

Have Healthy People 2020 Benchmarks for Leading Causes of Death Been Met in Rural and Urban Areas?



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Introduction

- Healthy People is an HHS initiative designed to improve the health of all Americans by setting and tracking goals over decade-long periods
- Healthy People uses science-based objectives to encourage collaboration, identify national priorities, increase public awareness, and provide measurable information about progress in improving population health
- Healthy People has existed for 3 decades, with the current iteration – Healthy People 2020 – launched in December 2010



Introduction

- Our center has been interested in progress towards achieving HP 2020 national mortality objectives for seven leading causes of death:
 - ❖ Diabetes
 - ❖ Suicide
 - ❖ Heart Disease
 - ❖ Stroke
 - ❖ Cancer
 - ❖ Unintentional Injury
 - ❖ COPD
- In particular, we were interested in how progress towards Healthy People 2020 goals varied across urban and rural parts of the United States



Research Agenda

- Overarching Research Question: How much progress have urban and rural areas of the United States made in meeting Healthy People 2020 mortality objectives?
- A national chart book will be published in 2020 by FORHP and the Southwest Rural Health Research Center (SRHRC)



Data Source & Study Sample

- Data source:
 - National Center for Health Statistics Mortality Data
 - Available through CDC Wonder platform
 - 2007 (HP 2020 baseline year)-2017
 - Mortality rates are age-adjusted and reflect the number of individuals who have died from each cause per 100,000 people who live in the area being analyzed in a given year
- Study sample:
 - All U.S. deaths attributed to cancer, suicide, heart disease, unintentional injury, and stroke as the underlying cause of death from 2007 – 2017
 - Diabetes mortality reflects all deaths attributed to diabetes as a multiple cause of death from 2007-2017 to maintain consistency with HP2020 standards
 - COPD mortality reflects deaths in adults 45 and older in line with HP 2020 standards
 - Deaths were identified using ICD 10 codes

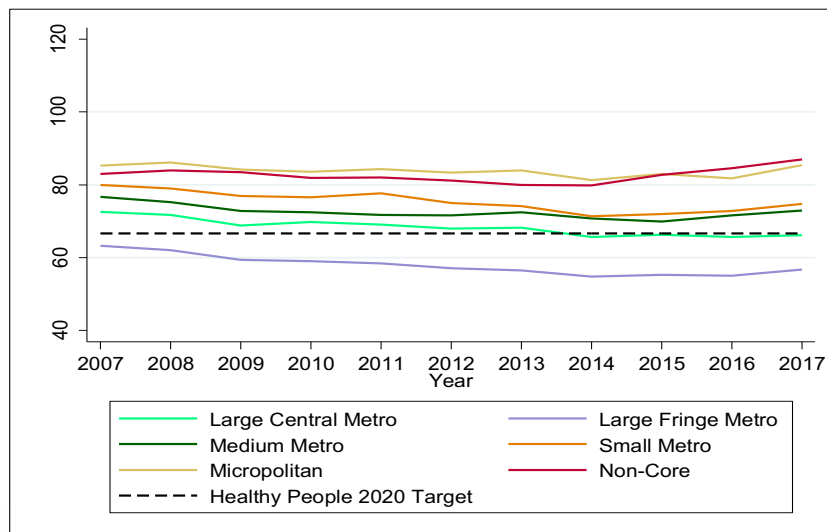


Healthy People 2020 Diabetes Mortality

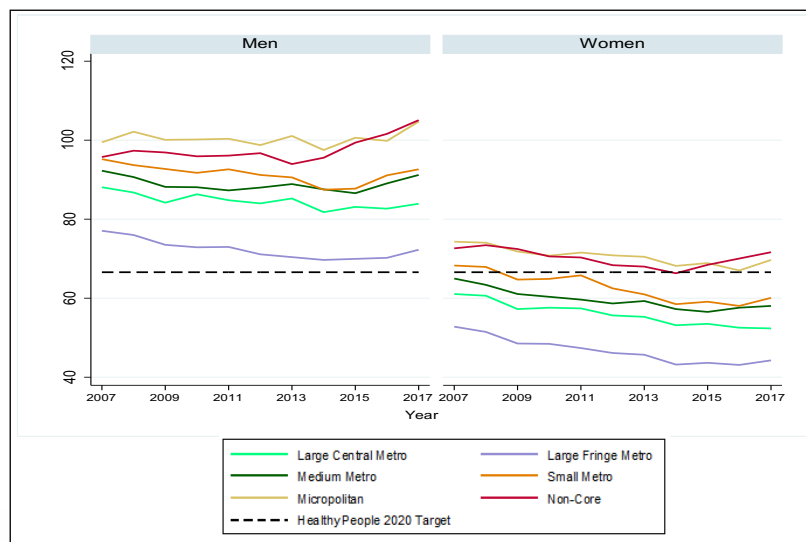
- 2007 stats: 74.0 age-adjusted deaths per 100,000 in population
- 2020 target: 66.6 age-adjusted deaths per 100,000 in population
- Clear evidence of national progress towards goal exists
 - 2011: 70.3
 - 2012: 69.1
 - 2013: 69.2
 - 2014: 67.1
 - 2015: 67.6
 - 2016: 67.8
 - 2017: 69.2
- Unanswered question: how does this vary across the urban-rural continuum?



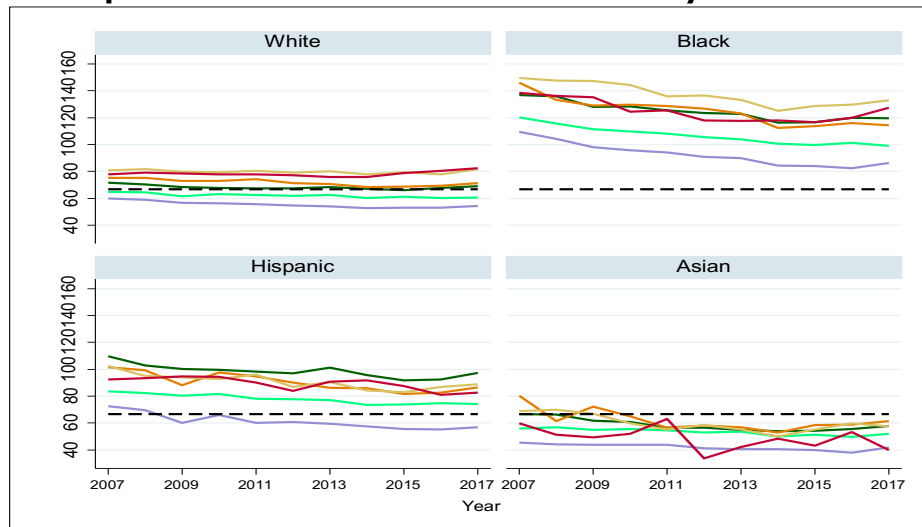
Overall Age Adjusted Diabetes Deaths by Year



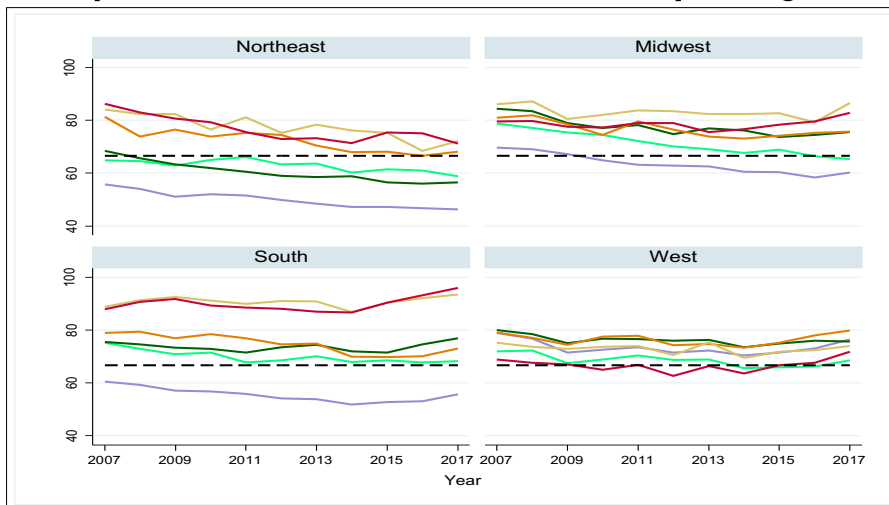
Age Adjusted Diabetes Deaths by Gender



Age Adjusted Diabetes Deaths by Race



Age Adjusted Diabetes Deaths by Region



Diabetes Key Takeaways

- Mortality rates in rural areas actually appear to be moving further away from the Healthy People 2020 goals than in 2007
- Men at all levels of rurality are struggling to meet Healthy People 2020 goals; women in urban areas have met goals and in rural areas are close
- Asians and Whites in urban areas, and Hispanics in large fringe metros have achieved Healthy People 2020 goals. All other racial groups at all other levels of rurality have not
- Diabetes mortality is particularly high in the rural South, but all rural areas are struggling across regions. The urban Northeast appears to be performing best, and the West appears to be emerging as a new area of concern

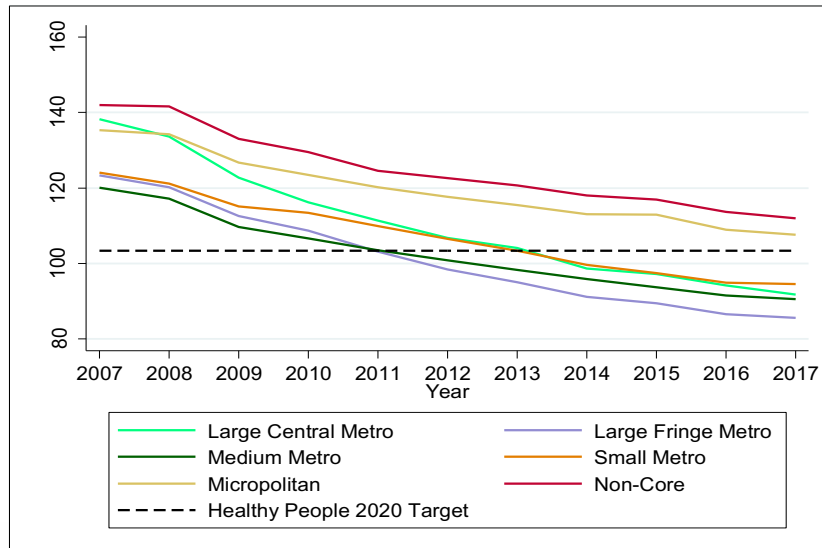


Healthy People 2020 Heart Disease Mortality

- 2007 stats: 129.2 age-adjusted deaths per 100,000 in population
- 2020 target: 103.4 age-adjusted deaths per 100,000 in population
- Clear evidence of achieving national heart disease goal
 - 2011: 109.2
 - 2012: 105.4
 - 2013: 102.6
 - 2014: 98.8
 - 2015: 97.2
 - 2016: 94.3
 - 2017: 92.9
- Unanswered question: how does this vary across the urban-rural continuum?



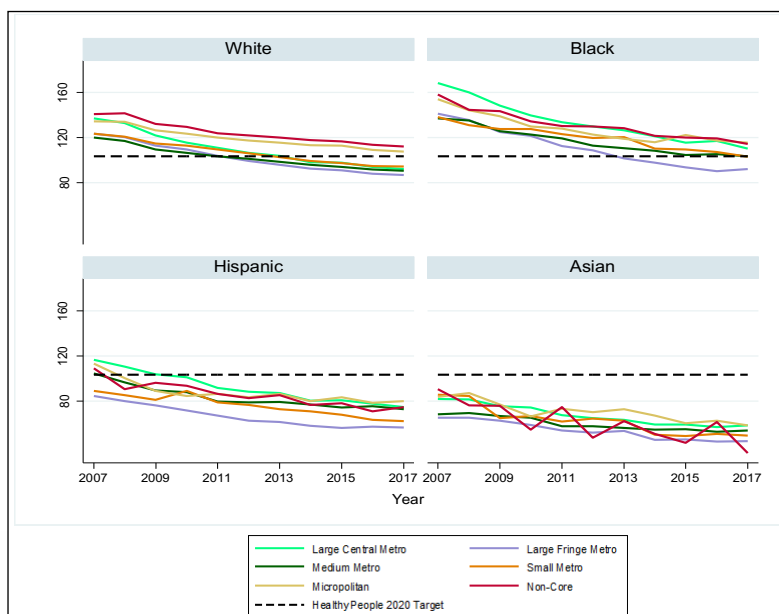
Overall Age Adjusted Heart Disease Deaths by Year



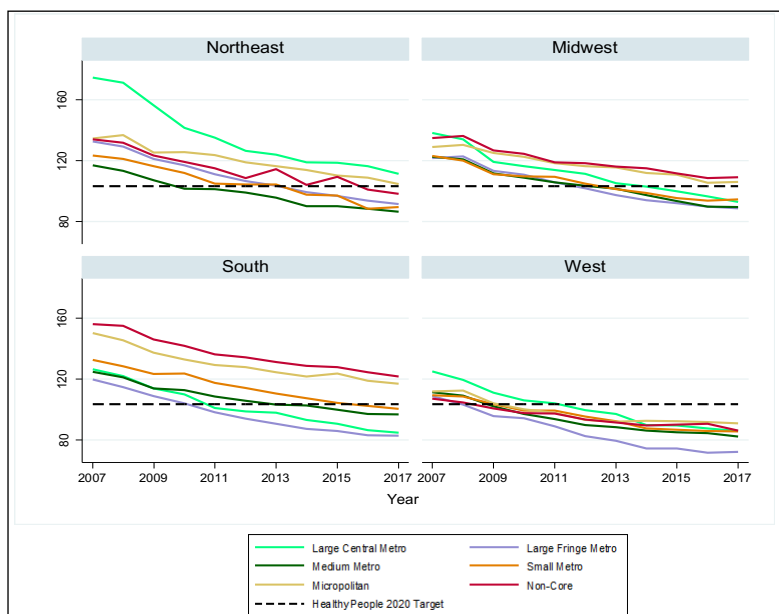
Age Adjusted Heart Disease Deaths by Gender



Age Adjusted Heart Disease Deaths by Race



Age Adjusted Heart Disease Deaths by Region



Heart Disease Takeaways

- Nationally the US has succeeded in achieving its Healthy People 2020 heart disease goal
- Rural America has seen considerable improvements in mortality but has not yet achieved the HP 2020 heart disease mortality objective
- Women at all levels of rurality have achieved the HP 2020 goal; men across the urban-rural continuum have yet to achieve the goal
- Hispanics and Asians have achieved the HP 2020 goal as have Whites and Blacks in urban areas; more work is needed for rural Whites and Blacks
- The West has had the most success and the greatest lags in progress toward the goal can be found in the rural South

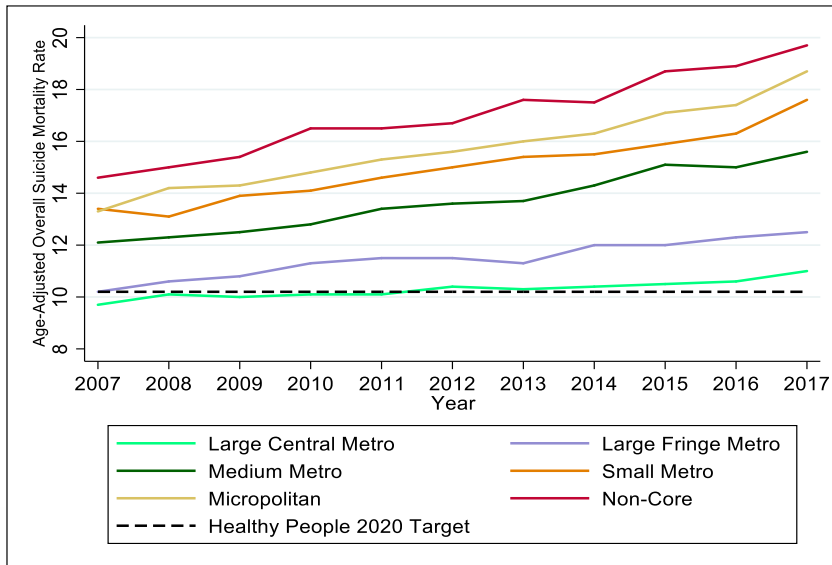


Healthy People 2020 Suicide Mortality

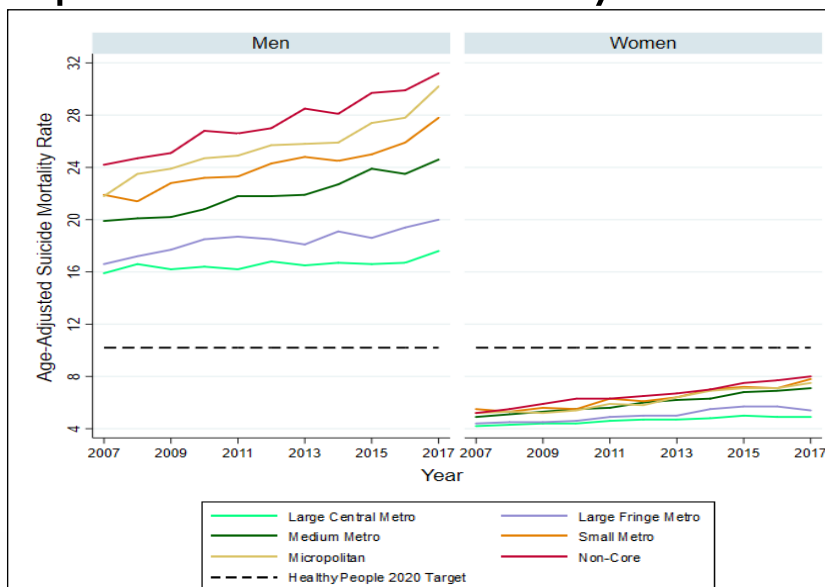
- 2007 stats: 11.3 age-adjusted deaths per 100,000 in population
- 2020 target: 10.2 age-adjusted deaths per 100,000 in population
- Clear evidence of national failure in reaching suicide reduction goal
 - 2011: 12.3
 - 2012: 12.6
 - 2013: 12.6
 - 2014: 13.0
 - 2015: 13.3
 - 2016: 13.5
 - 2017: 14.0
- Unanswered question: how does this vary across the urban-rural continuum?



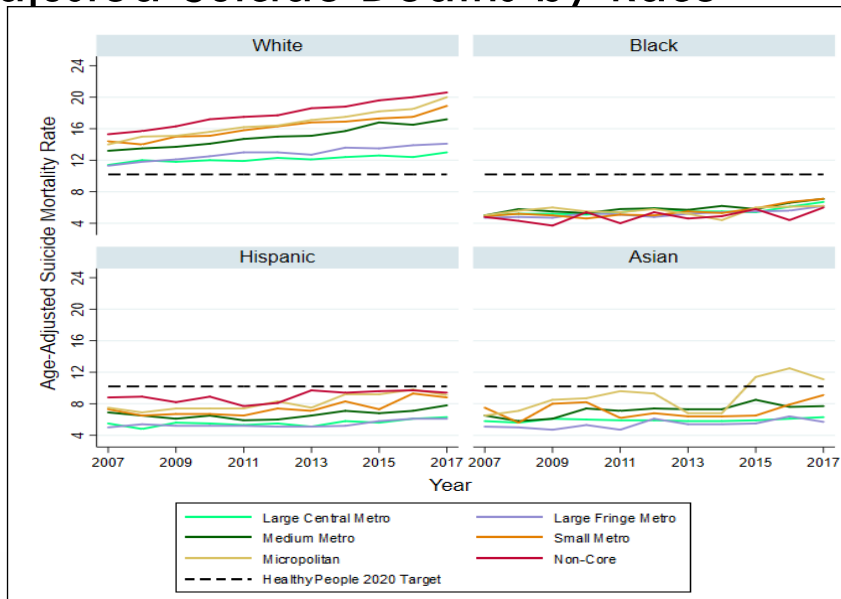
Overall Age Adjusted Suicide Deaths by Year



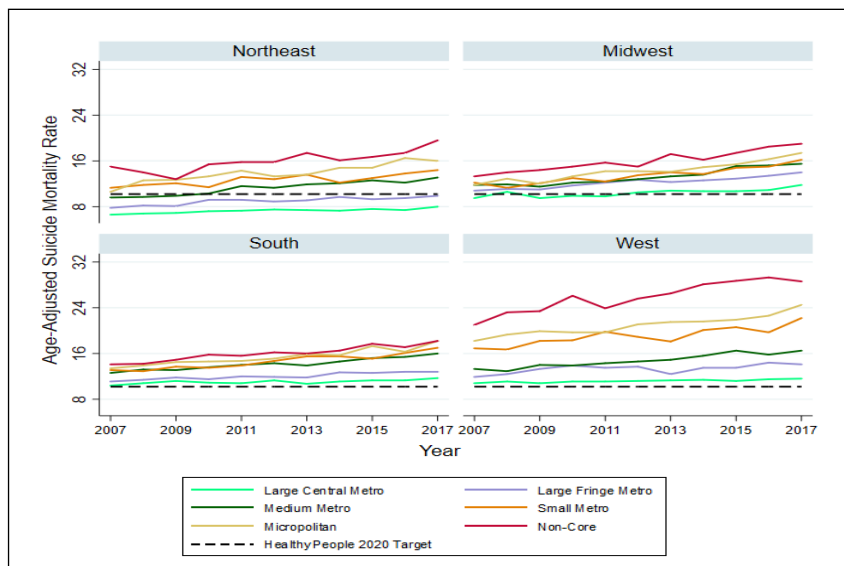
Age Adjusted Suicide Deaths by Gender



Age Adjusted Suicide Deaths by Race



Age Adjusted Suicide Deaths by Region



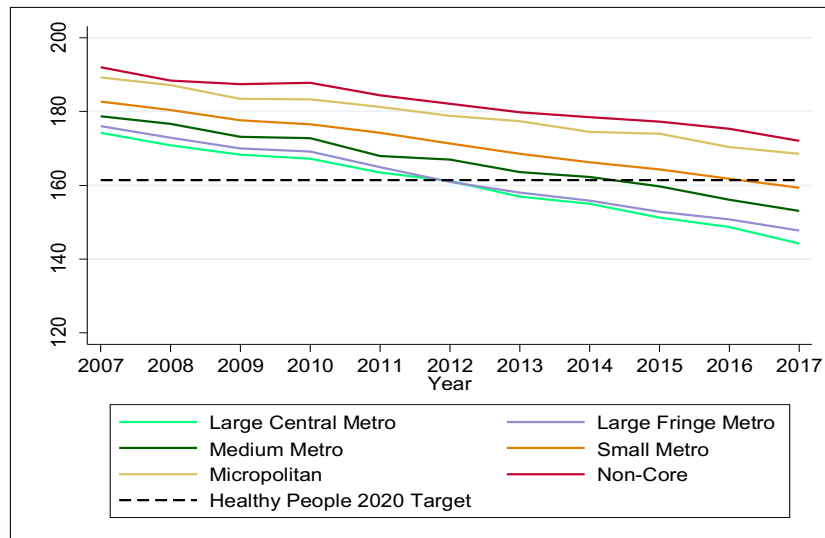
Suicide Takeaways

- Nationally the US has failed to achieve its Healthy People 2020 suicide goal
- Suicide is most problematic in rural areas and among Whites
- Combating growing suicide rates needs to be a national priority but efforts should be concentrated in the US West

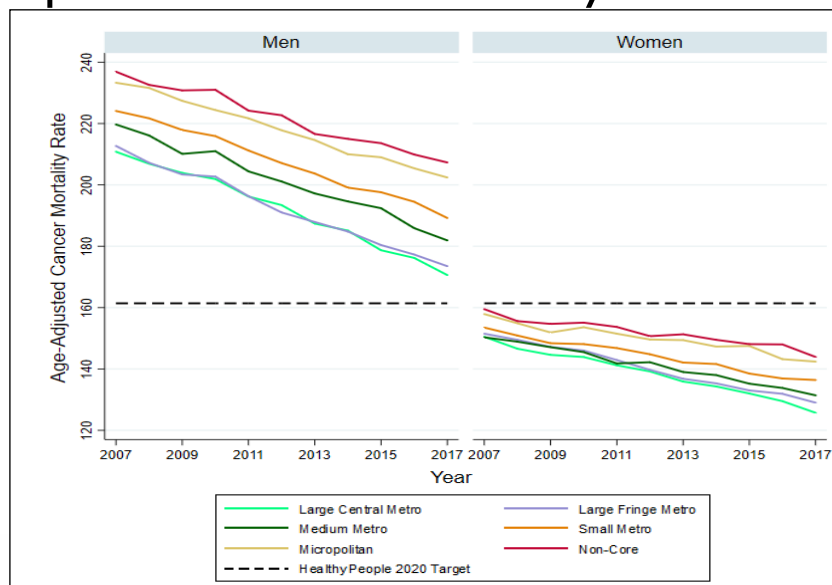
Healthy People 2020 Cancer Mortality

- 2007 stats: 179.3 age-adjusted deaths per 100,000 in population
- 2020 target: 161.4 age-adjusted deaths per 100,000 in population
- Clear evidence of achieving cancer goal nationally
 - 2011: 169.0
 - 2012: 166.5
 - 2013: 163.2
 - 2014: 161.2
 - 2015: 158.5
 - 2016: 155.8
 - 2017: 152.5
- Unanswered question: how does this vary across the urban-rural continuum?

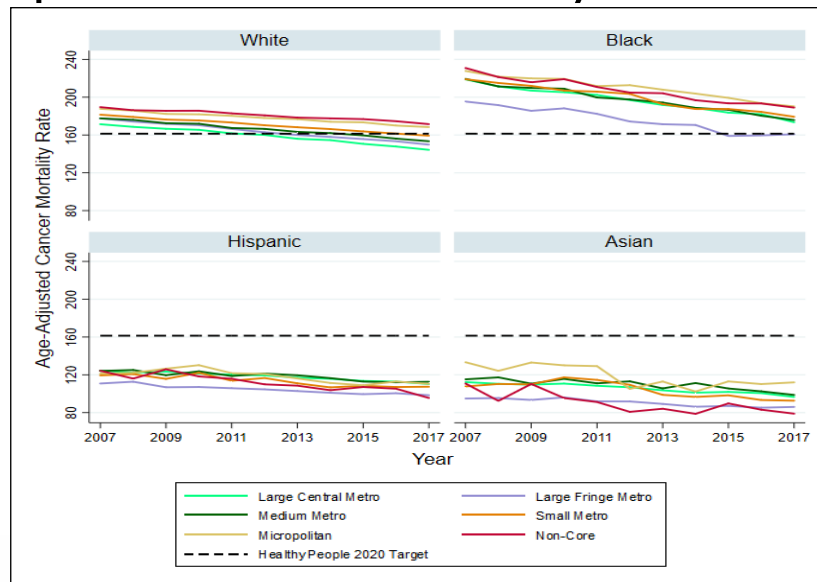
Overall Age Adjusted Cancer Deaths by Year



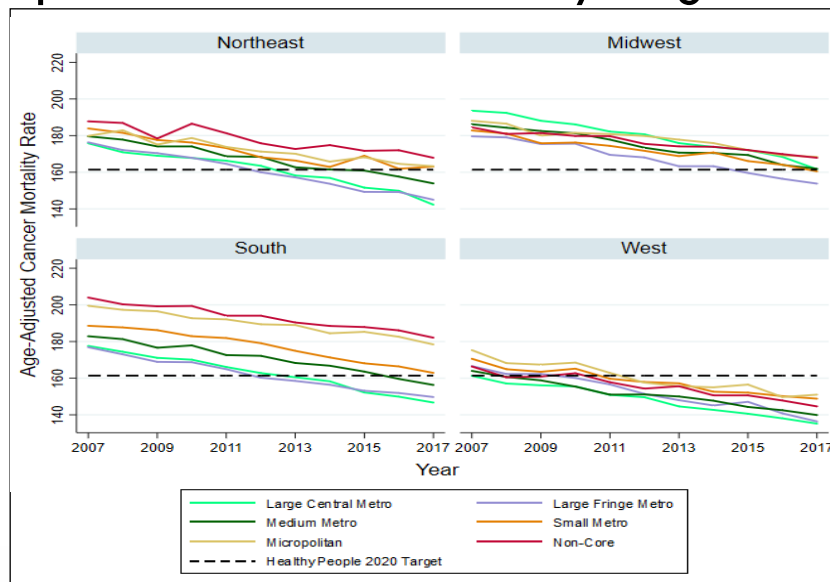
Age Adjusted Cancer Deaths by Gender



Age Adjusted Cancer Deaths by Race



Age Adjusted Cancer Deaths by Region



Cancer Takeaways

- Nationally, urban areas have achieved cancer Healthy People 2020 mortality goals; rural areas have made significant progress but have more work to do
- Men and women have both decreased cancer mortality, but men at all levels of rurality need continued improvement
- Hispanics, Asians, and urban Whites have achieved the cancer mortality goal, Blacks and rural Whites have not
- Progress has been made across all regions, but the rural South is furthest from the Healthy People 2020 cancer mortality goal

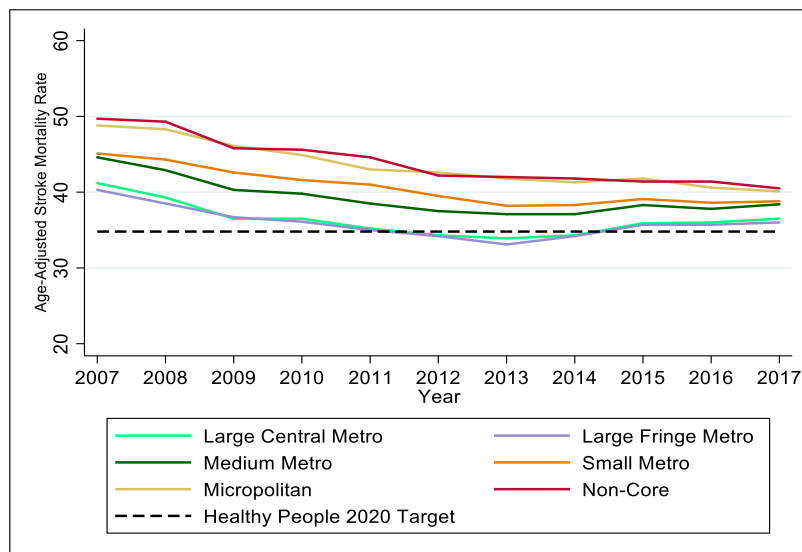


Healthy People 2020 Stroke Mortality

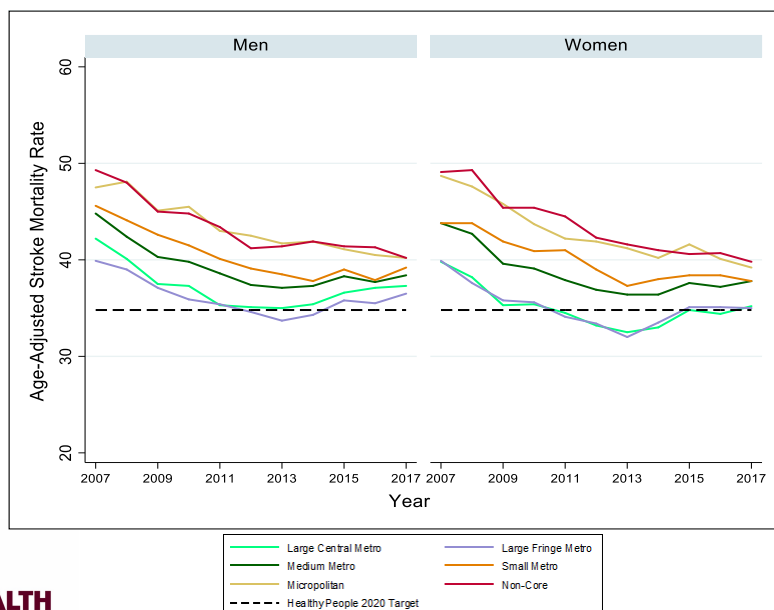
- 2007 stats: 43.5 age-adjusted deaths per 100,000 in population
- 2020 target: 34.8 age-adjusted deaths per 100,000 in population
- Clear evidence of minimal progress in achieving stroke mortality reduction goal
 - 2011: 37.9
 - 2012: 36.9
 - 2013: 36.2
 - 2014: 36.5
 - 2015: 37.6
 - 2016: 37.3
 - 2017: 37.6
- Unanswered question: how does this vary across the urban-rural continuum?



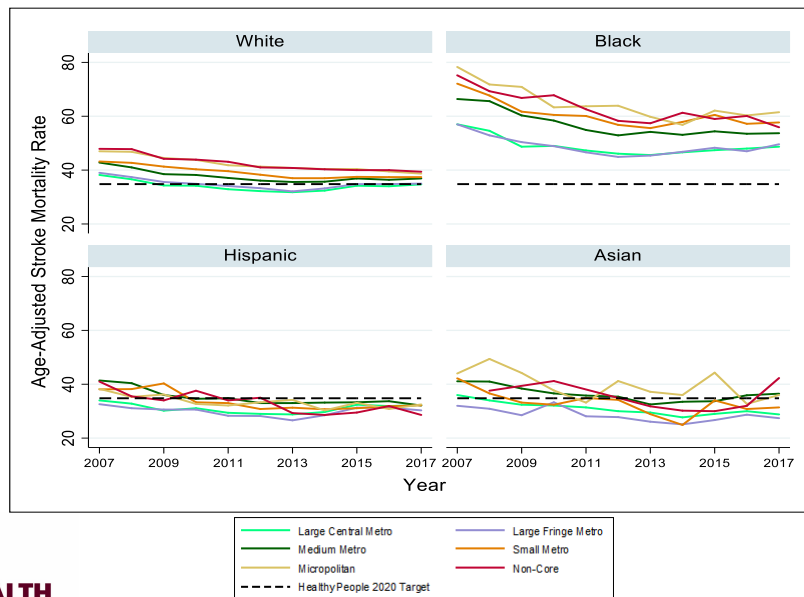
Overall Age Adjusted Stroke Deaths by Year



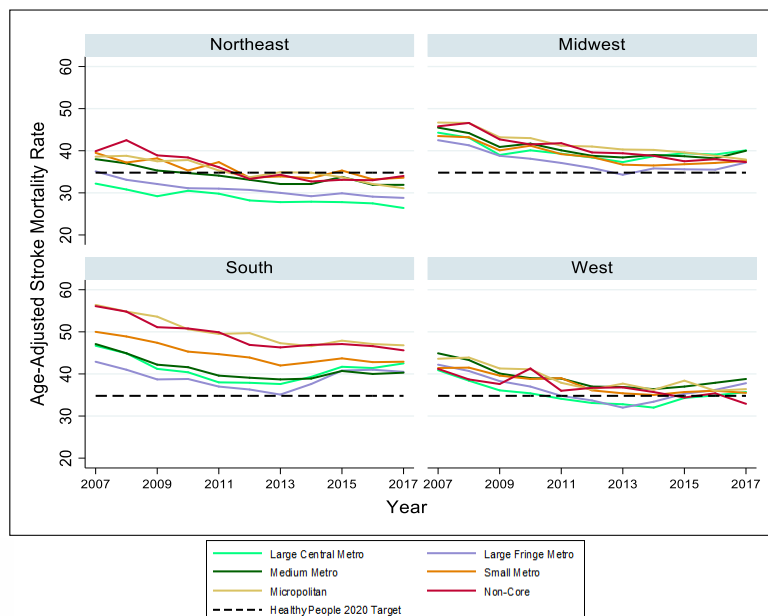
Age Adjusted Stroke Deaths by Gender



Age Adjusted Stroke Deaths by Race



Age Adjusted Stroke Deaths by Region



Stroke Takeaways

- Nationally, minimal progress has been made toward achieving the Healthy People 2020 goal for stroke, important work remains at all levels of rurality
- Women in non-core and micropolitan areas being furthest away from the goal as of 2017. Men have struggled to reach the Healthy People 2020 stroke goal
- Stroke mortality remains disproportionately higher among Blacks regardless of rurality. Hispanics generally met the Healthy People 2020 stroke goal, but for rural Whites, the goal remained elusive as of 2017
- In the South, the stroke goal remained elusive for residents at all levels of rurality, with the residents of non-core and micropolitan areas being furthest away from the goal

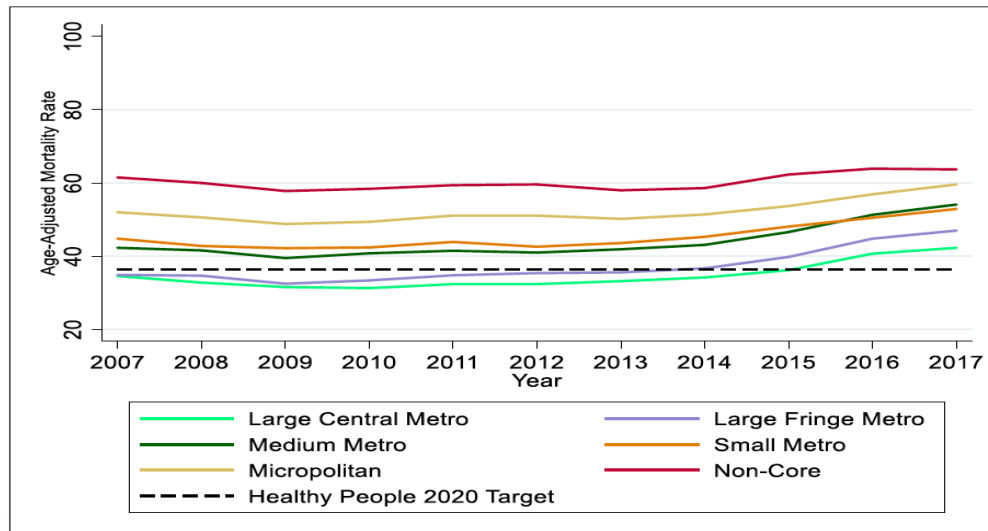


Healthy People 2020 Unintentional Injury

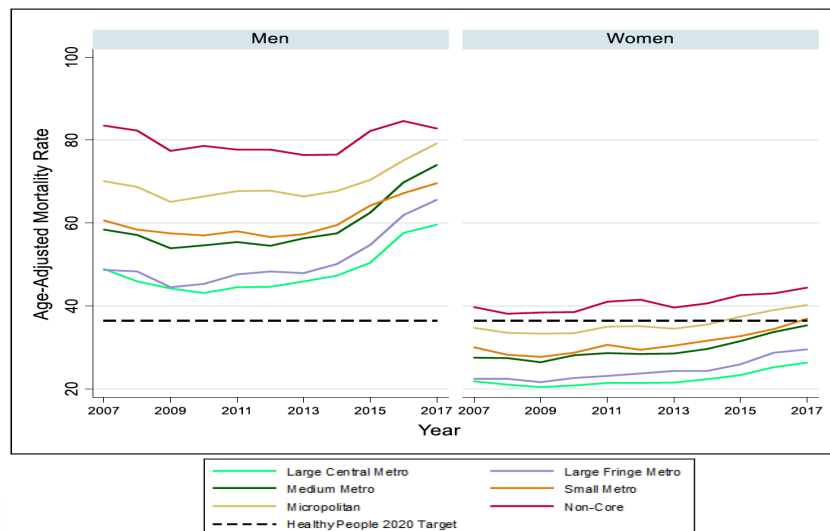
- 2007 stats: 40.4 age-adjusted deaths per 100,000 in population
- 2020 target: 36.4 age-adjusted deaths per 100,000 in population
- Clear evidence of national failure in achieving the unintentional injury goal
 - 2011: 39.1
 - 2012: 39.1
 - 2013: 39.4
 - 2014: 40.5
 - 2015: 43.2
 - 2016: 47.4
 - 2017: 49.4
- Unanswered question: how does this vary across the urban-rural continuum?



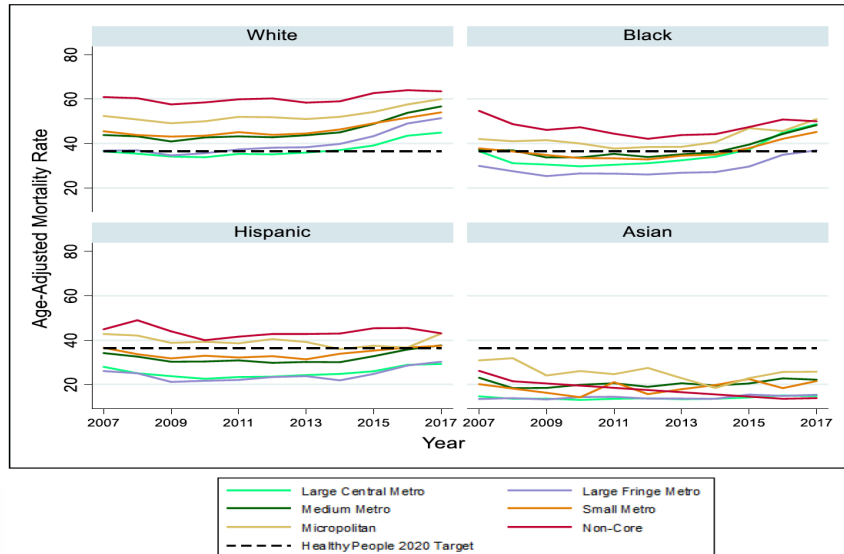
Overall Age Adjusted Unintentional Injury Deaths by Year



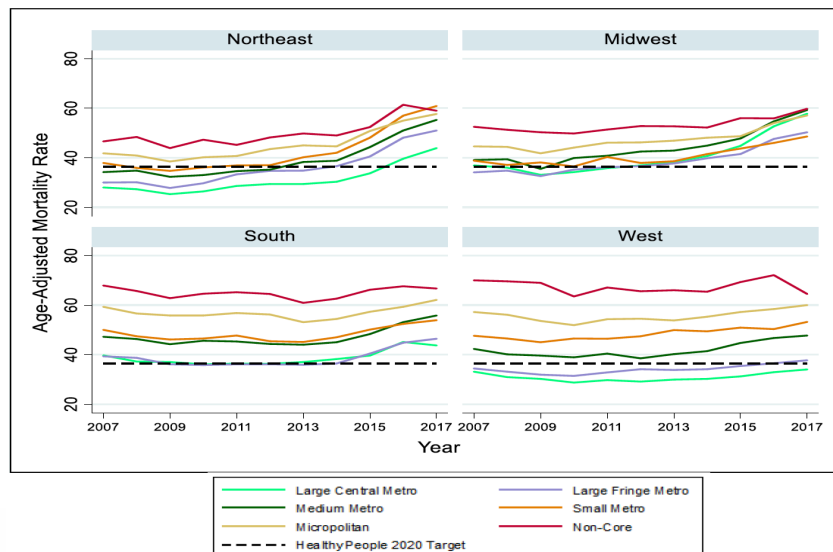
Age Adjusted Unintentional Injury Deaths by Gender



Age Adjusted Unintentional Injury Deaths by Race



Age Adjusted Unintentional Injury Deaths by Region



Unintentional Injury Takeaways

- Nationally the US has been moving away from the Healthy People 2020 unintentional injury goal
- While unintentional injuries are increasing for all residents along the urban rural continuum, it is notably highest among residents of non-core and micropolitan areas
- While women in urban areas have largely stayed under the unintentional injury goal, women in non-core and micropolitan areas had not met the goal in 2017. Additionally, men, regardless of level of rurality, were far away from the goal, with rural male residents furthest away from the goal
- Whites, regardless of residence along the urban-rural continuum, were notably moving away from the unintentional injury goal, with non-core and micropolitan residents being furthest away

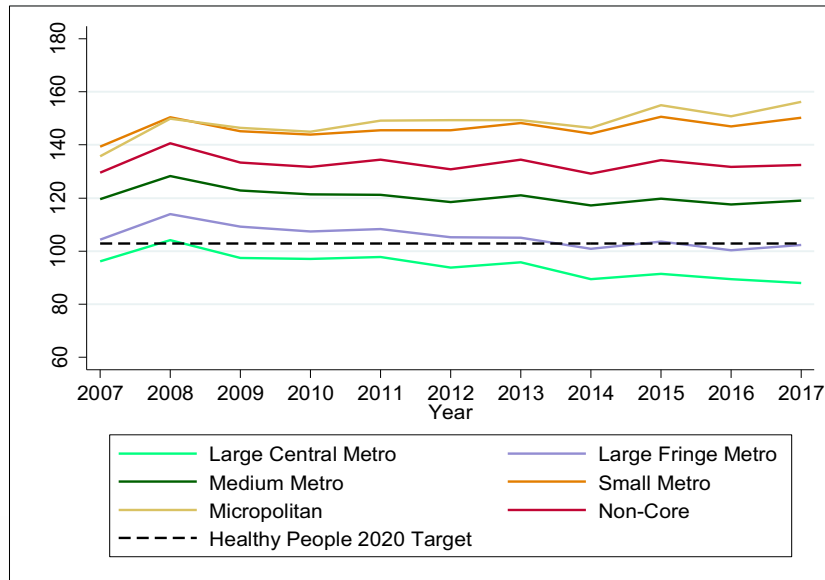


Healthy People 2020 COPD Mortality

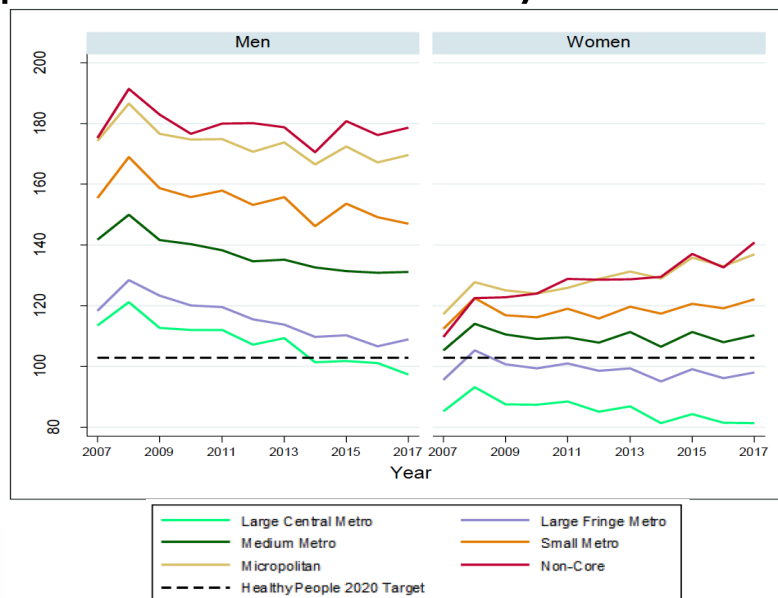
- 2007 stats: 113.9 age-adjusted deaths per 100,000 in population
- 2020 target: 102.6 age-adjusted deaths per 100,000 in population
- Clear evidence of limited progress in achieving COPD goal
 - 2011: 117.7
 - 2012: 114.8
 - 2013: 116.5
 - 2014: 111.7
 - 2015: 115.1
 - 2016: 112.3
 - 2017: 113.4
- Unanswered question: how does this vary across the urban-rural continuum?



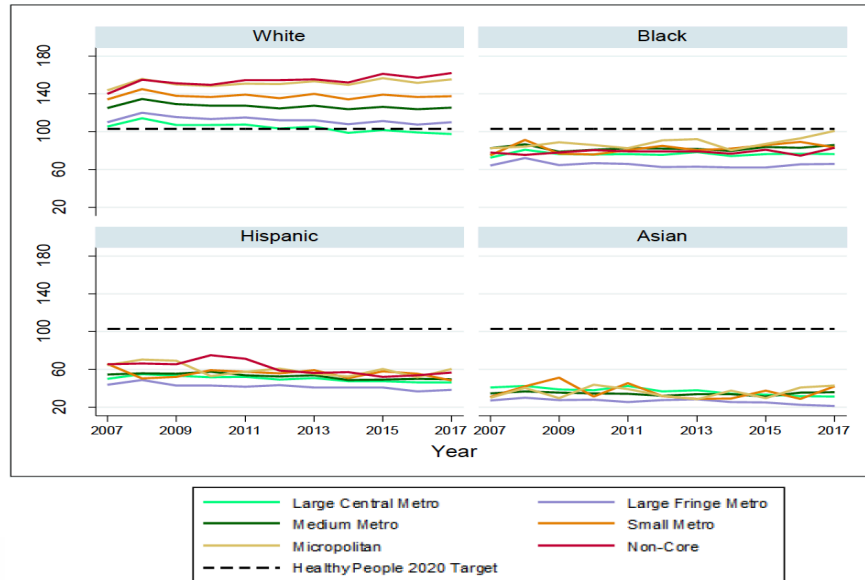
Overall Age Adjusted COPD Deaths by Year



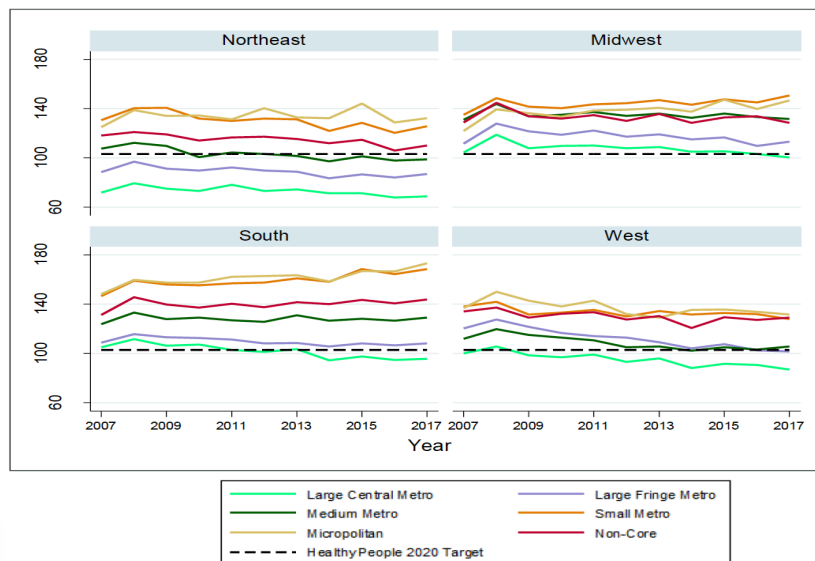
Age Adjusted COPD Deaths by Gender



Age Adjusted COPD Deaths by Race



Age Adjusted COPD Deaths by Region



COPD Takeaways

- Nationally the US has made minimal progress in achieving its Healthy People 2020 COPD goal
- While residents of large central and large fringe metropolitan areas achieved the COPD goal, residents of all other areas did not, with residents of micropolitan and small metropolitan areas being furthest away from the goal
- Men were substantially further away from the COPD goal than women, with men in non-core and micropolitan areas furthest away from it
- Hispanics, Blacks and Asians have largely met the HP 2020 COPD goal. Whites however, had only achieved the Healthy People 2020 goal in large central metropolitan areas with highest mortality rates in rural areas



Overall Takeaways

- Rural America continues to lag behind urban America in achieving Healthy People 2020 mortality objectives
- The rural South is a problem area for diabetes, cancer, stroke, COPD and heart disease while the rural West is a problem area for suicide
- Men appear to lag behind women in achieving Healthy People 2020 goals across levels of rurality and topics
- Interventions aimed at reducing deaths from leading causes of disease in rural America are needed to help rural America achieve Healthy People 2020 goals
- More thorough consideration of rural America in crafting Healthy People 2030 and 2040 priorities may be warranted



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