

Letting the Community Lead the Way: Nobles County Research Study Sheds Light on COVID-19 Spread

Planning a community-driven study

In April 2020, early on in the COVID-19 pandemic, a COVID-19 outbreak temporarily shut down the JBS pork plant in Worthington, Minnesota. Employees at this pork plant identify as Hispanic or Latinx, African, or Asian immigrants, communities that have been hardest hit by COVID-19 due to many systemic barriers and challenges. Over 600 employees tested positive, leaving the small community in Nobles County with a ripple effect that was incalculable at the time.

That summer, the city of Worthington reached out to the Minnesota Department of Health (MDH) to request that they partner to conduct a research study to better understand the impact and extent of the outbreak in Nobles County. The study, known as a serology study, would involve collecting dried blood spot samples from Nobles County residents and testing them for SARS-CoV-2 antibodies, an indicator of past COVID-19 infection.

To plan the study, MDH formed a team of staff from across the agency. They immediately brought together a group of community partners, including Voices for Racial Justice, an organization committed to building power through collective cultural and healing strategies for racial justice across Minnesota and Seeds of Justice, the Worthington chapter of Voices for Racial Justice. Community organizers from these groups were instrumental in designing the study and working directly with community members to ensure participation in the study. A key element of the process was relationship building. At each meeting the MDH team and the community partners prioritized getting to know each other. This proved to be critical because much of the work took interpersonal trust to be successful.

For this study, the MDH team did not just want to understand the spread of COVID-19 in Nobles County, but also the impact on the community and potential solutions to prevent future outbreaks. The blood test was paired with a written survey available in Spanish, Karen, Amharic, Oromo, and English. The survey included questions about food security, housing, and community resources. When developing the survey, Stephanie Yendell, an MDH team member, said, "MDH and community leaders got an equal vote on which questions we would include. Everyone left empowered."

Breaking tradition in favor of trust

The success of the study depended on community members showing up to participate. In order for the results to be useful, the demographics of the participants had to be representative of the community overall. For MDH staff, this meant trusting community partners and organizers to reach the community and bring them in. Traditionally, serology studies rely on preregistration of participants in order to estimate participants and their demographics; however, the community organizers insisted that this would not work well amongst the community. Sara Vetter from MDH explained, "We had to trust the community. They are community organizers, this is the culture, we have to understand the community and the people. We worked with the community and let them do what they need to do." They broke the mold of other community testing events by designing an onsite registration system that could handle more people and brought in additional volunteers to assist participants with day-of registration.

Additionally, community organizers took the lead in planning some of the other critical elements of the study. Yendell said, "They had input into what time and days the events would be, thinking about what time people's shifts are and what time people finish church. [They advocated for] choosing places that were familiar to the community." All these thoughtful details ensured that there would be good "turnout of participants from different ethnic communities," Leticia Rodriguez, a member of Seeds of Justice, explained. And, when it came time for the study, there was.

The data

The study ultimately had 1,691 participants that represented an accurate slice of the Nobles County population by race and ethnicity. In total, 266 participants tested positive for SARS-CoV-2 IgG antibodies, meaning they previously had COVID-19. The positivity rates showed a racial and ethnic disparity; the percent positivity for participants who identified as Asian (36%), Hispanic (28%), and Black or African American (26%) was higher than that of non-Hispanic Whites (9%). Furthermore, participants who worked at the local meat processing plant or lived with someone who worked at the meat processing plant had much greater odds of testing positive than households without meat processing plant workers.

The survey also proved to be a useful tool in understanding community needs. Results pointed to food insecurity for a quarter of Nobles County's residents, and also the need for a community center with culturally appropriate resources in various languages. Some of the resources that were mentioned included assistance with health insurance, legal help, employment and tenant rights, transportation, emotional support, housing and jobs, and navigating symptoms.

Making meaning for the results

The data tells a vivid story of the impact of the outbreak in Worthington. While the outbreak was identified at the meat packing plant, COVID-19 reached the entire community. Mateo Frumholtz, an MDH epidemiologist, shared, "The estimated prevalence of infection is much higher than what we thought it was. There is a community ripple effect of having an outbreak in one setting." Furthermore, the survey revealed more factors associated with testing positive. "Socioeconomic factors led to significantly higher risks of having been exposed and infected with COVID-19. For example, food insecurity was associated with higher odds of being exposed," said Frumholtz.

The racial disparities provided data to prove that communities of color were harder hit by the outbreak. Vetter explained, "[COVID-19] really is impacting people of color more. Our study can demonstrate that mechanically and scientifically, not just anecdotally."

Lessons learned

The MDH staff and community organizers involved in the study attribute its success to their strong partnership and trust in community wisdom. Marisol Chiclana-Ayala, co-director of the Cultural, Faith, and Disabilities branch at MDH, noted, "Local leaders were part of everything: development of the budget, design of survey, engagement strategies development...everything, and we followed their lead." Frumholtz agreed, saying, "There is something very different between engaging your partners and sharing power with your partners. We brought them in on day one, saying you tell us what to do and we'll bring the technical expertise and the resources." For, Rodriguez, this project "really showed that working as a team with different partners, you will achieve the greatest success."

As a result, MDH and the Nobles County community were able to collect data to both better understand the outbreak at JBS and the different factors that contributed to COVID-19 risk and overall health challenges in the area. Frumholtz explained, "All groups got something out of the project. Through this partnership, they were able to gain data they needed as well."

Now, over a year after the outbreak at JBS, all Minnesotans ages 12 and up have access to safe and effective vaccines to stop the spread of COVID-19. As community vaccination events have taken place across Minnesota, many of the same community engagement methods have continued to be effective in reaching people who are most impacted by health inequities. These have included same-day registration, community organizer involvement, and hosting events at a variety of times. MDH staff hope that these principles will continue to guide our work with the community going forward.