

Massachusetts Department of Public Health

COVID-19 COMMUNITY IMPACT SURVEY: RURAL COMMUNITIES SPOTLIGHT

Presented by: Kirby Lecy MPH
Coauthors: Alana LeBron and Ta-wei Lin

Results as of October 13, 2021



R E M I N D E R

This webinar is meant to be watched after you have already seen the [CCIS Introduction Webinar](#).

The introduction contains important background information explaining how to interpret these results, how we did the survey, and how to frame these findings with a racial justice lens so that we can all turn the CCIS data into action!

Visit <http://mass.gov/covidsurvey> for more!

CCIS TEAM MEMBERS

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CCIS COMMUNITY PARTNERS

Many groups that were critical in the success of this effort and gave important input on the development and deployment of the survey:

- Health Resources in Action (HRiA)
- John Snow International (JSI)
- Academic Public Health Volunteer Corps and their work with local boards of health and on social media
- Mass in Motion programs, including Springfield, Malden, and Chelsea
- Cambodian Mutual Assistance
- The Mashpee Wampanoag Tribe
- The Immigrants' Assistance Center, Inc
- Families for Justice as Healing
- City of Lawrence Mayor's Health Task Force
- The 84 Coalitions, including the Lawrence/Methuen Coalition
- Boys and Girls Clubs, including those in Fitchburg and Leominster and the Metro South area
- Chinatown Neighborhood Association
- Father Bill's
- UTEC
- MassCOSH
- Stavros Center for Independent Living
- Greater Springfield Senior Services
- Center for Living and Working
- DEAF, Inc.
- Massachusetts Commission for the Deaf and Hard of Hearing
- Viability, Inc.



PURPOSE AND INTENT

RURAL COMMUNITIES SPOTLIGHT

This webinar will share some key findings from the COVID-19 Community Impact Survey (CCIS) around the pandemic's impacts on rural communities. The goal is that these findings:

- Identify ways to advance new, collaborative solutions with community partners to solve the underlying causes of inequities
- Provide data that stakeholders at all levels can use to "make the case" for a healthy future for ALL.

Remember to watch the [CCIS Introduction Webinar](#) for important background, tools, and tips to frame these findings with a racial justice lens to turn the CCIS data into action!

Visit <http://mass.gov/covidsurvey> for all things CCIS!



POPULATION SPOTLIGHT: RURAL COMMUNITIES

Kirby Lecy
Alana LeBron
Ta-wei Lin

“Rural communities experience higher age-adjusted death rates and a higher number of potentially excess deaths from the five leading causes compared with urban areas. Higher death rates and potentially excess deaths are often associated with various interconnected societal, geographic, behavioral, and structural factors. Historic trends indicate that focusing on access to health care in rural areas of the United States alone is not sufficient to adequately address complex health outcomes, including mortality among rural populations.”

– Center for Disease Control and Prevention
Rural MMWR Series



STAKEHOLDER ENGAGEMENT

The Massachusetts Rural Council on Health (MARCH) has been an active partner in the CCIS Rural Data Spotlight. MARCH is the advisory council to the MA DPH State Office of Rural Health and is comprised of rural leaders from across the state representing many sectors.

MARCH provided direct outreach to rural communities for survey responses to ensure the rural voice and perspective was captured. They provided feedback on the data, raised up important themes, and helped identify next steps for data to action.

FRAMING MATTERS

Rural communities have unique histories and experiences.
Using equity focused frames allows us to understand their individual needs.

Dominant frames about rural communities see them as a **geographic** designation. According to this frame:

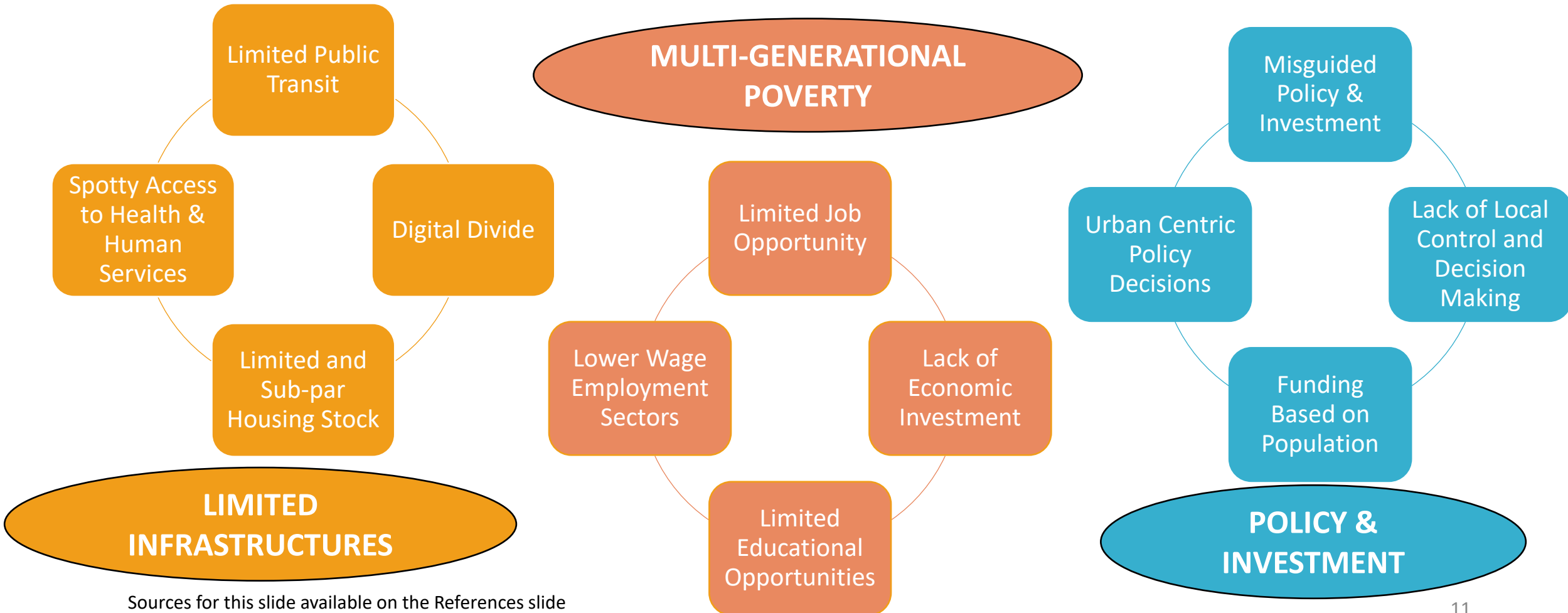
- Rural communities include areas with small population sizes and low population density.
- Rural areas are homogeneous.
- Rural communities are home to people who are less educated, politically conservative, and are not interested in getting the COVID-19 vaccine.

Equity-focused frames see rural communities as a **geography and culture**. According to this frame:

- Rural areas are made up of *diverse populations* and include individuals who have varying cultural and social beliefs.
- Rural communities are home to many vulnerable populations (seasonal workers, tribal populations, elders, LGBTQ, immigrant populations).
- Rural isolation can maximize the inequities these populations face.

STRUCTURAL BARRIERS IMPACTING RURAL COMMUNITIES

Structural barriers are obstacles that collectively affect a group disproportionately and perpetuate or maintain stark disparities in outcomes. Understanding these factors helps us to interpret data and inform the actions we take.



Sources for this slide available on the References slide

WHAT IS “RURAL”?

The Massachusetts DPH Rural Definition was created to better meet the program and policy needs of rural communities.

- There is no single definition of rural nationally.
- The MDPH State Office of Rural Health created a state definition framework in 2002 with guidance and input from rural stakeholders and leaders.
- MDPH State Office of Rural Health defines rural as towns that meet at least one of the following criteria:
 - Meet at least 1 of 3 federal rural definitions at the sub-county level (Census Bureau, OMB, or RUCAs).
 - Has a population <10,000 people and a population density below 500 people per square mile.
 - Has a hospital in the town that meets the state licensure definition of a small rural hospital or is a certified Critical Access Hospital.
 - Has a federally licensed Rural Health Clinic in the town.

THE MDPH RURAL DEFINITION

Rural towns have a very low population density and large geographic spread which creates isolation.

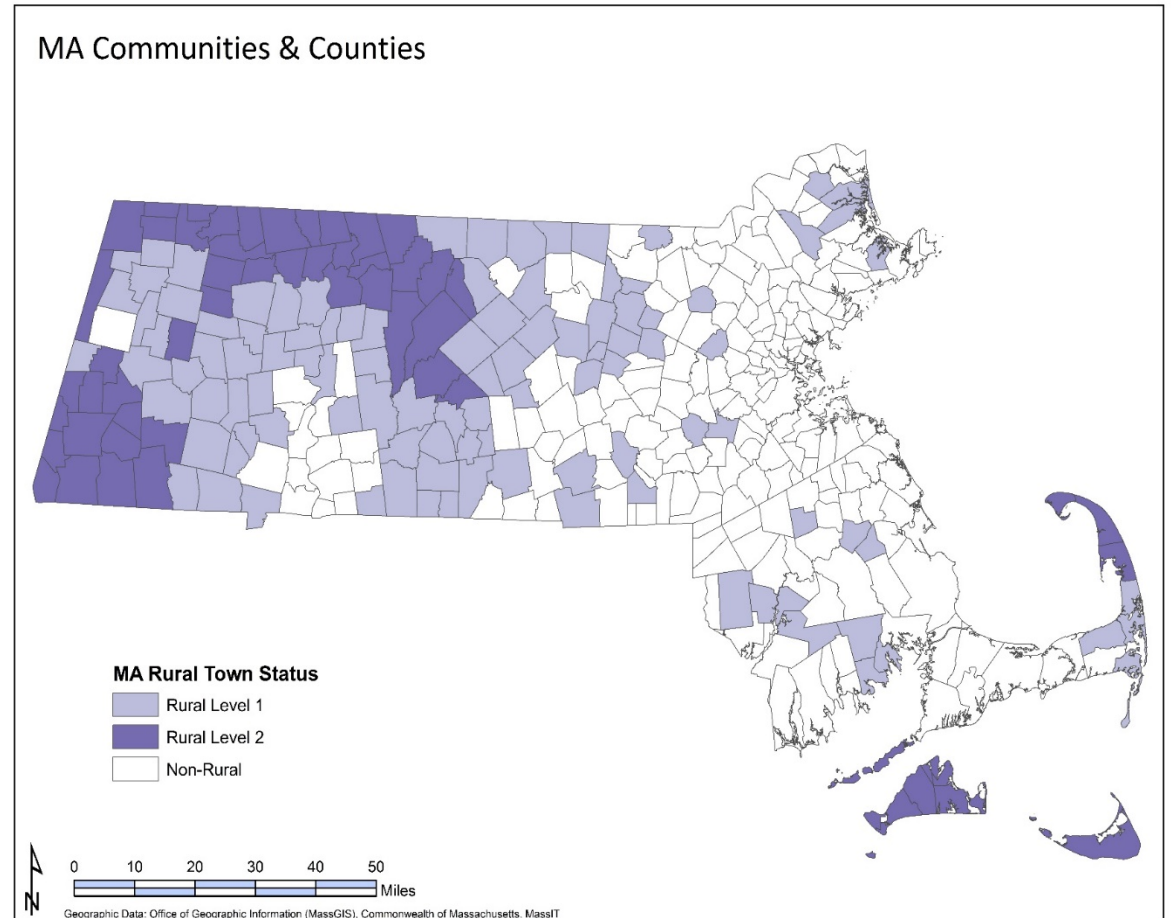
160 of
Massachusetts'
351 towns are
designated
Rural.

10% of
Residents live in
the **53%** of
land mass
designated rural.

**The MDPH Rural
Definition has two
levels of rurality**

RURAL LEVEL 2 TOWNS
are less populated,
more remote, and
isolated from urban core
areas.

RURAL LEVEL 1 TOWNS
have more population
than level 2 and are
closer to urban core
areas.



Source: MA State Office of Rural Health.

*There is no geographic definition for the “suburbs” or “metropolitan areas” within the federal classifications used by MA State Office of Rural Health.

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CCIS IS ONE OF THE LARGEST SURVEILLANCE EFFORTS TO CAPTURE THE EXPERIENCES OF RURAL COMMUNITIES

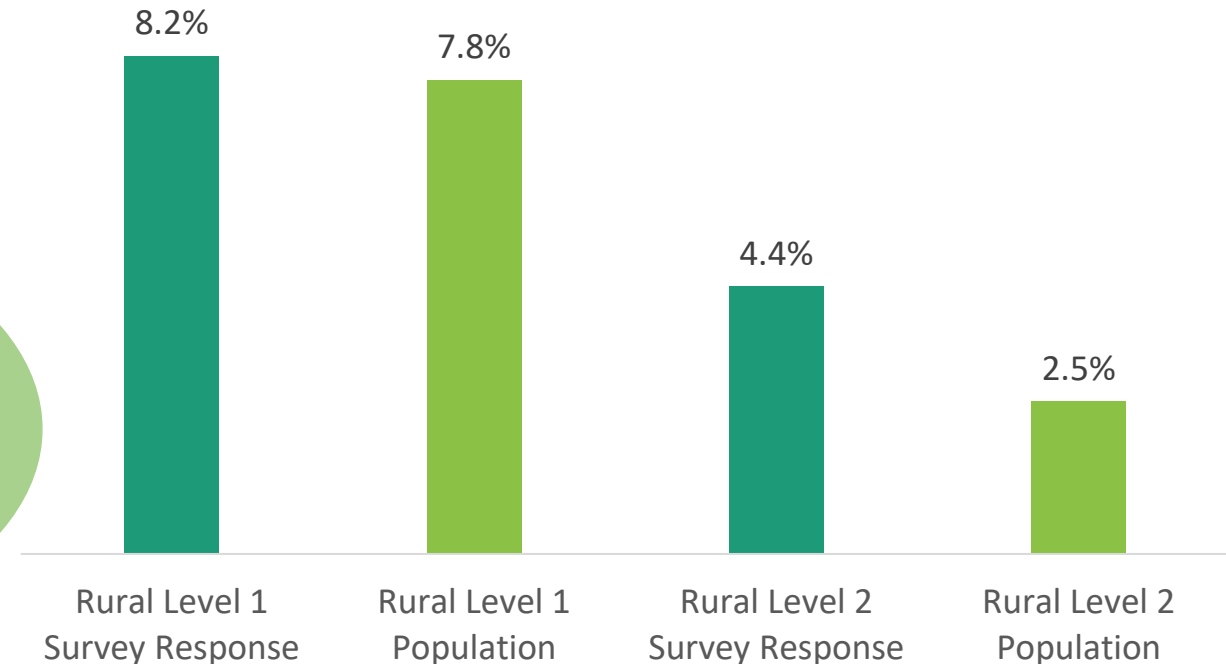
MA CCIS begins to fill an important gap in COVID-19 data for rural communities.

Over **4,200** CCIS participants were from rural towns in MA

in comparison

The 2020 the CDC Behavioral Risk Factor Surveillance System (BRFSS) only had 905 participants from rural towns in MA.

CCIS Survey Response and Rural Definition Population Levels by percent.

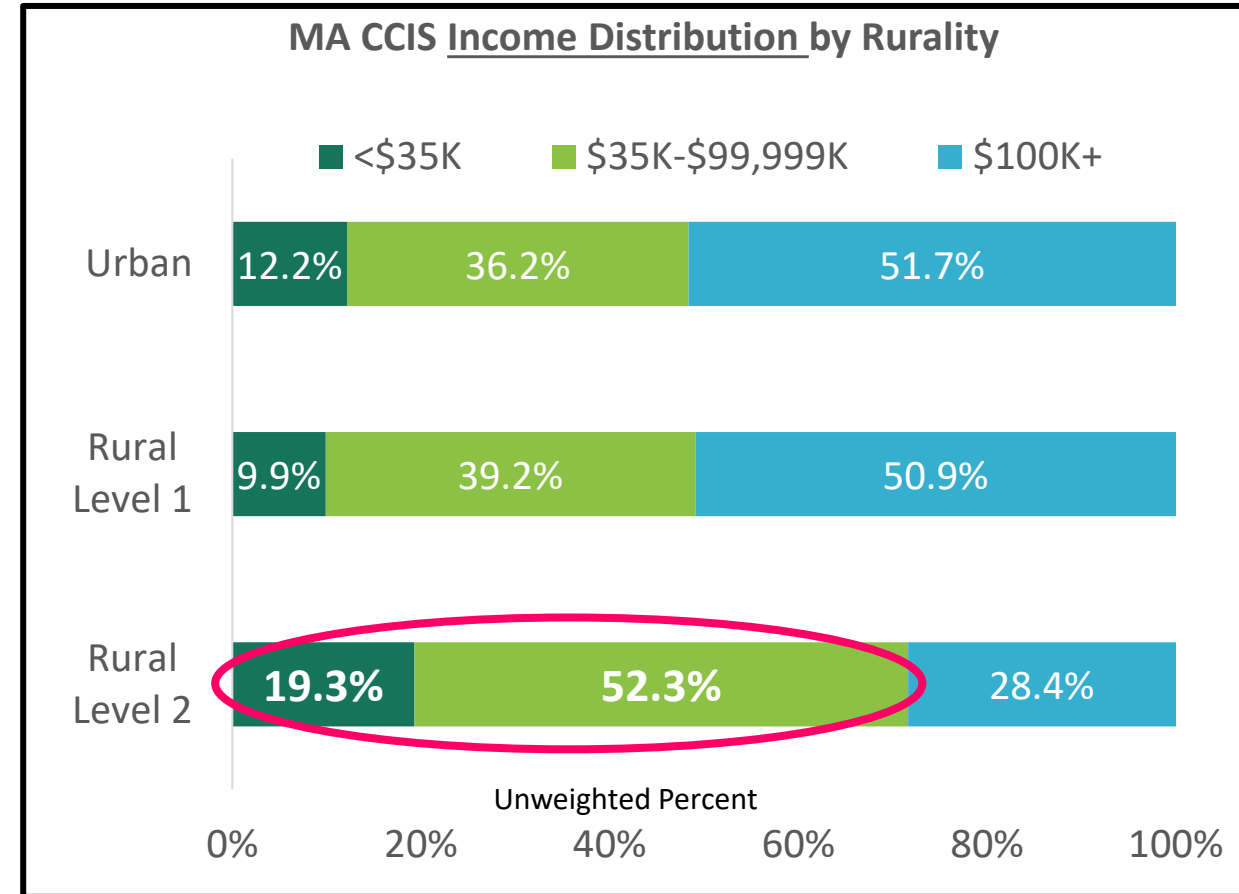
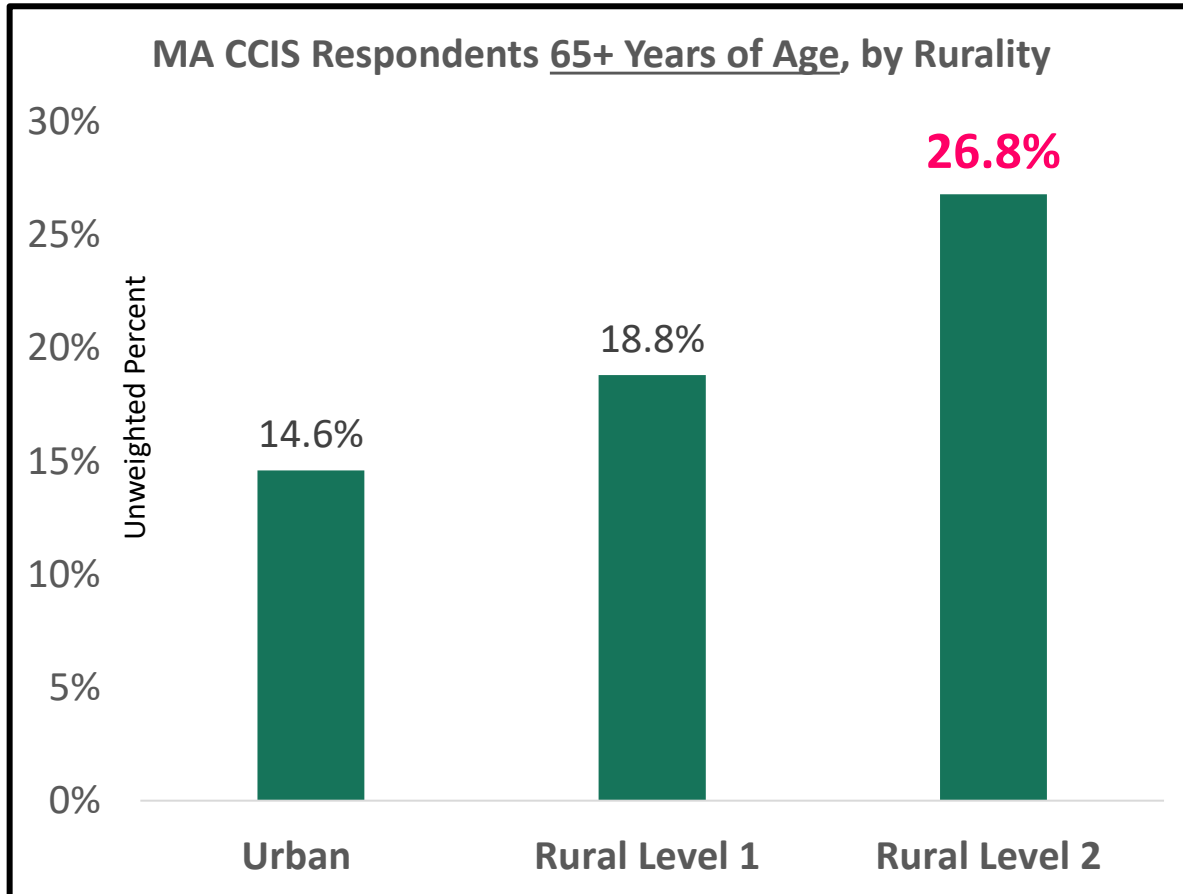


Note: Unweighted percentages shown based on 33,600 responses;
All respondents took the survey between September and November 2020.

Unweighted Percent

AGE AND INCOME BY RURAL DESIGNATION

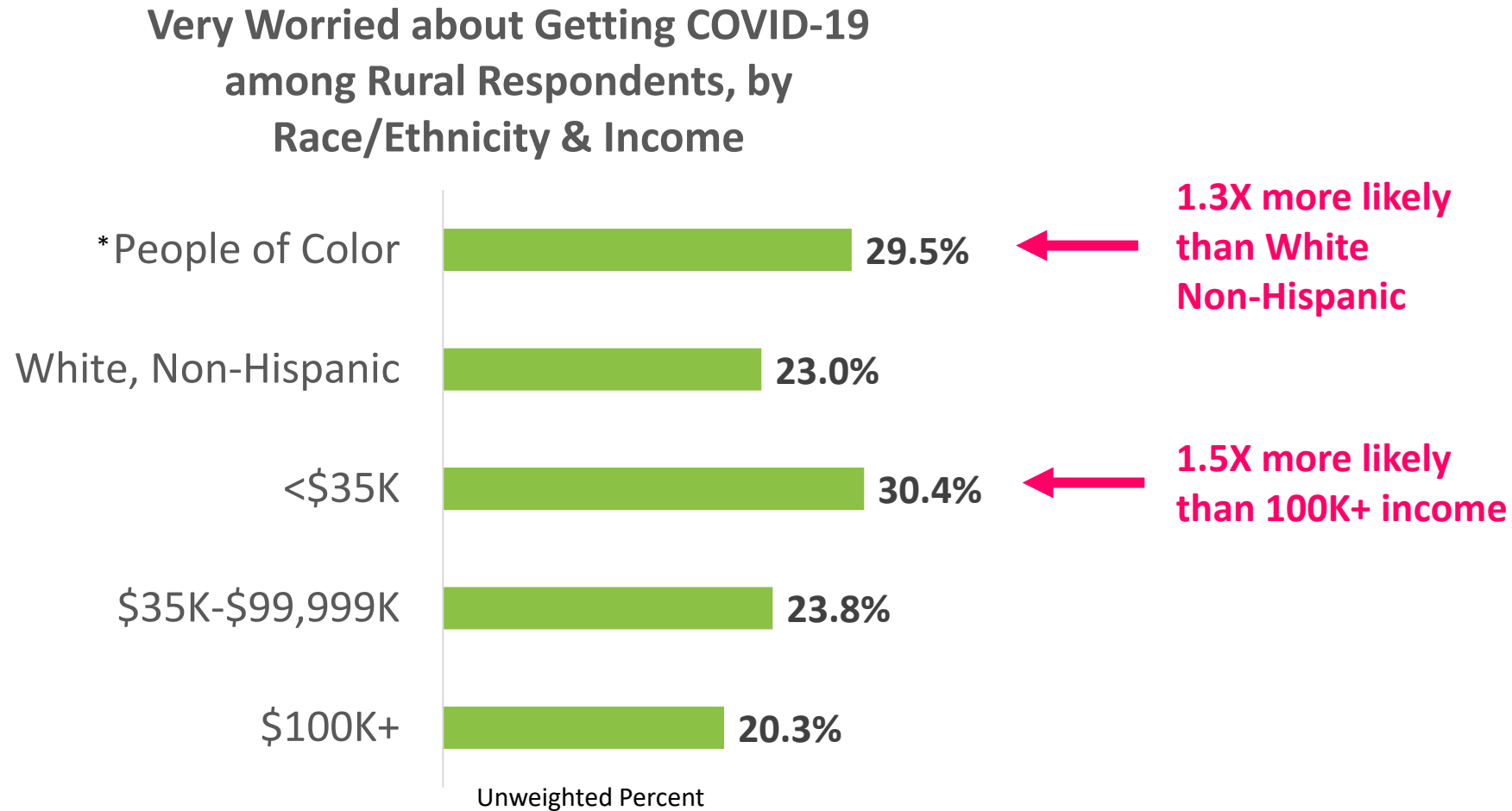
The more rural the community, the **older the population** is and the more likely they are to **be low to moderate income**.



Note: Unweighted percentages shown based on 33,600 responses for age and 31,311 responses for income.
Difference in age and income distribution by rurality is statistically significant at $p < 0.05$

CONCERN ABOUT GETTING COVID-19 IS HIGHER AMONG RURAL RESPONDENTS OF COLOR AND WITH LOWER SOCIOECONOMIC STATUS

Rural Respondents were less worried overall about getting COVID-19, compared urban (29.3%) respondents. However, levels of concern were not the same across all rural populations. For example, people of color and residents with lower income reported higher levels of concern.



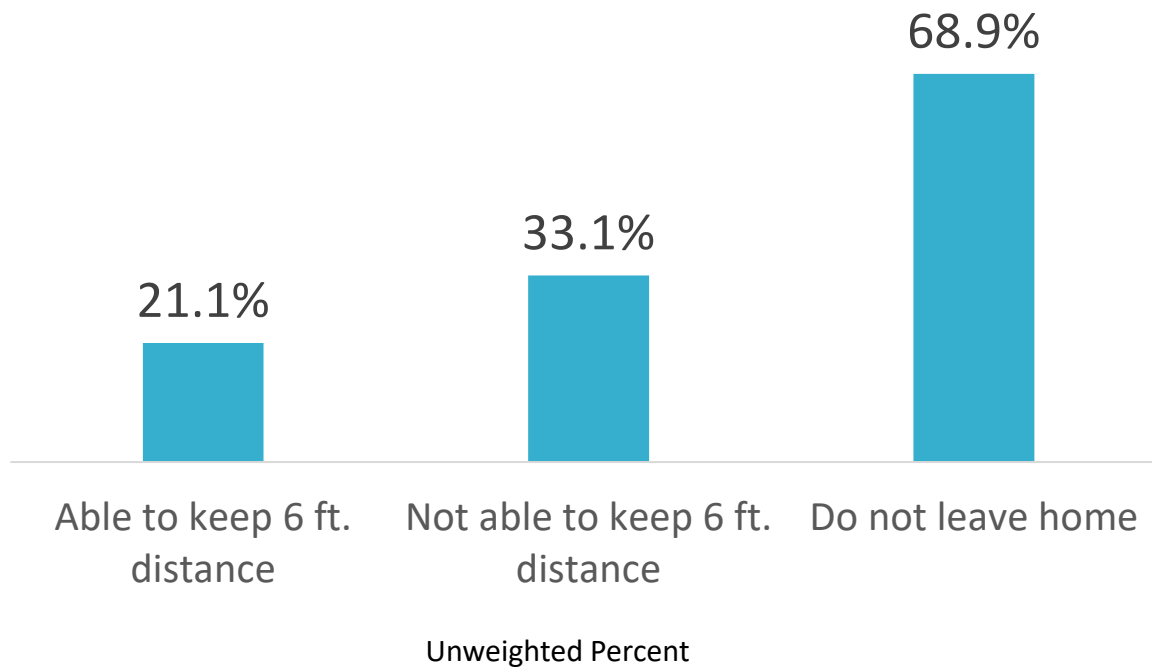
*Note: While people of color may share some similar experiences, they are not a homogeneous racial/ethnic group.

Due to small cell sizes, we have collapsed People of Color into one category to enable reporting of outcomes.

Difference in worry about COVID-19 by race/ethnicity and income is statistically significant at $p < 0.05$ (among rural respondents)

CONCERN ABOUT GETTING COVID-19 IS HIGHEST AMONG RURAL RESPONDENTS NOT ABLE TO KEEP 6 FT DISTANCE AND THOSE WHO DO NOT LEAVE HOME

"Very Worried" about Getting COVID-19 among Rural Respondents, by Ability to Social Distance



Rural populations have higher populations of isolated elders who rely on family, neighbors, and outside services for access to basic needs.

Although these elders did not leave home, they still worried about contracting COVID 19.

Note: Unweighted percentages shown based on 4,090 responses among rural respondents.

Difference in "very worried" about getting COVID-19 by distance is statistically significant at $p < 0.05$

GOVERNMENT WEBSITES AND NEWS OUTLETS ARE MOST RELIABLE SOURCES OF COVID-19 INFORMATION FOR RURAL RESPONDENTS

Top sources for most reliable and up-to-date COVID-19 information among respondents, by rurality

	Urban	Rural Level 1	Rural Level 2
Government websites	60.7%	65.2%	60.1%
News outlets	63.2%	59.3%	65.2%
Community partners	19.1%	20.1%	22.0%
Government officials	14.7%	16.7%	13.2%
Social media	16.0%	11.9%	16.9%

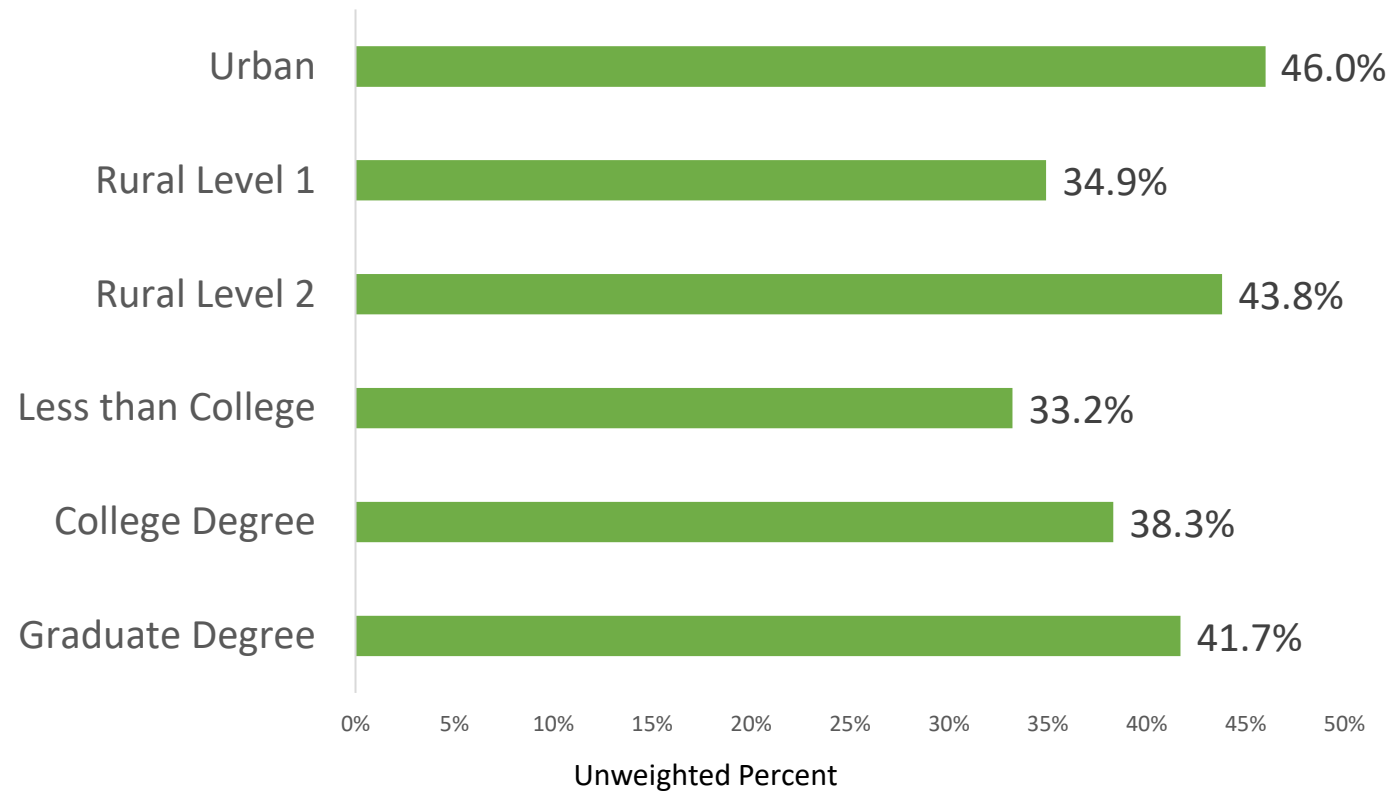
Unweighted percent

Note: Unweighted percentages shown based on 6,435 responses.

Difference in reliable and up-to-date COVID-19 information is statistically significant at $p < 0.05$ for social media

COVID-19 TESTING IS LOWER AMONG RURAL RESPONDENTS AND THOSE WITH LOWER SOCIOECONOMIC STATUS

Ever Tested for COVID-19, by Rurality, and by Educational Attainment (among Rural Respondents)



Note: Unweighted percentages shown based on 31,703 responses by rurality and 4,049 responses for educational attainment (among rural respondents).

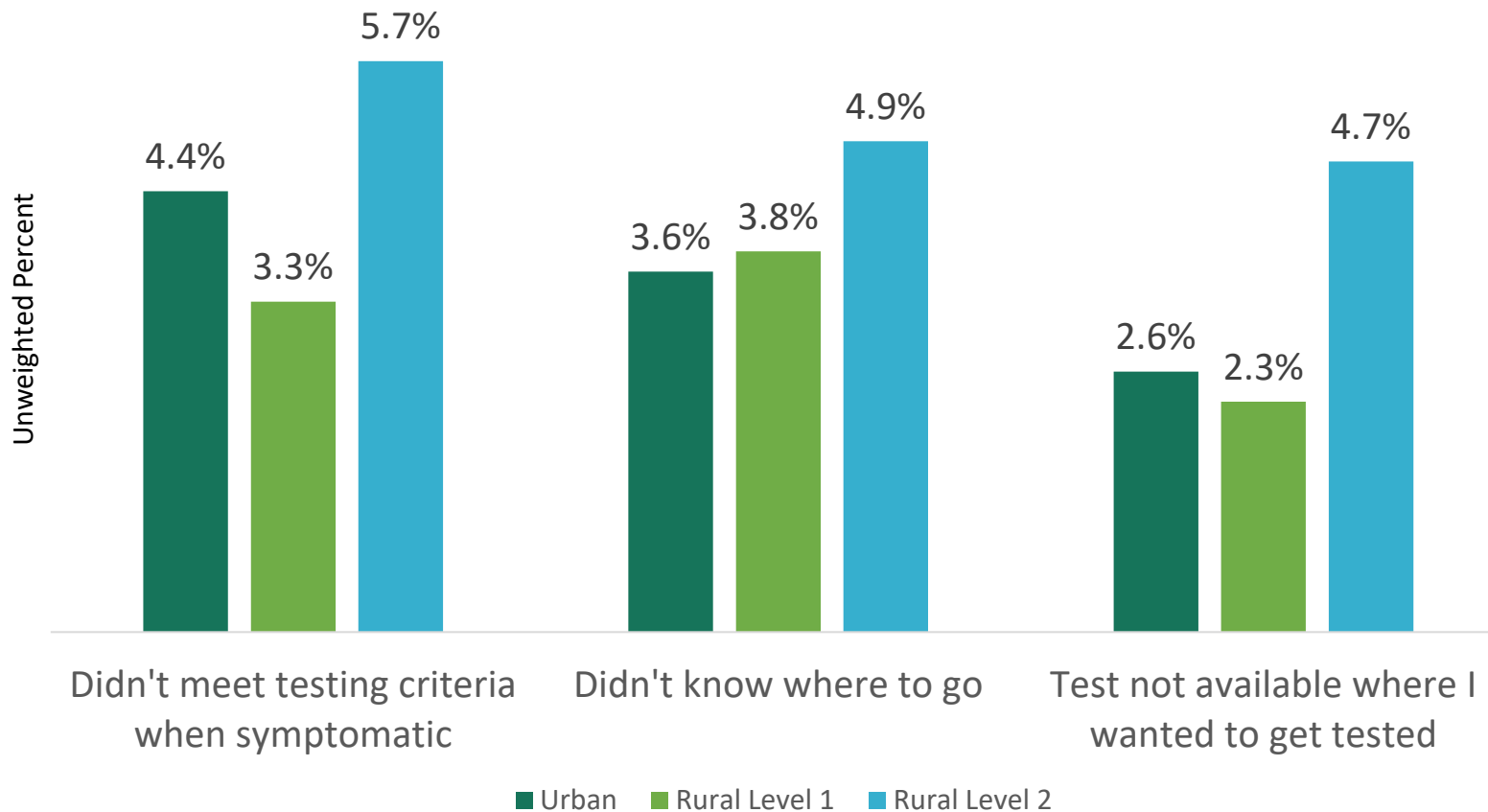
Access to COVID-19 testing in rural communities was limited at the time of survey (Sept.-Nov. 2020).

Access has improved but is still limited; many rural residents must travel over 20 miles to access a testing location and must book an appointment in advance.

Rural areas lack pharmacy chains and urgent care locations who provided the bulk of testing services.

TOP REASONS WHY RESPONDENTS IN RURAL REGIONS DID NOT GET A COVID-19 TEST

Top Reasons for Not Getting COVID-19 Test, by Rurality



Our most isolated rural communities had a lack of information and access to testing sites.

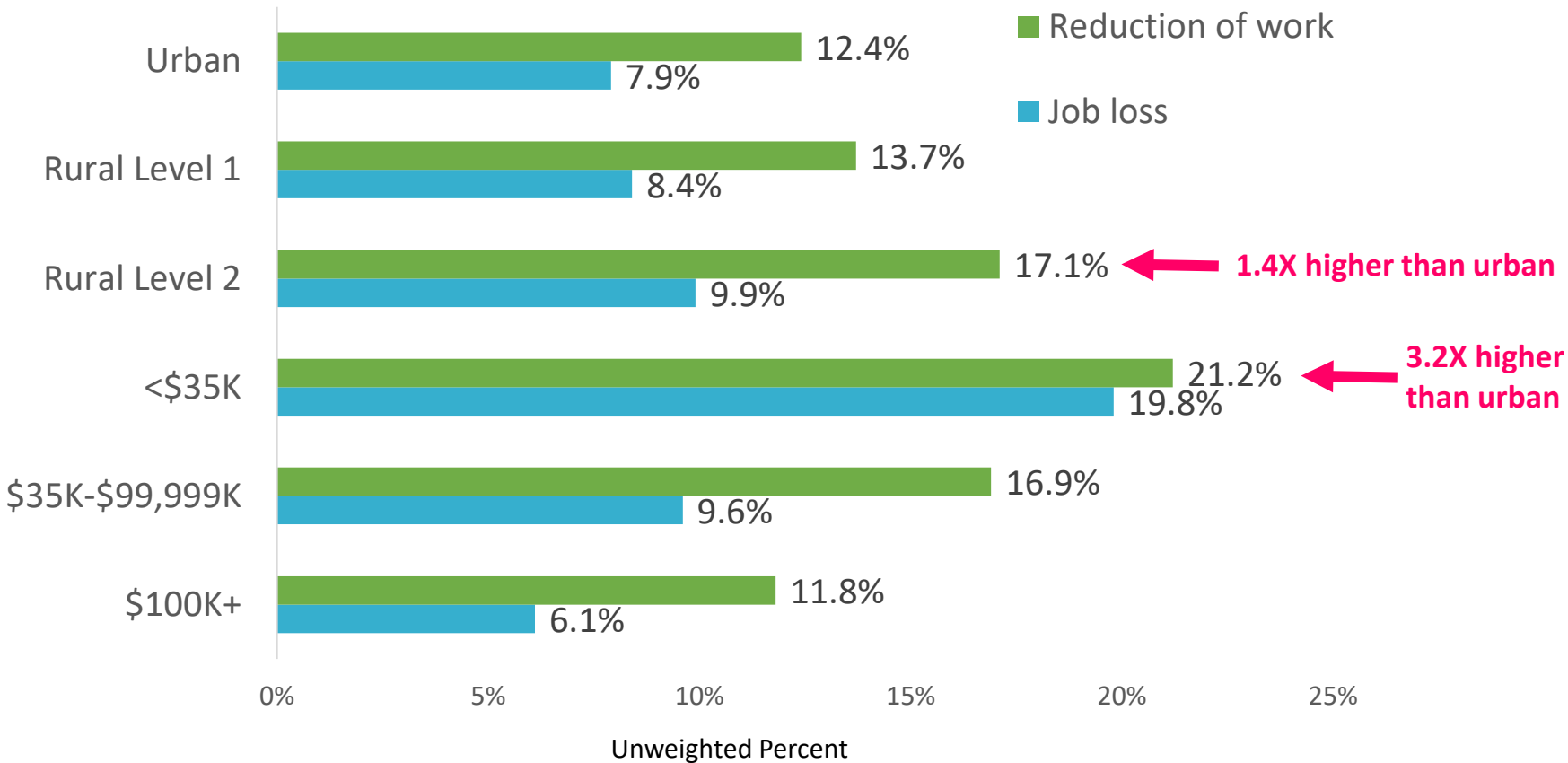
Future testing efforts in rural communities need to be more widespread and communicated through trusted local partners.

*Note: The most common reason for not getting tested reported by MA CCIS respondents was due to not having symptoms of COVID-19. Data presented are for other reasons for not getting COVID-19 test. Unweighted percentages shown based on 17,398 responses.

Difference in reason for not getting COVID-19 testing by rurality is statistically significant at $p < 0.05$ for “didn’t meet testing criteria when symptomatic” and “test not available where I wanted to get tested.”

JOB LOSS AND JOB REDUCTION

Job Loss & Reduction of Work, by Rurality and Income (among Rural Respondents)



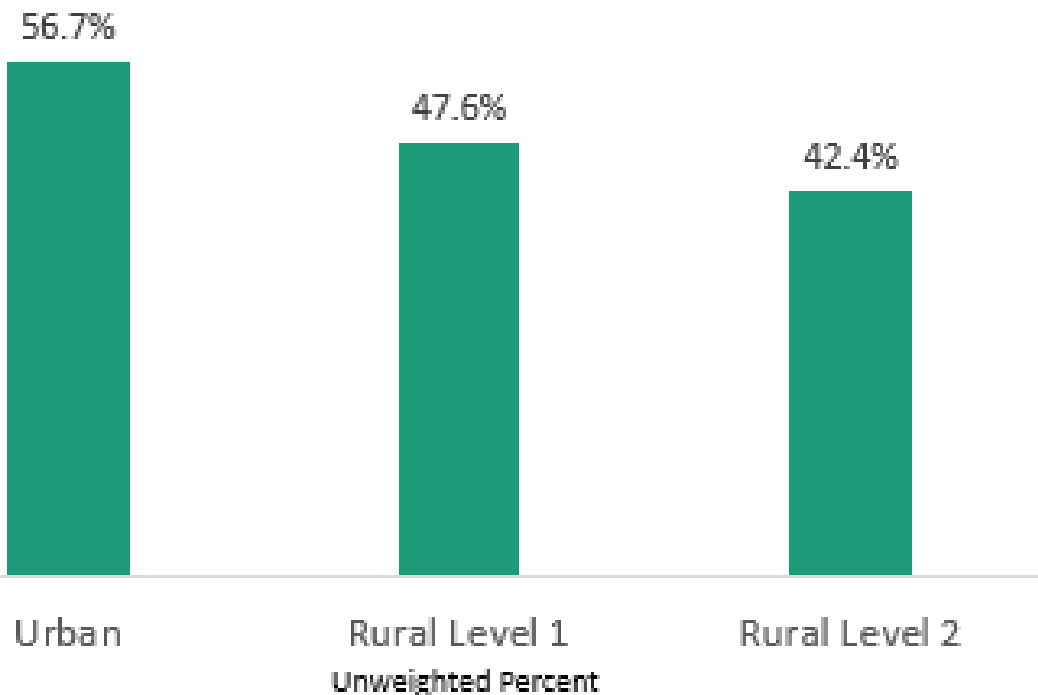
Rural areas saw higher levels of job loss and reduction as compared to urban areas. With isolated rural (1.4 X) and lower income populations (3.2 X) having the largest reduction of work comparatively.

Note: Unweighted percentages shown based on 20,896 responses by rurality and 2,354 responses for income (among rural respondents). Difference in reduction of work by rurality is statistically significant at $p < 0.05$

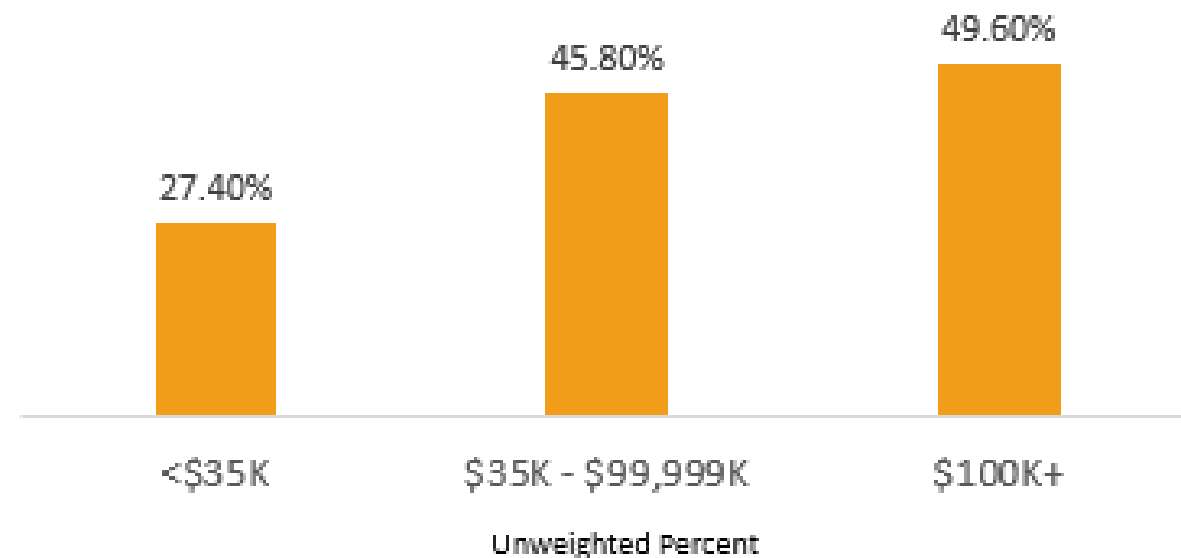
RURAL AND RURAL LOW-INCOME RESPONDENTS ARE LESS LIKELY TO WORK FROM HOME

The top job sectors for rural communities are food service/accommodations and healthcare. These jobs sectors are less likely to have work from home options. The lack of broadband in rural areas also complicated work from home options.

Working from Home by Rurality



Rural Respondants Working from Home by Income



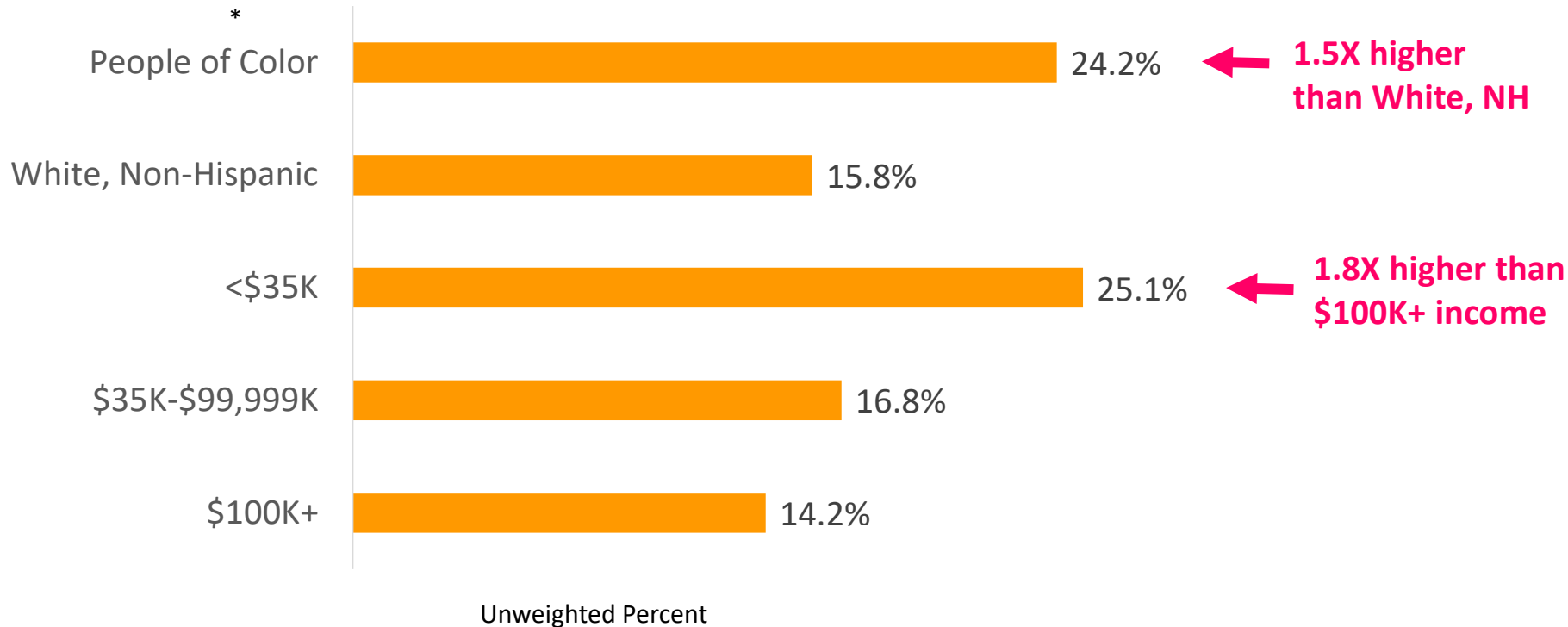
Note: Unweighted percentages shown based on 19,608 responses by rurality and 2,366 responses for age and 2,248 responses for income (among rural respondents).

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Difference in working from home by rurality and income (among rural respondents) is statistically significant at $p < 0.05$

PEOPLE OF COLOR & LOWER INCOME EXPERIENCED HIGHER RATES OF DELAYED MEDICAL CARE AMONG RURAL RESPONDENTS

Experienced Delayed Medical Care Since July 2020 among Rural Respondents, by Race/Ethnicity & Income



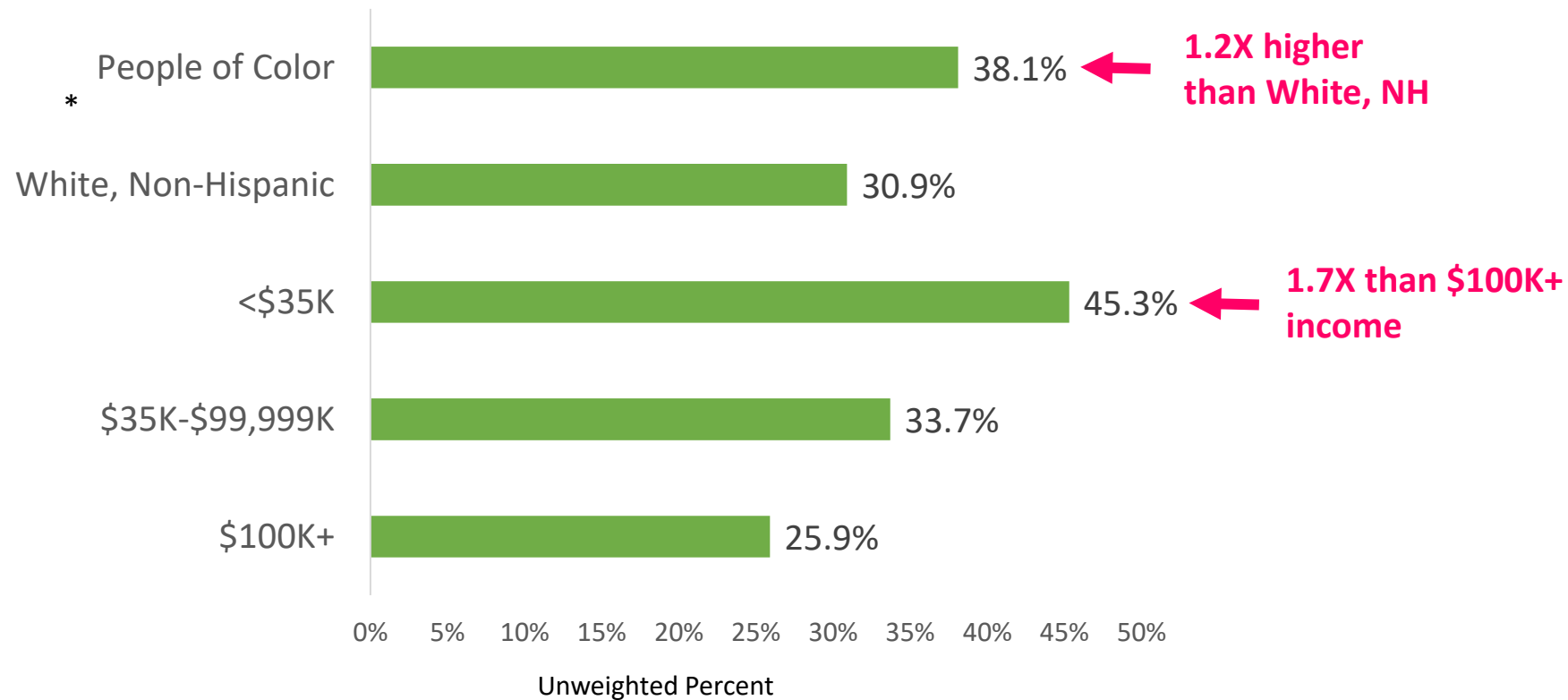
Pre COVID-19 there was already limited access to both primary and specialty clinical services in rural areas.

*Note: While people of color may share some similar experiences, they are not a homogeneous racial/ethnic group. Due to small cell sizes, we have collapsed People of Color into one category to enable reporting of outcomes. Unweighted percentages shown based on 3,154 responses for race/ethnicity and 2,985 responses for income (among rural respondents).

Difference in delayed medical care by race/ethnicity and income is statistically significant at $p < 0.05$

POOR MENTAL HEALTH STATUS MORE COMMON AMONG RESPONDENTS OF COLOR AND LOWER INCOME RESPONDENTS

15+ Poor Mental Health Days among Rural Respondents, by Race/Ethnicity and Income

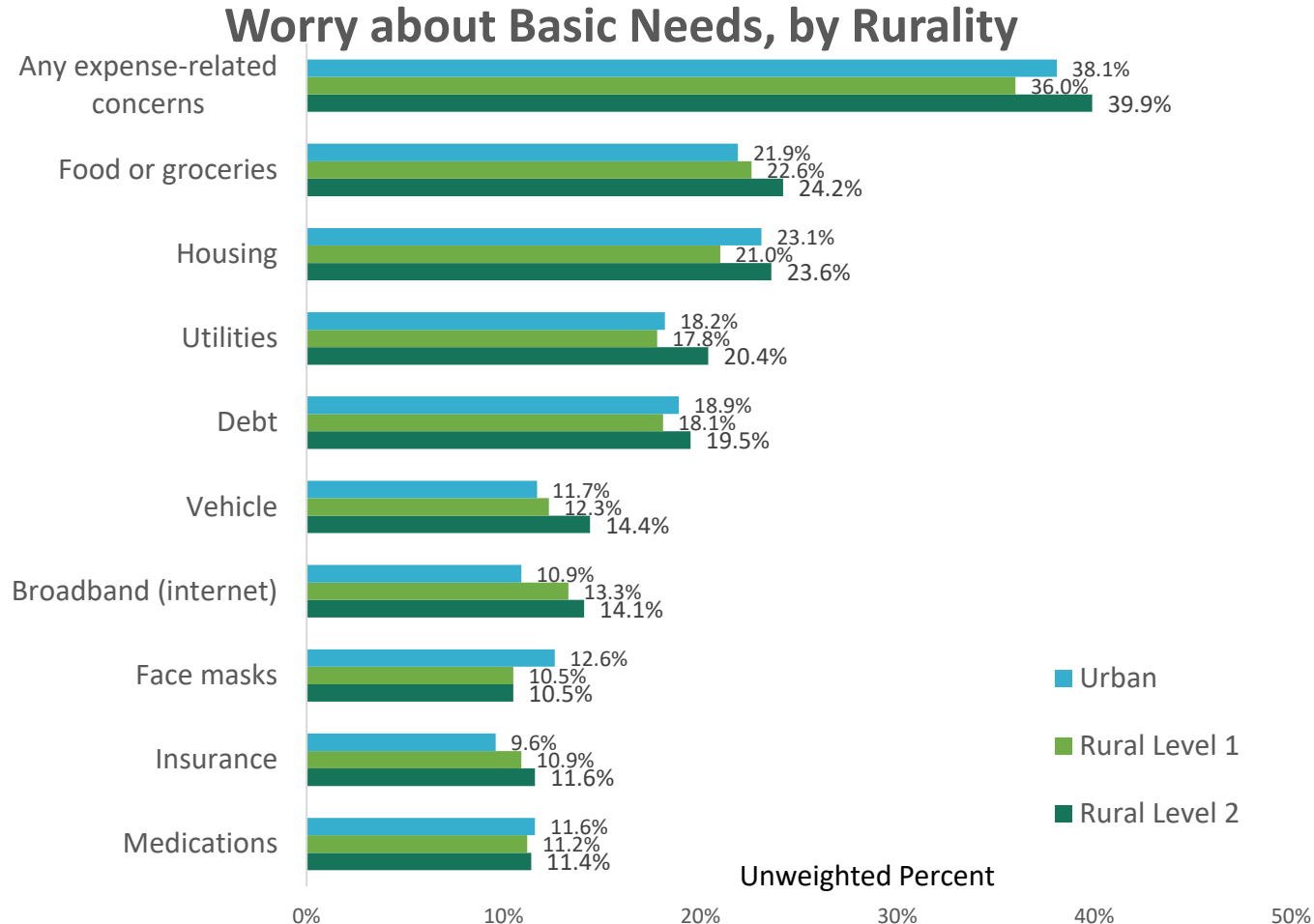


Although Mental Health has been a long-standing concern of rural communities', the allowance of telehealth (reimbursement) during COVID created a service rural residents did not have prior.

*Note: While people of color may share some similar experiences, they are not a homogeneous racial/ethnic group. Due to small cell sizes, we have collapsed People of Color into one category to enable reporting of outcomes. Unweighted percentages shown based on 3,538 responses for race/ethnicity and 3,385 responses for income (among rural respondents).

Difference in mental well-being by race/ethnicity and income is statistically significant at $p < 0.05$

CONCERNS ABOUT MEETING BASIC NEEDS HIGHER AMONG MOST ISOLATED RURAL COMMUNITIES



The most isolated rural communities reported higher rates of concern for nearly every basic need category compared to urban communities

Note: Unweighted percentages shown based on 30,565 responses.

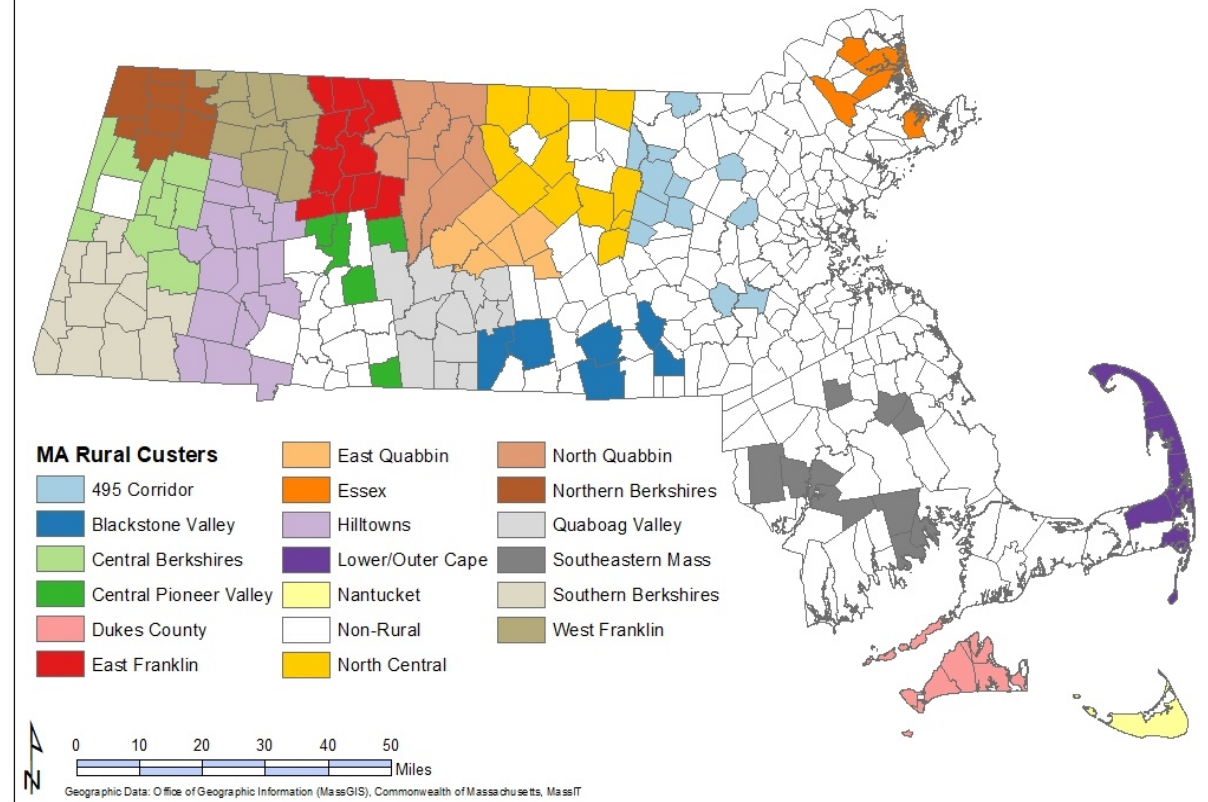
Difference in worry about basic needs is statistically significant at $p < 0.05$ for any expense-related needs, vehicle, broadband (internet), facemasks, and insurance expenses.

MA DPH USES RURAL CLUSTERS TO UNDERSTAND DIFFERENT RURAL AREAS' UNIQUE NEEDS

Grouping small rural towns allows for more granular data analysis. Working with the MA Rural Advisory Council on Health DPH created Rural Clusters that represent geographic areas that have been historically classified together through shared services, cultural commonality, or geographic cohesion

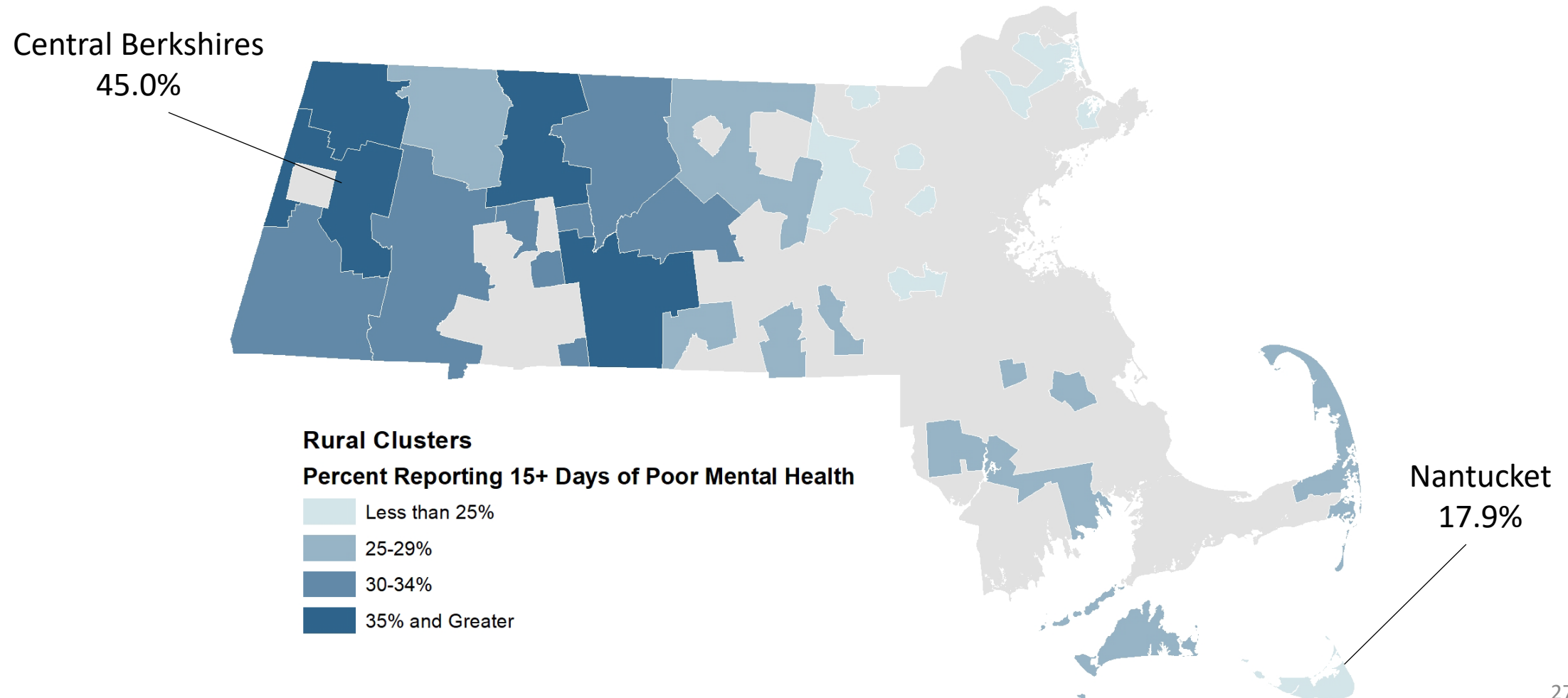
The 18 Rural Clusters allow us to look at data and trends across our rural areas to better understand unique needs and target resources.

MA Communities & Counties



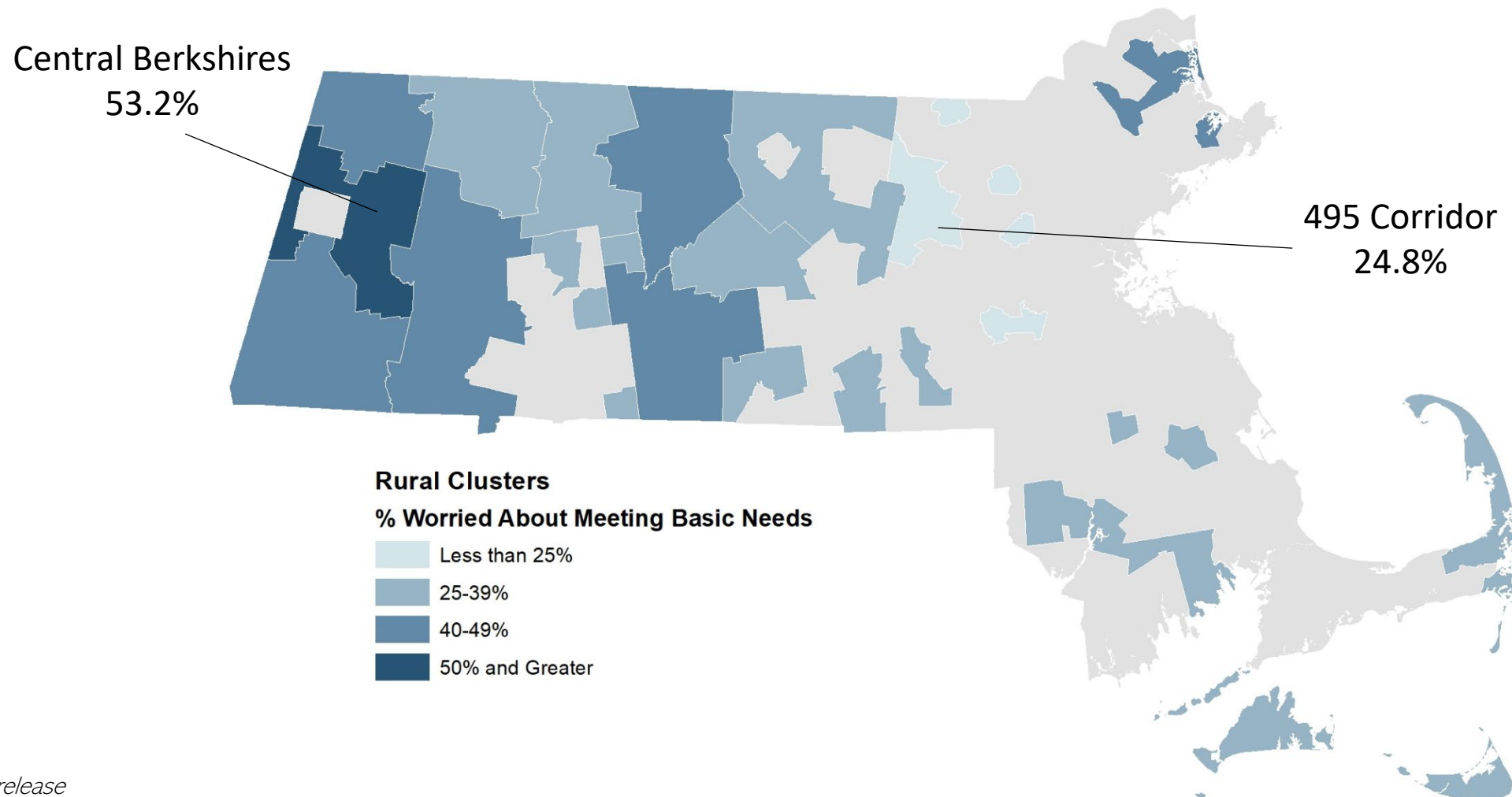
MENTAL HEALTH NEEDS VARY GREATLY ACROSS RURAL CLUSTERS

Percent of Respondents Reporting 15 or More Days of Poor Mental Health in the Past 30 Days by Rural Cluster



CONCERN ABOUT MEETING BASIC NEEDS VARY ACROSS RURAL CLUSTERS

Percent of Respondents Reporting Being Worried About Meeting One or More Basic Needs by Rural Cluster



RURAL COMMUNITIES & COVID-19



Large populations of older residents are particularly vulnerable to COVID-19 morbidity and mortality



Transportation is barrier for those who do not have personal transportation & those who are uncomfortable driving to more urbanized areas



Rural residents who need MA Health transportation might need help navigating how to sign up



Limited access to health and social services



Increases in telehealth removes some barriers to health care & requires access to stable internet and computers - major inequities remain in access to telehealth



Pre-pandemic rural residents already struggled economically; rural economies are still recovering from the 2008 recession



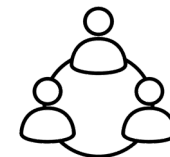
Many rural residents lost or reduced work due to the pandemic



Mistrust in government, experience with initial COVID-19 response, and past experiences with state agencies



There are pockets of vaccine hesitancy pre-pandemic in some rural communities



Many community-based organizations in rural communities work with rural residents and are important partners in COVID-19 response



Rural communities have been left out of most COVID-19 pandemic research

KEY TAKEAWAYS

- MA CCIS highlights differences in the impact of the pandemic by rural context.
- Findings show that residents of more rural communities (rural level 2) have been more likely to report changes in job status and less likely to be able to work from home.
- Patterns indicate racial/ethnic and socioeconomic disparities in COVID concerns, access to COVID testing, the opportunity to work from home, access to medical care, and mental well-being.
- Findings suggest that it is important to consider the unique and shared experiences across multiple rural sub-groups, including by rural context, race/ethnicity, age, income, and educational attainment.
- There are important socioeconomic differences in rural communities (e.g., occupation, income, type of residence such as second home) that may obscure some patterns across rural areas.

DATA TO ACTION

- Approach rural communities as a vulnerable population with unique health inequities and disparities, not just a geographic area.
- Include rural communities in assessments of the impact of COVID-19 to inform short- and long-term recovery policies.
- COVID-19 recovery plans may look different from those designed for non-rural communities and need to be tailored to rural regions. The same approach may not work in each rural region.
- Fund and partner with rural communities to work on solutions in their own regions since every community and local infrastructure (e.g., public health, social services, health care) is different.
- Invest resources to collect data about rural communities and disaggregate rural communities when possible (e.g., rural levels, rural areas).

The MDPH State Office of Rural Health (SORH) has been working with rural stakeholders, DPH programs, and federal partners to meet the unique needs of rural Massachusetts. The Massachusetts Council on Rural Health has worked with the SORH to develop Rural Data Standards, design rural led programing, and create a new COVID rural vaccine equity initiative. Initiatives likes these need to continue with strong support from all sectors to make lasting change for rural residents.

HAVE QUESTIONS ABOUT RESOURCES FOR RURAL COMMUNITIES?

For more state information and a list of resources for rural communities, visit the MA State Office of Rural Health website at: <https://www.mass.gov/state-office-of-rural-health> or contact Kirby Lecy, Project Coordinator for the State Office of Rural Health at kirby.lecy@mass.gov or (617)549 - 6423



For national information and resources related to rural health you can visit the Rural Health Information Hub <https://www.ruralhealthinfo.org/>



Source: MA State Office of Rural Health.



"In order to build the health and safety for Massachusetts, policy makers must develop rural competencies to fully understand and address rural population needs."

- Rebecca Bialecki

Executive Director of the MassHire Franklin Hampshire Workforce Board

REFERENCES

Limited Job Opportunities -Lower Wage Employment Sectors - The 2017 Workforce Development and Labor Force Review - <https://masshirehcb.com/wp-content/uploads/2021/04/MaWorkforceLaborAreaReviewPY2017.pdf>

Lack of Public Transportation- Digital Divide - Limited Educational Opportunities *Massachusetts Rural Policy Plan*. Rural Policy Advisory Commission. Massachusetts EOHHS - https://frcog.org/wp-content/uploads/2019/10/Rural_Policy_Plan_10.01.19.pdf

Lack of Healthcare & Human Services – HRSA Data Warehouse – HPSA FIND (Health Professional Shortage Areas) - <https://data.hrsa.gov/tools/shortage-area/hpsa-find>

Policy & Funding Decisions

Investing in Rural America – Senate Joint Economic Committee - https://www.jec.senate.gov/public/_cache/files/ed5bf0b5-dd14-473f-acdc-fd86ba98a6e1/investing-in-rural-america.pdf

Counting for Dollars, Metropolitan Policy Program – https://www.brookings.edu/wp-content/uploads/2016/06/0309_census_report.pdf

Urban Centric Policy Decisions - Defining and Describing Rural: Implications for Rural Special Research and Policy <https://journals.sagepub.com/doi/10.1177/875687051603500302>

WANT TO KNOW MORE?

Visit <http://mass.gov/covidsurvey> for more information on how residents of Massachusetts have been impacted by the pandemic and how we can all work together to turn these data into action!