

Older Adult Vaccination Rates Lag in Rural Areas and the South

Claire Pendergrast and Yue Sun

Older adults face especially high COVID-19 morbidity and mortality risks compared to younger age groups, and older adults residing in nursing homes and other congregate settings have been especially vulnerable throughout the pandemic.¹ For this reason, older adults were prioritized as one of the first groups eligible to receive the COVID-19 vaccine during initial rollout in early 2020. While COVID-19 vaccination coverage has been consistently higher among older adults than among younger age groups,² many older adults are still unvaccinated and are therefore still susceptible to serious COVID-19-related health risks and death.

KEY FINDINGS

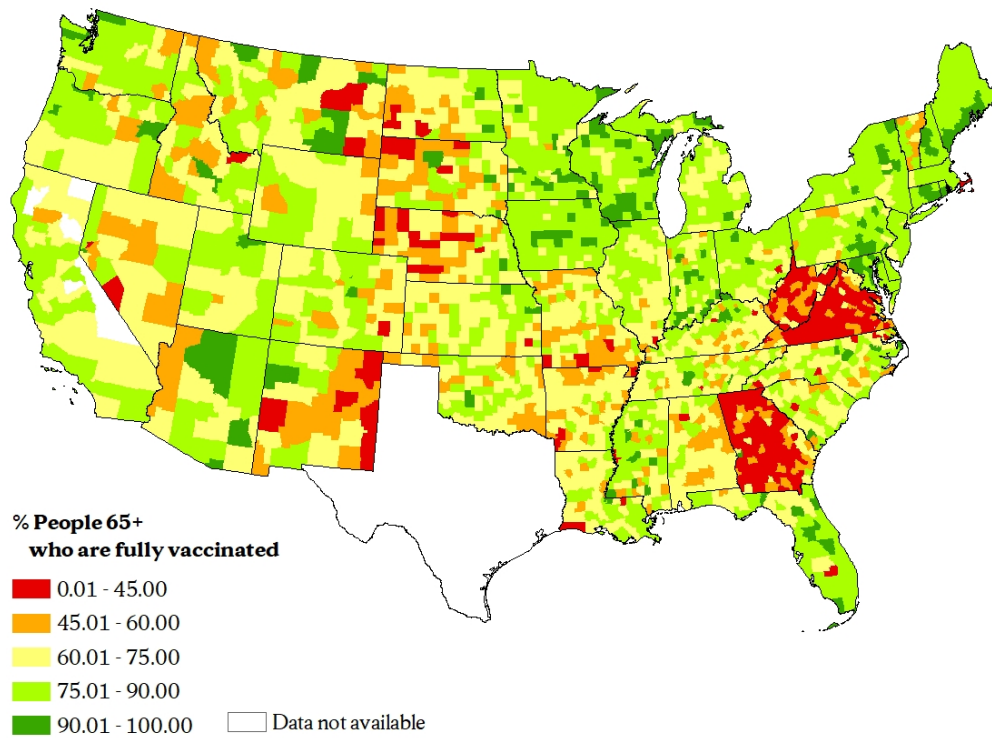
- Older adults' vaccination rates vary widely across the United States.
- In the Northeast, older adults' vaccination rates are especially high in both rural and urban areas, while in the South, rates are low overall and especially low in rural areas.
- Targetted outreach efforts are needed in rural communities to address intersecting geographic, social, and political challenges to vaccine access and uptake among older adults.

Geographic variation in vaccination rates have been [well-documented across the U.S.](#)³ with implications for communities' vulnerability to severe health impacts and strained health care infrastructure. Multiple factors influence vaccine uptake for all age groups, including older adults.^{2,4} Older adults may face greater barriers to vaccine access than younger age groups due to mobility limitations, cognitive impairments, social isolation, lack of transportation, and limited computer access.⁵

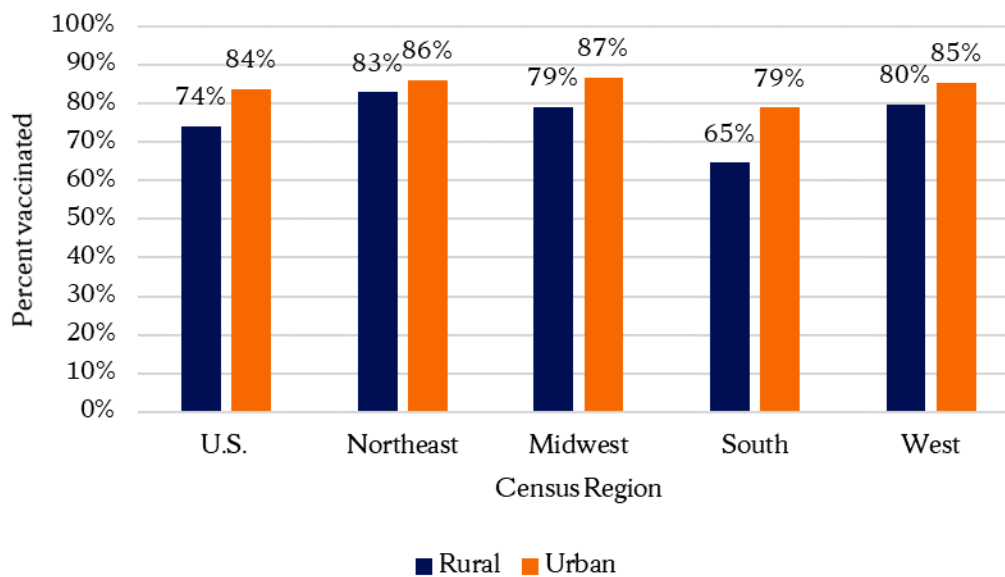
Using county-level data on vaccination rates for U.S. adults age 65 and older as of September 20, 2021 from the U.S. Center's for Disease Control and Prevention's (CDC) COVID-19 Vaccination Tracker, this brief describes geographic variation in older adults' vaccination rates, with a specific focus on rural-urban and regional differences.

Older Adults' Vaccination Rates are Lower in Rural Areas, Especially the Rural South

Just over 82% of U.S. adults age 65 and older are fully vaccinated against COVID-19. However, older adult vaccination rates vary dramatically across the country (Figure 1). Extremely low vaccination rates are found mainly in Georgia, Virginia, and West Virginia. The South has more counties with rates below 75% than anywhere else in the country. Wide within-state variation is also clearly visible. For example, Nebraska includes both counties with vaccination rates less than 45% and others with rates over 90%.



Note: N=2,869 counties; represents vaccination rates as of 09/20/21.
Data Source: CDC COVID-19 Vaccination Tracker



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Nationwide, older adults' vaccination rates are lower in rural counties (74.1% fully vaccinated) than in urban counties (83.8% fully vaccinated). When rural-urban differences in older adults' vaccination rates are examined separately by census region, rural rates are lower than urban rates in all regions, though the size of the difference varies widely by region. Urban Midwest counties had the highest older adult vaccination rate (86.7%). In the Northeast both rural and urban counties' older adult vaccination rates are above 80%, and rural counties lag only very slightly behind urban counties (82.9% in rural Northeast versus 86.1% in urban Northeast). Rates are dramatically lower in the South than in other regions. Southern urban rates (79.0%) are much higher than Southern rural rates (64.6%), and both Southern urban and rural rates are lower than the rural rates in other regions.

Prioritizing and Tailoring Vaccination Outreach for Rural Older Adults

Given the consistently lower vaccination rates for rural older adults compared with their urban counterparts, a concerted effort to reduce barriers to vaccine access and address vaccine hesitancy and resistance in rural communities is warranted. While many strategies to increase rural vaccine uptake will apply to all age groups, targeted efforts should be made to understand and address rural older adults' vaccination-related needs. These efforts should also take into account differences in geographic, social, and political context rather than attempting a one-size-fits-all strategy for increasing vaccination rates.

Promising strategies for improving vaccine access for rural older adults include addressing transportation barriers through expanded public transportation services, volunteer medical transportation programs, and offering vaccines at convenient and accessible locations, such as doctors' offices, pharmacies, grocery stores, and senior centers. Expanding opportunities for older adults to get vaccinated through home visits by healthcare providers would also address the heightened access challenges faced by homebound older adults, especially those who live alone. Providing assistance with scheduling vaccine appointments also extends older adults' vaccine access, especially for individuals and communities with limited broadband or low technology access.⁵

Vaccination communications materials should be designed to take into account older adults' communications preferences and potential vision and hearing impairments, and materials should follow plain-language guidelines and be translated into additional languages as needed.⁵ Ideally, rural leaders would develop and implement a multi-pronged communications campaign including print materials, radio and television ads, and online information.

Social and political factors also influence rural older adults' vaccine uptake. Vaccine outreach efforts should engage trusted local leaders and organizations to promote the benefits of getting vaccinated. Trusted community partners can also connect older adults with public health authorities or medical professionals to answer questions or address concerns about the vaccine or identify appropriate supports for addressing access barriers. Primary care physicians are especially well-positioned to encourage rural older adults to get vaccinated, as many older patients see their doctors as a trusted source of health-related information and interact with them relatively frequently. The National Rural Health Association has developed a resource library of communications best practices and materials to promote vaccination in rural communities, including resources specific to healthcare providers, faith and community leaders, and agricultural workers.⁶

Efforts to increase vaccination rates in rural areas must consider political and cultural differences in

rural communities. Throughout the pandemic, political beliefs have powerfully influenced public health behaviors like mask-wearing and social distancing. A [recent Lerner Center brief](#) showed that Trump vote share helped to explain lower vaccination rates in rural counties overall. Our analysis did not explicitly examine how political ideology contributed to geographic variation in older adults' vaccination rates. However, data from the KFF COVID-19 Vaccine Monitor shows that Republicans are more likely than Democrats to be unvaccinated and to report vaccine hesitance or resistance.⁷ Larger shares of Republican voters in rural areas and in the South may partially explain why these areas have lower vaccination rates. Emphasizing how vaccination supports Republican priorities (e.g., economic recovery) may be effective for reducing resistance in Southern and rural areas with low vaccination rates. In this regard, communications tools like the de Beaumont Foundation's PSA of the House GOP Doctors Caucus explaining the importance of vaccination, may be effective.⁸

Vaccination rates are also lower in counties with larger shares of non-Hispanic Black residents.⁹ This may contribute to the lower vaccination rates we found in the South. Older Black adults may face heightened barriers to vaccine access due to residential segregation and long-term disinvestment in communities of color, and may be especially concerned about vaccine safety thanks to historical and ongoing medical mistreatment of people of color.¹⁰ Public health approaches to outreach, education, and vaccine administration nationwide and especially in the South should prioritize the needs of older Black adults to improve health equity.

Given the recent CDC recommendation of a booster shot eight months after becoming fully vaccinated and the crisis level of spread due to the Delta variant,¹¹ particularly in Southern states with low vaccination rates, efforts to increase older adults' vaccine uptake and support communities with lagging vaccination rates is more important than ever.

Data and Methods

COVID-19 vaccination data were retrieved from the U.S. Centers for Disease Control and Prevention COVID-19 Vaccination Tracker (<https://data.cdc.gov/Vaccinations/COVID-19-Vaccinations-in-the-United-States-County/8xkx-amqh>). Rural-urban continuum codes from the USDA Economic Research Service and U.S. Census Bureau Census regions were used to calculate differences in older adults' vaccination rates by metro status and region. COVID-19 vaccination rates are not available for 273 counties (86 urban and 187 rural), including all counties in Texas and Hawaii, 8 counties in California, and 6 counties in Virginia.

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