Health Disparities Across New York's Rural Counties

By Parna Shakouri

Introduction

According to the 2020 U.S. Census data, an estimated 7.0% of New York's population, approximately 1.37 million people live in non-metro areas. As this population is rather small compared to their metropolitan counterpart, their particular needs are often overlooked or oversimplified in state public health legislation. New York's rural areas experience public health disparities unique to their own circumstances such as occupations, socio-economic status, and access to healthcare. Among common rural health disparities are an array of behavior-related issues such as mental illness, substance use disorder, and suicide. According to the Rural Health Information Hub, these challenges often include higher incidences of disease and disability, higher mortality rates, and lower life expectancy. Some rural factors include lower socioeconomic status, higher health risk behaviors, and lack of access to care providers, particularly specialists. New York is not an exception to these generalizations, in fact, it is a good example of why rural areas need particular, focused, and sustained infrastructural and community effort in order to achieve health equity. The New York State Association for Rural Health (NYSARH) is an excellent forum to work toward health equity for such disparities.

The New York State Association for Rural Health or NYSARH is a non-profit organization whose mission is to "improve the health and wellbeing of rural New Yorkers and their communities." As of 2020, NYSARH has memberships from 50 out of New York's 62 counties. With support and partnership with community members and other institutions, NYSARH acts as a "voice for rural health" by assessing rural health disparities and their underlying causes, raising public awareness, advocating for rural health resources, and providing meaningful information and analysis of the rural health perspective to legislators, lawmakers, and healthcare providers. Through this research project, two particular areas of disparity across New York's rural and urban counties have been identified as areas of focus for NYSARH. Additionally, through a literature review and interviews with public health workers in Madison

County, a series of policy recommendations have been included to address some of the needs of the community in combating these disparities.

Prevention Agenda Tracking Dashboard

The Prevention Agenda 2019-2024 is New York State's Health Improvement Plan which provides guidelines for state and local entities to strive toward health equity across populations that experience disparities. The quantitative and qualitative data in the dashboard are updated at the request of the Department of Health and by the New York State Public Health and Health Planning Council in partnership with over 100 non-profit, academic, public, and private institutions. The 2019-2024 Agenda is the third installation since the project's inception in 2008. The dashboard was most recently updated on October 2, 2023, to create a more user-friendly interface. Various public health indicators are available in the form of state-wide data, fewer on the county-based level, and fewest on the sub-county level. All information included below is part of the most recent set of published data focusing on a two-year range from 2018 to 2020. Where data was unavailable on the dashboard, it was supplemented through the Centers for Disease Control and Prevention's WONDER database.

For the purposes of this project, the county-level data was reviewed for disparities across all counties. For a comparative analysis, counties were divided into the following three categories **very rural, rural, and urban**, per guidance from the NYSARH Policy Executive Committee members.

Very Rural	Rural	Urban
Allegany	Cattaraugus	Albany
Cortland	Cayuga	Broome
Delaware	Chemung	Chautauqua
Essex	Chenango	Dutchess
Greene	Clinton	Erie
Hamilton	Columbia	Jefferson
Lewis	Franklin	Monroe
Orleans	Fulton	Nassau
Schoharie	Genesee	Niagara

Schuyler	Herkimer	Oneida
Seneca	Livingston	Onondaga
Wyoming	Madison	Ontario
Yates	Montgomery	Orange
	Otsego	Oswego
	Putnam	Rensselaer
	Steuben	Rockland
	Sullivan	St. Lawrence
	Tioga	Saratoga
	Warren	Schenectady
	Washington	Suffolk
	Wayne	Tompkins
		Ulster
		Westchester
		Bronx
		Kings
		New York
		Queens
		Richmond

Several points of disparity were identified including **maternal and infant mortality rates**. Per the agreement of the NYSARH Policy Executive Committee, maternal and infant health was not a focus of this research project. However, **NYSARH should prioritize this topic within health disparity and public policy research within the year** as maternal health continues to persist as a critical public health issue and one of great disparity across racial and socio-economic demographics. Maternal health is also a universal indicator of the greater health of any community and provides additional insight into key opportunities for the prevention of other health disparities.

The first area of focus for this project was **suicide**. Suicide is a leading cause of death which has a disproportionate impact among rural populations, including on farmworkers and other agricultural communities (Casant et al. 2022). Across the three categories of counties in

New York, there are disparities among suicide rates based on rurality among both adults and youth between the ages of 15-19. According to the Rural Health Information Hub, suicide rates among youth living in rural areas are approximately 54% higher than among their urban counterparts and have been rising consistently over the past decade (2022). **This is consistent with the 2018-2020 data which demonstrates that New York youth are between 35.3-46.0% more likely to die by suicide if they live in rural or very rural counties (Figure 1).**

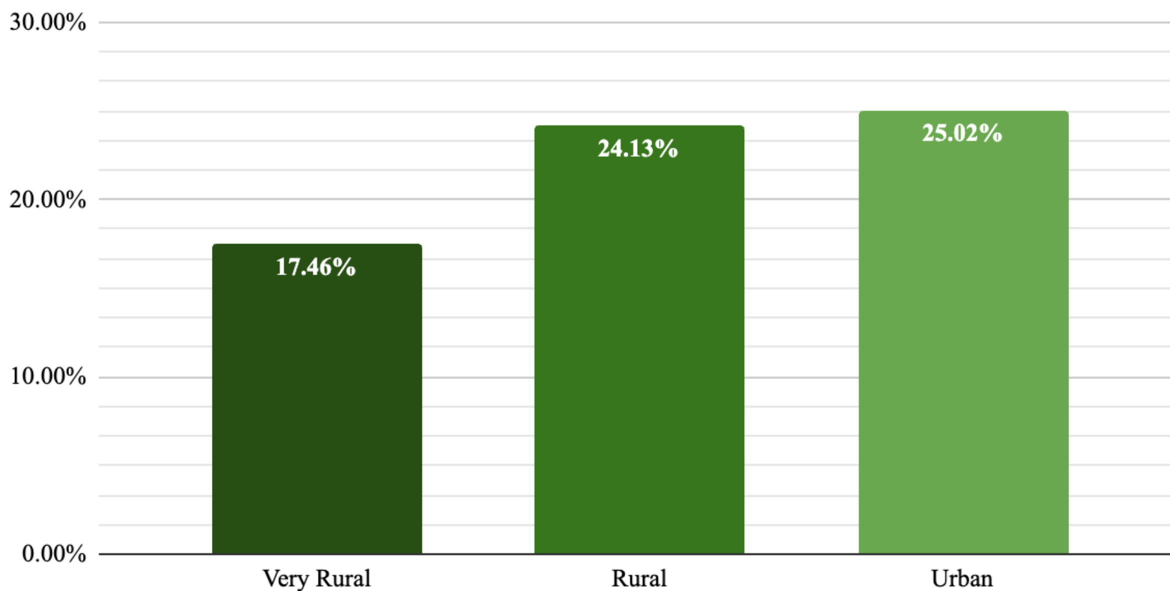
Figure 1. Suicide mortality rates across New York counties adjusted per 100,000 population.

The trend is similar among adults with an increased risk of between 33.6-40.3% in rural regions. No additional demographic information is provided to contextualize this data with regard to key indicators such as race or socio-economic status. It should also be noted that the dashboard does not provide information on rates of suicide attempts, focusing exclusively on fatal attempts.

The second area of focus for this data was a set of indicators for substance use disorder including 1) opioids, 2) tobacco, and 3) alcohol. The framing of the indicators is incredibly significant because neither account for official diagnoses of substance use disorders but rather

patterns of behavior that may indicate disordered use. While opioids were initially identified as a potential point of disparity across urban and rural counties, **further aggregation of data across multiple datasets determined that for the selected indicator, overdose deaths involving opioids, there was no apparent disparity for rural regions.** In fact, data showed that the degree of urbanism corresponds to higher rates of overdose deaths involving opioids (Figure 2).

Figure 2. Overdose deaths involving any opioids adjusted per 100,000 population.

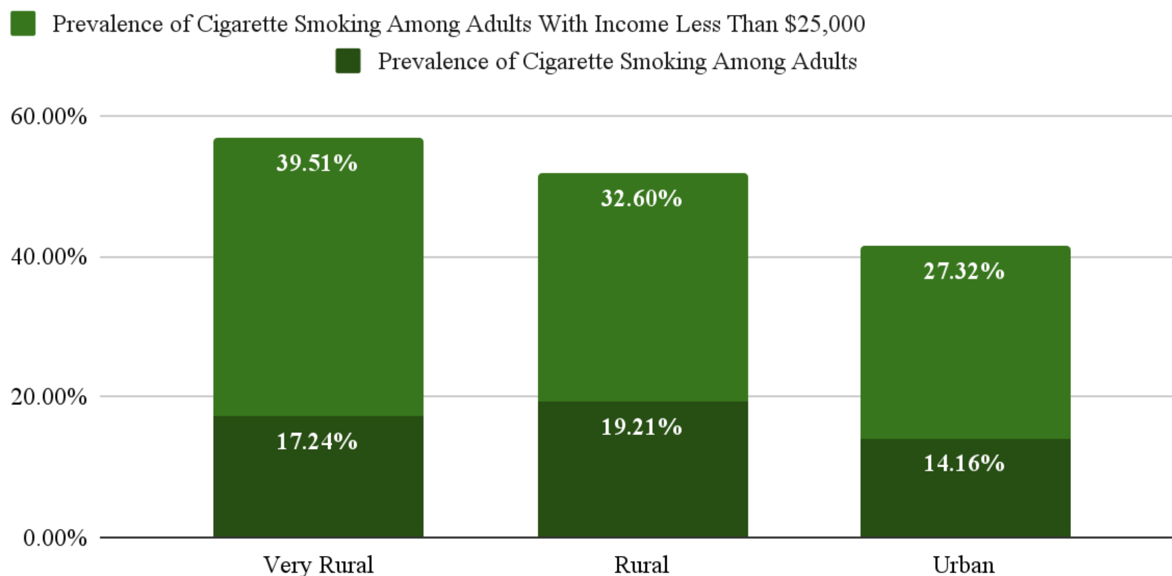


It should be noted that the limited focus of the dashboard including the phrasing of particular indicators may impact the accuracy of any data point on the dashboard including the aforementioned. Additionally, **although the average incidence of this indicator across rural areas is lower than urban ones, all regions have higher rates than the PA 2024 (state-wide) Objective which is 14.3 per 100,000. Therefore, opioid use and associated overdose occurrence are still issues central to the health of rural communities.**

Tobacco use is another common issue of focus for public health in rural communities, particularly due to the comparative lack and/or enforcement of smoking policies in open areas and less dense communities (Buettner-Schmidt et al. 2019). The American Psychological

Association suggests that youth in rural areas are at higher risk of using tobacco and that socio-economic stressors such as unemployment can have drastic effects on use among youth or adults (2023). However, the data from the dashboard does not provide any provisions pertaining to tobacco use among youth. The two major indicators are the prevalence of cigarette smoking among all adults and among adults with an income of less than $25,000. **Statistical analysis shows that adults in rural areas are between 20-30% more likely to smoke cigarettes than their urban counterparts and across the board (Figure 3).**

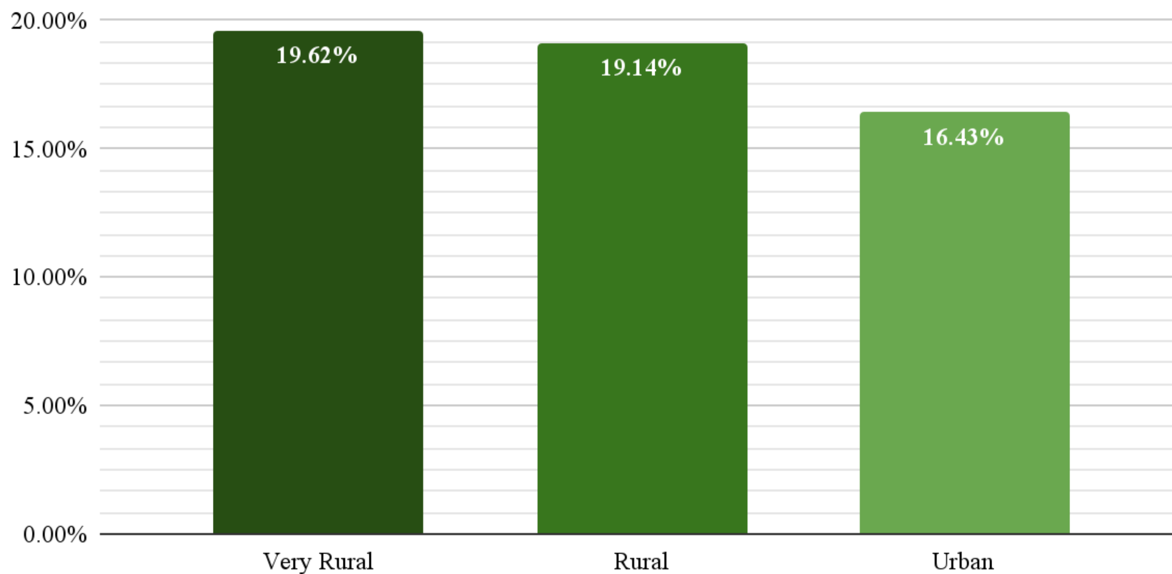
Figure 3. Prevalence of cigarette smoking among all adults and among adults with an income of less than $25,000.



The data also shows that smoking tobacco is much more prevalent among adults with lower income levels than across other demographics demonstrating a correlation between socio-economic status and substance use in the case of tobacco. This provides insight into the impact of socio-economic challenges on rural communities as well as the need to address these mechanisms through specialized efforts responding to the unique needs of the community as opposed to one generalized state-wide narrative.

The last indicator is the percentage of adults who reported binge drinking in the month leading up to the survey. This indicator is particularly problematic as it neither sufficiently proxies for all alcohol use disorders nor is it clear enough that all participants may have had similar interpretations of the question. **Still, the data shows a significant discrepancy of nearly 20% between reports of binge drinking in urban versus rural areas (Figure 4).** This is yet another example of disordered substance correlating with rural life.

Figure 4. Percentage of binge drinking among adults in the month leading to the survey.



One of the greatest challenges with conducting data collection for alcohol and other substance use is the lack of consensus on definitions and terms (Dixon et al. 2016). The various interpretations and ever-evolving nature of terms referring to drinking such as binge drinking make communication difficult and data collection less accurate and optimal.

Conclusion and Challenges

Although the Prevention Agenda includes a specific set of county-level data, this data is generally more dated and more frequently suppressed than its state-wide counterparts. Much of the federal and state-level studies are focused on state-wide research which does not accurately

reflect the disparities experienced in New York's most rural areas. This can also contribute to narrower and less specific action through policymakers and government structures. Due to the small population size and density in some rural areas, important information regarding health indicators such as those related to self-harm is suppressed to protect patient confidentiality. The suppression of public data presents barriers to research which is the foundation of many community and policy efforts for health equity.

Inaccurate and/or limited data remained the top challenge in conducting this research and although acquiring provisional data through supplemental sources such as the CDC WONDER helped alleviate that in this case, it still remains a barrier affecting all rural public health researchers. Having access to very limited accurate, timely, and contextualized data makes it more difficult for both public health workers in the field as well as legislators and other decision-makers and stakeholders to get an accurate perspective of rural health disparities. Still, the New York Prevention Agenda Tracking Dashboard is a useful tool in framing our understanding of public health issues across the state. Suicide and substance use disorders are critical points of concern for health in rural New York today. Each of the issues addressed in this research is behavioral in nature which means that addressing them in a meaningful way requires not only care but sustained dedication and persistence. These issues cannot be addressed through a magic bullet solution but rather through multifaceted and coordinated efforts by legislators, public health workers, and community members through policy, community organizing, and lifestyle changes.

Policy Recommendations

The following policy recommendations were formed based on the disparities demonstrated in the New York Prevention Agenda Tracking Dashboard as well as multiple interviews with public health workers working with governmental and nonprofit organizations in Madison County including the Madison County Health Department, BRiDGES, and the Madison County Mental Health Task Force. The interviews focused on understanding the history of each organization and the ways in which each of them comes together to work toward promoting healthy behaviors and achieving health equity in Madison County which is a rural county with a large student population and the wealth centered around Colgate University. To account for the unique circumstances of Madison County, these recommendations are more expansive and

inclusive of the limitations that rural counties with less wealth might experience. These recommendations are meant to guide NYSARH's work with other organizations in advocating for legislation that centers health equity for rural New Yorkers.

- ➢ *Securing a public health and mental health workforce*

Across the board, all public health organizations have experienced serious issues with maintaining their workforce through the COVID-19 pandemic. Even now, as we enter a post-pandemic era, American attitudes toward work seem to have shifted in a permanent way such that full-time in-person jobs are not very appealing. Beyond this, the nation has been suffering from a long-term healthcare staff shortage which also impacts rural residents disproportionately. One fundamental policy recommendation to address this is to advocate for increased state-funded public health positions or the creation of additional state-wide programming such as fellowships that situate public health workers across rural areas. Such assignments should not be limited to governmental organizations as most of the change on a community level is driven forward by nonprofits and other organizations in close and direct contact with community members. Partnerships with programs such as Public Health AmeriCorps should be strengthened through additional funding and incentives such as subsidized housing that eliminates the need for staff transportation.

- ➢ *Sustained Engagement with Nonprofit Organizations by Legislator*

There seems to be a clear understanding that across Madison County public health is a true community effort. Nonprofit organizations such as BRiDGES are key to the partnership that makes their collective impact possible yet they do not receive direct outreach or engagement from legislators. This is harmful due to the disconnect between public health workers who have direct knowledge of the community's needs and concerns and people who have direct control over addressing them. This means that even the most well-intentioned policy changes may lead to further harm. Legislators do directly engage with nonprofit organizations on occasional instances, however, a memorandum of understanding should be produced to hold all parties accountable for sustaining the relationship and clearly communicating expected outcomes.

- *Continued Collaboration with Schools*

Much of the nonprofit and community effort, especially since the onset of the pandemic, has been focused on addressing youth through the school system. This model is successful in that it engages a controlled environment and aims to create cultural and behavioral shifts in the most impressionable yet vulnerable demographic. In addition to sustaining this model in order to maximize preventative and educational efforts, the school system is also an excellent setting for collecting accurate data pertaining to community attitudes towards and practices of health. One example of this is the Madison County Teen Assessment Project Survey and although there could be improvement to its details, it provides a structured template to reproduce across other rural counties. Lastly, one of the challenges expressed by community public health workers was the inability to qualitatively measure the impact of their work on making cultural shifts. One potential recommendation is for public health researchers to work within the education system to conduct longitudinal studies that address this gap.

- *Creating and/or Funding Community Centers*

To reframe and reshape a community's understanding of and attitudes toward difficult subjects such as substance use disorder or addiction requires a shift not only at home or school but also in one's social life. Isolation is one of the risk factors for suicide that disproportionately impacts those living in rural areas. To address both of these concerns, one of the most powerful and effective methods is to create spaces for people to experience togetherness. Often referred to as a cultural or community center, such spaces would provide opportunities to spend time with others through activities such as art classes or book clubs but also have an education tone and aspect through dispensing information about relevant health-related issues. These spaces would provide opportunities to decrease isolation, interact with others, have conversations about difficult topics, and reframe attitudes and understandings toward issues experienced in one's community. One important feature of such spaces is that they are inclusive of all members of the community including youth, young adults, families, and individuals.

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