



National Healthcare Quality and Disparities Report

CHARTBOOK ON RURAL HEALTH CARE



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NATIONAL HEALTHCARE QUALITY AND DISPARITIES REPORT CHARTBOOK ON RURAL HEALTH CARE

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RURAL HEALTH CARE

This Rural Health Care 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 2013, although rates of uninsurance have been tracked through the first half of 2015. 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).

This chartbook contains:

- Overview of the QDR
- Overview of residents of rural areas, one of the priority populations of the QDR
- Summary of trends in health care quality and disparities for rural populations
- Tracking of access and quality measures for rural populations.

Key Findings of the 2016 QDR

- Quality of health care improved generally from 2000 through 2014-2015 but the pace of improvement varied by priority area:
 - Person-Centered Care: About 80% of measures improved overall.
 - Patient Safety: Almost two-thirds of measures improved overall.
 - Healthy Living: About 60% of measures improved overall.
 - Effective Treatment: More than half of measures improved overall.
 - Care Coordination: About half of measures improved overall.
 - Care Affordability: About 70% of measures did not change.
- 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 or ethnic groups.
- More than half of measures show that poor and low-income households had 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.

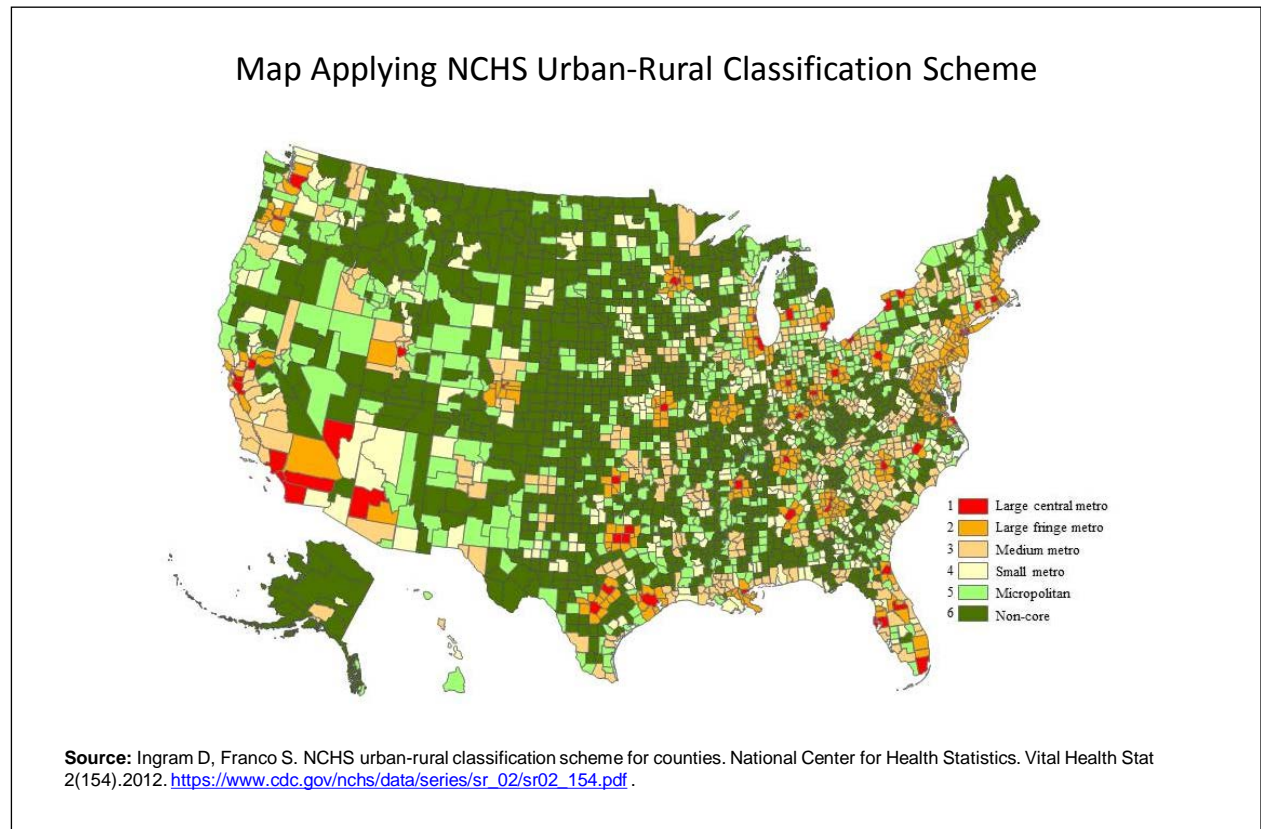
Chartbook on Rural Health

- This chartbook includes:
 - Summary of trends in health care quality and disparities for rural populations.
 - Figures illustrating select measures of Access to Health Care and 6 priority areas, including Care Affordability, Care Coordination, Effective Treatment, Healthy Living, Patient Safety, and Person-Centered Care, for rural populations.
- [Introduction and Methods](#) contains information about methods used in the chartbook.
- A Data Query tool (<http://nhqrnet.ahrq.gov/inhqrdr/data/query>) provides access to all data tables.

2006 NCHS Urban-Rural Classification System

Metropolitan	
Large central metropolitan	Counties in a metropolitan statistical area of 1 million or more population: <ol style="list-style-type: none"> 1. That contain the entire population of the largest principal city of the metropolitan statistical area, or 2. Whose entire population resides in the largest principal city of the metropolitan statistical area, or 3. That contain at least 250,000 of the population of any principal city in the metropolitan statistical area.
Large fringe metropolitan	Counties in a metropolitan statistical area of 1 million or more population that do not qualify as large central.
Medium metropolitan	Counties in a metropolitan statistical area of 250,000 to 999,999 population.
Small metropolitan	Counties in a metropolitan statistical area of 50,000 to 249,999 population.
Nonmetropolitan	
Micropolitan	Counties in a micropolitan statistical area.
Noncore	Counties not in a micropolitan statistical area.

Urban-Rural Classification Scheme Map



Use of NCHS Urban-Rural Classification Scheme in This Chartbook

- This chartbook compares residents of nonmetropolitan (rural) areas with residents of large fringe metropolitan (suburban) areas:
 - Residents of suburban areas tend to have higher quality health care and better outcomes.
- The National Center for Health Statistics (NCHS) Urban-Rural Classification Scheme is used to guide analyses involving geographic location.
- The 2013 NCHS classification system is derived from data gathered from three sources: the Office of Management and Budget metropolitan and nonmetropolitan designations, the Rural-Urban Continuum and Urban Influence coding systems, and the U.S. Census.
- The NCHS scheme includes six urbanization categories, including:
 - Four metropolitan county designations:
 - Large Central Metropolitan
 - Large Fringe Metropolitan
 - Medium Metropolitan
 - Small Metropolitan

- Two nonmetropolitan county designations:
 - Micropolitan
 - Noncore

Residents of Rural Areas

- According to the U.S. Census Bureau, in 2016, approximately 60 million Americans (19.3%) lived in a nonmetropolitan, or rural, area.
 - This figure included about 13 million children under 18 and 47 million adults.
- Although rural residents make up less than one-fifth of the U.S. population, 65% of the 3,142 U.S. counties are classified as nonmetropolitan (Meit, et al., 2014).
 - This figure includes 445 “frontier” counties (U.S. Census Bureau, 2010) that have a population density of fewer than 7 people per square mile.

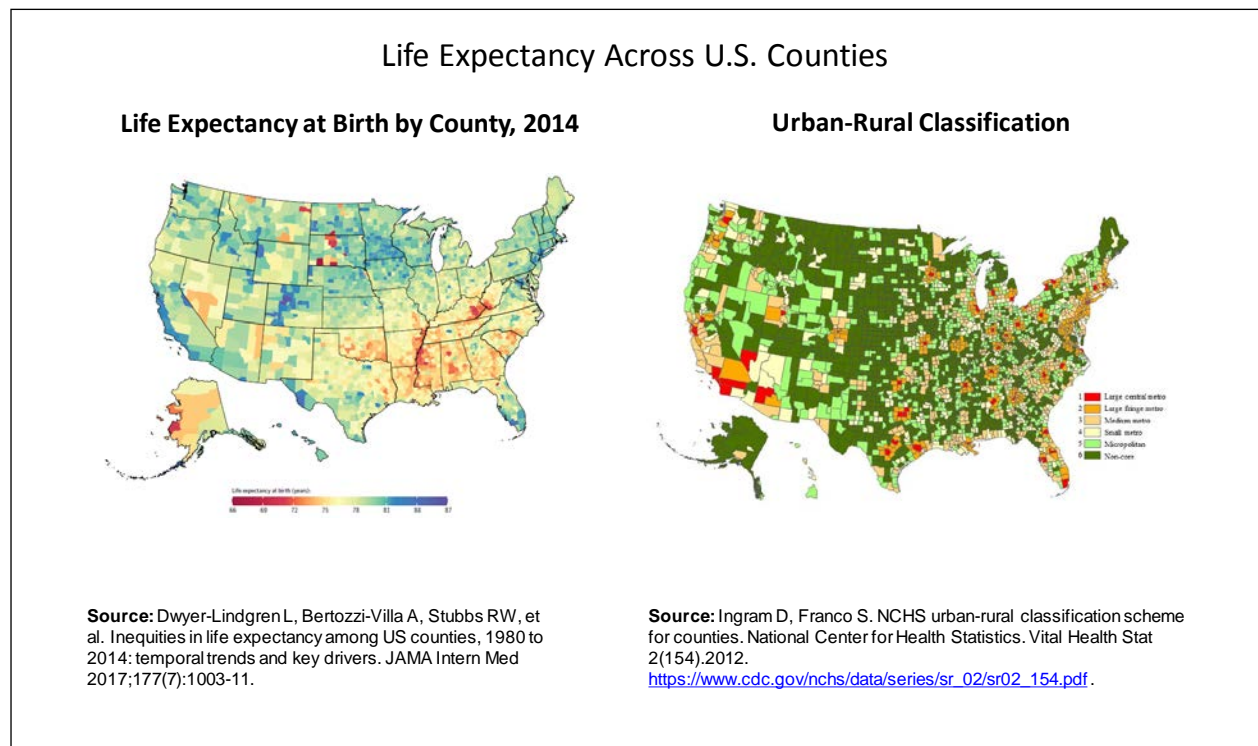
Health Issues in Rural Areas

- Compared with their urban counterparts, residents of rural counties are:
 - Older,
 - Poorer,
 - More likely to be overweight or obese, and
 - Sicker (Meit, et al., 2014).
- Rural residents also have:
 - Higher injury rates (NCHS, 2017).
 - Higher smoking rates (NCHS, 2017).
 - Higher rates of uninsurance (NCHS, 2017)
 - Higher rates of suicide (Kegler, et al., 2017).
 - Higher rates of opioid misuse (Warshaw, 2017).
- More residents of nonmetropolitan areas live in poverty compared with residents of metropolitan areas.
- A higher percentage of residents in rural areas has activity limitations due to chronic health conditions.
- Nonmetropolitan areas have higher rates of cigarette smoking, hypertension, obesity, and physical inactivity during leisure time. One study found that 9 of 10 counties with highest smoking prevalence for males were nonmetropolitan counties and the counties with the top 10 highest prevalence of female smokers were all nonmetropolitan counties (Dwyer-Lindgren, et al., 2014).

Life Expectancy in Rural Areas

- Life expectancy for U.S. residents decreases as level of rurality increases:
 - In 2005-2009, those living in large metropolitan areas had a life expectancy of 79.1 years compared with 76.7 years for those living in rural areas.
 - This disparity widened over time.
 - Causes of death contributing most to lower life expectancy in rural areas include:
 - Heart disease,
 - Unintentional injuries,
 - Chronic obstructive pulmonary disease,
 - Lung cancer,
 - Stroke,
 - Suicide, and
 - Diabetes (Singh & Siahpush, 2014).
 - During 1999-2014, annual age-adjusted death rates for heart disease, stroke, cancer, unintentional injury, and chronic lower respiratory disease (CLRD) were higher in nonmetropolitan areas than metropolitan areas. Age-adjusted death rates for unintentional injury were approximately 50% higher in nonmetropolitan areas than in metropolitan areas. Rates for heart disease and death rates for cancer decreased at a slower rate in nonmetropolitan areas compared with metropolitan areas. CLRD decreased in metropolitan areas but increased in nonmetropolitan areas (Moy, et al., 2017).

Life Expectancy in U.S. Counties



- In 2014, life expectancy at birth for both sexes combined at the national level was 79.1 years but there was a 20.1 year gap between the lowest and highest life expectancy among all counties (Dwyer-Lindgren, et al., 2017). Several counties in North and South Dakota, eastern Kentucky, and southwestern West Virginia had lower life expectancy compared with the rest of the country (Dwyer-Lindgren, et al., 2017).

Health Care Providers in Rural Areas

- Metropolitan, or urban, counties tend to have a greater supply of health care providers per capita than nonmetropolitan counties.
 - This finding is especially true for specialists such as neurologists, anesthesiologists, and psychiatrists.
 - The same is true for the supply of dentists, which decreases per capita as the level of rurality increases.
- Rural residents often live farther away from health care resources, which can add to the burden of accessing care (Meit, et al., 2014).
- Nonphysician practitioners, such as nurse practitioners and physician assistants, are also an important part of the health care landscape in rural communities.

Hospitals in Rural Areas

- Half of the nearly 5,000 hospitals in the United States are in rural areas.
- Most rural hospitals have about 265 beds, have 7 inpatients daily, and are housed in facilities that are about 10 years old.
- Rural hospitals:
 - Are typically in counties with a median population of 27,980;
 - Serve many older patients (16.8% of the population is 65 years and over); and
 - Serve poorer people (average per capita income is \$32,781 and 17.5% of the population live below the Federal poverty level (Freeman, et al., 2015).

Services Provided by Hospitals in Rural Areas

- Although rural hospitals vary widely, the typical rural hospital offers inpatient care that includes:
 - Surgical services.
 - Obstetric services.
 - Swing bed services.
- Rural hospitals typically do not include:
 - Intensive care units.
 - Skilled nursing facilities.
 - Psychiatric units.
 - Rehabilitation units.

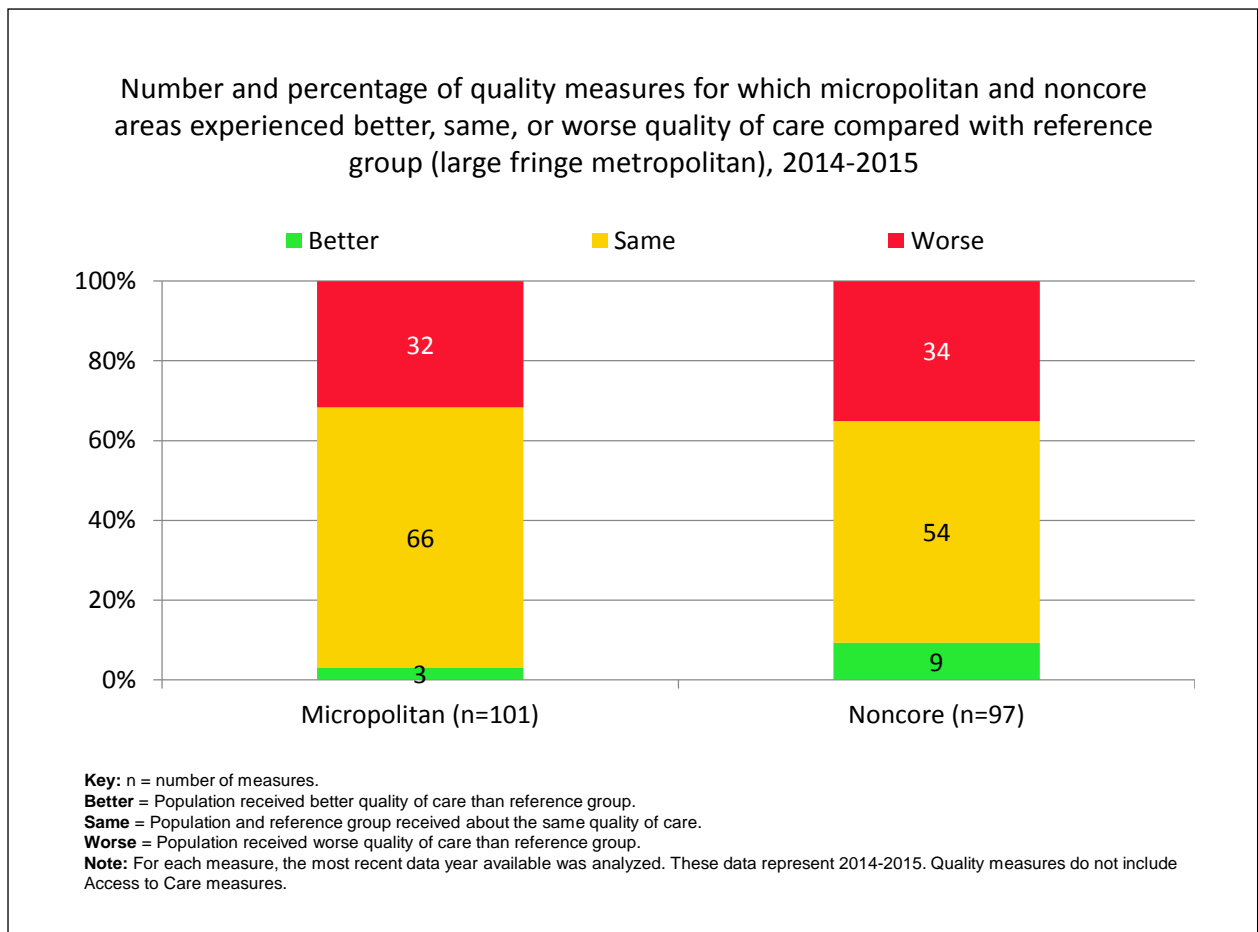
- The typical rural hospital also offers outpatient care.
- The typical rural hospital also offers outpatient care that includes outpatient surgical services and breast cancer screening/mammography but does not offer hospice services, home health services, chemotherapy services, dental services, or outpatient drug/alcohol abuse care (Freeman, et al., 2015).

Challenges Faced by Hospitals in Rural Areas

- Rural hospitals face unique challenges due to their size and case mix.
 - During the 1980s, many were forced to close due to financial losses.
 - From January 2005 to July 2016, 118 rural hospitals closed permanently and 7 closed but later reopened. The number of closures has increased each year since 2010; in the first half of 2016, the closure rate surpassed two closures per month (North Carolina Rural Health Research Program, 2016).

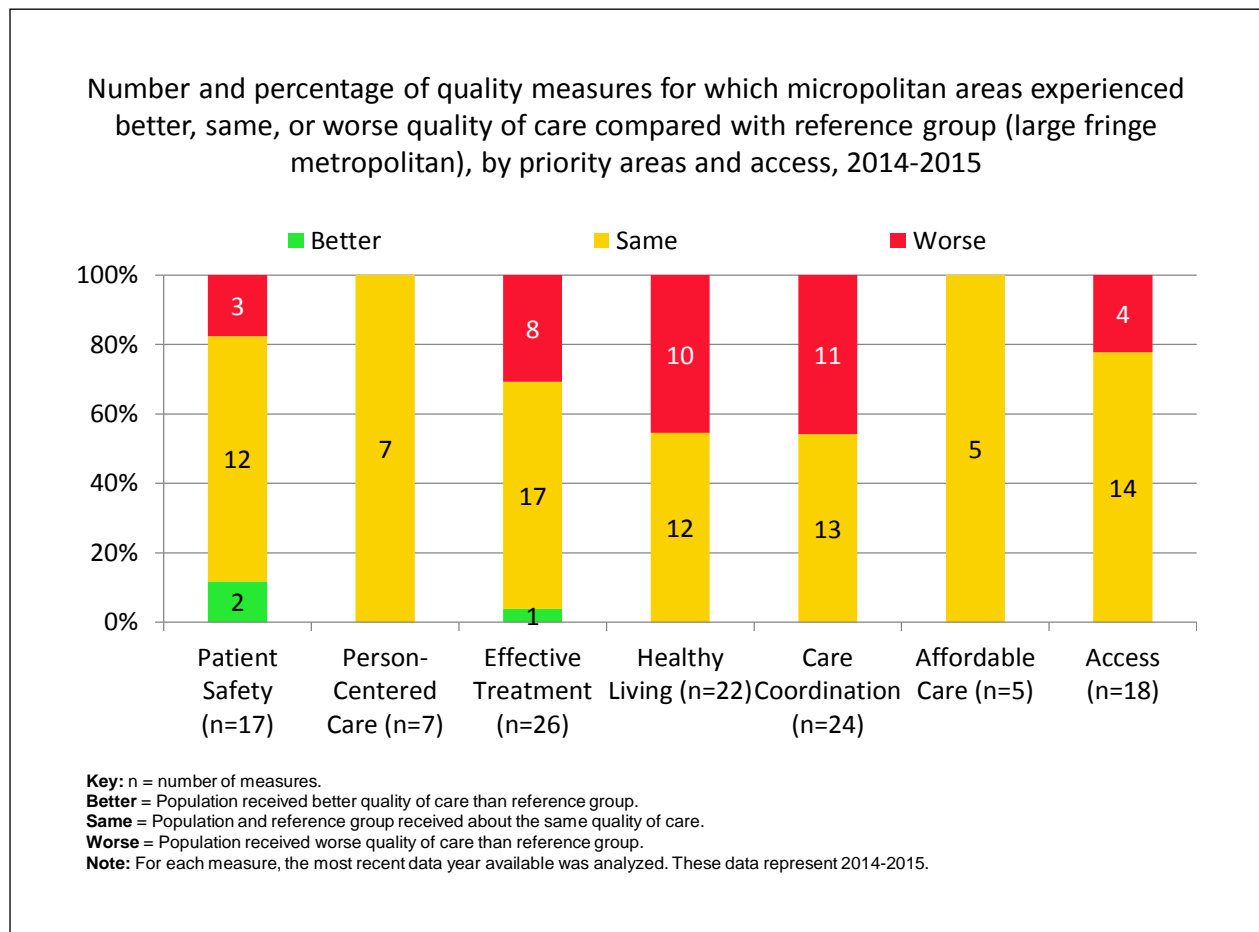
Summary of Trends

Quality Measures: Micropolitan and Noncore vs. Large Fringe Metropolitan



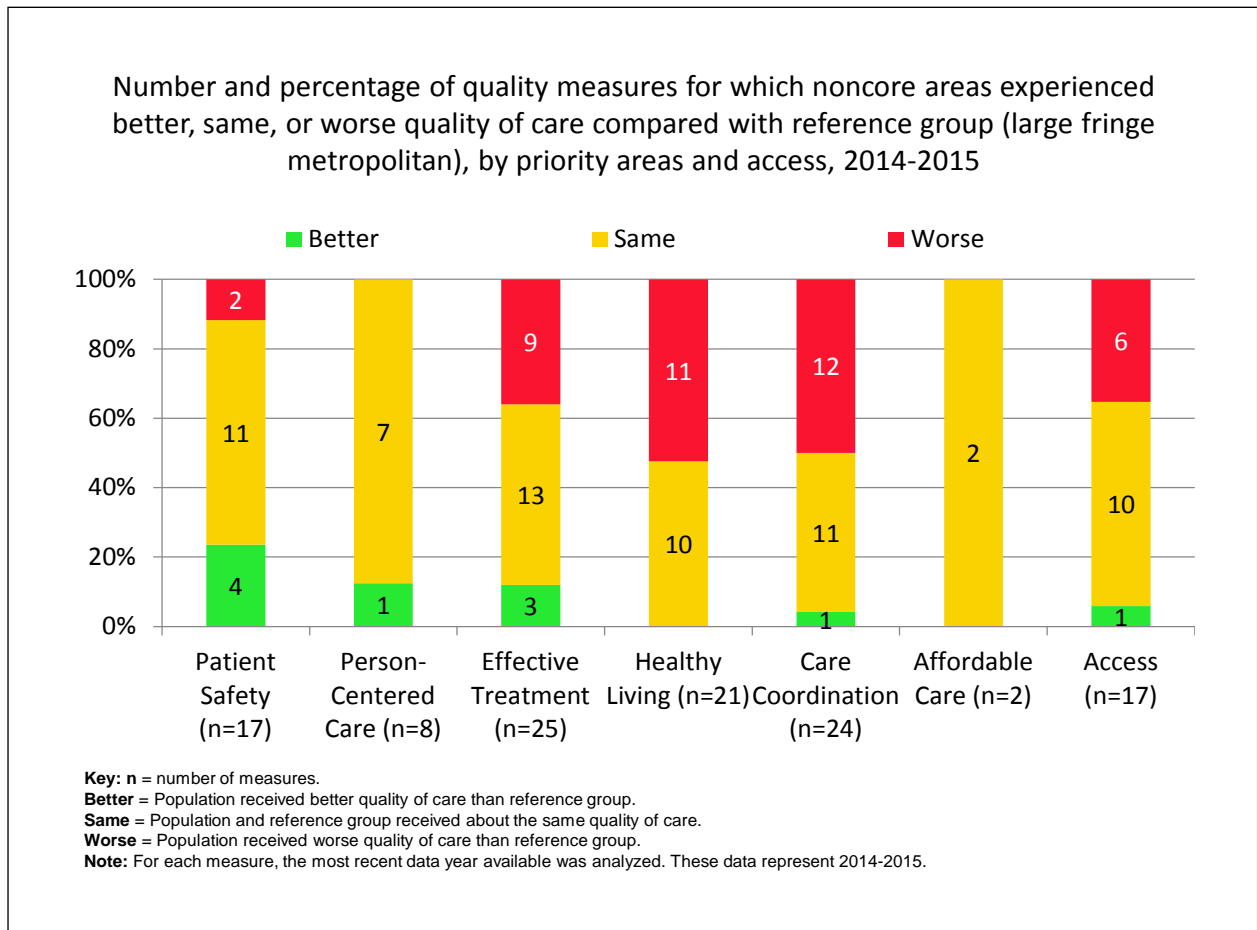
- Residents in micropolitan areas received:
 - Better quality of care for 3% (3 of 101) of the measures, compared with those living in large fringe metropolitan areas,
 - Worse quality of care for 32% (32 of 101) of the measures, compared with those living in large fringe metropolitan areas, and
 - The same quality of care for 65% (66 of 101) of the measures, compared with those living in large fringe metropolitan areas.
- Residents in noncore areas received:
 - Better quality of care for 9% (9 of 97) of the measures, compared with those living in large fringe metropolitan areas,
 - Worse quality of care for 35% (34 of 97) of the measures, compared with those living in large fringe metropolitan areas, and
 - The same quality of care for 56% (54 of 97) of the measures, compared with those living in large fringe metropolitan areas.

Quality Measures: Micropolitan vs. Large Fringe Metropolitan



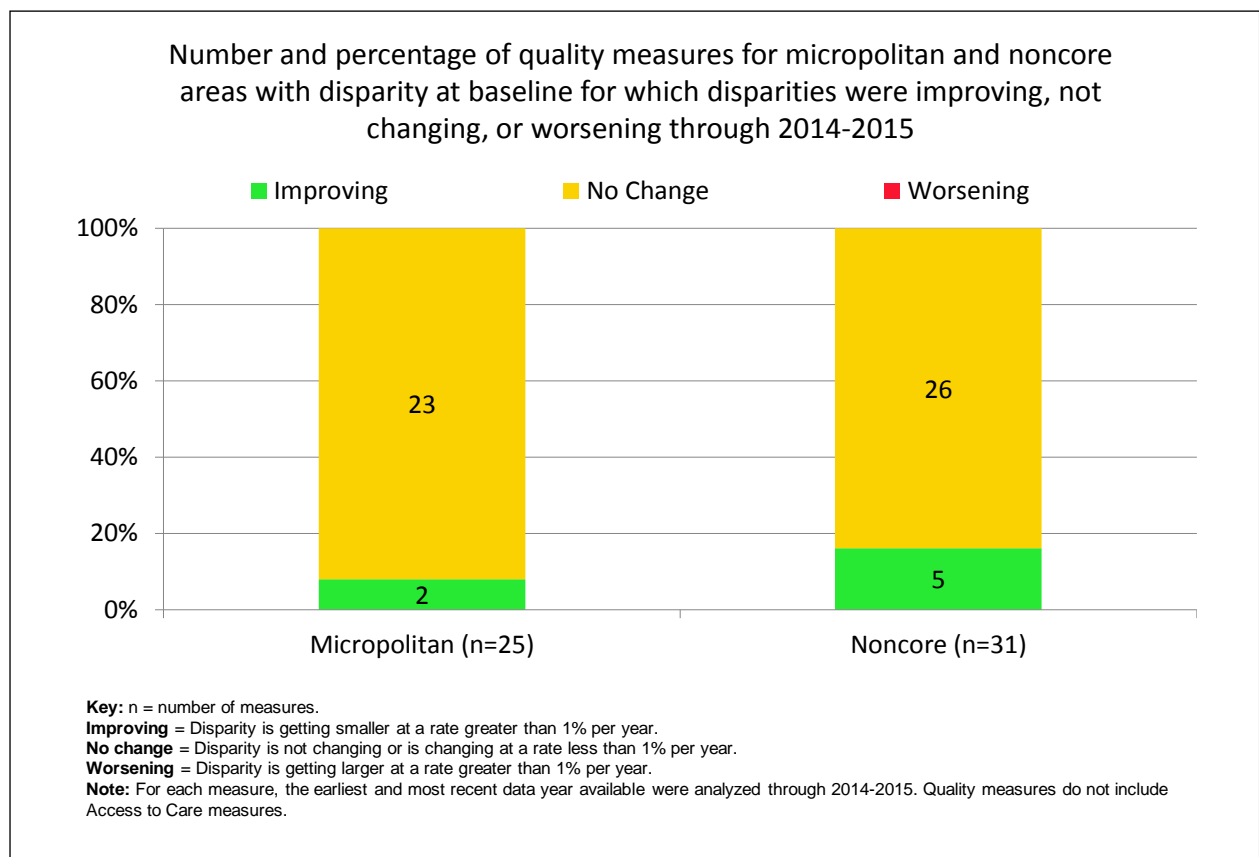
- **Overall:** Residents of micropolitan areas are doing worse than residents of large fringe metropolitan areas on Effective Treatment, Healthy Living, and Care Coordination measures.
- **Patient Safety:** Residents of micropolitan areas received better care for 12%, same care for 70%, and worse care for 18% of the measures compared with residents of large fringe metropolitan areas.
- **Person-Centered Care:** Residents of micropolitan areas and residents of large fringe metropolitan areas received the same care for 100% of the measures.
- **Effective Treatment:** Residents of micropolitan areas received better care for 4%, same care for 65%, and worse care for 31% of the measures compared with residents of large fringe metropolitan areas.
- **Healthy Living:** Residents of micropolitan areas received the same care for 55% and worse care for 45% of the measures compared with residents of large fringe metropolitan areas.
- **Care Coordination:** Residents of micropolitan areas received the same care for 54% and worse care for 46% of the measures compared with residents of large fringe metropolitan areas.
- **Affordable Care:** Residents of micropolitan areas and residents of large fringe metropolitan areas received the same care for 100% of the measures.
- **Access:** Residents of micropolitan areas received the same care for 78% and worse care for 22% of the measures compared with residents of large fringe metropolitan areas.

Quality Measures: Noncore vs. Large Fringe Metropolitan



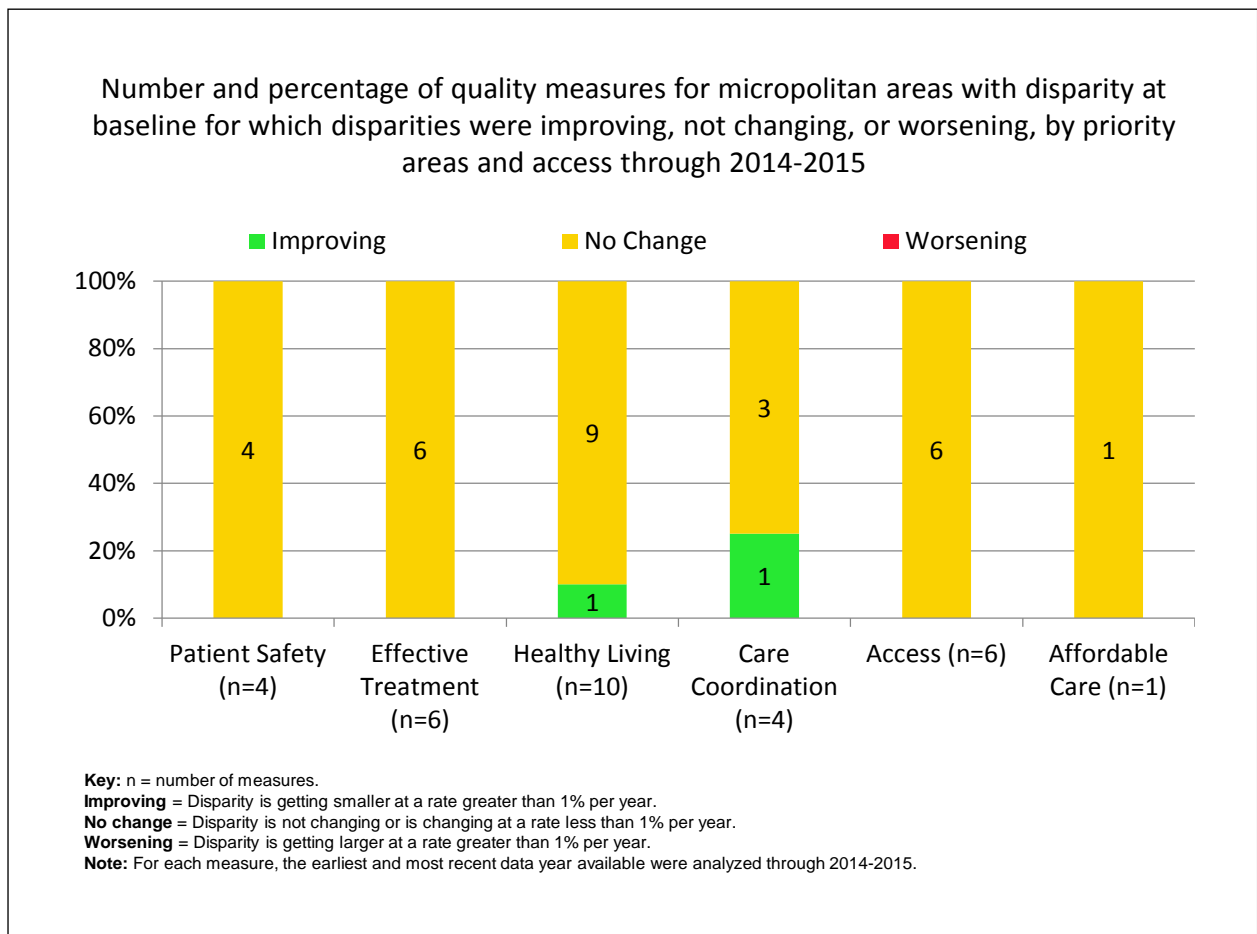
- **Overall:** Residents of noncore areas are doing worse than residents of large fringe metropolitan areas on Effective Treatment, Healthy Living, Care Coordination, and Access measures.
- **Patient Safety:** Residents of noncore areas received better care for 23%, the same care for 65%, and worse care for 12% of the measures compared with residents of large fringe metropolitan areas.
- **Person-Centered Care:** Residents of noncore areas received the same care for 88% and worse care for 12% of the measures compared with residents of large fringe metropolitan areas.
- **Effective Treatment:** Residents of noncore areas received better care for 12%, the same care for 52%, and worse care for 36% of the measures compared with residents of large fringe metropolitan areas.
- **Healthy Living:** Residents of noncore areas received the same care for 48% and worse care for 52% of the measures compared with residents of large fringe metropolitan areas.
- **Care Coordination:** Residents of noncore areas received better care for 4%, the same care for 46%, and worse care for 50% of the measures compared with residents of large fringe metropolitan areas.
- **Affordable Care:** Residents of noncore areas received the same care for 100% of the measures compared with residents of large fringe metropolitan areas.
- **Access:** Residents of noncore areas received better care for 6%, the same care for 59%, and worse care for 35% of the measures compared with residents of large fringe metropolitan areas.

Trends in Quality Disparities: Micropolitan and Noncore



- For residents of micropolitan areas:
 - Disparities were getting smaller for 8% (2 of 25) of the measures, compared with residents of large fringe metropolitan areas, and
 - Disparities did not change for 92% (23 of 25) of the measures, compared with residents of large fringe metropolitan areas.
- For residents of noncore areas:
 - Disparities were getting smaller for 16% (5 of 31) of the measures, compared with residents of large fringe metropolitan areas, and
 - Disparities did not change for 84% (26 of 31) of the measures, compared with residents of large fringe metropolitan areas.

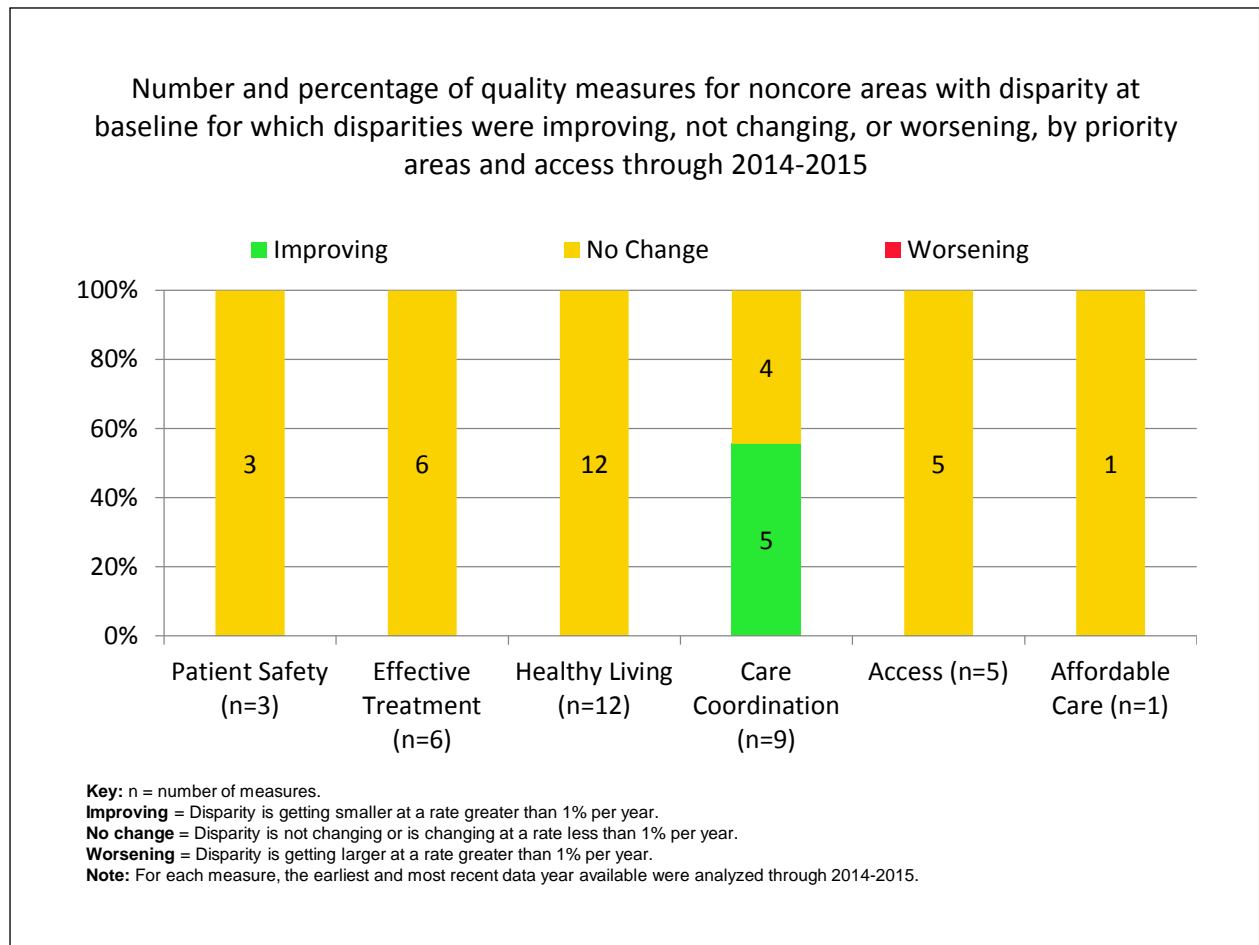
Trends in Quality Disparities: Micropolitan



- **Overall:** There is no clear pattern in the reduction of disparities between people living in micropolitan areas and people living in large fringe metropolitan areas.
- **Healthy Living:** Disparities got smaller for only 10% of the measures and there was no change in 90% of the measures.

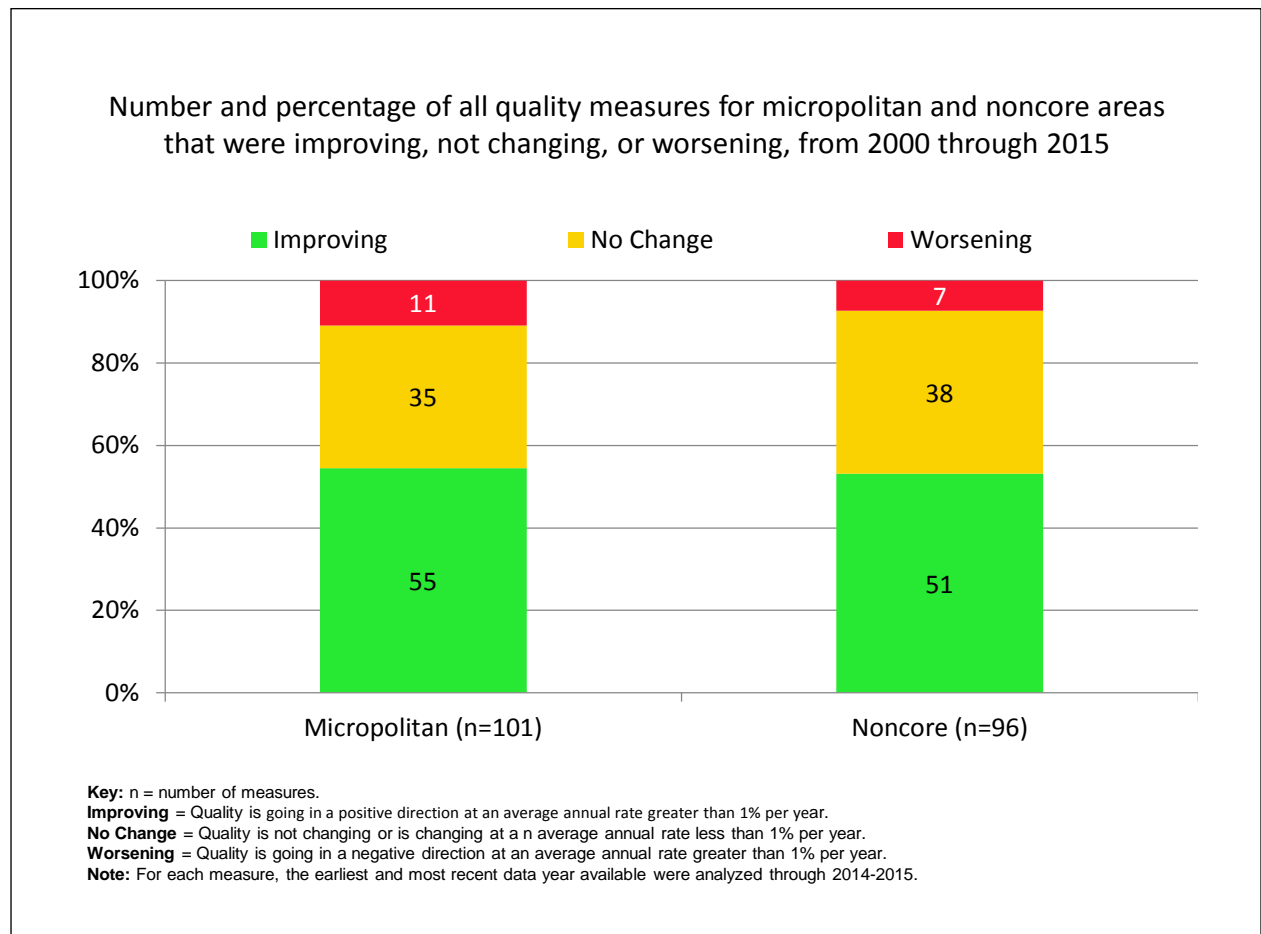
- **Care Coordination:** Disparities got smaller for 25% of the measures and there was no change in 75% of the measures.
- For all other priority areas and access, there was no change in 100% of the measures.

Trends in Quality Disparities: Noncore



- **Overall:** There is no clear pattern in the reduction of disparities between people living in noncore areas and people living in large fringe metropolitan areas.
- **Care Coordination:** Disparities got smaller for 56% of the measures and there was no change in 44% of the measures.
- For all other priority areas and access, there was no change in disparities in 100% of the measures.

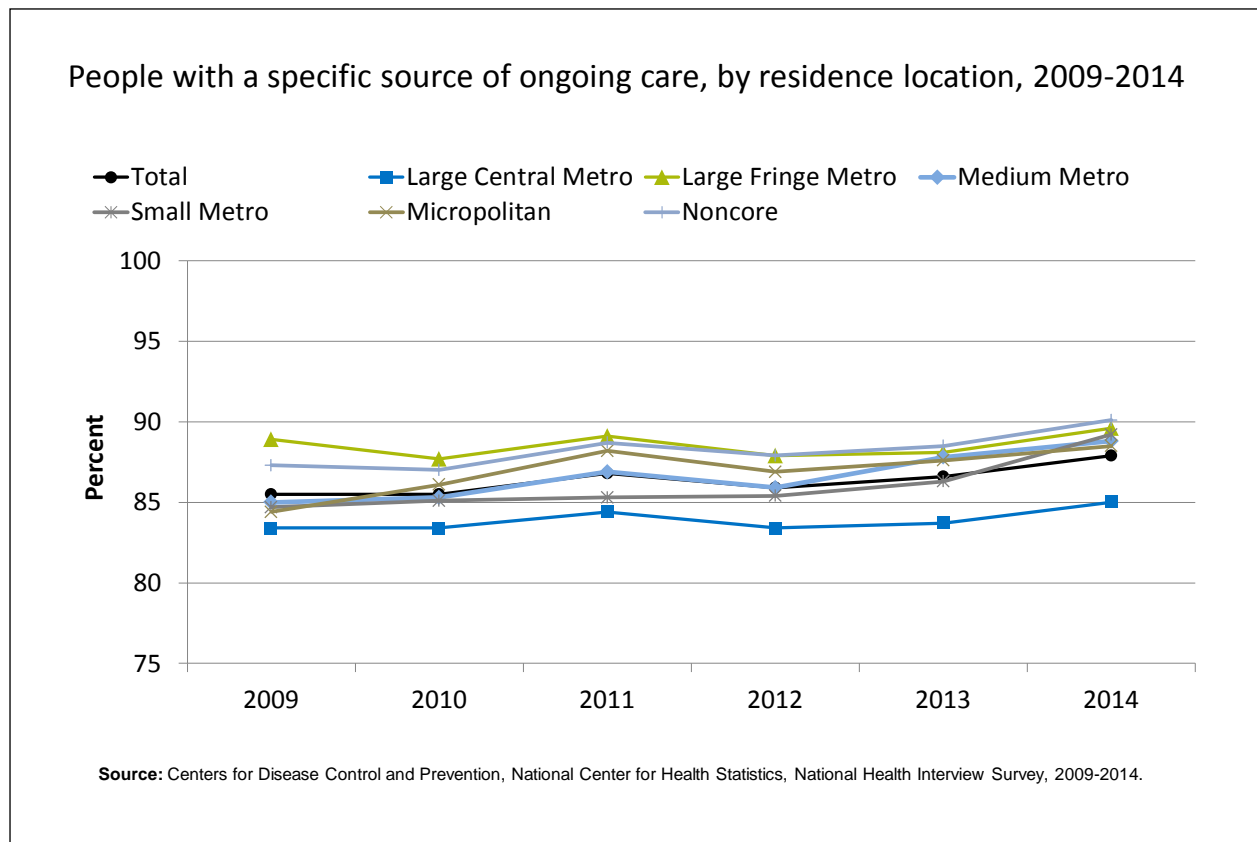
Trends in Quality Measures: Micropolitan and Noncore



- The quality of care for residents living in micropolitan areas:
 - Improved for 54% (55 of 101) of the measures,
 - Worsened for 11% (11 of 101) of the measures, and
 - Did not change for 35% (35 of 101) of the measures.
- The quality of care for residents living in noncore areas:
 - Improved for 53% (51 of 96) of the measures,
 - Worsened for 7% (7 of 96) of the measures, and
 - Did not change for 40% (38 of 96) of the measures.

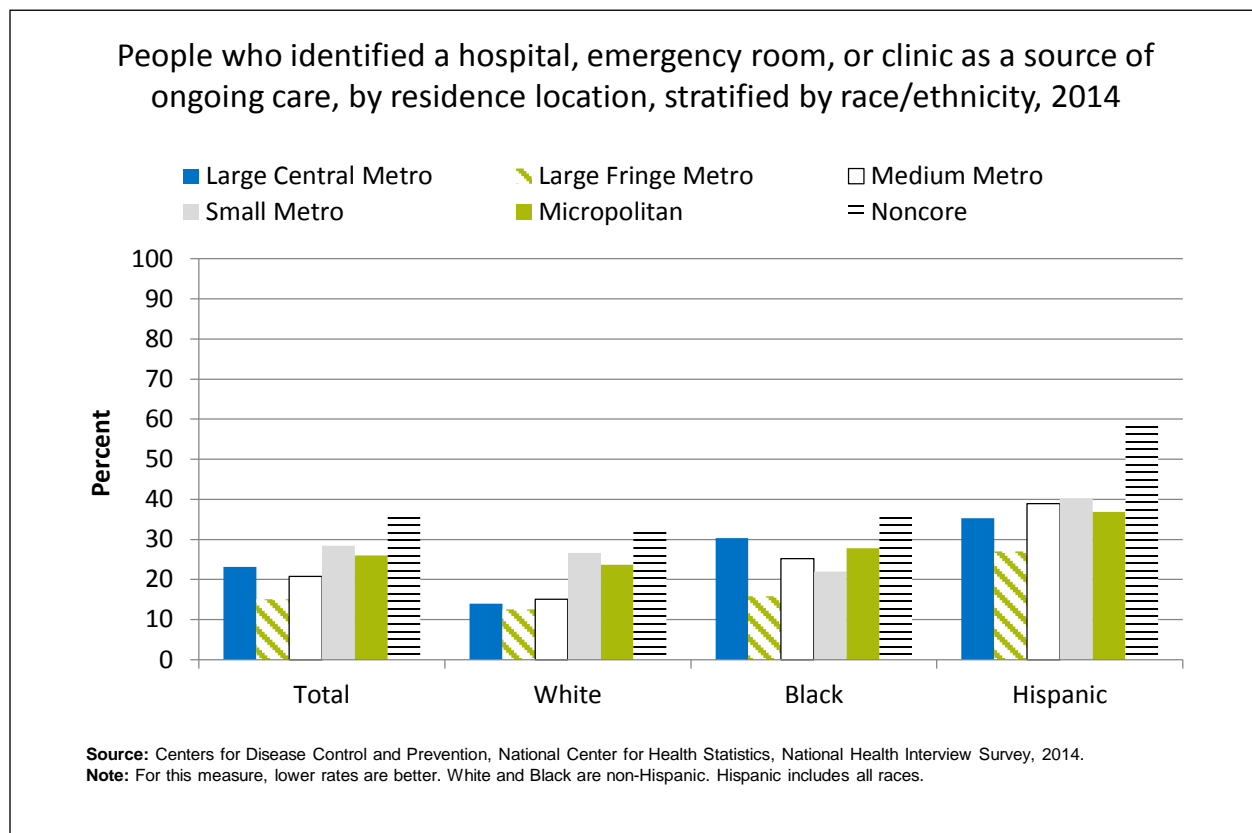
Access to Health Care

Specific Source of Ongoing Care



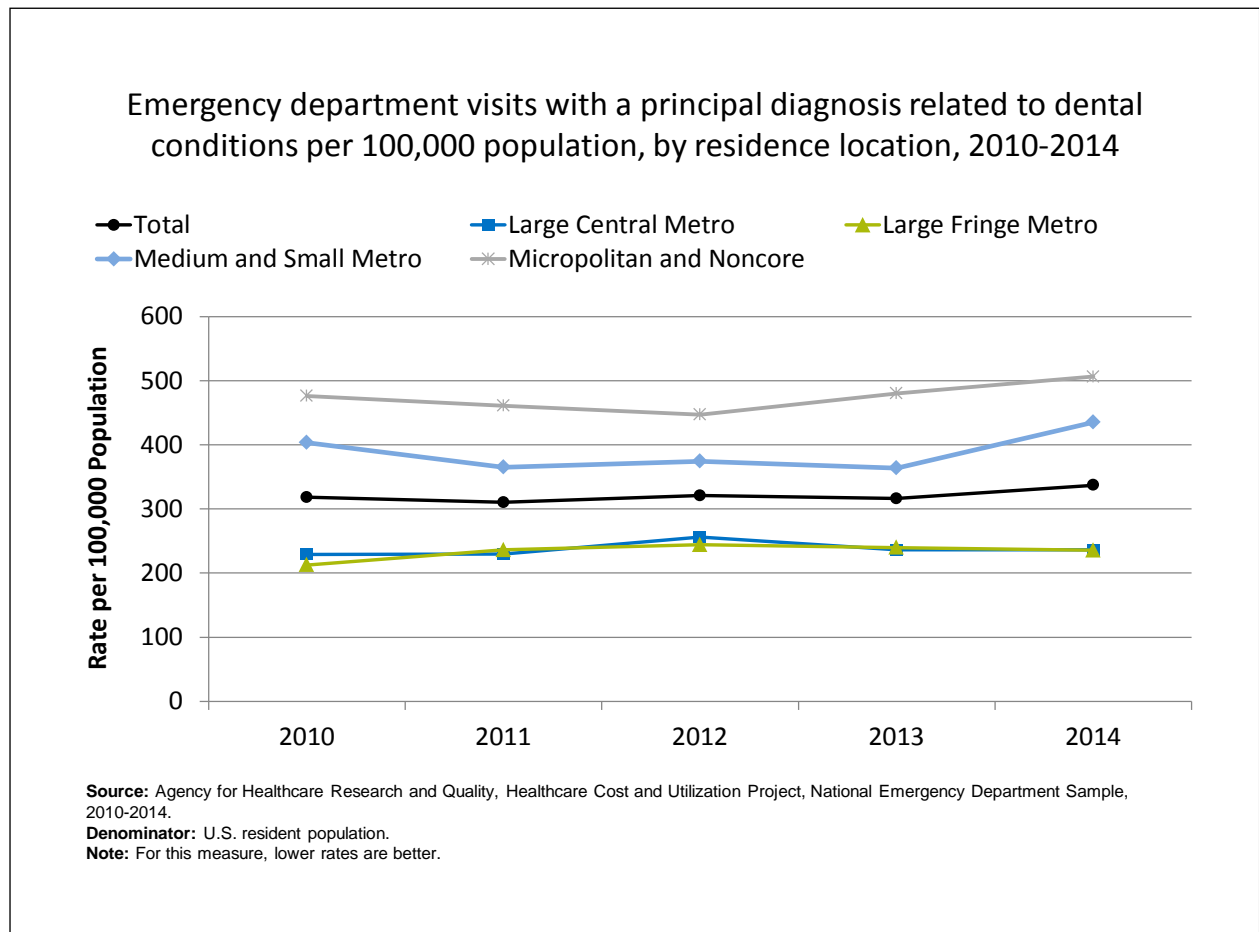
- **Importance:** People with a usual source of care have better health outcomes and fewer disparities and costs (ODPHP, 2017). “Having a usual source of health care has been consistently associated with greater use of preventive services, decreased use of emergency services, and with patients' ratings of quality and satisfaction with care” (Finney Rutten, et. al., 2015).
- **Overall Rate:** In 2014, the percentage of people with a specific source of ongoing care was 87.9%.
- **Change Over Time:** From 2009 to 2014, the percentage of people with a specific source of ongoing care improved for people in all residence locations.
- **Groups With Disparities:**
 - In 2014, the percentage of people with a specific source of ongoing care was worse for residents of large central metropolitan areas (85.0%) compared with residents of large fringe metropolitan areas (89.6%).
 - In 2014, 90.1% of residents of noncore areas and 88.5% of residents of micropolitan areas had a specific source of ongoing care compared with 89.6% in large fringe metropolitan areas, but this result was not statistically significant.

Hospital, Emergency Room, or Clinic as Source of Ongoing Care



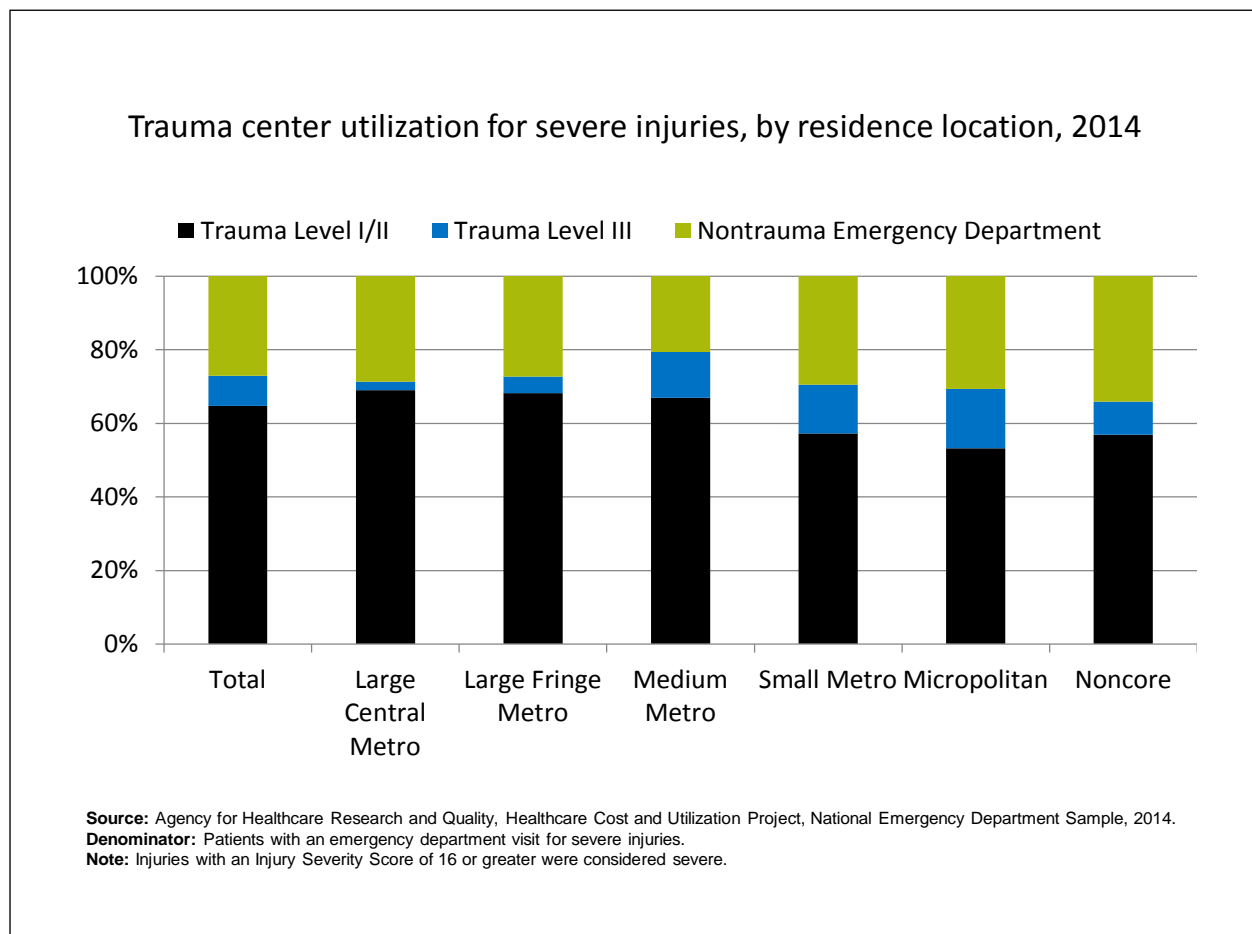
- Overall Rate:** In 2014, the percentage of people who identified a hospital, emergency room, or clinic as a source of ongoing care was higher for residents of noncore (36.5%), small metropolitan (28.4%), micropolitan (26.0%), large central metropolitan (23.2%), and medium metropolitan (20.8%) areas compared with residents of large fringe metropolitan areas (15.0%).
- Groups With Disparities:**
 - In 2014, the percentage of people who identified a hospital, emergency room, or clinic as a source of ongoing care was higher for Blacks and Hispanics in all residence locations compared with Whites. Hispanics also had worse percentages in all locations compared with Blacks.
 - In 2014, more than half of Hispanics (58.6%) living in noncore areas and 36.9% of Hispanics living in micropolitan areas identified a hospital, emergency room, or clinic as a source of ongoing care.
 - Also in 2014, 36.9% of Blacks living in noncore areas and 27.8% of Blacks living in micropolitan areas identified a hospital, emergency room, or clinic as a source of ongoing care.
 - Whites had the lowest reported rates, with 33.1% of noncore residents and 23.7% of micropolitan residents identifying a hospital, emergency room, or clinic as a source of ongoing care.

Emergency Department Visits for Dental Conditions



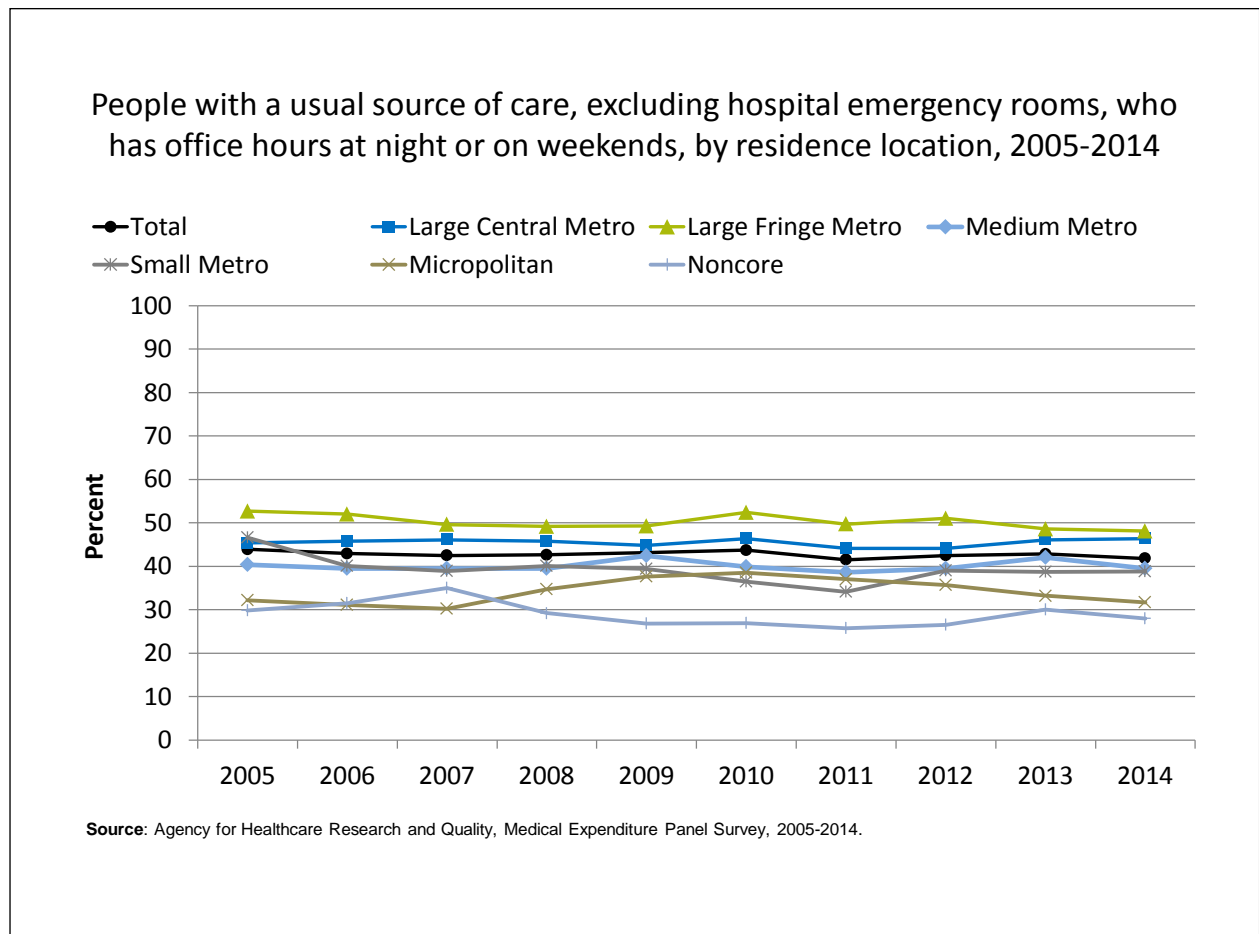
- **Importance:** Patients with limited access to community dental providers may seek dental care in emergency departments. Also, dental emergencies have higher readmissions than all other medical discharges (Chalmers, 2017).
- **Overall Rate:** In 2014, the rate of emergency department visits for dental conditions was 506.2 per 100,000 population among residents of micropolitan and noncore areas.
- **Groups With Disparities:** In all years, use of emergency departments for dental conditions was worse among residents of micropolitan and noncore areas. In 2014, the rate was 506.2 per 100,000 compared with residents of large fringe metropolitan areas (suburbs) (235.7 per 100,000).

Trauma Center Utilization



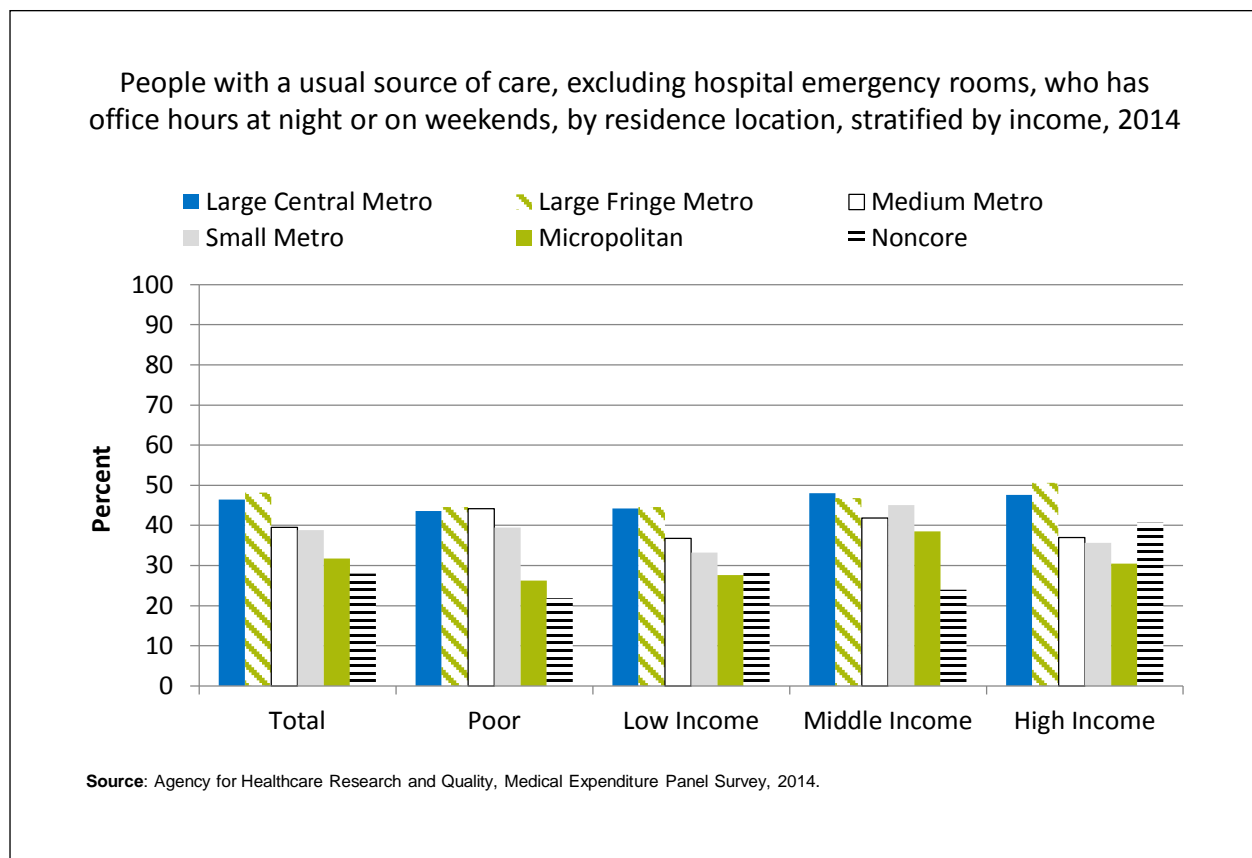
- **Importance:** Trauma centers provide care for injured patients with trauma-related injuries. Most patients with severe injuries are treated in Level I or II trauma centers, but access to trauma centers may be more difficult for residents of rural areas.
- **Overall Rate:** In 2014, 64.8% of all patients with severe injuries were treated in Level I or II trauma centers.
- **Groups With Disparities:**
 - In 2014, residents of micropolitan (53.2%), noncore (56.9%), and small metropolitan areas (57.3%) with severe injuries were less likely to be treated in Level I or II trauma centers than residents of large fringe metropolitan areas (68.2%).
 - In 2014, residents of micropolitan areas with severe injuries (16.1%) were more likely than residents of large fringe metropolitan areas (4.5%) to be treated at Level III trauma centers.

Usual Source of Care With Office Hours at Night or on Weekends



- **Overall Rate:** In 2014, the percentage of people with a usual source of care, excluding hospital emergency rooms, who had office hours at night or on weekends was 41.8%.
- **Change Over Time:** From 2005 to 2014, the percentage of people with a usual source of care, excluding hospital emergency rooms, who had office hours at night or on weekends decreased for people living in micropolitan, noncore, small, medium, and large fringe metropolitan areas.
- **Groups With Disparities:**
 - In 2014, the percentage of people with a usual source of care, excluding hospital emergency rooms, who had office hours at night or on weekends was lower for people living in medium metropolitan (39.5%), small metropolitan (38.8%), micropolitan (31.7%), and noncore areas (28%) compared with those living in large fringe metropolitan areas (48.1%).

Usual Source of Care With Office Hours at Night or on Weekends, by Income

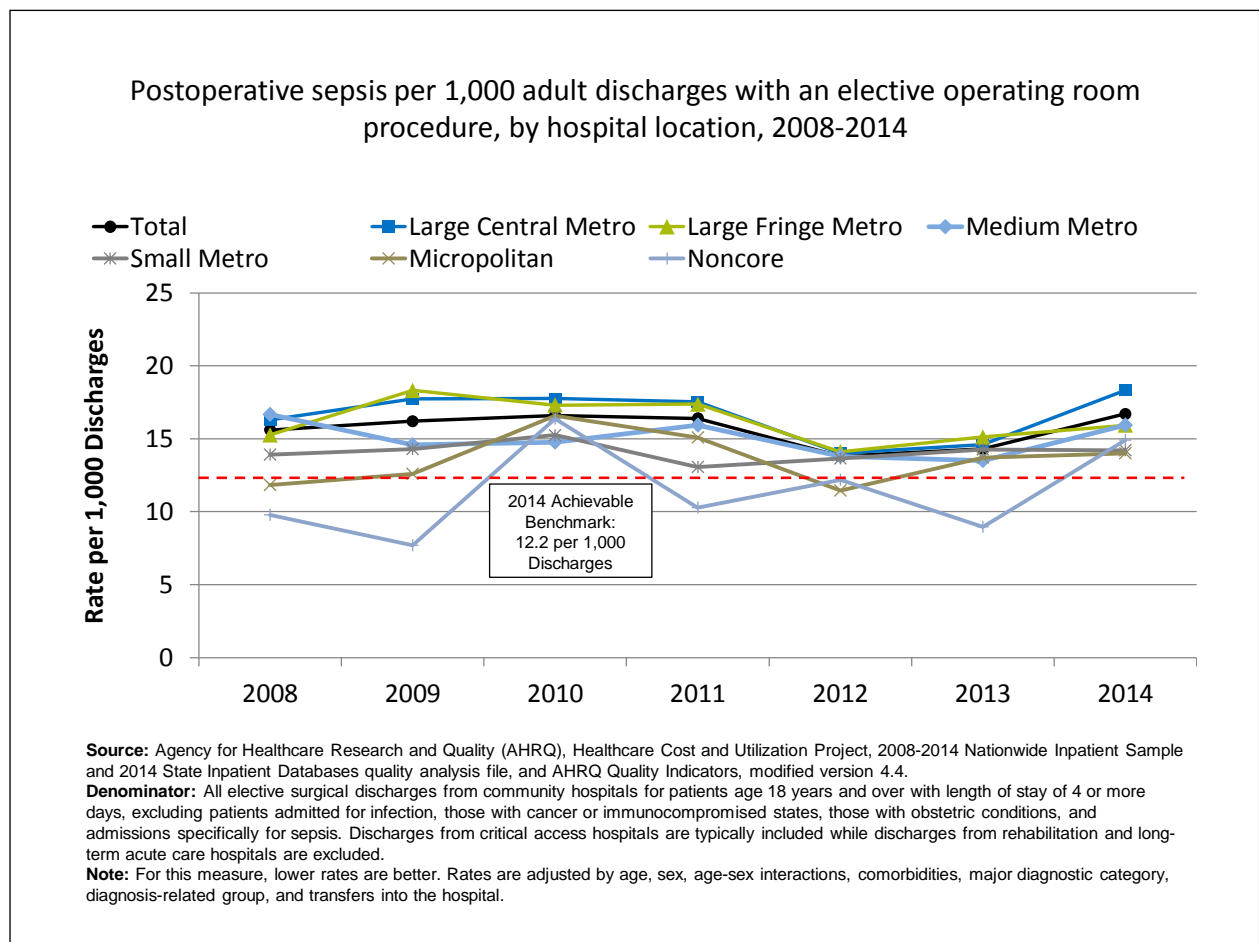


- Overall Rate:** In 2014, the percentage of people with a usual source of care, excluding hospital emergency rooms, who had office hours at night or on weekends was lower for residents of large central metropolitan (46.4%), medium metropolitan (39.5%), small metropolitan (38.8%), micropolitan (31.7%), and noncore areas (28%) compared with residents of large fringe metropolitan areas (48.1%).
- Groups With Disparities:**
 - In 2014, among people with high income, the percentage of people with a usual source of care, excluding hospital emergency rooms, who had office hours at night or on weekends was worse for residents of micropolitan areas (30.5%) compared with residents of large fringe metropolitan areas (50.5%).
 - In 2014, among people with middle income, the percentage of people with a usual source of care, excluding hospital emergency rooms, who had office hours at night or on weekends was worse for residents of noncore areas (24.0%) compared with residents of large fringe metropolitan areas (46.8%).
 - In 2014, among people with low income, the percentage of people with a usual source of care, excluding hospital emergency rooms, who had office hours at night or on weekends was worse for residents of micropolitan areas (27.6%) and noncore areas (29.1%) compared with residents of large fringe metropolitan areas (44.6%).

- In 2014, among poor people, the percentage of people with a usual source of care, excluding hospital emergency rooms, who had office hours at night or on weekends was lower for residents of micropolitan areas (26.2%) and noncore areas (21.8%) compared with residents of large fringe metropolitan areas (44.5%).

Patient Safety

Postoperative Sepsis



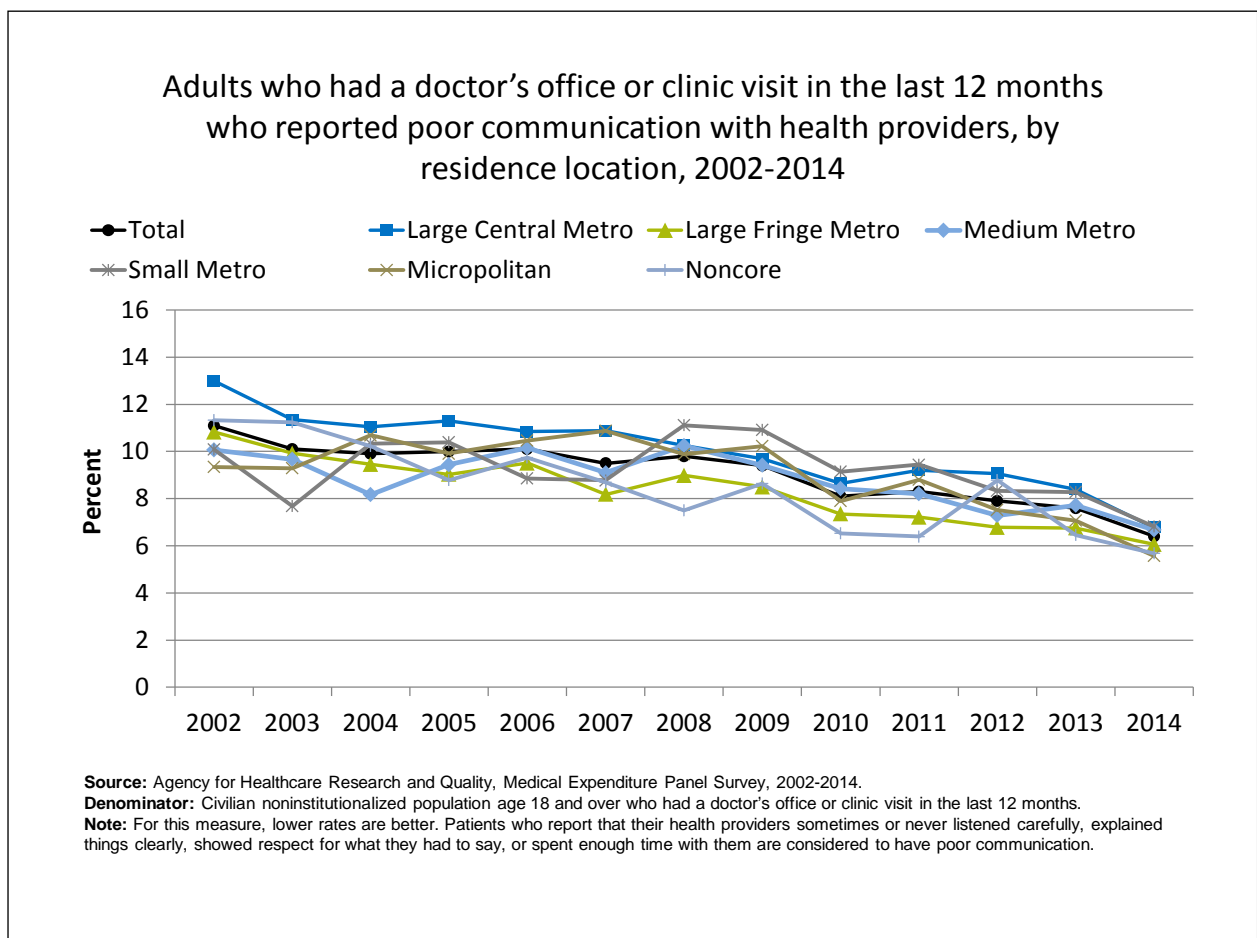
- **Importance:** Infections acquired during hospital care—also known as nosocomial infections—are among the most common complications of hospital care. Patients are particularly vulnerable to healthcare-associated infections after surgery. Hospitals in more rural areas may refer patients to hospitals in urban areas for complex surgeries.
- **Change Over Time:** From 2008 to 2014, the total rate of postoperative sepsis increased from 15.6 per 1,000 discharges to 16.7.
- **Groups With Disparities:** In 2014, hospitals in noncore areas had a lower rate (14.9) and those in large central metropolitan areas had a higher rate (18.3) than hospitals in large fringe metropolitan areas (suburbs) (15.9).

- **Achievable Benchmark:**

- The 2014 top 4 State achievable benchmark was 12.2 per 1,000 discharges. The top 4 States that contributed to the benchmark were Georgia, Iowa, Nebraska, and Wisconsin.
- At current rates of improvement, the benchmark could be met in 7 years by hospitals in medium metropolitan areas. Large fringe metropolitan areas could not meet the benchmark for 21 years.
- While having lower rates, hospitals in noncore and micropolitan areas show no movement toward the benchmark.

Person- and Family-Centered Care

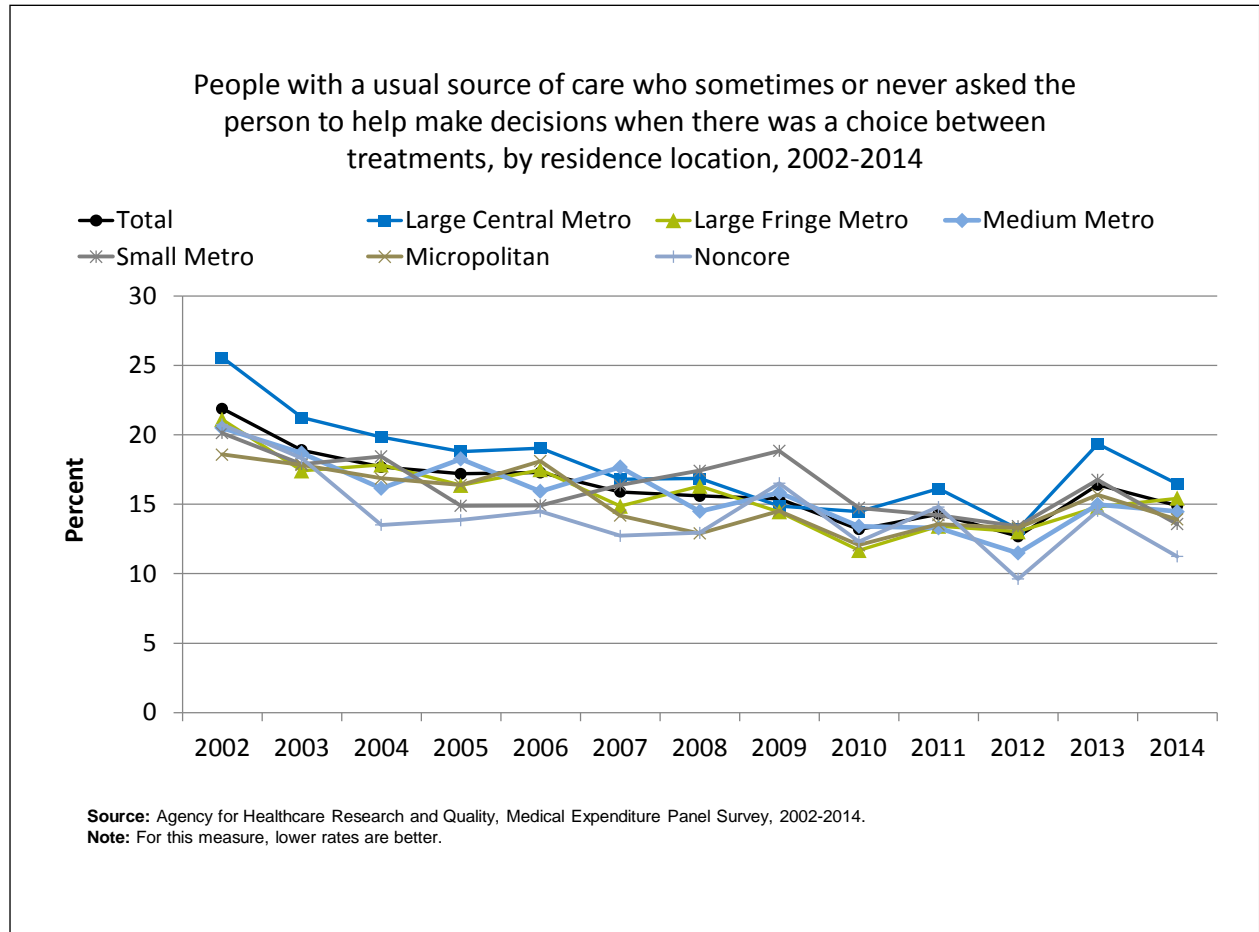
Provider-Patient Communication



- **Importance:** Optimal health care requires good communication between patients and providers, yet barriers to provider-patient communication are common. To provide all patients with the best possible care, providers need to understand patients’ diverse health care needs and preferences and communicate clearly with patients about their care.
- **Change Over Time:** From 2002 to 2014, the percentage of adults who reported poor communication with health providers decreased overall and for all residence location groups.

- **Groups With Disparities:** In 2014, the percentage of people reporting poor communication was higher for residents of large central metropolitan areas (6.8%) compared with those in large fringe metropolitan areas (6.1%).

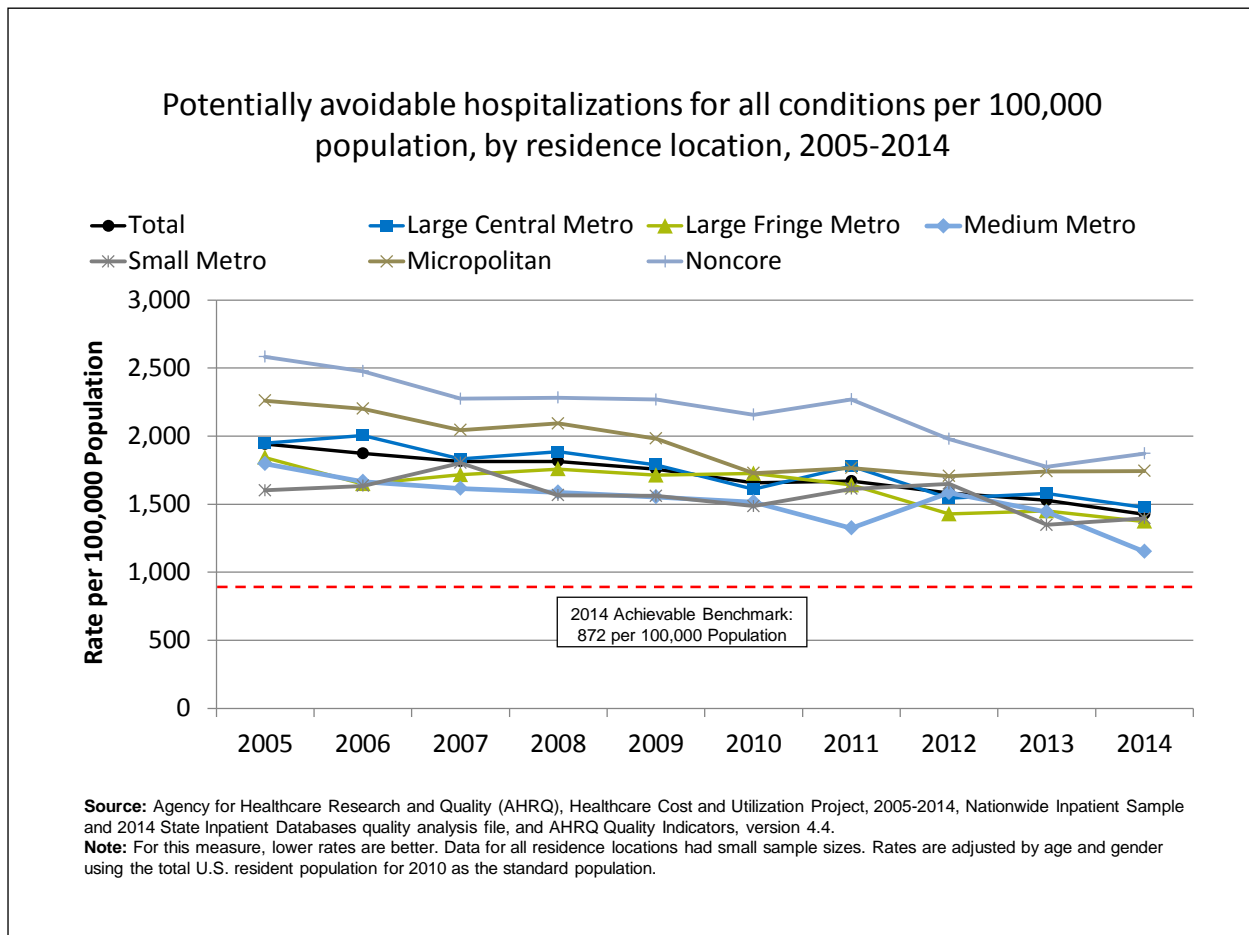
Usual Source of Care Asking for Help With Treatment Decisions



- **Importance:** The increasing prevalence of chronic diseases has placed more responsibility on patients, since conditions such as diabetes and hypertension require self-management. Patients need to be provided with information that allows them to make educated decisions and feel engaged in their treatment.
- **Change Over Time:** From 2002 to 2014, the percentage of people whose health care providers sometimes or never asked them to help make treatment decisions decreased overall and for all residence location groups.
- **Groups With Disparities:** In 2014, 11.2% of noncore residents had a usual source of care who sometimes or never asked the person to help make decisions when there was a choice between treatments compared with 15.4% of residents in large fringe metropolitan areas. From 2002 to 2014, the percentage of noncore residents whose usual source of care sometimes or never asked for help with treatment decisions improved at a faster pace than the percentage for residents of large fringe metropolitan areas.

Care Coordination

Potentially Avoidable Hospitalizations



- **Importance:** Hospitalizations due to ambulatory care-sensitive conditions (ACSCs) such as hypertension and pneumonia should be largely prevented if ambulatory care is provided in a timely and effective manner. Evidence suggests that effective primary care is associated with lower rates of ACSC hospitalization (also referred to as avoidable hospitalizations) (Gao, et al., 2014).
- **Overall Rate:** In 2014, the overall rate of potentially avoidable hospitalizations for all conditions was 1,426 per 100,000 population.
- **Trends:**
 - From 2005 through 2014, the overall rate of potentially avoidable hospitalizations for all conditions declined from 1,941 per 100,000 population to 1,426 per 100,000 population.
 - The rate of potentially avoidable hospitalizations for all conditions decreased for all residence locations.

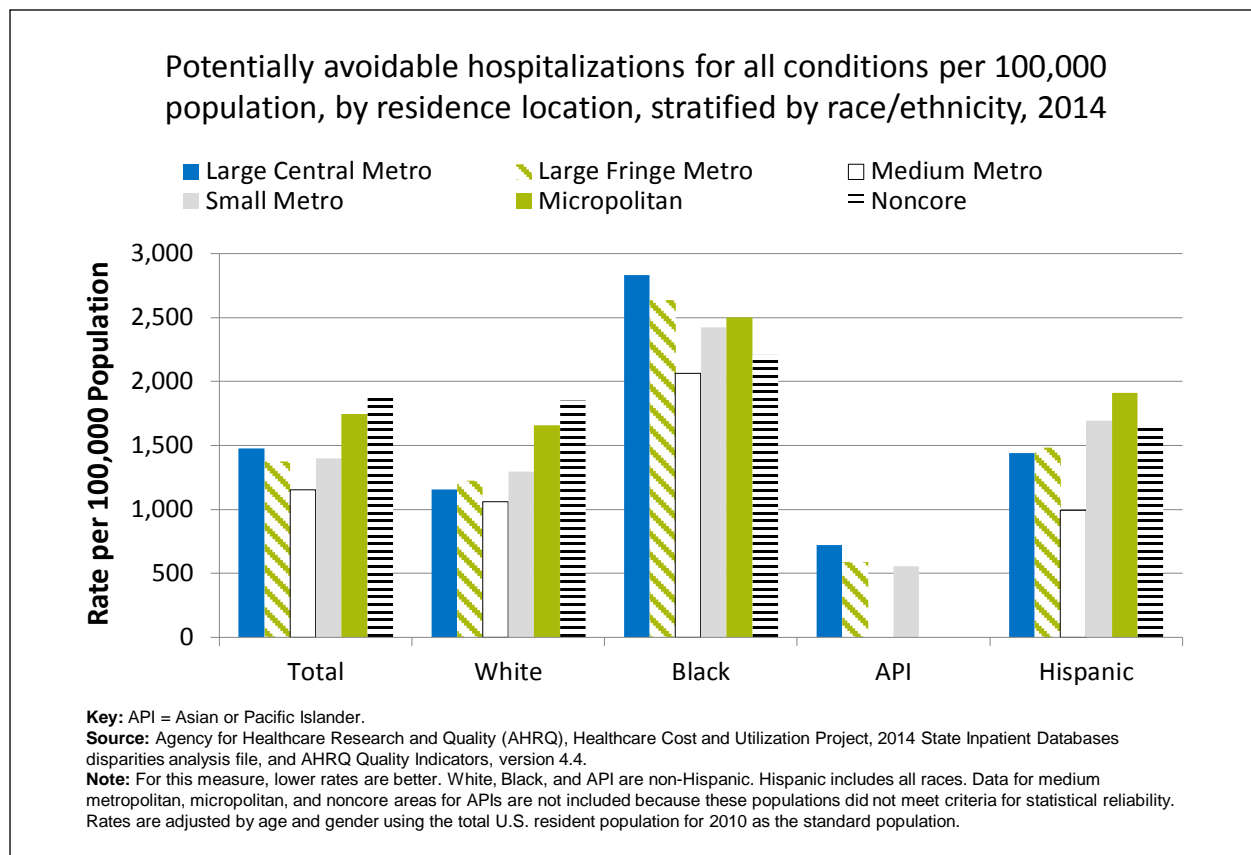
• **Groups With Disparities:**

- From 2005 to 2014, the rate of potentially avoidable hospitalizations for all conditions was higher for people living in noncore areas compared with those living in large fringe metropolitan areas (2005: 2,583 vs. 1,842 per 100,000 population and 2014: 1,872 vs. 1,373 per 100,000 population).
- In 2014, the rate of potentially avoidable hospitalizations for all conditions for people living in noncore areas (1,872 per 100,000 population) and micropolitan areas (1,744 per 100,000 population) was higher than for residents of large fringe metropolitan areas (1,373 per 100,000 population).
- The rate for residents of medium metropolitan areas was decreasing (from 1,796 per 100,000 population in 2005 to 1,152 per 100,000 population in 2014).

• **Achievable Benchmark:**

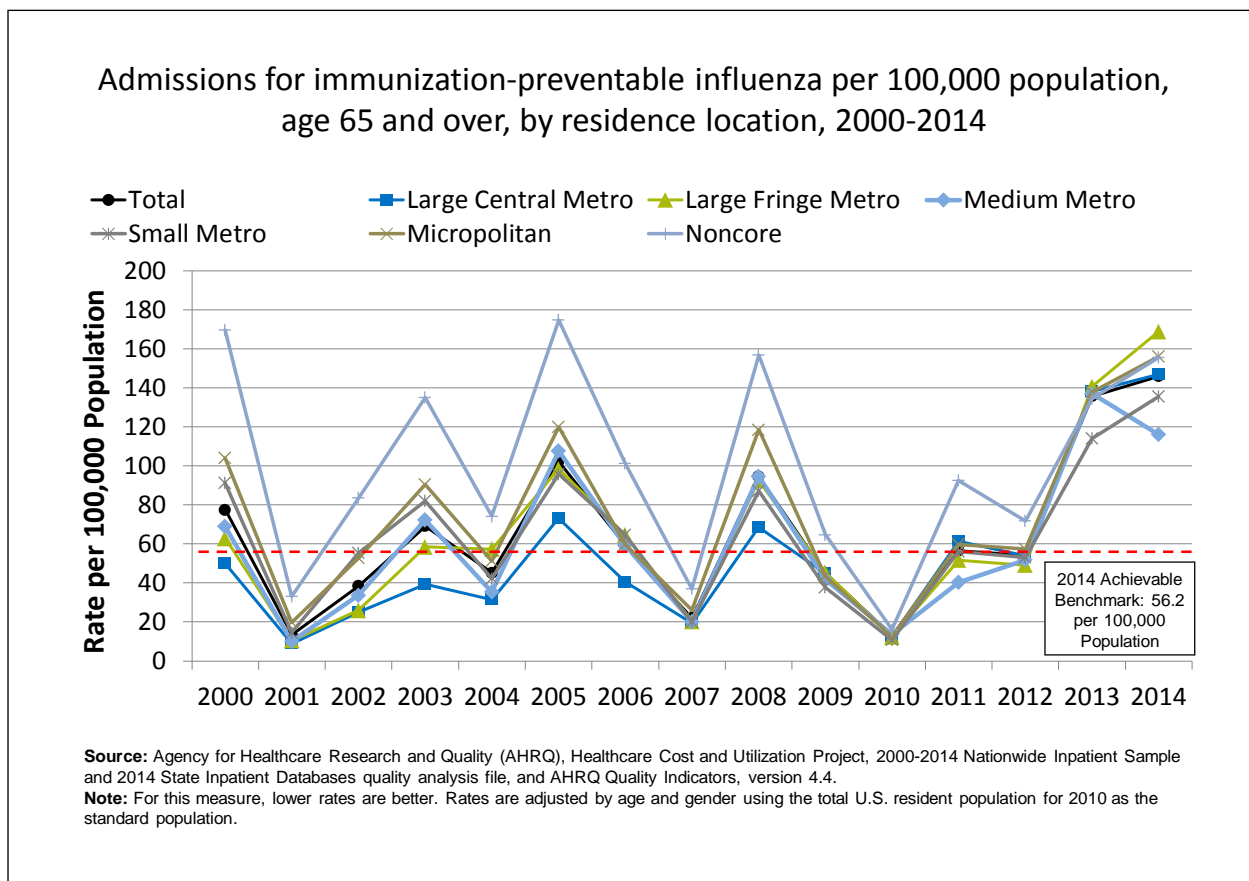
- The 2014 top 4 State achievable benchmark was 872. The top 4 States that contributed to the achievable benchmark are Colorado, Hawaii, Oregon, and Washington.
- The benchmark for residents of the following areas could be reached in the following timeframes: micropolitan and noncore areas (13 years), large central metropolitan and large fringe metropolitan areas (11 years), and medium metropolitan (6 years). Residents of small metropolitan areas could take 19 years to reach the benchmark.

Potentially Avoidable Hospitalizations, by Race/Ethnicity



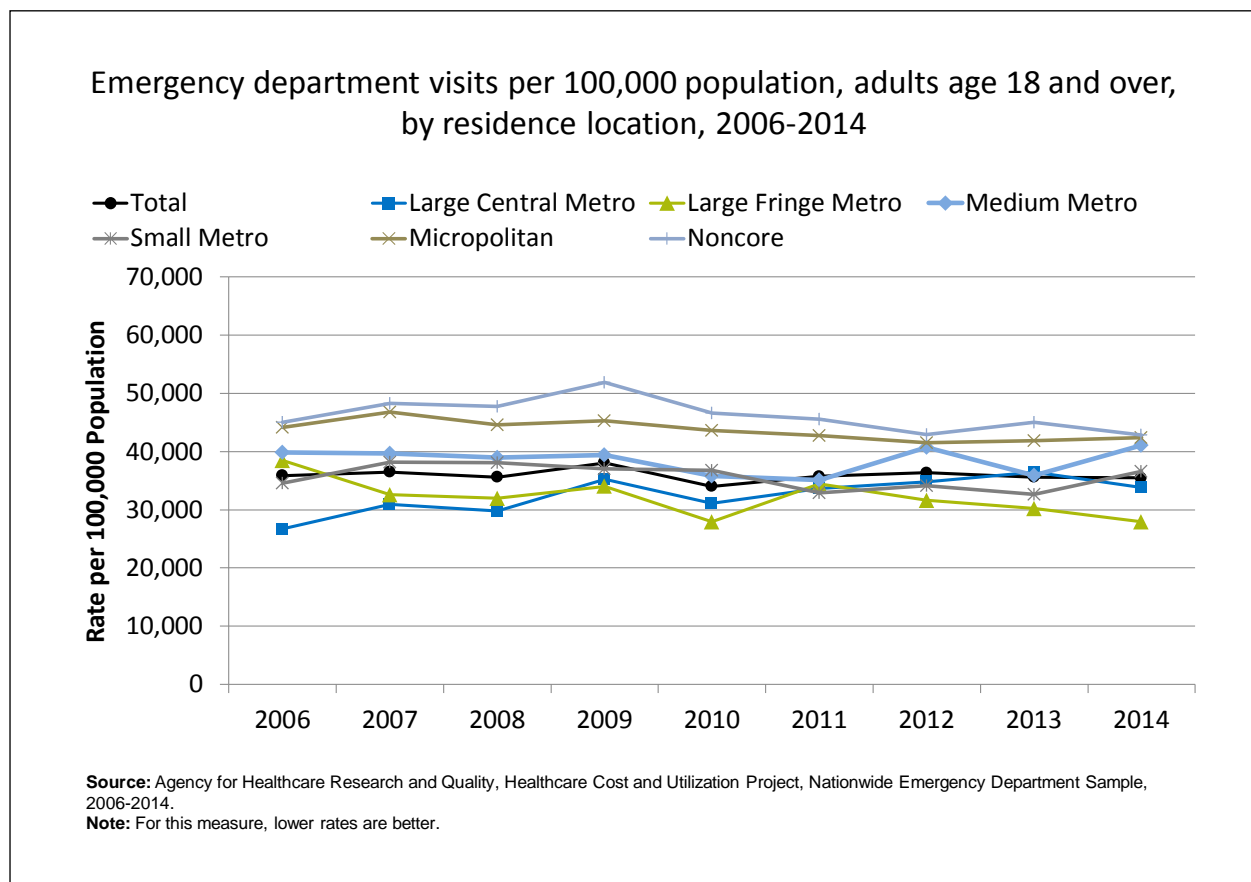
- **Overall Rate:** In 2014, the rate of potentially avoidable hospitalizations for all conditions per 100,000 population was 1,474 for large central metropolitan, 1,373 for large fringe metropolitan, 1,152 for medium metropolitan, 1,396 for small metropolitan, 1,744 for micropolitan, and 1,872 for noncore areas.
- **Groups With Disparities:**
 - In 2014, the rate of potentially avoidable hospitalizations for all conditions was higher for Blacks living in noncore areas (2,208 per 100,000 population) compared with Whites living in noncore areas (1,848 per 100,000 population). The rate of potentially avoidable hospitalizations for all conditions was higher for Blacks in all other residence locations compared with Whites, Asians and Pacific Islanders, and Hispanics and was greater than the total rate.
 - In 2014, the rate of potentially avoidable hospitalizations for all conditions was worse (increasing) for Whites living in noncore areas and micropolitan areas (1,847 and 1,659 per 100,000 population) compared with those living in large fringe metropolitan areas (1,221 per 100,000 population).
 - In 2014, the rate of potentially avoidable hospitalizations for all conditions was lower for Hispanics living in medium metropolitan areas (993 per 100,000 population) compared with those living in large fringe metropolitan areas (1,481 per 100,000 population).

Admissions for Immunization-Preventable Influenza



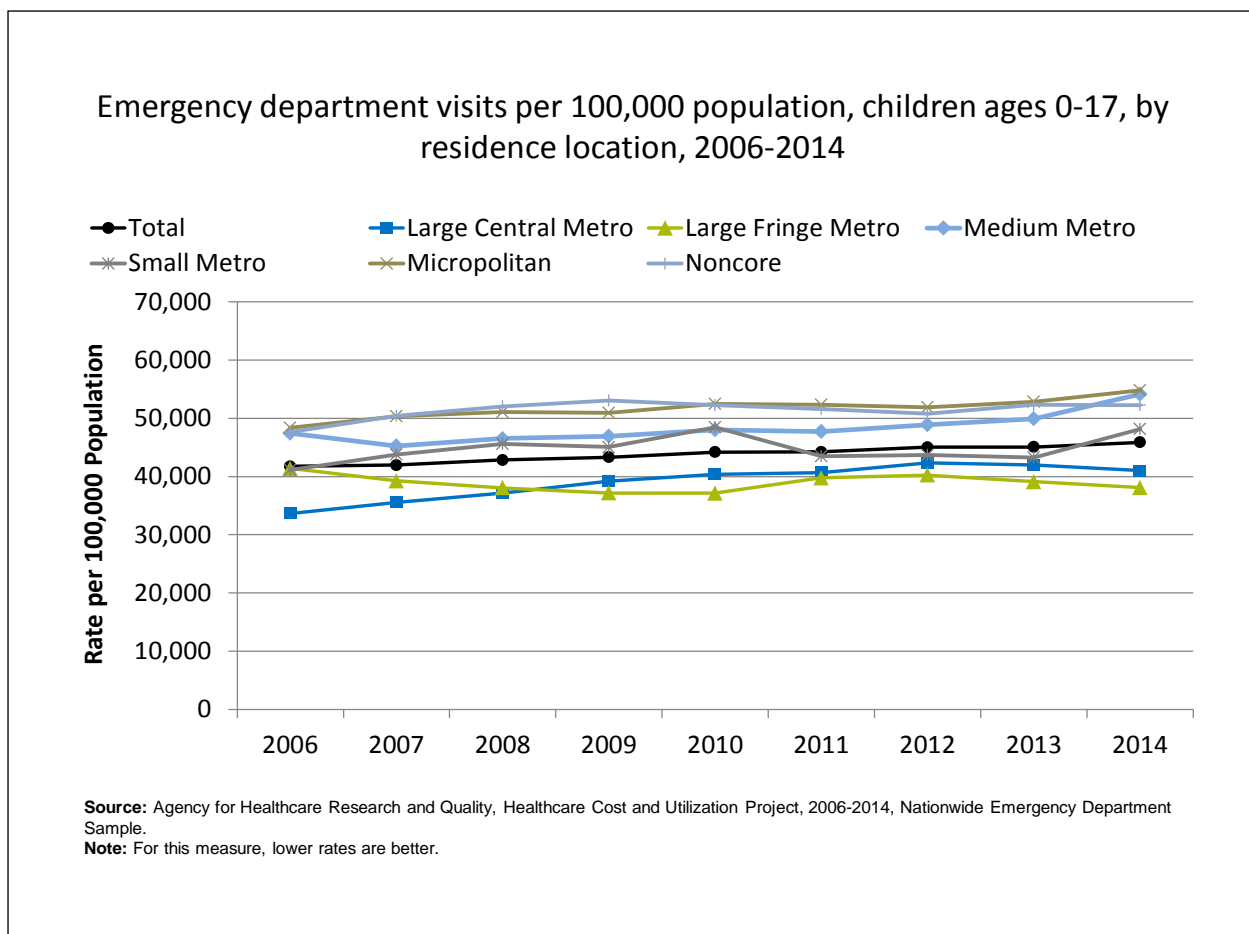
- **Importance:** Immunization is a cost-effective strategy for reducing illness, death, and disparities associated with influenza.
- **Overall Rate:** In 2014, the rate of admissions for immunization-preventable influenza in patients age 65 and over was 146 per 100,000 population.
- **Change Over Time:** From 2000 to 2014, there was no clear geographic pattern in the rate of admissions for immunization-preventable influenza among people age 65 and over.
- **Groups With Disparities:** In 2014, admissions for immunization-preventable influenza per 100,000 population age 65 and over was lower for people living in medium metropolitan areas (116.1 per 100,000) compared with those living in large fringe metropolitan areas (168.9 per 100,000).
- **Achievable Benchmark:**
 - The 2014 top 4 State achievable benchmark was 56.2 per 100,000 population. The top 4 States that contributed to the achievable benchmark are California, Nevada, Oregon, and Wyoming.
 - Residents of noncore metropolitan areas are moving toward the benchmark but could not achieve the benchmark for more than 20 years.
 - Residents of large central metropolitan areas are moving away from the benchmark. Residents of large fringe metropolitan, medium metropolitan, small metropolitan, and micropolitan areas are not making progress toward the benchmark.

Emergency Department Visits, Adults



- **Importance:** Emergency department (ED) visits are costly. An estimated 13% to 27% of ED visits in the United States could be managed in physician offices, clinics, and urgent care centers, saving \$4.4 billion annually (Weinick, et al., 2010).
- **Overall Rate:** In 2014, the rate of ED visits for adults ages 18 and over was 35,472 per 100,000 population. From 2006 to 2014, there were no statistically significant changes in the overall rate.
- **Change Over Time:** The rate of ED visits per 100,000 population for adults age 18 and over was increasing in large central metropolitan areas (from 26,665 per 100,000 population in 2006 to 33,793 in 2014). There were no statistically significant changes in other residence locations.
- **Groups With Disparities:** In 2014, residents of noncore (42,829), micropolitan (42,373), small metropolitan (36,613), and medium metropolitan (41,105) areas had higher ED visit rates than residents of large fringe metropolitan areas (27,915 per 100,000 population).

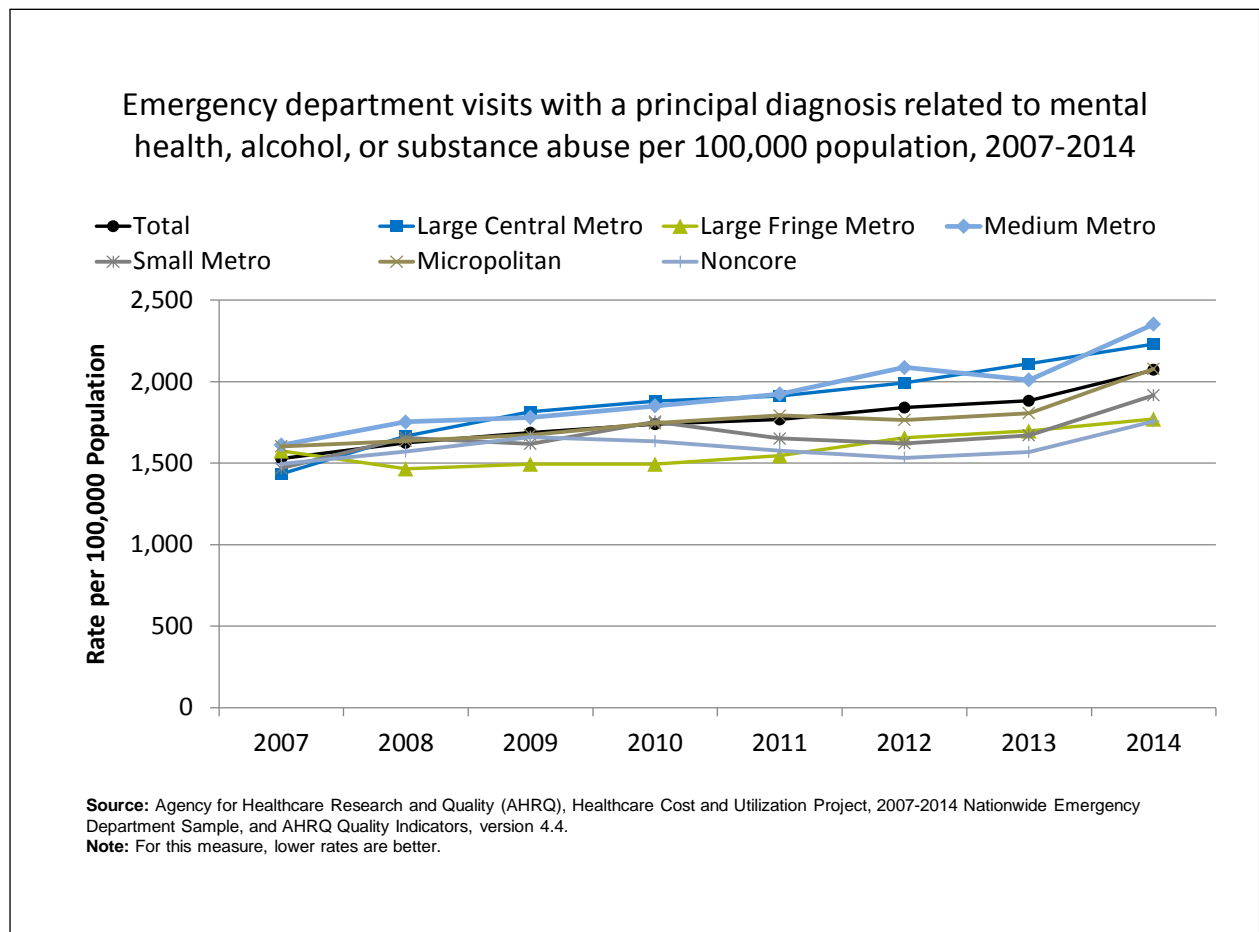
Emergency Department Visits, Children



- **Overall Rate:** In 2014, the rate of all ED visits for children ages 0-17 was 45,872 per 100,000 population.

- **Change Over Time:** From 2006 to 2014, the rates of ED visits per 100,000 population for children ages 0-17 were increasing in large central metropolitan (from 33,676 to 41,036), medium metropolitan (from 47,453 to 54,132), micropolitan (from 48,399 to 54,814), and noncore (from 47,677 to 52,279) areas. Small metropolitan areas did not have any statistically significant changes.
- **Groups With Disparities:** In 2014, residents of noncore (52,279), micropolitan (54,814), small metropolitan (48,156), and medium metropolitan (54,132) areas had higher ED visit rates than residents of large fringe metropolitan areas (38,072 per 100,000 population).

Emergency Department Visits Related to Mental Health or Substance Use

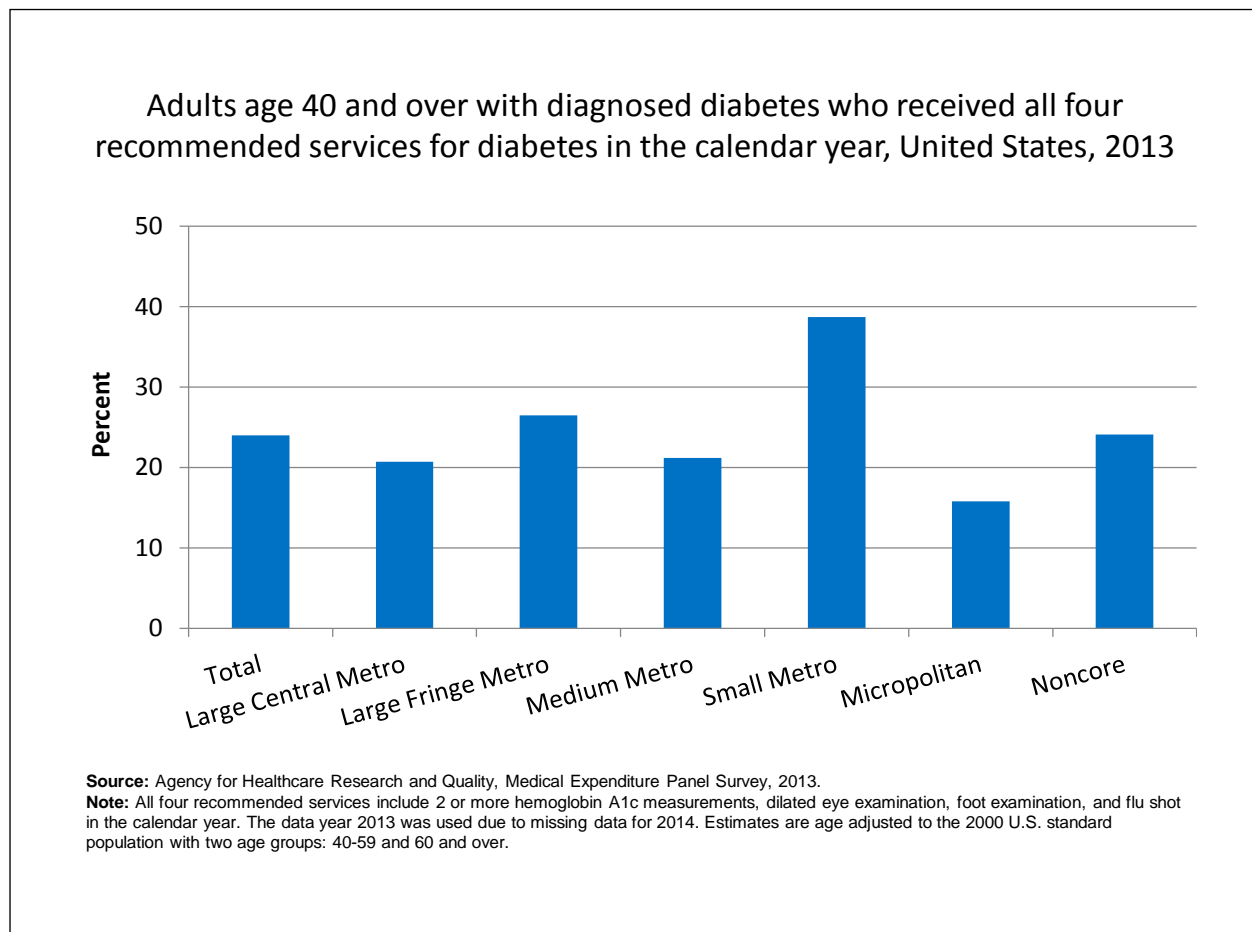


- **Importance:** “Approximately 20.2 million adults age 18 or over had a substance use disorder in 2014. Of these adults, 16.3 million had an alcohol use disorder and 6.2 million had an illicit drug use disorder. An estimated 2.3 million adults had both an alcohol use disorder and an illicit drug use disorder in the past year” (Lipari & Van Horn, 2017). Inadequate management of substance use disorders can lead to costly ED visits.
- **Overall Rate:** In 2014, the rate of ED visits with a principal diagnosis related to mental health, alcohol, or substance abuse was 2,072 per 100,000 population.

- **Change Over Time:** The rate for ED visits with a principal diagnosis related to mental health, alcohol, or substance abuse in all residence locations except noncore areas worsened over time.
- **Groups With Disparities:** In 2014, the rate of ED visits per 100,000 population was worse for residents of medium metropolitan areas (2,353) compared with residents of large fringe metropolitan areas (1,771).

Effective Treatment

Receipt of Recommended Services for Diabetes

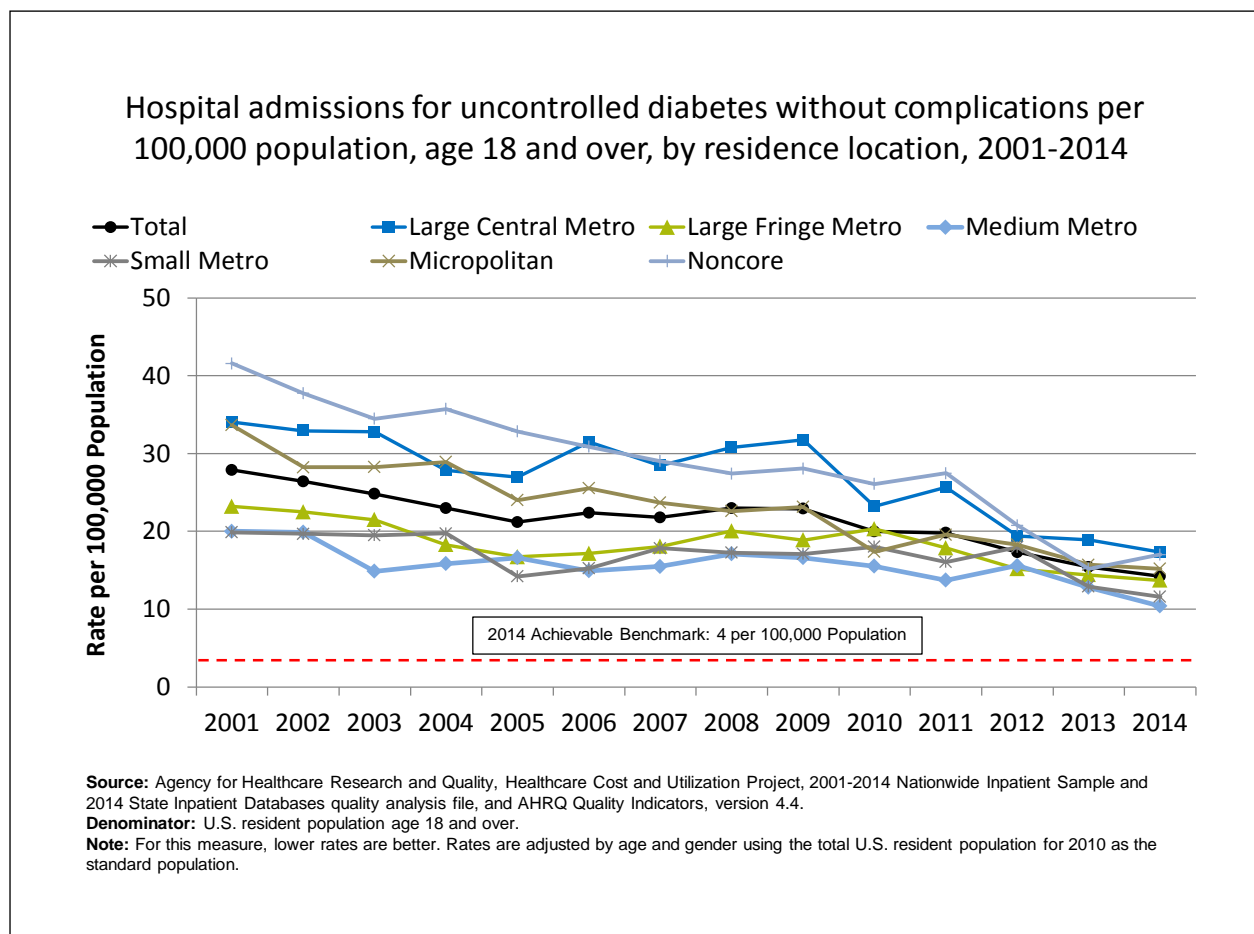


- **Importance:** People with diabetes have an increased risk for heart disease, stroke, kidney disease, and retinopathy that lead to a decrease in quality of life (CDC, 2017). Diabetes preventive care and self-management such as regular medical visits, glucose monitoring, foot and eye examinations, healthy eating, and regular physical activity can prevent or delay costly complications. In 2014, 7.2 million hospital discharges and 14.2 million ED visits were reported with diabetes as any listed diagnosis.
- **Overall Rate:** In 2013, 24% of adults diagnosed with diabetes received all four recommended services for diabetes.

- **Groups With Disparities:**

- Adult residents of small metropolitan areas diagnosed with diabetes were more likely to receive all four recommended services than residents of large fringe metropolitan areas (38.7% vs. 26.5%). Residents of micropolitan areas were less likely to receive all four recommended services than residents of large fringe metropolitan areas (15.8% vs. 26.5%).
- The percentage of adults diagnosed with diabetes who received all four recommended services was 20.7% in large central metropolitan areas, 26.5% in large fringe metropolitan areas, 21.2% in medium metropolitan areas, 38.7% in small metropolitan areas, 15.8 in micropolitan areas, and 24.1% in noncore areas.

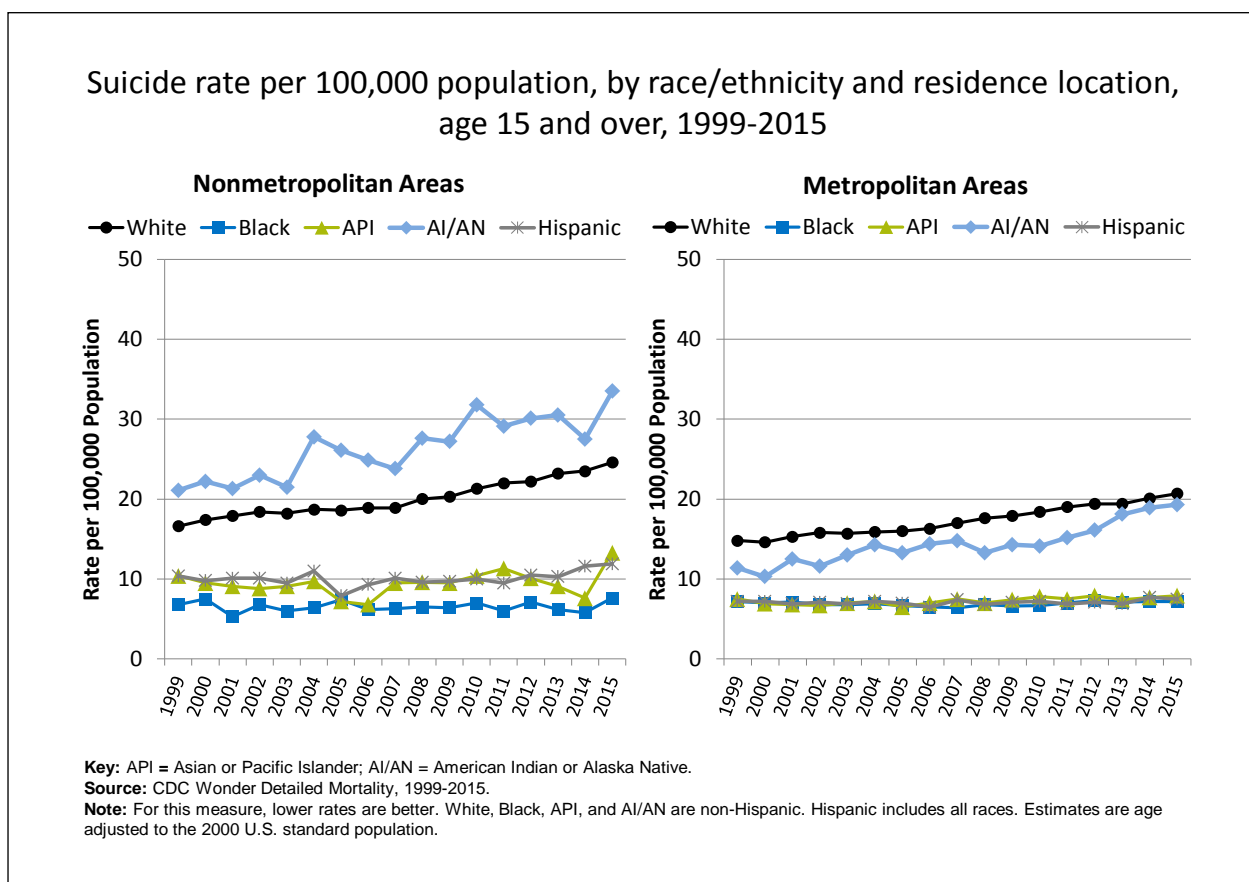
Hospital Admissions for Uncontrolled Diabetes



- **Importance:** Individuals who do not achieve good control of their diabetes may develop symptoms that require correction through hospitalization. Admission rates for uncontrolled diabetes may be reduced by better outpatient treatment and patients’ tighter adherence to diet and medication.
- **Trends:** From 2001 to 2014, the rate of hospital admissions for uncontrolled diabetes decreased overall and for all residence locations.

- **Groups With Disparities:** In 12 of 14 years, the rates of hospital admissions for uncontrolled diabetes were higher among residents of noncore areas compared with residents of large fringe metropolitan areas (suburbs).
- **Achievable Benchmark:**
 - The 2014 top 4 State achievable benchmark was 4 admissions per 100,000 population age 18 and over. The top 4 States that contributed to the achievable benchmark were Colorado, Hawaii, Vermont, and Washington.
 - At the current rates, residents of noncore and micropolitan (nonmetropolitan) areas should reach the benchmark in about 8 years, sooner than residents of metropolitan areas, whose rates are not decreasing as quickly.

Suicide Rate



- **Importance:** Suicide rates in the United States have been increasing since 2000. Rates in less urban areas have been higher than rates in more urban areas, with some evidence of a growing difference. Increased suicide risk is associated with factors that are more prevalent in less urban areas, such as limited access to mental health care, social isolation, and opioid misuse (CDC, 2017). Suicide may be prevented when its warning signs are detected and treated. Identification of suicidal ideas and plans among individuals being treated for depression is expected to increase with the growing use of standardized screening instruments and electronic medical records.

• **Trends:**

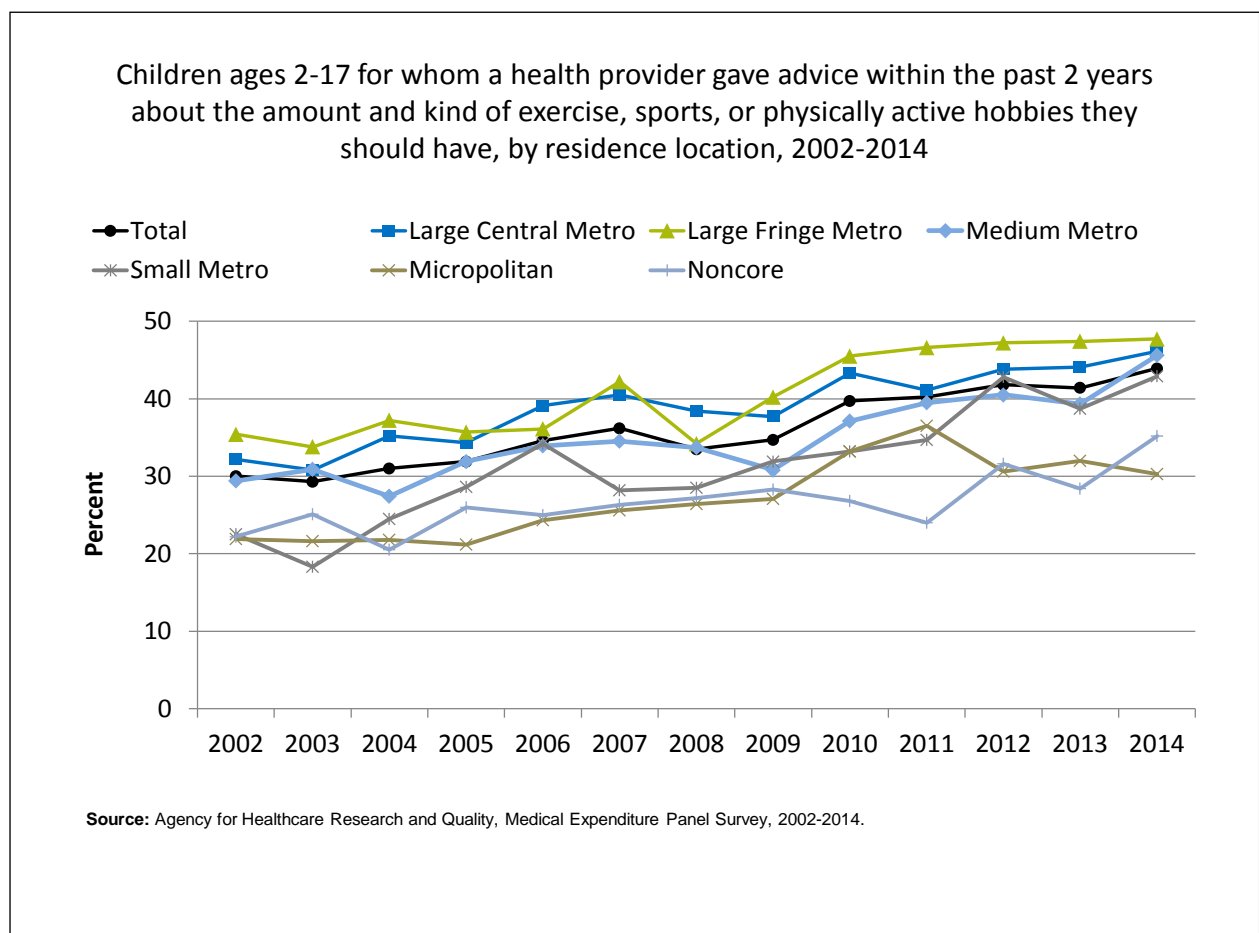
- From 1999 to 2015, in nonmetropolitan areas, the suicide rate for Whites increased from 16.6 to 24.6 per 100,000 population; for Blacks, from 6.8 to 7.6 per 100,000 population; and for American Indians and Alaska Natives, from 21.1 to 33.5 per 100,000 population.
- From 1999 to 2015, in metropolitan areas, the suicide rate for Whites increased from 14.8 to 20.7 per 100,000 population and for AI/ANs, from 11.4 to 19.3 per 100,000 population.

• **Groups With Disparities:**

- In 2015, residents of nonmetropolitan areas had higher rates of suicide than residents of metropolitan areas for all racial/ethnic groups. AI/AN residents were the only group with higher suicide rates than Whites
- In 2015, the suicide rate among AI/ANs residing in metropolitan areas was 19.3 per 100,000 population compared with 33.5 per 100,000 population for AI/AN residents of nonmetropolitan areas.

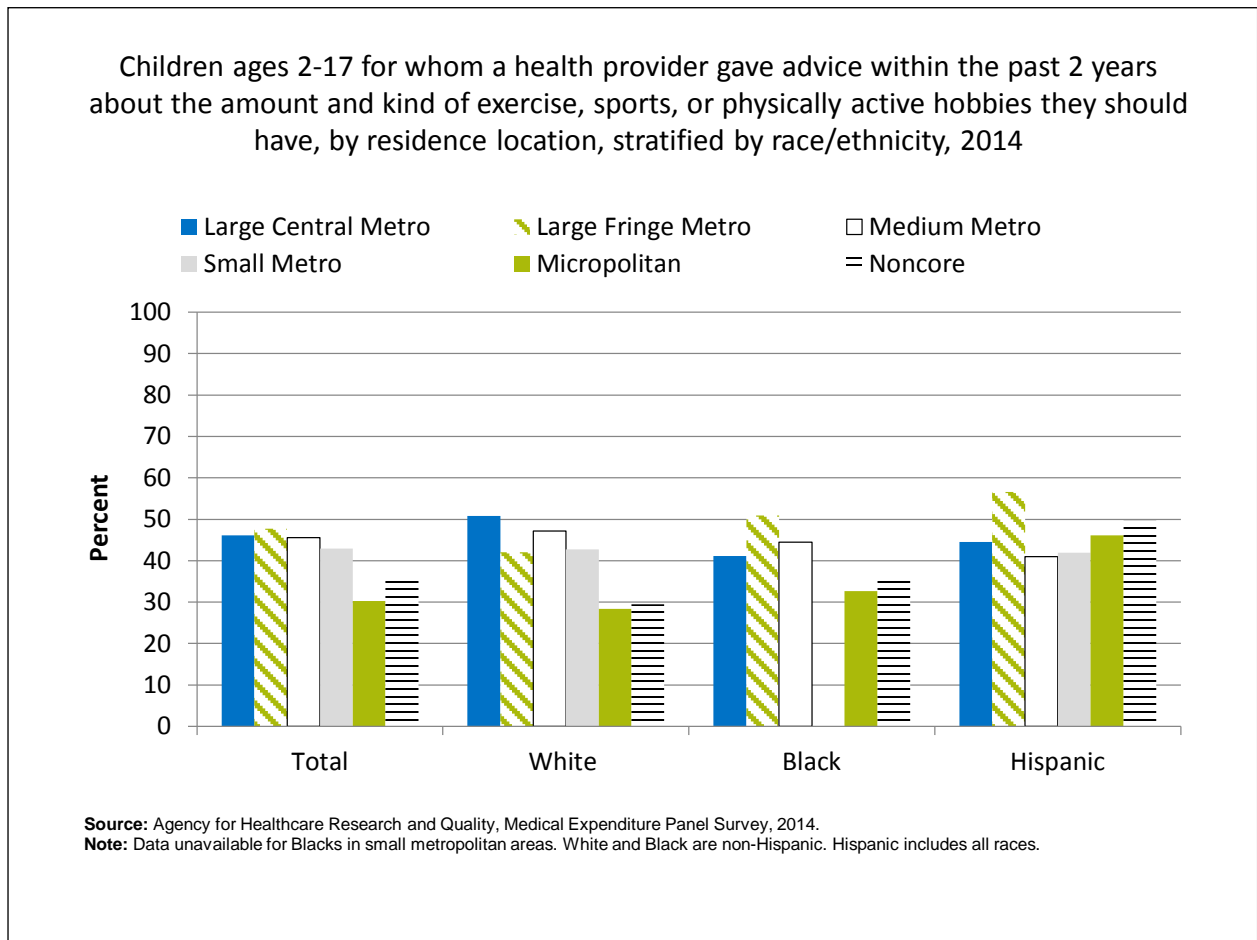
Healthy Living

Advice for Children About Exercise



- **Importance:** Childhood is often a time when people establish healthy lifelong habits. Physicians can play an important role in encouraging healthy behaviors from a young age. For example, they can educate children and parents about the importance of regular exercise.
- **Overall Rate:** In 2014, 43.9% of children ages 2-17 received advice about exercise, sports, or physically active hobbies.
- **Trends:**
 - From 2002 to 2014, the overall percentage of children who received advice about exercise improved from 30.0% to 43.9%.
 - All geographic locations showed improvement.
- **Groups With Disparities:**
 - In all years, children in micropolitan areas were less likely to receive advice about exercise, sports, or physically active hobbies than children in large fringe metropolitan areas.
 - In 12 of 13 years, children in noncore areas were less likely to receive advice about exercise, sports, or physically active hobbies than children in large fringe metropolitan areas.

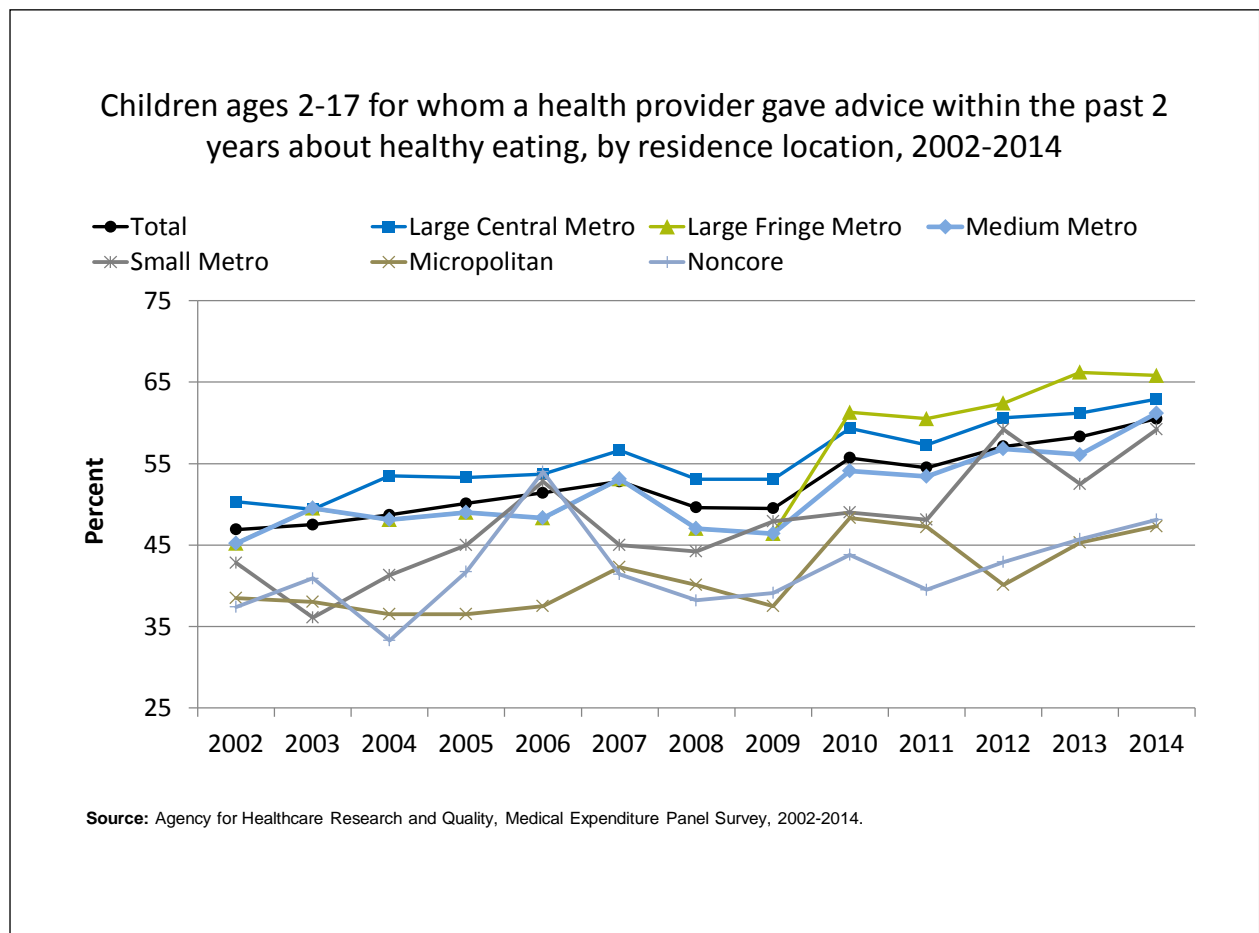
Advice for Children About Exercise, by Race/Ethnicity



• **Groups With Disparities:**

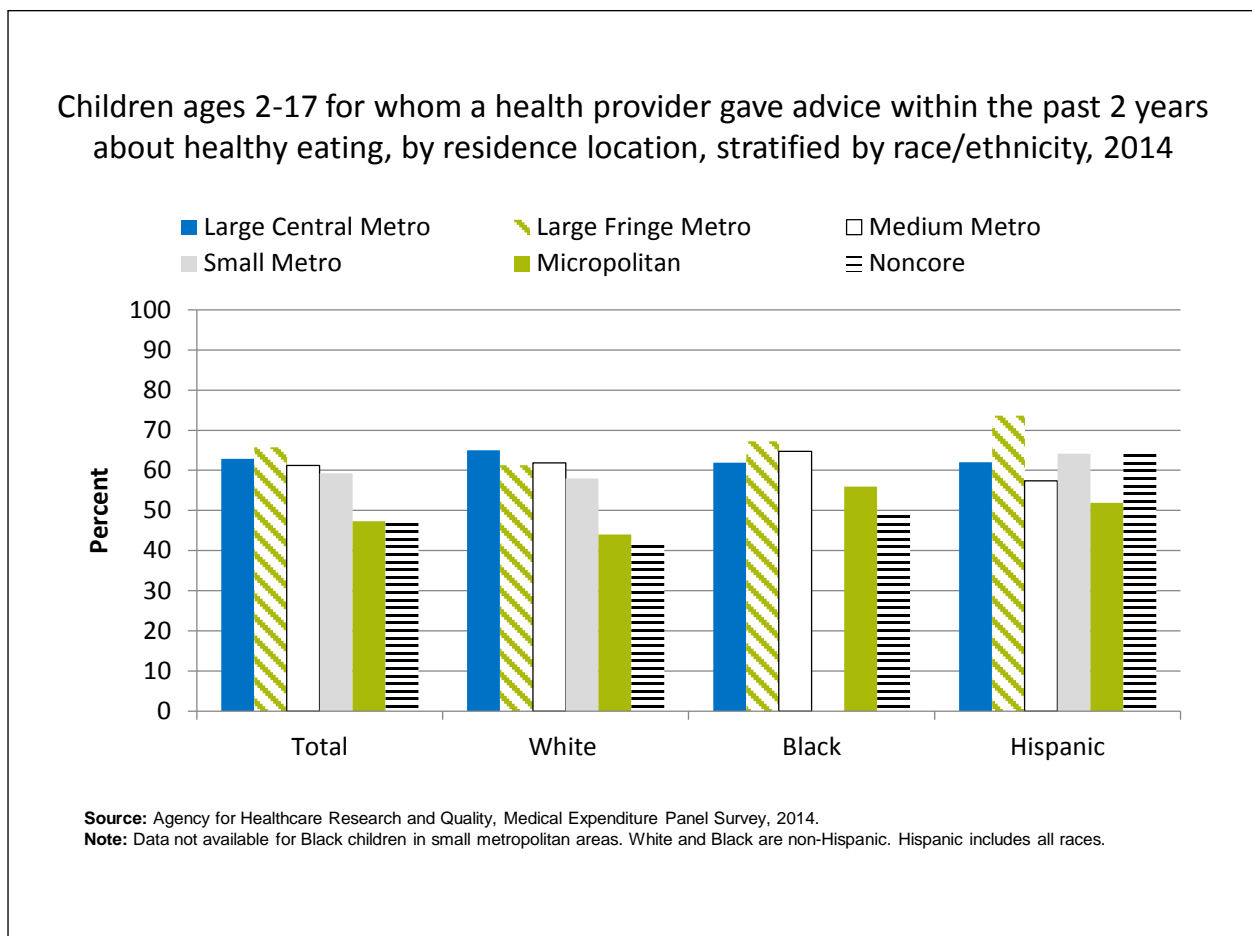
- Overall, children in micropolitan and noncore areas were less likely to receive advice about exercise, sports, or physically active hobbies than children in large fringe metropolitan areas.
- Among Black children, residents of large central metropolitan, micropolitan, and noncore areas were less likely than residents of large fringe metropolitan areas to have a health care provider give advice about the amount and kind of exercise, sports, or physically active hobbies they should have.
- Among Hispanic children, residents of large central metropolitan, medium metropolitan, and small metropolitan areas were less likely than residents of large fringe metropolitan areas to have a health care provider give advice about the amount and kind of exercise, sports, or physically active hobbies they should have.
- Among White children, residents of micropolitan areas were less likely than residents of large fringe metropolitan areas to have a health care provider give advice about the amount and kind of exercise, sports, or physically active hobbies they should have.

Advice for Children About Healthy Eating



- **Importance:** It is essential for physicians to emphasize to patients the importance of consuming foods from all food groups, including whole grains and fibers, lean proteins, complex carbohydrates, fruits, and vegetables, as well as providing education about balancing energy intake and energy expenditure.
- **Overall Rate:** In 2014, 60.5% of children ages 2-17 received advice about healthy eating.
- **Trends:**
 - From 2002 to 2014, the overall percentage of children who received advice about healthy eating improved from 46.9% to 60.5%.
 - All geographic locations except noncore showed improvement.
- **Groups With Disparities:** In 2014, children in micropolitan and noncore areas were less likely to receive advice about healthy eating than children in large fringe metropolitan areas.

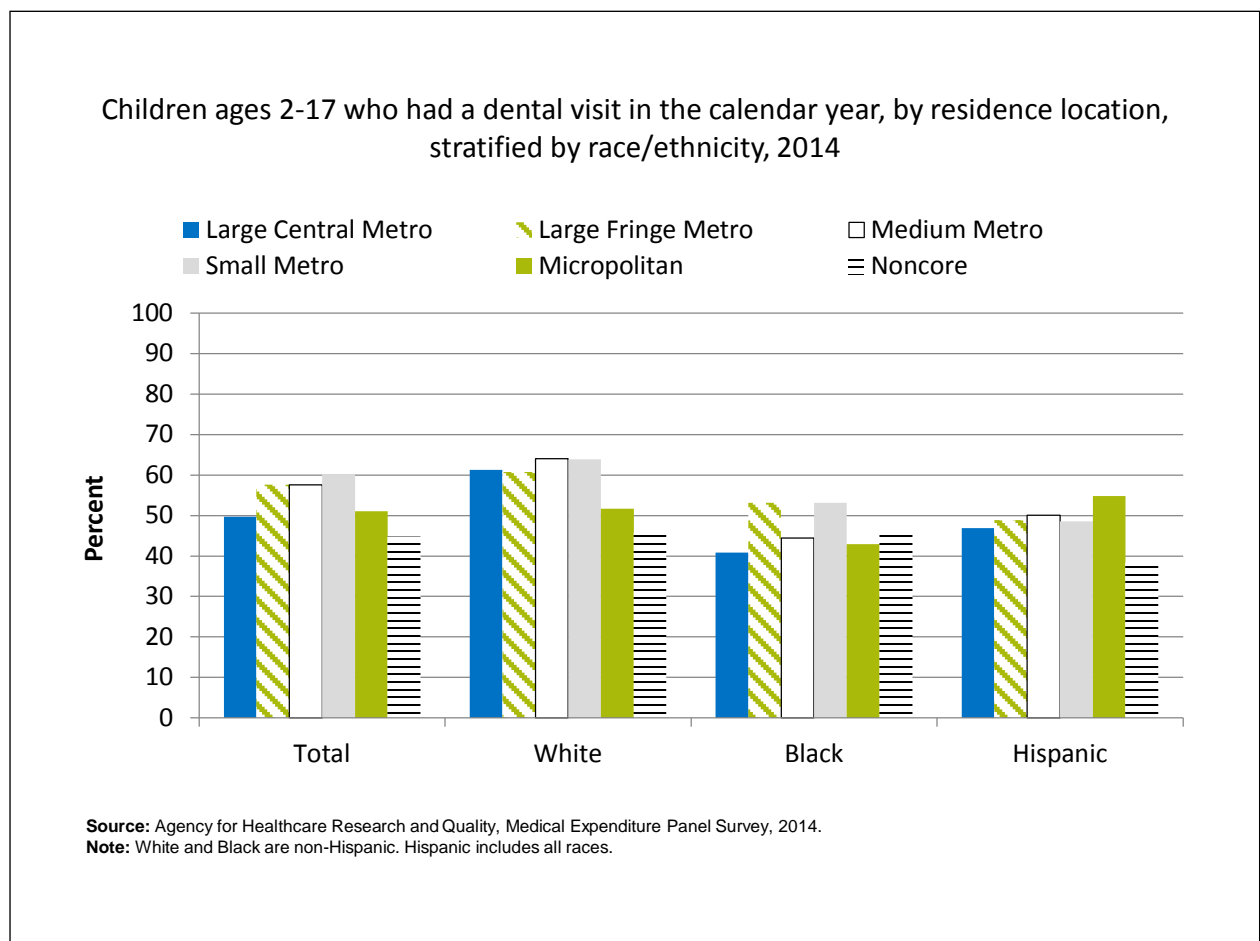
Advice for Children About Healthy Eating, by Race/Ethnicity



- **Importance:** It is essential for physicians to emphasize to patients the importance of consuming foods from all food groups, including whole grains and fibers, lean proteins, complex carbohydrates, fruits, and vegetables, as well as providing education about balancing energy intake and energy expenditure.

- **Overall Rate:** In 2014, 60.5% of children ages 2-17 received advice about healthy eating (data not shown).
- **Groups With Disparities:**
 - Overall, in 2014, children residing in micropolitan and noncore areas were less likely to receive advice about healthy eating than children in large fringe metropolitan areas.
 - Among Black children, residents of noncore areas were less likely than residents of large fringe metropolitan areas to receive advice about healthy eating.
 - Among Hispanic children, residents of large central, medium metropolitan, and micropolitan areas were less likely than residents of large fringe metropolitan areas to receive advice about healthy eating.
 - Among White children, residents of micropolitan and noncore areas were less likely than residents of large fringe metropolitan areas to receive advice about healthy eating.

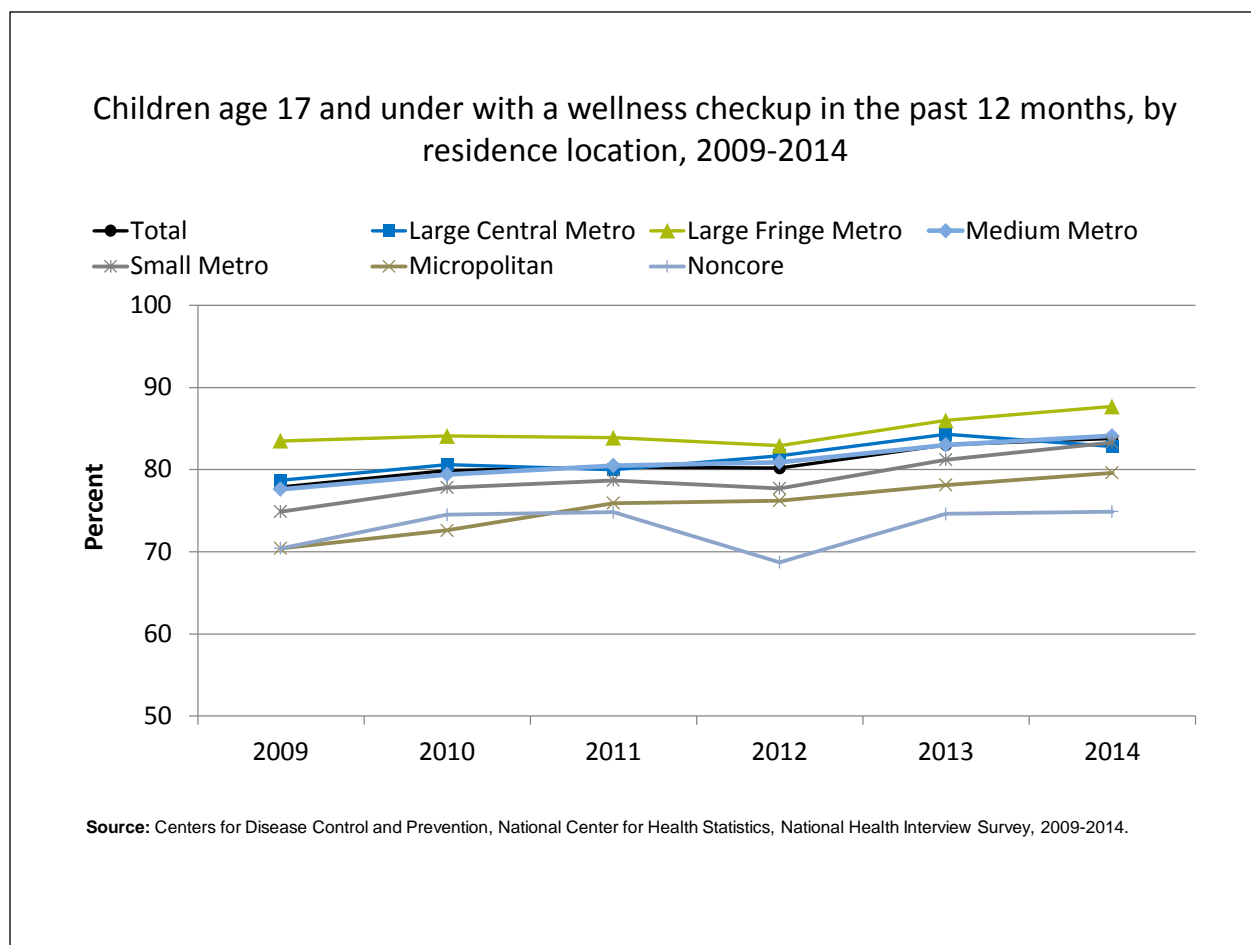
Children’s Dental Visits



- **Importance:** According to the National Institute of Dental and Craniofacial Research, presence of dental caries is the single most common chronic disease of childhood (NIDCR, 2014). Regular dental visits help to improve overall oral health and prevent dental caries.

- **Overall Rate:** In 2014, 54.4% of children ages 2-17 had a dental visit in the calendar year (data not shown).
- **Groups With Disparities:**
 - Overall, in 2014, children residing in large central metropolitan and noncore areas were less likely to have a dental visit in the calendar year than children in large fringe metropolitan areas.
 - Among Hispanic children, there were no statistically significant differences by residence location in the percentage of children who had a dental visit in the calendar year.
 - Black children in large central metropolitan areas were less likely than Black children in large fringe metropolitan areas to have a dental visit.
 - White children residing in noncore areas were less likely than children in large fringe metropolitan areas to have a dental visit.

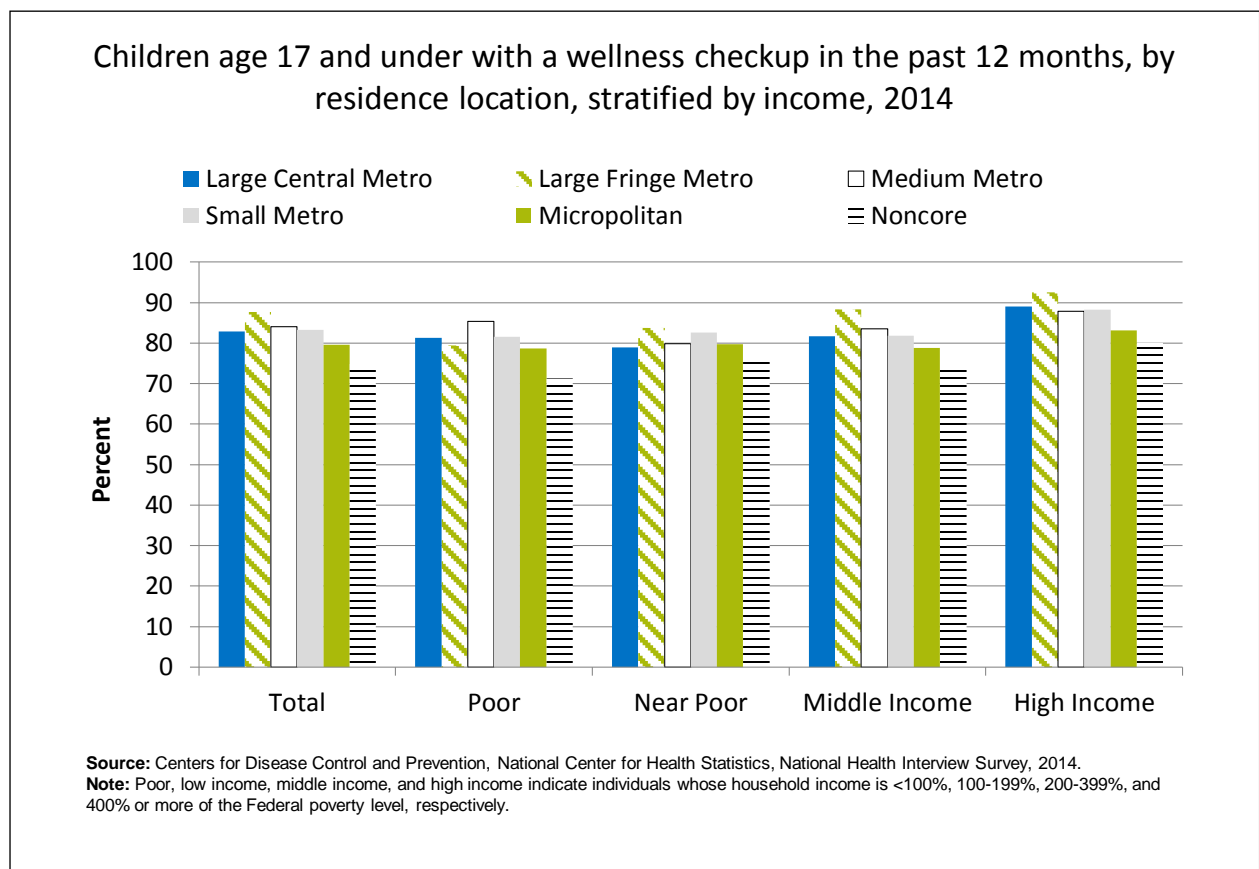
Children’s Wellness Visits



- **Importance:** Well-child visits are an important component of high-quality health care for children. These visits may provide children with preventive and developmental health services, help ensure timely immunizations, help reduce the use of acute care services, and offer parents an opportunity to discuss their health-related concerns with providers.

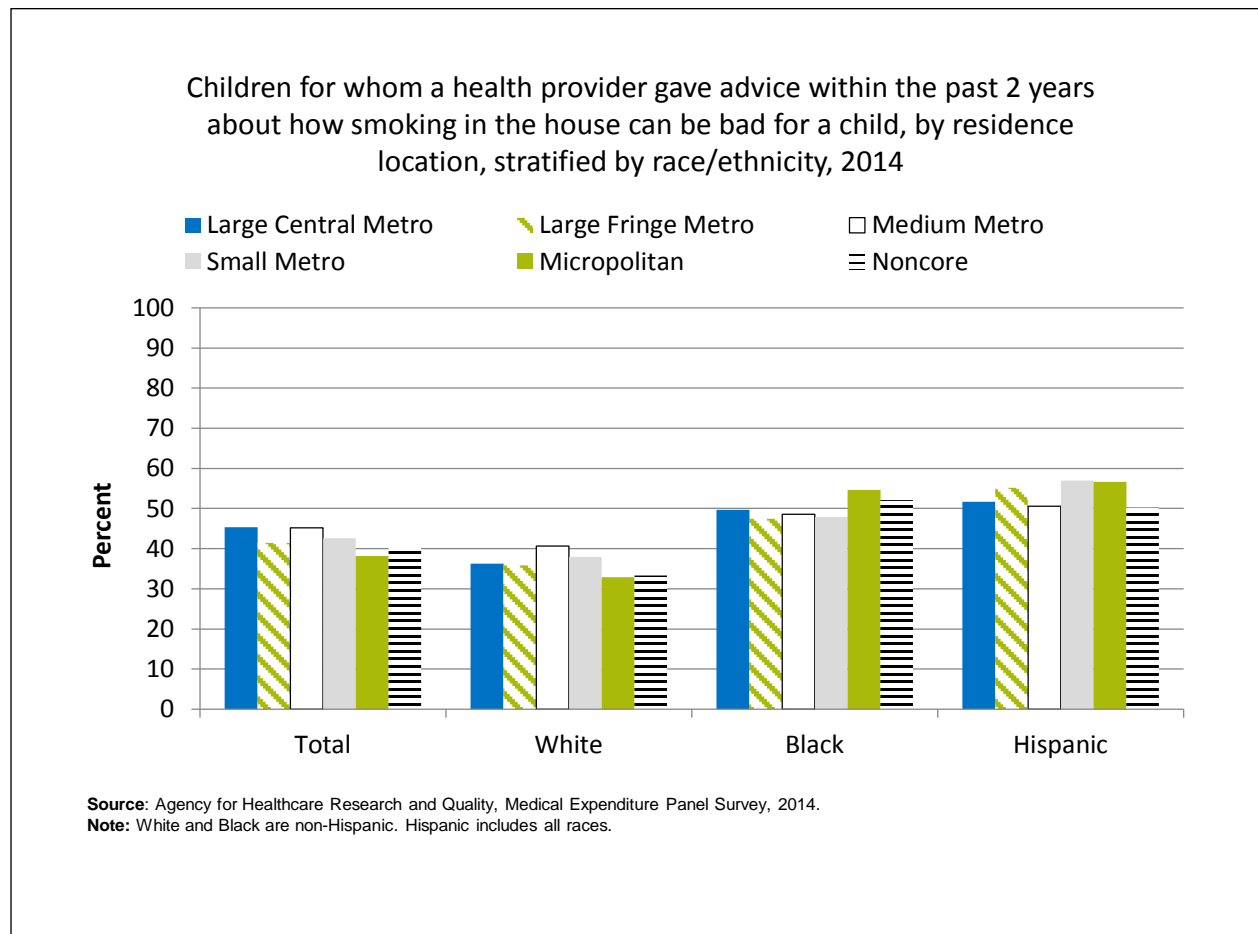
- **Overall Rate:** In 2014, 83.8% of children ages 0-17 had a wellness checkup.
- **Trends:**
 - From 2009 to 2014, the overall percentage of children who had a wellness checkup improved from 77.9% to 83.8%.
 - All geographic locations except noncore showed improvement.
- **Groups With Disparities:** In 2014, children in all other residence locations were less likely than children in large fringe metropolitan areas to have a wellness checkup.

Children’s Wellness Checkups, by Income



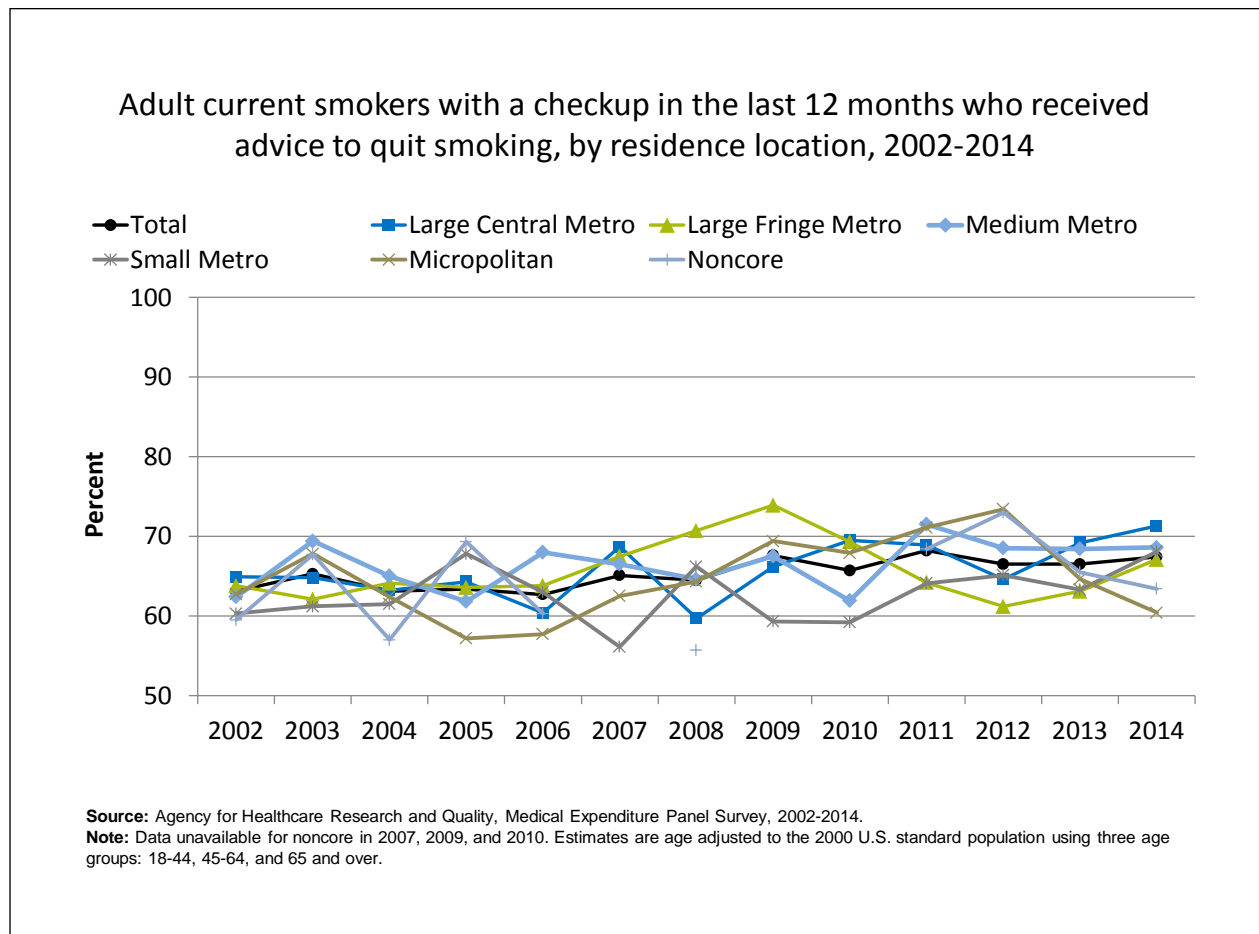
- **Groups With Disparities:**
 - Overall in 2014, children in all other residence locations were less likely than children in large fringe metropolitan areas to have a wellness visit.
 - Among middle-income children, residents of all other locations were less likely than residents of large fringe metropolitan areas to have a wellness visit.
 - High-income children living in large central and medium metropolitan areas, micropolitan areas, and noncore were less likely than children in large fringe metropolitan areas to have a wellness visit.

Advice About Avoiding Smoking Around Children



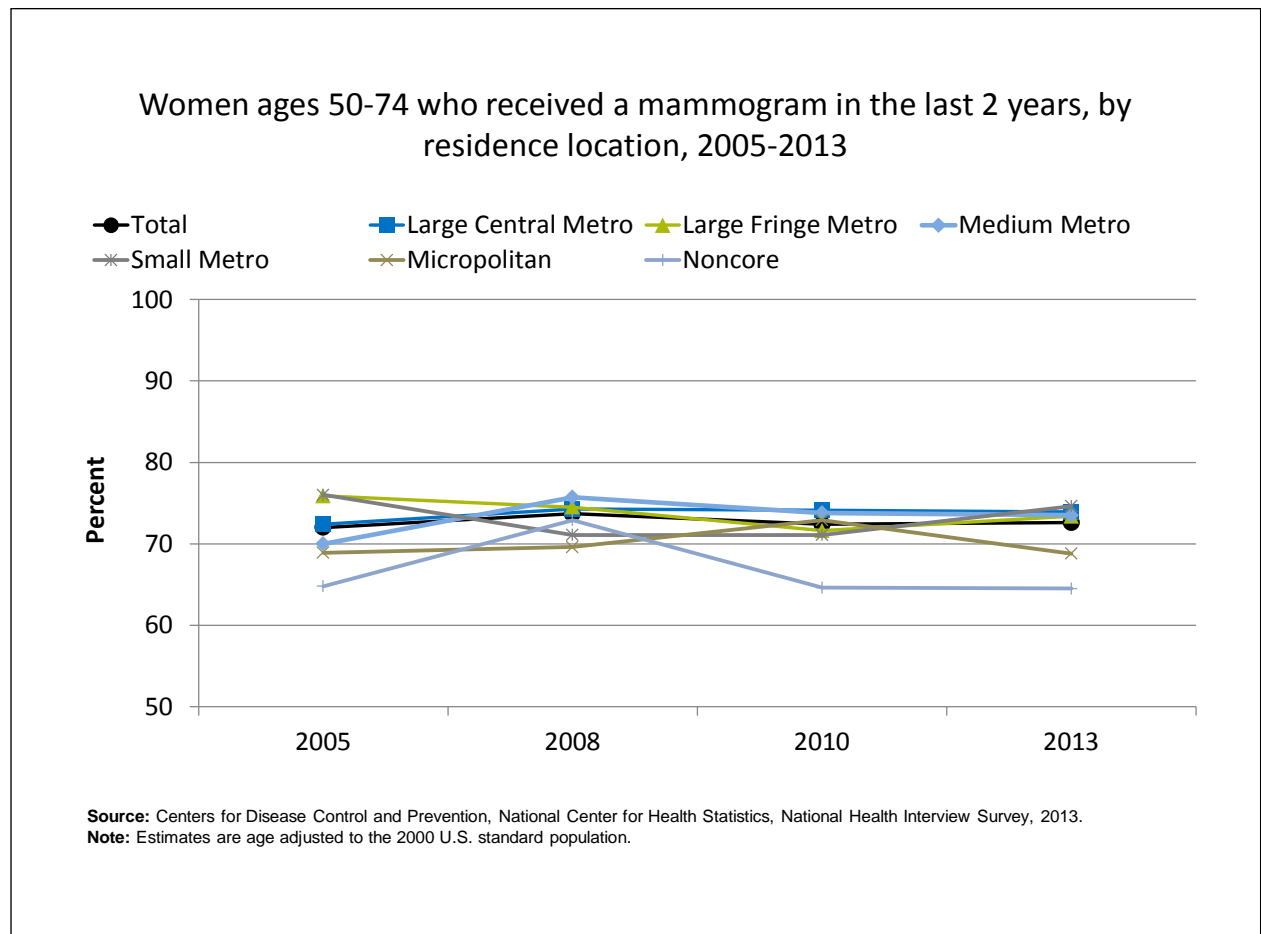
- **Importance:** Secondhand smoke can cause serious health problems in children. Studies show that older children whose parents smoke get sick more often. Their lungs grow less than children who do not breathe secondhand smoke, and they get more bronchitis and pneumonia.
- **Groups With Disparities:**
 - Blacks residing in large central metropolitan, large fringe metropolitan, micropolitan, and noncore areas were more likely than Whites in the same areas to receive advice about how smoking in the home can be bad for a child.
 - Hispanics residing in large central metropolitan, large fringe metropolitan, small metropolitan, and micropolitan areas were more likely than Whites in the same areas to receive advice about how smoking in the home can be bad for a child.

Advice to Adult Smokers To Quit



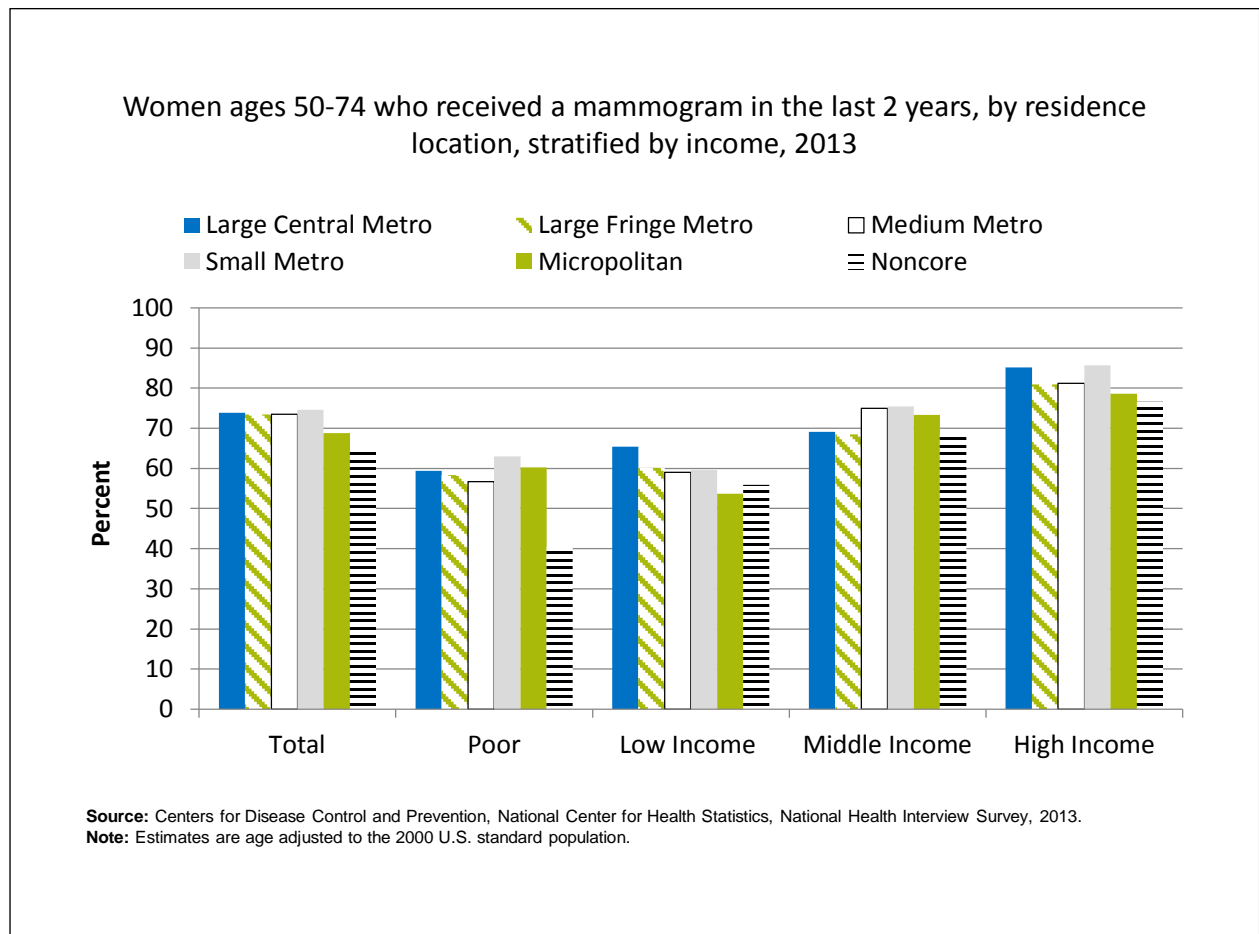
- **Importance:** Tobacco use increases the risk of developing and dying from heart disease, stroke, and chronic lower respiratory disease. Cigarette smoking is the leading cause of preventable disease and death in the United States (Garcia, et al., 2017). Since the first Surgeon General’s report on smoking and health in 1964, there have been more than 20 million premature deaths attributable to smoking and exposure to secondhand smoke (OSH, 2014). In 2012, 25.6% of residents of nonmetropolitan areas age 18 and over were current smokers compared with 15.4% of residents of large metropolitan areas (Blackwell, et al., 2014).
- **Overall Rate:** In 2014, 67.4% of current smokers received advice to quit smoking.
- **Trends:**
 - From 2002 to 2014, the overall percentage of adults who received advice to quit smoking increased from 63.1% to 67.4%.
 - Among current smokers in large central metropolitan areas, there were significant improvements, increasing from 64.9% in 2002 to 71.3% in 2014.

Receipt of Mammograms



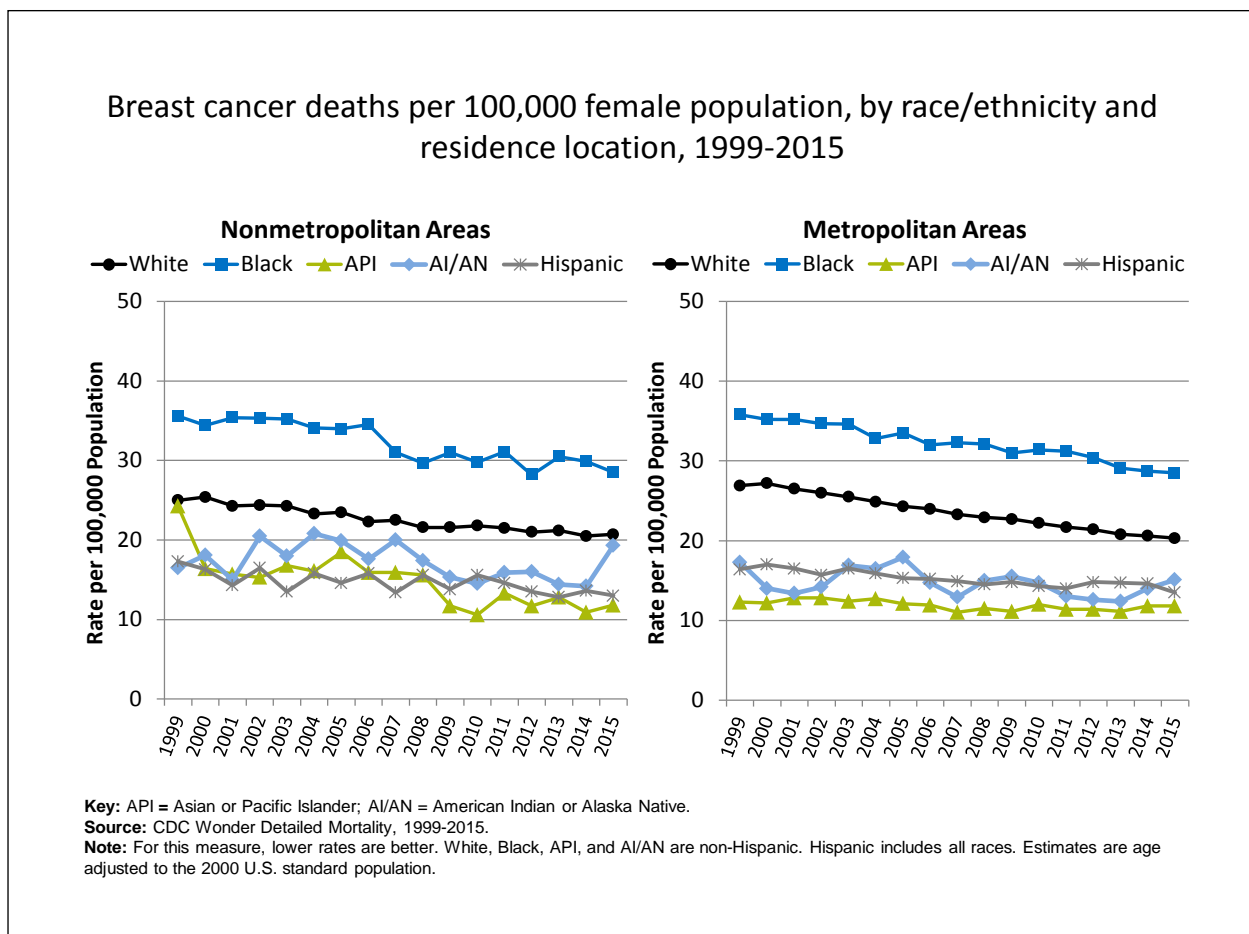
- **Importance:** Early detection of cancer allows more treatment options and often improves outcomes. Mammography, the most effective method for detecting breast cancer at its early stages, can identify malignancies before they can be felt and before symptoms develop.
- **Overall Rate:** In 2013, 72.6% of women ages 50-74 received a mammogram.
- **Trends:**
 - From 2000 to 2013, the overall percentage of women ages 50-74 who received a mammogram worsened from 77.2% to 72.6%.
- **Groups With Disparities:** In 2013, women in noncore areas were less likely to receive a mammogram than women in large fringe metropolitan areas.

Receipt of Mammograms, by Income



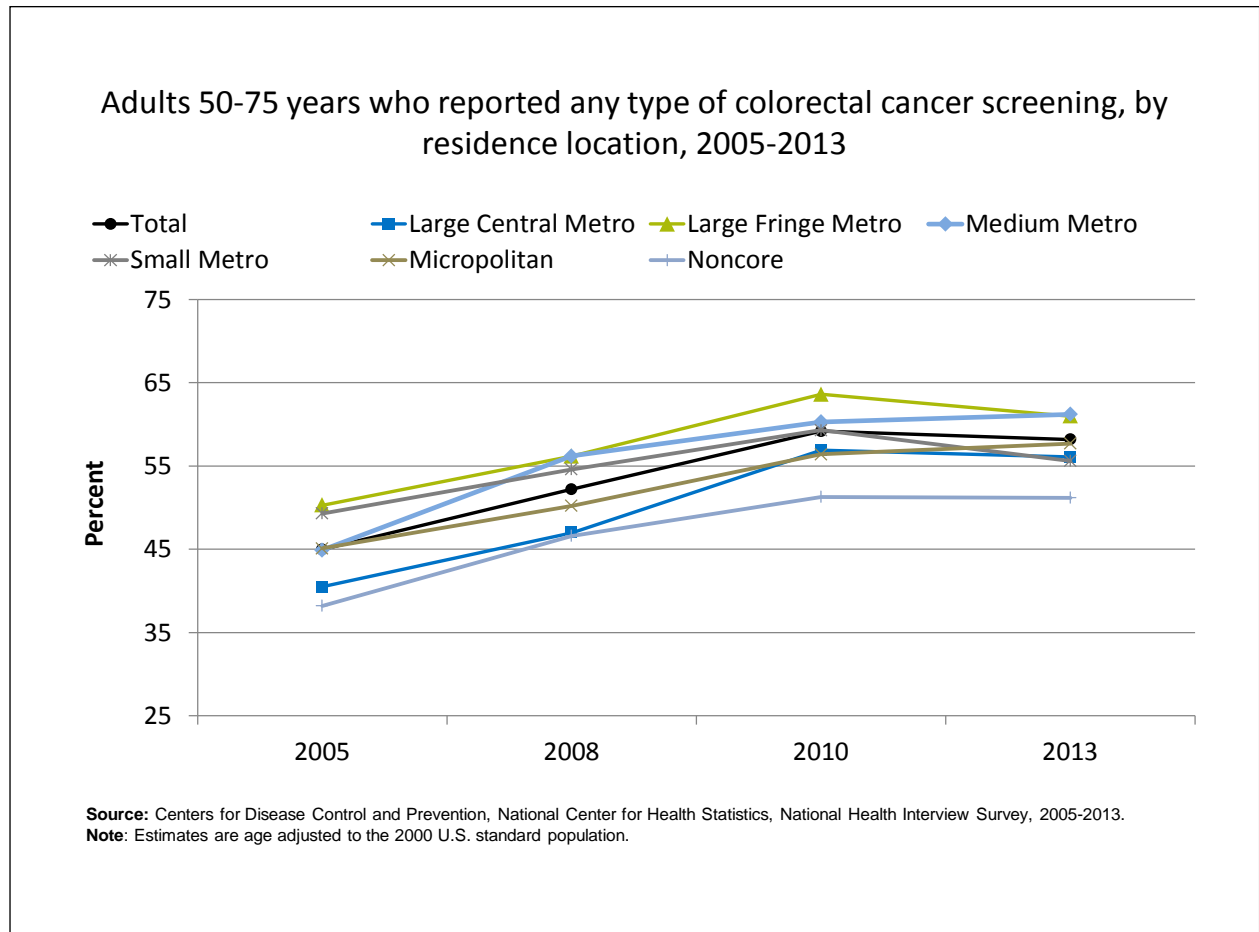
- **Importance:** Early detection of cancer allows more treatment options and often improves outcomes. Mammography, the most effective method for detecting breast cancer at its early stages, can identify malignancies before they can be felt and before symptoms develop.
- **Groups With Disparities:**
 - In 2013, women in noncore areas were less likely to receive a mammogram than women in large fringe metropolitan areas.
 - Among poor women, those from noncore areas were less likely to receive a mammogram than those living in large fringe metropolitan areas.

Breast Cancer Deaths



- **Importance:** Excluding skin cancers, breast cancer is the most common cancer diagnosed among U.S. women, accounting for nearly one in three cancers. It is also the second leading cause of cancer death among women after lung cancer.
- **Trends:**
 - From 1999 to 2015, the breast cancer mortality rate in nonmetropolitan areas decreased for Whites from 25.0 to 20.7 per 100,000 population; for Blacks, from 35.6 to 28.5; for Asians and Pacific Islanders (APIs), from 24.3 to 11.8; and for Hispanics, from 17.3 to 13.0.
 - From 1999 to 2015, the breast cancer mortality rate in metropolitan areas decreased for Whites from 26.9 to 20.3 and for Blacks, from 35.8 to 28.5.
- **Groups With Disparities:**
 - In 2015, Blacks in nonmetropolitan areas were more likely to die from breast cancer than Whites, while Asians and Pacific Islanders (APIs) and Hispanics were less likely.
 - In 2015, API, AI/AN, and Hispanic women living in metropolitan areas were less likely to die from breast cancer than White women, while Black women were more likely.

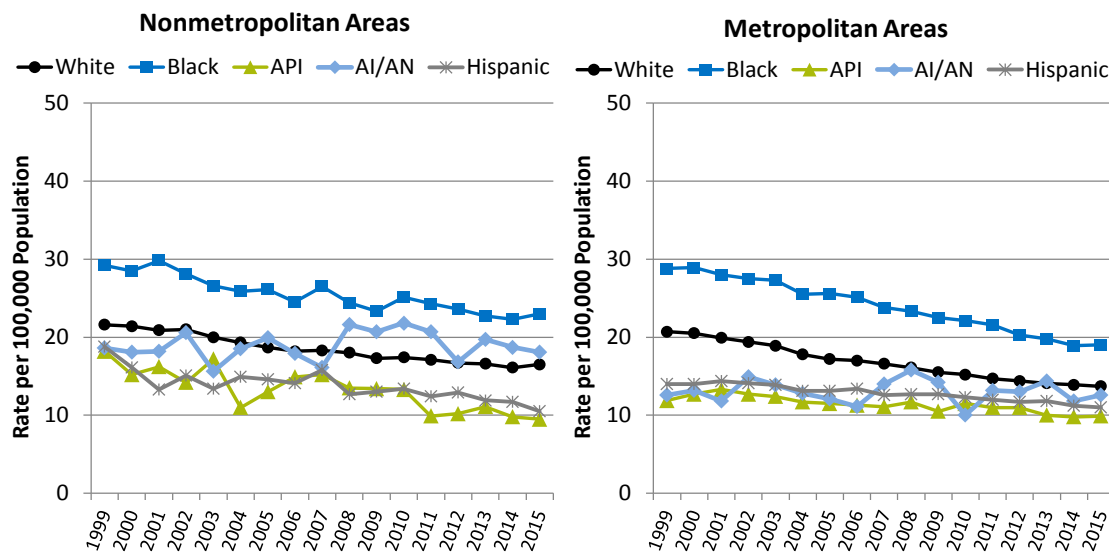
Colorectal Cancer Screening



- **Importance:** Colorectal cancer is the third most common cancer in adults. Prevention of colorectal cancer includes modifying risk factors such as weight, physical activity, smoking, and alcohol use, as well as screening for early disease.
- **Overall Rate:** In 2013, 58.2% of adults ages 50-75 received any type of colorectal cancer screening.
- **Trends:**
 - In 2013, 57.7% of adults in micropolitan areas received colorectal cancer screening compared with 45.1% in 2005.
 - In 2013, 51.2% of adults in noncore areas received colorectal cancer screening compared with 38.2% in 2005.
- **Groups With Disparities:**
 - In 2013, adults in large central metropolitan, small metropolitan, and noncore areas were less likely to receive colorectal cancer screening than residents of large fringe metropolitan areas.

Colorectal Cancer Deaths

Colorectal cancer deaths per 100,000 population, by race/ethnicity, 1999-2015



Key: API = Asian or Pacific Islander; AI/AN = American Indian or Alaska Native.

Source: CDC Wonder Detailed Mortality, 1999-2015.

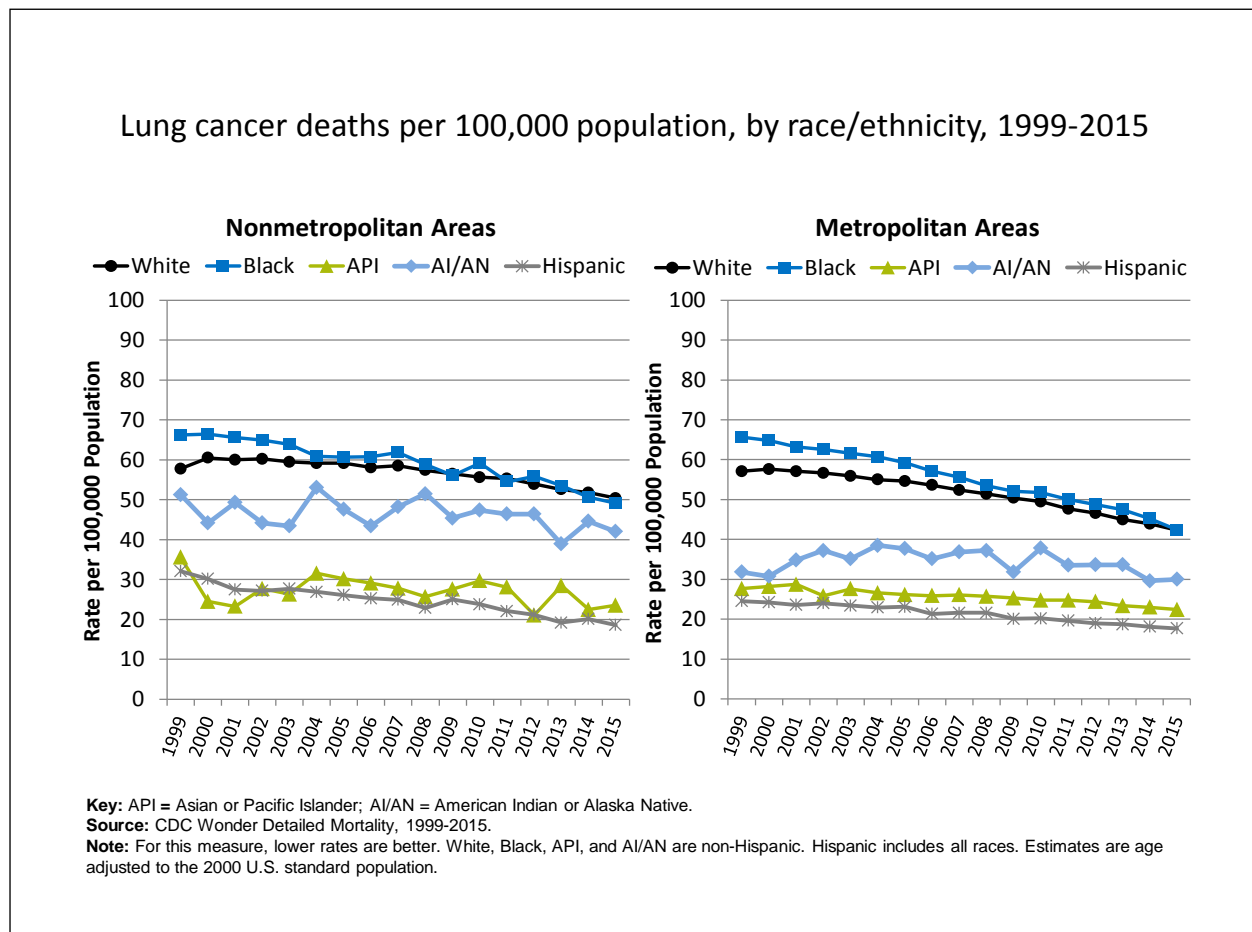
Note: For this measure, lower rates are better. White, Black, API, and AI/AN are non-Hispanic. Hispanic includes all races. Estimates are age adjusted to the 2000 U.S. standard population

- **Importance:** Colorectal cancer is the third leading cause of cancer-related deaths in women in the United States and the second leading cause in men.
- **Trends:**
 - From 1999 to 2015, the colorectal cancer mortality rate in nonmetropolitan areas decreased for Whites from 21.6 to 16.5 per 100,000 population; for Blacks, from 29.2 to 23.0; for APIs, from 18.2 to 9.5; for AI/ANs, from 18.6 to 18.1; and for Hispanics, from 18.8 to 10.5.
 - From 1999 to 2015, the colorectal cancer mortality rate in metropolitan areas decreased for Whites from 20.7 to 13.7; for Blacks, from 28.8 to 19.0; for APIs, from 11.9 to 9.9; and for Hispanics, from 14.0 to 11.0.
- **Groups With Disparities:**
 - In 2015, Blacks in nonmetropolitan areas were more likely to die from colorectal cancer than Whites, and Hispanics and APIs were less likely.
 - In 2015, in metropolitan areas, APIs and Hispanics were less likely to die from colorectal cancer than Whites but Blacks were more likely.

Lung Cancer

- Lung cancer is the leading cause of cancer death and the second most common cancer among both men and women in the United States.
- Most lung cancers can be prevented, because they are related to smoking (or secondhand smoke), or less often to exposure to radon or other environmental factors.
- Most lung cancers are diagnosed at an advanced stage. For these patients, cure is unlikely, and few survive beyond 1 to 2 years (Tanoue, 2015).

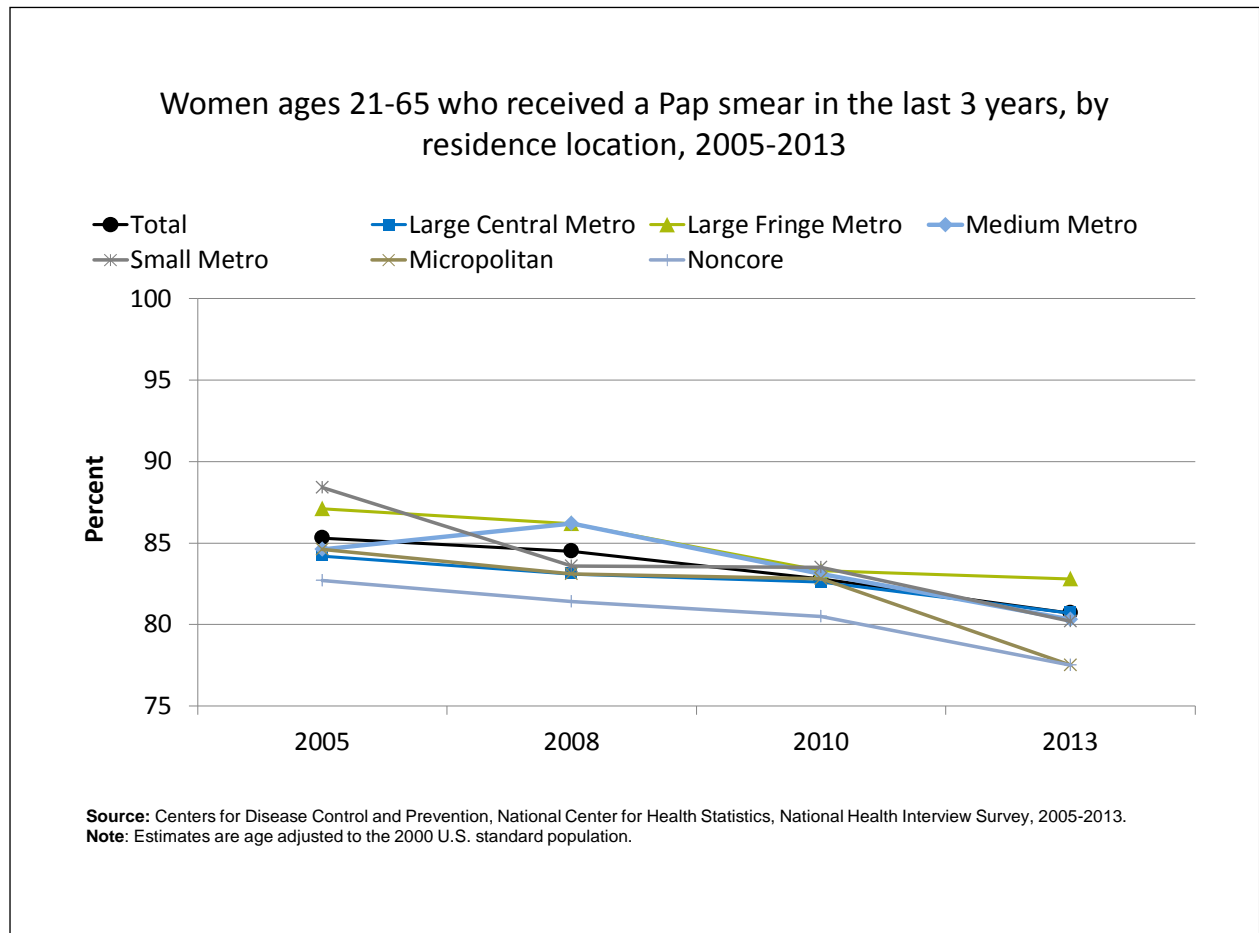
Lung Cancer Deaths



- **Importance:** According to the Centers for Disease Control and Prevention, more people in the United States die from lung cancer than any other type of cancer. This is true for both men and women. In 2014, 215,951 people in the United States were diagnosed with lung cancer, including 113,326 men and 102,625 women (U.S. Cancer Statistics Working Group, 2017).
- **Trends:**
 - From 1999 to 2015, the lung cancer mortality rate in nonmetropolitan areas decreased for Whites from 57.8 to 50.4; for Blacks, from 66.2 to 49.1; for APIs, from 35.6 to 23.6; for AI/ANs, from 51.2 to 42.0; and for Hispanics, from 32.1 to 18.6.

- From 1999 to 2015, the lung cancer mortality rate in metropolitan areas decreased for Whites from 57.1 to 42.4; for Blacks, from 65.7 to 42.4; for APIs, from 27.7 to 22.4; for AI/ANs, from 31.8 to 30.0; and for Hispanics, from 24.5 to 17.7.
- **Groups With Disparities:**
 - In 2015, APIs, AI/ANs, and Hispanics in nonmetropolitan areas were less likely to die from lung cancer than Whites.
 - In 2015, in metropolitan areas, APIs, AI/ANs, and Hispanics were also less likely to die from lung cancer than Whites.

Receipt of Pap Smears



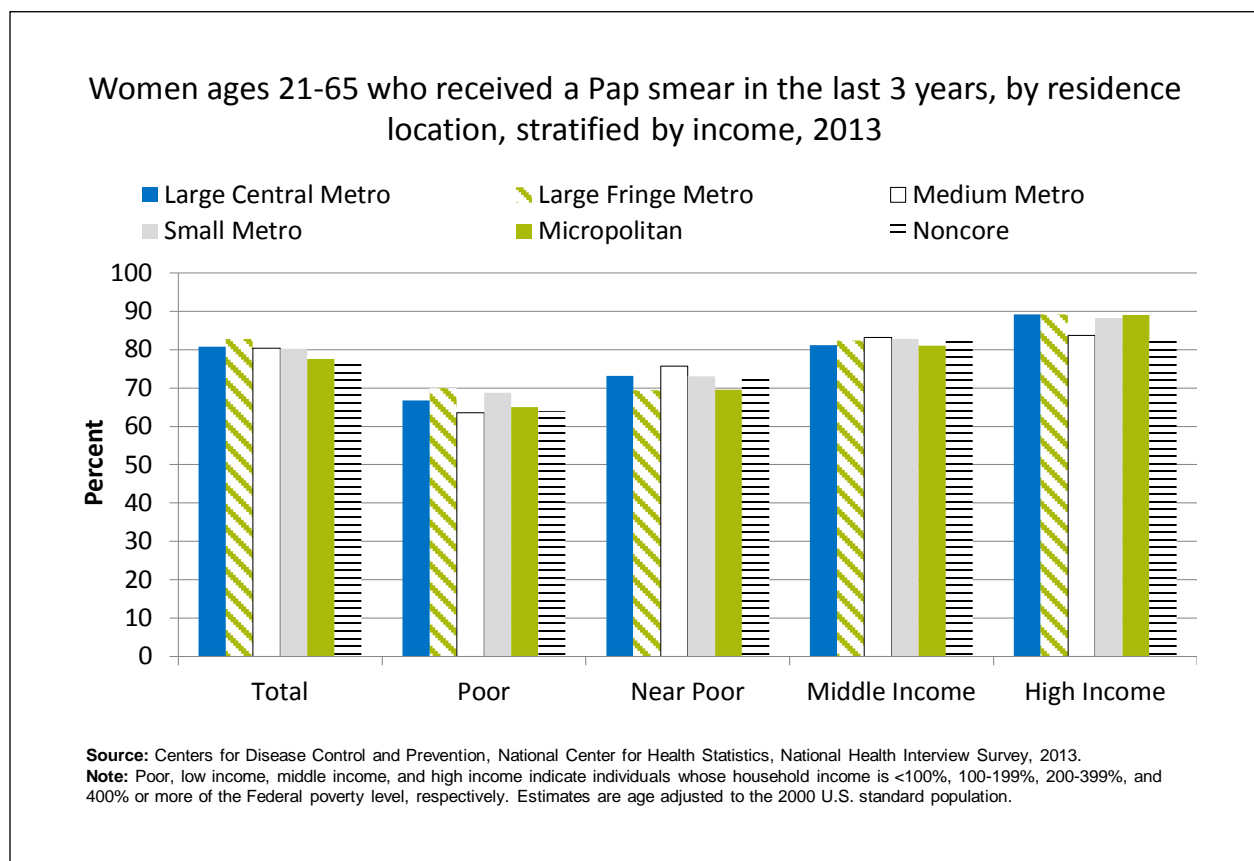
- **Importance:** Pap testing has led to a significant reduction in cervical cancer mortality. About half of newly diagnosed cases of invasive cervical cancer are in women who have never had a Pap test.
- **Overall Rate:** In 2013, 80.7% of women ages 21-65 received a Pap smear.

• **Trends:**

- In 2013, 80.7% of women in large central metropolitan areas received a Pap smear compared with 84.2% in 2005.
- In 2013, 82.8% of women in large fringe metropolitan areas received a Pap smear compared with 87.1% in 2005.
- In 2013, 80.2% of women in small metropolitan areas received a Pap smear compared with 88.4% in 2005.
- In 2013, 77.5% of women in micropolitan areas received a Pap smear compared with 84.6% in 2005.
- In 2013, 77.5% of women in noncore areas received a Pap smear compared with 82.7% in 2005.

- **Groups With Disparities:** In 2013, women in micropolitan and noncore areas were less likely to receive a Pap smear than women in large fringe metropolitan areas.

Receipt of Pap Smears, by Income

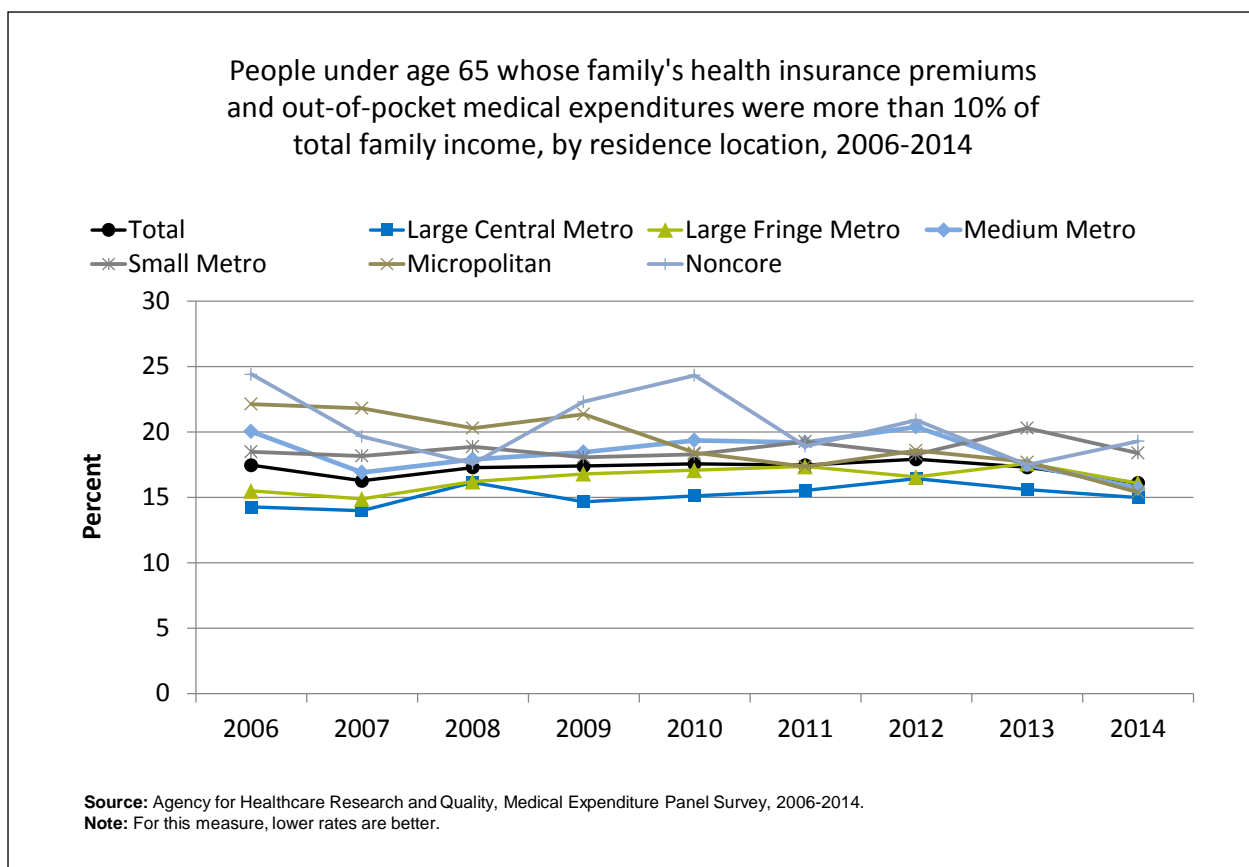


- **Importance:** Pap testing has led to a significant reduction in cervical cancer mortality. About half of newly diagnosed cases of invasive cervical cancer are in women who have never had a Pap test.

- **Groups With Disparities:**
 - In 2013, women in micropolitan and noncore areas were less likely than women in large fringe metropolitan areas to receive a Pap test.
 - Among high-income women, those in medium metropolitan areas were less likely to receive a Pap test than those in large fringe metropolitan areas.

Affordability

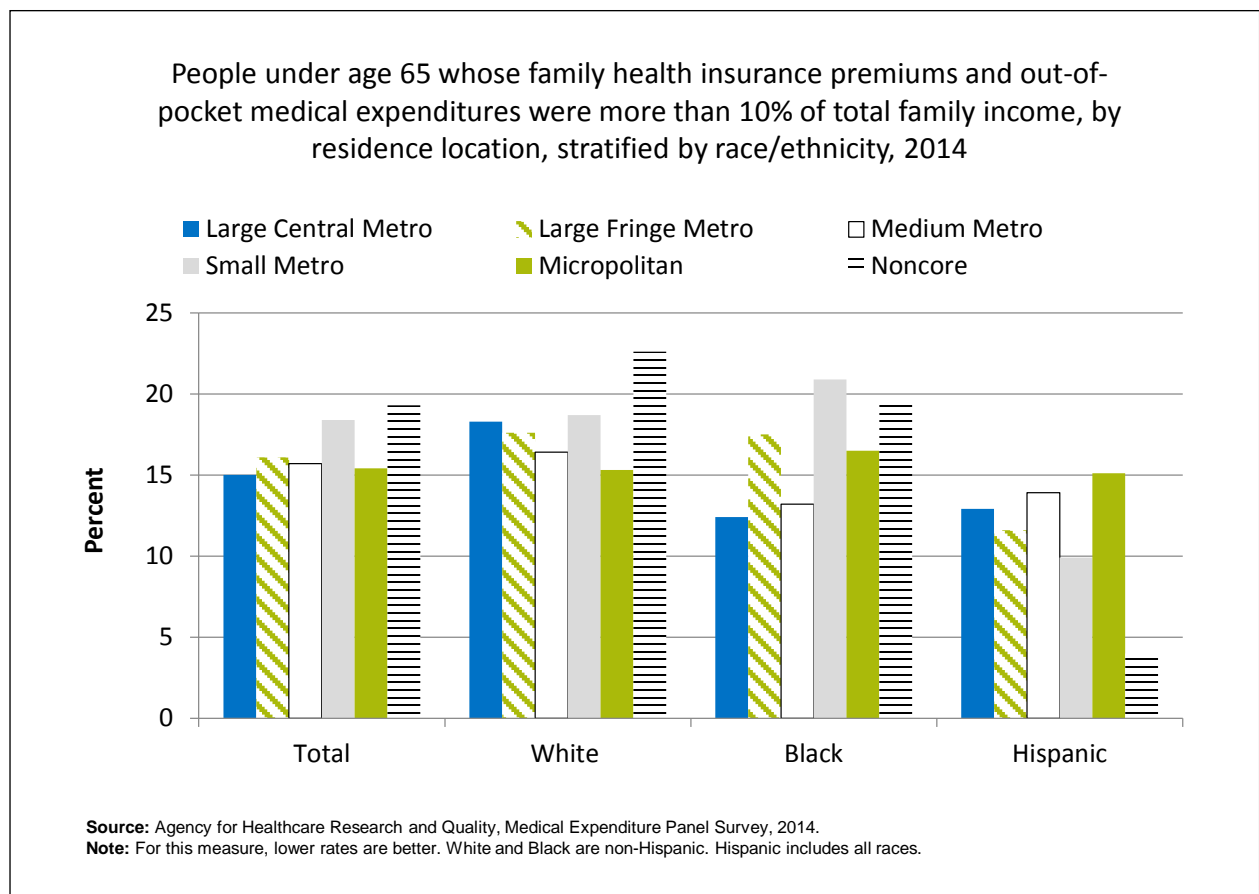
Health Insurance Premiums and Out-of-Pocket Expenses as Percentage of Family Income



- **Importance:** Health care expenses that exceed 10% of family income are a marker of financial burden for families.
- **Overall Rate:** In 2014, 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 was 16.1%.
- **Trends:**
 - From 2006 to 2014, there was no statistically significant change 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 their total family income.

- From 2006 to 2014, 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 decreased for people in micropolitan and noncore areas.
- From 2006 to 2014, 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 increased for people in large central metropolitan and large fringe metropolitan areas.

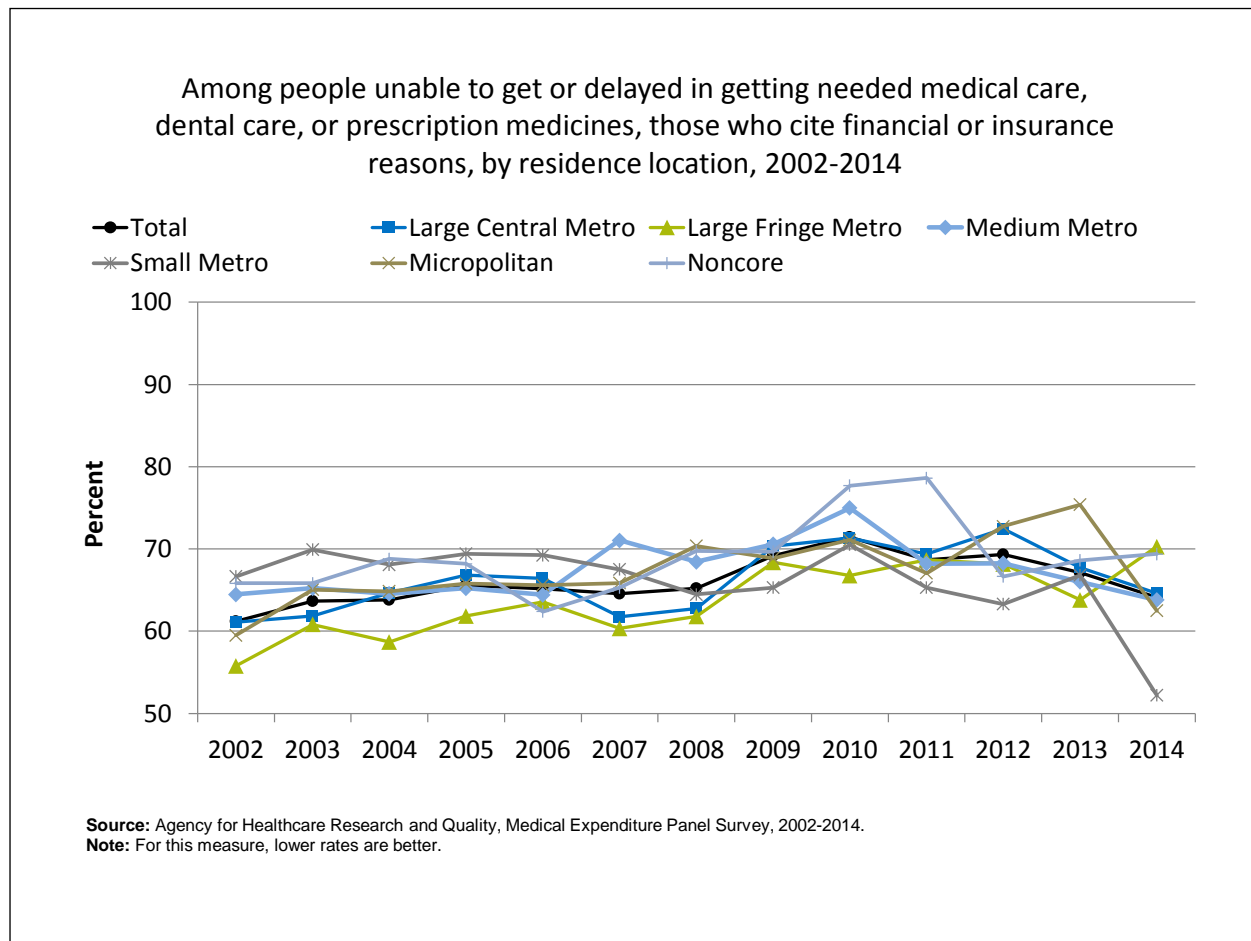
Health Insurance Premiums and Out-of-Pocket Expenses as Percentage of Family Income, by Race/Ethnicity



- **Overall Rate:** In 2014, there were no statistically significant differences between large fringe metropolitan areas and all other areas 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.
- **Groups With Disparities:**
 - In 2014, among Blacks, 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 was lower for those in large central metropolitan areas compared with those in large fringe metropolitan areas.

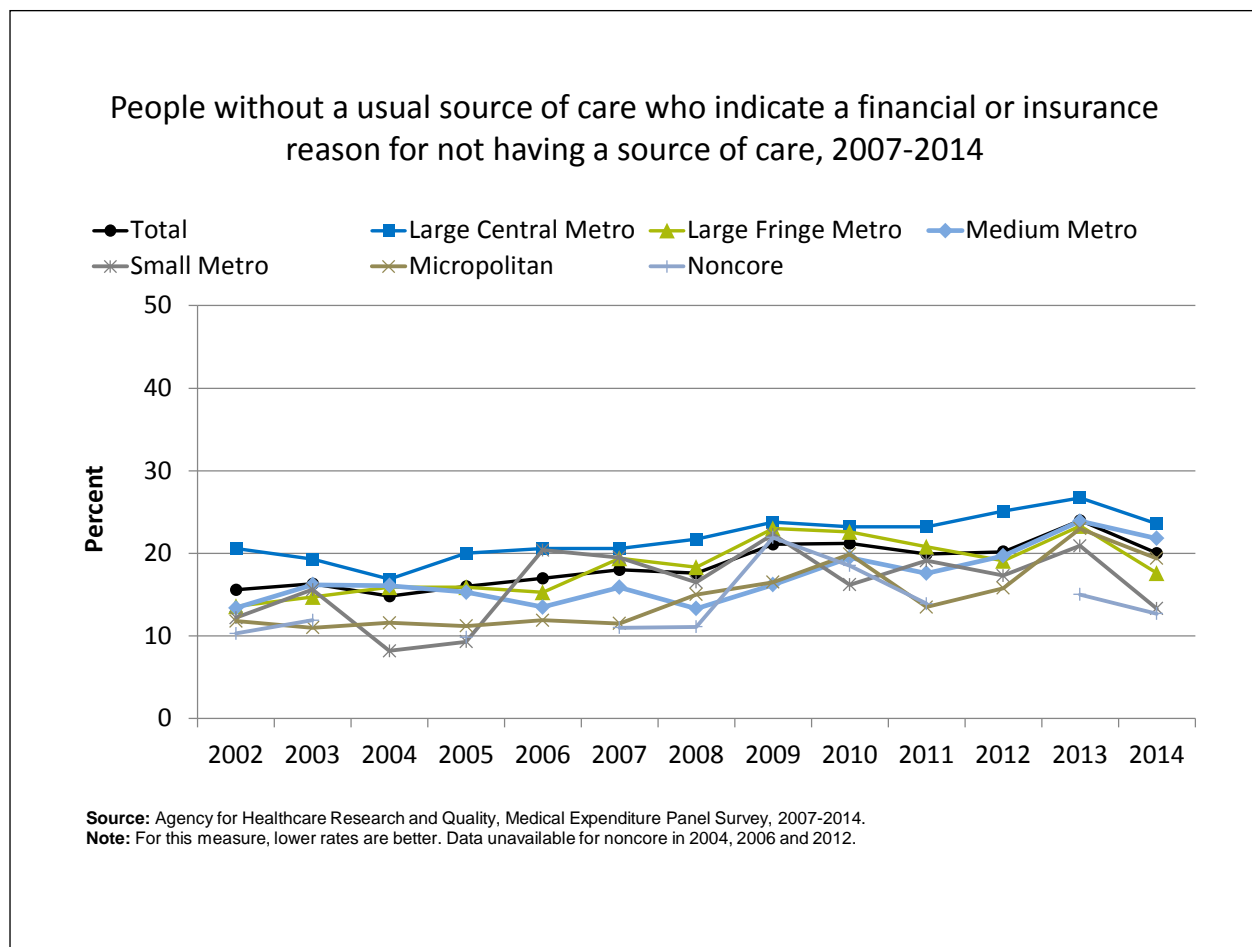
- In 2014, among Hispanics, the percentage of people under age 65 whose family’s health insurance premiums and out-of-pocket medical expenditures were more than 10% of total family income was lower for those in noncore areas compared with those in large fringe metropolitan areas.

Delays or Difficulty Getting Needed Care for Financial or Insurance Reasons



- **Importance:** Some Americans cannot afford all the care they need.
- **Overall Rate:** In 2014, among people unable to get or delayed in getting needed medical care, dental care, or prescription medicines, 64.1% cited financial or insurance reasons.
- **Trends:**
 - From 2002 to 2014, the percentage of people unable to get or delayed in getting needed medical care, dental care, or prescription medicines due to financial or insurance reasons decreased for residents of small metropolitan areas.
 - The percentage of people unable to get or delayed in getting needed medical care, dental care, or prescription medicines due to financial or insurance reasons increased for residents of large fringe metropolitan areas.

Financial or Insurance Reason for Lacking a Usual Source of Care



- **Importance:** Having a usual source of health care has been consistently associated with greater use of preventive services, decreased use of emergency services, and patients’ ratings of quality and satisfaction with care (Rutton, 2015).
- **Overall Rate:** In 2014, 20% of people without a usual source of care indicated a financial or insurance reason for not having a source of care.
- **Trends:**
 - From 2002 to 2014, the percentage of people without a usual source of care who indicated a financial or insurance reason for not having a source of care increased for residents of large central, large fringe, medium metropolitan, and micropolitan areas.
- **Groups With Disparities:**
 - In 2014, the percentage of people without a usual source of care who indicated a financial or insurance reason for not having a source of care was higher for residents of large central metropolitan areas compared with residents of large fringe metropolitan areas.

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