Ensuring an Equitable Distribution of COVID-19 Vaccines in Rural Communities

John Gale, Alana Knudson, Michael Meit, Shena Popat

I. Overview

As COVID-19 vaccines progress through the final approval process and into initial distribution, the availability of the vaccine promises relief to rural residents and providers who have been severely and disproportionately impacted by the pandemic. Much work needs to be done to ensure that rural Americans share equitably in this promise.

The National Rural Health Association encourages national, state, and local leaders to:

- **Equitably allocate sufficient doses to vaccinate** all rural vulnerable populations and essential workers, including members of the rural health care workforce;
- **Develop an efficient distribution system** to ensure that states and rural communities receive vaccines in a timely fashion and have the capacity to transport, store and administer the vaccines;
- **Support a rational vaccine delivery system** that reflects the realities of rural living – inadequate health care and public health infrastructure, long travel distances, and health care and public health workforce shortages;
- Provide leadership that capitalizes on **rural America's longstanding culture** of helping their neighbors; and
- Provide evidence-based, non-partisan **information on vaccine safety, physical distancing, and mask wearing** to maximize the impact of these vaccines.

II. Equitable allocation of vaccine supplies

Cases of COVID-19 are surging across rural American. Rural COVID-19 cases reached their highest level in November since the start of the pandemic, the prevalence of COVID-19 cases is growing more rapidly in rural than in urban areas, and rural COVID-19 deaths per capita have surpassed urban deaths.[3, 17] Rural residents are disproportionately at risk for COVID-19 as they are generally older and less healthy than their urban peers.[4] The growing racial and ethnic diversity of rural areas is also a COVID-19 risk factor given recent studies indicating that black and Hispanic individuals bear a greater burden of COVID-19 after adjusting for underlying health conditions, geography, and source of care.[10]

Rural health care and public health systems, many of which are already vulnerable, have struggled to respond to the demands of COVID-19.[6] This situation is exacerbated by chronic workforce shortages.[8] Many rural providers have difficulty replacing staff lost to quarantine and are forced to rely on high-cost travel/locum tenens staff to provide services.

Vaccine allocation formulas must account for these factors. State plans to prioritize the vaccination of at-risk populations and essential workers must also take these issues into account and include "hidden" essential health care workers that may otherwise be overlooked including volunteer emergency medical services personnel, community health workers, and personal caretakers.

III. Development of an Efficient Distribution, Transportation, and Storage Systems

Rolling out COVID-19 vaccines to all rural communities is a complex undertaking. This complexity must be reflected in state vaccination plans to ensure an efficient and equitable distribution of vaccines to rural communities and populations. Issues that should be addressed in state plans include development of distribution and transportation systems to ensure that supplies are delivered in a timely fashion as well as state and local distribution points that are equipped with the appropriate cold storage facilities to receive and safeguard vaccine supplies.[5, 16]

Many rural hospital leaders are concerned about the cold storage requirements of the vaccines and the affordability of the refrigeration equipment needed to serve as vaccination sites. At the same time, state plans should ensure the availability of supplies needed to conduct vaccination programs including dry ice, syringes, needles, alcohol wipes, and sharps disposal containers.[14] It is also important to develop vaccination registers as well as vaccine monitoring and reminder systems to track those receiving vaccinations and to remind them to return for second doses as required. These systems should also integrate with state and national reporting systems to allow effective communication across rural and urban settings.

IV. Development of a Vaccination Infrastructure That Reflects Rural Realities

The health care and public health infrastructures in rural communities, which will serve as the foundation for rural vaccine distribution systems, are already under stress due to financial issues, workforce shortages, and inadequate capacity. As a result, the development of local vaccine delivery systems calls for close collaboration between

rural hospitals and local health departments. Efforts to rapidly and efficiently deploy the COVID-19 vaccine need to reflect these rural realities. These efforts in rural states will also require dedicated Federal funding to support the increased costs of transportation, storage, and delivery of COVID-19 vaccines.

The use of national pharmacy chains to distribute vaccines (initially to health care workers and long-term care residents and staff as well as later to the general public) may work in urban areas but not in rural communities where these chains are less likely to have locations.[2] Immediate resources are needed to support rural health care and public health providers in administering the COVID-19 vaccine and address infrastructure issues including storage and distribution capacity. The vaccination infrastructure should further reflect rural realities by incorporating hospitals, rural health clinics, local pharmacies, and other venues to address access concerns and by engaging non-traditional partners as appropriate.

V. Leadership

Historically, vaccination rates for normal childhood immunizations and influenza are lower in rural areas than in urban areas. The reasons for these lower rates are complex but include cultural skepticism, lack of access to services, lower health literacy rates, lower perceived risk, and travel barriers.[1] Certain rural populations, including people of color and American Indians, may have even greater levels of cultural skepticism and inherent distrust of government and/or external medical organizations.[15] Unless immediate action is taken, the same will be true for COVID-19 vaccination rates.

Rural residents have a long culture of helping and supporting their neighbors.[7, 9] National, state, and local leaders can harness this culture and work with trusted local influencers to improve COVID-19 vaccination rates and develop effective state vaccination plans.[11] It is important to engage trusted local sources in efforts to promote vaccination including health care and public health officials, faith-based leaders, community lay workers, educators, political officials, and other community leaders. National, state, and local officials must be sympathetic to rural issues as well as judgement free. State vaccination plans should identify and prioritize rural vulnerable populations, health care personnel, and essential workers; develop evidence-based, culturally appropriate vaccination protocols and messaging; and implement an accessible vaccination infrastructure.

Finally, the initial distribution of COVID-19 vaccines does not negate the need for continued vigilance to prevent the further spread of the virus including the use of evidence-based public health practices such as the use of masks, physical distancing, and limitations on large group gatherings.[12] Again, there will be a need for strong

national, state, and local leadership on importance of these evidence-based public health practices.

VI. Use of Evidence-Based Information and Protocols

Rural Americans have a history of independence and skepticism that carries over to COVID-19 and the need for vaccination.[13] To combat this skepticism, national, state, and local leaders need to base programs, outreach, and messaging on evidence-based science and work closely with trusted local influencers, including educators, clergy, political officials, health care and public health professionals, lay health workers, and other community leaders. Educational outreach to encourage vaccination among rural residents should be non-judgmental, clear, and culturally appropriate to the diverse populations across rural communities.

As part of U.S. Ad Council's national messaging campaign, we encourage the council to develop a targeted rural messaging campaign encouraging rural and frontier people to be vaccinated as well as to counter widespread misinformation. As part of this strategy, we further encourage the Council to work with rural and frontier experts to ensure that the messaging campaigns and content are rurally and culturally relevant and evidence based.

VII. Conclusions

The approval of effective COVID-19 vaccines holds great promise to reduce the surging spread of the virus in rural communities. National and state health officials must work to ensure that vaccines are equitably allocated across rural communities and populations; effective state-level vaccination plans are developed and implemented; appropriate state and community-level vaccination infrastructures are established; and evidenced-based, culturally sensitive education and messaging are conducted. Leadership that capitalizes on rural strengths and is sensitive to rural realities is essential to this process. Failure to address these concerns will compromise the effectiveness of vaccination programs, perpetuate the historical disparities in rural vaccination rates, and fail to prevent the damage to rural communities caused by COVID-19.

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