NAVIGATING TRUST

COVID-19 vaccine confidence across multilingual protein processing worker communities

Health Within Our Reach

CDM Centro de los Derechos del Migrante, Inc.

Introduction

Since the first COVID-19 vaccines were authorized in December 2020, the Centers for Disease Control and Prevention (CDC) have supported a variety of efforts to encourage widespread vaccine confidence and uptake, especially among populations disproportionately at risk for suffering the effects of COVID-19. Early on, the CDC designated frontline protein processing workers - those employed in meat, poultry and seafood processing - as a priority group for COVID-19 vaccination. Despite this measure, many frontline protein processing worker communities continued to face significant and unique barriers to vaccine access and confidence; indeed, as an overwhelmingly rural workforce disproportionately made up of immigrants, refugees, and people of color, protein processing workers have often been classified as "hard to reach" populations within the COVID-19 public health response and beyond.[1]

Throughout the Federal COVID-19 Public Health Emergency (PHE), the CDC continued to support and solicit insights from diverse stakeholders - including healthcare institutions, employers, research institutions, community-based organizations, and the media - on best practices for supporting COVID-19 vaccination among frontline protein processing workers and other disproportionately impacted - yet "hard to reach" - populations. In this context, Centro de los Derechos del Migrante, Inc. (CDM) entered into a multi-year cooperative agreement with the CDC to control the spread of COVID-19 among frontline protein processing workers, including through COVID-19 vaccine confidence efforts. Beginning in 2020, CDM led the Protein Processing Worker Project, a collaboration among a network of community-based organizations (CBO's), to carry out an expansive *Health Within Our Reach* outreach and communications campaign to support frontline protein processing workers in accessing critical COVID-19 information and resources tailored to their linguistic and cultural needs.

What makes a difference in COVID-19 vaccine confidence for frontline protein processing worker communities?

Between 2021-2022, CDM worked in consultation with collaborators at the CDC, research institutions, CBO's, and protein processing workers to design a mixed-methods (qualitative and quantitative) questionnaire to better understand protein processing workers and community members' experiences with COVID-19 prevention measures, especially those factors most likely to influence their decision to vaccinate themselves and their families against COVID-19. The questionnaire surveyed participants about their confidence in COVID-10 vaccines, perceptions about COVID-19 messaging, their vaccination status, as well as experiences related to vaccine access. Finally, it assessed interviewees' experience with and perception of diverse COVID-19 prevention efforts and vaccine campaigns, including government-led campaigns, employer-led campaigns, media campaigns, and community outreach campaigns like those employed by CDM and CBO stakeholders. CDM and partners conducted the interviews throughout the spring and summer of 2022, a time when COVID-19 vaccines and booster shots were widely available across the United States for adults and children ages 5–11.

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1 Mixed Messages and COVID-19 Prevention: Why Information Is Not Always Enough to Protect Meat Processing Workers. Sivén, Jacqueline M. et al. AJPM Focus, Volume 2, Issue 4, 100128. Available at https://www.ajpmfocus.org/article/S2773-0654(23)00065-2/fulltext

We have compiled this overview of our findings to assist public health officials, CBO's, community outreach workers, and other stakeholders continuing to combat infectious diseases like COVID-19 that disproportionately affect immigrant and migrant workers of color employed in frontline industries. Highlights from this analysis include:

- The most frequently-reported challenges that participants faced in obtaining a COVID-19 vaccine included time restraints due to work schedules and the inability to take time off to get vaccinated.

- When asked about the materials or events that had the greatest impact on their decision to get vaccinated, participants largely cited five sources: Community-based (including non-profits, churches and other civil society organizations), workplace, the media, the government and other official sources, personal experiences, and the participants' own research. Overall, community-based information and events was the most frequently mentioned source having the greatest impact.

- When asked about the most important COVID-19 vaccination message they had heard or seen, participants overwhelmingly mentioned messages related to the protection that vaccines could provide to themselves, their families and communities.

- Overall, a combination of community engagement, measures addressing everyday practical needs, personal experiences, and readily available and accessible information were key factors that collectively influenced participants' decision to receive the COVID-19 vaccine.

Methodology

CDM partnered with five CBO's to conduct 206 in-person interviews in English, Spanish, and Haitian Creole. The six organizations conducted interviews with both protein processing workers as well as protein processing industry-connected community members (e.g. related to, sharing a household with, or living in community with, protein processing workers), who we recruited through personal and organizational contacts, door-to-door visits, fliers, and social media. All participants were at least 18 years of age and lived or worked in DE, MD, VA, NC, SC or GA. The interviews lasted approximately 30 minutes each, and participants received a $20 gift card for their time. Migrant Clinicians Network (MCN) performed quantitative and qualitative data analysis,[2] the results of which are summarized below. Given that not all participants answered all questions, we have included the total number of responses (n=#) below for reference.

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2 MCN conducted frequency analyses and cross-tabulations using the SPSS statistical software. Frequency analyses allowed for the identification of the prevalence of various characteristics of participants, while cross-tabulations facilitated the exploration of potential associations and patterns among variables. MCN used grounded theory to analyze qualitative data, a process which involves applying inductive reasoning, using a systematic process that begins with reviewing the data in order to identify ideas or concepts that emerge, which are coded and ultimately grouped into overarching areas.

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Demographic Information

Overall, participants came from diverse demographic groups and industries. Approximately two-thirds were female, and about half fell within the age range between 31-50 years old. About half of participants self-identified as Hispanic/Latinx, while one-quarter identified as African American/Black. Nine out of ten participants were born outside of the U.S. Three-quarters of the participants were employed in poultry processing, while one in ten were seafood workers. About 7% of participants were meatpacking workers. About half of the participants were Spanish speakers, one-quarter spoke Haitian Creole. About one out of ten participants indicated that they were bilingual/multilingual, and a similar number reported that they spoke English. See Figure 1 for specific information.

Figure 1: Demographic Information

GENDER (n=197)

Female 68% **Male 32%**

COUNTRY OF ORIGIN (n=188)

Non-U.S. 91% **U.S. 9%**

AGE (n=196)

Years Old	18-30	31-50	51-65	66+
	29%	55%	15%	1%

INDUSTRY WORKED (n=204)

Poultry 77% **Seafood 10%** **Meat 7%** **Other 6%**

RACE/ETHNICITY (n=203)

Hispanic/Latinx	46%
African American/Black	24%
Other	18%
Prefer not to answer	7%
White	3%
Indigenous or Native	2%

PREFERRED LANGUAGE (N=206)

|	
Spanish	55%
Haitian Creole	29%
Bilingual / Multilingual (English/Spanish/Haitian Creole)	10%
English	9%

Vaccination Status

Vaccination status varied among participants. Just over half were partially vaccinated, meaning they had received their initial vaccine doses but had not yet received any boosters. Additionally, three out of ten participants had obtained at least one booster shot, indicating a higher level of vaccine engagement. About 14% were unvaccinated.

Deciding to Get Vaccinated

When asked whether anything in particular made the difference in participants' decision or ability to get vaccinated, participants cited a variety of specific factors. About one-third of participants stated that a particular institution or organization, such as Protein Processing Worker Project-affiliated CBO's, churches, their employer, or a government agency's vaccination campaign, helped them make the decision. A similar proportion of participants indicated that incentives like gift cards were also a key factor in their choice to get vaccinated. Additionally, about a quarter of participants were swayed by specific information from sources like a Protein Processing Worker Project-affiliated CBO, healthcare workers or institutions, online information or social media, family and friends. One-fifth of participants cited the encouragement or advice of a particular person in their life, including Protein Processing Worker Project-affiliated CBO staff, doctors, coworkers and family, as their primary motivator. Finally, just over 1 in 10 participants noted that receiving time off from work made a difference.

FIGURE 2:
Vaccination Status (n=201)

57%
YES: partially
(no booster)

29%
YES: one
booster
or more
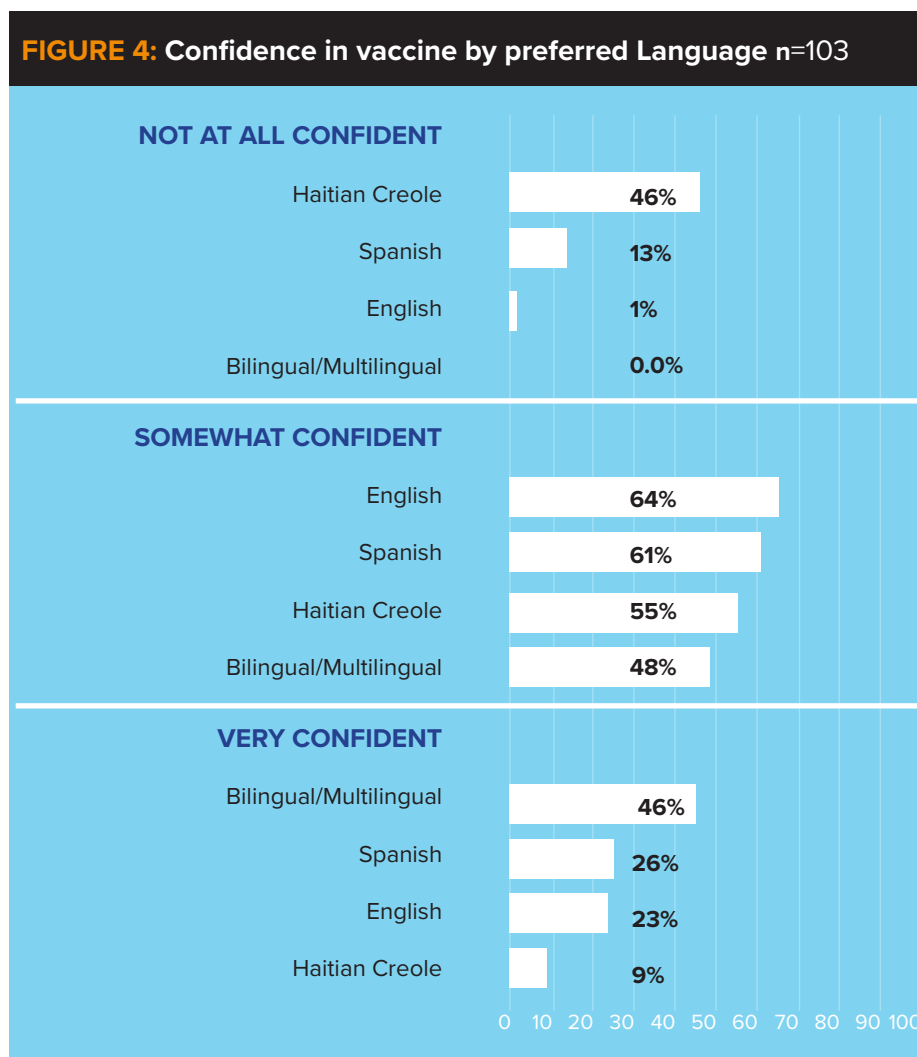
14%
NO
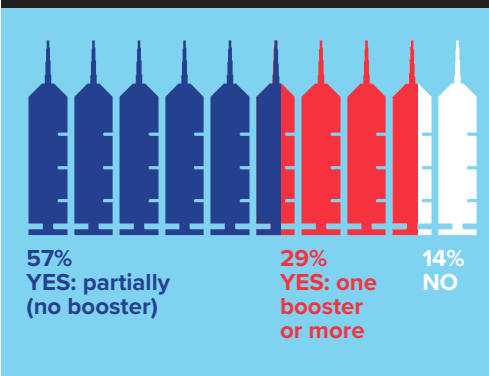
FIGURE 3:
Specific factors that made a difference in participants' decision or ability to get vaccinated (n=114)

Permission at work: 13.2%

A person: 19.3%

Information: 27.2%

Incentive: 31.6%

Institution or organization: 32.5%
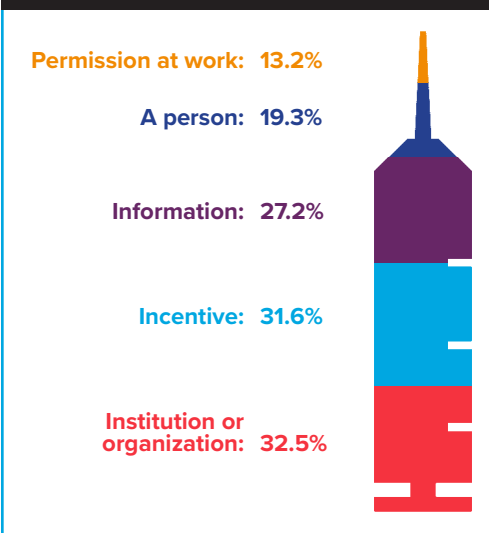
At the same time, fully or partially vaccinated participants also expressed varying levels of vaccine confidence. Out of the 144 participants who reported being fully or partially vaccinated, about one-third (35%) said that the choice to get vaccinated was *easy*. A majority of participants mentioned struggling with the decision, including 37% who expressed that the choice was *somewhat difficult* and 23% who expressed that the choice was *very difficult*.

Vaccine confidence also varied among participants who spoke different languages. Figure 4 illustrates the level of vaccine confidence expressed by the 103 vaccinated workers who also provided their preferred language. Those whose preferred language is Haitian Creole reported the lowest levels of vaccine confidence compared to other language groups. Specifically, just under half of Haitian Creole speakers had no confidence at all in the vaccine, and a similar proportion had only a little or somewhat of confidence; fewer than 1 in 10 Haitian Creole speakers expressed a high degree of confidence in the COVID-19 vaccine. By contrast, more than a quarter of English and Spanish speakers expressed a high level of confidence. Bilingual/multilingual participants expressed the highest overall confidence in the vaccine, with just under half reporting "a lot."

FIGURE 4: Confidence in vaccine by preferred Language n=103

NOT AT ALL CONFIDENT

Language	Percent
Haitian Creole	46%
Spanish	13%
English	1%
Bilingual/Multilingual	0.0%

SOMEWHAT CONFIDENT

Language	Percent
English	64%
Spanish	61%
Haitian Creole	55%
Bilingual/Multilingual	48%

VERY CONFIDENT

Language	Percent
Bilingual/Multilingual	46%
Spanish	26%
English	23%
Haitian Creole	9%

0 10 20 30 40 50 60 70 80 90 100

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CHALLENGES SURROUNDING COVID-19 VACCINE CONFIDENCE AND ACCESS

Much of the data we collected on the challenges participants experienced with regards to COVID-19 vaccine confidence and access through open-ended questions requiring qualitative data analysis. The most frequently-reported challenges that participants faced in obtaining a COVID-19 vaccine included **time restraints due to work schedules** and the **inability to take time off** to get vaccinated. Participants also reported having a **lack of trust in vaccines**, a sentiment fueled by **health-related fears**, such as potential side effects of the vaccine. Some participants mentioned significant challenges in obtaining a COVID-19 vaccine due to a **lack of trusted information** and clarity regarding where and when to get vaccinated. Participants noted it was difficult for them to find vaccination centers and schedule appointments. Furthermore, **lack of educational materials in the participants' preferred language(s)** added another layer of difficulty. Finally, participants reported facing **accessibility** issues, including specific concerns about vaccine availability and/or scarcity.
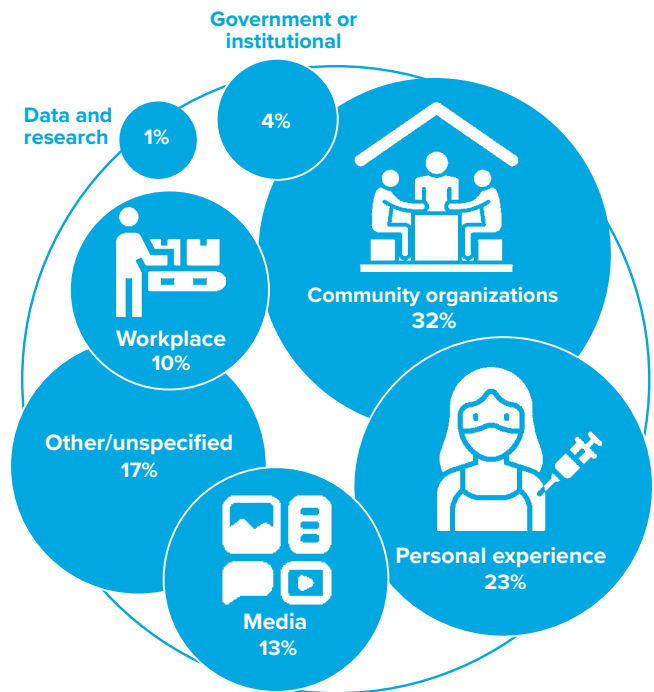
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Making a Difference in COVID-19 Vaccine Confidence and Access

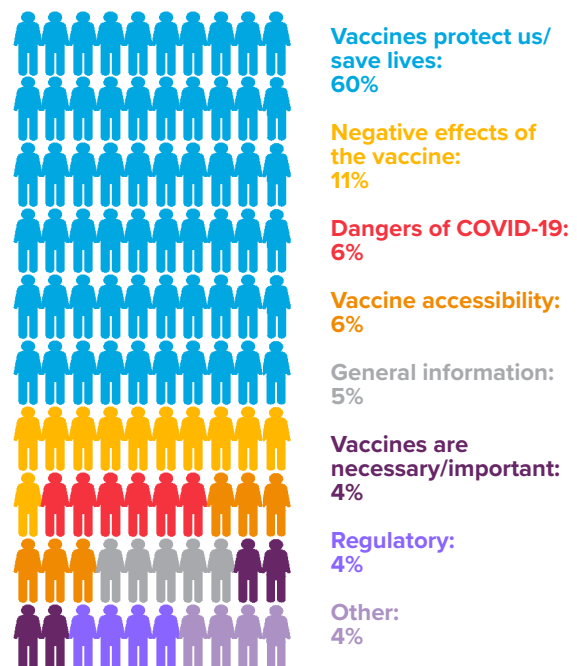## WHAT IMPACTED YOUR VACCINATION DECISION THE MOST?

When asked about the materials or events that had the greatest impact on their decision to get vaccinated, participants' responses could be grouped into several sources. Materials or events stemming from community-based organizations (e.g. community fairs, CBO's, faith-based organizations) was the leading source. Following that, participants most readily mentioned a personal experience that had impacted them, such as contracting COVID-19 or a loved one's death. Next, participants mentioned that experience with a media source (e.g. radio, television, social media) or an experience at their workplace made the biggest difference. Finally, a smaller proportion of workers cited either a government or institutional source (e.g. the CDC, a health department, or school) or a research-backed resource as a primary motivator.

When asked about **the most important COVID-19 vaccination message they had heard or seen**, participants overwhelmingly mentioned messages related to the protection that vaccines could provide to themselves, their families and communities. Other responses could be grouped into the themes described below, including the importance of vaccines, the negative effects of vaccines, general vaccine info, regulatory information around vaccines, vaccine accessibility, and the dangers of COVID-19.

FIGURE 5:
Materials or events that had the greatest impact

Government or institutional

Data and research **1%**

4%

Community organizations **32%**

Workplace **10%**

Other/unspecified **17%**

Personal experience **23%**

Media **13%**

FIGURE 6: Most impactful covid-19 messages

Vaccines protect us/save lives:
60%

Negative effects of the vaccine:
11%

Dangers of COVID-19:
6%

Vaccine accessibility:
6%

General information:
5%

Vaccines are necessary/important:
4%

Regulatory:
4%

Other:
4%

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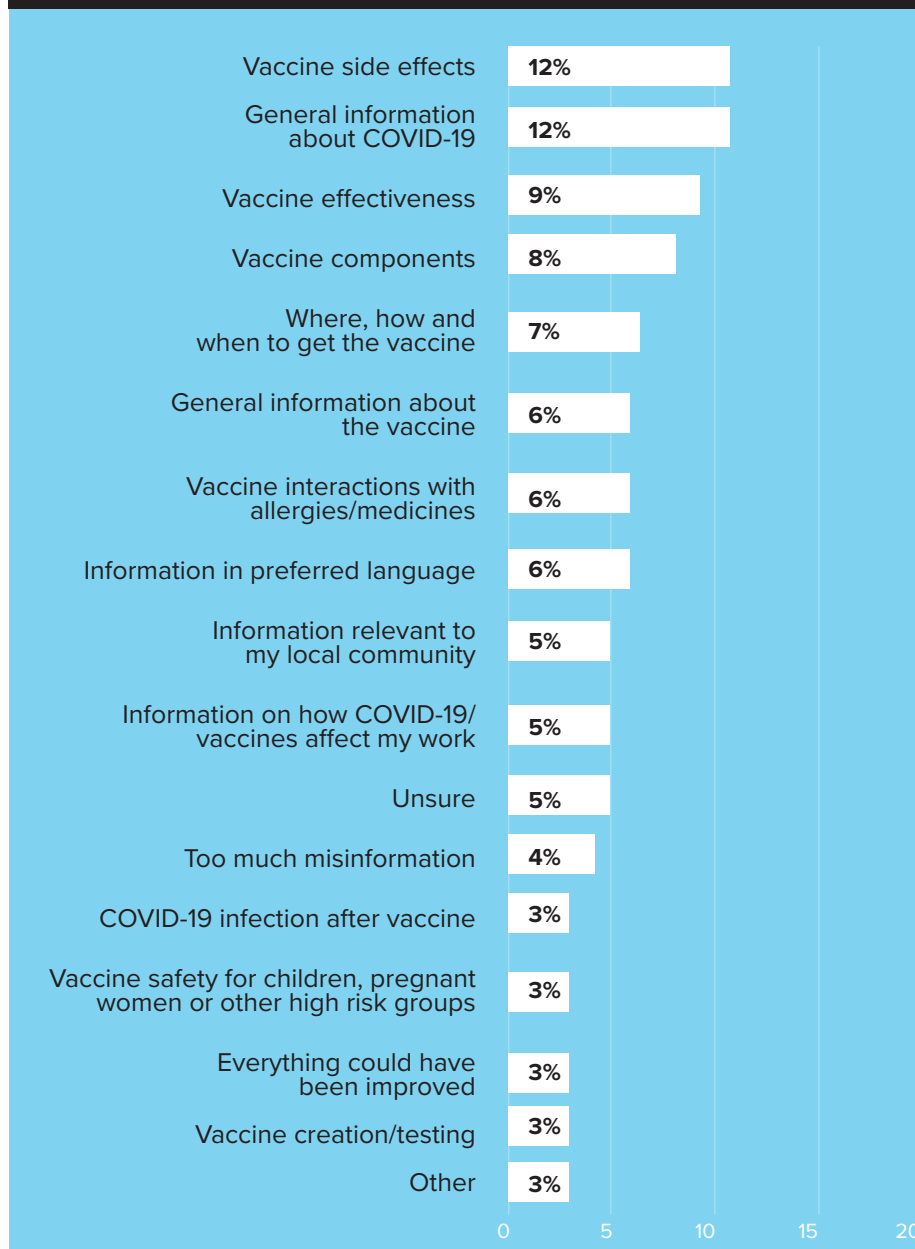CENTRO DE LOS DERECHOS DEL MIGRANTE, INC.

Proposed Improvements

We also asked participants which aspects of the messaging and information surrounding the COVID-19 vaccine could be improved or clarified in the future, the vast majority (78%) of participants offered specific recommendations. Those responses are described below, with the most common themes being accurate information about the vaccine's side effects, general lack of reliable information about COVID-19, and the vaccine's effectiveness and reliability.

FIGURE 7: Suggested Improvements to COVID-19 Messaging n=144

Category	%
Vaccine side effects	12%
General information about COVID-19	12%
Vaccine effectiveness	9%
Vaccine components	8%
Where, how and when to get the vaccine	7%
General information about the vaccine	6%
Vaccine interactions with allergies/medicines	6%
Information in preferred language	6%
Information relevant to my local community	5%
Information on how COVID-19/ vaccines affect my work	5%
Unsure	5%
Too much misinformation	4%
COVID-19 infection after vaccine	3%
Vaccine safety for children, pregnant women or other high risk groups	3%
Everything could have been improved	3%
Vaccine creation/testing	3%
Other	3%

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CONCLUSIONS AND RECOMMENDATIONS

The COVID-19 pandemic disproportionately affected frontline immigrant and migrant workers and workers of color employed in protein processing industries across the U.S. and their surrounding communities. These workers are more likely than the general population to have limited English proficiency and to live in areas with limited access to health services. Although the CDC prioritized frontline protein processing workers' access to COVID-19 vaccination, processing workers and their communities have faced significant barriers to vaccine access and uptake. Understanding the motivations behind workers' and their communities' decisions to get vaccinated or boosted, as well as the factors influencing those decisions, is essential for future campaigns aimed at promoting confidence in and access to health programs.

In interviewing 206 protein processing workers and their community members in the context of the Protein Processing Worker Project, we found that overall, a combination of community engagement, measures addressing everyday practical needs, personal experiences, and readily available and accessible information were key factors that collectively influenced participants' decision to receive the COVID-19 vaccine. While workplace vaccination requirements were significant factors in workers' decisions to get their first vaccines, participants were more likely to cite community-based events and materials, specific institutions or people, or personal experiences as factors motivating ongoing vaccination decisions.

These findings emphasize the need for tailored, intersectional and multicultural approaches to workplace health and safety that address workers' specific concerns and experiences. Localized, community-driven outreach strategies improved outcomes for workers and helped reach unvaccinated populations. Providing linguistically and culturally adapted information in a setting that workers know and trust, along with personalized one-on-one support, helped workers and their families overcome persistent barriers to accessing trusted information and resources, including COVID-19 vaccines.

Furthermore, efforts to reduce the impact of infectious diseases on workers should prioritize education on, and access to, fundamental labor rights—such as paid and unpaid leave, protection against retaliation, wage and hour safeguards, and collective bargaining. Strengthening these rights will enhance the health and safety of workers and their communities both in the workplace and beyond.

By utilizing the report's findings for evidence-based public health interventions, organizations and institutions can more effectively reach the diverse workforce in the protein processing industry, helping to mitigate the future impact of infectious diseases.

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