National Conference of State Legislatures

Rural Health Roundtable – Northeastern States

Muskie School of Public Service

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University of Southern Maine
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RHRC
Rural Health Research & Policy Centers
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www.ruralhealthresearch.org

Maine Rural Health Research Center

Objectives

- Rural definitions and lived experience
- Review
  - Northern Border Commission Data
  - Rural health disparities in the U.S. and the northeast
  - Impacts of poverty in the U.S. and the northeast
- Resiliency
- A vision for the future of rural health

Creating a Vision for an Ideal Rural Health System

- Imagine what an ideal rural health systems would look like for your state, region, or the United States as a whole.
  - What would your ideal system look like?
  - Who would be involved? What sectors of society would be involved?
  - What words come to mind?

Please take a few minutes to reflect on your thoughts about an ideal rural health system and jot down some notes. We will have an opportunity to discuss your thoughts at the conclusion of this session.

Defining Rural

Defining Rural

- Census Bureau does not define rural: anything that is not urban is rural
  - Urbanized areas of 50,000 or more people
  - Urban clusters of 2,500 to 49,999 people
- Office of Management and Budget uses counties and population sizes to define rural:
  - Metro area (urban core of 50,000 or more people)-Not rural
  - Micro area (urban core of 10,000-49,9999 people)-Rural
  - Counties outside of Metro or Micro Areas-Rural

Challenges of Defining Rural

- Census Bureau overcounts the number of people in rural areas, while the OMB undercounts them
- The Census definition:
  - Does not follow city or county boundaries, making it hard to determine if an area is urban or rural
  - Classifies many suburban areas as rural
- OMB includes some rural areas in metro
  - Example – Bridgeton, Maine is located in Cumberland County (which is defined as metropolitan) but looks very rural to most people

An Alternative Approach to Defining Rural

- Rural Urban Commuting Area (RUCA) codes at the census tract levels (can be rolled up to the county level)
- RUCAs reflect population and commuting patterns and defines rural as:
  - All non-metro counties
  - All metro census tracts with RUCA codes 4-10 and
  - Large area Metro census tracts of at least 400 sq. miles in area with population density of 35 or less per sq. mile with RUCA codes 2-3
  - Beginning with Fiscal Year 2022 Rural Health Grants, all outlying metro counties without a UA to be rural

The Lived Experience of Rural

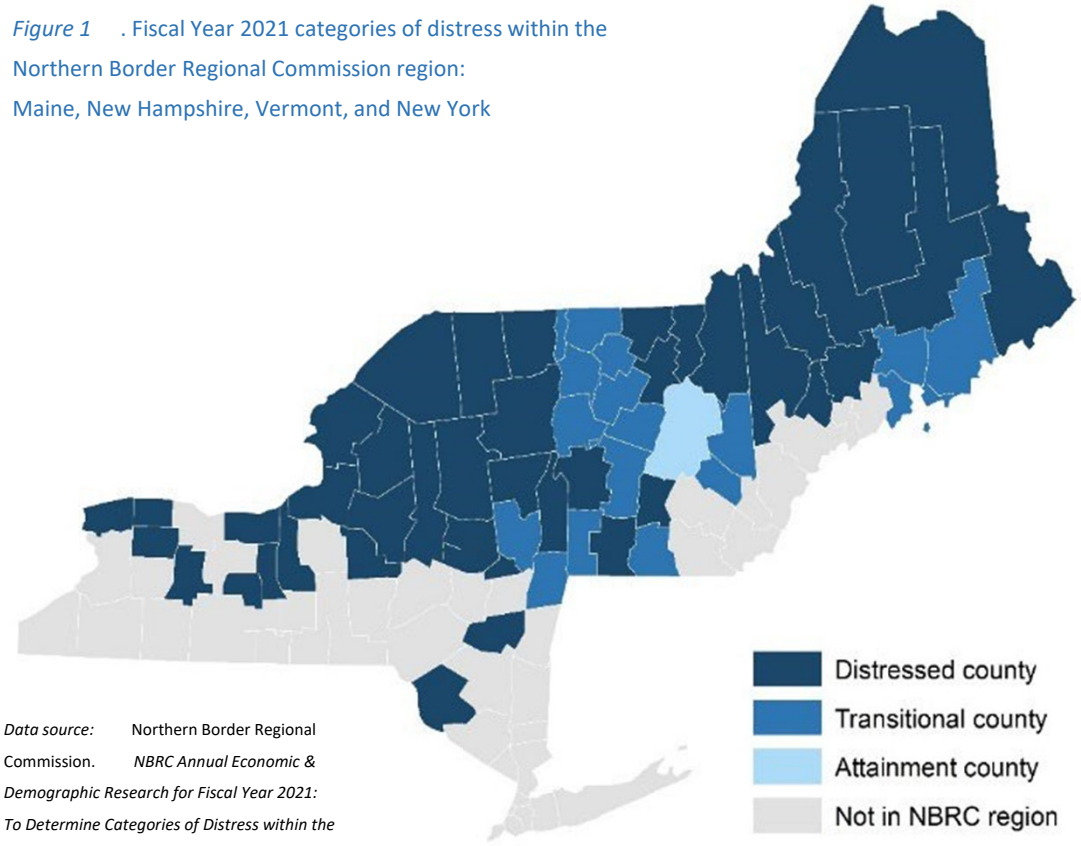
- Most people define rural based on their "lived experience"–how they perceive barriers and challenges
- The challenge imposed by travel distances varies from area to area depending on what people are used to
  - Contrast western states (Montana or Wyoming) to New England states (Vermont, New Hampshire, Rhode Island)
- Historically, rural people travel further to obtain health care, go to school, or commute to their jobs

Northern Border Commission

Source: Ahrens, K., Burgess, A., Milkowski, C., Munk, L., Jonk, Y., & Ziller, E. (2022). The Northern Border Region: A Health-Focused Landscape Analysis [Chartbook]. University of Southern Maine, Maine Rural Health Research Center.

Northern Border Commission

Figure 1 . Fiscal Year 2021 categories of distress within the Northern Border Regional Commission region: Maine, New Hampshire, Vermont, and New York



Data source: Northern Border Regional Commission. *NBRC Annual Economic & Demographic Research for Fiscal Year 2021: To Determine Categories of Distress within the Northern Boarder Regional Commission Service Area.* March 2021.

Demographics

Geography	Population	Rurality	Age		Sex
		Living in a rural area	Below 18 years of age	Age 65 and older	Female
	(N)	(%)	(%)	(%)	(%)
United States	328,239,523	19.3%	22.3%	16.5%	50.8%
Maine	1,344,212	61.3%	18.5%	21.2%	51.0%
New Hampshire	1,359,711	39.7%	18.8%	18.7%	50.4%
New York	19,453,561	12.1%	20.7%	16.9%	51.4%
Vermont	623,989	61.1%	18.3%	20.0%	50.6%

Data sources: Census Population Estimates, 2010&2019; American Community Survey, 2015-2019 5-year estimates.

Demographics (cont'd)

Geography	Race/ethnicity [1]						Language
	Non-Hispanic white	Non-Hispanic Black	Hispanic	American Indian & Alaska Native	Asian	Native Hawaiian/ Other Pacific Islander	Not proficient in English
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
United States	60.1%	12.5%	18.5%	1.3%	5.9%	0.2%	4.3%
Maine	93.0%	1.6%	1.8%	0.7%	1.3%	<0.1%	0.5%
New Hampshire	89.8%	1.5%	4.0%	0.3%	3.0%	<0.1%	1.0%
New York	55.3%	14.5%	19.3%	1.0%	9.0%	0.1%	6.9%
Vermont	92.6%	1.3%	2.0%	0.4%	1.9%	<0.1%	0.6%

Data sources: Census Population Estimates, 2010&2019; American Community Survey, 2015-2019 5-year estimates.

[1] Race/ethnicity data may not sum to 100% due to missing data.

Sociodemographics

Geography	Employment				Income			Social support	Education	
	Employed full time, ages - 16 to 64	Unemployed, 16 and older seeking work	Employed in healthcare and social assistance	Median household income	Pop.in poverty	Children in poverty	Children eligible for free or reduced price lunch	Children in single-parent households	High school grad. rate	Adults with some college
	(%)	(%)	(%)	($)	(%)	(%)	(%)	(%)	(%)	(%)
United States	66.4%	3.7%	15.8%	65,712	12.3%	16.8%	52.2%	25.5%	85.0%	66.1%
Maine	63.1%	3.0%	21.7%	58,824	10.9%	13.8%	44.1%	20.6%	85.9%	68.3%
New Hampshire	65.4%	2.5%	15.4%	78,571	7.5%	8.1%	27.0%	19.1%	88.9%	70.8%
New York	66.4%	4.0%	19.9%	72,038	13.1%	18.2%	53.9%	27.0%	82.4%	68.7%
Vermont	62.2%	2.4%	19.0%	63,293	10.1%	10.8%	36.4%	21.2%	85.5%	68.7%

Data sources: American Community Survey, 2015-2019 5-year estimates; Bureau of Labor Statistics, 2019; Small Area Income and Poverty Estimates, 2019; National Center for Education Statistics, 2018-2019; EDFacts, 2017-2018.

Access to Healthcare

Geography	Access to care							Quality of care		
	Uninsured among ages 0-64	Uninsured among adults ages 18-64	Uninsured among children ages 0-18	Ratio of population to primary care physicians	Ratio of population to primary care providers other than physicians	Ratio of population to dentists	Ratio of population to mental health providers	Preventable hospital stays per 100,000 Medicare enrollees	Mammography screening among female Medicare enrollees ages 65-74	Flu vaccinations among fee-for-service Medicare enrollees
	(%)	(%)	(%)	(N:1)	(N:1)	(N:1)	(N:1)	(N)	(%)	(%)
United States	10.4%	12.4%	5.2%	1,319	942	1,405	383	4,236	42.0%	48.0%
Maine	10.2%	11.7%	5.7%	899	655	1,484	202	3,447	46.0%	46.0%
New Hampshire	7.1%	8.6%	2.3%	1,100	682	1,302	311	3,844	49.0%	52.0%
New York	6.3%	7.7%	2.5%	1,194	787	1,174	329	4,043	42.0%	50.0%
Vermont	4.9%	5.9%	1.5%	892	818	1,365	208	3,256	45.0%	49.0%

Data sources: American Community Survey, 2015-2019 5-year estimates; Bureau of Labor Statistics, 2019; Small Area Income and Poverty Estimates, 2019; National Center for Education Statistics, 2018-2019; EDFacts, 2017-2018.

Death Rates/100,000 - Cause Specific

Geography	Length of life	Injury-related deaths	Injury-related death subcategories			
	Premature death (years of potential life lost before age 75, # per 100,000)	All injury deaths (# per 100,000)	Suicide deaths (# per 100,000)	Firearm deaths (# per 100,000)	Drug overdose deaths (# per 100,000)	Motor vehicle crash deaths (# per 100,000)
United States	6,906.6	72.3	13.8	11.9	21.2	11.4
Maine	7,020.8	93.0	17.7	11.4	28.4	11.5
New Hampshire	6,373.8	88.5	17.9	10.6	32.7	8.6
New York	5,406.3	50.5	8.1	4.2	19.1	5.7
Vermont	6,277.2	85.6	17.0	11.7	22.4	9.6

Data source: National Center for Health Statistics – Mortality Files, 2013-2019.

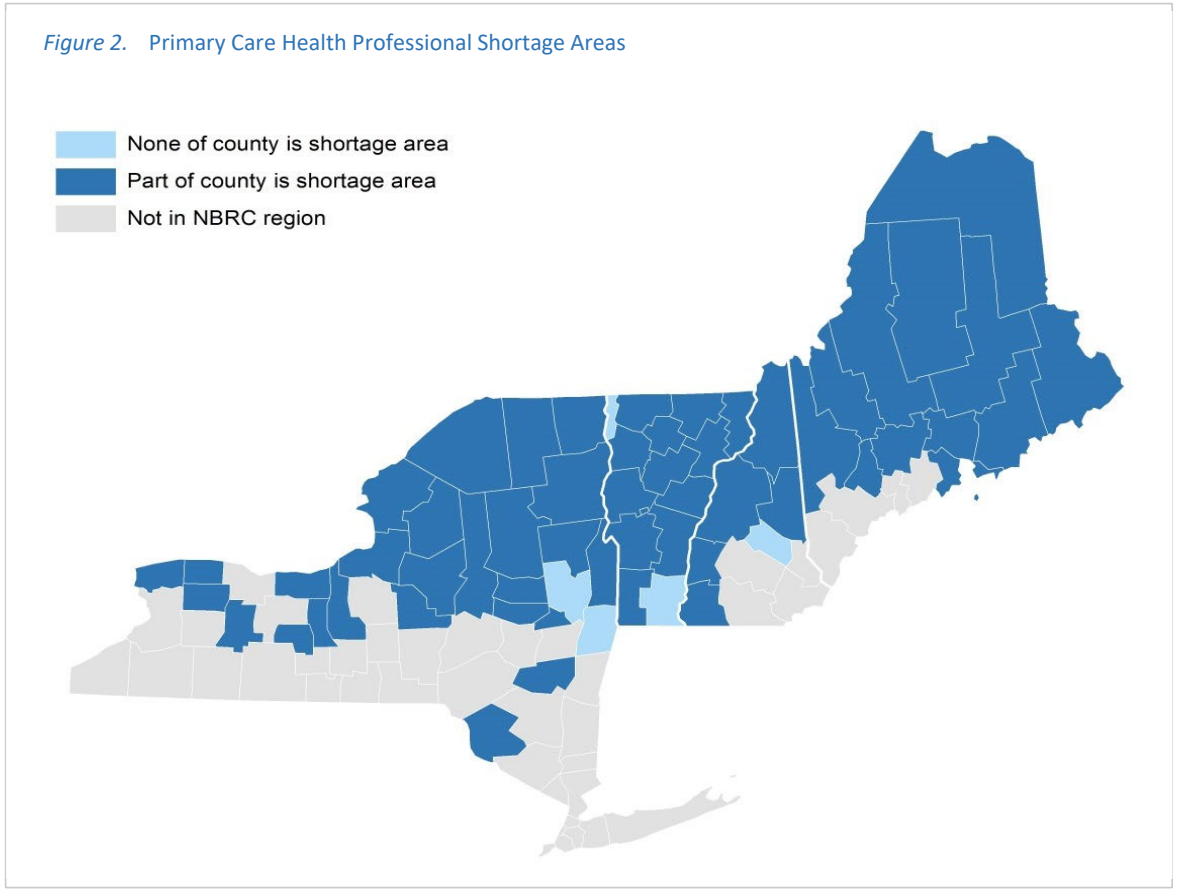
Top Five Causes of Death

Geography	Top five causes of death (Age-adjusted rate of death per 100,000 population)				
	Heart disease	Cancer	Accidents (unintentional injuries)	Chronic lower respiratory diseases	Stroke (cerebrovascular diseases)
United States	164.8	152.3	47.5	40.2	37.3
Maine	147.8	168.6	63.3	48.6	33.9
New Hampshire	148.7	153.7	62.6	40.8	27.9
New York	173.7	141.5	33.7	28.6	24.9
Vermont	153.1	158.7	55.9	40.6	30.7

Data source: National Center for Health Statistics – Mortality Files, 2013-2019.

Primary Care Shortage Areas

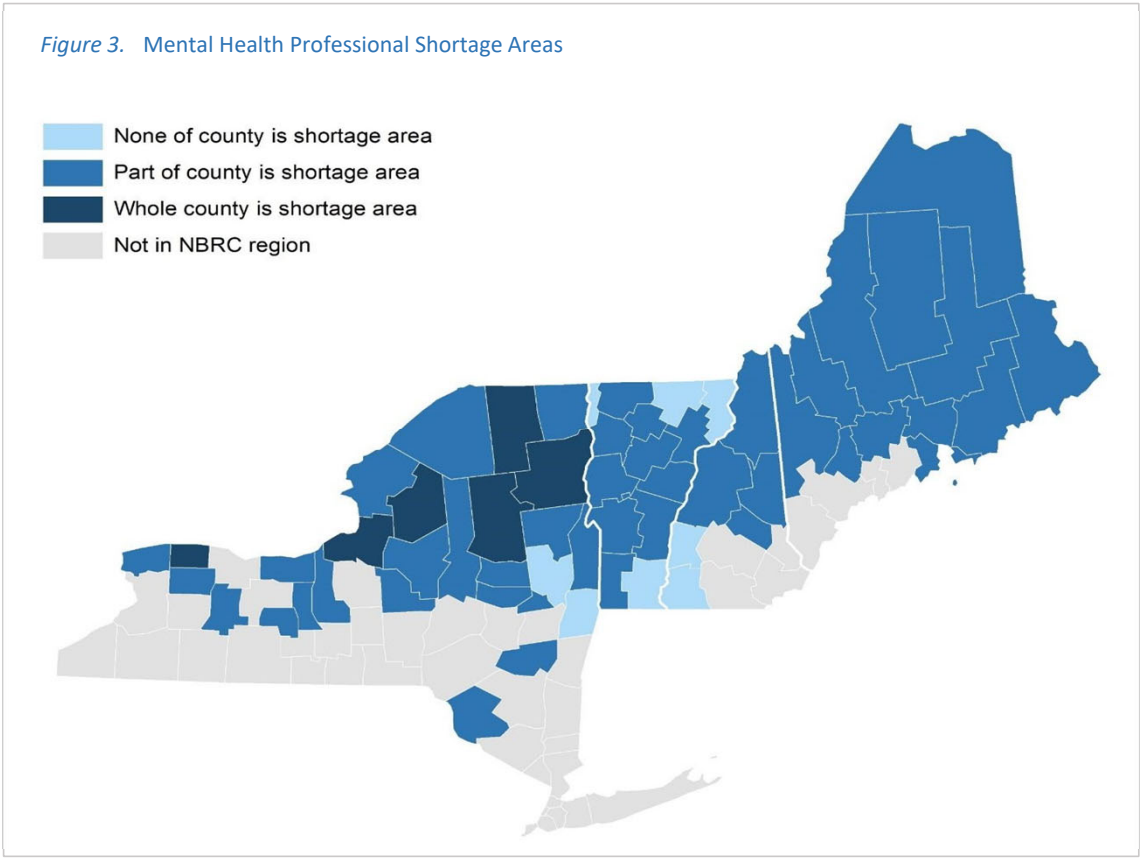
Figure 2. Primary Care Health Professional Shortage Areas



Data source: Health Resources & Services Administration, Area Health Resources Files, 2020-2021.

Mental Health Shortage Areas

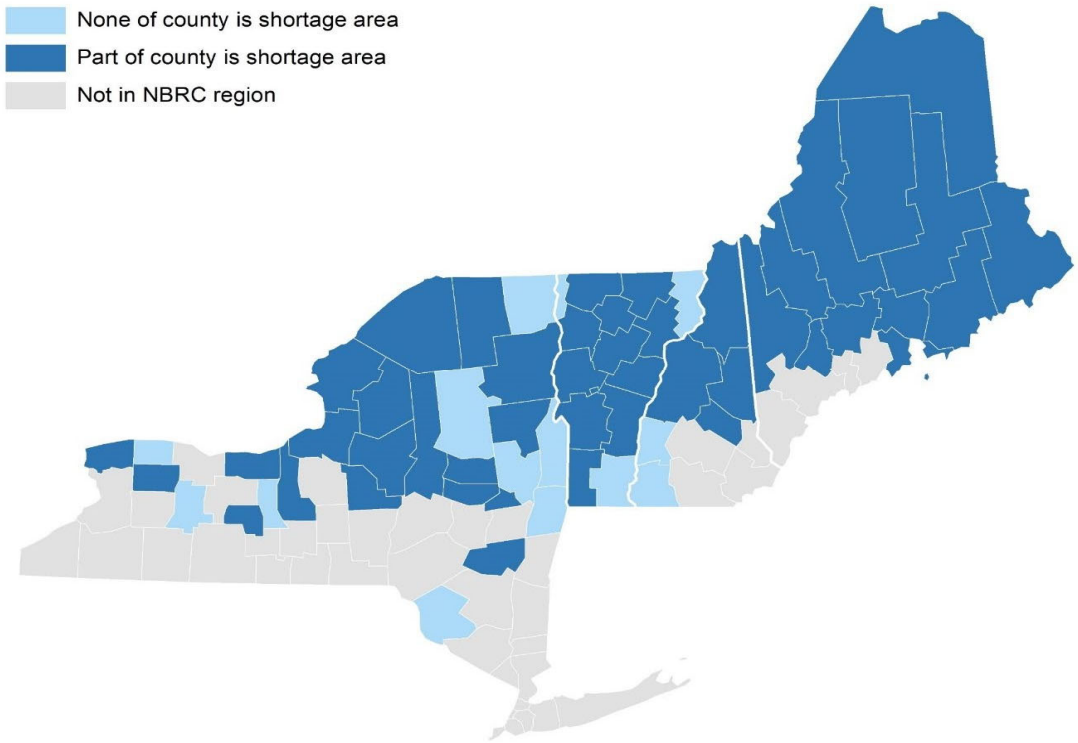
Figure 3. Mental Health Professional Shortage Areas



Data source: Health Resources & Services Administration, Area Health Resources Files, 2020-2021.

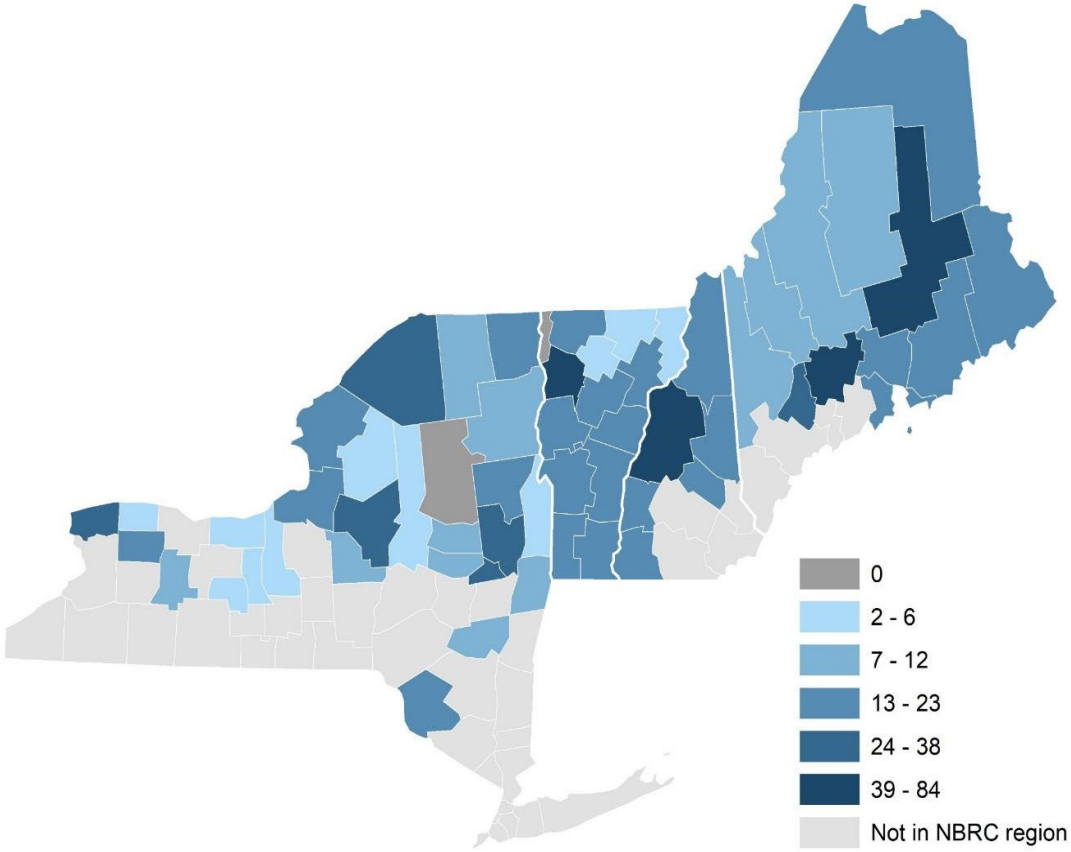
Dental Health Shortage Areas

Figure 4. Dental Health Professional Shortage Areas



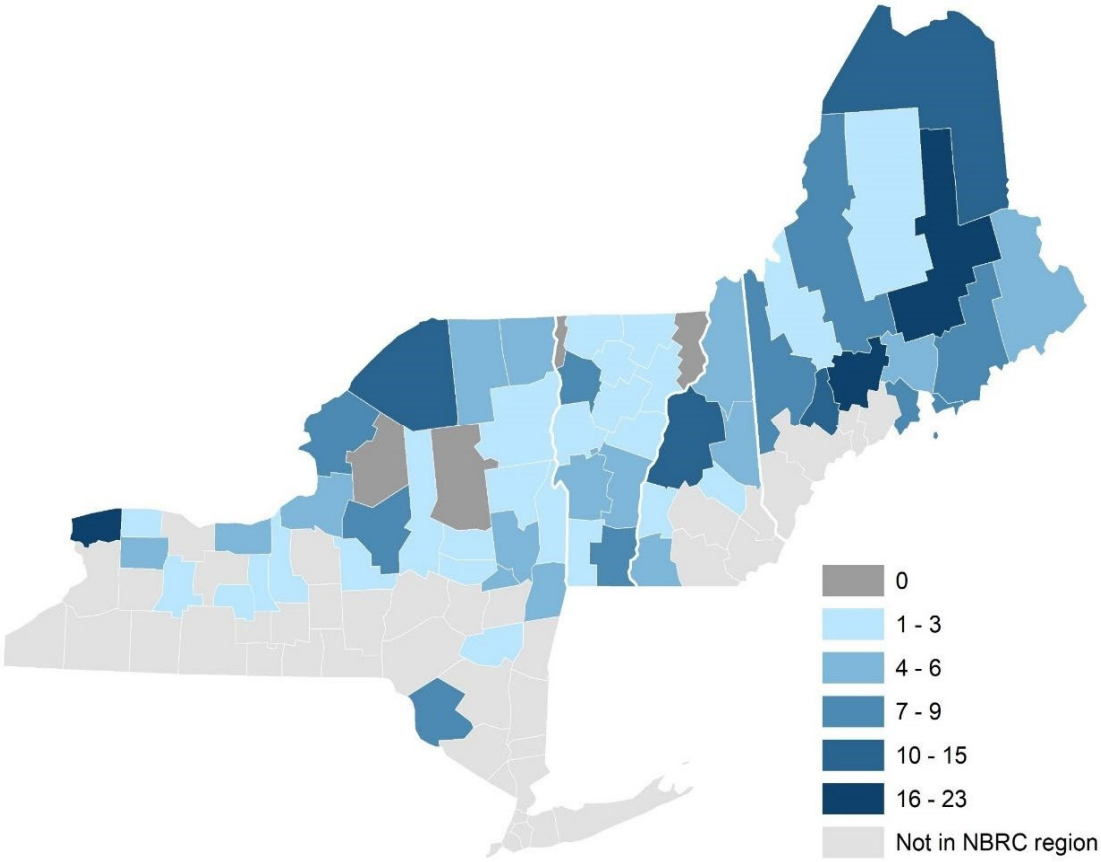
Data source: Health Resources & Services Administration, Area Health Resources Files, 2020-2021.

Buprenorphine Practitioners Per County



Data source: Substance Abuse and Mental Health Services Administration, Behavioral Health Treatment Locator, 2021

Substance Use Treatment Facilities



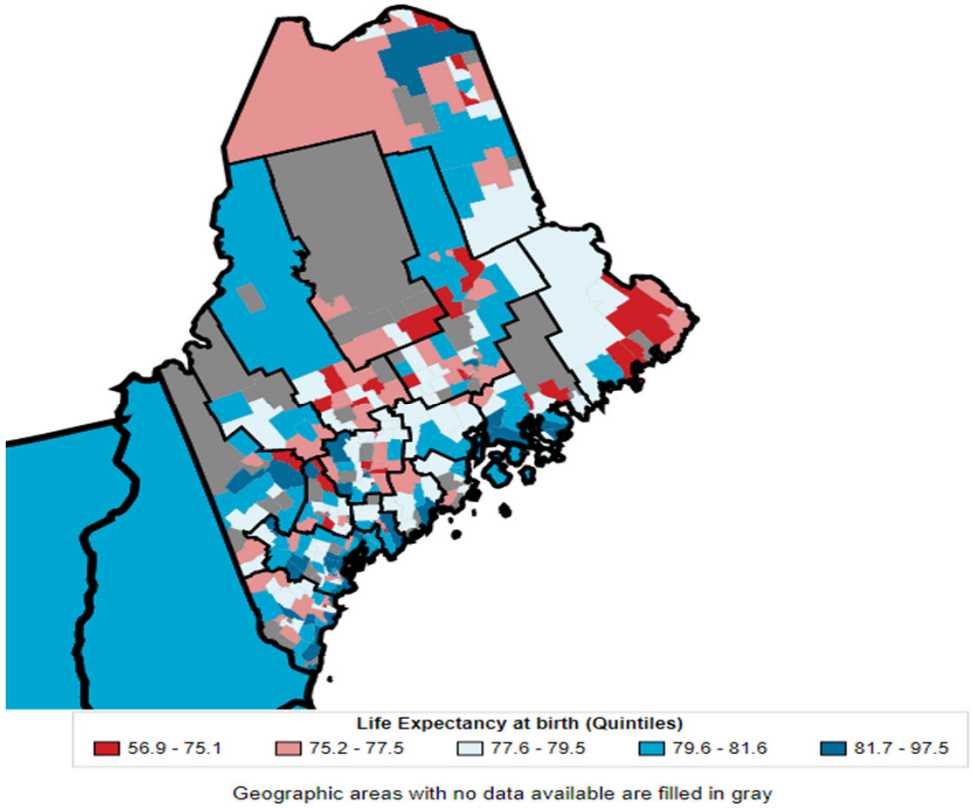
Substance Abuse and Mental Health Services Administration (SAMHSA). Behavioral Health Treatment Services Locator: About the Locator.

Rural Health and Economic Disparities

Life Expectancy by State and Gender

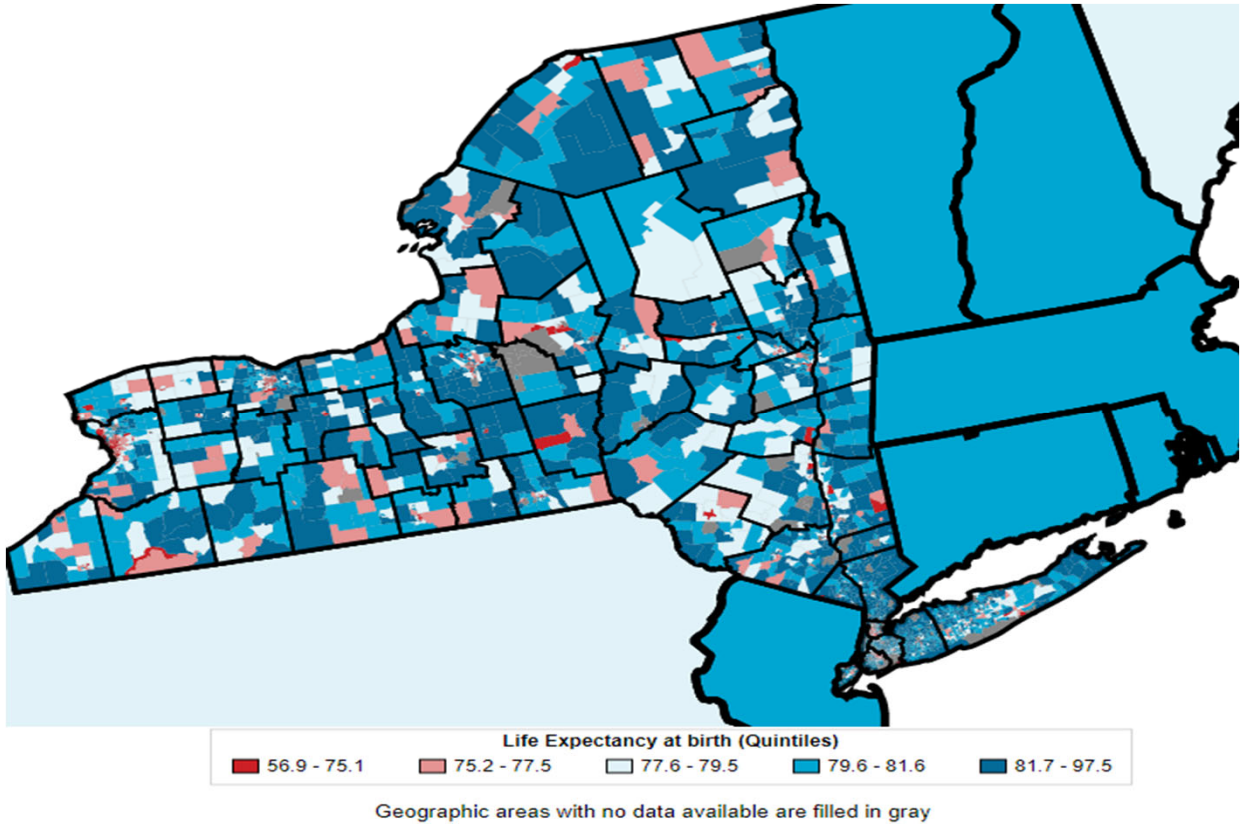
State	Total Age in Years	Female Age in Years	Male Age in Years
Connecticut	80.3	82.8	77.7
Maine	78.3	80.9	75.9
Massachusetts	80.4	82.86	80.4
New Hampshire	79.4	81.6	77.1
New York	80.7	83.1	78.2
Vermont	79.8	82.3	77.2

Life Expectancy at Birth– Maine



Tejada-Vera B, Bastian B, Arias E, Escobedo LA., Salant B, Life Expectancy Estimates by U.S. Census Tract, 2010-2015. National Center for Health Statistics. 2020.

Life Expectancy at Birth–New York



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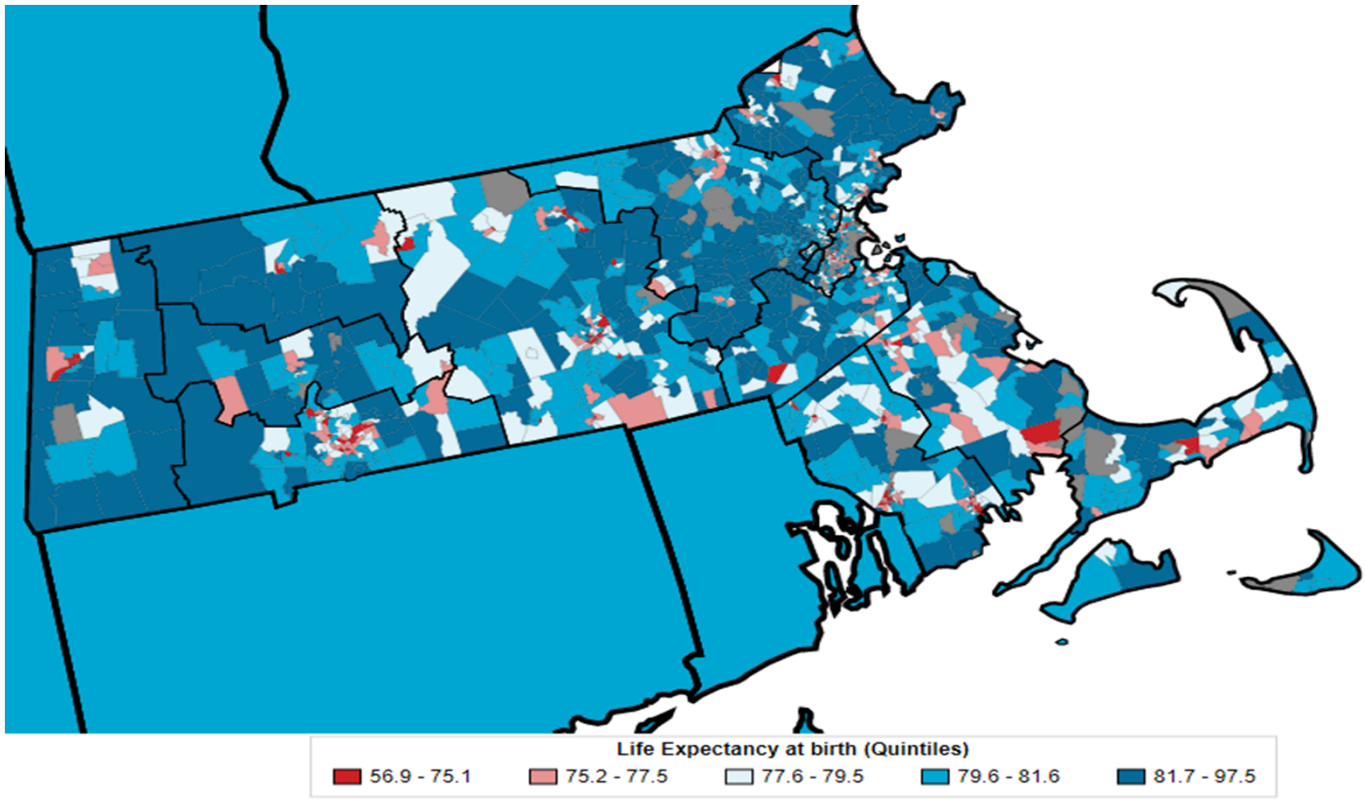
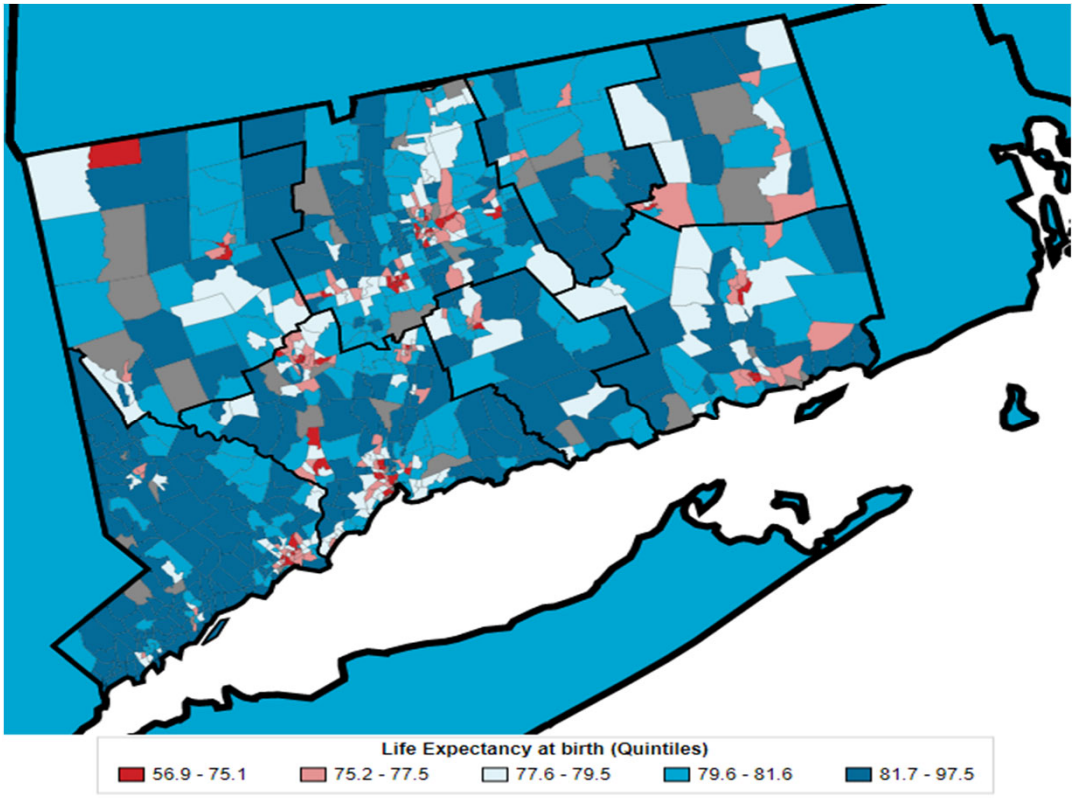
Life Expectancy at Birth–Massachusetts



Tejada-Vera B, Bastian B, Arias E, Escobedo LA., Salant B, Life Expectancy Estimates by U.S. Census Tract, 2010-2015. National Center for Health Statistics. 2020.

Life Expectancy at Birth–Connecticut



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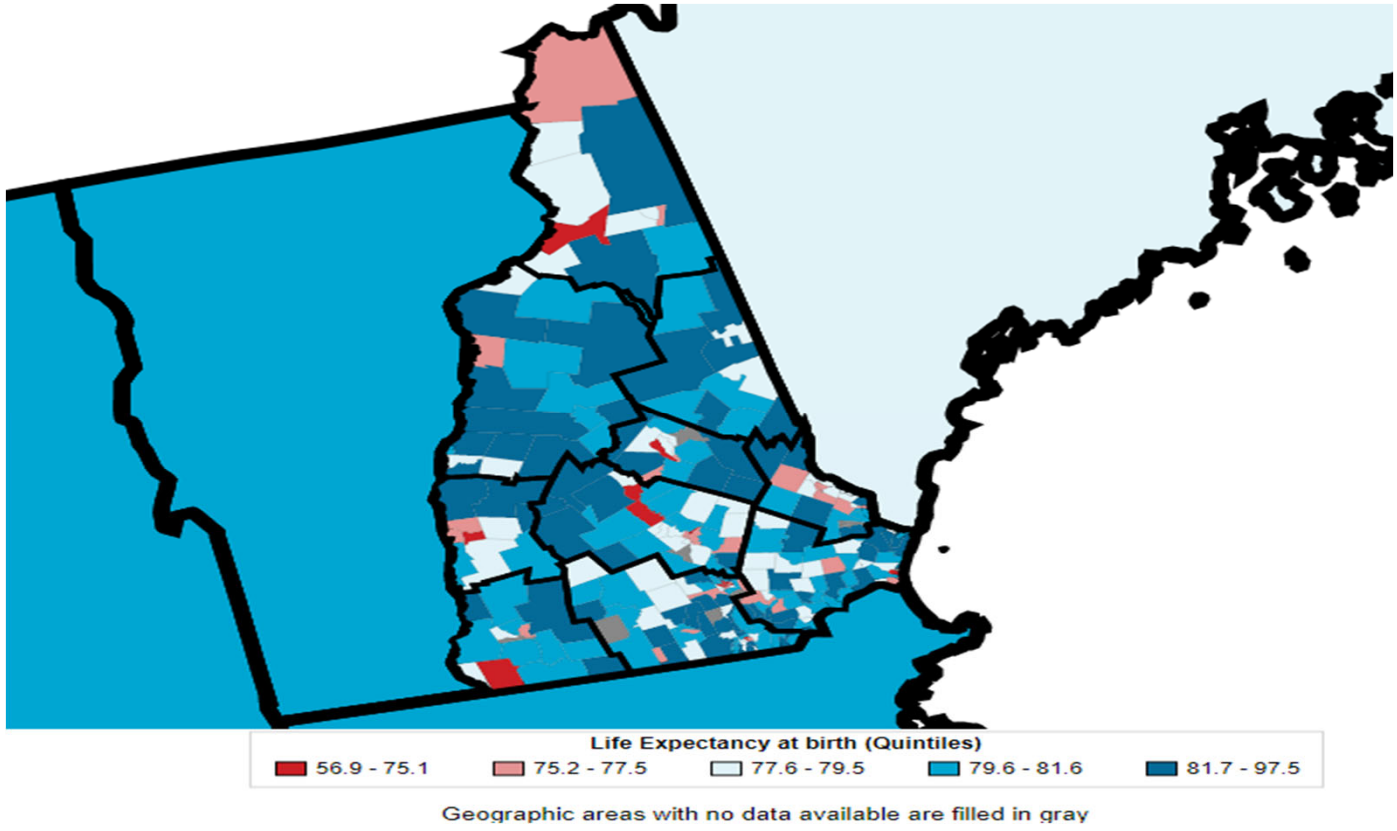
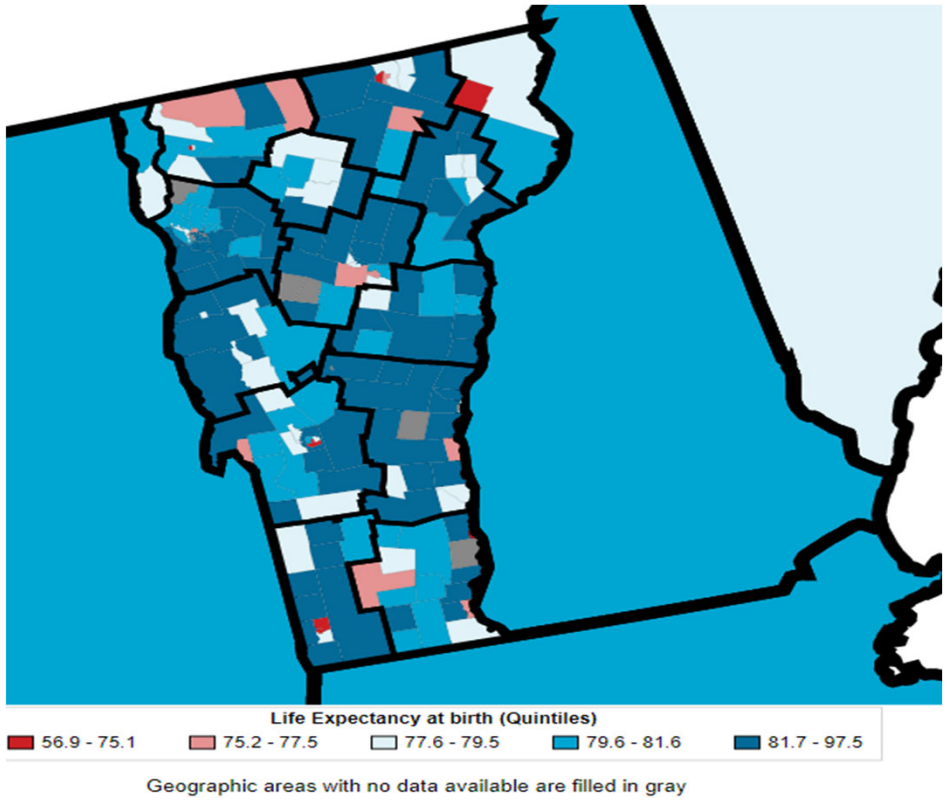
Life Expectancy at Birth–New Hampshire



Tejada-Vera B, Bastian B, Arias E, Escobedo LA., Salant B, Life Expectancy Estimates by U.S. Census Tract, 2010-2015. National Center for Health Statistics. 2020.

Life Expectancy at Birth–Vermont



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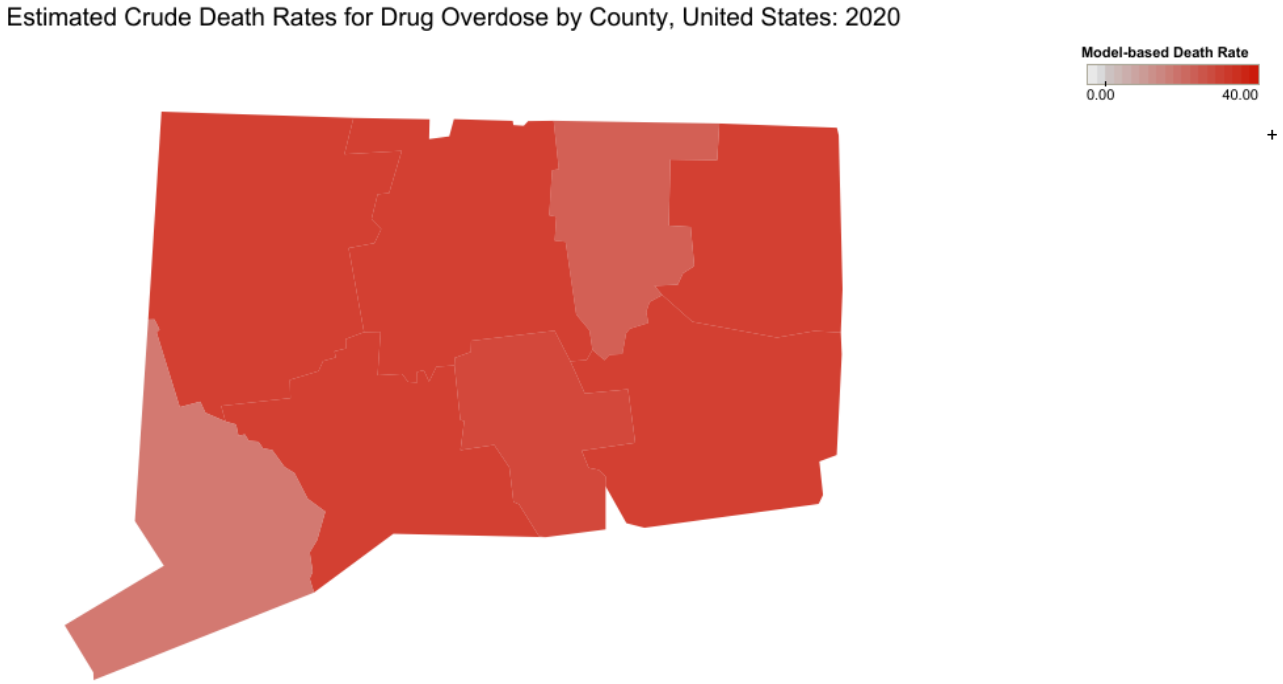
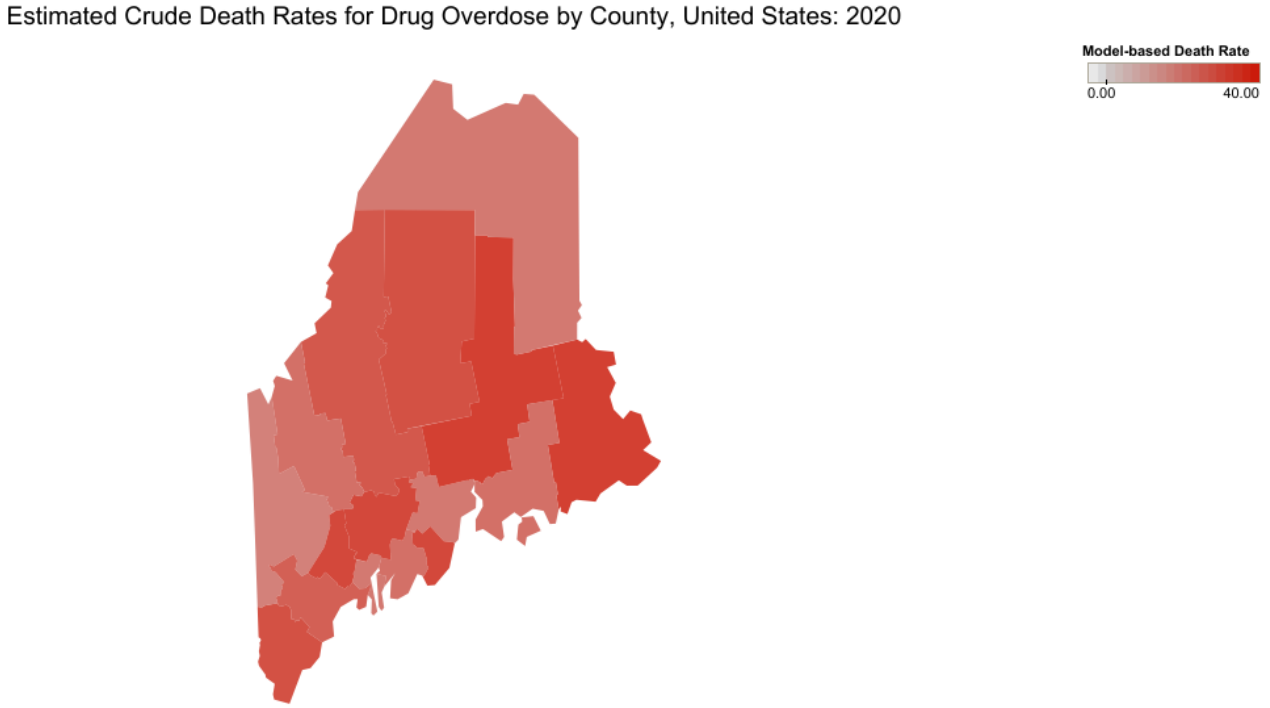
Drug Overdose Death Rates by County – Connecticut



Rossen LM, Bastian B, Warner M, Khan D, Chong Y. Drug poisoning mortality: United States, 2003–2020. National Center for Health Statistics. 2022. (Available from: https://www.cdc.gov/nchs/data-visualization/drug-poisoning-mortality/).

Drug Overdose Death Rates by County – Maine



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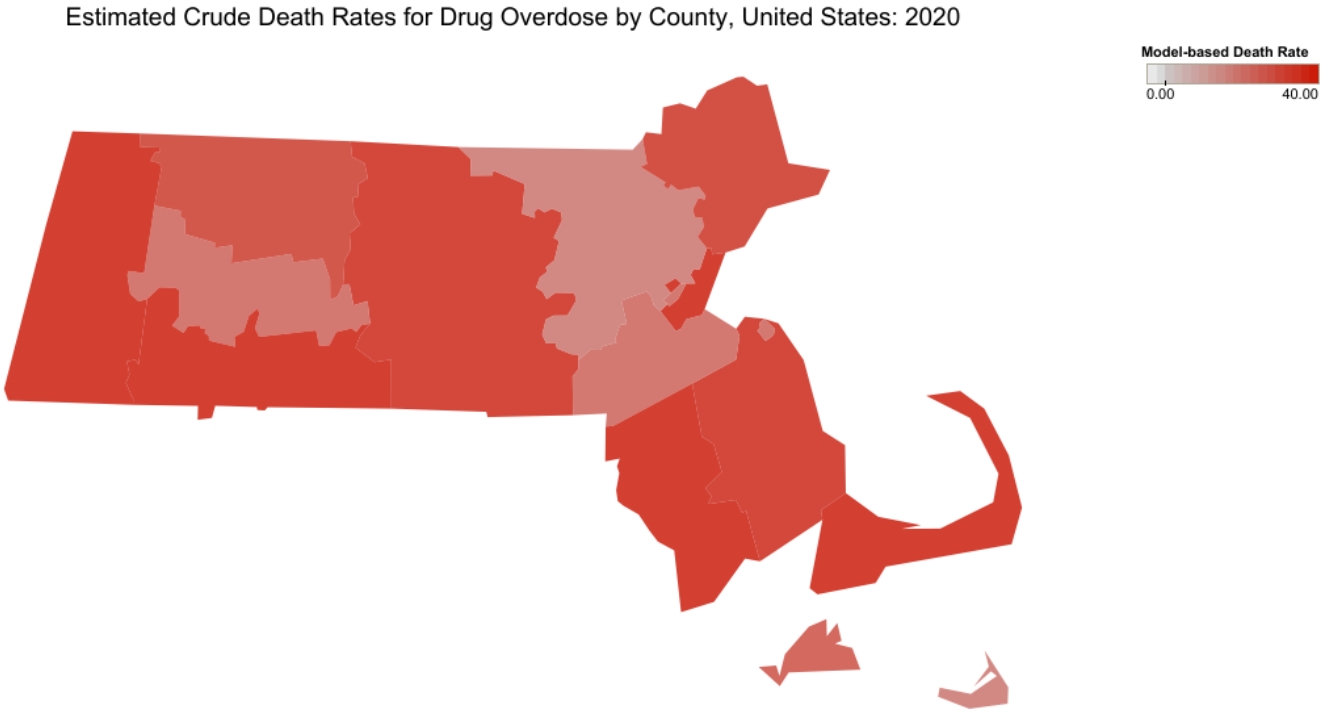
Drug Overdose Death Rates by County – Massachusetts



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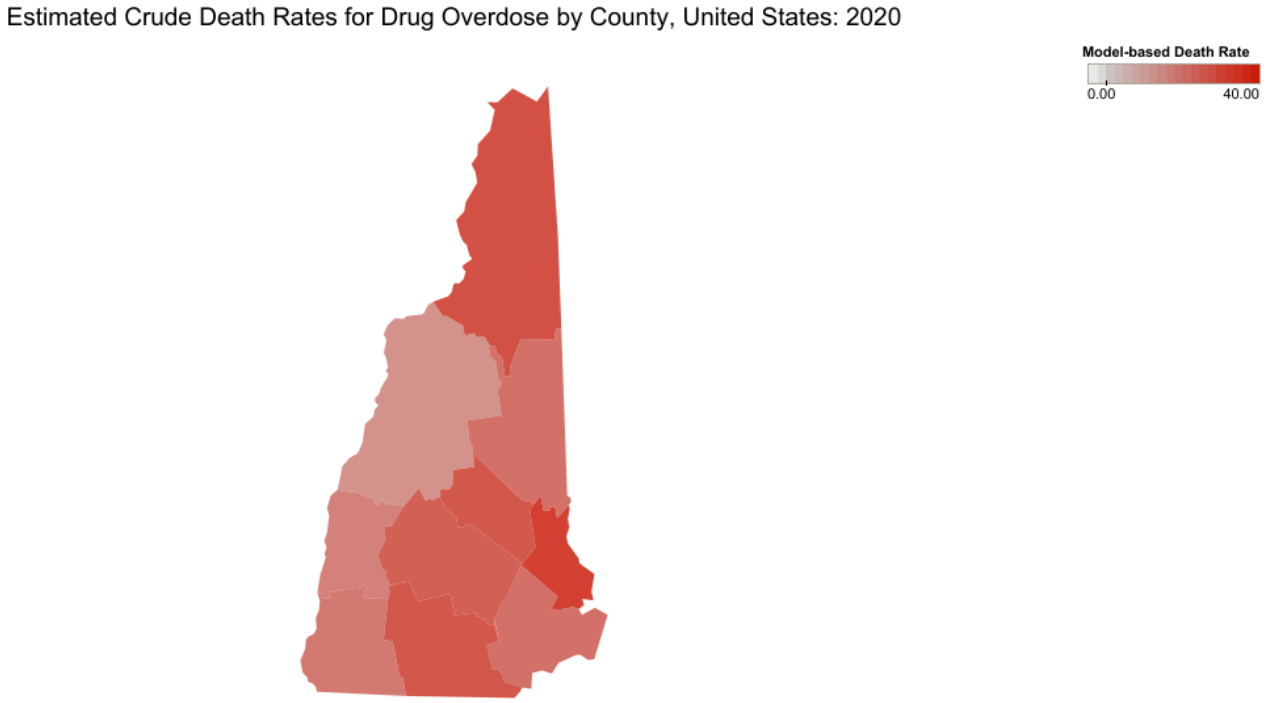
Drug Overdose Death Rates by County – New Hampshire



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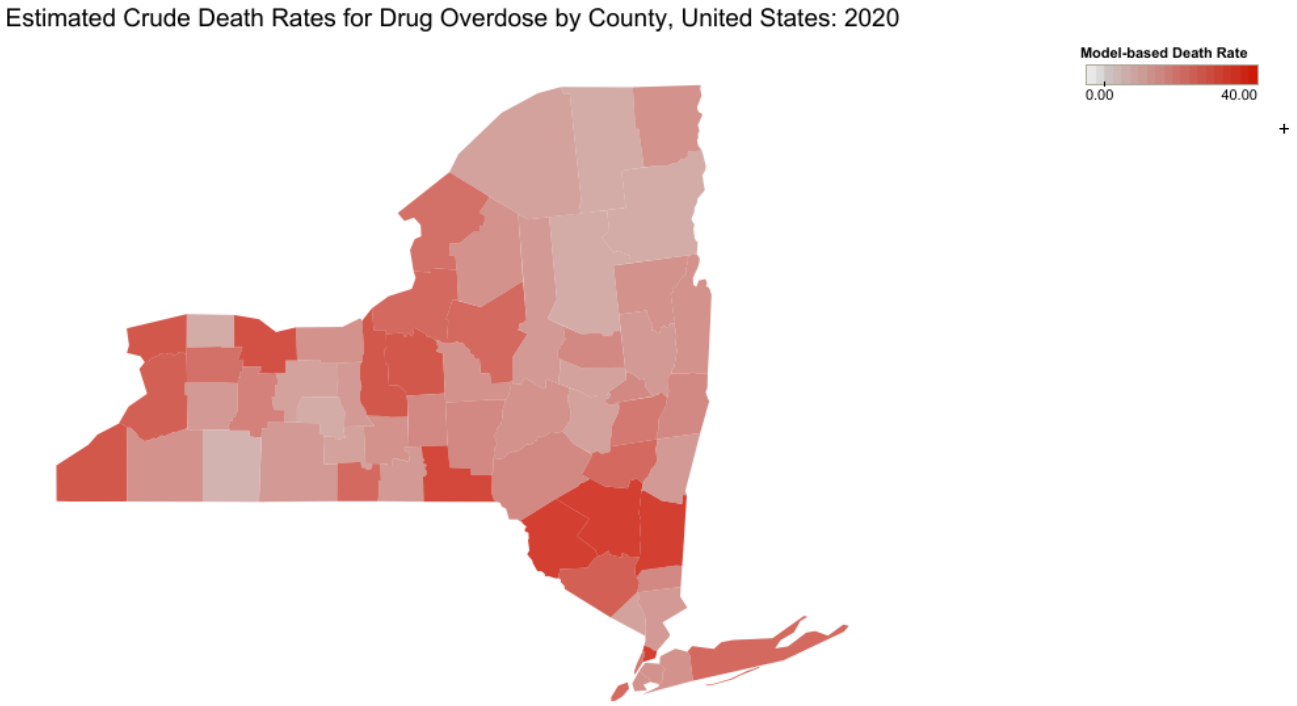
Drug Overdose Death Rates by County – New York



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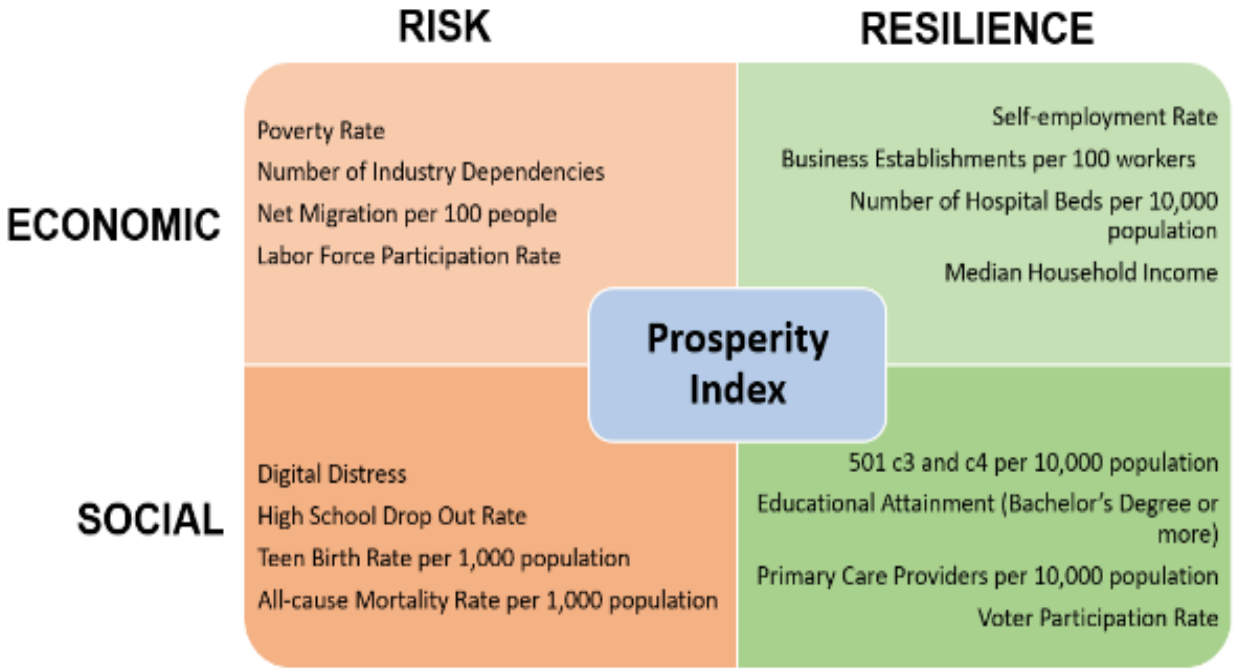
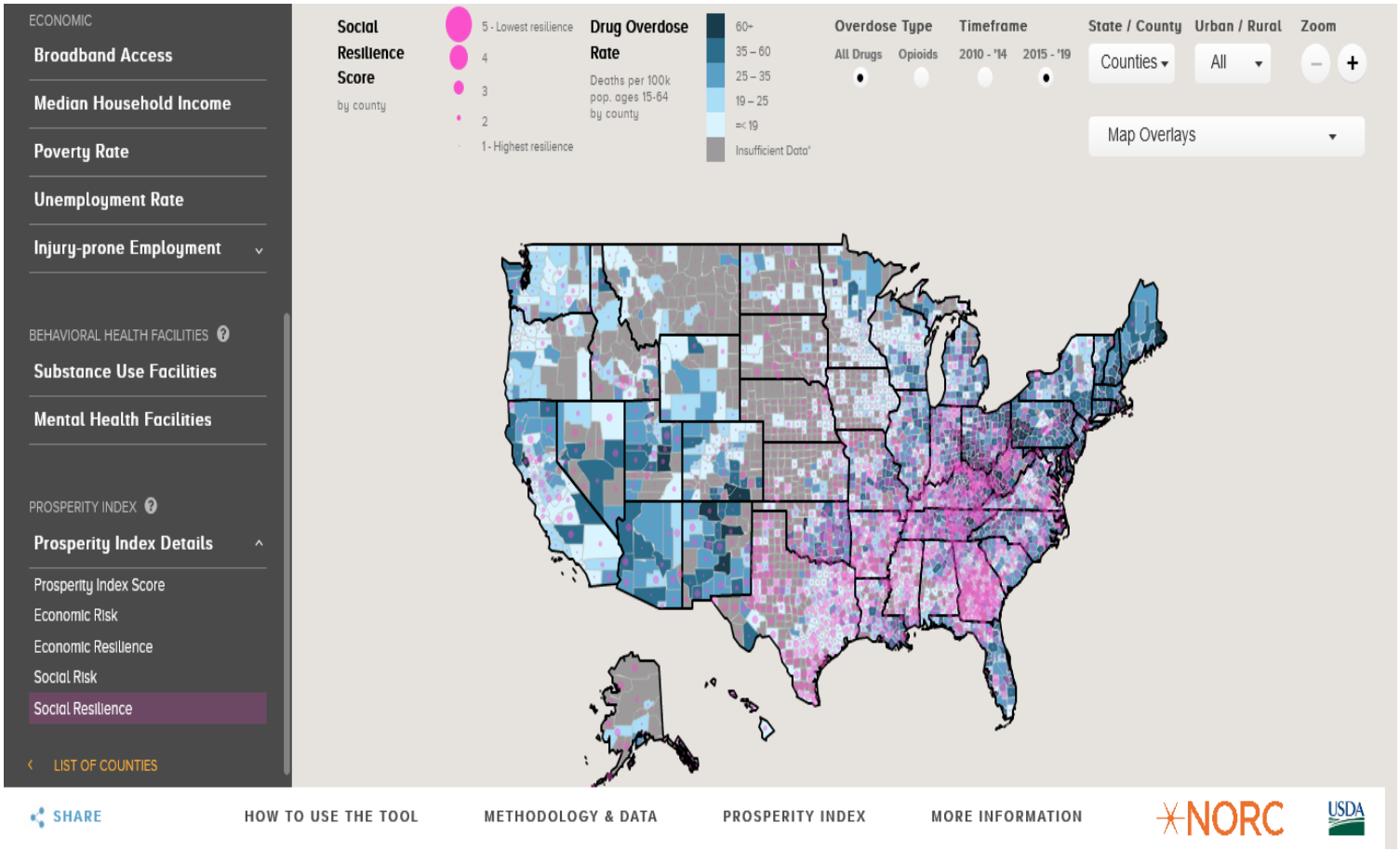
Resiliency

NORC's Prosperity Index



https://opioidmisusetool.norc.org/

NORC Overdose Mapping Tool



Challenges

Continuing Rural Workforce Shortages

- Government Accounting Office estimates shortages of more than 20,000 primary care physicians (PCPs) in rural areas by 2025
- In the wake of COVID-19, rural hospitals report critical shortages of registered nurses and other essential staff.
- Workforce shortages impact rural hospitals, nursing homes, primary care clinics, emergency medical services (EMS), and public health departments
- Projected shortages of psychiatrists; clinical, counseling, and school psychologists; mental health and substance use H social workers; school counselors; and marriage and family therapists through 2025 as well as a maldistribution of these providers that favor urban areas

Financial Vulnerability of Rural Providers

- 181 rural hospitals have closed since 2005
- 453 are estimated to be at risk of closure, with more than 200 at immediate risk of closure
- More than 1/3 of rural ambulance and EMS agencies are also at risk of closure
- Nursing homes and long-term care facilities are in short supply in rural communities, and many are closing

Additional Challenges

- Increases in the pace of mergers and acquisitions
- Loss of essential services – obstetrical care, chemotherapy, and other critical services
- Continued acquisition of physician practices and employment of physicians by rural hospitals
- Declining need for inpatient hospital
- Increased competition by non-hospital providers
- Growth of advance and value-based payment models
- Growth in the adoption of Medicare Advantage plans, accountable care organizations, and managed care
- Growing influence of private equity funding

Evolving Future Challenges

- An increased focus on containing healthcare costs
- Greater demand for health equity
- Growth in patient-centered care and consumerism
- Evolution of non-traditional competitors including “retail” healthcare
- Continued transition of care from hospitals to the community and homes
- Focus on mental health and wellbeing
- Use of technology to transform healthcare

A Vision for the Future

The Future of Rural Health

Re-orienting Rural Health Systems to Emphasize Comprehensive Primary Care (primary care, wellness and prevention, mental health, substance use, chronic care management, oral health, and public health)

- ***Regional Medical Center (RMC), Manchester, IA***
  - RMC has 5 Rural Health Clinics (RHCs) that provide an expanded array of primary care and mental health services primary care in rural Iowa
- ***Weeks Medical Center (WMC), Lancaster, NH***
  - WMC has four that provide comprehensive primary care, mental health, and substance use services throughout the Lakes Region of New Hampshire. The mental health program was described as the fastest growing department in the WMC system
- ***Ozarks Community Hospital (OCH), Gravette, AR***
  - OCH operates 12 RHCs and two other clinics in rural Missouri, Arkansas, and Oklahoma and serves primarily Medicare and Medicaid patients. Most of its 12 RHCs provide comprehensive primary care as well as mental health services using a mix of staff

The Future of Rural Health

Re-imagining the Rural Hospital to reduce emphasis on inpatient beds and emphasize need services – comprehensive primary care, outpatient care, long-term care and social supports

- ***Frontier Community Health Integration Project***
  - A federal demonstration to support small, isolated critical access hospitals (CAHs) in frontier communities in eastern Montana and western North Dakota
    - Roosevelt Medical Center, Culbertson MT; McCone County Health Center, Circle MT; Dahl Memorial Healthcare Association, Ekalaka MT; Jacobson Memorial Hospital Care Center, Elgin ND; McKenzie County Healthcare Systems, Watford City ND; and Southwest Healthcare Services, Bowman ND
  - Provides cost-based reimbursement to expand access to needed services in isolated areas including:
    - Hospital owned ambulance services
    - Up to 10 additional swing beds (above the 25 acute/swing beds limit for CAHs) to allow for expanded skilled nursing and long-term care services
    - Distant and originating site telehealth services to provide expanded access to specialty care, remote patient monitoring, chronic care management, and direct care services by hospital staff

The Future of Rural Health (cont'd)

Re-engaging Rural Communities

- Implement community engagement tools to assist communities in taking control of their health systems
- Reducing loss of community input and control
- Reducing bypass behavior

Maine - Making Informed Decisions about Rural EMS

The Informed Community Self-Determination Model was developed by a team in Maine to engage residents of St. George in making informed decisions about their struggling EMS system through:

1. Assessment of the reality and adequacy of the current EMS system (response, operational, and financial characteristics as well as clinical level and performance)
2. Alternative models and cost impact (what levels of services and response capacity, outside of the box alternatives, costs of each alternative)
3. Decision makers forum (broad representation of interests, reports from meetings, straw poll)
4. Choose operating model and commit to funding (designate follow up reporting)

The Future of Rural Health

- Rebuilding the Rural Health Workforce by:
  - Expanding the use of team-based care
  - Explore new staffing types
  - Use technology such as telehealth and artificial intelligence using evidence-based clinical guidelines to expand access to care, transform clinical paradigms, and improve provider productivity
    - ***Forward in Los Angeles, CA*** is a direct care model that charges members a $149 monthly fee. There are no copays or deductibles. An iPad, not a receptionist, checks patients in and a body scanner records a patient's pulse, oxygen level, height, weight and temperature during the visit. There is no computer between a physician and patient, as medical information appears on a large wall monitor powered by artificial intelligence and predictive analytics. Forward uses technology to reduce payroll costs and create better outcomes for patients. Forward uses AI to follow what doctors do, step-by-step.

Revisiting the Ideal Rural Health

- Please think about your notes from the beginning of this presentation. Is there anything you would change based on what you heard today?
- Any questions or comments?

Contact Information

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Maine Rural Health Research Center: https://mrhrc.org/
Flex Monitoring Team: https://www.flexmonitoring.org/

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