

## Community Forums to Address Vaccine Hesitancy: A Useful Tool for Meeting the Needs of Diverse Communities

Laura Palombi, PharmD, MPH, MAT<sup>1</sup>; Jazmin Belknap, PharmD<sup>1</sup>; Mary Jo Katras, PhD<sup>2</sup>; Grant Anderson, PhD<sup>1</sup>

<sup>1</sup>Pharmacy Practice and Pharmaceutical Sciences, University of Minnesota - College of Pharmacy, Duluth

<sup>2</sup>Department of Family, Health and Wellbeing, University of Minnesota Extension, St. Paul, Minnesota

### Abstract

Community forums are a valuable tool in engaging rural communities to address critical public health issues. Recognizing low levels of COVID-19 vaccine uptake in rural Minnesota communities and the critical public health threat that resulted, pharmacy faculty and Extension professionals from the University of Minnesota partnered with a diverse group of rural stakeholders to plan a series of six community forums to provide life-saving, evidence-based education about the COVID-19 vaccine. Each forum allowed trusted local community leaders, public health workers and healthcare providers to share information about the impact of COVID-19 in their communities. Data about the COVID-19 vaccines was provided, and community members were allowed to ask questions and voice their concerns about the virus and the vaccines. Virtual community forums allowed rural stakeholders to reach a diverse and geographically remote population while maintaining COVID-19 distancing requirements. Offering a safe, virtual space and immediate access to reliable and trusted place-based education allowed individuals an opportunity to get their vaccine questions answered immediately. Community forums can be conducted in rural communities as a direct communication tool to address critical public health issues such as vaccine hesitancy, and empower community members to make informed decisions in fighting against the COVID-19 pandemic.

### Background

Vaccine hesitancy, defined as a delay in acceptance or refusal of vaccination despite availability of vaccination services, is known to contribute to differences in rural/urban health outcomes.<sup>1,2</sup> Recent assessments have found that individuals living in rural areas, those with lower household incomes, and lower levels of education are more likely to be hesitant about receiving the COVID-19 vaccine.<sup>3,4</sup> Data from the Kaiser Family Foundation reveal that only 31% of rural residents say they will get a COVID-19 vaccine, compared with 42% of urban residents and 43% of suburban residents.<sup>5</sup> A variety of strategies to increase vaccine uptake have been utilized in rural communities across the nation, with varied results.<sup>6-8</sup>

Research has shown that rural populations are at significant risk for morbidity and mortality associated with COVID-19 due to factors that include age stratification, the high prevalence of elderly individuals, and pre-existing comorbidities such as heart disease, diabetes, obesity, and smoking status.<sup>9-11</sup> This, along with limited health care access, fewer life-saving resources including intensive care units and ventilators, and lower health literacy, put rural US communities at significant risk of COVID-19 related morbidity and mortality.<sup>10,11</sup> Many have expressed concern that the prevalence of COVID-19 in rural communities is much higher than is reported due to their lower testing rate.<sup>12</sup> Additionally, subpopulations that already experience vaccine-related disparities and who also live in rural communities are at even greater risk of COVID-related mortality.

**Corresponding author:** Laura Palombi, PharmD, MPH, MAT  
Pharmacy Practice and Pharmaceutical Sciences  
University of Minnesota - College of Pharmacy, Duluth  
Email: [lpalombi@d.umn.edu](mailto:lpalombi@d.umn.edu)

In 2021 a series of community forums focused on COVID-19 vaccine education and access were held across Northeastern Minnesota. Community forums are designed to provide a venue where local public health experts, health care providers, and community organizations can hold a dialog with community members, and have shown utility as an advocacy tool in organizing stakeholders and communities to mobilize and address critical public health issues.<sup>13</sup> Community forums have been used successfully by pharmacists to educate rural community members on substance use and build local grassroots coalitions that strive to find community-specific solutions to reduce substance use and improve community mental health.<sup>14,15</sup> While community forums were hosted in-person before the COVID-19 pandemic, they have always had the potential to be shared and disseminated using remote technology.

The social distancing requirements resulting from the COVID-19 pandemic, along with alarming rates of vaccine hesitancy and a great deal of misinformation regarding COVID-19 vaccines, necessitated a team approach to addressing vaccine hesitancy in northeastern Minnesota that would allow virtual participation.

### Methods

Community forums were hosted by faculty members from the College of Pharmacy at the University of Minnesota in collaboration with partners from the University of Minnesota Extension. The forum presenters included local public health departments and community agencies that were concerned about low COVID-19 vaccine uptake in rural northeastern Minnesota.

Teams of concerned individuals, led by pharmacy faculty and partners in Extension, brought together community stakeholders to plan a series of 6 community forums that allowed local public health officials and healthcare providers in rural Minnesota communities to share reliable COVID-19 information with community members. The forums also gave community members opportunities to ask questions and voice their concerns with the COVID-19 vaccine and the impact of the COVID-19 virus.

The planning team recruited trusted community leaders, local healthcare providers including pharmacists and physicians, county and state public health department experts, and community members, to share information and personal experiences regarding the clinical and public health impact of COVID-19 in each of their communities. The panel also included an infectious disease expert from the pharmacy department at the local University campus and was moderated by the University Extension faculty. A conscious effort was made to have a diverse group of presenters in hopes to give rise to a diverse group of attendees. Local public health and community agencies used their advertising platforms to recruit community members to these Zoom events. Advertisements were made in the form of posted fliers, by word of mouth, social media posts, via email, on the radio, and were disseminated by local public health community partners, Extension, public access television, and major employers including local schools.

These forums were developed to accommodate remote attendance and participation due to the danger posed by the spreading COVID-19 virus and State of Minnesota and University of Minnesota restrictions on public gatherings. Live sessions were broadcast online for attendees to listen in, ask questions, and build a strong foundation with which they could make informed health decisions for themselves and their families. Two forums also had limited in-person participation in a hybrid format, consistent with community norms in that area and more relaxed distancing recommendations, with presenters and community members present both on-line and in person. All sessions were recorded for asynchronous dissemination. Forums were conducted between February and October 2021.

### Results

Sharing personal experiences allowed for attendees to gain perspective on how deadly COVID-19 can be and aided in building a relationship between the presenters and community members. Some panelists discussed current statistics of COVID-19 and risks between different age groups, specific populations, and more. Public health topics included COVID-19 prevalence, protective actions, recommendations, and best ways to avoid getting sick. The end of each session presented ample time for participants to ask questions of the panelists. By recruiting local trusted members of the community to sit on the panel, community members could be confident and feel comfortable

asking their sensitive questions about the disease and use of the available vaccines.

A general overview of COVID-19 was provided, and education on each of the COVID-19 vaccines (Moderna, Pfizer, and Janssen) was given to attendees. Each forum also presented statistics on COVID-19 cases in the local community. After attending a community forum, attendees were asked to complete an evaluation form to determine how the events could be improved in the future.

Most attendees were interested in learning more about the then new COVID-19 vaccines and attended the forums to bolster their interest in becoming fully vaccinated. However, despite the research demonstrating safety and efficacy of each of the COVID-19 vaccinations, many community member attendees at the forums displayed hesitancy in wanting to receive their vaccination(s). Hesitancy was expressed in a multitude of ways throughout the COVID19 pandemic. Individuals showed signs of being nervous or anxious about receiving a COVID19 vaccination, put off receiving their vaccination, or showed reluctance to learn about the vaccinations. Overall, vaccination decisions came down to personal views and fears combined with education from personal trusted sources.

### Discussion

Community forums are a useful tool for engaging rural and diverse populations. The implementation team had a 5-year track record of having planned and implemented over a dozen community forums across northeastern Minnesota, many of them in partnership with Extension, and have established relationships with public health departments and healthcare providers throughout the region. Recruiting ambassadors and experts from each community was determined to be more impactful than having a team of University of Minnesota experts travel to each location. It is critical to be aware of cultural context and understand that each community will differ slightly from the next. Engaging with community members in the planning of each event and allowing them to guide the agenda gives critical insight to community culture and establishes a common level of understanding with attendees. Community forums allow for the voice of the community to be raised up and allows for lived experience to be integrated into the conversation.

Partnerships between pharmacy faculty/departments and Extension create a powerful model that brings together scientific expertise, shared experience and local knowledge that leads to greater health for all. This partnership allows for authentic community engagement and deep trusted relationships. This partnership creates the opportunity to address critical public health topics (vaccine hesitancy and the opioid crisis [opioid.umn.edu](http://opioid.umn.edu)) through a holistic lens. Taking a place-based approach is also critical. Forum location can make the slightest difference in attendance turnout and how the

community perceives the event, especially when topics are controversial. It may be beneficial to adopt the culture of the community into the event as much as possible and reserve an established location within the community such as a local town hall, park, or public area. Another recommendation for future research is to maximize partnerships with entities that have a longstanding presence in communities.

During the period of time these forums were held, community and employer COVID-19 mitigation practices meant that four forums were held virtually and only two forums held in a hybrid setting. The virtual component meant communicating with participants, hosting, recording, archiving and creating links for participants to access; this was determined to be a key contributor to success, and was performed by the University Extension collaborator. The nature of an online live forum may have limited the participation of people without high speed internet access and others with limited technical skills, particularly elderly participants. Of note, the second live event held in a rural community school had very few in-person attendees. This was ascribed to fear of gathering in a community setting at the height of COVID-19 transmission and recent community opposition to COVID-19 vaccines and masking mandates. These local issues also made it difficult to recruit local health care professionals to participate in the forums during this stage of the pandemic.

Looking at hesitancy in the future, it may be beneficial to research the public's understanding of the Emergency Use Authorization (EUA) process. EUAs facilitate the availability of medical resources that help diagnose, treat, or prevent the spread of disease during a declared public health emergency when there are no approved options available. The known and potential benefits and risks are taken into consideration prior to approval of an EUA. Some attendees shared beliefs that the EUA was a shortcut to production, which allowed for misinterpretation of the expedited process of approval. Using vaccine experts and local health care providers to address this issue helped alleviate some of the concerns voiced by participants at the forums. While we were unable to determine the impact of the community forum participation on vaccine status, such assessments are important to fully determine the effectiveness of the community forums in the future.

### Conclusion

The University of Minnesota - College of Pharmacy utilized Extension partnerships to engage various communities and empower them to make informed decisions regarding COVID-19 vaccinations. Community forums are a valuable community engagement tool to address critical public health issues, including vaccine hesitancy amidst the COVID-19 pandemic. Pharmacists and pharmacy faculty are well-positioned to partner with Extension, local public health, and community agencies to host and participate in community forums focused on the COVID-19 pandemic, and COVID-19 vaccines. These forums aimed to support research-informed health education

and present accurate and reliable information regarding COVID-19 and vaccination data so community members could make informed decisions.

**Acknowledgements:** The authors would like to acknowledge the partners who made the community forums possible, including: St Louis County Public Health, Aitkin County Public Health, Minnesota Department of Health, Arrowhead Area Agency on Aging, Hibbing School District ISD 701, Hibbing Public Access Television, Fairview Range Medical Center, St. Luke's, Ecumen Lakeshore, and local physicians and pharmacists.

### References

1. MacDonald NE. Vaccine hesitancy: Definition, scope and determinants, *Vaccine*. 2015; 33(24): 4161-4164. <https://doi.org/10.1016/j.vaccine.2015.04.036>.
2. Gatwood J, McKnight M, Fiscus M, Hohmeier KC, Chisholm-Burns M. Factors influencing likelihood of COVID-19 vaccination: A survey of Tennessee adults. *Am. J. Health Syst. Pharm.* 2021;10:879–889. doi: 10.1093/ajhp/zxab099.
3. Khubchandani J, Sharma S, Price JH, Wiblishauser MJ, Shamra M, Webb F. COVID-19 Vaccination Hesitancy in the United States: A Rapid National Assessment. *Comm Health.* 2021; 46(2): 270–277.
4. Ebrahimi OV, Johnson MS, Ebling S, Amundsen OM, Halsøy Ø, Hoffart A, Skjerdingstad N, Johnson SU. Risk, Trust, and Flawed Assumptions: Vaccine Hesitancy During the COVID-19 Pandemic. *Front Public Health.* 2021 Jul 1;9:700213. doi: 10.3389/fpubh.2021.700213.
5. Kaiser Foundation. Coronavirus Dashboard. 2020. <https://www.kff.org/coronavirus-covid-19/dashboard/kff-covid-19-vaccine-monitor-dashboard/>
6. Newcomer SR, Caringi J, Jones B, Coyle E, Schehl T, Daley MF. A Mixed-Methods Analysis of Barriers to and Facilitators of Human Papillomavirus Vaccination Among Adolescents in Montana. *Public Health Rep.* 2020;135(6):842-850. doi:10.1177/0033354920954512
7. Alcindor DJ. Targeting COVID Vaccine Hesitancy in Rural Communities in Tennessee: Implications for Extending the COVID-19 Pandemic in the South. *Vaccines (Basel).* 2021;9(11):1279.
8. Hohmeier KC, Barenie RE, Hagemann TM, Renfro C, Xing K, Phillips A, Allen R, Fiscus MD, Chisholm-Burns M, Gatwood J. A social media microinfluencer intervention to reduce coronavirus disease 2019 vaccine hesitancy in underserved Tennessee communities: A protocol paper. *J Am Pharm Assoc (2003).* 2022 Jan-Feb;62(1):326-334. doi: 10.1016/j.japh.2021.11.028.
9. Paul R, Arif A, Pokhrel K, Ghosh S. The Association of Social Determinants of Health With COVID-19 Mortality in Rural and Urban Counties. *J Rural Health.* 2021 Mar;37(2):278-286. doi: 10.1111/jrh.12557
10. Lakhani HV, Pillai SS, Zehra M, Sharma I, Sodhi K. Systematic Review of Clinical Insights into Novel Coronavirus (CoVID-19) Pandemic: Persisting Challenges in U.S. Rural Population. *International Journal of Environmental Research and Public Health.* 2020; 17(12):4279. <https://doi.org/10.3390/ijerph17124279>

11. Ahmed R, Williamson M, Hamid MA, Ashraf N. United States County-level COVID-19 Death Rates and Case Fatality Rates Vary by Region and Urban Status. *Int. J. Environ. Res. Public Health*. 2020, 17(12), 4279; <https://doi.org/10.3390/ijerph17124279>
12. Zhang CH, Schwartz GG. Spatial Disparities in Coronavirus Incidence and Mortality in the United States: An Ecological Analysis as of May 2020. *J Rural Health*. 2020; 36: 433-445. <https://doi.org/10.1111/jrh.12476>
13. American Public Health Association, Sample Questions for Public Forums. Accessed online on February 21, 2023: [https://www.apha.org/-/media/files/pdf/advocacy/speak/public\\_forum\\_questions.ashx?la=en&hash=5A098EB71C1F699AB5B79D908FA32A562E38E541](https://www.apha.org/-/media/files/pdf/advocacy/speak/public_forum_questions.ashx?la=en&hash=5A098EB71C1F699AB5B79D908FA32A562E38E541)
14. Palombi LC, Vargo J, Bennett L, Hendler J, Coughlin P, Winter G, LaRue A. A Community Partnership to Respond to the Heroin and Opioid Abuse Epidemic. *J Rural Health*. 2017; 33: 110-113. <https://doi.org/10.1111/jrh.12180>
15. Palombi L, Olivarez M, Bennett L, Hawthorne AN. Community Forums to Address the Opioid Crisis: An Effective Grassroots Approach to Rural Community Engagement. *Substance Abuse: Research and Treatment*. 2019;13. doi:10.1177/1178221819827595