Examining the Burden of Public Stigma Associated With Mental Illness in the Rural U.S.

March 12, 2024

- ✓ All attendees are muted
- ✓ Today's session will be recorded
- ✓ Submit questions using the Q&A function
- ✓ Q&A will follow the presentation

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NORC at the University of Chicago

EAST TENNESSEE STATE UNIVERSITY

Background

- In September 2020, ETSU was funded as one of 7 federally funded Rural Health Research Centers – 4-year, $2.8 million award
  - Minnesota, South Carolina, Kentucky, Washington, Southern Maine, North Carolina
- ETSU/NORC Rural Health Equity Research Center
  - Collaboration between ETSU Addiction Science Center, ETSU CRHR, and NORC Walsh Center for Rural Health Analysis.
  - Center maintains a focus on health equity and addresses issues related to rural public health, health care access, mental health and the needs of vulnerable populations.

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How the RHRCs Work

- Funding from the Health Resources and Services Administration (HRSA) Federal Office of Rural Health Policy (FORHP).
- Each project year research centers submit 5 proposals, and FORHP selects 4 for implementation based on agency research and policy needs.
- All projects must be national in scope and rely largely on available secondary data.

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Key Faculty & Graduate Assistants

CRHR Team


Michael Meit


Stephanie Mathis


Casey Balio


Kate Beatty


Qian Huang


Amy Wahlquist


Maggie Francisco

NORC Team


Alana Knudson


Craig Holden


Shena Popat

ASC Team


Robert Pack


Angela Hagaman

Graduate Student Support


Olivia Sullivan


Nicole Galler

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Center Projects

- Year 1:
  - Characteristics of Buprenorphine Therapy Among Commercially-Insured Pregnant and Postpartum Women
  - Rural-Urban Analysis of Persistent Health Professional Shortage Areas
  - Examining the Burden of Public Stigma Associated with Mental Illness in the Rural U.S.
  - Inpatient Treatment Costs Associated with Substance Use Disorders

- Year 2:
  - A Closer Examination of Rural Hospital Bypass
  - Examining Differences in Rural and Urban Medicare FFS Beneficiaries' Emergency Department Use Pre-COVID-19 and During COVID-19
  - Following the Money: Do Block Grant Resources Reach Rural Communities?
  - Screening, Brief Intervention and Referral to Treatment (SBIRT) Penetration in Rural vs. Urban Healthcare Settings in the U.S.

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Center Projects

- Year 3:
  - Assessment of the Area Deprivation Index in Rural Areas
  - Hierarchical Condition Category (HCC) Risk Scores: Designed to Predict Future Cost and Health Care Resource Use – Do They Also Accurately Reflect Differences in Health Status between Rural and Urban Beneficiaries?
  - Rural/Urban Differences in Forgoing Health Care during the COVID-19 Pandemic
  - Understanding Rural Health Data Challenges through Analysis of Peer-Reviewed Publication Limitations

- Year 4:
  - Health Professional Shortage Areas (HPSAs) and Medically Underserved Area (MUAs) Over Time
  - Suicide Mortality: A Comparison of Urban and Rural Rates
  - Comparing Health Indices: Differences by Rurality, Missingness, and Associations with Health Outcomes
  - Build the Rural Evidence Base: Examining the feasibility of Implementing Pilot Programs and Demonstrations in Rural Communities
  - Examining Post-Acute Care Utilization and Outcomes for Rural Medicare FFS and Medicare Advantage Beneficiaries

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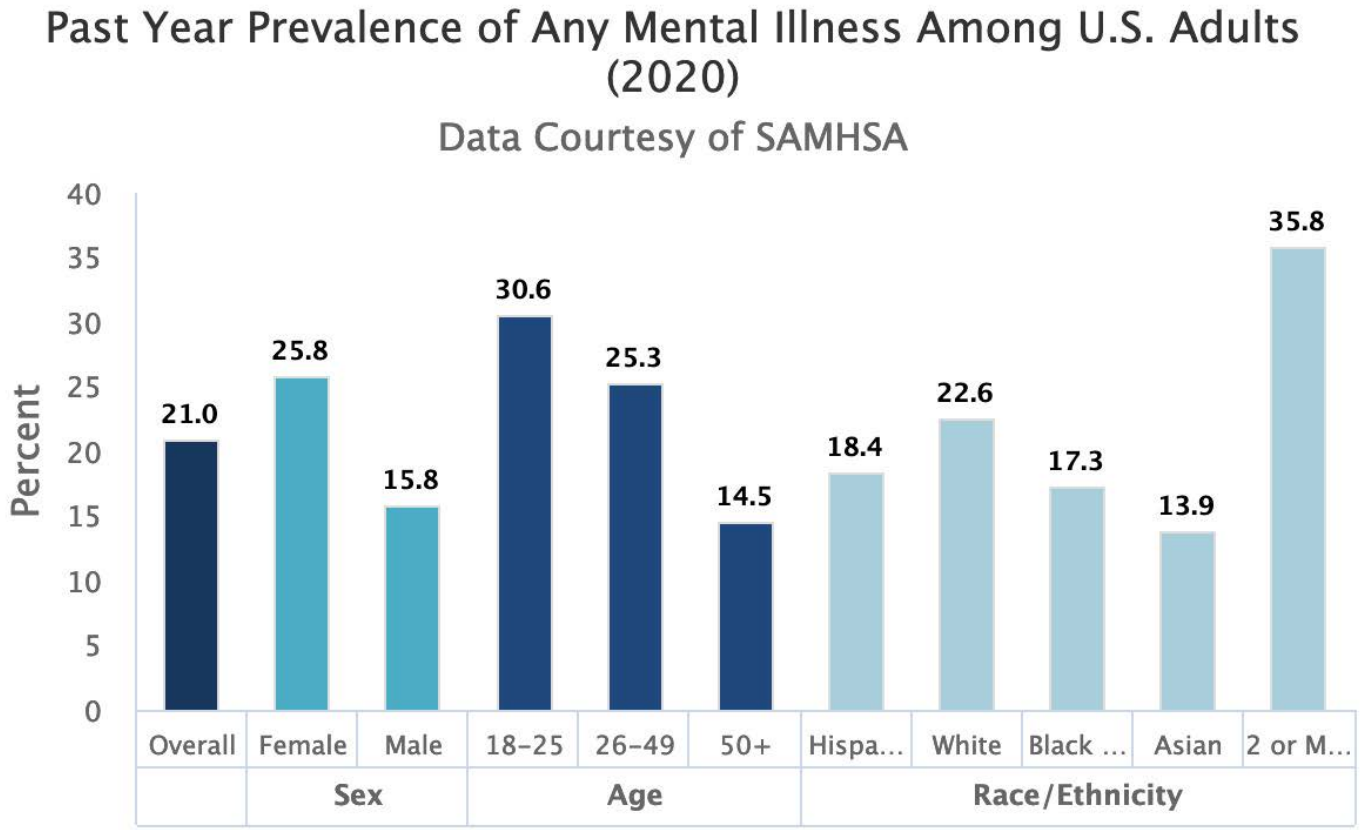
Mental Illness Stigma by Geography and Demographic Characteristics

Mental Illness in the US

- In 2020, 21% of adults aged 18 and older (or 52.9 million people) had any mental illness in the past year.[1]

- Any mental illness is defined as a mental, behavioral, or emotional disorder.



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Mental Illness in Rural US

- With longstanding barriers to prevention and treatment, mental health conditions remain prevalent in rural communities.
- 20.5% of adults in rural counties had a mental illness in the past year.[1]
- Many individuals with mental illness do not receive mental health services.
- Of the approximately 52.9 million adults aged 18 or older in 2020 with any mental illness in the past year, 46.2% (or 24.3 million people) had accessed mental health services in the past year.[1]

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What is Stigma?

"The negative social attitude attached to a characteristic of an individual that may be regarded as a mental, physical, or social deficiency. A stigma implies social disapproval and can lead unfairly to discrimination against and exclusion of the individual."

--American Psychiatric Association

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Impact of Stigma

- Its negative consequences are significant and can limit opportunities across multiple aspects of life—housing, employment, social relationships, health care, and more.[2–4]

- Stigma can impede seeking and engagement in mental health care and disease self-management among those with mental illness.[1,5–7]

- Stigma can have serious consequences for stigmatized individuals and their communities.[8]

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Impact of Stigma in Rural US

- A study among rural Appalachian parents of children with mental health concerns identified stigma as a barrier to seeking services for their children.[14]

- In older adults, rural residents reported greater public and self-stigma related to seeking help for personal problems.[15]

- A study of individuals living in South Dakota found a gender-rural interaction where men had higher levels of stigma related to mental illness than women, but rural women had higher levels of stigma than urban women.[10]

Impact of Stigma in Rural US

- Given the potential influence of stigma in affecting whether and where individuals seek treatment, combined with the more limited resources to address the mental health needs in rural communities…

- It is important to understand any potential differences in stigma levels between rural and urban communties.[12,13]

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Objectives

- Describe the burden of public stigma associated with any mental illness in rural versus urban communities in the US.

- Examine stigmatizing attitudes and beliefs towards any mental illness among the general population, including differences by rurality, age, gender, race/ethnicity, and experience with mental illness (personal or knowing someone).

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Data Collection: AmeriSpeak®

- Funded and operated by NORC at the University of Chicago, AmeriSpeak®
- A probability-based panel designed to be representative of the U.S. household population.
- AmeriSpeak® panelists participate in NORC studies or studies conducted by NORC on behalf of governmental agencies, academic researchers, and media and commercial organizations.

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Data Collection: AmeriSpeak®

- For purposes of this study, the sample was designed to support rural/non-rural analyses, with Rural-Urban Commuting Area (RUCA) codes as the measure of rurality.[18]

- The target sample size was a total of 2,000 panelists aged 18 years or older:
  - 1,000 panelists living in rural areas (RUCA codes 4-10)
  - 1,000 panelists living in urban areas (RUCA codes 1-3).

Survey Design and Administration

- Utilized a brief, validated scale with 11 items designed to examine public attitudes about mental illness.[17]

- Questions were scored on a five-point Likert scale with the following response options:
  - strongly disagree; somewhat disagree; neither disagree nor agree; somewhat agree; and strongly agree.

- The items factored into two subscales “negative stereotypes” and “recovery and outcomes.”

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Survey Questions: Negative Stereotypes

1. I believe a person with mental illness is a danger to others.
2. I believe a person with mental illness is unpredictable.
3. I believe a person with mental illness is hard to talk with.
4. I believe a person with mental illness has only himself/herself to blame for his/her condition.

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Survey Questions: Recovery Outcomes

5. I believe a person with mental illness would improve if given treatment and support.
6. I believe a person with mental illness feels the way we all do at times.
7. I believe a person with mental illness can eventually recover.
8. I believe a person with mental illness can be as successful at work as others.
9. Treatment can help people with mental illness lead normal lives.

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Survey Questions: Additional Questions

10. Have you had or do you personally know anyone who has had a mental illness?

From the AmeriSpeak® panel, we also included demographic information collected from survey respondents within our analyses.

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Variables of Interest

- **Rurality**
  - Urban—RUCA code 1 to 3
  - Rural—RUCA code 4 to 10

- Racial/ethnic group categories:
  - non-Hispanic White
  - non-Hispanic Black
  - Hispanic
  - non-Hispanic other

- Age categories:
  - 18-29
  - 30-44
  - 45-59
  - 60 and older

- Gender:
  - Male
  - Female

- Experience with any mental illness

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Data Analysis

- Individually as continuous variables
  - Scale from strongly disagree=1 to strongly agree=5

- Summed to create the two subscales:
  - Negative stereotypes—four items (4-20 range), **higher** scores corresponded to **more negative** attitudes.
  - Recovery and outcomes—five items (5-25 range), **higher** scores corresponded to **more positive** attitudes.

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Data Analysis

- Weighted bivariate (chi-squared and ANOVA) analyses
- Weighted linear regression models for each subscale
- All analyses were weighted with a variable created and provided by NORC to account for rurality group in addition to the base sample weighting.

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	Urban		Rural		
	Weighted N	%	Weighted N	%	p-value
Gender					
Male	482	48	539	49	0.6
Female	519	52	551	51	
Age					
18-29	205	21	173	16	0.01
30-44	264	26	286	26	
45-59	238	24	254	23	
60+	294	29	376	35	
Race & ethnicity					
White, non-Hispanic	609	61	863	79	<0.0001
Black, non-Hispanic	126	13	69	6	
Other, non-Hispanic	10	1	18	2	
Hispanic	178	18	95	9	
Experience with AMI					
Yes	742	81	822	81	0.9
Stigma	Weighted Mean	SD	Weighted Mean	SD	
Negative Stereotype (total score)	10.16	2.76	10.22	2.67	0.6
Recovery Outcomes (total score)	19.45	3.2	19.56	3.19	0.4

Negative Stereotypes

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	Beta	SE	p-value
Age			
18-29	---	---	0.0007
30-44	0.78	0.31	
45-59	0.69	0.29	
60+	1.14	0.28	
Gender			
Female	---	---	0.09
Male	0.29	0.17	
Race			
White, non-Hispanic	---	---	0.001
Black, non-Hispanic	1.05	0.33	
Other, non-Hispanic	0.82	0.32	
Hispanic	0.08	0.32	
Geography			
Urban	---	---	0.84
Rural	-0.04	0.18	
Experience with AMI			
No	---	---	<0.0001
Yes	-1.05	0.25	

Recovery Outcomes

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	Beta	SE	p-value
Age			
18-29	---	---	0.61
30-44	-0.37	0.34	
45-59	-0.33	0.33	
60+	-0.43	0.32	
Gender			
Female	---	---	0.05
Male	-0.40	0.20	
Race			
White, non-Hispanic	---	---	0.98
Black, non-Hispanic	-0.16	0.43	
Other, non-Hispanic	-0.04	0.34	
Hispanic	-0.11	0.36	
Geography			
Urban	---	---	0.97
Rural	-0.09	0.21	
Experience with AMI			
No	---	---	0.05
Yes	0.55	0.28	

Key Findings

- Overall, **rural respondents held no more negative attitudes towards individuals with mental illness than urban respondents.**
- Respondents with experience with mental illness had **lower negative stereotype** scores and **higher recovery outcome** scores.
- White, non-Hispanic respondents had the lowest negative stereotype scores with Black, non-Hispanic respondents having the highest scores.
- Female participants had higher scores than male participants with regard to recovery outcome scores.
- Older respondent had higher negative stereotype scores than younger respondents.

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Discussion

- Findings suggest Black, non-Hispanic and Other, non-Hispanic respondents overall hold more negative stereotypes relative to White, non-Hispanic and Hispanic respondents, regardless of geography.

- Addressing behavioral health access and stigma issues in communities of color can help to address health inequities.

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Discussion

- Understanding the scale of public stigma associated with mental illness is a necessary step for:
  - Mitigating negative consequences
  - Advancing the quality of health care, behavioral health, and quality of life of individuals experiencing mental illness.

- Similar stigma reduction strategies could be successful in rural and urban communities—but should focus on subpopulations with higher stigma.

- With limited access to mental health services, consideration of such strategies could be especially important in rural areas.

Discussion

- Rural communities experience disparities in behavioral health services.
- Delivery of and access to mental health services such as assessment, treatment, and medication management and monitoring are often limited in rural communities.[12,13,27]
- Given that stigma is a widely recognized barrier to receipt of mental health services, targeted strategies could improve access to and engagement in services among individuals experiencing mental illness in rural communities.

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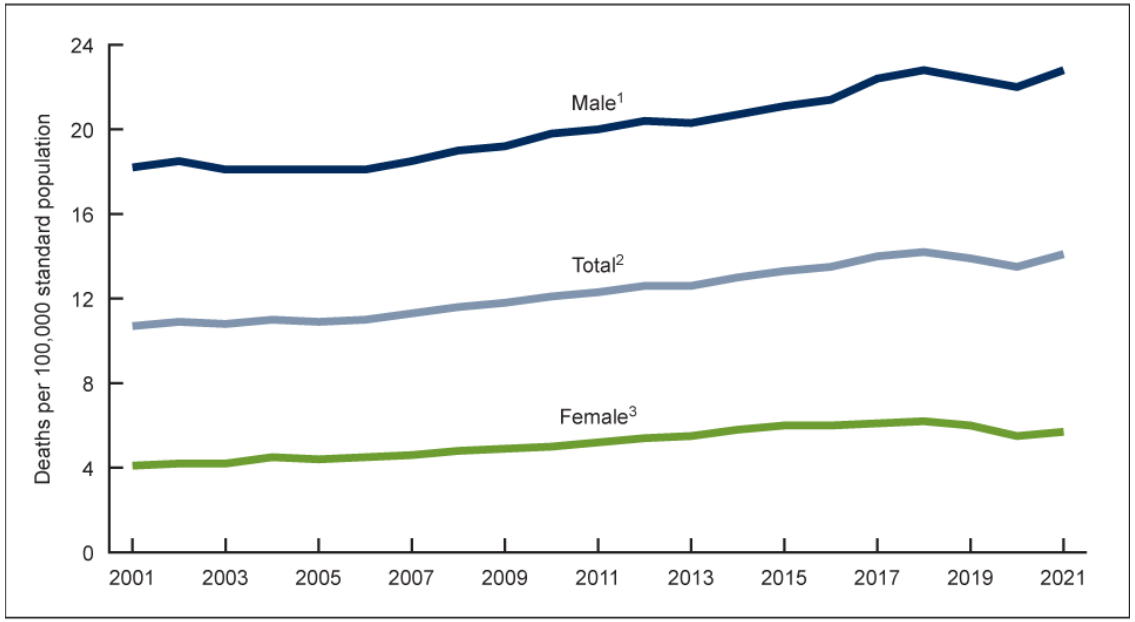
Suicide Mortality: A Comparison of Urban and Rural Rates

Suicide Mortality Background

U.S. Suicide Mortality Trends from CDC:

- Increase over time 2001 - 2018
  - 10.7 deaths per 100,000 in 2001
  - 14.2 per 100,000 in 2018
- Decrease between 2018-2020
  - 13.5 per 100,000
- Recent increase to 14.1 per 100,000 deaths in 2021
  - 4% increase

Age-Adjusted Suicide Rates by Sex, U.S. 2001-2021



Source: https://www.cdc.gov/nchs/products/databriefs/db464.htm

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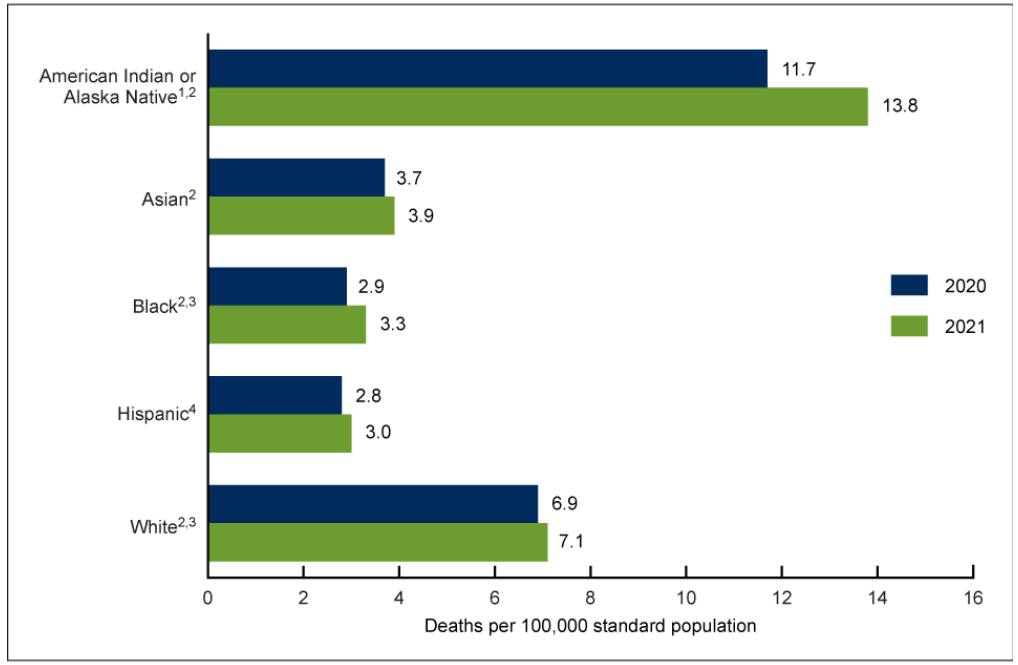
Suicide Mortality Background

- Demographics:
  - Males at higher risk of suicide than females (22.8 deaths per 100,000 vs. 5.7 per 100,000)
  - Differences between racial and ethnic groups
  - AIAN population highest suicide mortality rates in 2021
  - Lack of analysis and understanding of differences by geography

Age-Adjusted Suicide Rates for females by race and Hispanic Origin, U.S. 2020-2021



Source: https://www.cdc.gov/nchs/products/databriefs/db464.htm

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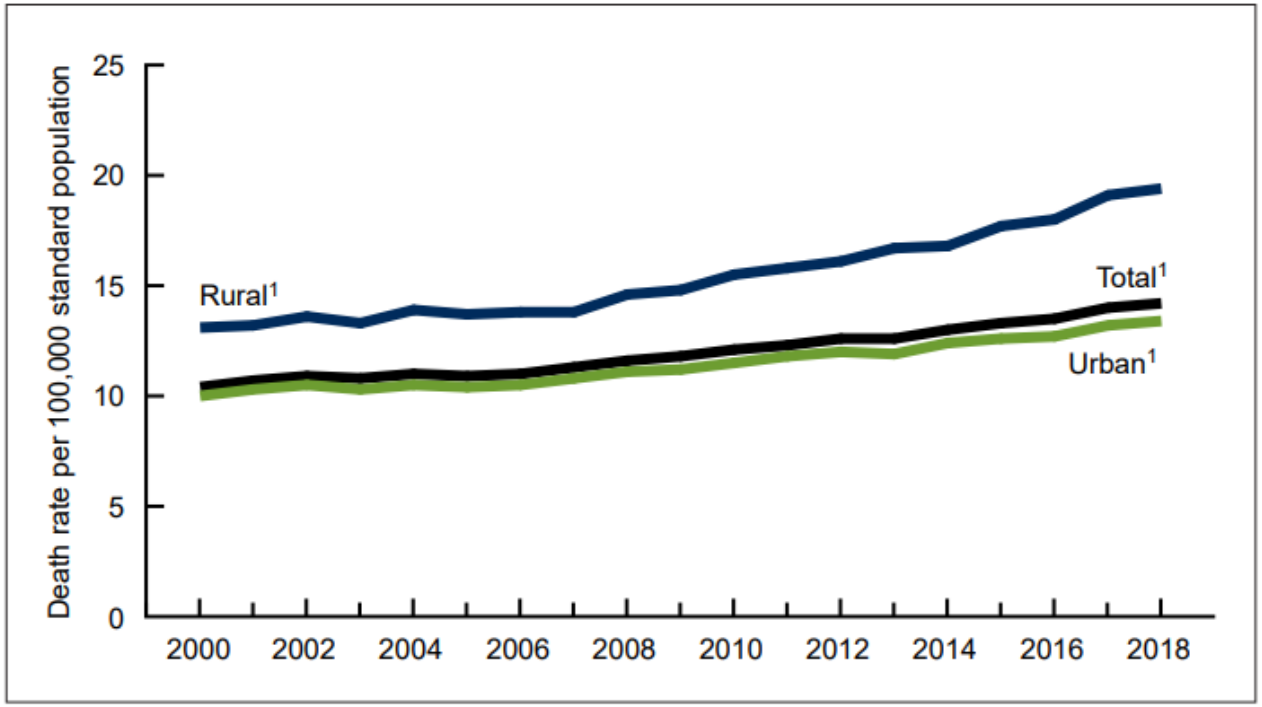
Suicide Mortality Background

CDC 2000-2018 report findings:

- Urban and Rural Differences:
  - Rural rates higher than urban (19.4 per 100,000 vs. 13.4 per 100,000)
  - Mortality increased at higher rate in rural than urban (48% vs. 34%)

Age-Adjusted Suicide Rates, by Urban-Rural Status U.S. 2000-2018



Source: https://www.cdc.gov/nchs/data/databriefs/db373-h.pdf

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Introduction

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- Need for rural suicide mortality research:
  - Vulnerable populations who live in rural communities
  - Impact of COVID-19 pandemic
  - Documented increase in suicide rates overall
  - Risk factors:
    - Access to mental healthcare
    - Geographic isolation
    - Stigma
    - At-risk substance use
- This project aims to describe and compare the suicide mortality rates between rural and urban areas in the U.S., overall and by other demographic characteristics.

Data and Methodology

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- **State-level**: Suicide mortality rates per year (2018-2021) by rurality
- **County-level**: Suicide mortality rates by geography from 2018 to 2021 in the U.S. and then compare with demographic characteristics
- **Data Sources**:
  - CDC Wonder
  - RUCC 2023 Codes
  - County Composite BRIC Scores
  - American Community Survey
  - CDC Social Vulnerability Index
- **Statistical Analyses:** Bivariate, Multivariable analyses, Spatial analyses

Preliminary Results

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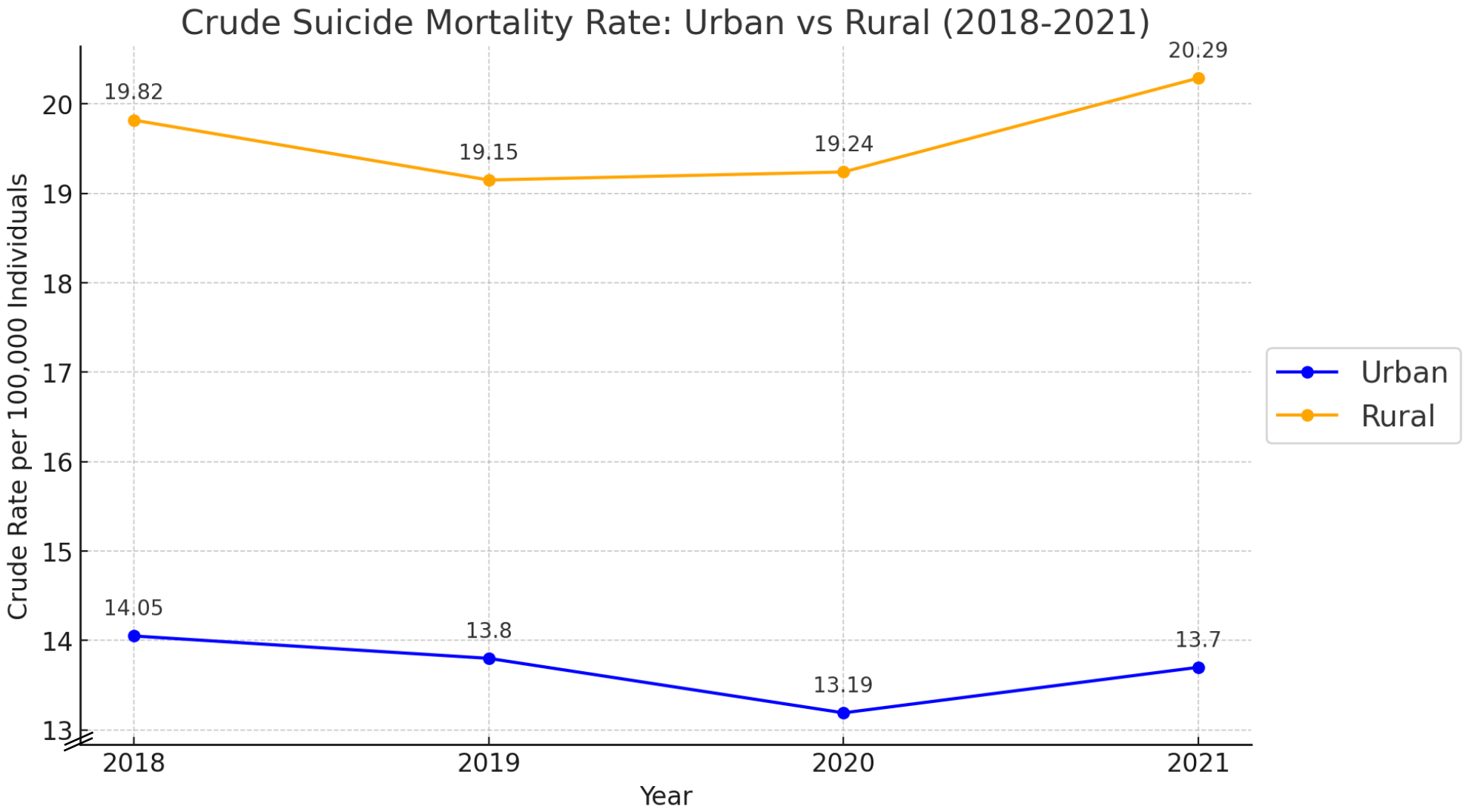

Preliminary Results

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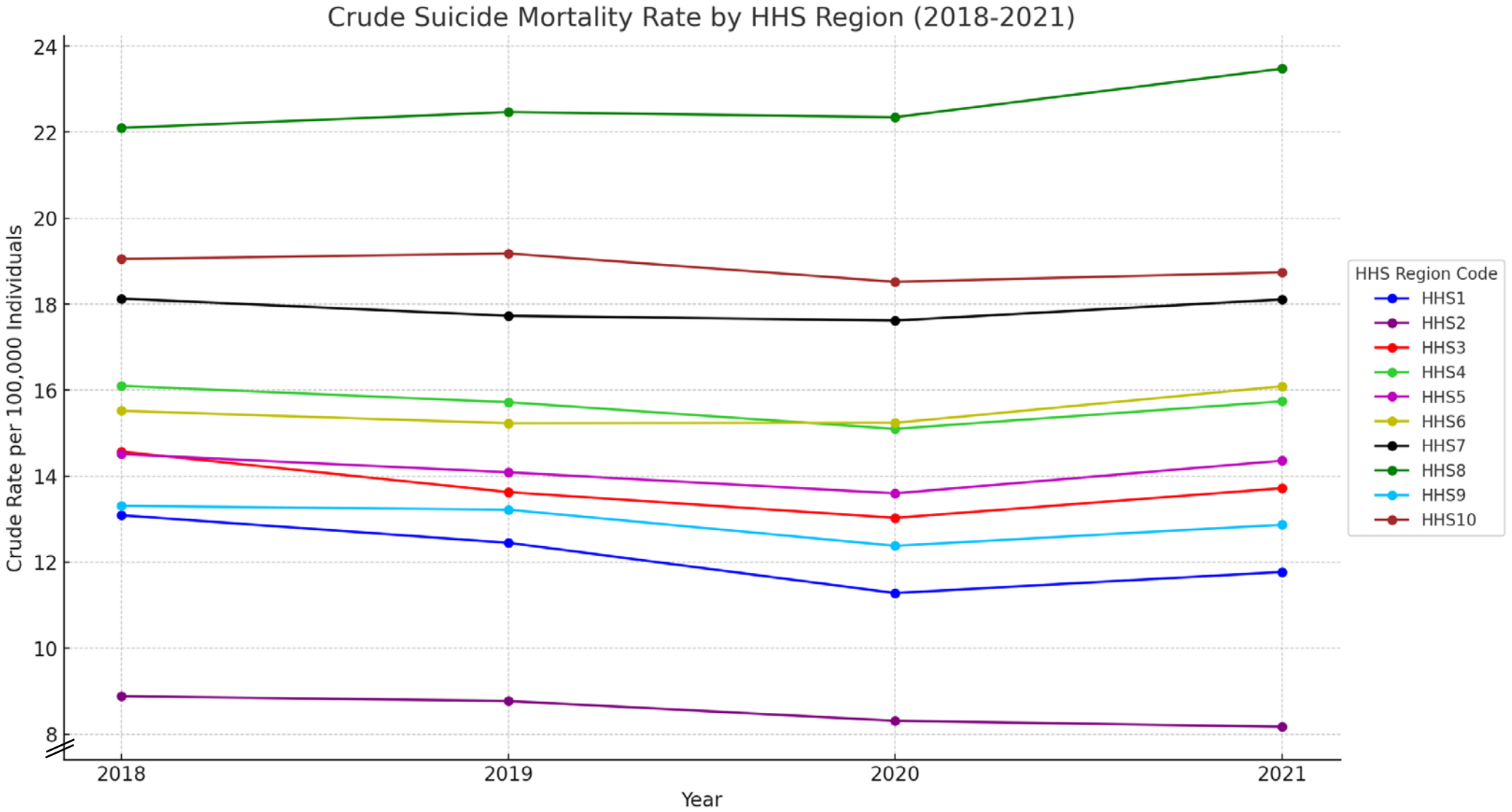

Preliminary Results

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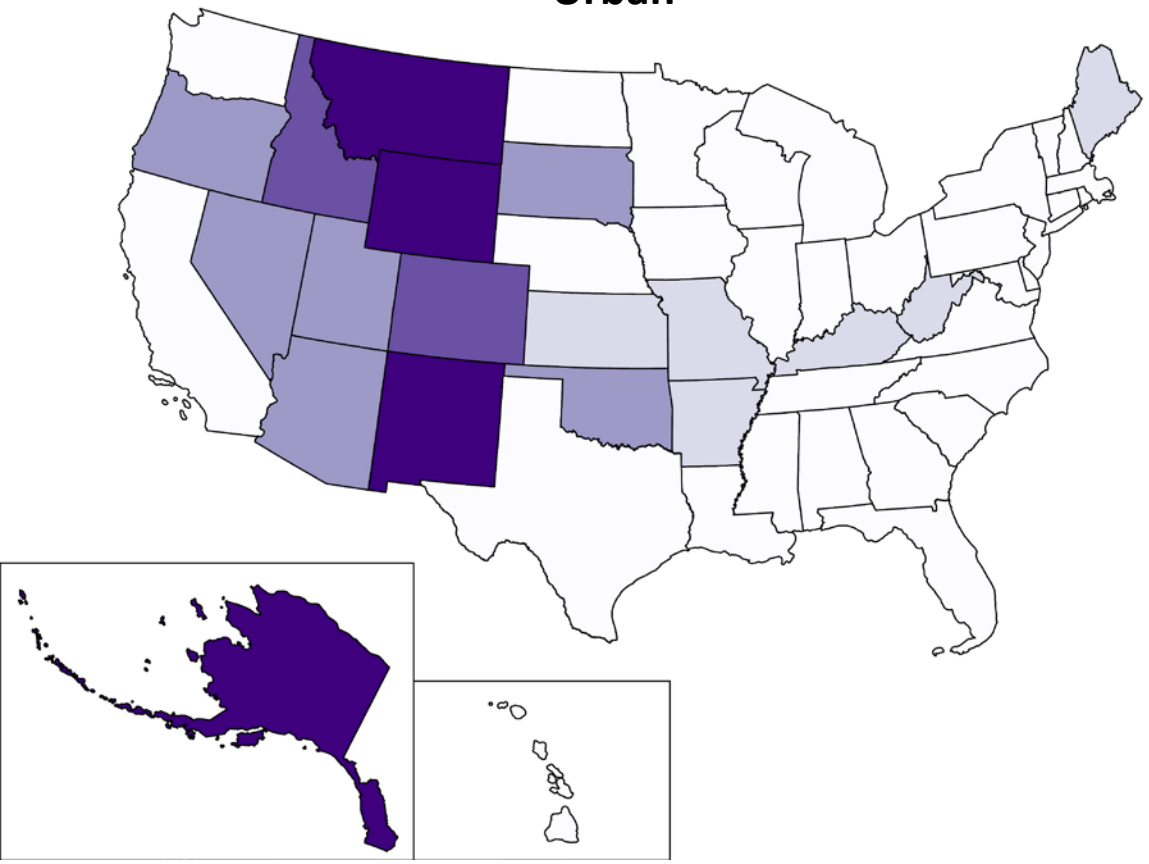
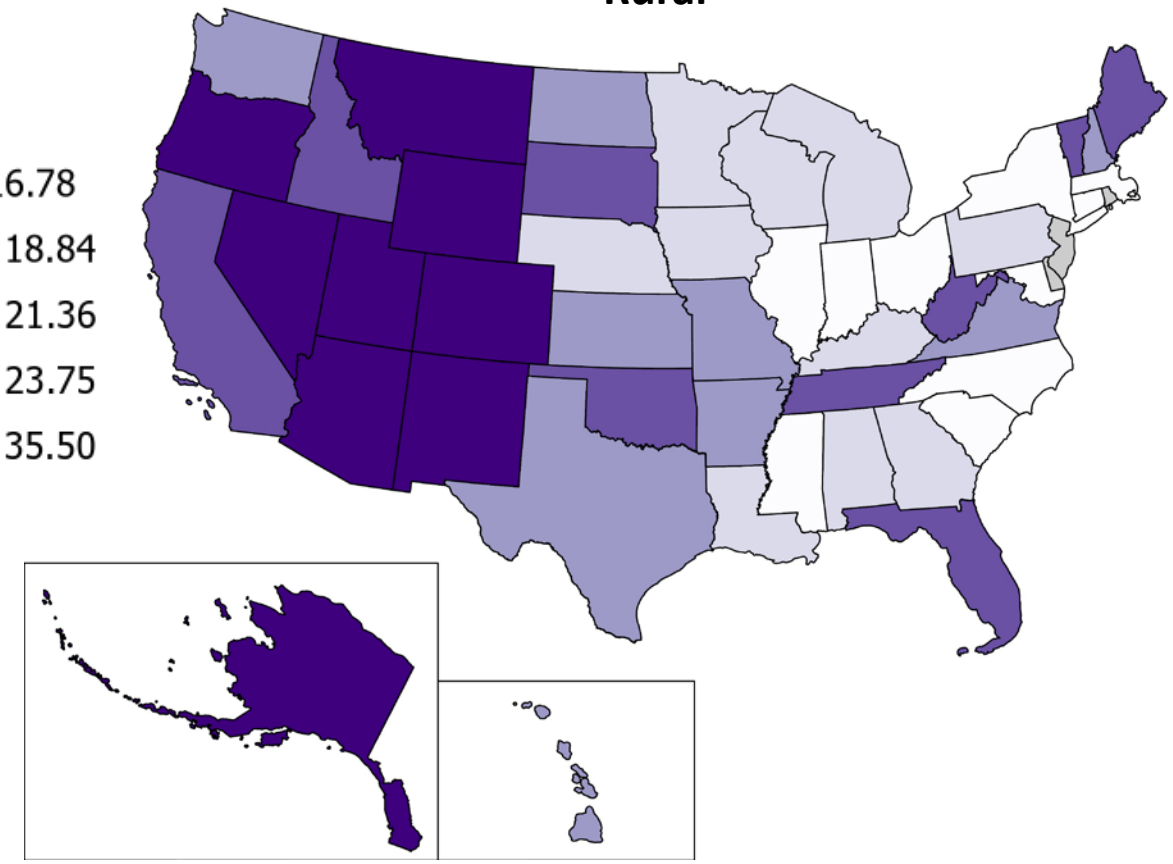
Crude Suicide Mortality Rate (per 100,000) by State 2018 – 2021

Urban



6.99 - 16.78
16.79 - 18.84
18.85 - 21.36
21.37 - 23.75
23.76 - 35.50
N/A

Rural



Future Analysis

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	State	County
Gender	X	X
Age	X	X
Race/Ethnicity	X	X
Year	X	
Combination with Rurality	X	X
SVI		X
BRIC		X
Socioeconomic Variables	X	X
Health Access	X	X

Caveats:

- Data are Suppressed when the data meet the criteria for confidentiality constraints (less than 10);
- Death rates are flagged as Unreliable when the rate is calculated with a numerator of 20 or less.

Conclusion

- In the U.S., rural areas experienced high suicide mortality rates from 2018 to 2021.
- HHS Region 8 (CO, MT, ND, SD, UT, WY) recorded the highest crude suicide mortality rates among all HHS Regions, whereas HHS Region 2 (NJ, NY) had the lowest rates.
- Geographically, the Western U.S., particularly in rural areas, had elevated suicide mortality rates.

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Policy Implications

- Access to mental health providers
  - Increasing the workforce
  - Telehealth/Broadband/Technology
  - Alternative interventions (e.g., training nontraditional providers)
- Insurance coverage for mental health
- Supportive working environment
- Improving public awareness and perceptions about mental health issues

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Resources

- Examining the Burden of Public Stigma Associated with Mental Illness in the Rural United States

  Publication Details: Examining the Burden of Public Stigma Associated With Mental Illness in the Rural United States - Rural Health Research Gateway

- The Relationship Between Experience with Mental Illness and Stigmatizing Attitudes and Beliefs

  Publication Details: The Relationship Between Experience With Mental Illness and Stigmatizing Attitudes and Beliefs - Rural Health Research Gateway

- Mental Health in Rural Communities Toolkit

  Mental Health in Rural Communities Toolkit – Rural Health Information Hub

For more than 30 years, the Rural Health Research Centers have been conducting research on healthcare in rural areas.

Rural Health Research Gateway

The Rural Health Research Gateway ensures this research lands in the hands of our rural leaders.

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