Rural Demographics & Social Determinants of Health

Population Health in Rural America in 2020 Workshop

National Academies' Roundtable on Population Health Improvement

Alana Knudson, PhD
June 24, 2020

The Walsh Center for Rural Health Analysis

NORC AT THE UNIVERSITY OF CHICAGO

NORC Walsh Center for Rural Health Analysis

NORC at the University of Chicago is an objective and non-partisan research institution that delivers reliable data and rigorous analysis to guide critical programmatic, business, and policy decisions.

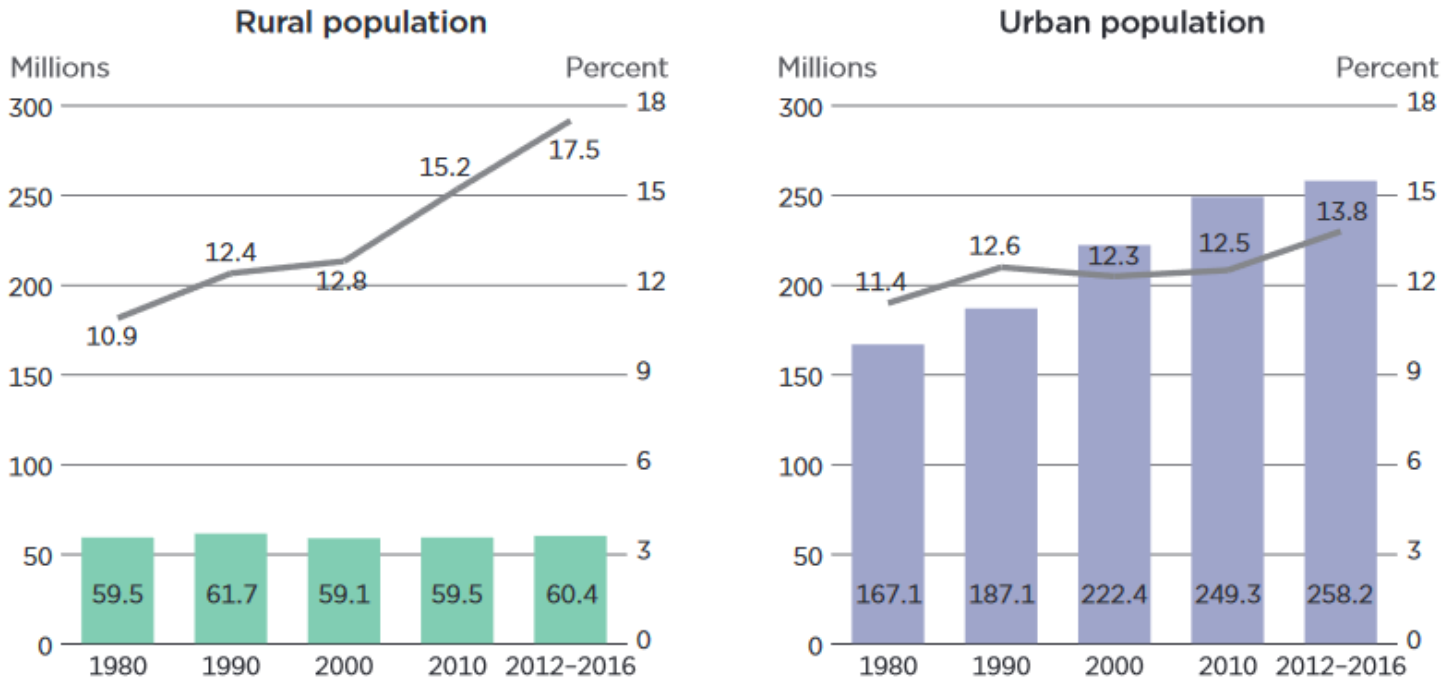
NORC's Walsh Center for Rural Health Analysis, established in 1996, conducts timely policy analysis, research, and evaluation that address the needs of policy makers, the health care workforce, and the public on issues that affect health care and public health in rural America. The Walsh Center is based in Bethesda, MD.

Rural Demographics and Social Determinants of Health

Rural and Urban Residents 65 Years and Over

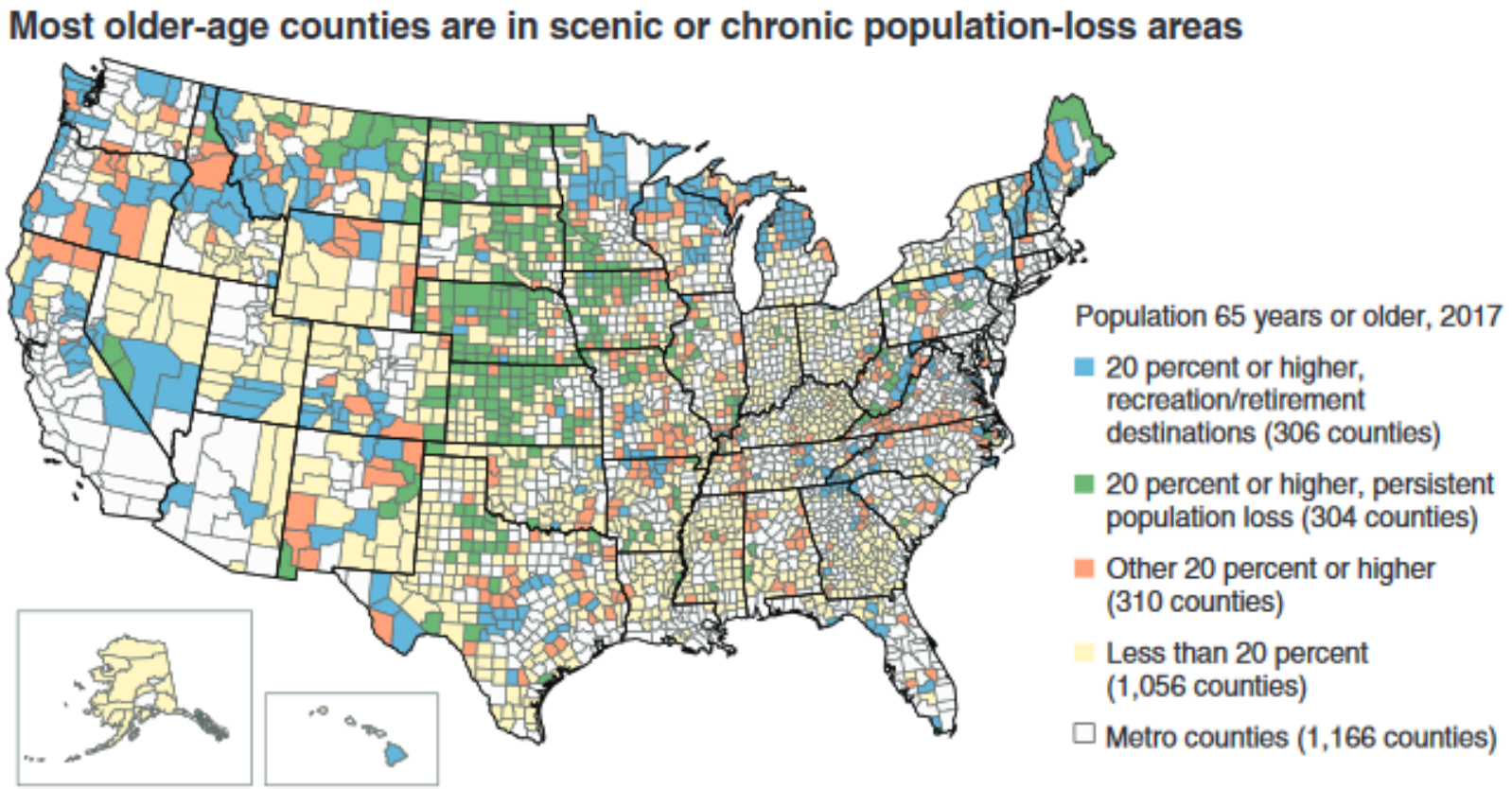
Figure 1.

Population Size and Percentage 65 Years and Over by Rural and Urban Status: 1980 to 2012–2016



Note: Data based on sample. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see <www.census.gov/acs>.
Source: U.S. Census Bureau, 1980 Census, 1990 Census, 2000 Census, 2010 Census, and 2012–2016 American Community Survey, 5-Year Estimates.

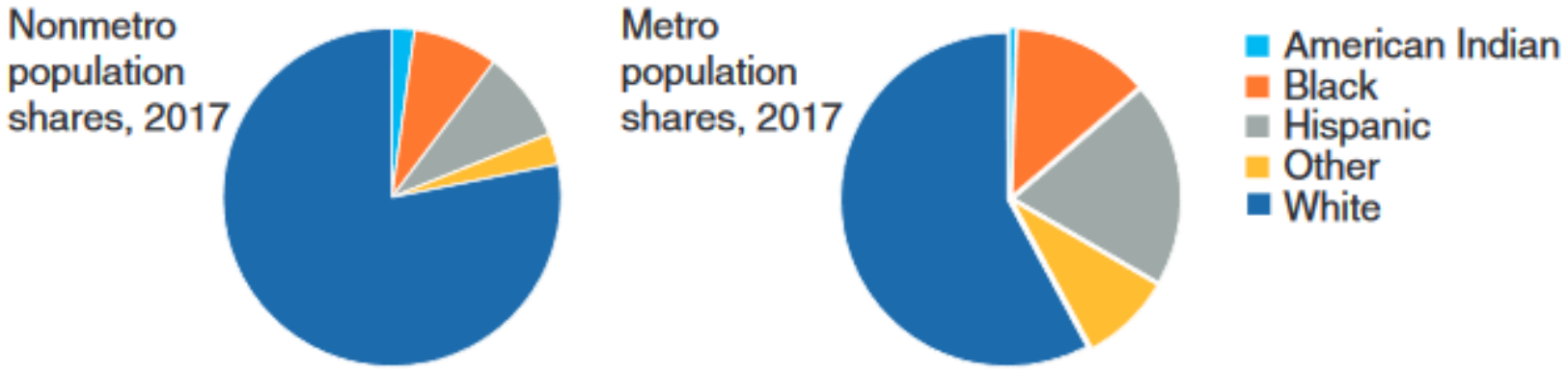
Rural Counties with > 20% of Population 65 Years and Older



Source: USDA, Economic Research Service using data from the U.S. Census Bureau Population Estimates Program.

Racial/ethnic Minorities in Rural and Urban Areas

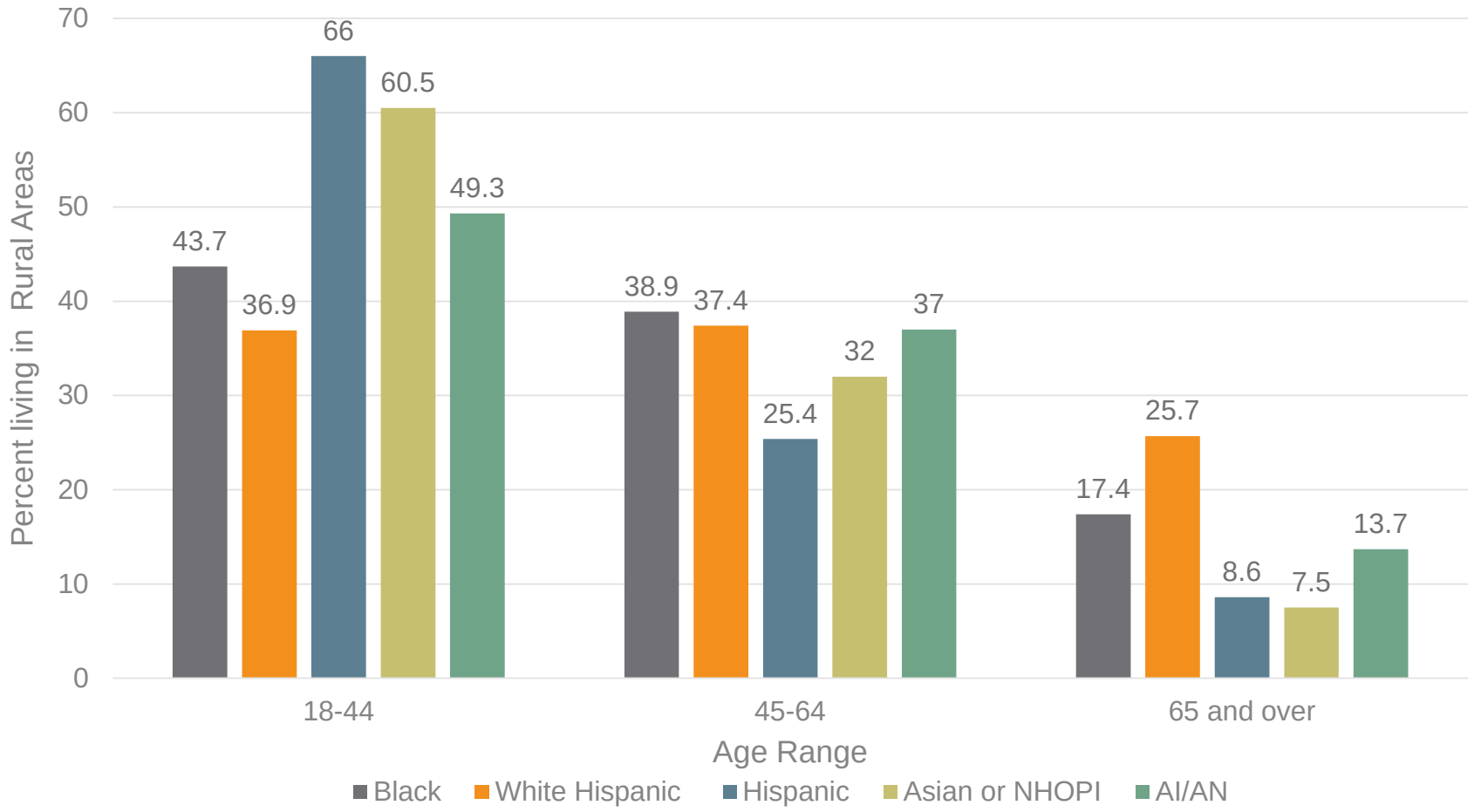
Racial/ethnic minorities make up 22 percent of the nonmetro population compared with 42 percent in metro areas



Note: Statistics for Whites, Blacks, and American Indians include only non-Hispanic residents. Residents included in the Hispanic category may be of any race. Groups with relatively few nonmetro residents (Asians, Pacific Islanders, and those reporting multiple races) are combined into a single category (Other).

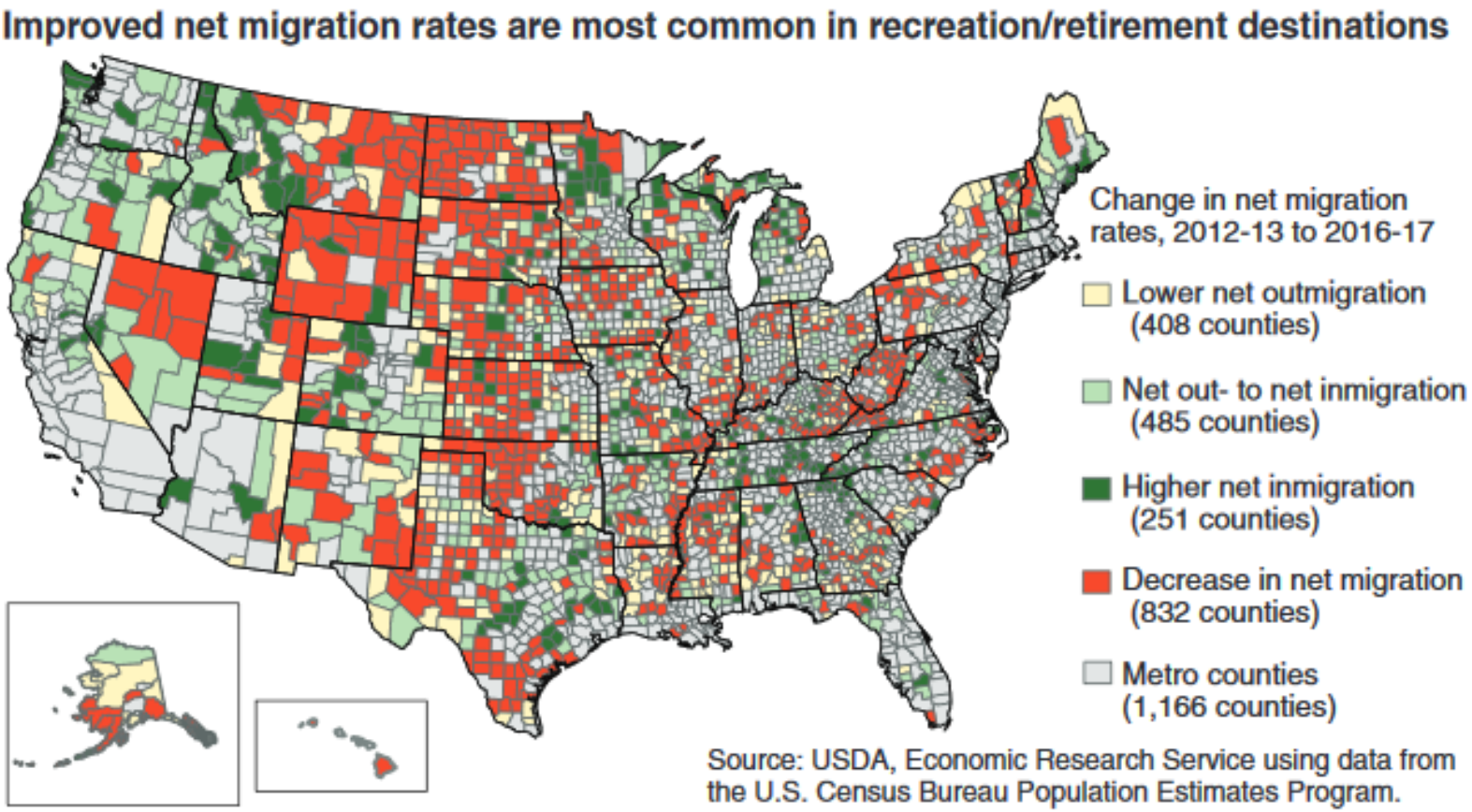
Source: USDA, Economic Research Service using data from U.S. Census Bureau, Population Estimates Program.

Sociodemographic Characteristics of Adults 18 and Over in Rural Areas by Race/Ethnicity



Source: James CV, Moonesinghe R, Wilson-Frederick SM, Hall JE, Penman-Aguilar A, Bouye K. Racial/Ethnic Health Disparities Among Rural Adults — United States, 2012–2015. MMWR Surveill Summ 2017;66(No. SS-23):1–9.

Rural Net Migration: 2012-2013 to 2016-2017

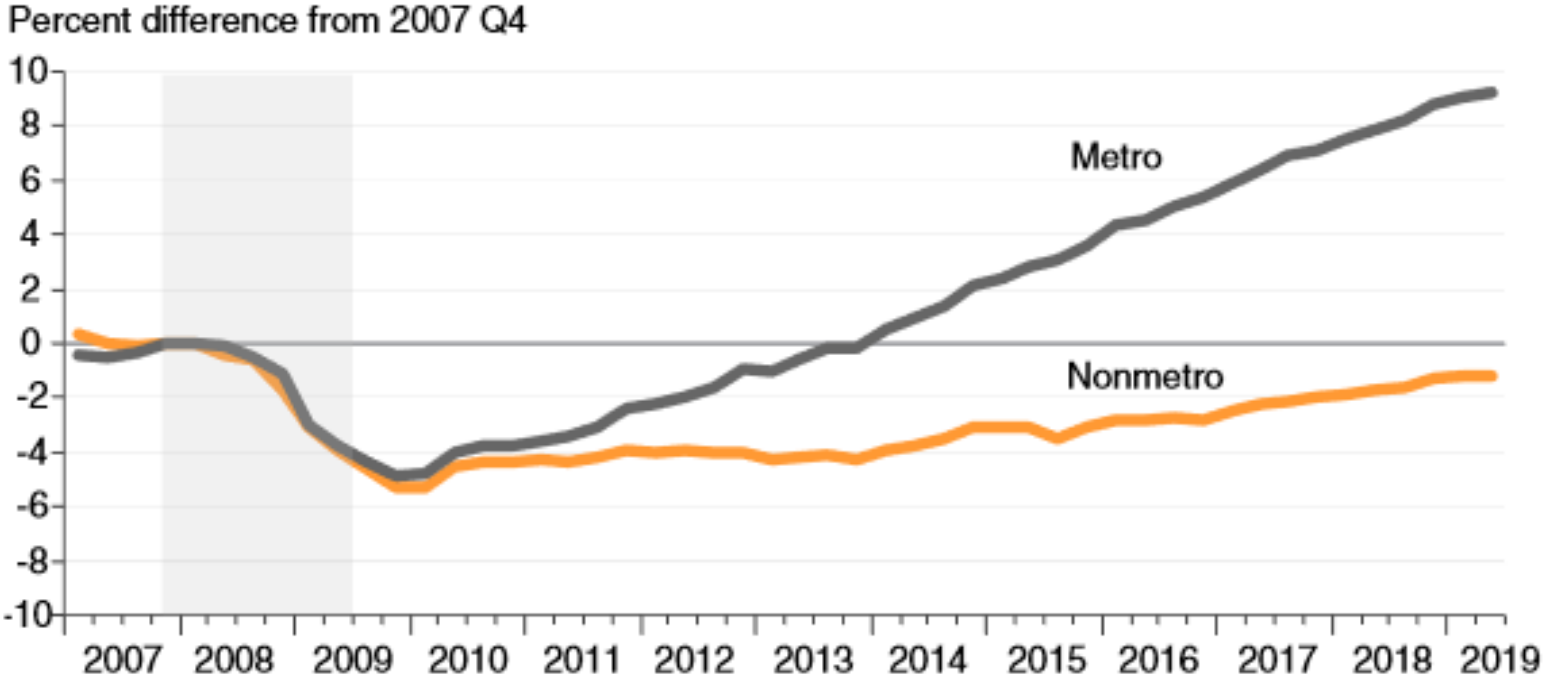


Social Determinants of Health

Office of Disease Prevention and Health Promotion. (n.d.) Healthy People 2020: Social Determinants of Health. Retrieved from: https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health

Rural/Urban Employment: 2007 - 2019

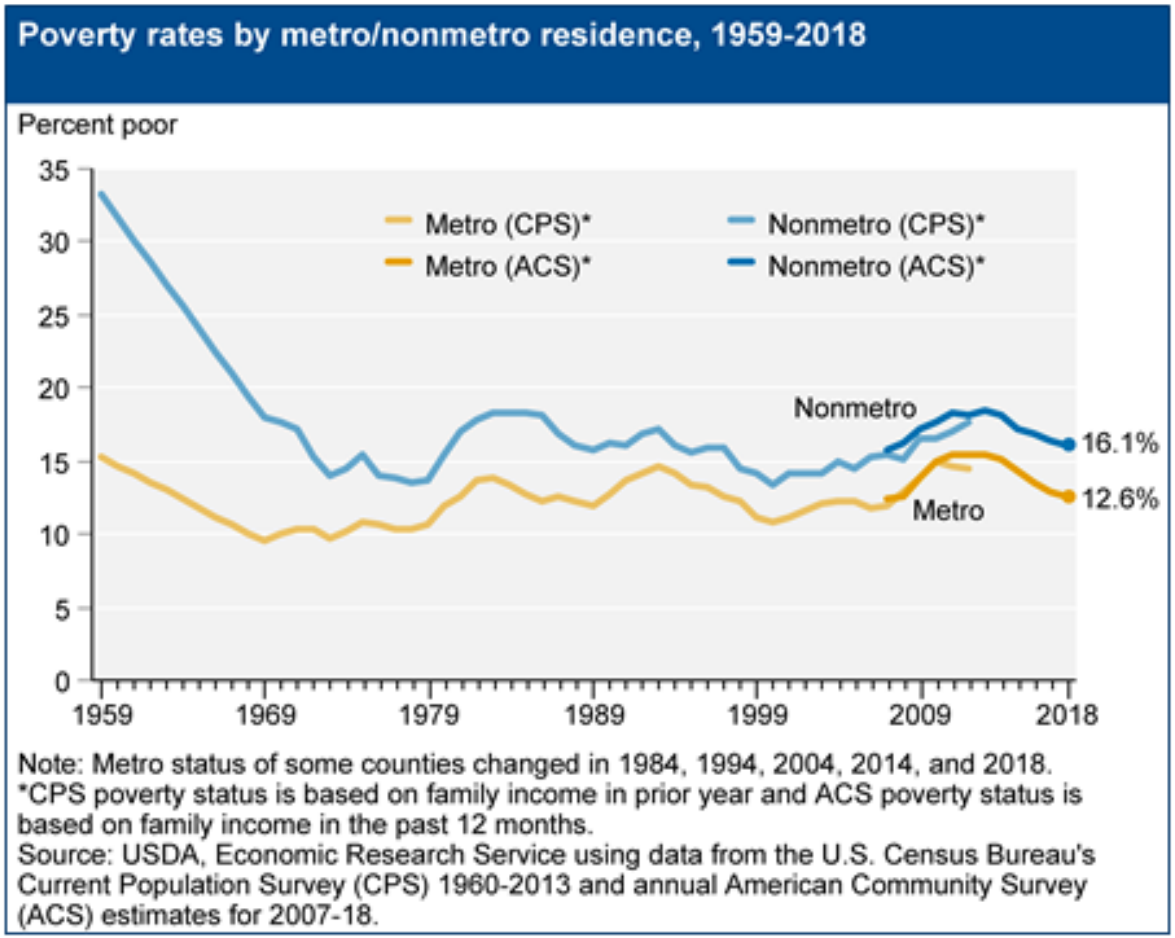
Employment has grown more rapidly in metro than nonmetro areas since the Great Recession



Note: Shaded area indicates Great Recession. Data are seasonally adjusted.

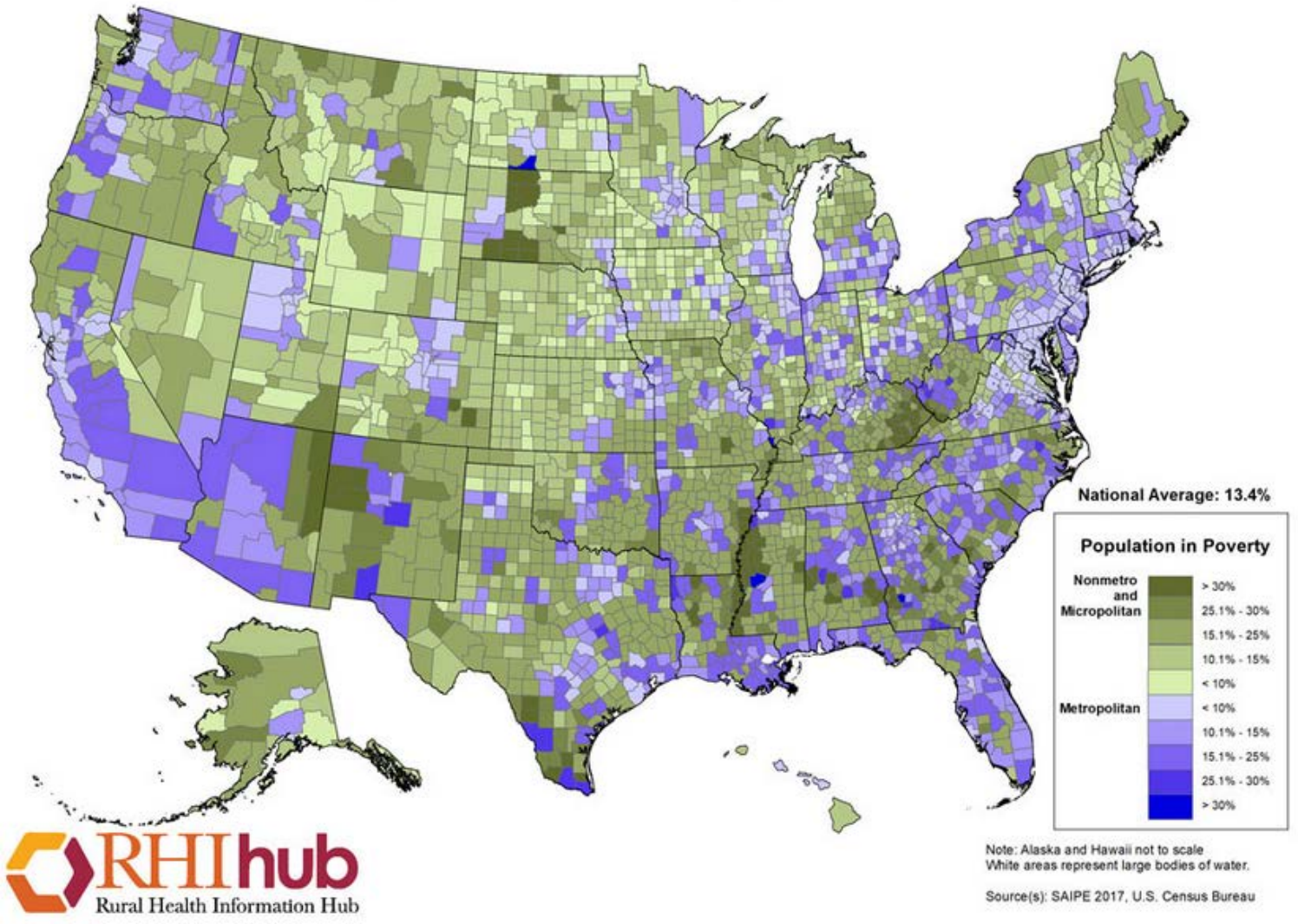
Source: USDA, Economic Research Service using data from the U.S. Bureau of Labor Statistics (BLS), Local Area Unemployment Statistics (LAUS).

Rural Health Disparities: Poverty Rates

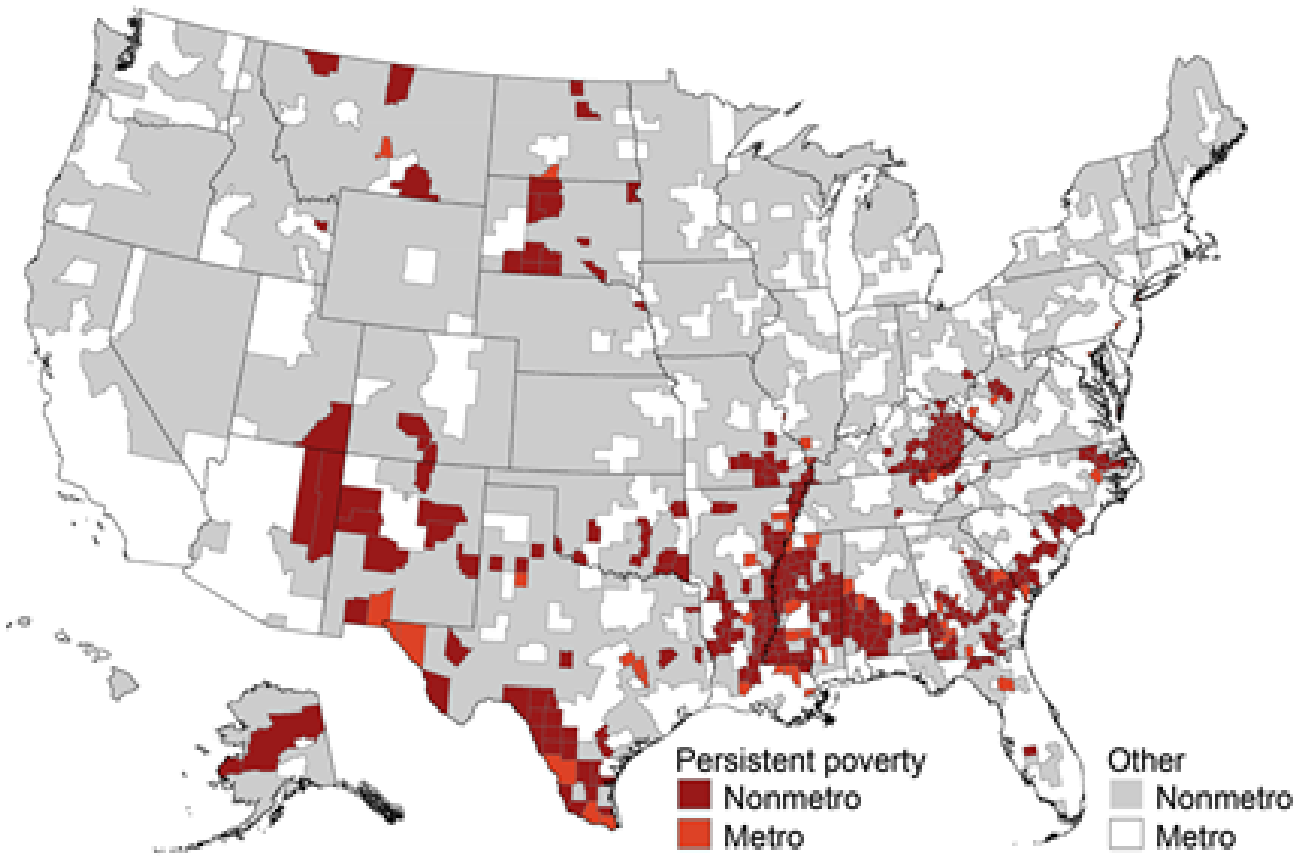


USDA Economic Research Service. (2019). Poverty Overview. Retrieved from: https://www.ers.usda.gov/topics/rural-economy-population/rural-poverty-well-being/#historic

Poverty by County

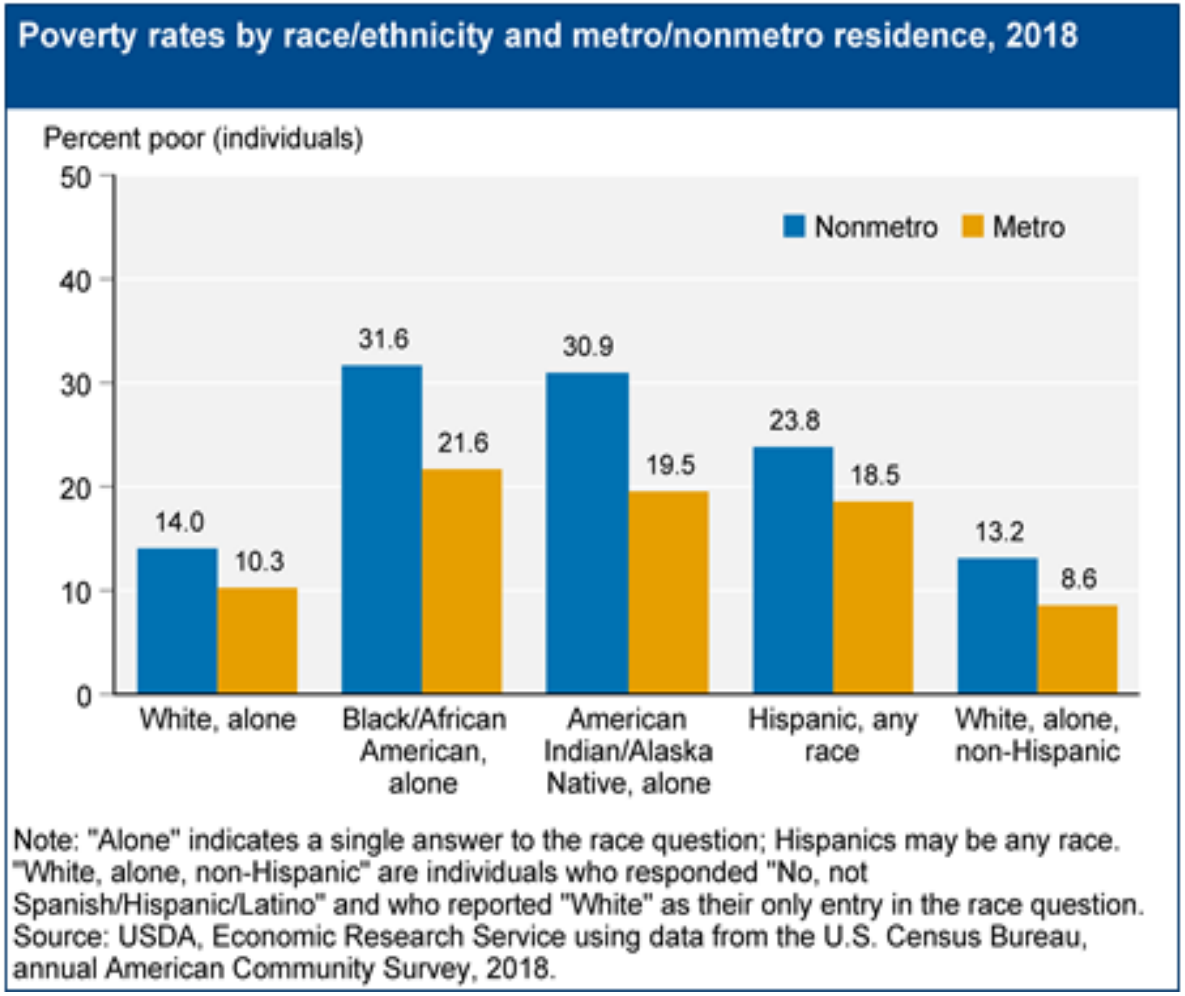


Persistent poverty counties, 2015 edition



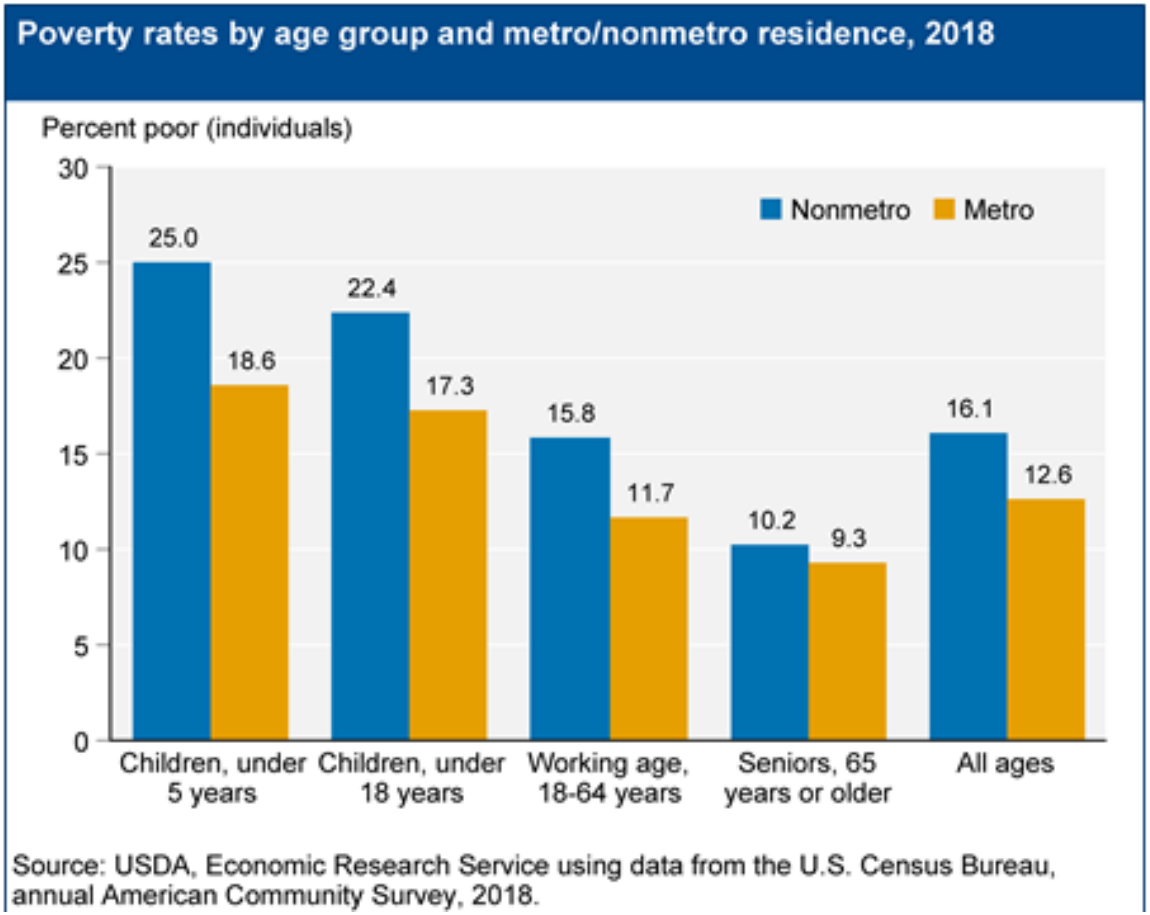
Persistent poverty counties are those where 20 percent or more of county residents were poor, measured by the 1980, 1990, 2000 censuses, and the 2007-11 American Community Survey.
Note that county boundaries are drawn for the persistent poverty counties only.
Source: USDA, Economic Research Service using data from U.S. Census Bureau.

Rural Health Disparities: Race/Ethnicity Poverty Rates



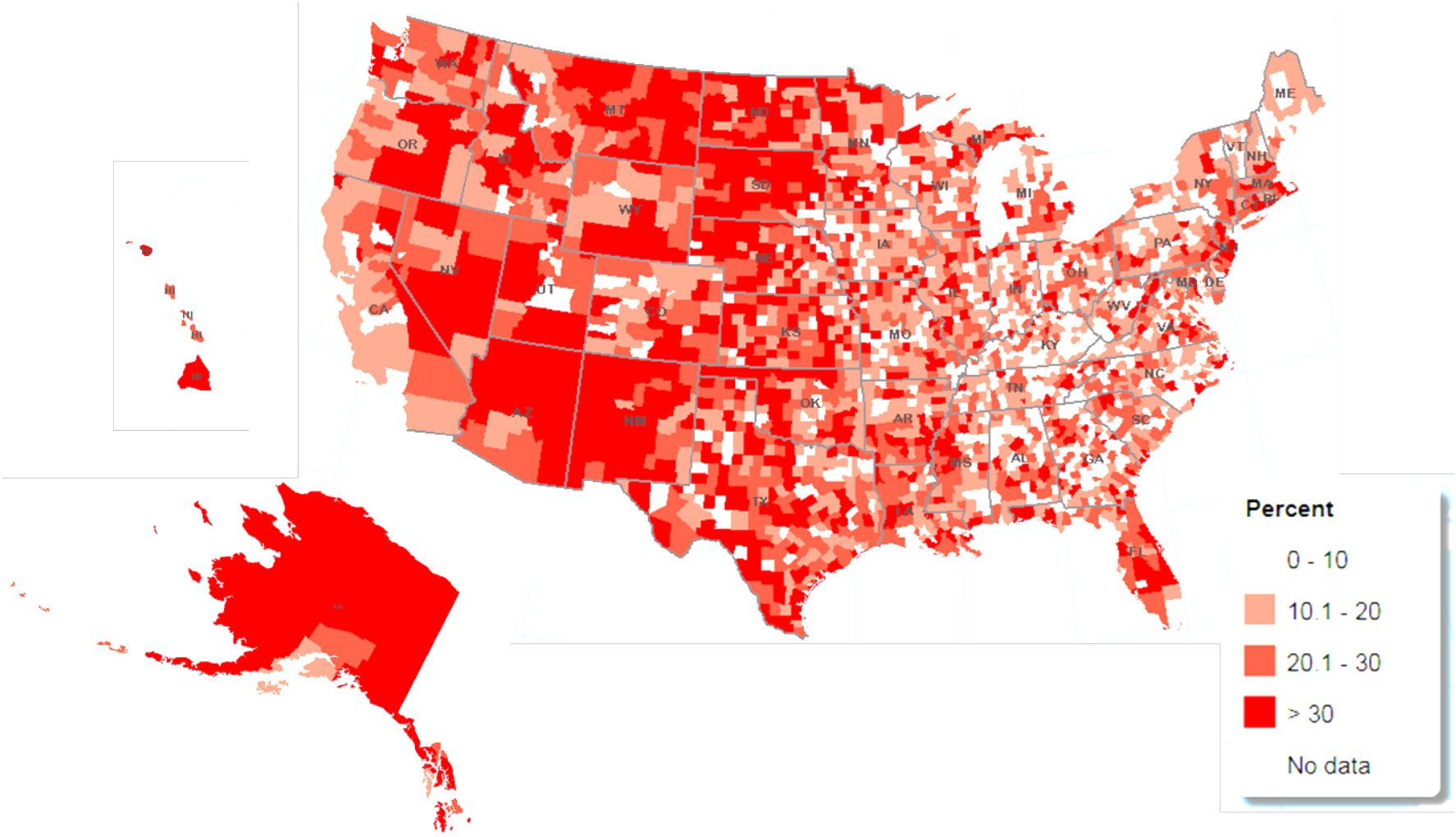
USDA Economic Research Service. (2019). Poverty Overview. Retrieved from https://www.ers.usda.gov/topics/rural-economy-population/rural-poverty-well-being/#historic

Rural Health Disparities: Age Categories



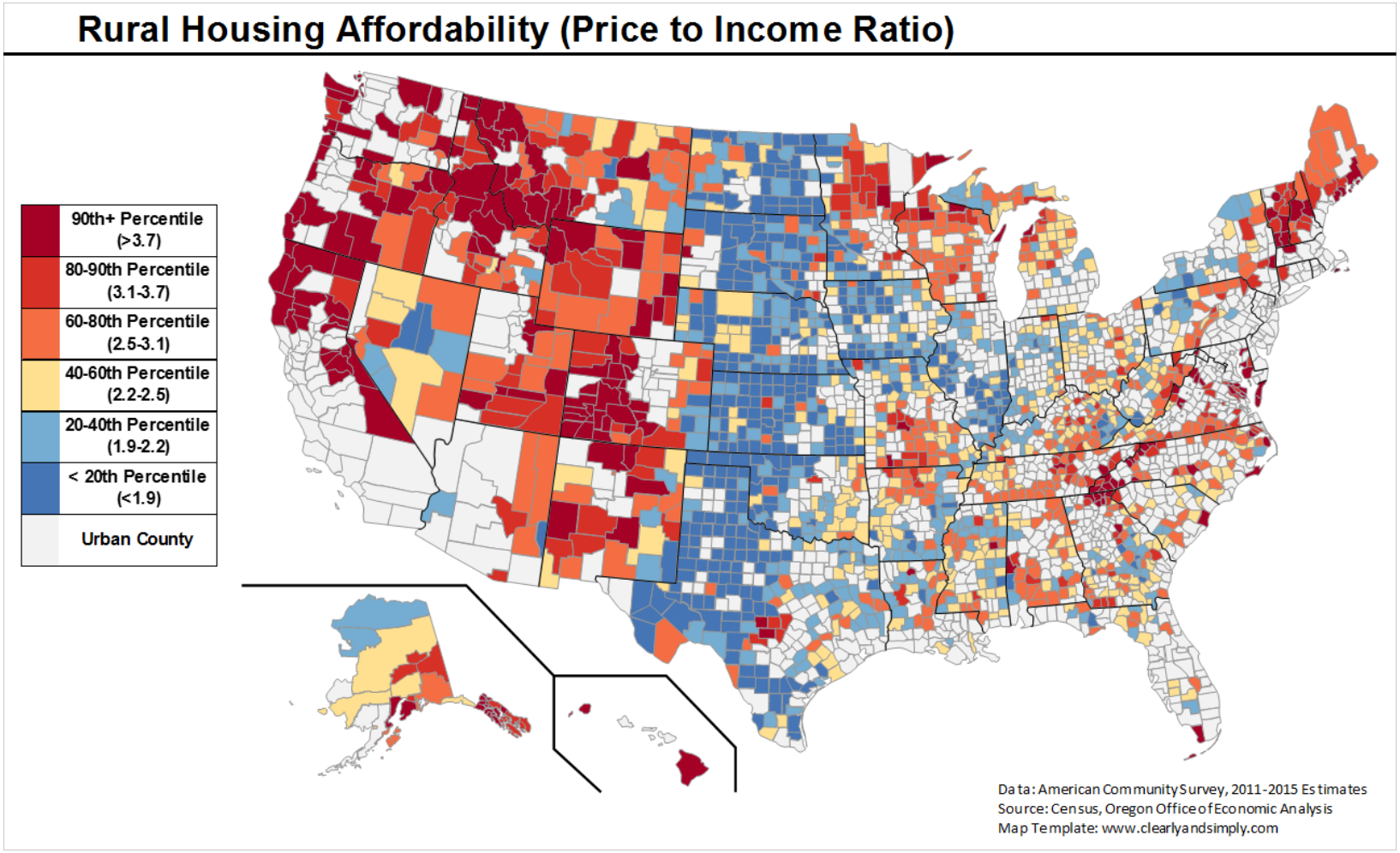
USDA Economic Research Service. (2019). Poverty Overview. Retrieved from https://www.ers.usda.gov/topics/rural-economy-population/rural-poverty-well-being/#historic

Percentage of Population with Low Access to Grocery Stores (2015)



USDA Economic Research Service. (2017). Percentage of Population with Low Access to Grocery Stores. Retrieved from: https://www.ers.usda.gov/data-products/food-environment-atlas/go-to-the-atlas/

Rural Housing Affordability



Oregon Office of Economic Analysis. (2017). Housing Affordability. Retrieved from: https://oregoneconomicanalysis.com/2017/02/09/rural-housing-affordability/

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Rural Health Information Hub

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IN THIS TOOLKIT

Modules

- 1: Introduction
- 2: Program Models
- 3: Program Clearinghouse
- 4: Implementation
- 5: Evaluation
- 6: Sustainability
- 7: Dissemination

About This Toolkit

Rural Health > Tools for Success > Evidence-based Toolkits > Social Determinants of Health in Rural Communities Toolkit

Social Determinants of Health in Rural Communities Toolkit

https://www.ruralhealthinfo.org/toolkits/sdoh

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Thank You!

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Structural urbanism:

Current funding mechanisms systematically disadvantage rural populations

Janice Probst, PhD
Distinguished Professor Emerita
Arnold School of Public Health
June 24, 2020

UNIVERSITY OF South Carolina
Arnold School of Public Health

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There will be a quiz

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Structural urbanism

A bias toward large population centers that emerges from a focus on individuals rather than infrastructure when designing health care and public health interventions

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Why focus on individuals fails: scale

- Most health care programs require a minimum number of funded participants to be viable under current financing mechanisms
- In public health, focus on attaining national goals obscures local problems and small populations

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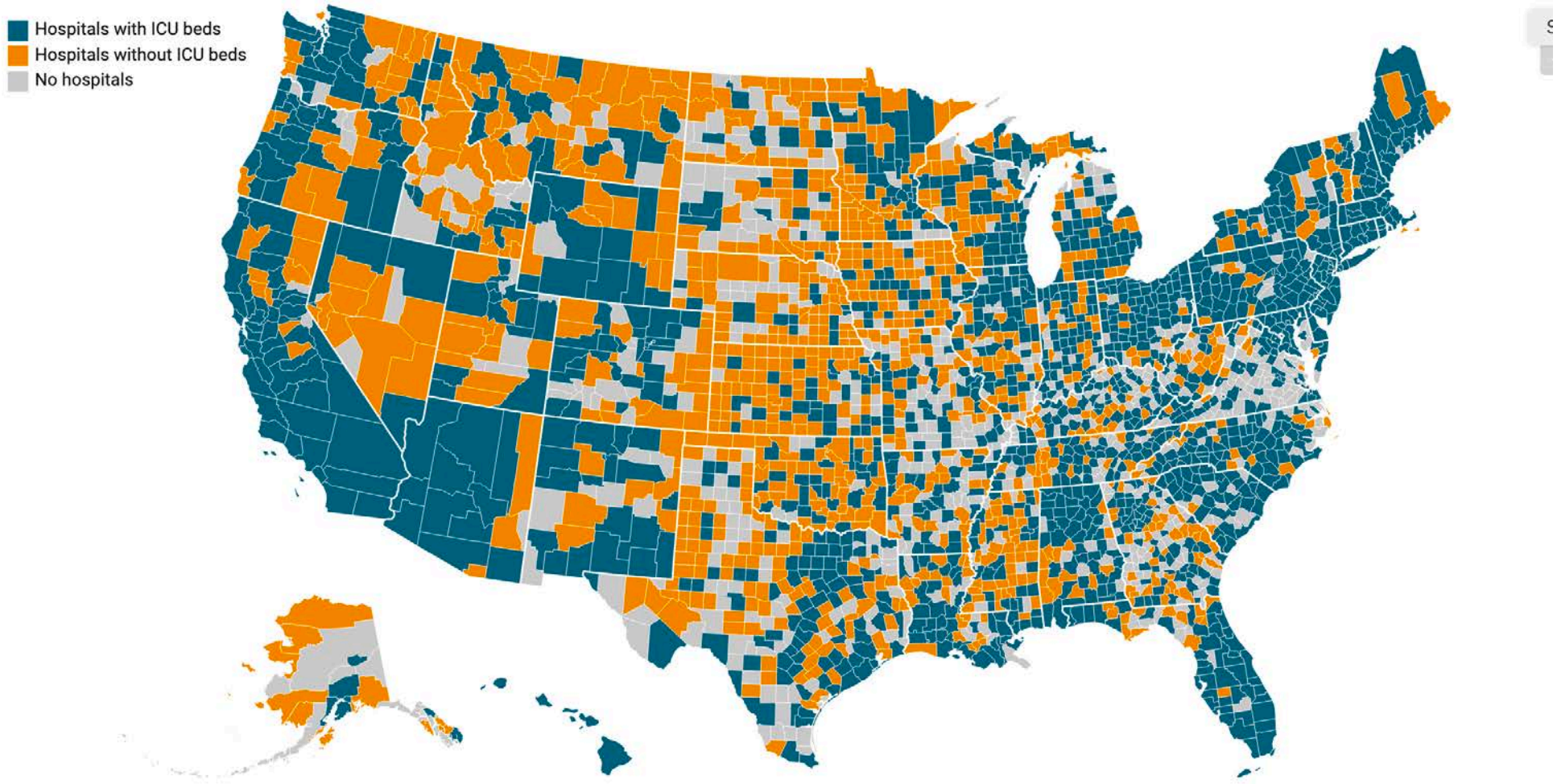
Pandemic concern: ICU beds



Source: https://khn.org/news/as-coronavirus-spreads-widely-millions-of-older-americans-live-in-counties-with-no-icu-beds/

Notes: This analysis includes the most recent reports, from FY 2018 and 2019. Some hospitals may have closed since then. Some hospitals may have made errors in their reporting, and in several cases KHN has manually adjusted the data. In some cases, beds in small satellite hospitals are reported in the main hospital's filing. Hospitals for veterans run by the Department of Defense are not included in this analysis.

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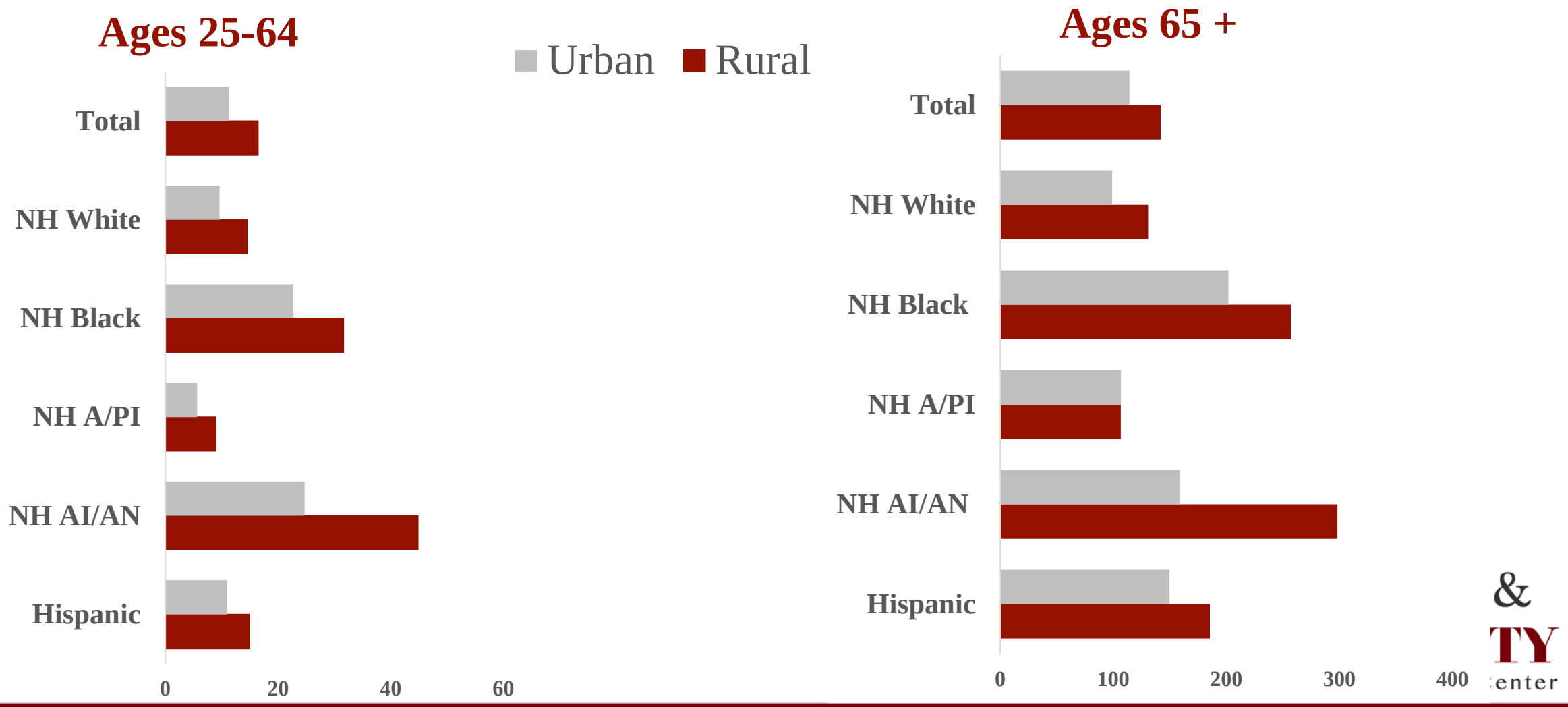
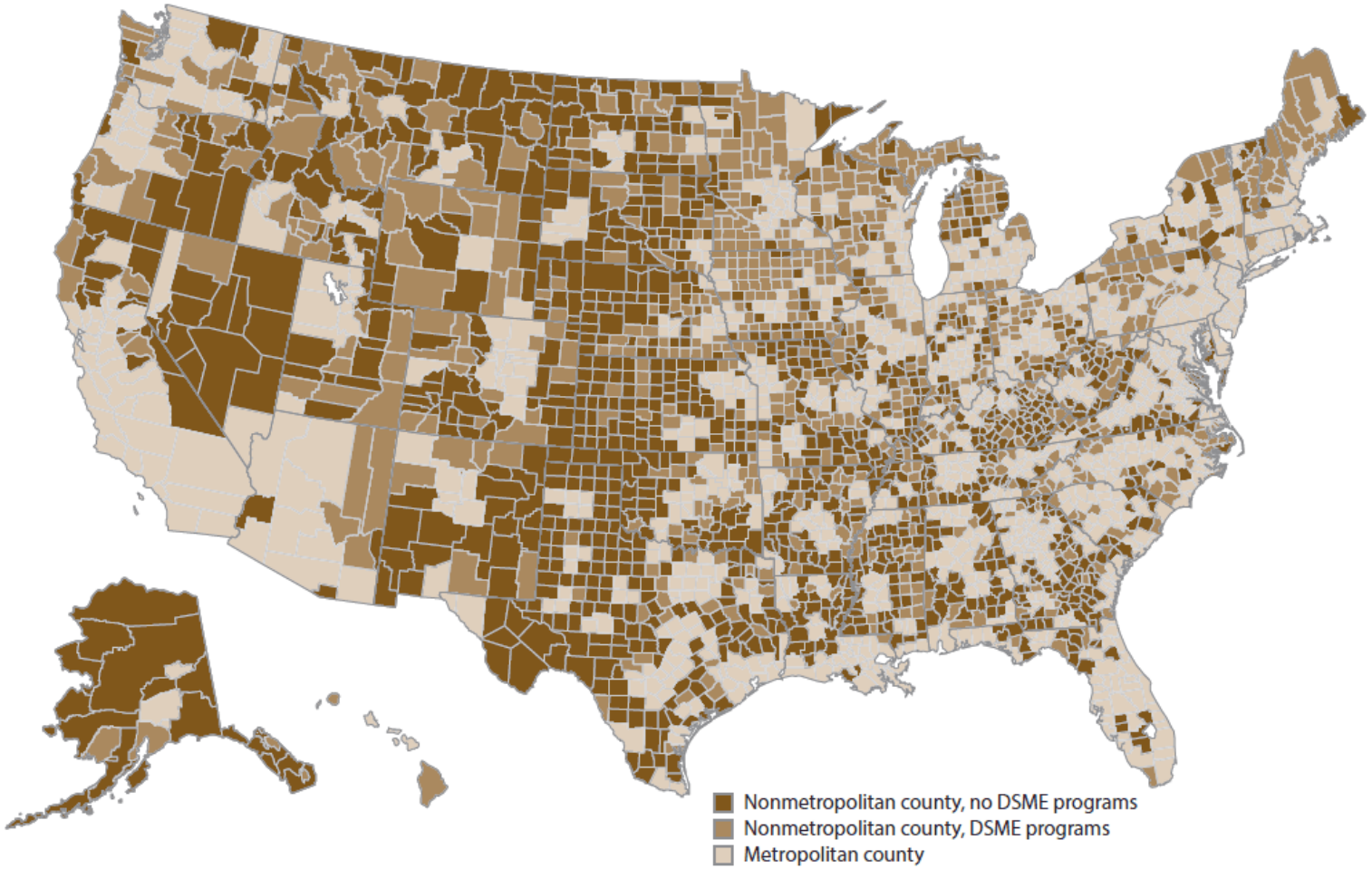
Age-adjusted 2017-2018 death rates for diabetes among adults, by race and residence, per 100,000 population



Small populations → lack of services



1,233 out of 1,796 rural counties (62%) have no diabetes self management program

Source: Rutledge et al MMWR Surveill Summ. 2017 Apr 28;66(10):1-6.

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Takeaway for direct health care services

Funding mechanisms that reimburse health care as a service provided to an individual

will never

serve rural populations and communities fairly

(And yes, this applies to capitation, value-based care, "Medicare for All," and the rest of the tweaks)

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Challenges for public health

Healthy People 2020 Mortality Rate Goals for Children		
Age group	2020 Target	2017 National
< 1	6.0	5.8
1-4 years	26.5	24.3
5-9 years	12.4	11.6
10-14 years	14.8	15.5
15-19 years	54.3	51.5

Infant rates per 1000; other rates per 100,000

Success!
Almost all national goals met!

Khan et al, JAMA Pediatrics, 2018 Dec 1;172(12):e183317.

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About “national” success….

Healthy People 2020 Mortality Goals for Children				
Age group	Target rate for 2020	2017 National	2017 Urban	2017 Rural
< 1	6.0	5.8	5.7	**6.6**
1-4 years	26.5	24.3	22.8	**33.3**
5-9 years	12.4	11.6	11.0	**15.3**
10-14 years	14.8	15.5	14.6	**21.2**
15-19 years	54.3	51.5	49.3	**65.3**

Infant rates per 1000; other rates per 100,000

Source: Probst et al *Health Aff* 2019.

“Moving the needle:” large populations

- Neglect of rural surveillance
  - *Health United States* 2017: 144 tables, but only 27 of them (19%) presented outcomes for rural populations
- Emphasizing numbers rather than severity restricts rural opportunities
  - Community transformation grants (CDC; 2010-2014) required a minimum population of 500,000

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COVID has intensified structural problems

- Declines in person-based payment hit small facilities hardest
  - Declining physician office visits nationwide [Rubin, JAMA Published online June 18, 2020]
  - Community Health Centers seeing 70% - 80% decline in income (Wright et al JRH 2020)
  - Rural hospitals furloughing staff as elective procedures decline (https://www.beckershospitalreview.com/finance/10-hospitals-furloughing-staff-in-response-to-covid-19.html)

- Person-based funding provides no clear avenue for rural recovery post-pandemic

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The quiz: what is in this picture?

INFRASTRUCTURE!

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Health care as infrastructure: a framework for change

- A characteristic of a community, not a person
- Responsive to community need
- Funded as a utility:
  - Taxation and/or
  - Regulated utility with fees that maintain services for all populations at need

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Different perspective, different options

- From “this hospital is not viable under current, centrally determined rates”

To

- “Rates for this institution will be sufficient to maintain its viability”

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Change is not simple …

- Defining geographic levels for supporting health care is complex
  - States?
  - Tennessee Valley Authority approach?
  - Combinations?
- Determination of need and allocation of resources will be contentious

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…but failure to change is worse

- America cannot be internationally competitive without a strong rural base
- Rural health care is dying in the areas of highest need, with adverse effects on lives and on communities
- A focus on communities and their essential infrastructure offers one path forward

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Thank you!

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Why is Mortality Higher in Rural America?

Mark Holmes (*@gmarkholmes*)

Director, NC Rural Health Research Program (*@ncrural*), Sheps Center

Professor, Health Policy and Management, UNC Gillings School of Global Public Health

Population Health In Rural America in 2020
June 2020

This presentation uses work partially funded by Federal Office of Rural Health Policy, Award #U1GRH03714

Collaborative work: project team listed at end of presentation

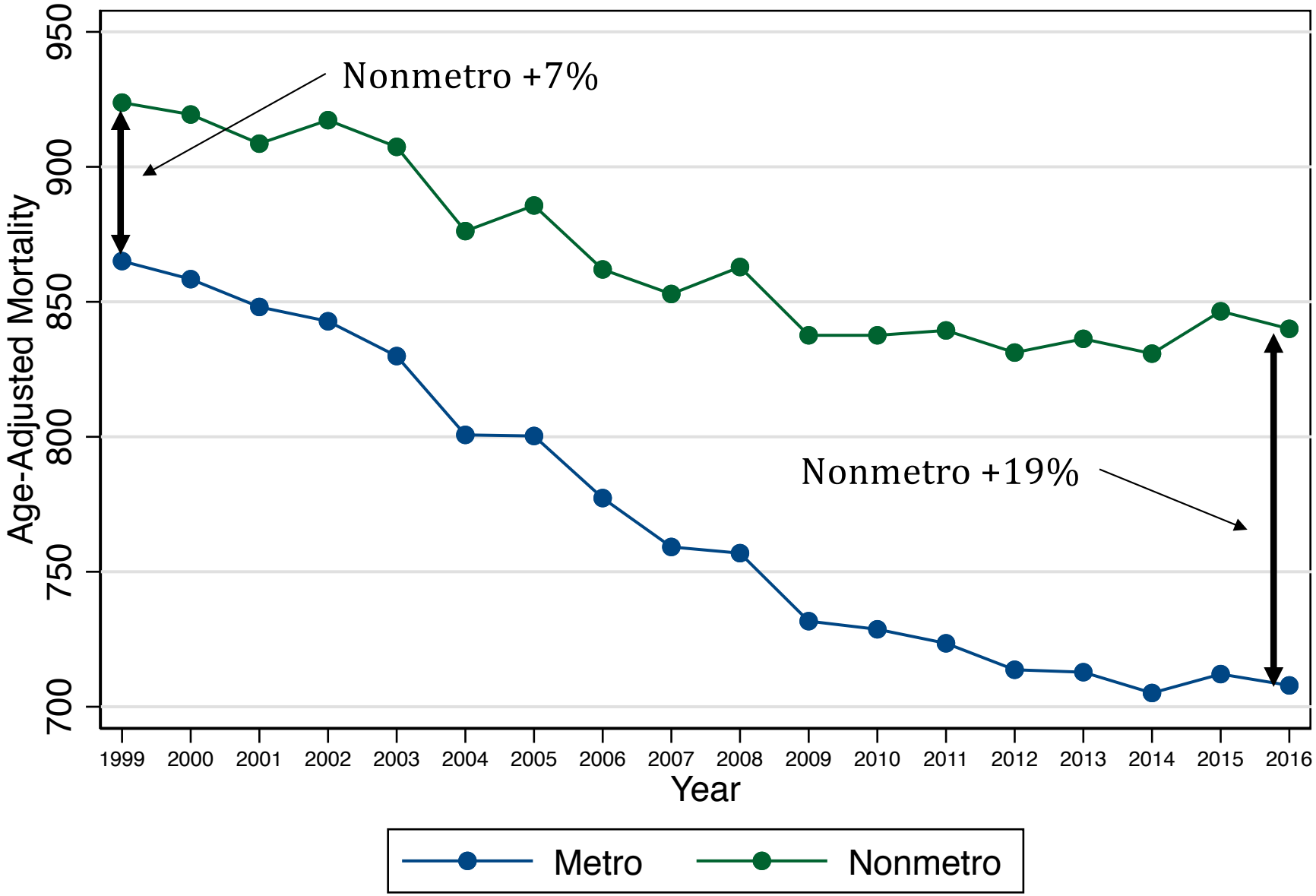
Presentation in One Slide

- Rural mortality rates are higher than urban mortality rates
- The gap is increasing over time, and research suggests it may vary regionally
- Drivers: access, behaviors, SDOH
- COVID-19 mortality is currently lower in rural areas
  - Except in the South

Here: "urban" = metro, "rural" = non-metro

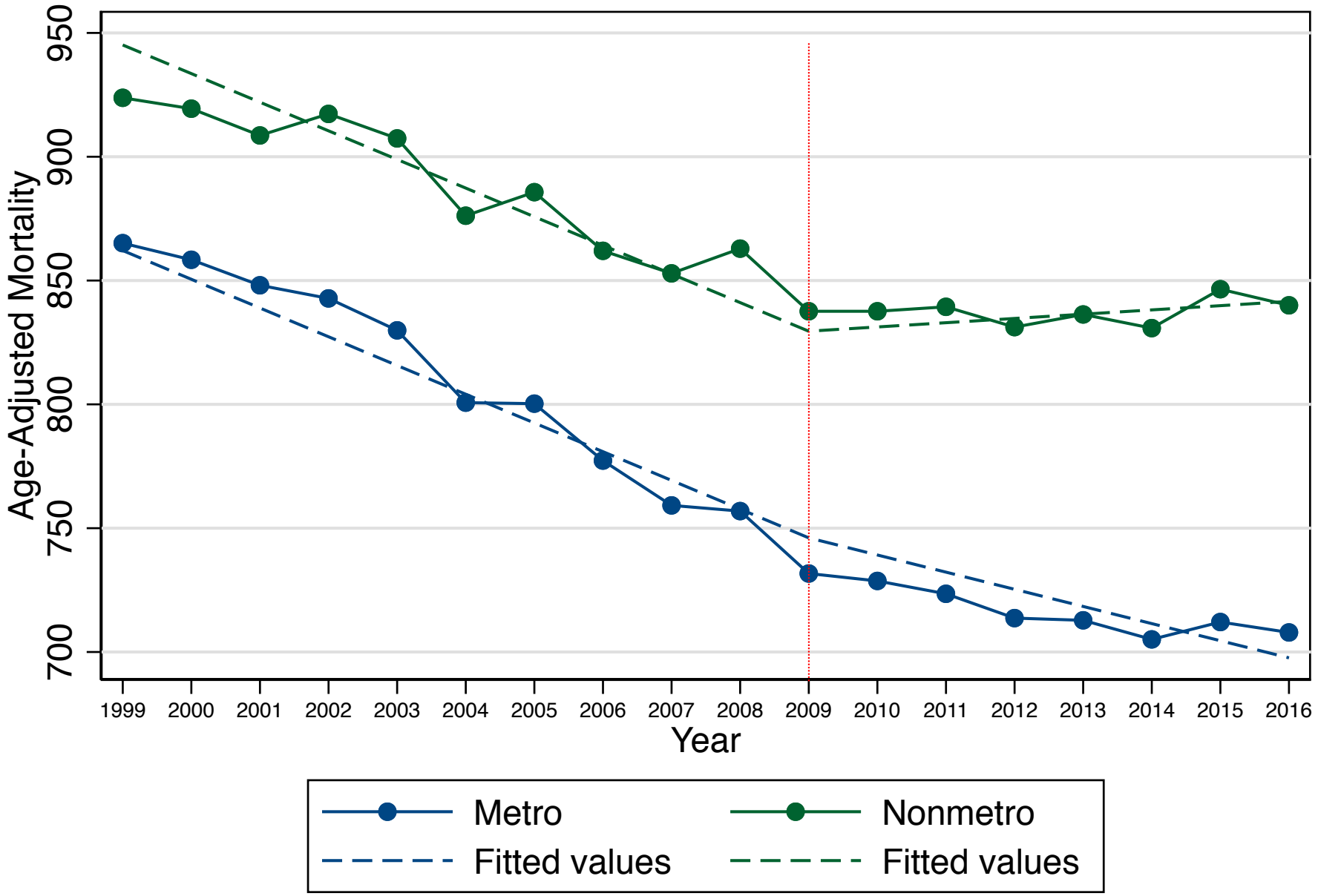
NC RHRP
NC Rural Health Research Program

Mortality is decreasing overall, but rural-urban gap is growing



Source: CDC WONDER Compressed Mortality. 2013 Metro status.

Mortality is decreasing overall, but rural-urban gap is growing



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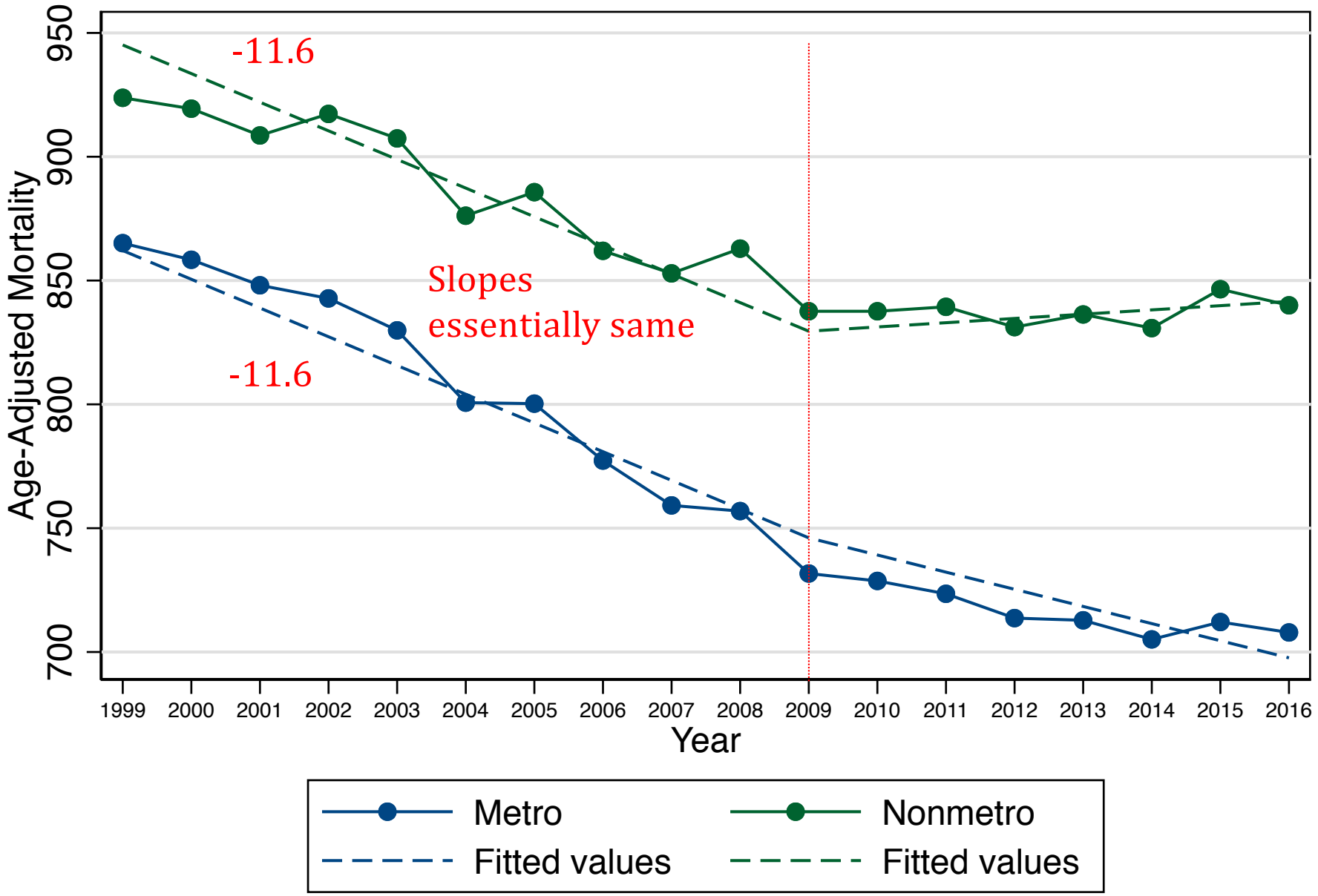

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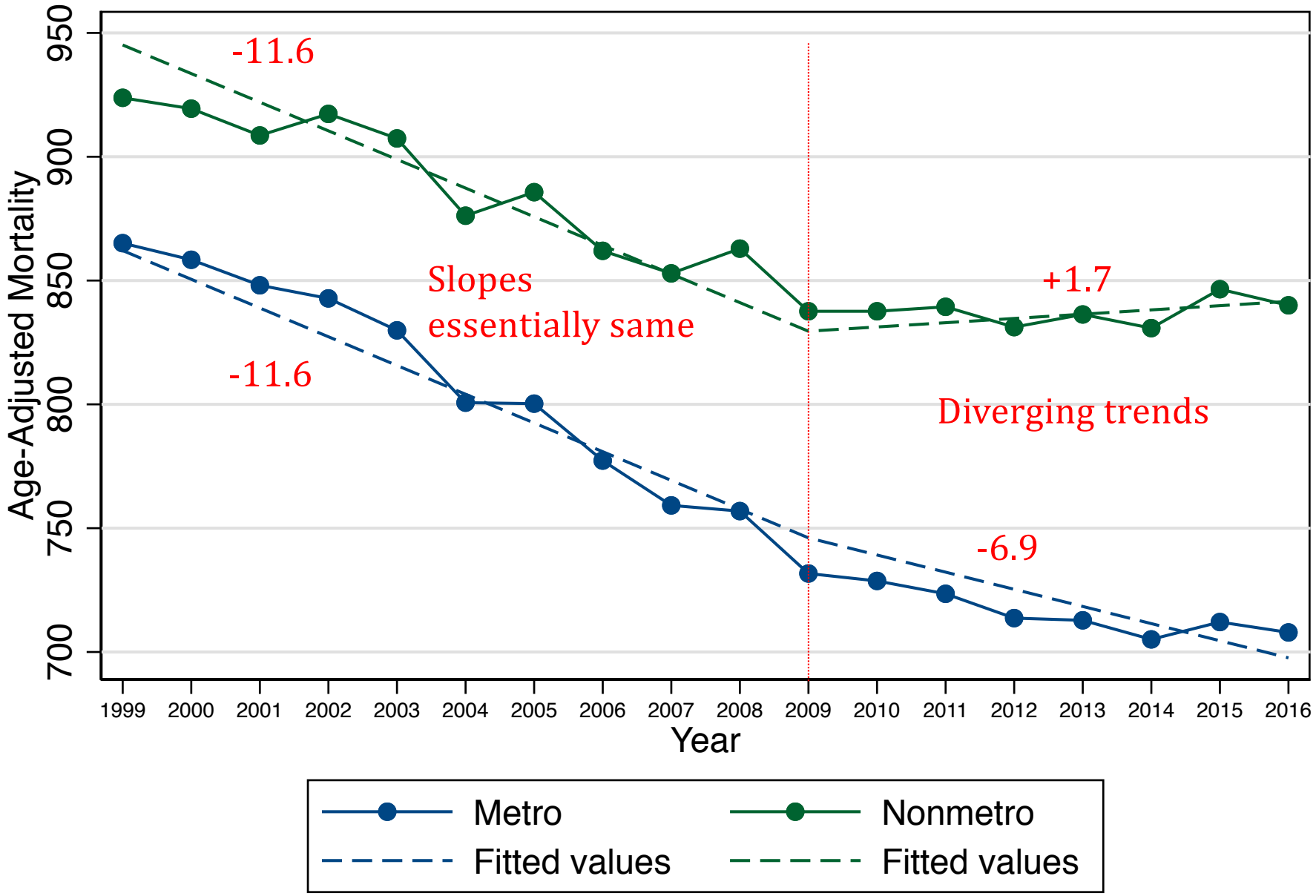
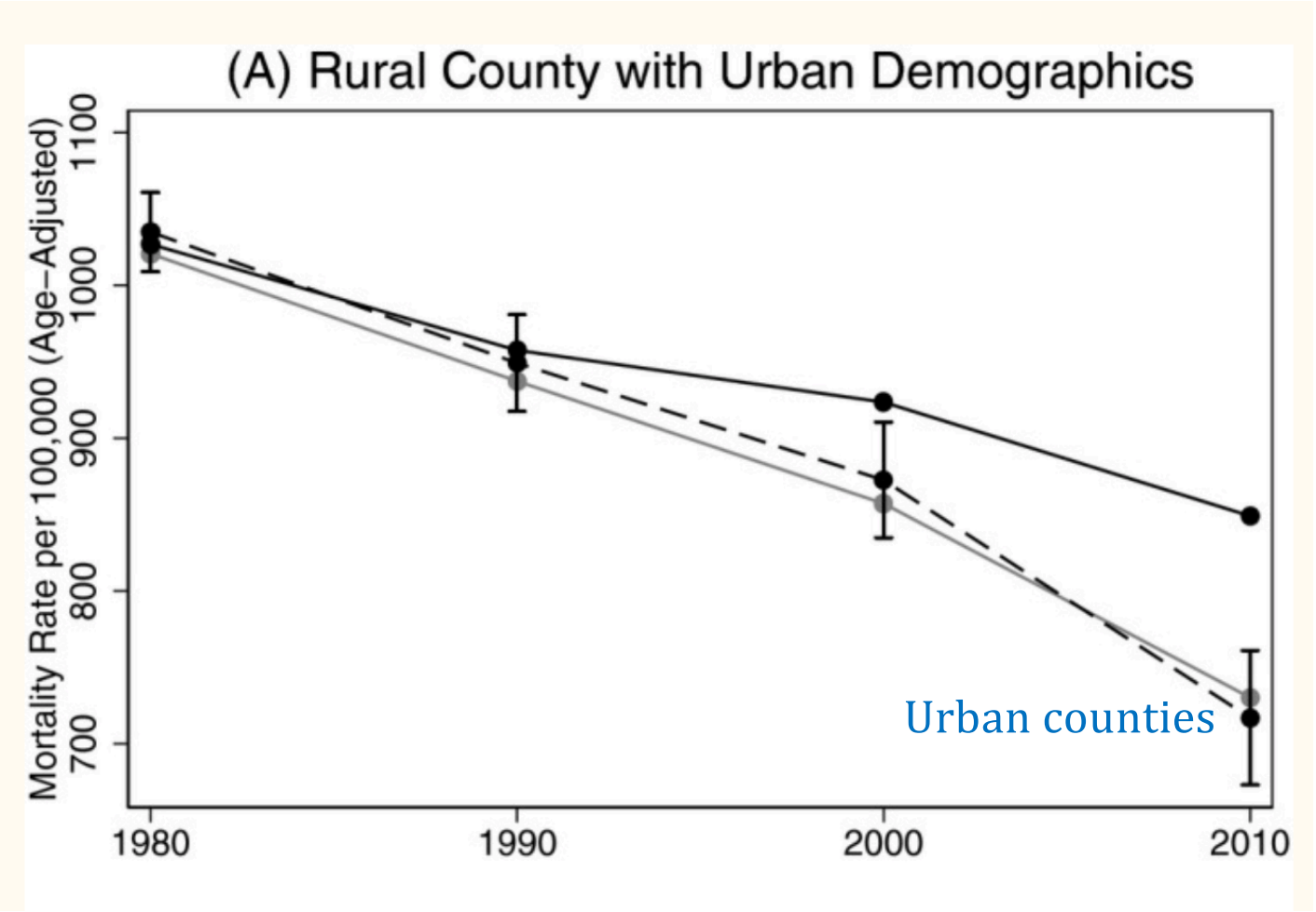


Source: CDC WONDER Compressed Mortality. 2013 Metro status.

Drivers of higher mortality

- Demographics/economics
  - Spencer et al (2018) concluded that demographics are an increasing predictor of the rural-urban mortality gap



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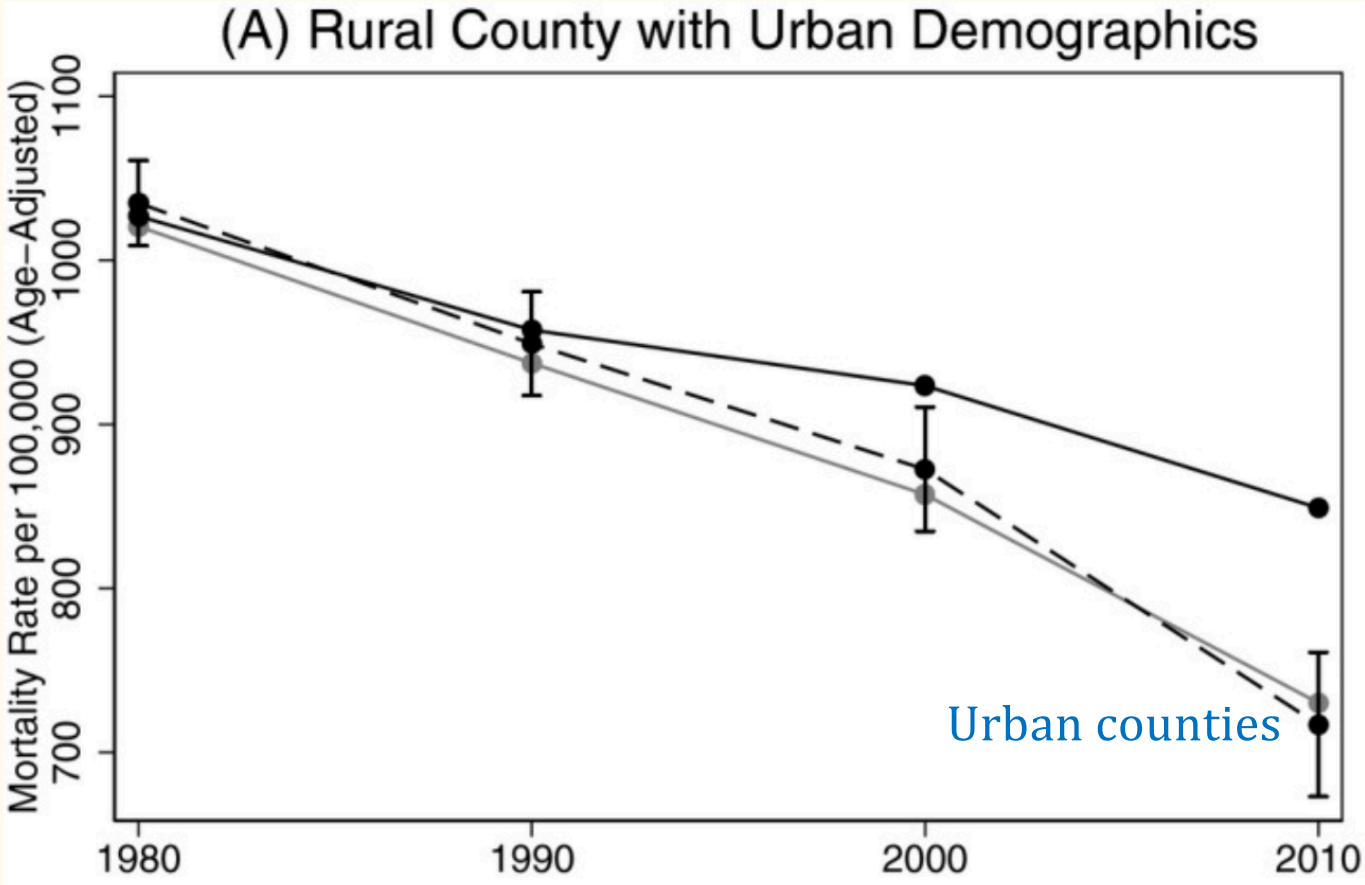


Rural counties

Rural counties if made them have the same demographics as urban

Drivers of higher mortality

Behavior

- Rural counties have higher rates of smoking and obesity….

Table 1. Modifiable Risk Factor Rates in Rural and Urban Areas

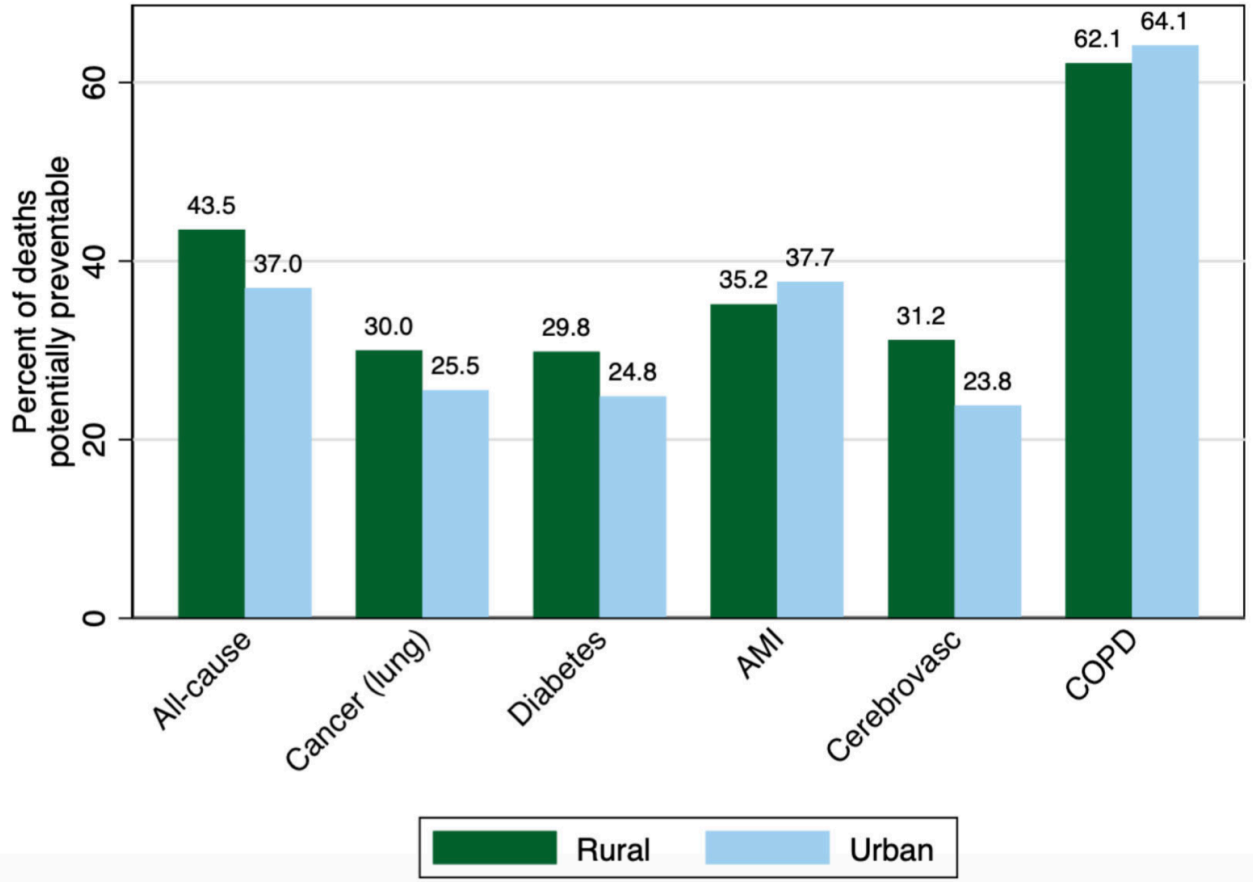
	Total mean (SD)	Rural mean (SD)	Urban mean (SD)	p-value
Smoking (Percentage of adults who are current smokers)	16.3 (3.51)	19.1 (3.46)	15.8 (3.29)	<.001
Excessive Alcohol Use (Percentage of adults reporting binge or heavy drinking)	17.7 (2.79)	16.5 (3.45)	17.9 (2.60)	<.001
Obesity (Percentage of adults that report a BMI of 30 or more)	27.4 (4.93)	31.5 (4.46)	26.7 (4.66)	<.001
N (U.S. Counties)	3,110	1,999	1,147	

Drivers of higher mortality

- Behavior

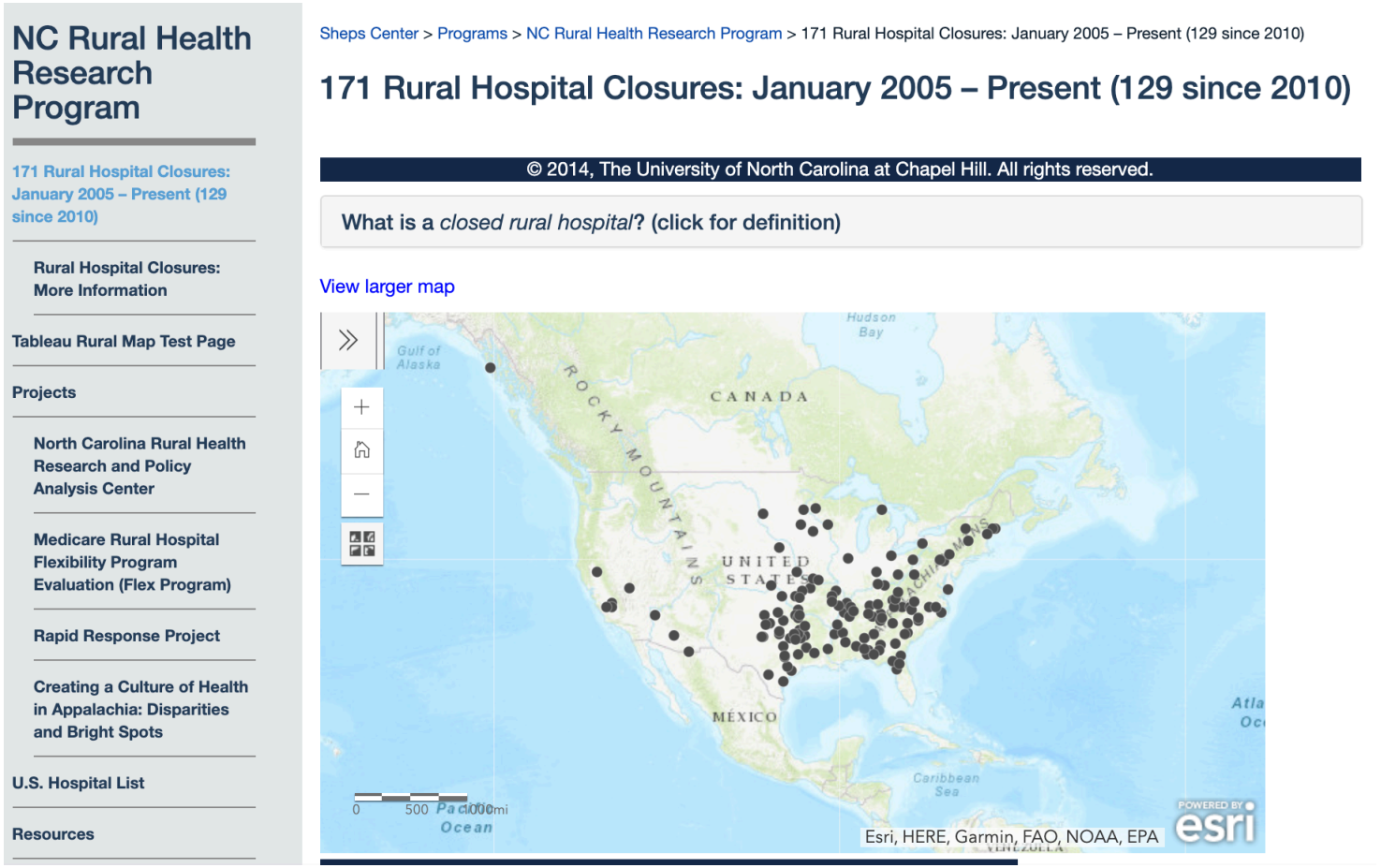
…. and this leads to higher rates of death due to certain conditions.

Figure 1. Percent of Potentially Preventable Deaths Attributable to Specific Conditions by Rural and Urban Areas

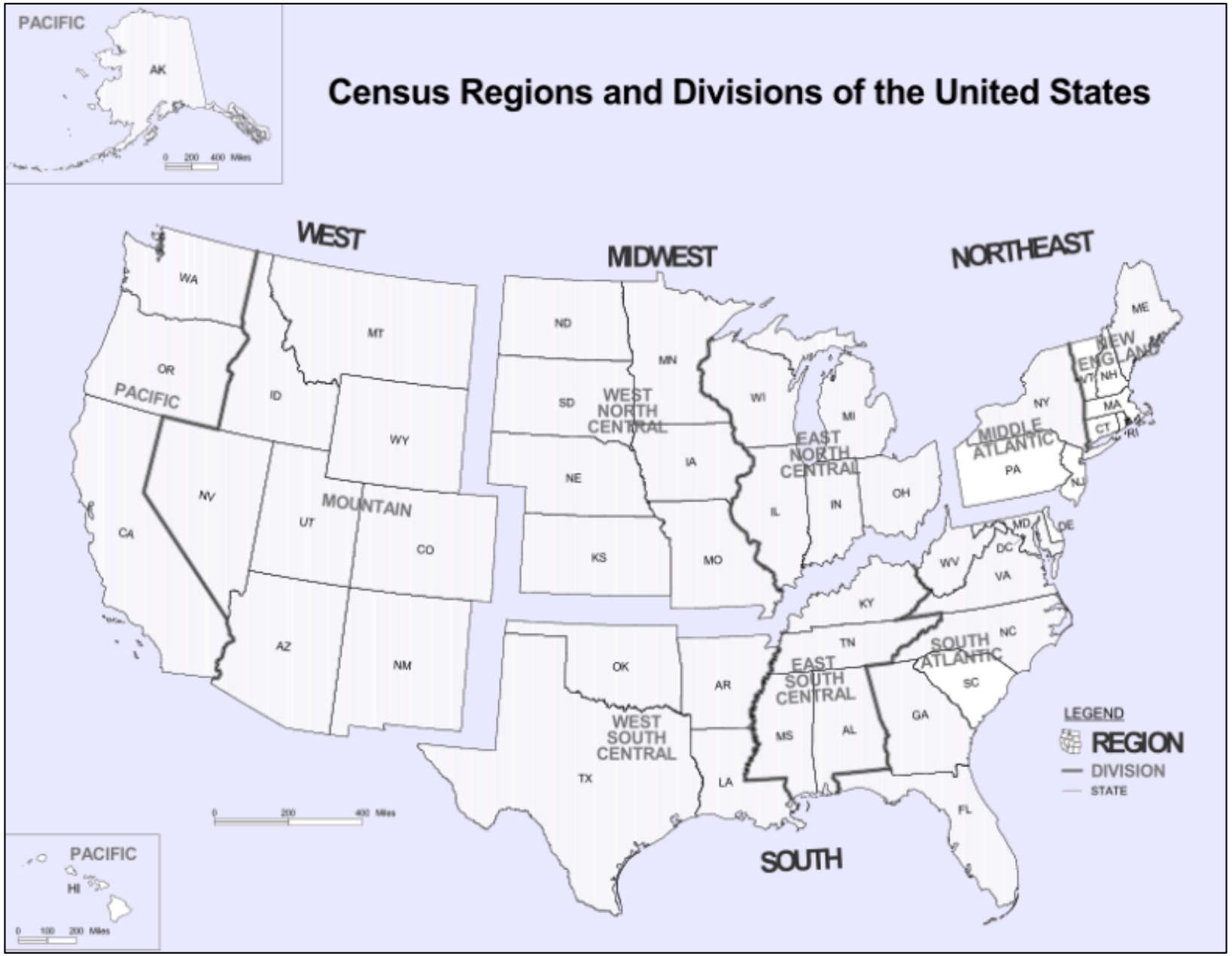


Drivers of higher mortality

- Provider Supply
  - Fewer health care professionals per capita (mental health notable)
  - Hospital closures



Census Divisions



Variation in causes of death

- Previous work (e.g. Singh and Siahpush) has found that certain conditions are (largely) behind the increasing gap:
  - Heart disease, unintentional injury, suicide, cirrhosis, COPD, lung cancer, stroke

Let's look into causes of death and see what trends we find regionally

1. Is the rate in this division higher in rural than in urban areas?
2. Is the rural rate in this division higher than rural rate nationally?

Which causes of death are relatively more common in rural areas *within each division*

- For example, let's compare mortality from diabetes in rural New England to mortality from diabetes in urban New England
- Which causes of death are more over-represented in rural areas?
- (Let's use the 113 ICD-10 groups)

MVA, Injuries, Suicide, Heart Attack dominate

Cause	New Eng	Mid Atl	E N Cntl	W N Ctl	S Atl	E S Ctl	W S Ctl	Mtn	Pac
Motor Vehicle Accidents	2	2	1	1	1	2	1	1	4
Other nontransport accidents	8	4	4	3	3	3	3	2	2
Suicide by firearm	1	1	3	4	5	9	5	5	1
AMI	14	3	2	2	2	1	2	6	18

- "Over-represented" causes of death in rural areas are somewhat national: MVA across the country, suicide by gun relatively more common in Northeast (broadly defined), other accidents elsewhere, AMI in most of country
  - Key elements: mental health and trauma (time-sensitive)
- Other notables: pneumonia in southern belt (not shown)

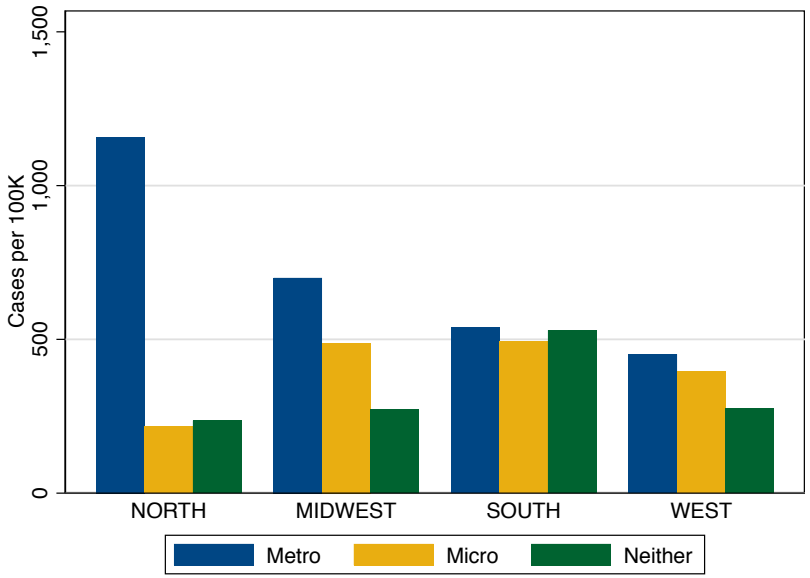
Policy Implications

- Nationwide one-size-fits-all policy may not be the best option
- Consider policies to improve rural health in regions with higher disparities
- Understand what is behind the variation in the rates
  - (e.g. Better trauma systems? Or safer highways?)

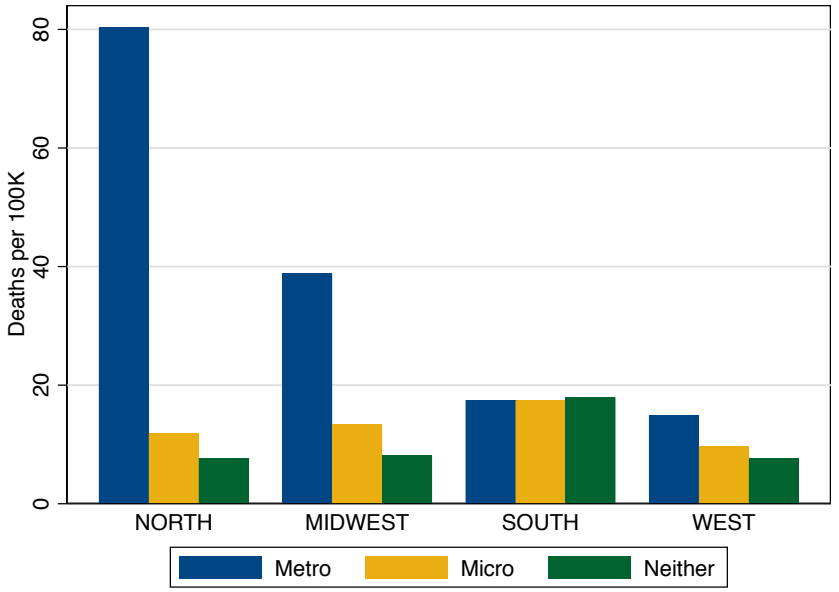
COVID-19 Impact on Rural America

- Rural/urban disparities in COVID-19 cases and mortality
  - NORTH: Much higher in urban
  - MIDWEST/WEST: Higher in urban
  - SOUTH: Comparable rates

Cases per 100K



Deaths per 100K

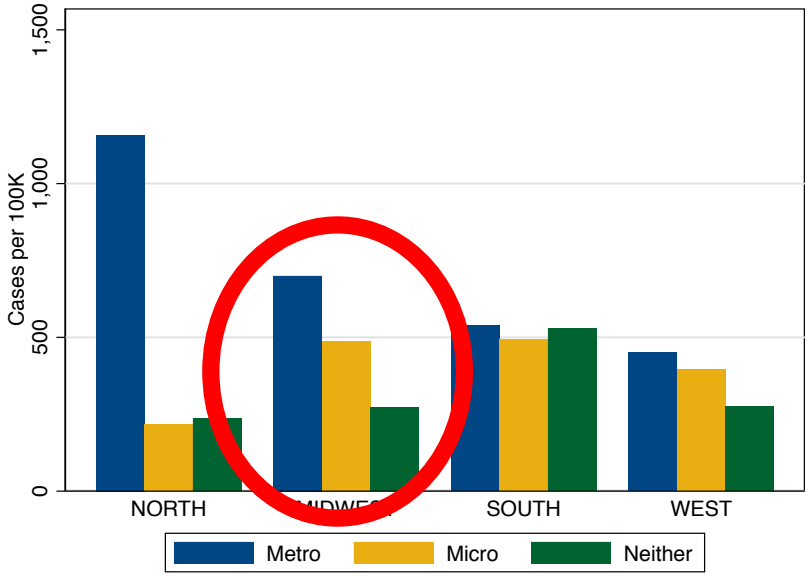


Cases/Death data from NY Times Github pulled 6/22/2020. Scales differ.

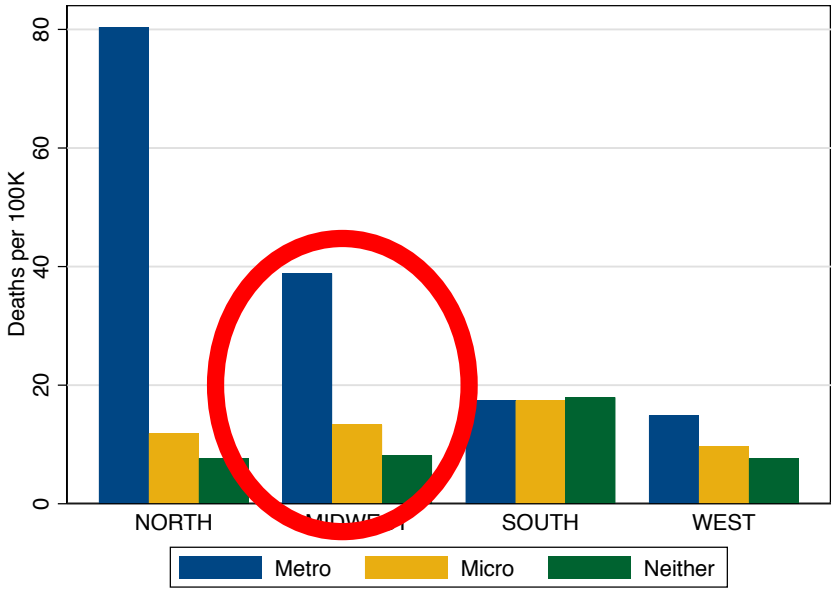
COVID-19 Impact on Rural America

- Rural/urban disparities in COVID-19 cases and mortality
  - NORTH: Much higher in urban
  - MIDWEST/WEST: Higher in urban
  - SOUTH: Comparable rates
- Sizable difference between cases & deaths in Midwest

Cases per 100K



Deaths per 100K



Cases/Death data from NY Times Github pulled 6/22/2020. Scales differ.

North Carolina Rural Health Research Program

Location:

Cecil G. Sheps Center for Health Services Research
University of North Carolina at Chapel Hill
Website: http://www.shepscenter.unc.edu/programs-projects/rural-health/
or http://go.unc.edu/ncrhrc
Email: ncrural@unc.edu
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Sharita Thomas, MPP
Randy Randolph, MRP
Denise Kirk, MS
Kristie Thompson, MA
Julie Perry
Hannah Friedman

NC RHRP
NC Rural Health Research Program

Resources

North Carolina Rural Health Research Program
http://www.shepscenter.unc.edu/programs-projects/rural-health/

Rural Health Research Gateway
www.ruralhealthresearch.org

Rural Health Information Hub (RHIhub)
https://www.ruralhealthinfo.org/

National Rural Health Association
www.ruralhealthweb.org

National Organization of State Offices of Rural Health
www.nosorh.org

Rural Health Research Gateway

The Rural Health Research Gateway provides access to all publications and projects from seven different research centers. Visit our website for more information.
www.ruralhealthresearch.org

Sign up for our email or RSS alerts!
www.ruralhealthresearch.org/alerts

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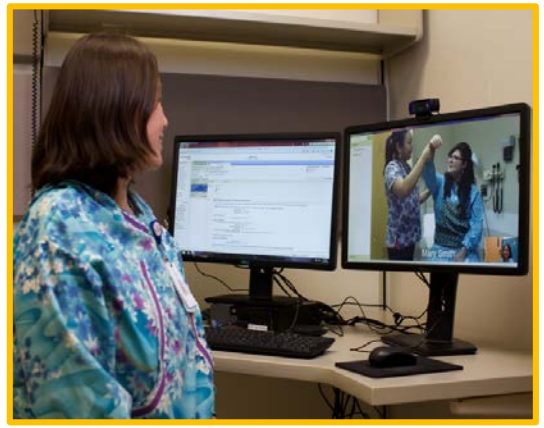
RHRC
Rural Health Research & Policy Centers
Funded by the Federal Office of Rural Health Policy
www.ruralhealthresearch.org



Nothing About Us Without Us

A Tribal Health Perspective

Valerie Nurr’araaluk Davidson
June 24, 2020

ALASKA PACIFIC UNIVERSITY

Alaska Pacific University

- Honoring Alaska's Indigenous heritage, exemplifying excellence and preparing paths
- University of the Arctic member
- Strategic affiliation with Alaska Native Tribal Health Consortium
  - Tribally driven and culturally responsive research
  - Support Indigenous researchers and scholars
  - Rural workforce issues

ALASKA PACIFIC UNIVERSITY

Supporting Partnerships

- Tribes and Tribal Organizations
- Federal Partners
  - Indian Health Service
  - CMS
  - CDC, esp. Arctic Investigations Unit
  - HRSA
  - USDA
  - EPA
- State of Alaska
  - Alaska Dept. of Health & Social Services
  - AK Dept. of Environmental Conservation

ALASKA PACIFIC UNIVERSITY

Indian Health Service

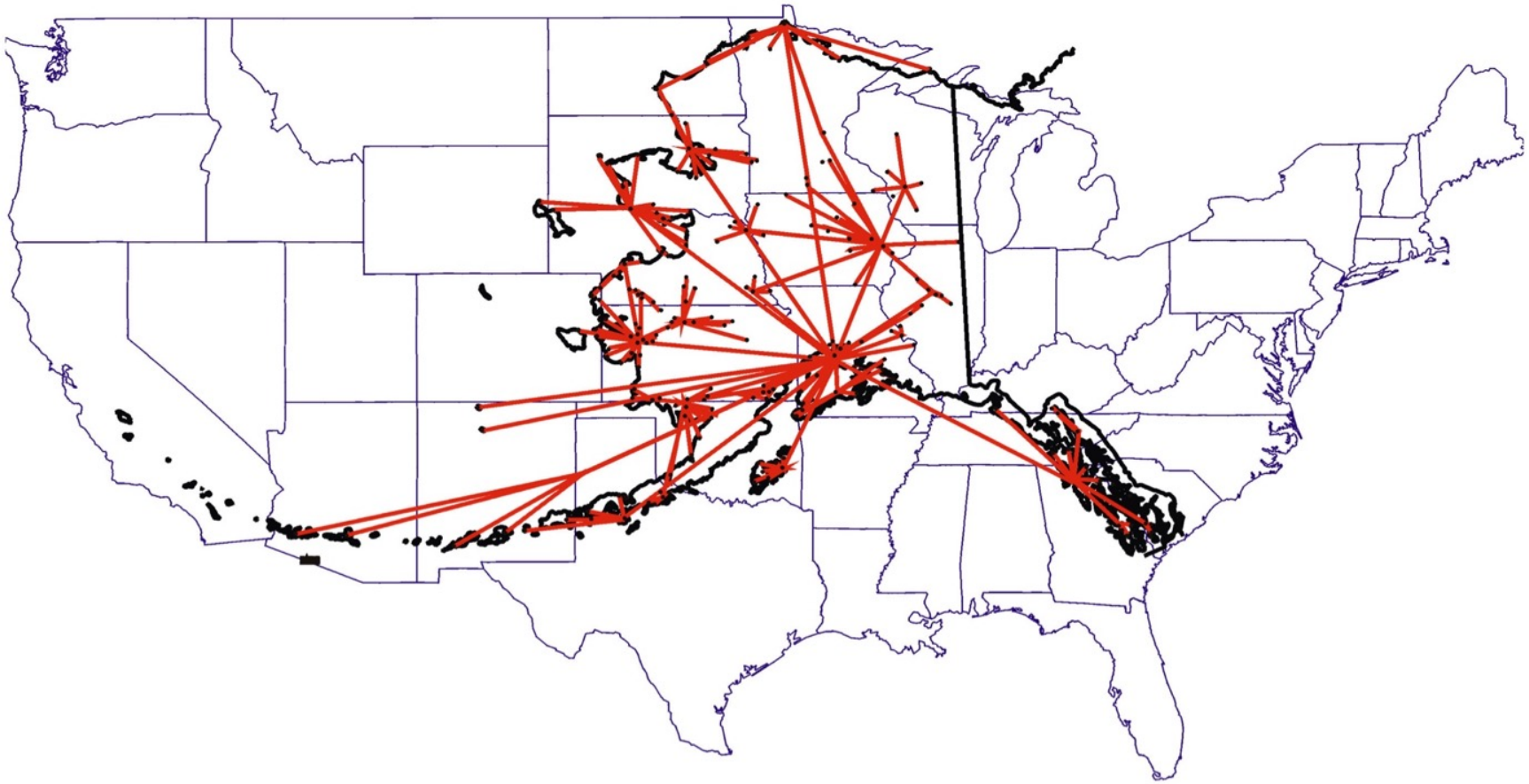
- 2.6 million American Indian/Alaska Native people
- IHS Direct Service
- Urban Indian Health Clinics
- Compacted Services

AK Tribal Health System

- Voluntary affiliation of Tribes and Tribal organizations providing health services to Alaska Native and American Indian people
- Approximately 12,000 employees statewide
- Each Tribal health organization is autonomous and serves a specific geographical area

ALASKA PACIFIC UNIVERSITY

ATHS Referral Pattern



ALASKA PACIFIC UNIVERSITY

Public Health Challenges

- Health Status of AI/AN People (National)
  - Life expectancy is 5.5 years less than U.S. all races population (73.0 years to 78.5 years)
  - Leading causes of death: heart disease, malignant neoplasm, unintentional injuries, diabetes
- Health Status of AI/AN People (Alaska)
  - Life expectancy is 70.7 years
  - Leading causes of death: cancer, heart disease, unintentional injury
- Lack of adequate sanitation facilities

Community Based Services

- Community Health Aide Program
- Behavioral Health Aide Program
- Dental Health Aide Therapist Program
- Special Diabetes Program for Indians
- Economic Status Improvement

ALASKA PACIFIC UNIVERSITY

COVID-19 Impacts

- Tribal Communities have been disproportionately impacted
- Systemic & Institutional racism is real
  - Impacts our health, access to care, funding, etc.
- Alaska Response
  - ANTHC deployed Rapid Testing throughout Alaska
  - Regional Tribal Health Organizations taking lead

Questions?

Valerie Nurr'araaluk Davidson

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Rural Data Challenges in Healthy People 2020

Sirin Yaemsiri, PhD, MSPH
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Senior Statistician
U.S. Government Accountability Office

The National Academies of Sciences, Engineering, and Medicine
Population Health in Rural America in 2020
June 24–25, 2020

Acknowledgments

- National Center for Health Statistics
  - Johanna M. Alfier
  - Lauren M. Rossen
  - Brigham Bastian
  - Melonie Heron
- Southwest Rural Health Research Center, School of Public Health, Texas A&M University
  - Alva O. Ferdinand
  - Jane Bolin
  - Timothy Callaghan
- Office of Health Equity, Veterans Health Administration
  - Ernest Moy

Healthy People 2020

- A national agenda that communicates a vision for improving health and achieving health equity
- A set of specific, measurable objectives with targets to be achieved over a ten-year period. Objectives are organized within 42 distinct topic areas.
- Overarching goal:
  Achieve health equity,
  eliminate disparities
- Please see **HealthyPeople.gov** for data on the objectives and additional information

Healthy People 2020—Objectives

AHS-1.1 Increase the proportion of persons with medical insurance LHI

Baseline:	83.2 percent of persons had medical insurance in 2008
Target:	100 percent
Target-Setting Method:	Total coverage
Data Sources:	National Health Interview Survey (NHIS), CDC/NCHS
Data:	DATA 2020 HP2020 data for this objective Spotlight on Disparities: • Disparities by geographic location • Disparities by sexual orientation • Disparities by marital status • Disparities by sex • Disparities by race and ethnicity • Disparities by age group • Disparities by family type Data Details Details about the methodology and measurement of this HP2020 objective

Healthy People 2020—Data

Access to Health Services

AHS-1.1 Increase the proportion of persons with medical insurance LHI

Persons with medical insurance (percent, under 65 years)

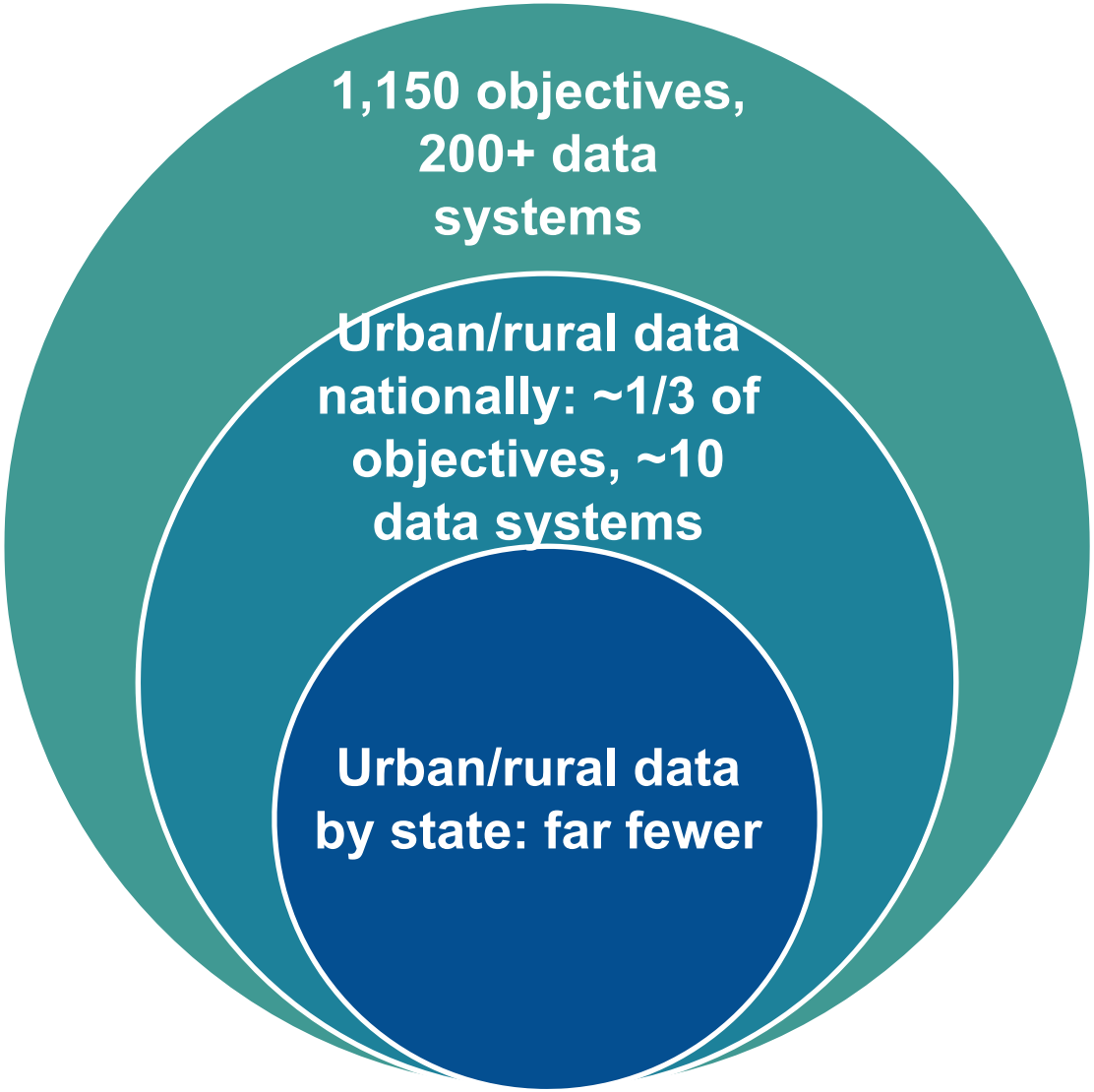
2020 Baseline (year): 83.2 (2008) **2020 Target:** 100 **Desired Direction:** ↑ Increase desired

Choose Years ▼

POPULATIONS	2013	2014	2015	2016	2017	2018
TOTAL View Chart	83.3	86.7	89.4	89.7	89.3	89.0
GEOGRAPHIC LOCATION View Chart View Disparities						
Metropolitan	83.8	87.0	89.7	90.1	89.8	89.4
Non-metropolitan	80.7	84.8	87.2	86.7	86.2	86.0

Typically the Office of Management and Budget's (OMB) urban/rural definition

Healthy People 2020—Rural Data



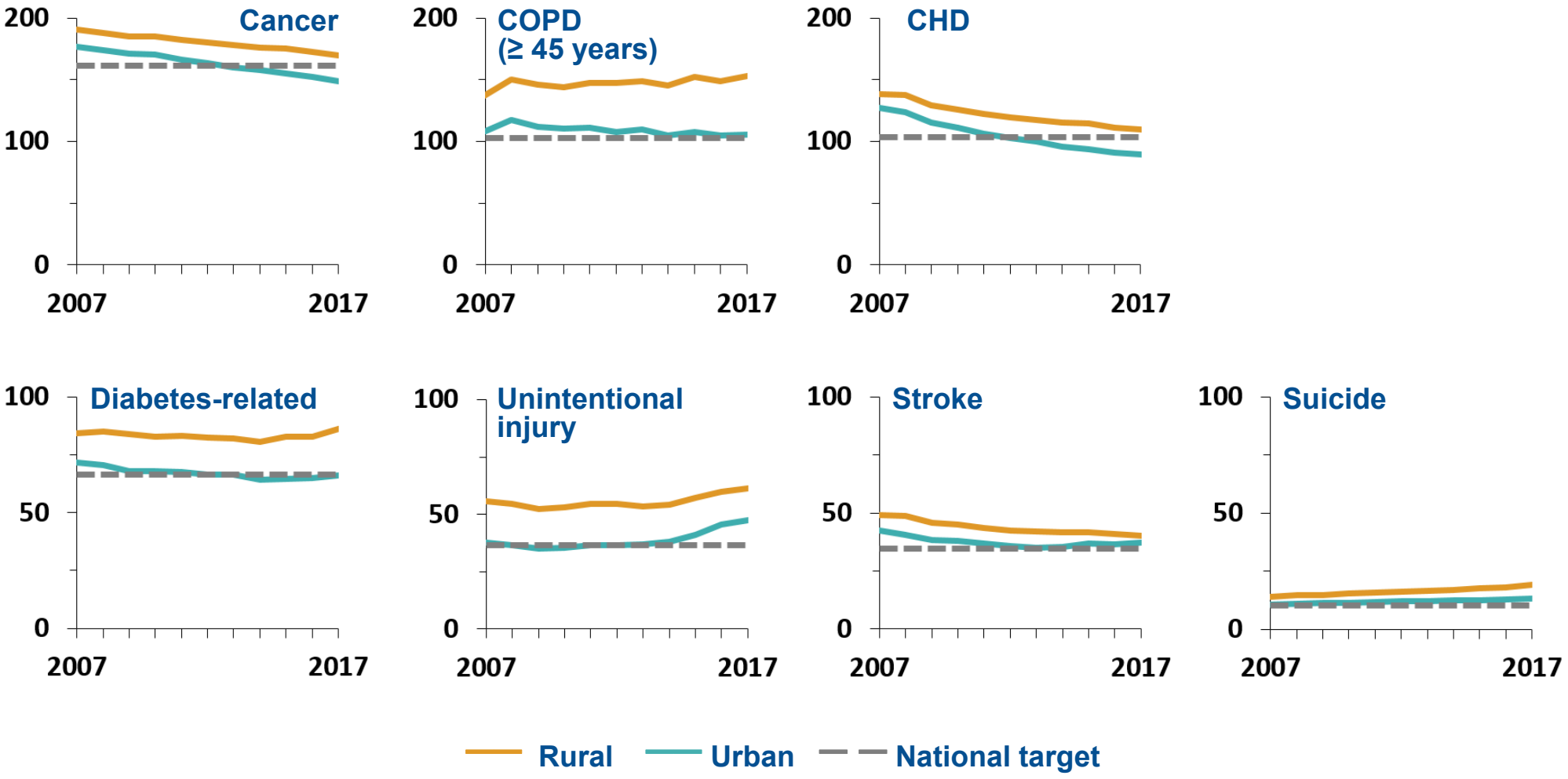
Example—

- Data: National Vital Statistics System—Mortality
- Objectives: Age-adjusted rates for seven causes of death tracked by Healthy People 2020
- Rural/Urban: Office of Management and Budget's 2013 county-based classification scheme
- Measure: Progress toward target attainment[1]

Major causes of death analyzed
Cancer
Chronic Obstructive Pulmonary Disease (≥ 45 years)
Coronary Heart Disease
Diabetes-related
Unintentional injury
Stroke
Suicide

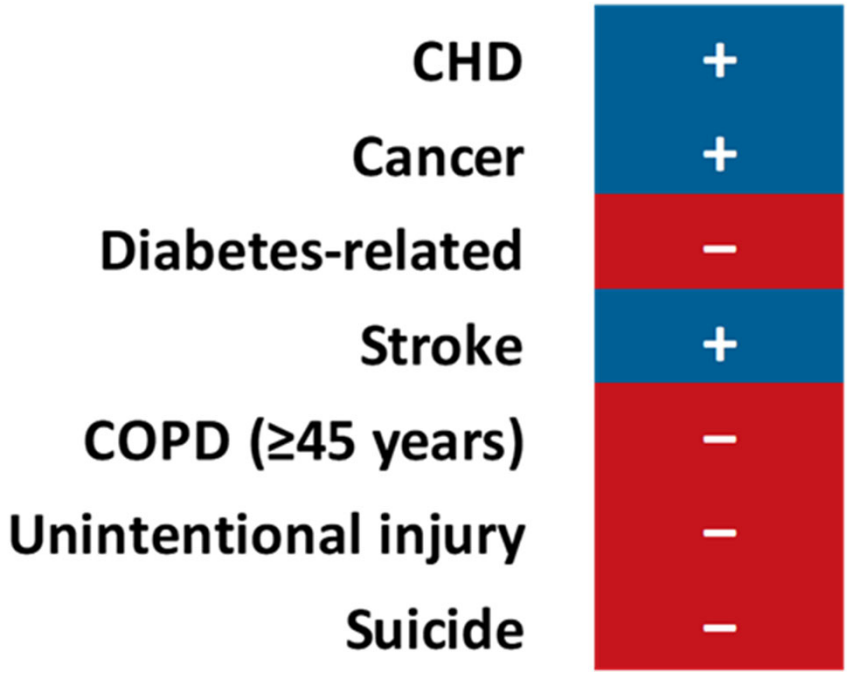
1. Talih M, Huang DT. Measuring progress toward target attainment and the elimination of health disparities in Healthy People 2020. Healthy People Statistical Notes, no 27. Hyattsville, MD: National Center for Health Statistics. 2016.

Example—Age-adjusted death rates (per 100,000 population) for rural and urban areas, U.S., 2007–2017



Source: Yaemsiri S, Alfier JM, Moy E, et al. Healthy People 2020: Rural Areas Lag In Achieving Targets For Major Causes Of Death. Health Aff (Millwood). 2019;38(12):2027-2031. doi:10.1377/hlthaff.2019.00915

Example—Progress toward national targets in rural areas, as of 2017



✓ Target met or exceeded

\+ Improving

• Little or no detectable change

– Getting worse

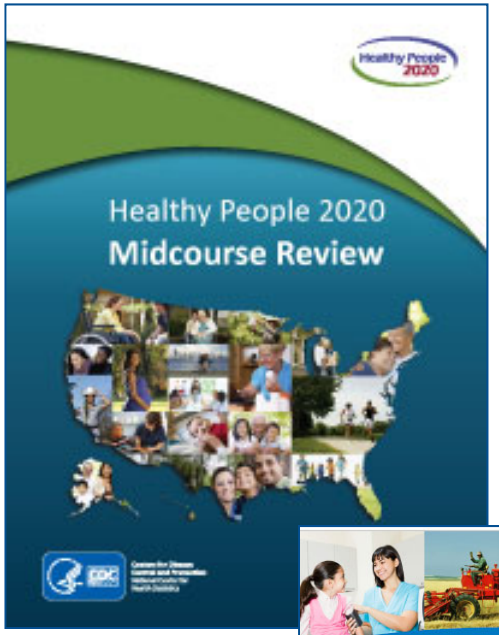
Source: Yaemsiri S, Alfier JM, Moy E, et al. Healthy People 2020: Rural Areas Lag In Achieving Targets For Major Causes Of Death. Health Aff (Millwood). 2019;38(12):2027-2031. doi:10.1377/hlthaff.2019.00915

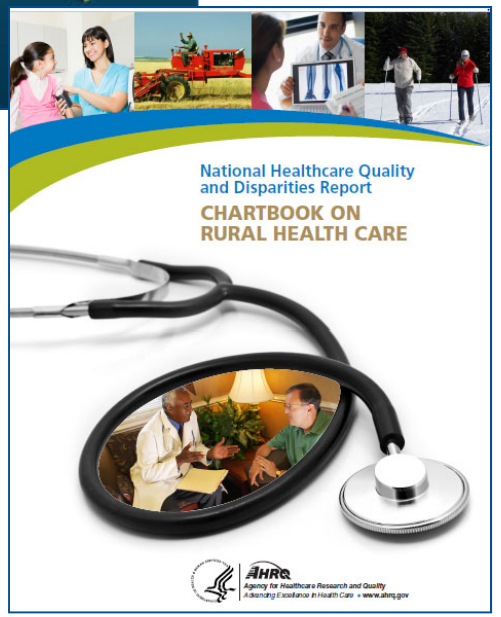
Rural Data Challenges

- Not all Healthy People data systems support estimates for rural areas at the national level
- Fewer support estimates for rural areas at the state level.
- Measures need at least two reliable and comparable estimates in order to measure progress.
- Targets are set based on the national rate, often meaning that rural areas have to make more progress to meet the national target.
- The data tool currently does not support estimates for rural areas by region.
- The data tool currently does not support aggregating data years to improve the reliability of data in rural areas.
- No way to easily filter and find objectives with rural estimates at the national or state levels.

Other resources

- Analyze other cuts from data systems used to support Healthy People 2020, for example, by region
- Healthy People 2020 Midcourse Review: check out the ”disparities tables” at the end of most chapters.
- Rural Healthy People 2020 (next talk by Dr. Alva Ferdinand)
- AHRQ Chartbook on Rural Health Care—updated Oct 2017





Conclusions

- Data users could flexibly aggregate data to produce reliable estimates for rural areas.
  - Regional estimates for rural residents where state estimates are not possible
  - Aggregate data years
- Data systems could:
  - Expand sample sizes to allow state estimates of Healthy People measures for rural residents
  - Oversample rural residents to allow state estimates of Healthy People measures for rural residents
- Use Healthy People as a framework and benchmark

Looking Ahead: Rural Healthy People Processes and Rural Health Indicators

Alva O. Ferdinand, DrPH JD

Roundtable on Population Health Improvement

National Academies of Science, Engineering, and Medicine

June 24, 2020

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Southwest Rural Health Research Center

How did Rural Healthy People come about?

- First Principal Investigator: Dr. Larry Gamm (Professor Emeritus – Texas A&M University School of Public Health)

- Collaborators:
  - Southwest Rural Health Research Center led by Dr. Catherine Hawes
  - Dr. Jane Bolin
  - Dr. Gail Bellamy
  - Linnae Hutchinson
  - Dr. Alicia Dorsey
  - Other Texas A&M faculty and graduate students


Dr. Larry Gamm


Dr. Jane Bolin


Linnae Hutchinson


Dr. Catherine Hawes


Dr. Gail Bellamy

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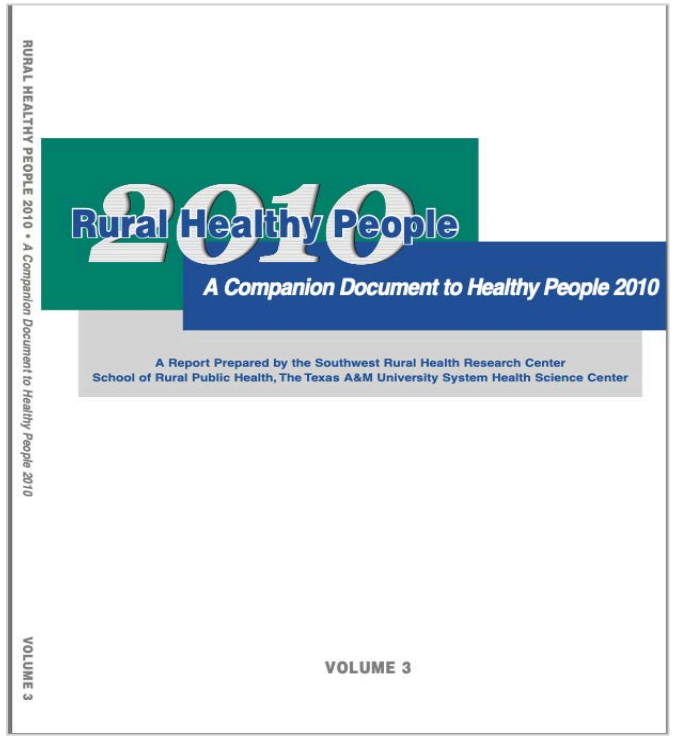
A Rural Companion for Healthy People

- Commissioned by the Office of Rural Health Policy (ORHP) in 2002
- Healthy People 2010's health objectives for the nation had just been released
- Rural Healthy People 2020: A Companion to Healthy People
  - In which the focus of the companion documents was on identifying rural health priorities AND presenting current rural health research and models for addressing rural health priorities

Rural Healthy People 2010: Companion Documents to Healthy People 2010



Rural Health Research Gateway: https://www.ruralhealthresearch.org/projects/286

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Rural Healthy People 2010: A Companion Document to Healthy People 2010

CONTENTS (VOLUME 1)

CONTENTS (VOLUME 2)

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Rural Healthy People 2010: Top Rural Health Priorities

Top 10 Priorities	
Rank	Objective
1	Access to Quality Health Care
2	Heart Disease and Stroke
2	Diabetes
4	Mental Health and Mental Disorders
5	Oral Health
6	Tobacco Use
6	Substance Abuse
6	Education and Community-Based Programs
6	Maternal, Infant, and Child Health
10	Nutrition and Overweight Status
10	Cancer
10	Public Health Infrastructure

Priorities 11-15	
Rank	Objective
13	Immunization and Infectious Disease
13	Injury and Violence Prevention
15	Family Planning
15	Environmental Health

Note: Priority ranking based on average percentages of four groups of state and local rural health leaders choosing objectives as a priority. There were virtual ties among some priorities.

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TEN YEARS LATER…

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Health Research Center

Rural Healthy People 2020 Aims & Objectives

- Convene a Rural Healthy People 2020 Advisory Board to include representatives from funding partners, rural health providers, state rural health agencies, and national rural health agencies
- Conduct a nationally representative survey to identify Healthy People objectives that are most critical to rural America
- Identify and catalogue what has worked or has promise based on the evidence
- Disseminate this information to local, state, and federal policymakers
- Work with federal, state, and local agencies as well as other rural stakeholders to continue discussions on what to measure, how to measure it, and strategies for improving population health in rural America

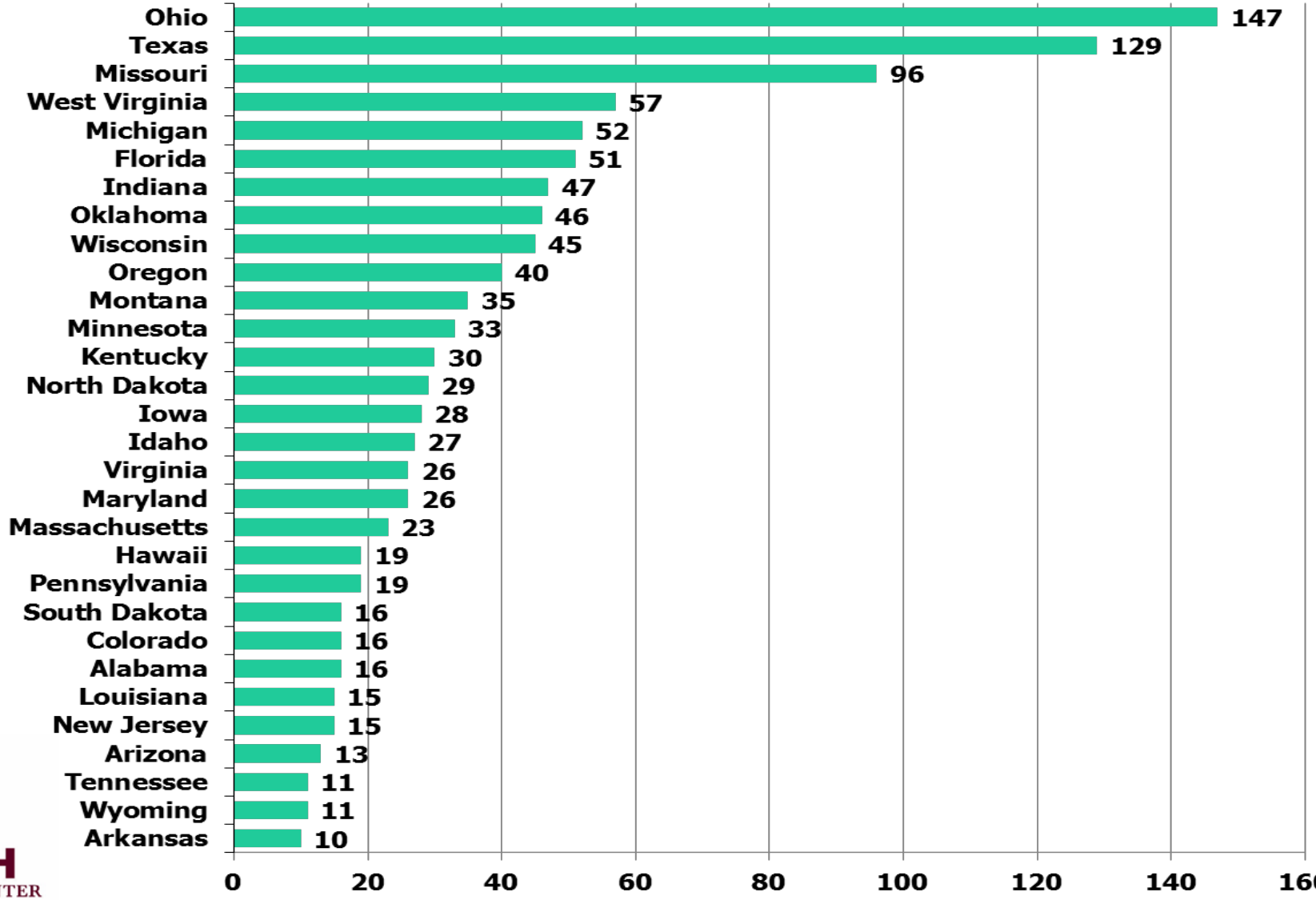
Rural Healthy People 2020 Survey

- Survey originally fielded in December 2010
  - 755 respondents

- Survey fielded again in Spring 2012 preceded by:
  - Webinar on Rural Healthy People sponsored by the National Organization of State Offices of Rural Health (NOSORH)
  - Letters to select State Health Officers

- Resulted in a total of 1,214 respondents

States with >10 Respondents to the Rural Healthy People 2020 Survey



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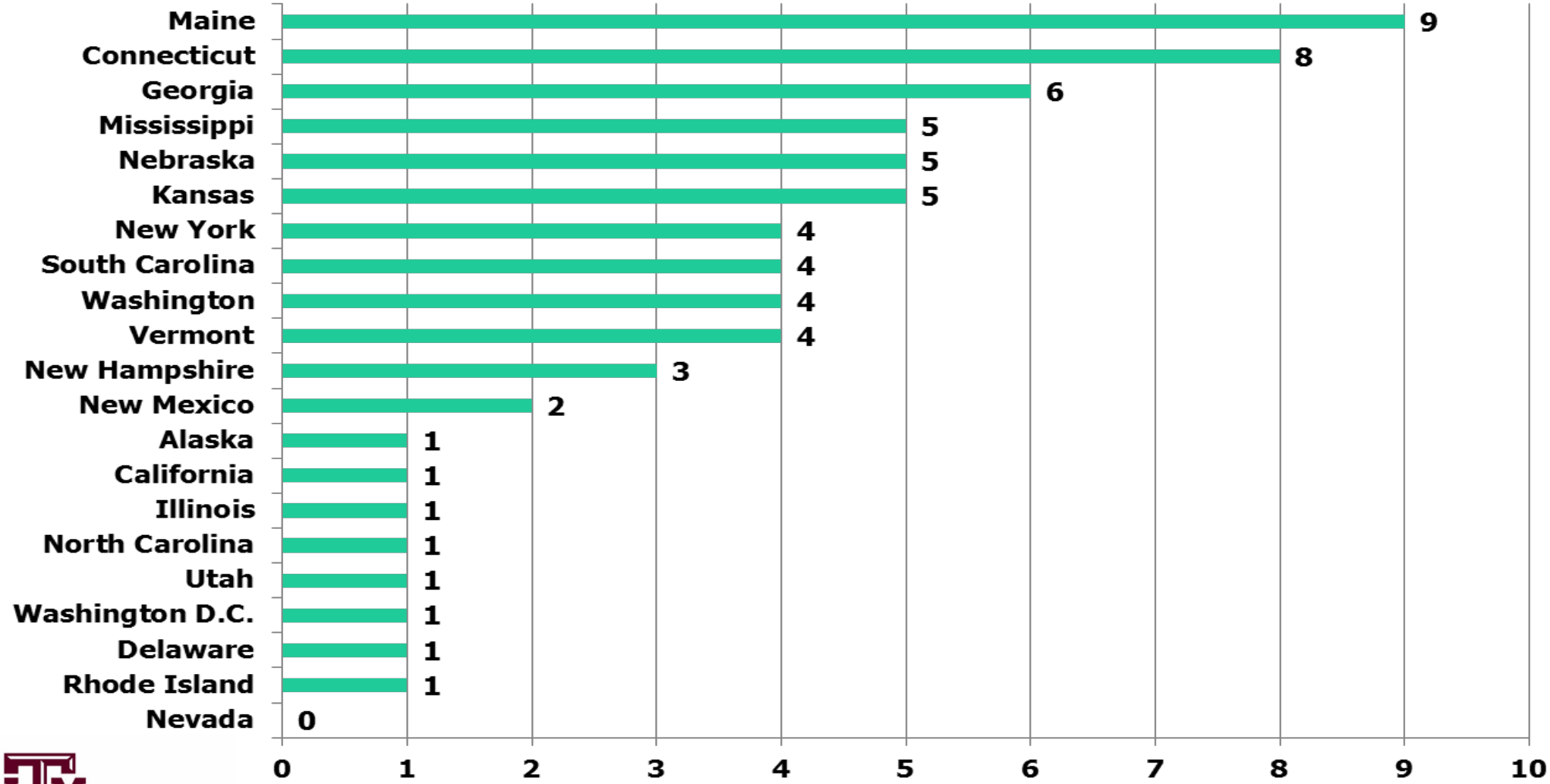
States with <10 Respondents



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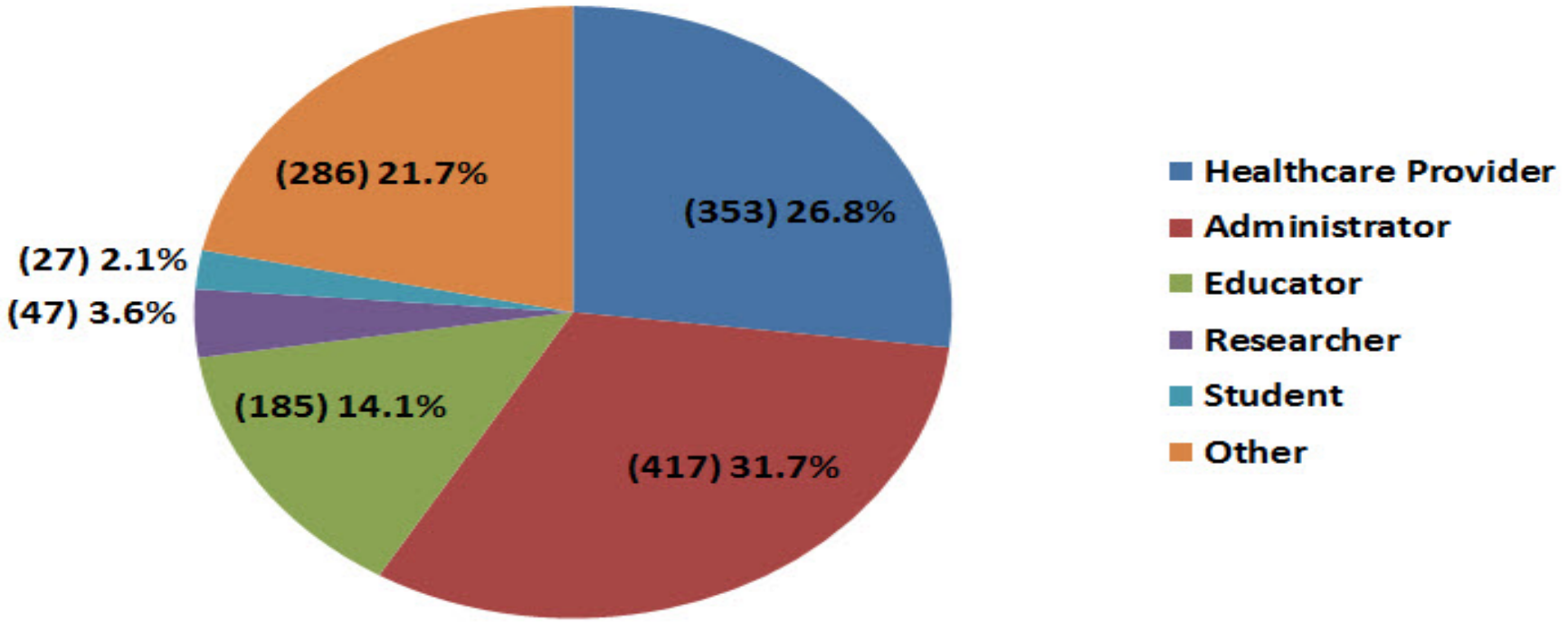
Respondents' Professions



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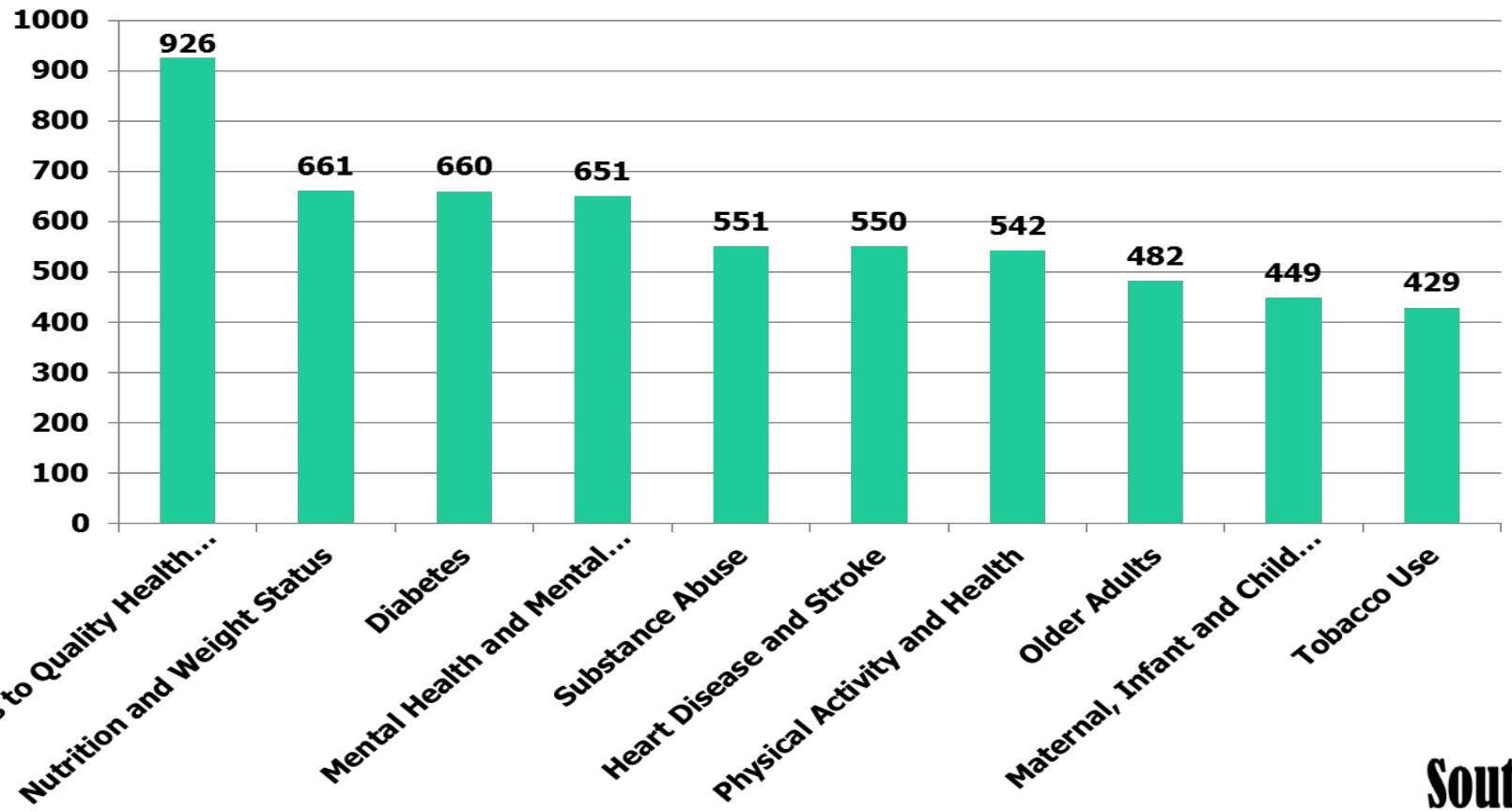
Top 10 Rural Healthy People 2020 Priorities (N=1214)



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Rural Healthy People 2020: Top 20 Rural Health Priorities

Top 20 Priorities 10 Years Later	
Rank	**Objective**
1	Access to Quality Health Care
2	Nutrition & Weight Status
2	Diabetes
4	Mental Health and Mental Disorders
5	Substance Abuse
6	Heart Disease and Stroke
7	Physical Activity and Health
8	Older Adults
9	Tobacco Use
10	Cancer

Priorities 11 - 20	
Rank	**Objective**
11	Education and Community-Based Programs
12	Oral Health
13	Quality of Life and Well-Being
14	Immunizations and Infectious Disease
15	Public Health Infrastructure
16	Family Planning and Sexual Health
17	Injury and Violence Prevention
18	Social Determinants of Health
19	Health Communication & Health IT
20	Environmental Health

Rural Healthy People 2010 vs 2020: How Have Priorities Changed?

Top 20 Priorities 10 Yrs. later	
Change?	Objective
1	Access to Quality Health Care
2	Nutrition & Weight Status
3	Diabetes
4	Mental Health and Mental Disorders
5	Substance Abuse
6	Heart Disease & Stroke
7	Physical Activity & Health
8	Older Adults
9	Tobacco Use
10	Cancer
11	Educ. & Comm. Based Programs
12	Oral Health
13	Quality of Life & Well-Being
14	Immunizations & Infectious Diseases
15	Public Health Infrastructure
16	Family Planning & Sexual Health

= Stayed Same

= Moved Up

= Moved Down

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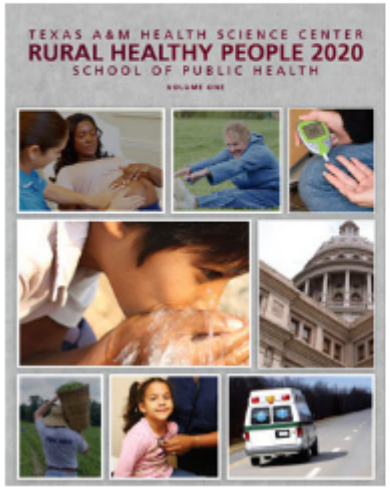
Rural Healthy People 2020

Volume 1

Volume 1 includes chapters on rural health priorities 1-10:

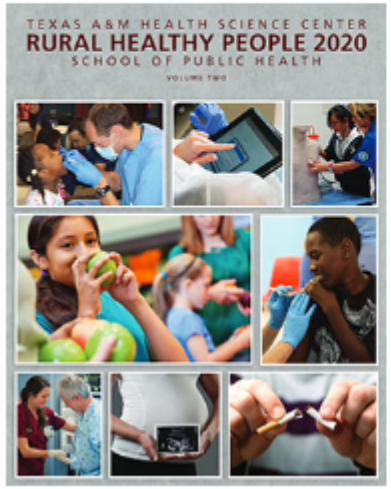


- Access to Quality Health Services
- Nutrition and Weight Status
- Diabetes
- Mental Health
- Substance Abuse
- Heart Disease and Stroke
- Physical Activity
- Older Adults
- Maternal and Child Health
- Tobacco Use

Volume 1 posted online in May, 2015
https://srhrc.tamhsc.edu/rhp2020/rhp2020-v1-download.html

Volume 2

Volume 2 includes chapters on rural health priorities 10-20:



- Cancer
- Health Education
- Oral Health
- Quality of Life
- Immunizations, Infectious Diseases
- Public Health Infrastructure
- Sexual Health and Family Planning
- Injury and Violence Prevention
- Social Determinants of Health
- Information Technology

Volume 2 posted online in November, 2015
https://srhrc.tamhsc.edu/rhp2020/rhp2020-v2-download.html

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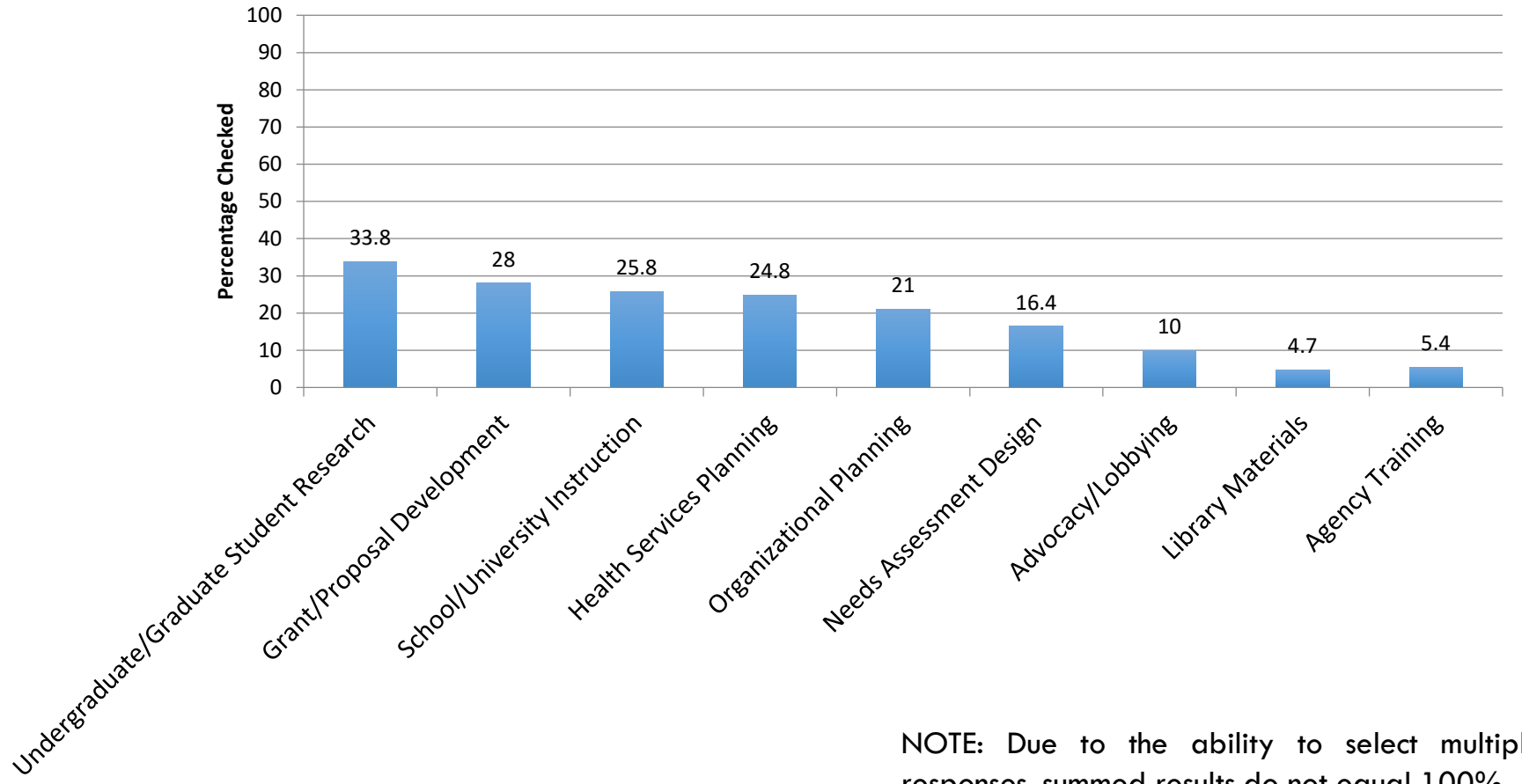
Purposes for Which Rural Healthy People 2020 Volumes have been used/downloaded



NOTE: Due to the ability to select multiple responses, summed results do not equal 100%.

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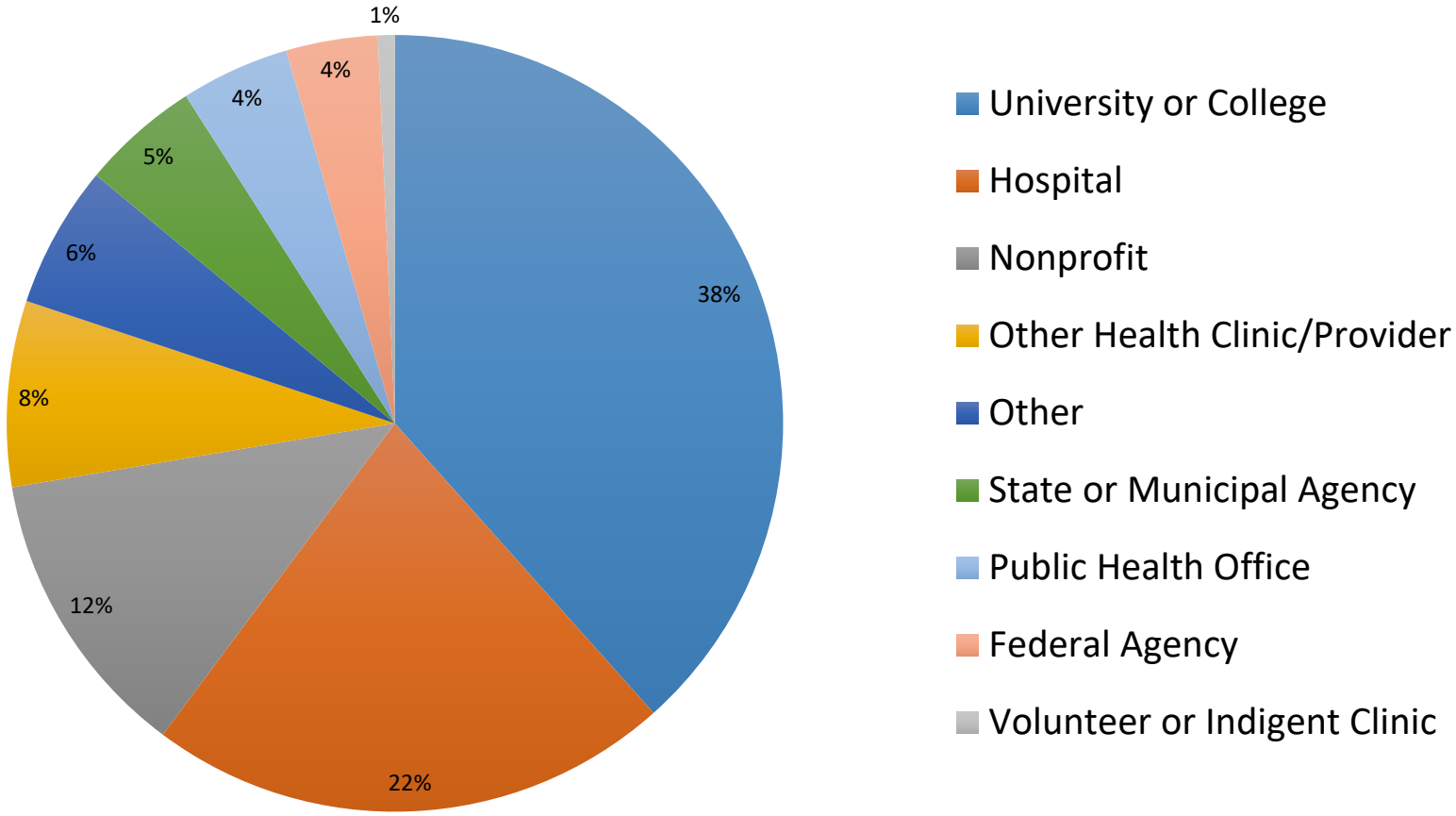
Entities that Have Downloaded Rural Healthy People 2020



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What Did Not Change?

- Access to care has been and continues to be the top priority for rural America
- More targeted prevention and care models are needed in rural areas
- The need for more model programs and practices that have shown to be effective in rural settings

Rural Healthy People 2030

- We need continued input and involvement of rural stakeholders to:
  - Identify objectives without priority areas for targeted attention between now and 2030
  - Identify successful or promising programs developed in rural America that will help us achieve those objectives
  - Identify and advocate for data sources that will help us track progress for rural America
  - Keep rural health disparities at the forefront of policymakers' and advocates' minds

Contact Information

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DO RURAL RACIAL DISPARITIES GET LOST IN THE LARGER DISCUSSION ON RURAL-URBAN DISPARITIES?

Jan M. Eberth, PhD, FACE
Associate Professor of Epidemiology
Director, Rural and Minority Health Research Center
University of South Carolina

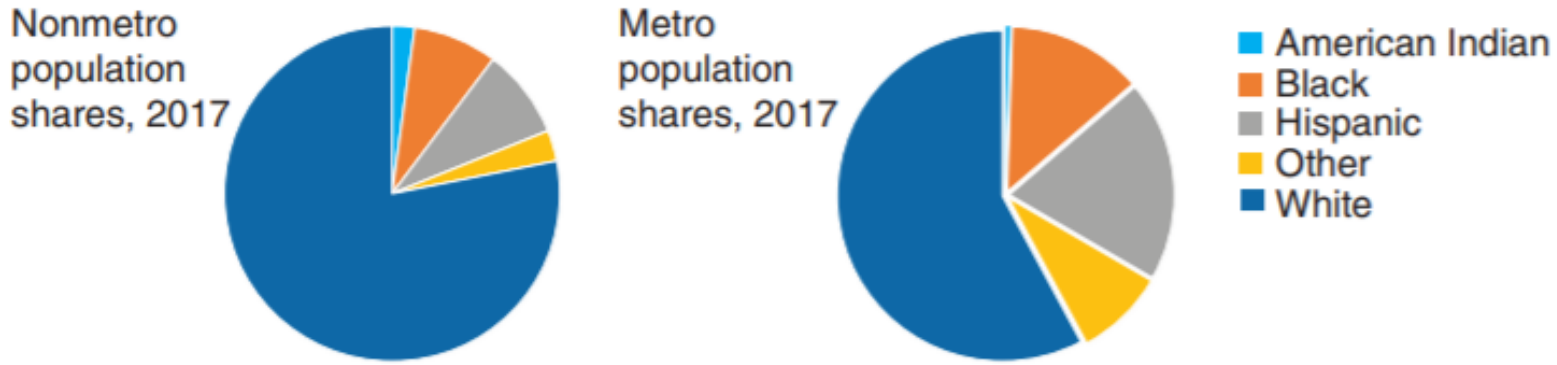
UNIVERSITY OF South Carolina
Arnold School of Public Health

RURAL & MINORITY Health Research Center

RACIAL/ETHNIC DIVERSITY IN RURAL

- "Race" is a socially defined classification *exposing some* to interpersonal and structural disadvantage
- One in five rural persons is a person of color or an Indigenous person.

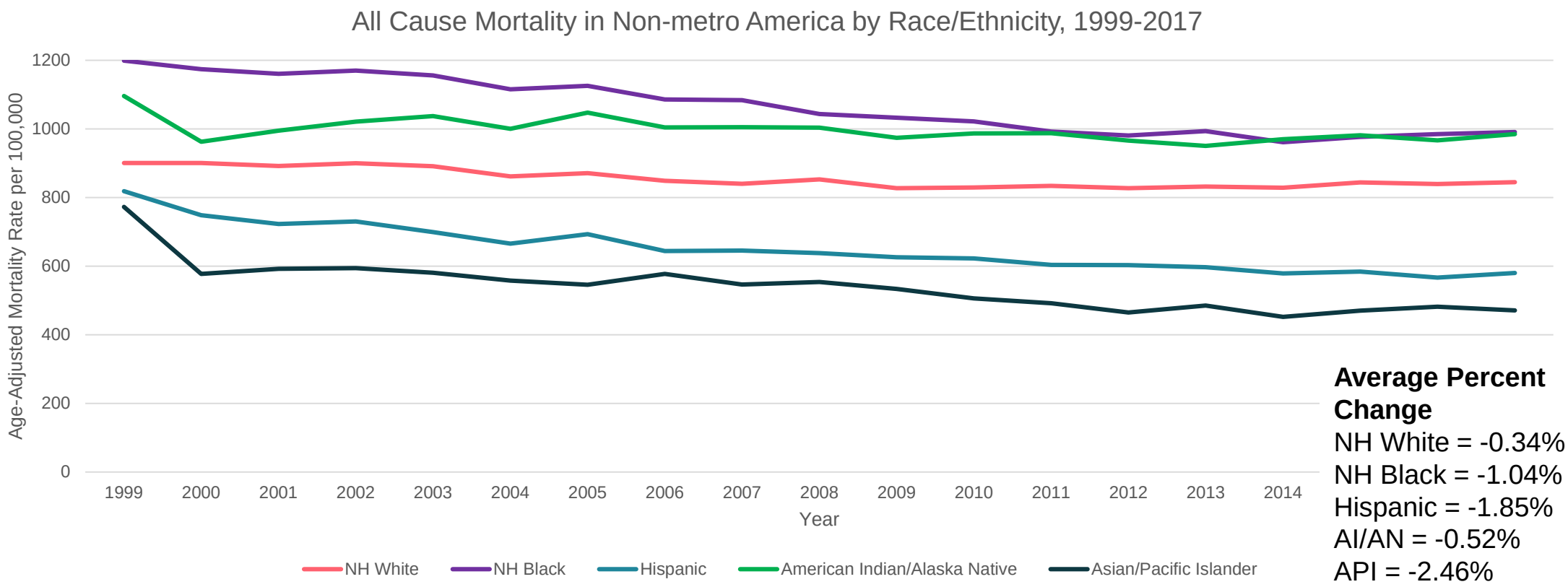
Racial/ethnic minorities make up 22 percent of the nonmetro population compared with 42 percent in metro areas



Note: Statistics for Whites, Blacks, and American Indians include only non-Hispanic residents. Residents included in the Hispanic category may be of any race. Groups with relatively few nonmetro residents (Asians, Pacific Islanders, and those reporting multiple races) are combined into a single category (Other).

Source: Rural America at a Glance, 2018.

ALL CAUSE MORTALITY BY RACE/ETHNICITY



Average Percent Change

NH White = -0.34%
NH Black = -1.04%
Hispanic = -1.85%
AI/AN = -0.52%
API = -2.46%

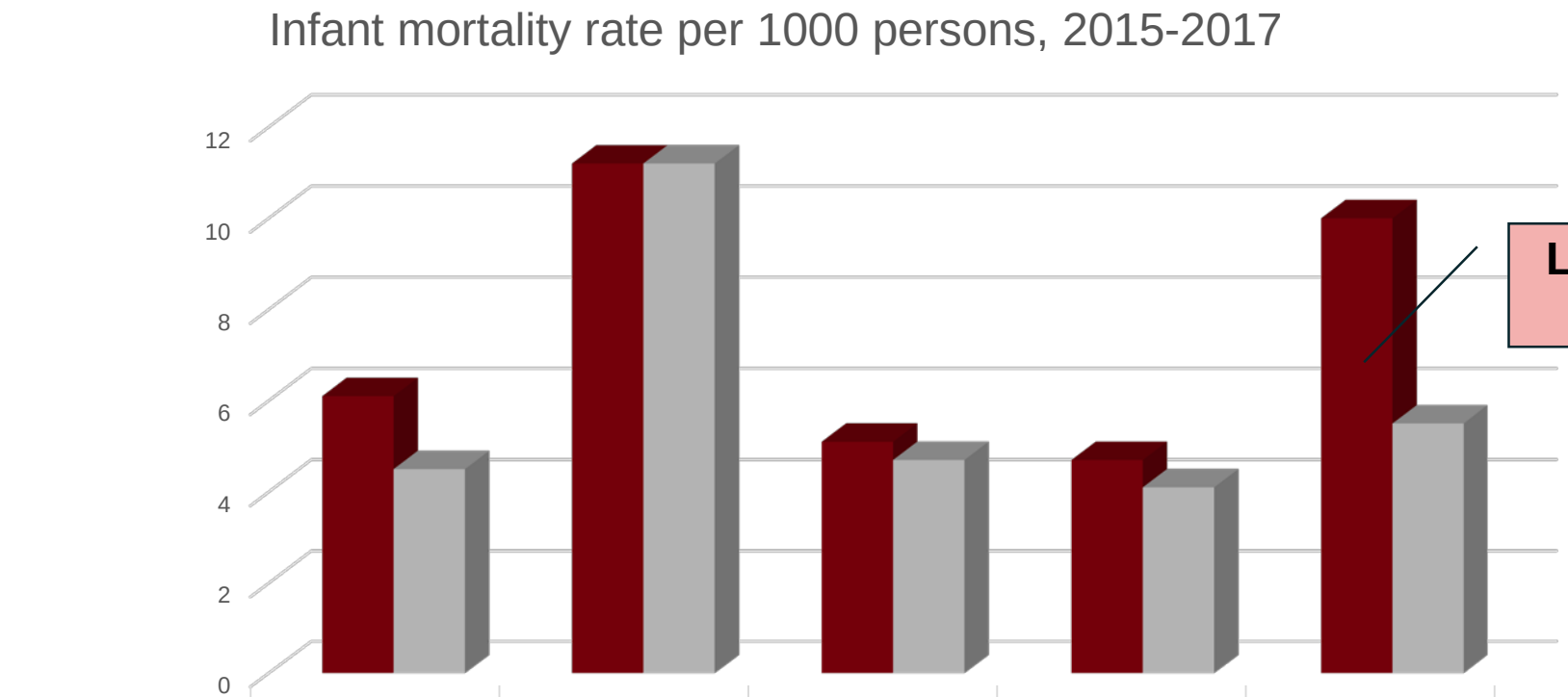
Source: RMHRC Team's Analysis of CDC Wonder Data; Probst et al. AJPH In Press.

CAUSE SPECIFIC MORTALITY BY RACE/ETHNICITY

	Non-metro		Metro		Non-metro Disparity
	Age-adjusted Rate	Low-High, Range	Age-adjusted Rate	Low-High, Range	
Cancer	174.5	107.7_{API} - 203.1_{Black}	154.9	101.0_{API}, 188.3_{Black}	+13% Overall $Low_{Hispanic}$=-1% $High_{AI/AN}$=33%
Cardiovascular disease	194.2	105.6_{API}- 240.0_{Black}	161.9	86.6_{API}, 207.6_{Black}	+20% Overall $Low_{Hispanic}$=+9% $High_{AI/AN}$=+33%
Unintentional injury	57.1	22.7_{API}- $101.9_{AI/AN}$	41.8	15.8_{API}, $63.6_{AI/AN}$	+37% Overall Low_{Black}=+20% $High_{AI/AN}$=+60%

Source: Analysis of CDC Wonder Data (2013-2017); Probst et al. AJPH In Press.

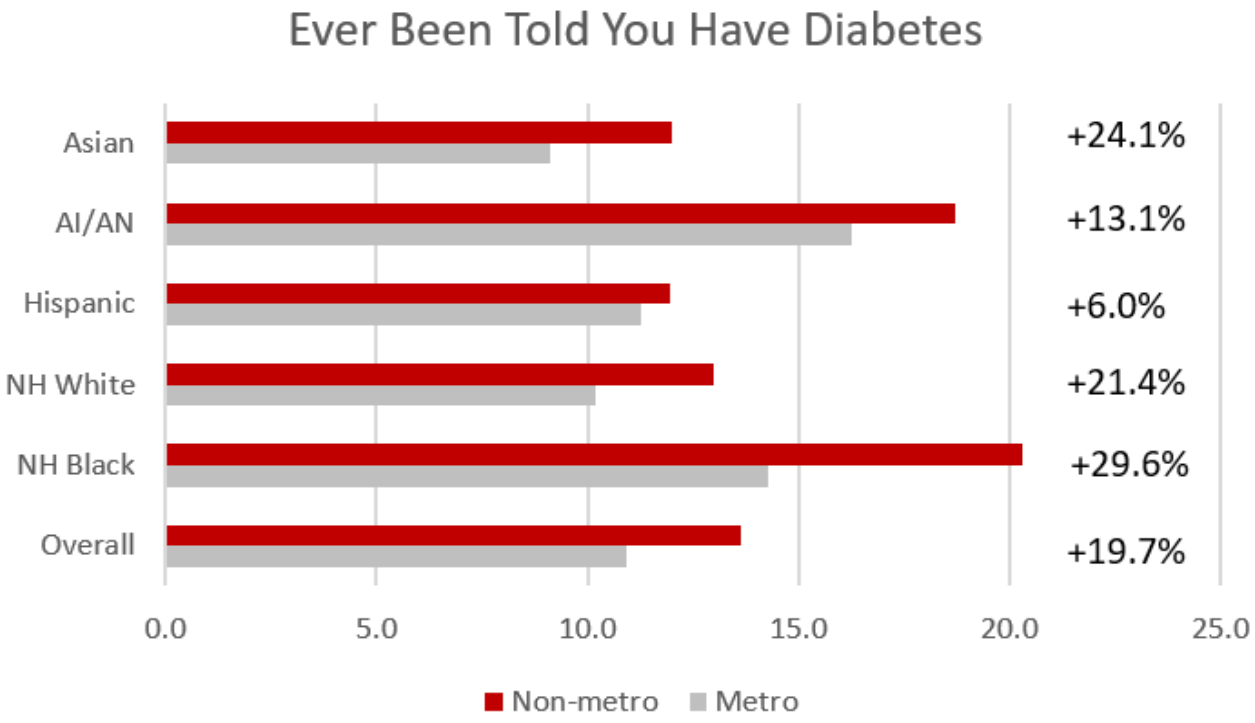
INFANT MORTALITY BY RACE/ETHNICITY



	NH White	Black	Hispanic	API	AI/AN
Non-metro	6.1	11.2	5.1	4.7	10
Metro	4.5	11.2	4.7	4.1	5.5

Source: Probst et al. Health Affairs. 2019;38(12).

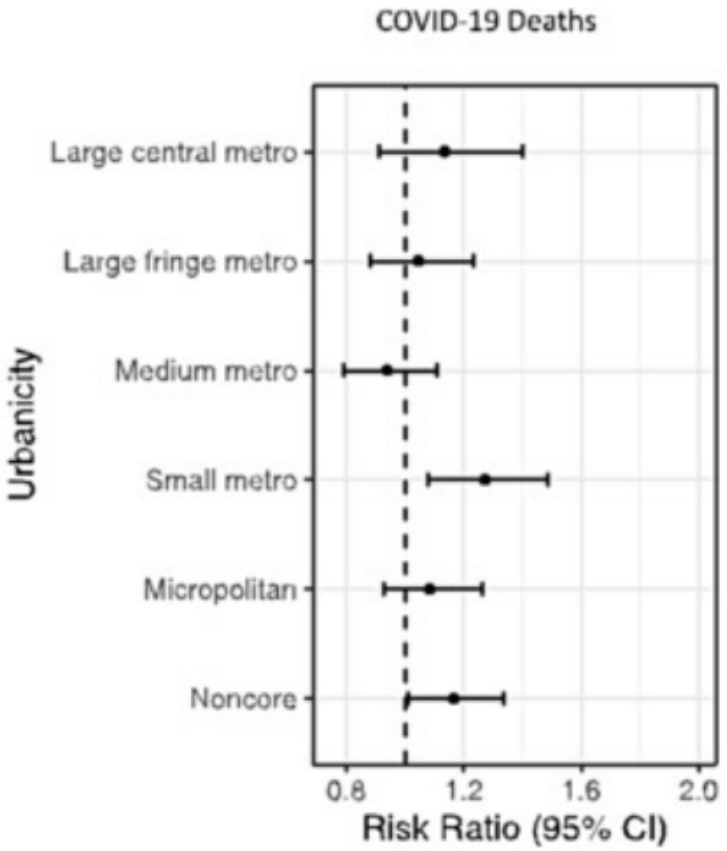
CHRONIC DISEASE BURDEN BY RACE/ETHNICITY



- Overall, non-metro residents have higher diabetes burden than metro residents. Only when stratified can we see:
  - the *difference* is largest in NH Black populations
  - non-metro NH Black residents have the highest rate of diabetes in the U.S., following by non-metro AI/AN residents

Source: RMHRC Team's Analysis of 2018 BRFSS Data

COVID19 & RACE/ETHNICITY



- A higher proportion of black residents in a county was only associated with COVID19 deaths in small metro and noncore areas (see figure, left).
- COVID19 diagnoses was independently associated with % uninsured residents (RR 1.16).

Source: Millet et al. Annals of Epidemiology. Epub May 14, 2020.

PUTTING THE DATA INTO CONTEXT

- For traditionally underserved populations, living in a rural area can “heighten exposure to unequal social conditions that perpetuate disparities...”
- “Root causes” of health inequity in rural areas include:
  - Higher rates of poverty and lower educational attainment
  - Lower access to health care services
  - Failing infrastructure and lower per capita investment
  - Lack of public transportation
  - Segregation and racism

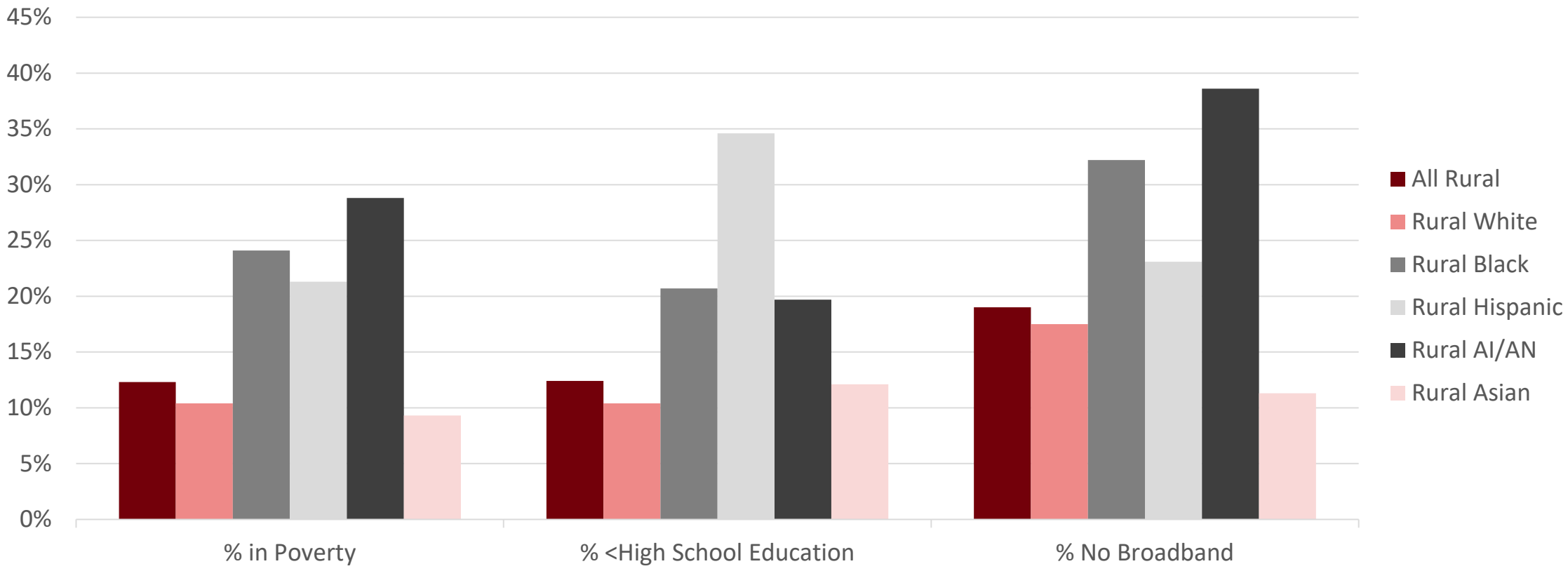
Source: Caldwell et al. AJPH. August 2016;106(8).

SOCIAL DETERMINANTS OF HEALTH (SDOH)

"…social determinants may mediate or modify observed racial/ethnic differences in health outcomes."

Source: Healthy People 2020; Lorch and Enlow, 2016.

SDOH BY RACE/ETHNICITY IN RURAL RESIDENTS



Source: Probst et al, 2019; RMHRC Policy Briefs using county data from 2016 American Community Survey

CONCLUSIONS & IMPLICATIONS

- Compounding effect of rurality and racial/ethnic minority status
  - Rural racial/ethnic minorities experience: higher mortality rates across the lifespan, experience more chronic diseases in adulthood than their rural white peers and are more likely to experience adverse social and economic conditions.
- So… what is needed to tackle racial/ethnic health disparities in rural communities? What interventions should we focus on?

TAKE HOME MESSAGE

- Develop and enforce POLICIES to ensure equitable education, housing, healthcare, transportation, criminal justice, etc…
  - Policies should be right sized for rural places

MORE INFORMATION

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Resources:
Rural Health Research Gateway: ruralhealthresearch.org
RHIhub: ruralhealthinfo.org
PolicyMap: policymap.com

THANKS!

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University of South Carolina

HRSA
Health Resources & Services Administration

Population Health in Rural America in 2020

Rural Health Care Landscape

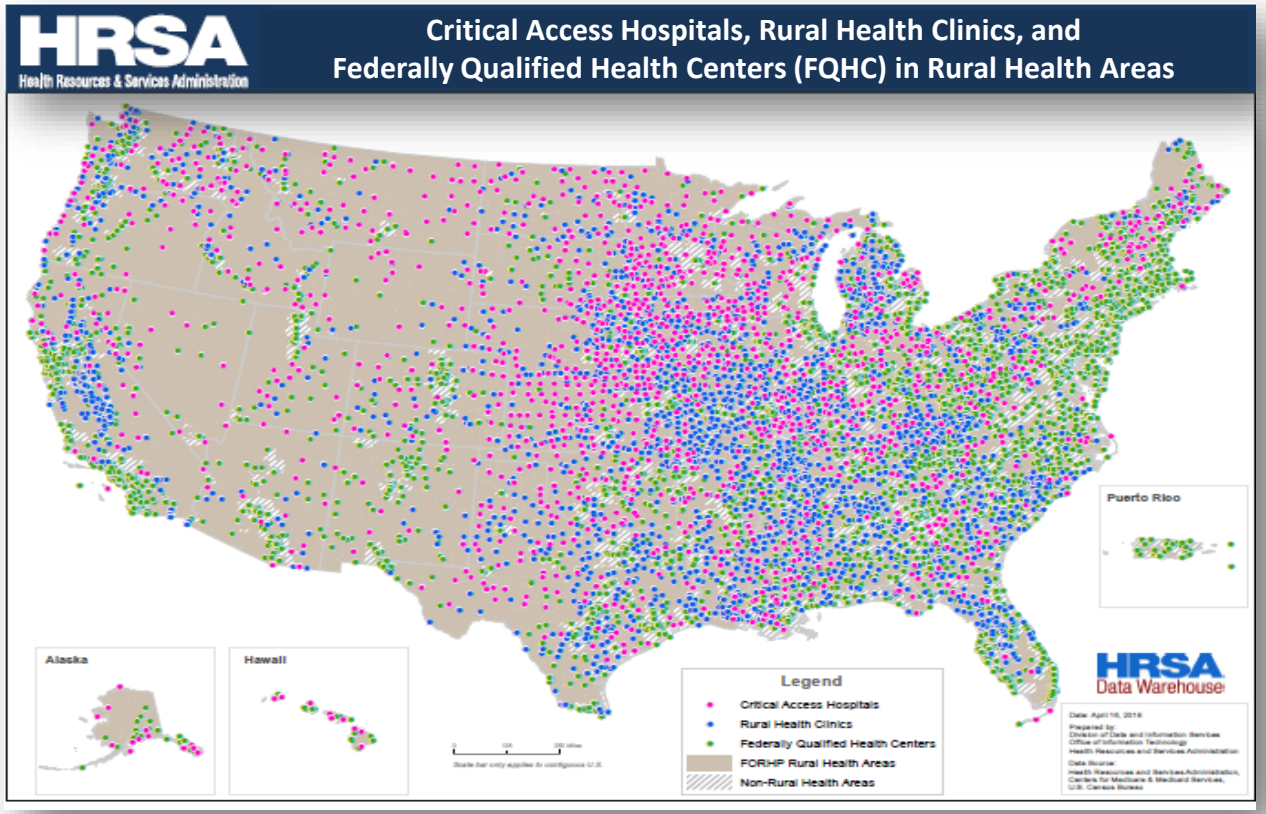
June 24, 2020

Paul Moore
Senior Health Policy Advisor, Federal Office of Rural Health Policy
Exec. Sec., National Advisory Committee on Rural Health and Human Services

Vision: Healthy Communities, Healthy People

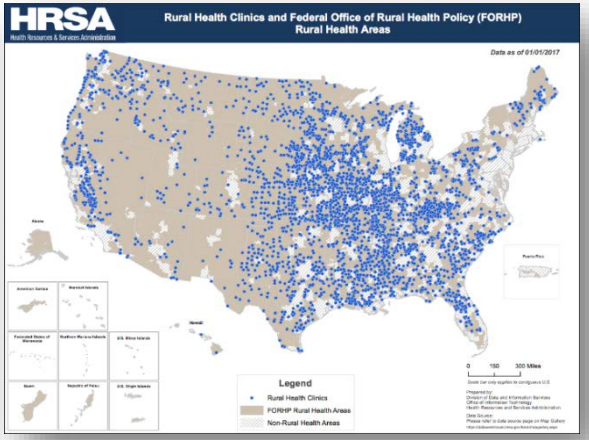
Rural Health Care Landscape

Rural Health Safety Net

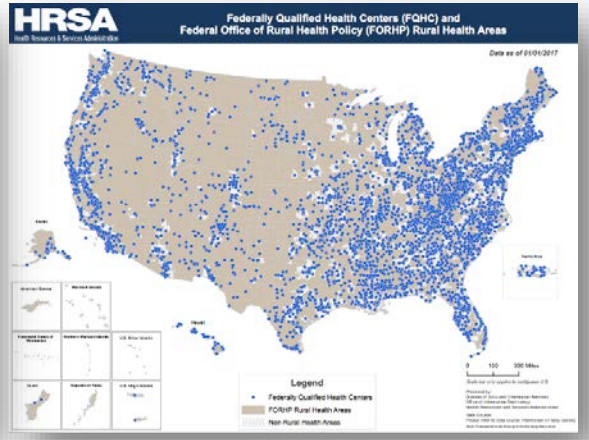


The Rural Health Care Safety Net

Critical Access Hospitals
(CAHs)



Rural Health Clinics
(RHCs)



Federally Qualified Health Centers
(FQHCs)

Long Term Care SNF and NF

U.S. Department of Health & Human Services
HRSA
Federal Office of Rural Health Policy

Rural Health Care Landscape

Death rates, Disparities, Distance, Dollars and Departures

People in rural areas **live 3 fewer years** than people in urban areas, with **rural areas having higher death rates for heart disease and stroke.**

Rural women face higher maternal mortality rates

Rural residents face **higher rates of tobacco use, physical inactivity, obesity, diabetes and high blood pressure**

Rural populations face greater challenges with **mental and behavioral health** and have **limited access to mental health care.**

Rural hospitals are closing or facing the possibility of closing

+

Increasing shortages of clinicians

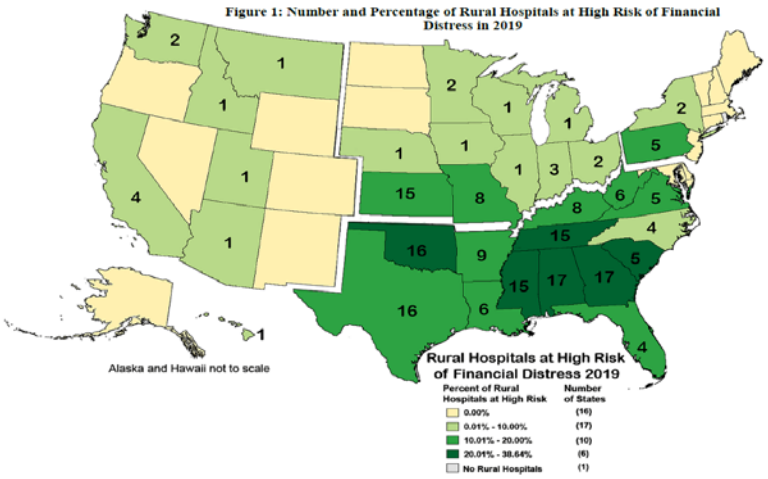
Long distances and lack of transportation make it difficult to access emergency, specialty and preventive care.

+

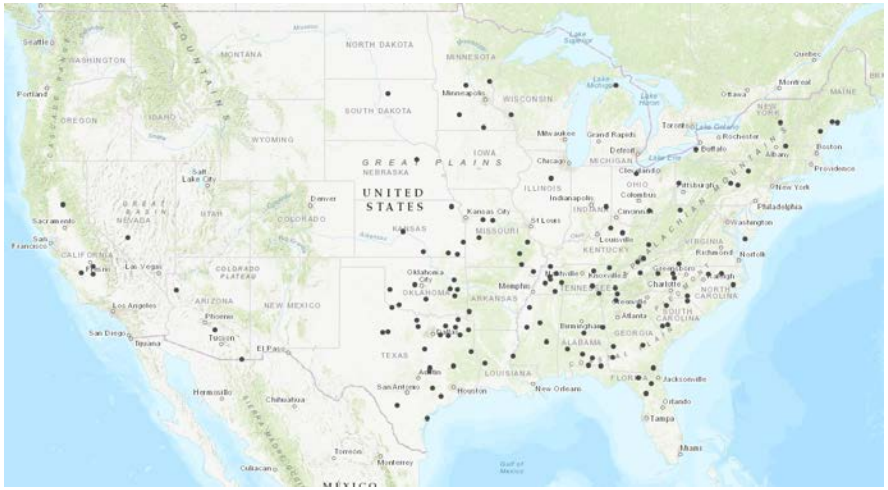
Rural populations are more likely to be **uninsured and have fewer affordable health insurance options** than in suburban and urban areas.

Hospital Closures and Financial Vulnerability

- **Rural Hospital Closure and Risk**
- **Loss of Key Services**



Source: *Geographic Variation in the 2019. Risk of Financial Distress among Rural Hospitals. University of North Carolina Cecil G. Sheps Center, April 2019.*



171 Rural Hospital Closures
January 2005 – Present
(129 since 2010)

U.S. Department of Health & Human Services
HRSA
Federal Office of Rural Health Policy

A "Future" Rural Health Care Landscape

Rural Health Models and Innovations

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Rural Health > Case Studies & Conversations

Rural Health Models and Innovations

Featured Projects

Recently Added

- Health Profession Rural Summer Immersion Program
- Community Health Worker-based Chronic Care Management Program
- Camp Mariposa
- HealthStreet Cognitive Screening Project

Video Highlights

Video Series: Rural Programs Making a Difference

Browse Rural Project Examples

ABOUT RURAL HEALTH MODELS AND INNOVATIONS

This section features rural health programs and interventions, including approaches that have demonstrated success in research studies and program evaluations, as well as anecdotal accounts. Each rural community should consider whether a particular approach is a good match for its needs and capacity. While it is sometimes possible to adapt program components to match your resources, keep in mind that changes to the program design may impact results. Programs listed in this section are not endorsed by RHIhub or the Federal Office of Rural Health Policy.

Read about the criteria and evidence-base for programs included in *Rural Health Models and Innovations*.

A "Future" Rural Health Care Landscape

Rural Health Models and Innovatons

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Rural Health > Tools for Success

Testing New Approaches

Why Rural-specific Demonstration Projects Are Needed

The healthcare delivery system is undergoing dramatic change, with an emphasis on finding new approaches and organizational frameworks to:

- improve health outcomes,
- control costs, and
- improve population health

Financial incentives are changing from a focus on volume-based services to value-based services. There is a concurrent need to better measure and account for quality of care in all settings and improve transitions of care as patients move from one care setting to another.

Advances in technology and new approaches to organizing care delivery are occurring quickly, with examples like the patient-centered medical home, accountable care organizations, and patient-safety organizations.

Most early adopters of new care models have been large, urban-based integrated delivery systems. Less is known about how these changes and environmental factors will affect rural healthcare delivery systems. Because rural healthcare providers are often paid outside of the traditional prospective payment systems and fee schedules, there is less known about how new and emerging models might function in rural communities. As a result, policy makers and rural providers need to better understand the implications of new and emerging models for low-volume rural settings.

The Centers for Medicare & Medicaid Services (CMS) Innovation Center was established through the Affordable Care Act. The Innovation Center tests new payment and service

COVID-19 Flexibilities

CMS Innovation Center COVID-19 Flexibilities shares flexibilities and adjustments to current and future models in response to the COVID-19 public health emergency.

WHY CONDUCT DEMONSTRATION PROJECTS

Demonstration projects are used to test and measure, on a limited and controlled scale the effect of potential program changes before they are launched nationwide. Especially important in rural healthcare, implementing a demonstration project is one way to find out whether a new model of providing healthcare will meet rural communities' needs. Demonstrations also provide decision makers valuable information on whether these new models can operate nationwide. New models of care that work in urban areas may not necessarily work as well in rural settings, where there is a lower volume of patients and different Medicare reimbursement models.

COVID-19 and the Rural Health Care Landscape

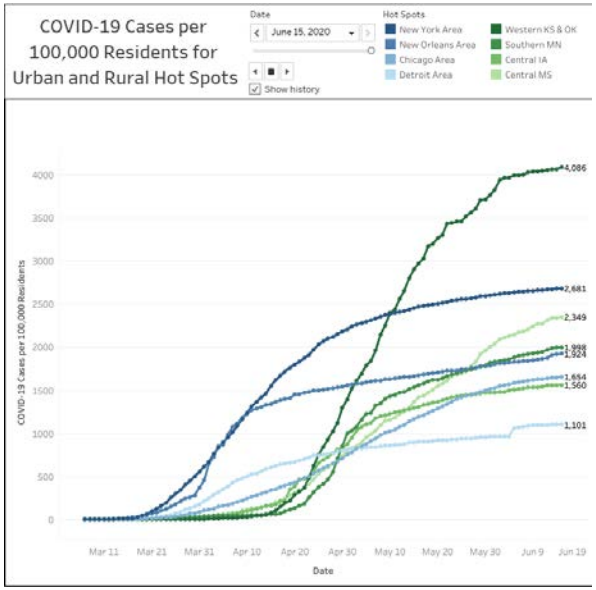
Rural Challenges and Opportunities of the Corona Virus Pandemic

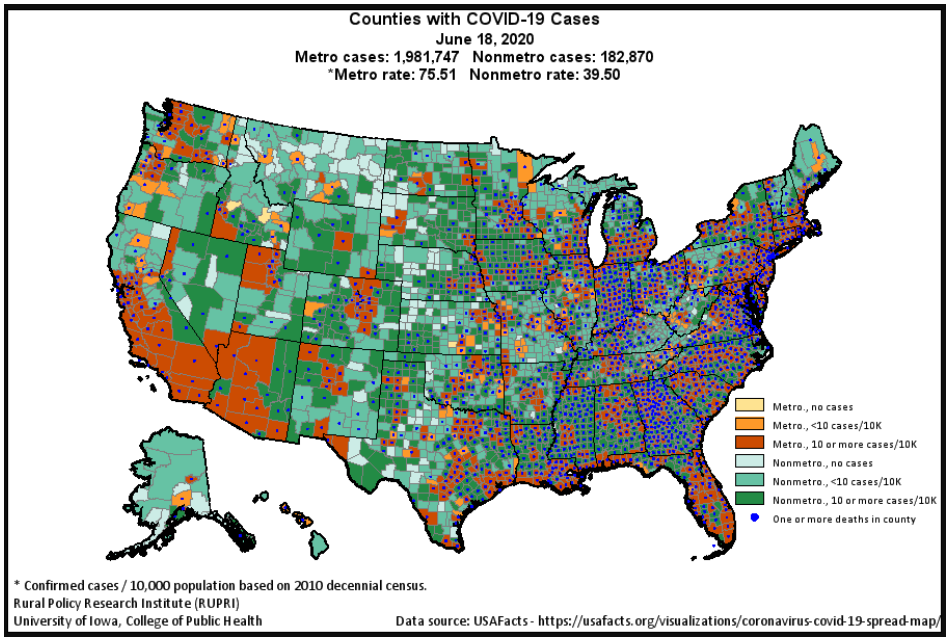
Pre-existing Demographics, Distance and Disparities

Re-thinking Access and Capacity

Releasing Technology and Telehealth

Reforming Payment Methodologies





Tribal Health Care in Rural Settings: Diversity and Health Disparities in the Biomedical Workforce

National Academies of Science, Engineering & Medicine

Population Health in Rural America in 2020

Daniel J. Calac, MD

June 24, 2020

Goals

1. Impress an awareness of American Indian presence nationally
2. Appreciate the magnitude of American Indian/Alaskan Native Health Disparity
3. Factors affecting the quality of life for American Indian/Alaskan Natives
4. Reviewing the magnitude of biomedical workforce shortages

Introducing Awareness of American Indian Nations

Diversity of Native Americans

- Over 570 federally recognized tribes in the United States
- Over 350 distinct dialects
- Innumerable traditions exist amongst tribes

Government to Government relationships and Health Care Delivery

"Health Services provided by the federal government for Indian people are not a gift. They are the result of business arrangements between two parties that resulted in a pre-paid health plan. The health plan was prepaid by cession for their entire lands…."

(Rhoades and Deersmith 1996)

American Indian Health Care in 1900s: Public Health Service to Indian Health Service

1849 - Native American health transferred from War Department to Bureau of Indian Affairs (BIA)- (Ref: Treaty obligations)

1908-1920 - Delivery of professional medical services within Public Health Service

1911 - First appropriation in Congress

1921 - Snyder Act – ratification provided appropriations for “benefit, care, and assistance …for Indians…”

Health Care Systems: Indian Health Service in the 21st century

1976 – Indian Health Care Improvement Act

Assures via the Indian Health Service to provide:

- high quality health care
- assist tribes in health care management
- to advocate for tribes in health care issues

Health Care Systems: Indian Health Service in the 21st century:

12 Service Areas

Contemporary Indian Health Service

- Indian Health Service operates
  - 31 hospitals
  - 50 health centers
  - 2 school health centers
  - 31 health stations (Tribes can operate a facility under a P.L. 93-638)

Indian Health Council, Inc.

Rincon Indian Reservation - Valley Center,CA

Health Care for American Indians: California

- The State of California is home to 42 Indian health care clinics
- The State is home to 7 Urban Indian health clinics
- Many clinics offer behavioral health programs and dental/medical services
- Many Indian health clinics rely on grant funding for provision of basic health care for tribal communities

Appreciate the Magnitude of American Indian/Alaskan Native Health Disparity

CDC Health Equity/Public Health Strategies

- Limited Community Capacity/Resources
- Variability in Health Literacy
- Lack of Community Engagement/Awareness/Participation
- Costs, Resources, and other Fiscal Considerations
- Transportation Challenges
- Potential Displacement Effects
- Variability in Implementation
- Crime/Safety Influences (real and perceived)
- Lack of Awareness of Diverse Norms and Customs

www.cdc.gov/healthequityguide

Health Disparity: Life Expectancy in Years:

- *U.S. Men 74.1 years*
- *U.S. Women 79.5 years*
- ***Total 76.9 years average***

- ***Median age at death:***
- ***81 years in the General Population***
- ***76 years in the AI Population***

Health and Human Services, 2016

Factors affecting the quality of life for American Indian/Alaskan Natives

Barriers to Health Care Access

Multiple barriers include:

- Social
- Geographic
- Educational
- Institutional
- Financial

Barriers to Health Care Access

- Geographic
  - Mountainous regions make transportation difficult and sometimes treacherous
- Educational
  - In 2014-15, only 71.6% of AI/AN completed high school vs 83.2% of others
  - In 2014, 19.8% of AI/AN held a Bachelor's degree versus 32.5% of all adults
- Institutional
  - Programs are only funded 60%
  - Funding limitations for mental health are prominent
- Social
  - Health care maintenance remains a tough sell
  - Health care access is perceived as urgent/emergent
- Financial
  - Approx. 28% of AI/AN live with poverty in 2014 compared with 15.5% for all Americans (US Census Bureau)
  - Annual per capita spending is $3,099 versus $8,097 for general population
  - Funding limitations for mental health are prominent

AI Resource Disparities

Medicaid Recipients	**$8,097**
VA Beneficiearies	$5,234
Medicare	$7,631
Bureau of Prisons	$3985
Indian Health Services	$3,099

- Per Capita Medical Expense in 2005 Federal Budget:

Reviewing the magnitude of the biomedical workforce shortages

Indian Health Service Workforce Vacancy Rates*

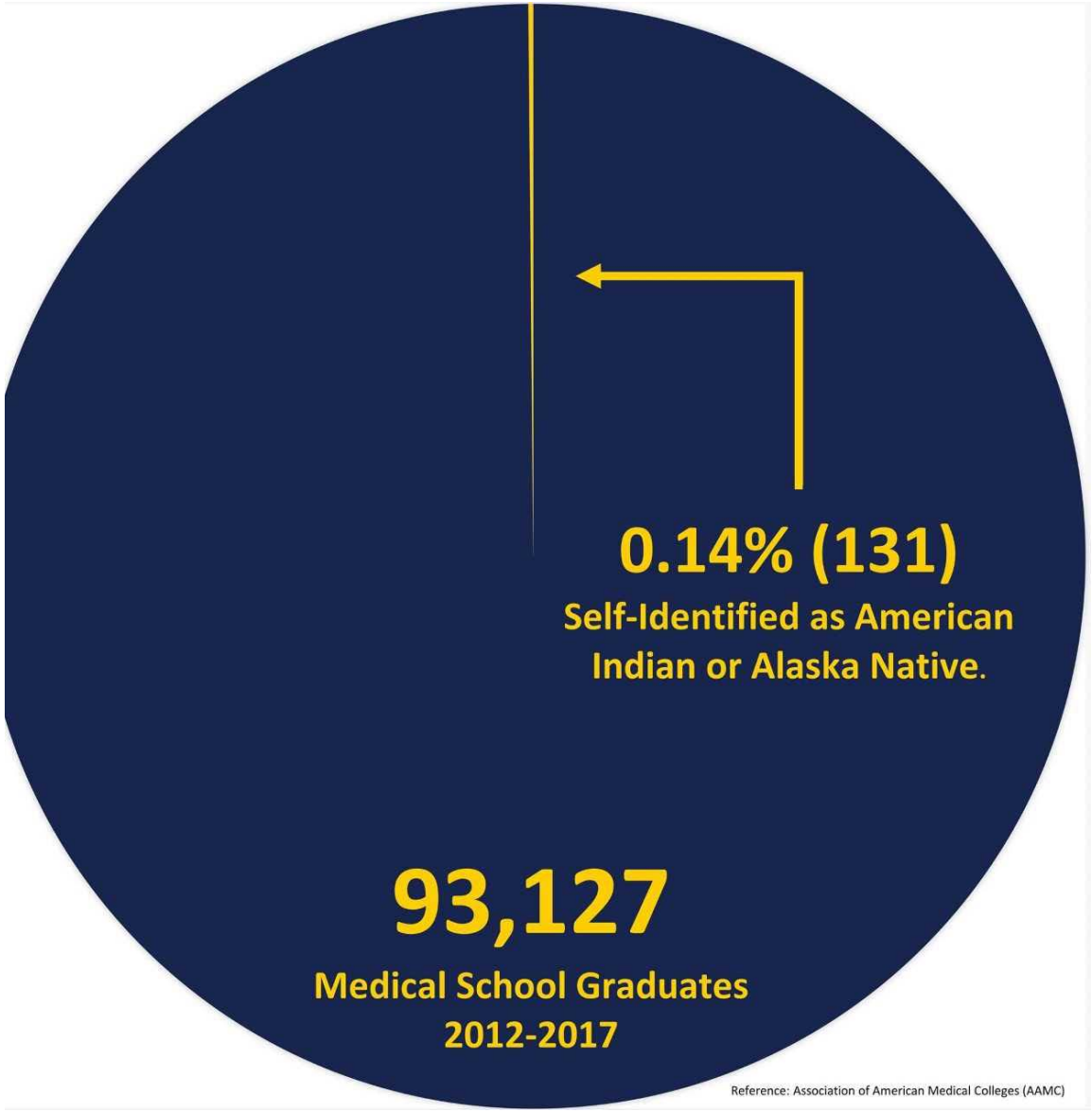
	IHS Federal Vacancy Rates*
Physicians	34%
Pharmacist	16%
Nurse	24%
Dentist	26%
PA	32%
AP Nurse	35%

*IHS FY 2015 Scholarship, Extern, Scholarship and Grant Programs and Partnership with NHSC Fact Sheet

*Nearly 150 physician positions currently being advertised on the IHS web site.

AI/AN Medical School Graduates

- AI/AN Applicants = 100* / 51,628 (.02%)
- AI/AN Matriculants = 42*/21,326 (.02%)



2017 AI/AN Medical School Facts (AAMC Data)

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Indian Health Council

National Academies of Science, Engineering & Medicine

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Native American Research Centers for Health (NARCH)

Wraparound Services: Implications for Rural America

Nir Menachemi, PhD, MPH
Fairbanks Endowed Chair, Professor and Department Head
Health Policy and Management
Scientist, Regenstrief Institute

RICHARD M. FAIRBANKS
SCHOOL OF PUBLIC HEALTH

INDIANA UNIVERSITY - IUPUI

Regenstrief Institute

What are wraparound services?

- Wraparound services are non-medical services provided in conjunction with primary care

- Wraparound services could be co-located with primary care or work on a referral basis to an outside agency

Wraparound Services focus on SDoH

<u>Wraparound Service Providers:</u>

- Social workers
- Dieticians
- Mental health counselors
- Financial planners
- Patient navigators

Economic Stability	Neighborhood and Physical Environment	Education	Food	Community and Social Context	Health Care System
Employment	Housing	Literacy	Hunger	Social integration	Health coverage
Income	Transportation	Language	Access to healthy options	Support systems	Provider availability
Expenses	Safety	Early childhood education		Community engagement	Provider linguistic and cultural competency
Debt	Parks	Vocational training		Discrimination	Quality of care
Medical bills	Playgrounds	Higher education		Stress	
Support	Walkability				
	Zip code / geography				

Health Outcomes
Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations

KFF
HENRY J KAISER FAMILY FOUNDATION

JAMA Pediatrics | Original Investigation

Effects of Social Needs Screening and In-Person Servic… A Rand…

Laura M. Gottlie…

VULNE…

By Megan… Samantha…

Me… Tra… By Of…

ABSTR…

benef… housi… than 1… care to address legal problems that create a… This paper describes how such medical-lega… clinical systems—for example, by adding le… health records to help low-income patients… conditions. We recommend the integration of medical-legal pa… into federal health care programs.

eat right.

RESEARCH Review

Effectiveness of Dietetic… Primary Health Care: A S… of Randomized Controlle…

Lana J. Mitchell, PhD, AdvAPD*; Lauren E. Ball, PhD, APD†; L…
Lauren T. Williams, PhD, FDAA§

ARTICLE INFORMATION

Article history:
Submitted 16 September 2016
Accepted 27 June 2017
Available online 19 August 2017

Keywords:
Diet therapy
Dietitian
Nutrition therapy
Workforce
Outpatients

2212-2672/Copyright © 2017 by the Academy of Nutrition and Dietetics.
http://dx.doi.org/10.1016/j.jand.2017.06.364

*AdvAPD=Advanced Accredited Practising Dietitian (certified in Australia).
†APD=Accredited Practising Dietitian (certified in Australia).
§FDAA=Fellow of Dietitians Association of Australia.

ABSTRACT

Background …vidual patien… …of evidence … …health care se… …to inform the…
Objective Th… …effectiveness … …care to suppo…
Study desig… …lative Index … …searched for … …published be… …care exclusive… …patients to … …terventions d… …only, in a gro… …methodologic… …and the body… …Evidence Ana…
Main outco… …terventions i… …tically signif… …effectiveness …

General Hospital Psychiatry 53 (2018) 1–11

Patient outcomes associated with primary care behavioral health services: A systematic review

Kyle Possemato[a,b,*], Emily M. Johnson[a], Gregory P. Beehler[a,c], Robyn L. Shepardson[a,b], Paul King[a,d], Christina L. Vair[e], Jennifer S. Funderburk[a,b,f], Stephen A. Maisto[a,b], Laura O. Wray[a,g]

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ARTICLE INFO

Keywords:
Primary care behavioral health
Access
Utilization
Functioning
Satisfaction

ABSTRACT

Objective: This systematic review focused on Primary Care Behavioral Health (PCBH) services delivered under normal clinic conditions that included the patient outcomes of: 1) access/utilization of behavioral health services, 2) health status, and 3) satisfaction.
Method: Following PRISMA guidelines, comprehensive database searches and rigorous coding procedures rendered 36 articles meeting inclusion criteria. The principle summary measures of odd ratios or Cohen's *d* effect sizes were reported.
Results: Due to significant limitations in the methodological rigor of reviewed studies, robust findings only emerged for healthcare utilization: PCBH is associated with shorter wait-times for treatment, higher likelihood of engaging in care, and attending a greater number of visits. Several small, uncontrolled studies report emerging evidence that functioning, depression, and anxiety improve overtime. There was no evidence of greater improvement in patient health status when PCBH was compared to other active treatments. The limited available evidence supports that patient satisfaction with PCBH services is high.
Conclusions: The implementation of PCBH services is ahead of the science supporting the usefulness of these services. Patient outcomes for PCBH are weaker than outcomes for Collaborative Care. More rigorous investigations of patient outcomes associated with PCBH are needed to allow for optimization of services.

By Joshua R. Vest, Lisa E. Harris, Dawn P. Haut, Paul K. Halverson, and Nir Menachemi

Indianapolis Provider's Use Of Wraparound Services Associated With Reduced Hospitalizations…

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…tive binomial regression and a series of logistic regressions to analyze… 77, 160–169, 2016)

Why Low uptake of Wraparound Services?

- Fee-for-Service → No Wraparound Services
  - These services reduce hospital revenues by keeping people healthier or preventing need for costly care
  - Average ‘cost saving’ at urban Indianapolis FQHC was 1.4 to 2.4 million per year[1]

- Mostly used in urban settings especially with vulnerable groups in FQHCs

[1] Vest et al., Health Affairs (2018)

Implications for Rural Health

- Rural settings may be “ideal” for wraparound services
  - Needs stemming from unfavorable SDoH are high
- Wraparound services (e.g., transportation services) in rural dental clinics increased treatment completion[2]
  - Most wraparound services supported via grants or philanthropy
- Among SUD treatment centers, rural locations less likely to offer wraparound services[3]
- Challenges include stigma (for behavioral health[4]), transportation barriers & distance between facilities, limited funding, service availability & a shortage of wraparound service providers

[2]Larson et al (2019) Journal of Public Health Management and Practice
[3]Edmond et al (2016) Am. J Drug Alcohol Abuse
[4]Pullmann et al. (2010) Community Mental Health Journal

Role of Telemedicine?

- No studies examine utilization of wraparound services via telemedicine
  - Commentary suggests telemedicine useful if geographic access is limiting factor, but may not be as helpful for relieving financial burdens[5]

- Cautionary tale of what financial burdens can lead to…

[5]Wong et al., Am J of Public Health (2020)

The Role of Community Health Workers in Addressing the Needs of Rural Americans

Timothy Callaghan, PhD

June 24, 2020

PUBLIC HEALTH
TEXAS A&M HEALTH SCIENCE CENTER

Southwest Rural Health Research Center

Agenda

1. Provide background on CHWs
2. Use data to understand CHW roles in rural and urban America
3. Explore differences between CHWs in urban and rural environments
4. Note key challenges to CHW work
5. Highlight CHW efforts to combat COVID-19

Introduction

- Community Health Workers (CHWs) are individuals who bridge the gap between the public and needed health and social services
  - ➢ Often come from the community they serve – promotes trust
  - ➢ Hold unique cultural competence and a personal understanding of the challenges patients face in accessing services

- BLS projects the field of CHWs to grow by up to 13% over the next decade

Data and Today's Talk

- To understand CHWs and their roles in rural and urban America, I'll be relying on two sources of original data:

1. Data from focus groups held with CHWs in rural and urban parts of four states in 2019 (Florida, Minnesota, California, and Massachusetts)

2. Survey data – national survey of CHWs conducted in 2019

➢1,400 total CHW participants; 92.21% taken in English

➢CHWs from 45 states participated as well as PR and DC

What do CHWs Do? – In Their Own Words

- Link clients to resources:

➢"We are this bridge between the agencies, their resources, and the community. Promotoras [CHWs] are very successful…because we have this connection with people, we go to their level, we understand people because we belong to the community, we know their needs, a lot of times we experience them." (Promatora/CHW - Madera, CA)

➢"I would say…linking clients to resources. That would be to providers whether it's medical, dental, where you can get vision, where you can get a hearing screening, diapers whatever the resources that the clients need. Linking them to those resources." (CHW - Los Angeles, CA)

What do CHWs Do? – In Their Own Words

- Focus Beyond Just Health (Social Determinants):

➢"We help with insurance, and then we help with homelessness, and then we help with food, and then we help with moving, and then we help with dental access, and behavioral health access. And that's all before noon." (Bemidji, MN)

➢"…if you're worried about homelessness, if you're worried about where your next meal's coming from, or childcare, or all these things that are directly related to your family, you're not focusing on your health. You're focusing on these things. So, that's where we come into play... Nine times out of ten, they don't even identify anything health related. It's mostly social." (Boston, MA)

What do CHWs Do? – In Their Own Words

- Provide Insight that Might Otherwise be Missed:

➢"…especially if you go into the home, you had the opportunity to see the whole client, not just the COPD, not just the diabetes, not just the person who is vulnerable….You had the opportunity to see the person as they live. And that's something that your doctor doesn't get to see or your nurse in the hospital doesn't get to see. You just have a better understanding of where they are." (Okeechobee, FL)

➢"Then we can go back and relay to the doctor and the nurses what kind of problems [patients have]…. They [medical providers] actually get an insight on who their patients are and get to know them a little bit better because of us." (Greenfield, MA)

CHWs and Rural America

- Rural Americans face considerable barriers to accessing health and social services: transportation issues, limited providers, limited hospital access, and limited social programs

- CHWs unique capacity to link clients with resources could be valuable in rural areas with limited resources to begin with

- Key question: do many CHWs work with rural clients?

➢ Yes!

Rural Status of CHW Clients

Rural Status	Frequency	Percent
Only Urban Clients	125	10.95%
Mostly Urban Clients	369	32.31%
Equal Urban/Rural Clients	318	27.85%
Mostly Rural Clients	230	20.14%
Only Rural Clients	100	8.76%
Total	1,142	

- 28.9% of CHWs work primarily with rural clients; 43.3% of CHWs work primarily with urban clients
- Subsequent slides use “urban” to refer to only/mostly urban and “rural” for only/mostly rural

CHW Work Setting

- Rural CHWs are less likely to work in hospitals or community outreach, more likely to work in clinics and undefined roles

Work Setting	Urban CHWs	Rural CHWs
Hospital	8.72%	4.55%
Doctors Office	2.64%	6.06%
Health Clinic	21.10%	28.48%
Community Outreach	25.56%	18.48%
Non-Profit	26.77%	20.61%
Government Org.	5.27%	6.36%
Academic Institution	2.43%	3.33%
Other	7.51%	12.12%

Demographic Differences in CHWs

- Rural CHWs are 3 years older in our sample

- Urban CHWs are better educated: 52.29% of urban CHWs have at least a bachelors degree; 42.58% of rural CHWs have at least a bachelors degree

- 12.47% of urban CHWs in our study were male; only 6.17% of rural CHWs in our study were male

- Rural CHWs were more likely to be White, Non-Hispanic than Urban CHWs (Rural: 69.97% white; urban: 45.96% white)

Rural and Urban CHW Differences

- Specialists vs. Generalists

➢CHWs in urban areas are often hired to focus on a specific task – (program enrollment, focusing only on subpopulations, specific diseases etc.)

➢CHWs in rural areas tend to be generalists – they address all of the needs of the individual because there are not others to address any other needs the individual might have

➢"*…in an urban setting often they're adding a CHW specialized in diabetes, specialized in pre-natal care, specialized in something that they can really train that individual, and they have a large enough population that they can serve just that population, and that it really makes that difference in those urban areas. And I think the big thing I've seen different for us in a rural area is we have to be very generalist.*" *(Bemidji, MN)*

Rural and Urban CHW Differences

- Vast differences in access to resources and programs – CHWs in rural areas need to do more with less

➢ *"Everybody in Boston that has something going on has been offered some kind of program. And, really, they're so overwhelmed by, 'Oh, I have five different programs. I don't want another program.'" (Boston, MA)*

➢ "[In] *rural areas here, there's less transportation, there's less resources, there's less funding. Sometimes it can be trying. We have a program right now that the CHWs work with where if you're struggling with food…we can give you gift card of a certain amount for each person in the house, but that's limited. We can't give it to everybody and everybody at some point has problems with food insecurities." (Greenfield MA)*

Challenges in Building the CHW Workforce

- Our evidence suggests CHWs provide critical services to address social determinants of health not provided by other health professionals – however, there are barriers to the field's growth:

- Naming conventions

➢There is not a widely accepted nomenclature for these health workers – CHWs, Promator(a)s, health educators, health navigators, and dozens more;

➢Leads to confusing regulations, lack of consistent standards

- Payment

➢Reimbursement issues limiting the development of the field

➢Hard to bill for addressing social determinants in many states

CHWs and COVID-19

- Extensive efforts have been made to train CHWs about COVID-19 and prepare them for work during the pandemic

➢ Earliest training in Texas on March 5th (Disipando los mitos y rumores del nuevo Coronavirus 2019 (COVID-19))

➢ South Texas Promotora Association, Inc. also acted quickly; on March 7th, they hosted a 3-hour in-person Spanish educational training on COVID-19

➢ The National CHW Association, APHA CHW Section, and various training centers have promoted trainings created by state CHW networks

CHWs and COVID-19 Related Activities

- CHWs have taken on new roles during pandemic:

➢ Contact tracing – providing critical support that is trusted in the community and culturally appropriate

➢ Making masks

➢ Picking up groceries for vulnerable individuals

➢ Still connecting (virtually and in-person) with community members while practicing social distance.

CHW COVID-19 Challenges

- Hard to practice social distancing as CHWs in rural areas if residents lack internet access
- Some CHWs have been laid off due to reduced funds coming into organizations
- Reimbursement for online services vs. in person services

Overall Takeaways

- Community health workers are trusted community members and health professionals that bridge the gap between vulnerable populations and needed health services
- Vital in rural America given the unique barriers to health access
- CHWs in rural areas tend to have less education and are less likely to work in hospital settings
- Community Health Workers in rural environments have fewer options when trying to bridge clients to health services than their urban counterparts.
- In rural settings, Community Health Workers often characterize themselves as generalists, while CHWs in urban areas tend to be more specialized, particularly in hospital settings.

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