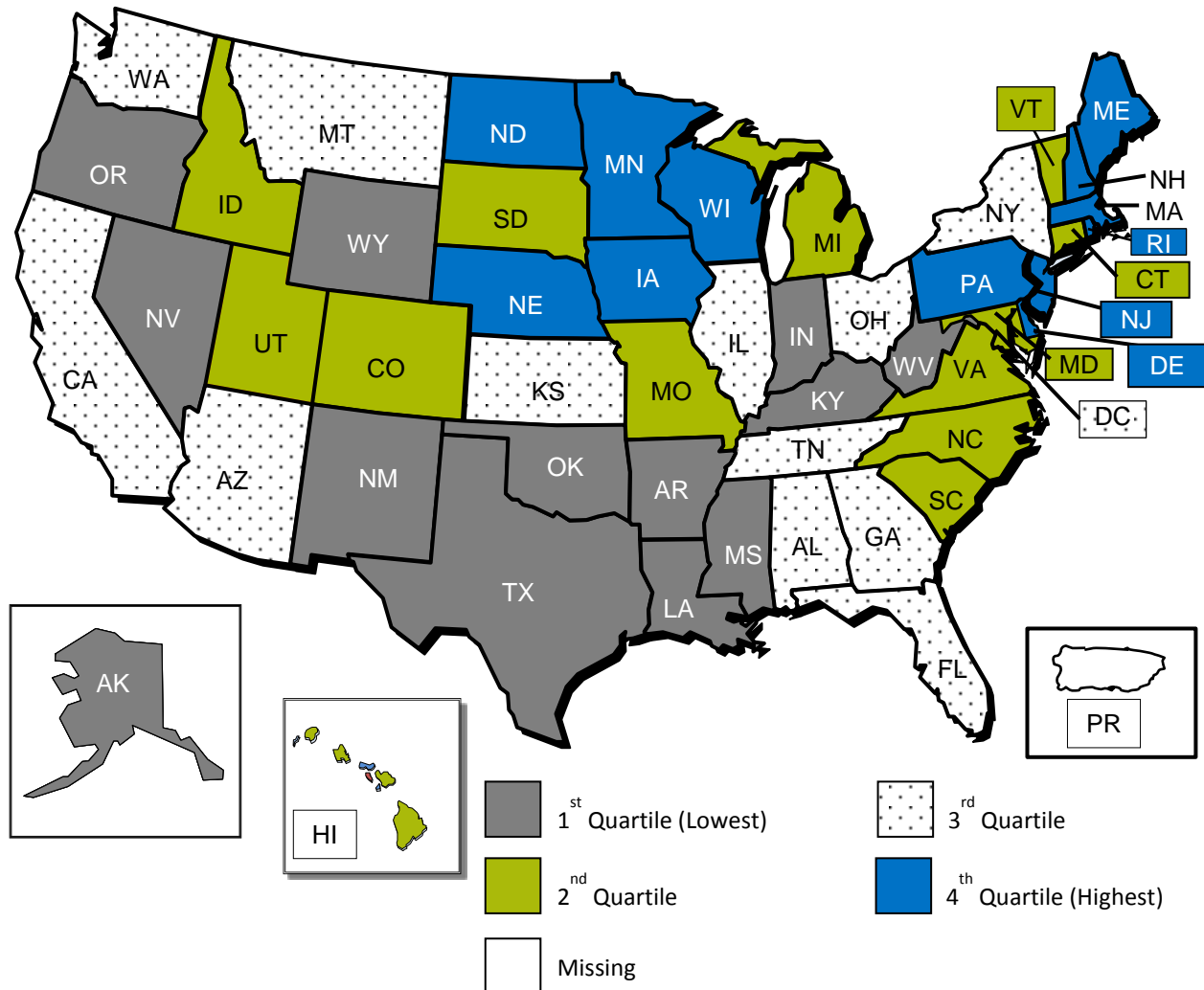
- In 2014, private insurance accounted for 35% of personal health care expenditures, followed by Medicare, Medicaid, and out of pocket (Figure 6).
- Sources of funds varied by type of expenditure (data not shown):
 - Private insurance accounted for 37% of hospital, 42% of physician, 10% of home health, 8% of nursing home, and 43% of prescription drug expenditures.
 - Medicare accounted for 26% of hospital, 23% of physician, 42% of home health, 23% of nursing home, and 29% of prescription drug expenditures.
 - Medicaid accounted for 17% of hospital, 11% of physician, 36% of home health, 32% of nursing home, and 9% of prescription drug expenditures.
 - Out-of-pocket payments accounted for 3% of hospital, 9% of physician, 9% of home health, 27% of nursing home, and 15% of prescription drug expenditures.

Personal health expenditures illustrate the economic burden of disease and barriers to access to health care. Findings from the Access and Disparities in Access to Health Care section of this report show the progress and opportunities for improvement in overcoming these barriers.

Variation in Health Care Quality and Disparities

State-level data show that health care quality and disparities vary widely depending on state and region. Although a state may perform well in overall quality, the same state may face significant disparities in health care access and quality.

Figure 7. Overall quality of care, by state, 2014-2015

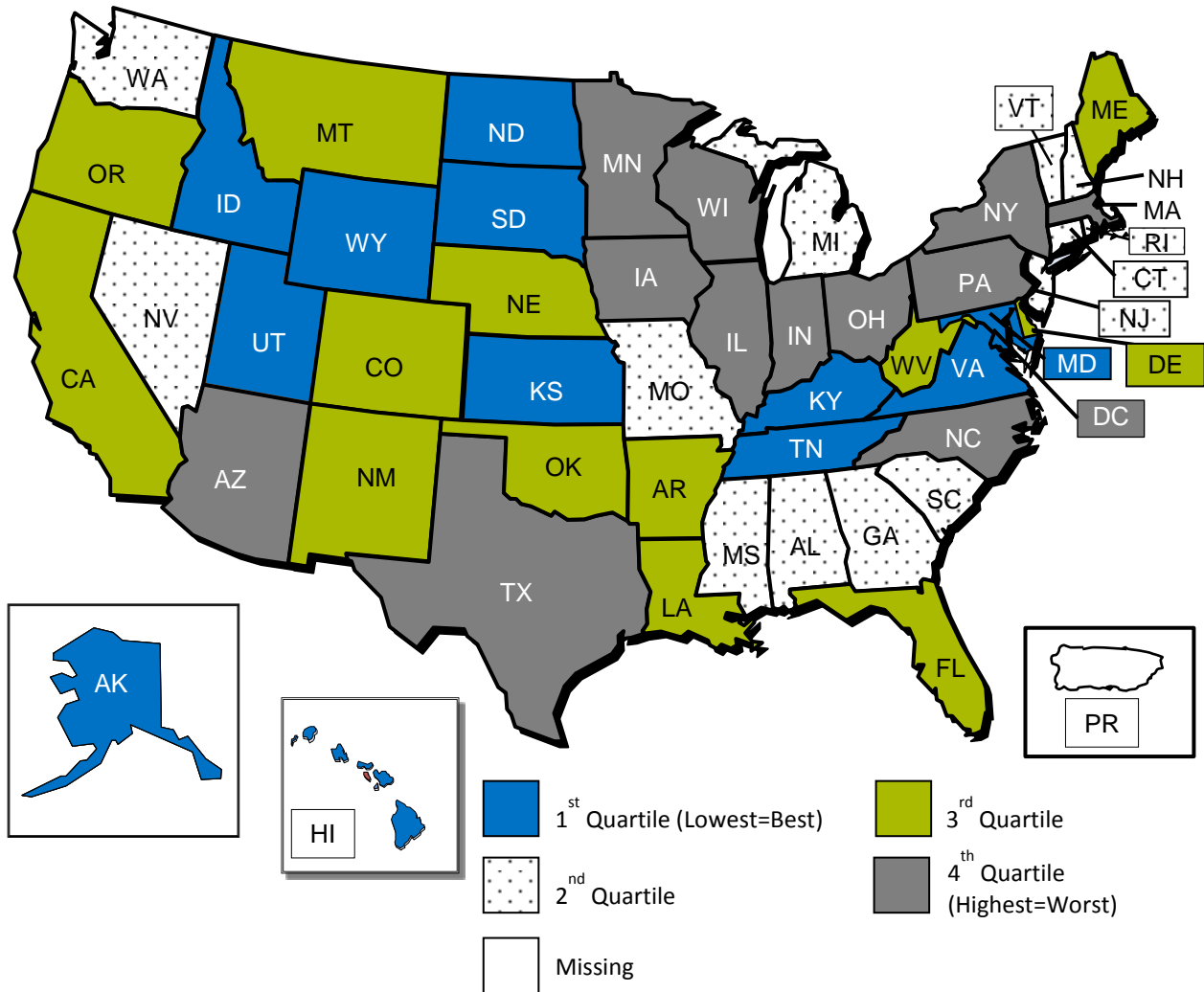


Note: All measures in the report with state-level data are used to compute an overall quality score for each state based on the number of quality measures above, at, or below the average across all states. States were ranked and quartiles are shown on the map. The states with the worst quality score are in the first quartile, and states with the best quality score are in the fourth quartile.

- The overall quality of care varied across the United States (Figure 7):
 - Some states in the Midwest (Iowa, Minnesota, Nebraska, North Dakota, and Wisconsin) and some in the Northeast (Delaware, Maine, Massachusetts, New Hampshire, New Jersey, Pennsylvania, and Rhode Island) had the highest overall quality scores. Scores were based on the number of measures that were better, same, or worse than the national average for each measure.

- Many Southern and Southwestern states (Arkansas, Kentucky, Louisiana, Mississippi, New Mexico, Oklahoma, Texas, and West Virginia), several Western states (Nevada, Oregon, and Wyoming), and one Midwestern state (Indiana) had the lowest overall quality scores.

Figure 8. Average differences in quality of care for Blacks, Hispanics, and Asians compared with Whites, by state, 2014-2015



Note: All measures in this report that had state-level data to assess racial and ethnic disparities were used. Separate quality scores were computed for Whites, Blacks, Hispanics, and Asians. For each state, the average of the Black, Hispanic, and Asian scores was divided by the White score. State-level AI/AN data were not available for analysis. States were ranked on this ratio, and quartiles are shown on the map. Disparity scores were not risk adjusted for population characteristics in each state. The states with the worst disparity score are in the fourth quartile, and states with the best disparity score are in the first quartile.

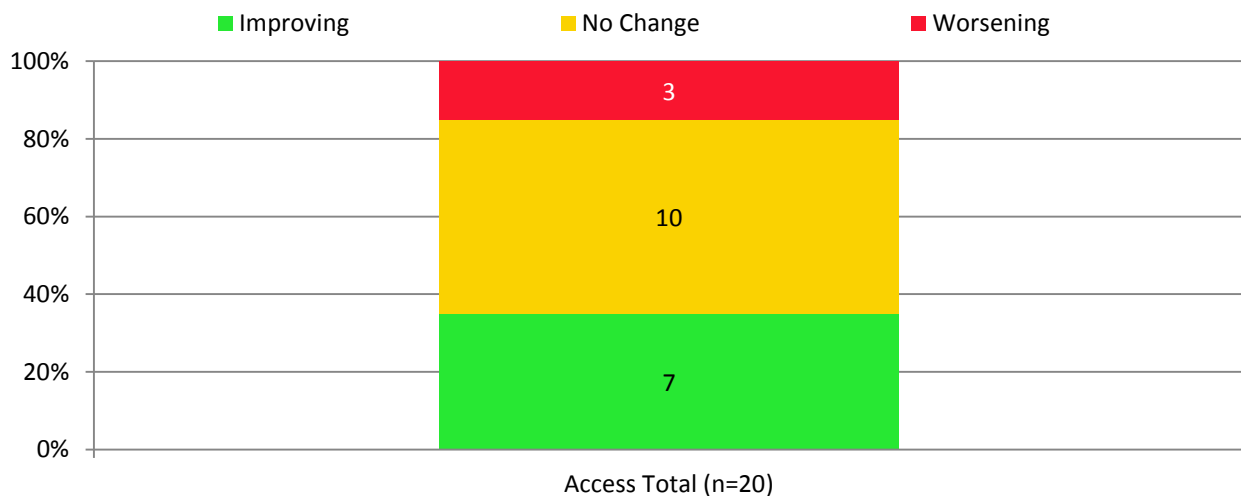
- Racial and ethnic disparities varied across the United States (Figure 8):
 - Some Western and Midwestern states (Idaho, Kansas, North Dakota, South Dakota, Utah, and Wyoming) and several Southern states (Kentucky, Tennessee, and Virginia) had the fewest racial and ethnic disparities overall.

- Several Northeastern states (Massachusetts, New York, and Pennsylvania), some Midwestern states (Illinois, Indiana, Iowa, Minnesota, Ohio, and Wisconsin), one Southern state (North Carolina), one Southwestern state (Texas), and one Western state (Arizona) had the most racial and ethnic disparities overall.

ACCESS AND DISPARITIES IN ACCESS TO HEALTH CARE

To obtain high-quality care, Americans must first gain entry into the health care system. Measures of access to care tracked in the QDR include having health insurance, having a usual source of care, encountering difficulties when seeking care, and receiving care as soon as wanted. Historically, Americans have experienced variable access to care based on race, ethnicity, socioeconomic status, age, sex, disability status, sexual orientation, gender identity, and residential location.

Figure 9. Number and percentage of access measures for which measure trends were better, same, or worsening, 2014



Key: n = number of measures.

Note: The measures represented in this chart are available in Appendix B.

Most access measures did not experience significant improvement over time (2000-2014; Figure 9; Appendix A, Graph 1 shows examples). Some of these measures are:

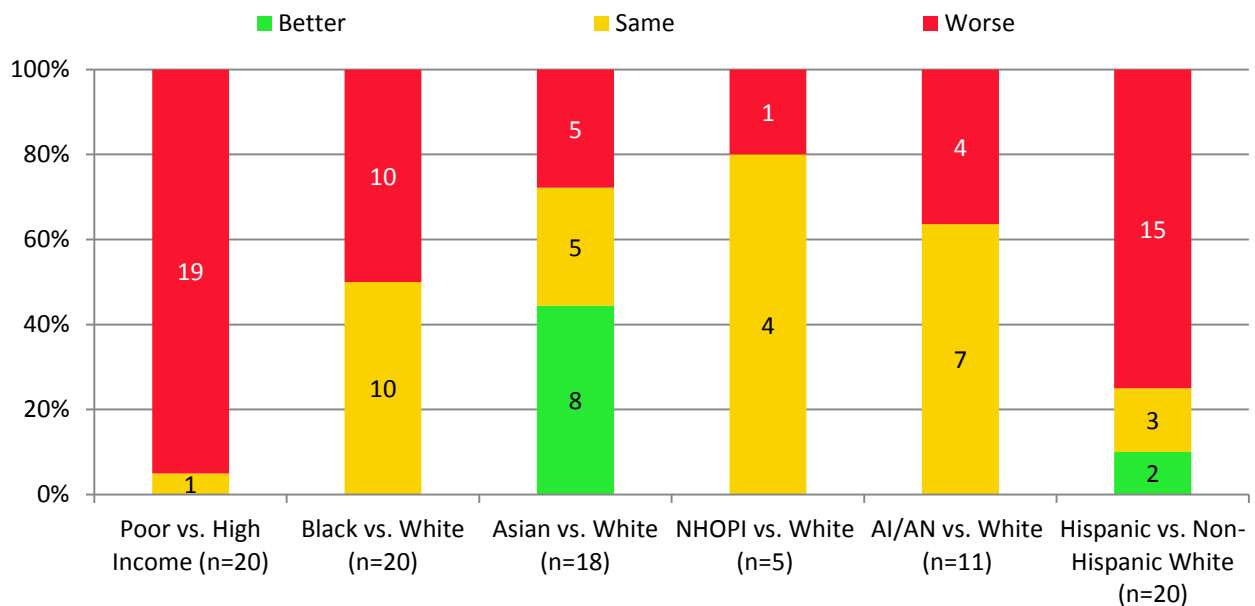
- Adults who needed care right away for an illness, injury, or condition in the last 12 months who sometimes or never got care as soon as needed.
- People who were unable to get or delayed in getting needed prescription medicines in the last 12 months.
- People with a usual primary care provider.

There were significant gains in having health insurance. Several subgroups did better than reference groups in 2014 on health insurance coverage measures for people under 65. Most of the recent increases in insurance coverage for people under 65 were due to Medicaid and Marketplace coverage (Selden, et al., 2016; Vistnes & Miller, 2016).

Most disparities showed no statistically significant changes, with a few exceptions, including the following measures that improved over time. The disparity between the comparison groups and reference groups are shrinking for the following measures:

- People under age 65 with any private health insurance:
 - Adults with limitations in basic activities vs. neither basic nor complex activities
- Adults age 65 and over with any private health insurance:
 - Hispanics vs. non-Hispanic Whites
 - American Indians/Alaska Natives (AI/ANs) vs. Whites
 - Blacks vs. Whites
- People with a usual source of care, excluding hospital emergency rooms, who has office hours at night or on weekends:
 - AI/ANs vs. Whites
- Adults who had a doctor’s office or clinic visit in the last 12 months and needed care, tests, or treatment who sometimes or never found it easy to get the care, tests, or treatment:
 - Asians vs. Whites

Figure 10. Number and percentage of access measures for which members of selected groups experienced better, same, or worse access to care compared with reference group, 2013-2015

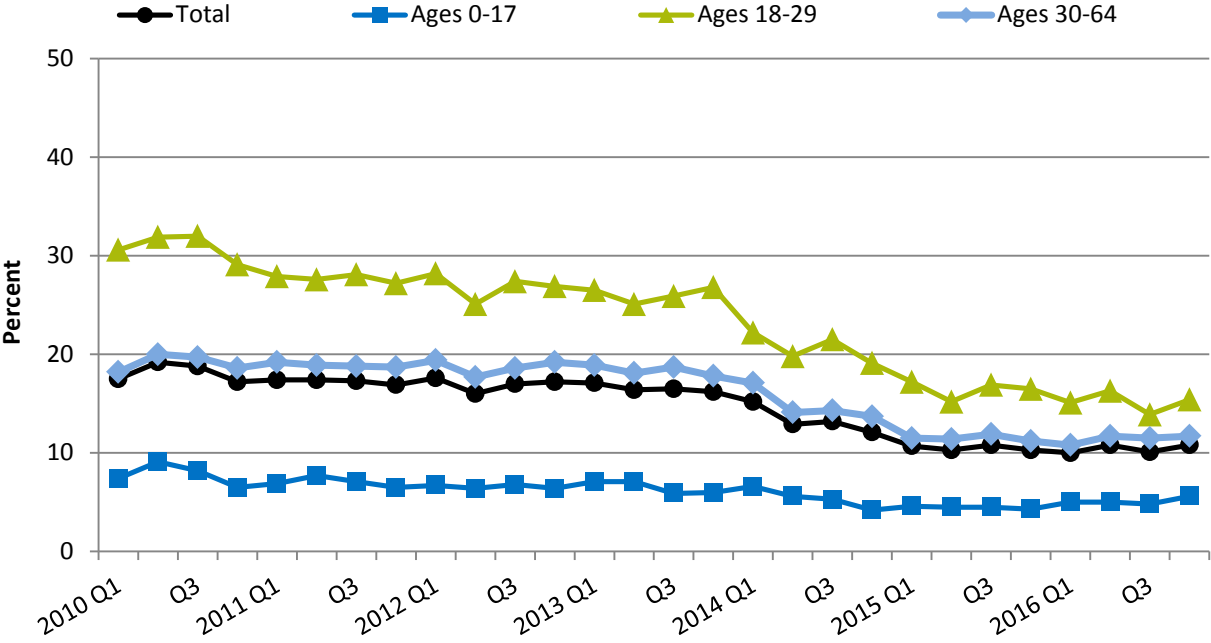


Key: n = number of measures; NHOPI = Native Hawaiian or Other Pacific Islander; AI/AN = American Indian or Alaska Native.

Note: The measures represented in this chart are available in Appendix B. The number of measures is based on the measures that have data for each population group.

- Poor people (at or below 100% of the Federal Poverty Level [FPL]) experienced worse access to care compared with high-income people for all access measures except one measure (Figure 10): People with a usual source of care, excluding hospital emergency rooms, with office hours at night or on weekends (AHRQ, Medical Expenditure Panel Survey [MEPS]).
- Blacks experienced worse access to care compared with Whites for 50% of measures.
- Asians experienced worse access to care compared with Whites for 28% of measures and better access for 44% of measures.
- Among the 11 measures that had data for AI/ANs, 64% showed no statistically significant differences between AI/ANs and Whites.
- Hispanics experienced worse access to care compared with Whites for 75% of measures.

Figure 11. Improving: People ages 0-64 who were uninsured at the time of interview, by age, 2010-2016, by quarter



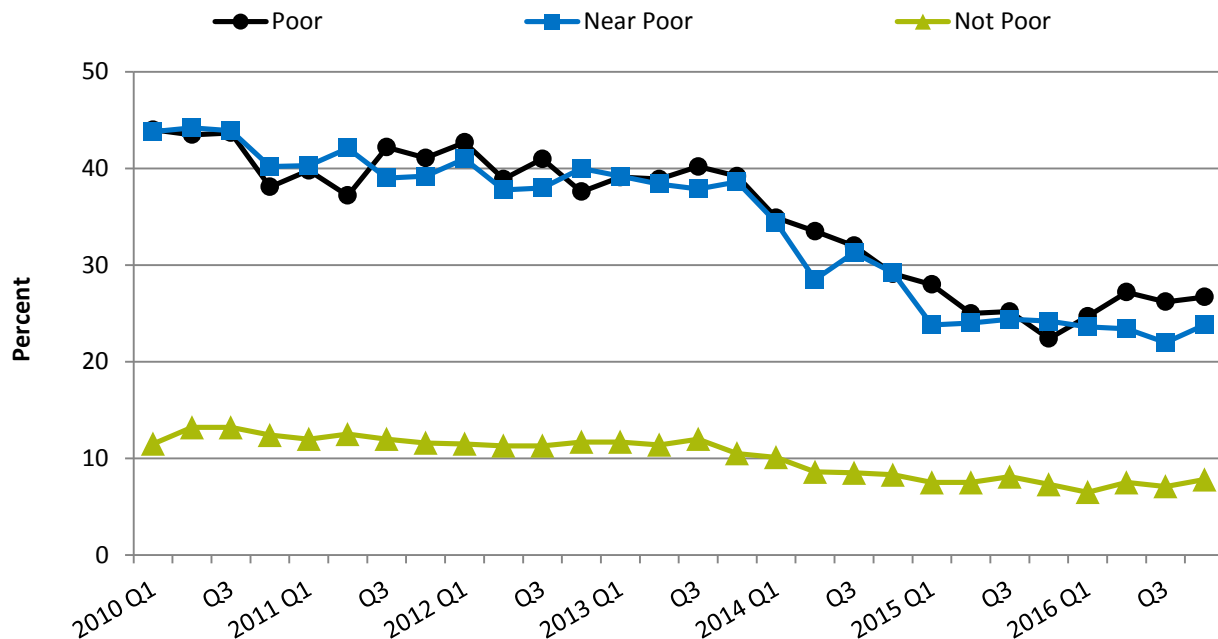
Key: Q = quarter.

Source: National Center for Health Statistics, National Health Interview Survey Early Release Program, January 2010-December 2016.

Note: For this measure, lower rates are better.

- From the first quarter of 2010 to the fourth quarter of 2016, the percentage of people ages 18-29 years who were uninsured at the time of interview decreased from 30.6% to 15.4% (Figure 11).
- During this time, the percentage of people who were uninsured at the time of interview also decreased for all other age groups under 65.

Figure 12. Improving: Adults ages 18-64 who were uninsured at the time of interview, by poverty status, 2010-2016, by quarter



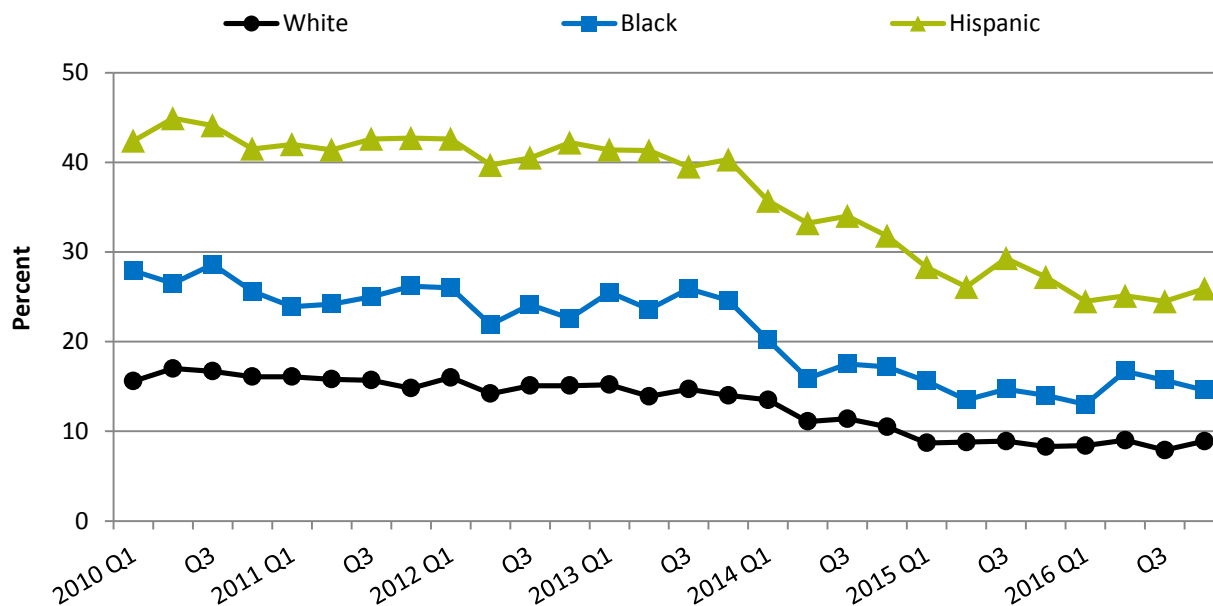
Key: Q = quarter.

Source: National Center for Health Statistics, National Health Interview Survey Early Release Program, January 2010-December 2016.

Note: For this measure, lower rates are better. Poverty categories are based on the Federal Poverty Level (FPL). Poor = below the FPL; near poor = 100% to <200% of the FPL; not poor = 200% or more of the FPL.

- From the first quarter of 2010 to the fourth quarter of 2016, the percentage of people ages 18-64 who were uninsured at the time of interview decreased for all poverty status groups (Figure 12). The percentage of uninsured near-poor adults dropped from 43.8% to 23.8% during this time.
- In quarter 4 of 2016, 26.7% of poor adults were uninsured at the time of interview compared with 7.8% of adults who were not poor.

Figure 13. Improving: Adults ages 18-64 who were uninsured at the time of interview, by race/ethnicity, 2010-2016



Key: Q = quarter.

Source: National Center for Health Statistics, National Health Interview Survey Early Release Program, January 2010-December 2016.

Note: For this measure, lower rates are better. White and Black are non-Hispanic. Hispanic includes all races. Data for Asian and Pacific Islanders and American Indians/Alaska Natives are not available for this measure.

- From the first quarter of 2010 to the fourth quarter of 2016, the percentage of people ages 18-64 who were uninsured at the time of interview declined for Whites (15.6% to 8.9%), Blacks (27.9% to 14.6%), and Hispanics (42.4% to 25.9%) (Figure 13).
- In addition, the disparities between Blacks and Whites and Hispanics and Whites were getting smaller over time.

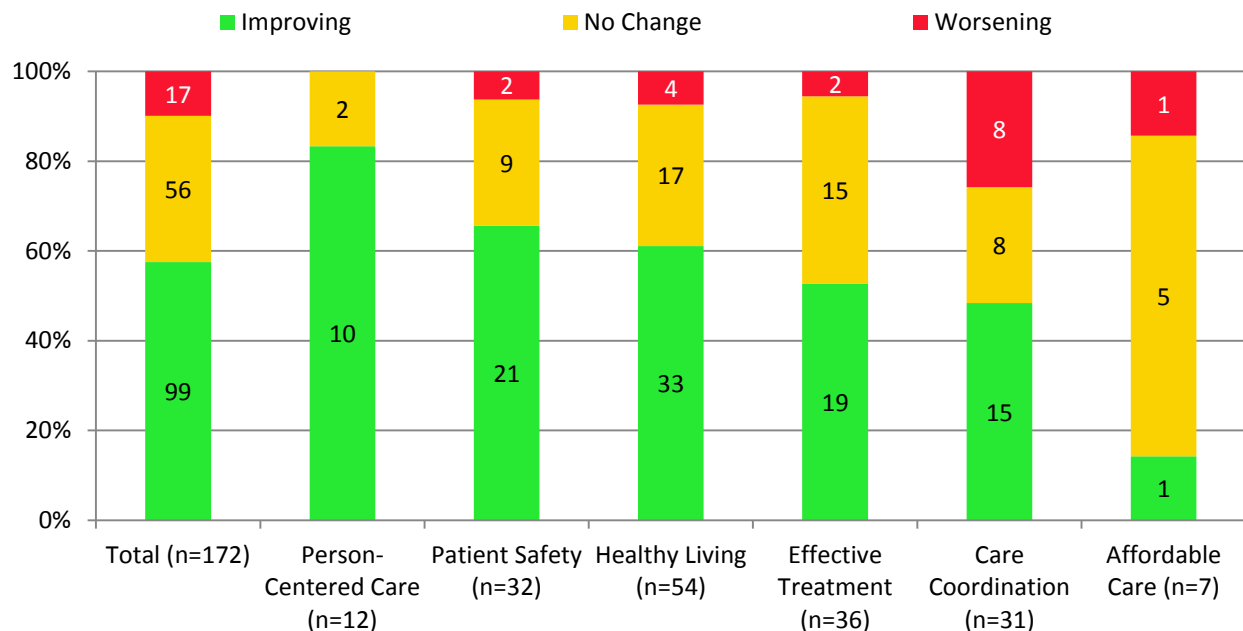
QUALITY AND DISPARITIES IN QUALITY OF HEALTH CARE

The QDR examines quality and disparities based on the six priority areas and access. The findings below provide examples of measures that showed large disparities, worsening disparities, or large improvements over time. A comprehensive list of measures improving, worsening, or staying the same, as well as disparities with reference groups and trends in disparities, can be found in Appendix B.

Trends in Quality

Quality of health care improved overall through 2014, but the pace of improvement varied by priority area.

Figure 14. Number and percentage of all quality measures that were improving, not changing, or worsening, total and by priority area, from 2000 through 2014



Key: n = number of measures.

Note: Most measures are tracked from 2000 through 2014 and others begin in later years. For more information, please review Appendix B.

Trends in Person-Centered Care

Person-centered care means defining success not just by the resolution of clinical symptoms but also by whether patients achieve their desired outcomes. About 80% of person-centered care measures were improving overall. For example, overall trends from 2002 to 2014 showed significant improvement in provider-patient communication for adults who had doctor visits in the past 12 months (Appendix A, Graph 2) (AHRQ, Medical Expenditure Panel Survey [MEPS]).

Trends in Patient Safety

Ensuring patient safety means to provide care free from accidental injury due to medical care or medical errors (Kohn, et al., 2000). The QDR tracks a number of patient safety measures organized around the major health care settings that must measure, understand, and improve health care so that Americans can be cared for in a safer health care environment. Measures include hospital-acquired infections, pressure ulcers in nursing homes, inappropriate prescription medications, and hospital readmissions.

Almost two-thirds of patient safety measures were improving overall. However, no statistically significant changes overall were observed in measures such as adult hospital patients with an anticoagulant-related adverse drug event to warfarin. In 2009, the rate for this measure was 4.4%

and in 2014 the rate was 4.8% (AHRQ and Centers for Medicare & Medicaid Services [CMS], Medicare Patient Safety Monitoring System [MPSMS]).

Several patient safety measures improved, including:

- Hospital admissions with central venous catheter-related bloodstream infections, which declined from 1.9 per 1,000 discharges in 2008 to 0.67 per 1,000 discharges in 2014 (Appendix A, Graph 3) (AHRQ, Healthcare Cost and Utilization Project [HCUP], Nationwide Inpatient Sample [NIS], 2008-2011; State Inpatient Databases [SID], 2012-2014; and AHRQ Quality Indicators, version 4.4).
- The percentage of adult patients receiving hip joint replacement due to fracture who had adverse events, which improved from 16.4% in 2009 to 9.8% in 2014 (Appendix A, Graph 3) (AHRQ and CMS, MPSMS).
- The percentage of adult hospital patients with an anticoagulant-related adverse drug event to low-molecular-weight heparin and factor Xa, which improved from 5.6% in 2009 to 3.5% in 2014 (Appendix A, Graph 4) (AHRQ and CMS, MPSMS).

Trends in Healthy Living

Healthy living measures in the QDR track process measures that focus on helping individuals maintain healthy lifestyles and wellness in their communities. These include measures for clinical preventive services, maternal and child care, obesity prevention, functional status preservation and rehabilitation, and supportive and palliative care.

About 60% of healthy living measures were improving overall, including adolescent vaccination. From 2008 to 2014, the percentage of adolescents ages 16-17 who received meningococcal conjugate vaccine increased from 38.6% to 79.1% (Appendix A, Graph 5) (Centers for Disease Control and Prevention [CDC], National Center for Immunizations and Respiratory Diseases and National Center for Health Statistics [NCHS], National Immunization Survey – Teen). However, no statistically significant changes overall were observed for influenza vaccinations for high-risk adults.

About 7% of all measures showed worsening performance, including one women's health measure and one children's health measure. In 2000, 87.5% of women ages 21-65 received a Pap smear in the last 3 years, but in 2013, 80.7% of women reported receiving this test (Appendix A, Graph 6). From 2002 to 2014, the percentage of children ages 12-19 with obesity increased from 16% to 20.5% (Appendix A, Graph 6) (CDC, NHANES).

Trends in Effective Treatment

Delivering optimal treatments for acute illness can help reduce the consequences of illness and promote the best recovery possible. The QDR effective treatment measures include process measures for preventive care, treatment of acute illness, and chronic disease management. Some outcome measures are also tracked in the QDR since timely treatment of acute illness and injury and meticulous management of chronic disease can positively affect mortality, morbidity, and quality of life.

More than half of Effective Treatment measures were improving. However, several areas show no statistically significant changes overall, including diabetes care, treatment for illicit drug use, and treatment for alcohol problems for people age 12 and over who needed such treatment.

Trends in Care Coordination

Care coordination is a conscious effort to ensure that all key information needed to make care decisions is available to health care consumers and providers. Care coordination is defined as the deliberate organization of patient care activities between two or more participants involved in a person's care to facilitate appropriate delivery of health care services (Shojania, et al., 2007). Coordinating basic patient information among providers is essential so that important information is not ignored, lost, or never communicated. Incomplete or inaccurate information and lack of followup care leads to confusion, higher costs, and misuse of medications, tests, and therapies for all patients, which results in poor outcomes (Carney Moore, et al., 2008).

About a quarter of all care coordination measures showed worsening performance. For example, avoidable admissions for hypertension per 100,000 population age 18 and over increased from 46.1 in 2000 to 54.2 in 2014 (AHRQ, HCUP, NIS, SID). From 2007 to 2014, the rate of emergency department visits with a principal diagnosis related to mental health increased from 1,063 per 100,000 population to 1,391 per 100,000 population (AHRQ, HCUP, Nationwide Emergency Department Sample [NEDS]).

About half of Care Coordination measures were improving overall. Among the best performing measures were hospital patients with heart failure who were given complete written discharge instructions. In 2013, 94.6% of patients received written discharge instructions, an increase from 57.4% of patients in 2005 (CMS, Clinical Data Warehouse). The rate of admissions for angina without cardiac procedure per 100,000 population age 18 and over showed one of the largest improvements, from 81.5 in 2000 to 11.9 in 2014 (AHRQ, HCUP, NIS, SID).

Trends in Care Affordability

Health insurance is designed to protect individuals from the burden of high health care costs. However, even with health insurance, the financial burden of health care can be high and is increasing (Banthin & Bernard, 2006). High premiums and out-of-pocket payments can be a significant barrier to accessing needed medical treatment, resulting in higher comorbidity and lower quality of life (Henrikson, et al., 2017). In addition, the advent of high-deductible health plans is placing a financial burden on many people, especially those with chronic conditions (Reed, et al., 2012; Zimmerman, 2011). Ensuring health care is affordable remains an important factor in achieving access to high-quality health care.

Data presented in this report show that about 70% of care affordability measures had no statistically significant changes overall. For example, from 2006 to 2014, no statistically significant changes were observed in the percentage of people under age 65 whose family's health insurance premiums and out-of-pocket medical expenditures were more than 10% of total family income (17.5% to 16.1%) (AHRQ, MEPS).

Trends in Disparities

Although some gaps are getting smaller, disparities remain.

Measures in this report were analyzed by comparing race/ethnicity, income, and insurance status with their reference groups in order to show disparities that may exist between these groups.

Figure 15. Number and percentage of quality measures for which members of selected groups experienced better, same, or worse quality of care compared with reference group (White) in 2013-2015

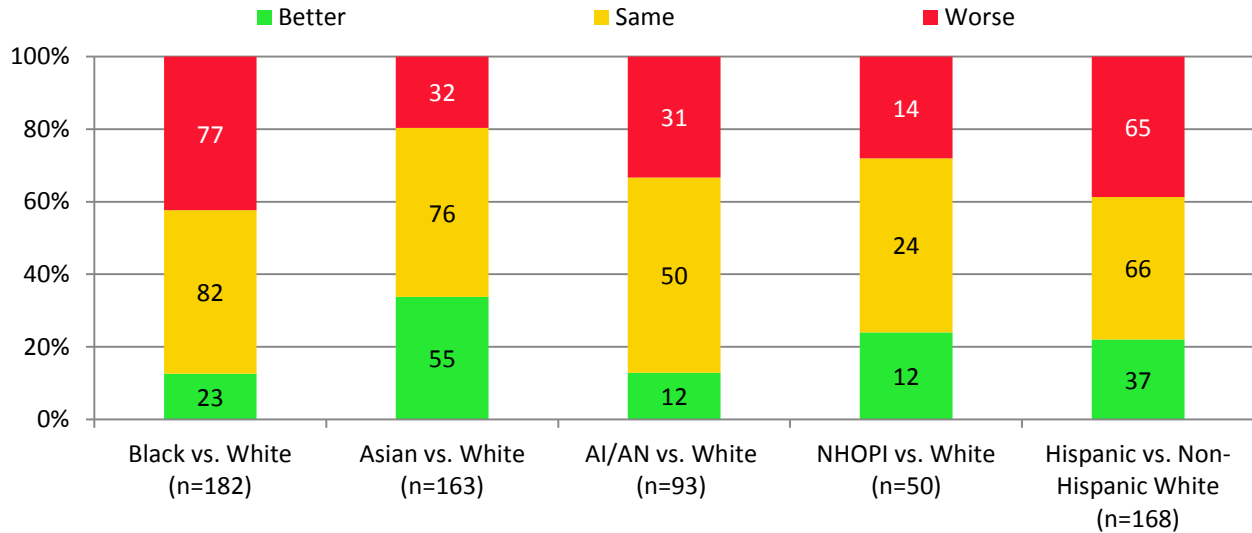
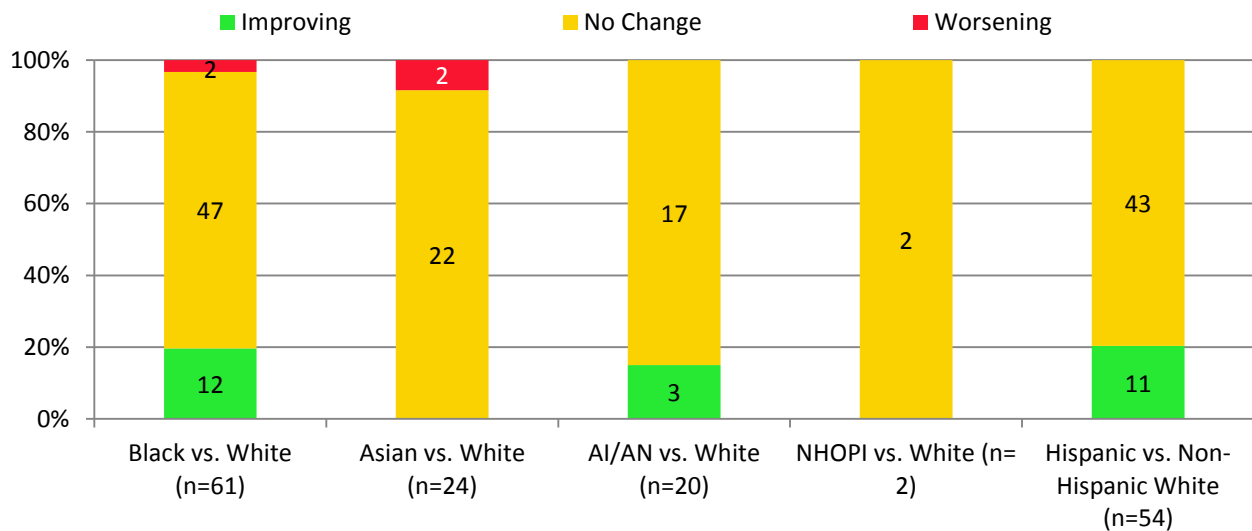


Figure 16. Number and percentage of quality measures with disparity at baseline for which disparities related to race and ethnicity were improving, not changing, or worsening (2000 through 2014-2015)



Key: n = number of measures; AI/AN = American Indian or Alaska Native; NHOPI = Native Hawaiian or Other Pacific Islander.

Figure 17. Number and percentage of quality measures for which income groups experienced better, same, or worse quality of care compared with reference group (high income), 2014-2015

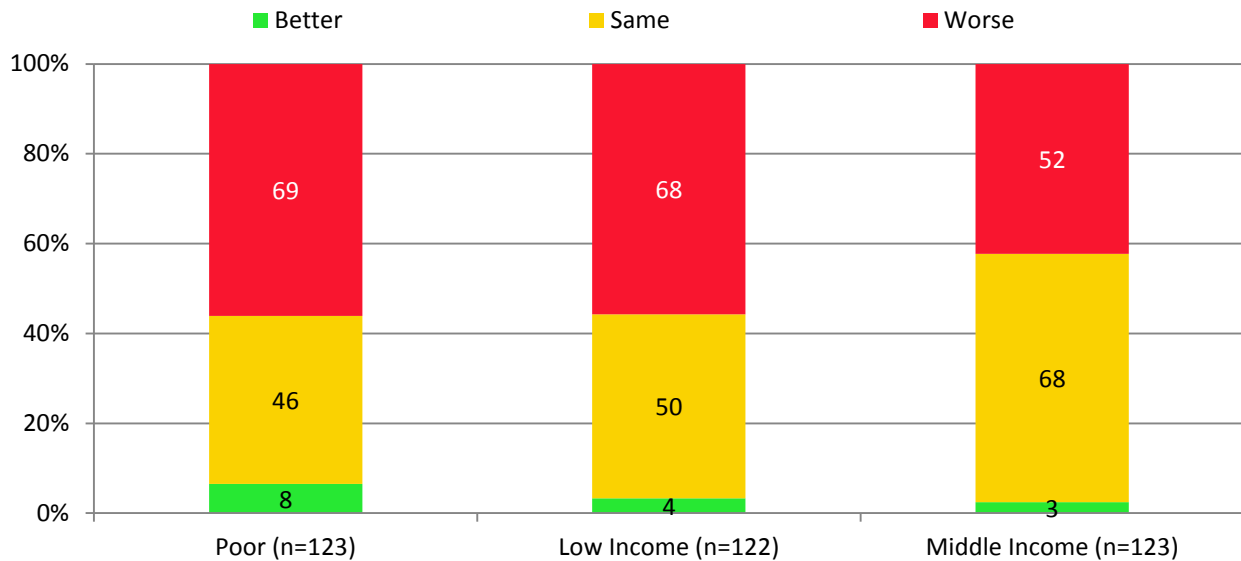
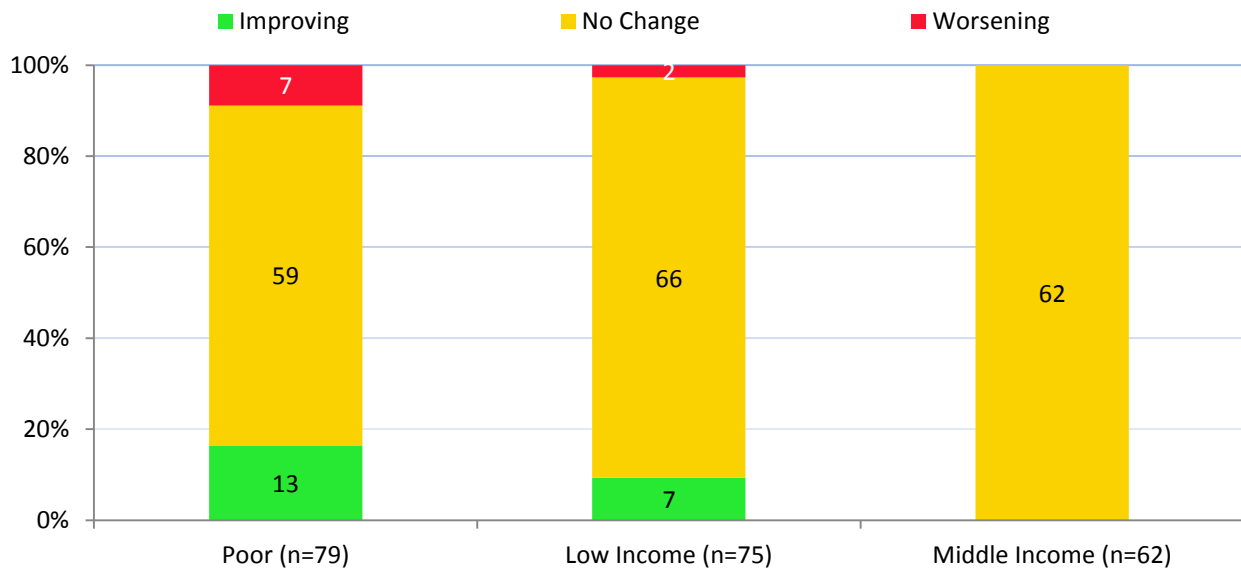
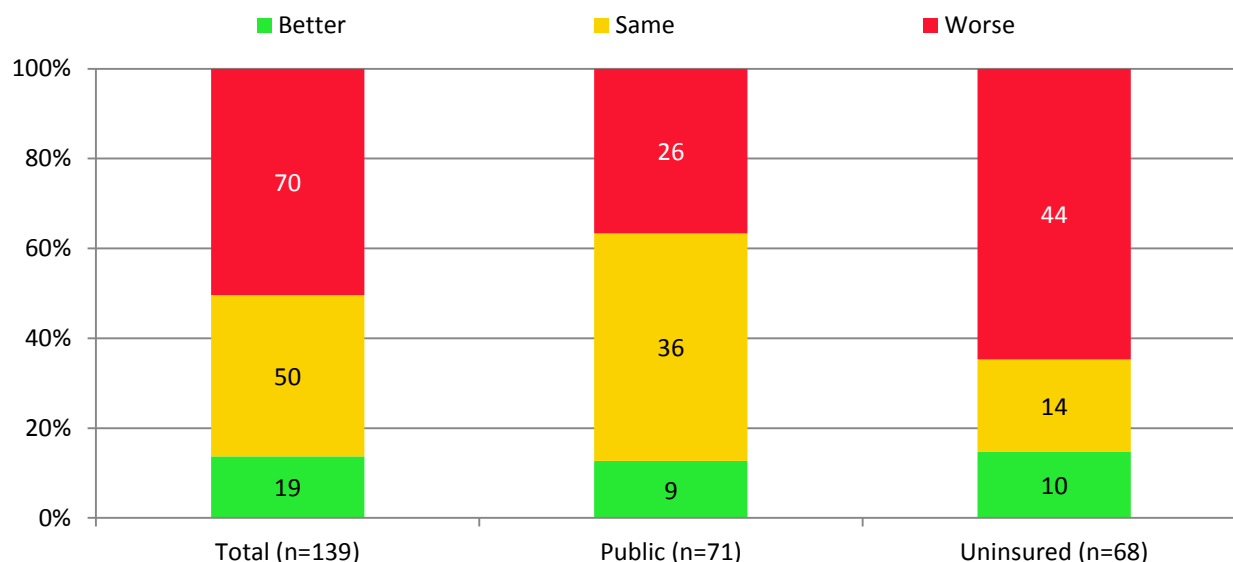


Figure 18. Number and percentage of quality measures with disparity at baseline for which disparities related to income were improving, not changing, or worsening (2000 through 2014-2015)



Key: n = number of measures.

Figure 19. Number and percentage of quality measures for which insurance groups experienced better, same, or worse quality of care compared with reference group (privately insured), 2014-2015



Key: n = number of measures.

Overall Disparities

- There were significant disparities for poor and uninsured populations in all priority areas. Figures 15-19 show that overall, some disparities were getting smaller from 2000 through 2011-2015, but disparities persist, especially among people in poor and low-income households, uninsured people, Hispanics, and Blacks.

Disparities in Patient Safety

- While many patient safety measures were improving overall, there were significant disparities in other patient safety measures, including the percentage of older adults who received potentially inappropriate prescription medications. In 2014, the percentage of older adults who, in the calendar year, received at least 1 of 33 potentially inappropriate prescription medications was higher for adults with complex activity limitations (21.7%) compared with adults with neither basic nor complex activity limitations (8.2%) (Appendix A, Graph 8ⁱⁱⁱ) (AHRQ, MEPS).

Disparities in Care Coordination

- Although about half of care coordination measures showed improvement, the largest disparities were observed in some preventable emergency department visits. These included emergency department visits for asthma for poor children (1,515 per 100,000 population) and adults (923 per 100,000 population) compared with high-income children (549 per 100,000 population) and adults (310 per 100,000 population) in 2014 (Appendix A, Graph 9) (AHRQ, HCUP, NEDS, 2014).

ⁱⁱⁱ Not all graphs in Appendix A are cited in this report. Appendix A contains additional measures.

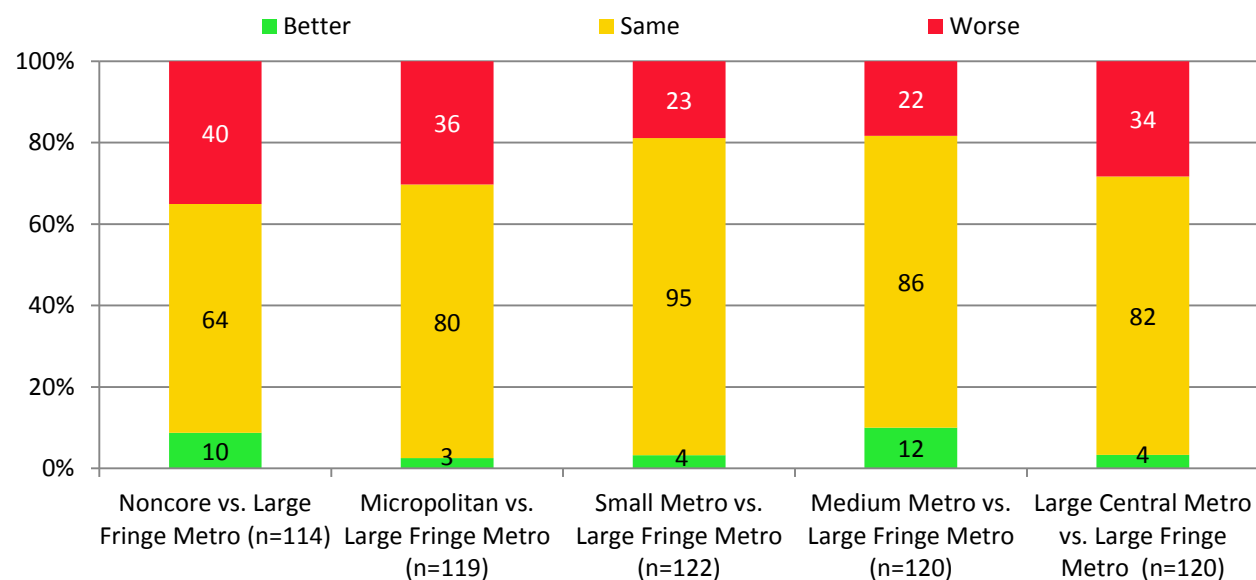
- Trends in these disparities also show worsening over time. From 2008 to 2014, the rate of poor adults who visited emergency departments for asthma increased from 809 to 923 per 100,000 population compared with high-income adults, who showed a decrease from 348 to 310. For poor children, the rate increased from 1,196 to 1,515 per 100,000 population compared with high-income children, whose rate remained stable (553 in 2008 and 549 in 2014) (Appendix A, Graph 10) (AHRQ, HCUP, NEDS, 2008-2014).
- Similarly, significant disparities in 2014 and worsening disparities from 2007 to 2014 were observed for emergency department visits for mental health among poor adults compared with high-income adults. High rates of utilization in emergency department visits may point to challenges in coordination of care and inadequate access. From 2007 to 2014, the rate of emergency department visits for mental health increased from 1,369 per 100,000 population to 1,993 per 100,000 population among poor adults. For adults with high income, the rate increased from 763 per 100,000 population to 941 per 100,000 population (Appendix A, Graph 11) (AHRQ, HCUP, NEDS, 2007-2014).

Disparities in Care Affordability

- Significant disparities persist for poor people compared with high-income people who reported they were unable to get or were delayed in getting needed medical care due to financial or insurance reasons (Appendix A, Graph 12) (AHRQ, MEPS).
- Significant disparities also persist for uninsured people compared with privately insured people who reported they were unable to get or were delayed in getting needed medical care due to financial or insurance reasons (Appendix A, Graph 13) (AHRQ, MEPS).

Variation in care persisted across the urban-rural continuum in 2014-2015.

Figure 20. Number and percentage of quality and access measures for which members of selected groups experienced better, same, or worse quality of care compared with reference group in 2014-2015, by geographic location



Key: n = number of measures.

Note: The measures represented in this chart are available in Appendix B. Definitions of geographic locations are available at https://www.cdc.gov/nchs/data_access/urban_rural.htm (refer to Appendix D).

Geographic differences vary by priority area.

Care Coordination

- Data show differences in utilization of mental health care and substance abuse treatment in large urban areas and small rural areas. High rates of utilization in emergency department visits may point to challenges in coordination of care and inadequate access.
- From 2007 to 2014, emergency department visits with a principal diagnosis related to substance abuse increased for all geographic locations except noncore, which showed no statistically significant change (AHRQ, HCUP, NEDS, 2007-2014).
- In 2014, the rate of emergency department visits with a principal diagnosis related to mental health per 100,000 population was higher for residents of large central metropolitan areas (1,435 per 100,000) than for residents of large fringe metropolitan areas (1,163 per 100,000) (Appendix A, Graph 14) (AHRQ, HCUP, NEDS, 2014).
- In 2014, residents of large central metropolitan areas (758 per 100,000) were more likely than residents of large fringe metropolitan areas (572 per 100,000) to have an emergency department visit with a principal diagnosis related to substance abuse only (Appendix A, Graph 15) (AHRQ, HCUP, NEDS, 2014).

Effective Treatment

- Data show that care for cardiac conditions remains a challenge for rural areas. In 2014, residents of micropolitan areas (384.7 per 100,000) were more likely than residents of large fringe metropolitan areas (329 per 100,000) to have hospital admissions for heart failure (Appendix A, Graph 16) (AHRQ, HCUP, National Inpatient Sample, 2014, and AHRQ Quality Indicators, version 4.4).
- Some measures, such as treatment for drug use, show worse performance in large suburbs. In 2015, residents of medium metropolitan areas (24.2%) and noncore areas (26.8%) who needed treatment for illicit drug use were more likely than residents of large fringe metropolitan areas (15.5%) to receive such treatment at a specialty facility (Appendix A, Graph 17) (Center for Behavioral Health Statistics and Quality, 2016, Results from the National Survey on Drug Use and Health: custom tables, Substance Abuse and Mental Health Services Administration, Rockville, MD).

Care Affordability

- Finding affordable care appears to have improved in some smaller populated areas. In 2014, the percentage of people who were unable to get or delayed in getting needed prescription medicines who cited financial or insurance reasons was lower in small metropolitan areas (41.0%) than in large fringe metropolitan areas (69.8%) (Appendix A, Graph 18) (AHRQ, MEPS).

LOOKING FORWARD

The *National Healthcare Quality and Disparities Report* (QDR) continues to track the nation's performance on health care access, quality, and disparities. The QDR data demonstrate significant progress in some areas and identify other areas that merit more attention where wide variations persist. The number of measures in each priority area varies, and some measures carry more significance than others as they affect more people or have more significant consequences. But the numbers below are a way to quantify and illustrate progress toward achieving accessible, high-quality and affordable care at the national level using the available nationally representative data.

This report shows that while the performance for most access measures did not change significantly over time (2000-2014), the insurance coverage rates did improve (2000-2016). Quality of health care improved in most areas but some disparities still persist, especially for poor and low-income households and those without health insurance.

U.S. Department of Health and Human Services (HHS) agencies are working on research and conducting programs in many of the priority areas, most notably:

- **Patient Safety.** The [National Scorecard on Rates of Hospital-Acquired Conditions 2010 to 2015](#) showed a 21 percent decline in hospital-acquired conditions, due to hospitals' increased focus on safety, spurred in part by Medicare payment incentives and catalyzed by the HHS Partnership for Patients initiative. Future improvements in patient safety are expected as ambulatory settings focus on improving patient safety. A new AHRQ resource, [Toolkit to Improve Safety in Ambulatory Surgery Centers](#), helps ambulatory surgery centers (ASCs) make care safer for their patients. ASCs can use the toolkit to apply the proven principles and methods of AHRQ's Comprehensive Unit-based Safety Program (CUSP) to prevent surgical site infections and other complications and improve safety culture in their facilities. In addition, new CUSP toolkits are available on the AHRQ Web site to help clinicians and hospitals reduce ventilator-associated events and to help nursing home staff reduce catheter-associated urinary tract infections.
- **Effective Treatment and Care Coordination** for mental health and substance use treatment. [The Surgeon General's Report on Alcohol, Drugs, and Health](#) reviews the knowledge base of substance use and provides recommendations to address substance misuse and related health consequences.

Since 2009, the [SAMHSA-HRSA^{iv} Center for Integrated Health Solutions](#) has provided resources for integrated primary and behavioral health services to better address the needs of individuals with mental health and substance use conditions or comorbidities of mental and substance use disorders. Integrating mental health, substance use disorder treatment, and primary care services produces the best outcomes and proves the most effective approach to caring for people with multiple health care needs.

^{iv} SAMHSA=Substance Abuse and Mental Health Services Administration; HRSA=Health Resources and Services Administration.

The SAMHSA [Knowledge Application Program](#) provides substance use treatment professionals with publications, online education, and other resources that contain information on best treatment practices.

National Institutes of Health/National Institute of Mental Health funding opportunities such as PAR-17-265 encourage research applications to develop and test the effectiveness and implementation of family navigator models designed to promote early access, engagement, and coordination of mental health treatment and services for children and adolescents who are experiencing early symptoms of mental health problems.

In addition, HHS continues to address **health disparities**. New data and resources address health disparities, especially among racial and ethnic minorities, older populations, rural populations, and people with limited English proficiency. One recent report is [Racial and Ethnic Disparities by Gender in Health Care in Medicare Advantage](#) from the [Centers for Medicare & Medicaid Services \(CMS\) Office of Minority Health](#).

Although the QDR does not include data on veterans, data are available from the Department of Veterans Affairs (VA). The [Office of Health Equity](#) has conducted research and published the [National Veteran Health Equity Report](#), which showed burden of diseases for veterans.

[Project ECHO](#) (Extension for Community Healthcare Outcomes) is a notable program addressing health disparities jointly funded by several HHS agencies, including AHRQ, CDC, CMS, HRSA, and SAMHSA, as well as other federal and state government agencies and private partners. It is a collaborative model of medical education and care management to increase access to specialty treatment in rural and underserved areas by engaging clinicians in a continuous learning system and partnering them with specialist mentors at an academic medical center or hub.

Recently, the [National Institute on Minority Health and Health Disparities](#) launched a new resource for stakeholders who work with populations with limited English proficiency: the [Language Access Portal \(LAP\)](#). The LAP contains information in multiple languages on diseases for which major health disparities have been identified in non-English-speaking populations, including cancer, diabetes, and cardiovascular disease. New disease areas will continue to be included and additional resources will be incorporated as they become available.

The [Office of the National Coordinator for Health IT \(ONC\) Health IT Certification Program](#) supports the availability of certified health IT for its encouraged and required use under federal, state, and private programs. The [Health IT Certification Criteria \(2015 Edition\)](#) includes certification criteria that support the capture of a wider range of patient health information, in a structured, more granular way. These criteria can help clinicians and organizations identify opportunities for care improvement for the patient populations they serve. It is a critical step forward in addressing health disparities in our health care system and in supporting quality care for all people, regardless of race, gender, sexual orientation, socioeconomic background, or behavioral conditions.

The Centers for Disease Control and Prevention provides ongoing administrative, scientific, and technical support for the operations of the [Community Preventive Services Task Force](#), whose

members review the effectiveness of intervention approaches across a wide range of health topics, including health equity. The [Guide to Community Preventive Services](#) (The Community Guide) is a collection of evidence-based findings of the Task Force applicable to communities and other populations. It includes strategies such as health care system changes, workplace and school programs and policies, and community-based programs.

Through various quality improvement and patient safety initiatives, HHS and other federal agencies drive us toward better health care. The 2016 QDR documents ongoing progress toward the goal of high-quality health care that is accessible to all Americans and identifies areas for improvement. Policymakers, researchers, and others can use these findings to direct future efforts toward making health care more coordinated, affordable, and equitable.

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