



Invited Commentary | Public Health

A Reality Check From the Fields—What's Next?

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The study by Mora and colleagues¹ echoes the call from World Health Organization epidemiologist, Maria Van Kerkhove, MS, PhD, “The world needs a reality check” and contributed much-needed research into COVID-19 transmission among one of the populations that has the highest risk and has experienced a significant proportion of the negative impact of COVID-19 in the US²: farmworkers. The study by Mora et al,¹ a collaborative partnership between academic researchers and a local community health clinic, was conducted in the Salinas Valley, California, 1 of the top 3 US agricultural regions. There were a few methodological limitations to the study, particularly that the study participants were farmworkers who had decided to seek testing at a community health center or study field testing site and that the sample size did not allow full analysis of potential correlates of risk factors among some subpopulations (eg, Indigenous-origin immigrants).

The finding by Mora et al¹ of higher rates of infection among agricultural workers and those living in crowded housing is an important contribution in explaining the elevated rates of mortality experienced by US agricultural workers² and, still more generally, among essential workers of low-income households. The findings of Mora et al¹ of higher incidence of infection among immigrant farmworkers with low education, as well as Indigenous-language workers, reveal a need to examine more precisely how sociocultural factors contribute to transmission as a basis for designing transmission prevention strategies for diverse subgroups within this historically underserved population. Because social networks play such a powerful role in farmworker employment and living arrangements—the contexts associated with elevated SARS-CoV-2 transmission—genomic surveillance within the transnational and regional migration networks of farmworkers may be a useful tool for better understanding national spread of COVID-19 as new variants emerge.

The risk factors identified by Mora and colleagues¹ are reminders that community, workplace, and home environments cannot be treated as fully independent, epidemiologically defined domains of SARS-CoV-2 transmission. Interventions need to be tailored to mitigate the multidirectional transmission of all these environments, especially among low-income immigrant workers, such as farmworkers, living in extremely crowded housing.

To design effective interventions for community spread, researchers must address the structural factors and social determinants of health faced by farmworkers and other historically underserved populations. These considerations will also be vital as we prepare our health care, public health, and civic infrastructures to respond more rapidly and effectively to the next pandemic. The pressing questions, then, are “what next?” How does the study by Mora et al¹ advance research and improve COVID-19 response strategies? How can the lessons we are now learning help us prepare for future pandemics?

The study by Mora et al,¹ conducted during the summer and fall of 2020, provides a baseline to better assess how variations in vaccine effectiveness have affected re-emergence of COVID-19 hotspots. Given the growing prevalence of the Delta variant, the findings of Mora et al¹ suggest refinements are needed in contact-tracing initiatives and overall mitigation. While agricultural employers in Monterey County, part of the Salinas Valley, California, have proactively prioritized worker vaccination, fewer nonworking spouses and vaccine-eligible children have been vaccinated.

A recent Kaiser Family Foundation report³ on vaccine hesitancy shows a need for tailored persuasive messaging. Among the most high-risk subgroups, such as H-2A visa workers living in congregate housing, informal trailer parks, and extremely crowded complex households, increasing access to vaccination will require microtargeting. Communications strategies will need to engage

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distinctive social networks (eg, hometown associations) and develop iterative messages that adapt to evolving pandemic conditions, with the goal of ultimately shifting social norms.

Barriers to getting vaccinated are often determined by economic conditions and necessities. Mora and colleagues have reported elsewhere⁴ that more than half (58%) of the farmworkers who had test results positive for COVID-19 continued to work despite feeling ill. In our experience, testing, self-isolation, quarantine, and vaccine uptake are often economically driven decisions based on fear of losing one's precarious employment or income in the event of infection, isolation, or quarantine.

Recognizing the social and economic drivers of disease behaviors have immediate policy implications regarding access to safety net programs for low-income essential workers in industry sectors with high concentrations of immigrant workers. California policy makers sought to address this with legislation assuring COVID-19 Workers' Compensation to all.⁵ But it is still unclear if this safety net program will be available to those unable to work owing to so-called "long COVID." Gaps in farmworker protections underscore a need for a comprehensive and equitable national strategy that confronts the long-term consequences of the COVID-19 pandemic.

Equitable access and utilization of health care is another urgent issue. As new drugs offering better outcomes with rapid postinfection treatment become available,⁶ public health messaging will need to emphasize that individuals with high risk of adverse outcomes seek medical care rapidly. In California, for example, less than half of farmworkers have health insurance and nearly 45% lack legal status; many farmworkers have never visited a US health care practitioner or are unaware if they are at high risk with respect to COVID-19 (eg, owing to diabetes or high body mass index).⁷

Despite the evidence that broad coalitions, including agricultural employers, community leaders, and educational organizations, in California's more heavily agricultural counties have made direct and indirect contributions to better-than-expected vaccination rates in farmworker communities, there is still much work to be done, as the US is well into a fourth surge of the pandemic. For example, alternatives to social media for promoting vaccination in areas with minimal internet connectivity and messaging tailored to health literacy levels are needed,⁸ as are enhanced operational refinements to better link testing, contact-tracing, wrap-around services supporting quarantine for those living in crowded housing, and vaccinations.

Despite the crucial contributions made by community coalitions in the Salinas Valley, these partnerships are not yet fully equitable nor optimal, even as the US enters into a fourth surge of the pandemic. Ethnocentric "one-size-fits-all" messages for digitally engaged literate English-speaking audiences, adopted by local public health agencies, have contributed to ongoing disparities experienced by farmworkers and their communities. Delays and reluctance to expand the scope of these partnerships can result in needless loss of life.

The examination of multiple correlates in the study by Mora et al¹ provides a valuable framework for further research to enhance understanding of the dynamics of transmission within the diverse distinctive migration, social, and economic networks of the 4.2 million farmworkers and their family members throughout the US.⁹ Going beyond a broad analysis of the structural disparities in disease burden toward more granular action provides opportunities for innovative response that can be implemented by catalyzing broad-spectrum community collaborations in all areas of pandemic strategy, including policy, outreach, engagement, safety net design, messaging and communication, education, and future preparedness.

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