


Promising Practices for Ensuring Equity in COVID-19 Vaccination: The Devil's in the Details

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The United States has made tremendous progress in delivering COVID-19 vaccines. As of January 2022, more than 79% of the eligible population had received ≥ 1 dose of the vaccine.¹ Encouragingly, the relative proportions of administered vaccines among Black and Latinx populations have increased compared with their population sizes.² As of late July 2021, among the 58% of people who had received ≥ 1 vaccine dose and for whom race and ethnicity were known, Latinx and Black people had begun to receive a larger share of recent vaccinations compared with their total population share (30% vs 17% and 13% vs 12%, respectively).³ These recent trends provide reason for optimism. However, because vaccinations among Black and Latinx populations, who have been disproportionately impacted by COVID-19, have only just begun to match or exceed their population proportions, their overall vaccination rates continue to lag relative to White populations. While we lack vaccination data in more granular race and ethnicity categories, it seems likely that many other racial and ethnic groups, in addition to Black and Latinx populations, included under the broader term Black, Indigenous, and People of Color (BIPOC), are experiencing the same lag relative to White populations.

A New and Challenging Phase of the Vaccine Rollout

The vaccine rollout has been a massive undertaking, and pent-up demand far outpaced supply during the initial months of rollout. More recently, as expected, the pendulum has swung; we have entered a new phase in which demand has declined dramatically, and most people who wanted the vaccine and could easily access it have gotten vaccinated. In this new phase, public health officials and health care institutions, faith-based organizations and youth-led nonprofit organizations, small businesses and huge national companies, tech startups, and many more are getting the chance to apply well-established public health principles that we all (think we) know so well⁴: engage the

community, understand their barriers, use trusted messengers to get the word out, and provide information using the channels that communities actually use, in the languages they actually speak. These principles, while not new, have never been more urgently needed, particularly given the explosion of misinformation and disinformation about COVID-19 vaccines. What is new is the unprecedented speed, scale, and complexity of what the nation is attempting to do: vaccinate as many people as possible in the shortest amount of time.

Barriers to Vaccination Access and Creative Strategies to Overcome Them

Across the country, hundreds of organizations at the federal, state, local, and hyperlocal levels are using promising strategies to overcome the many barriers that populations that have been historically marginalized—particularly those in BIPOC communities—confront in accessing COVID-19 vaccination (and health care more generally). The Rockefeller Foundation-funded Equity-First Vaccination Initiative is supporting more than 100 community-based organizations in 5 US cities to lead efforts to increase access to COVID-19 vaccines and accurate information about them.⁵ As a learning partner for this initiative, focusing on access to and delivery of vaccines, our team conducted an environmental scan to identify promising practices for overcoming access barriers and promoting racial and ethnic equity in COVID-19 vaccination. Importantly, ensuring

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Table 1. Five types of access barriers to equitable COVID-19 vaccination^a

Access barrier	Description
Information	Lack of accurate, timely, understandable information about where, when, and how to get vaccinated (including knowing the vaccine is free) because information is not disseminated through the channels used by the community, the information is not available in appropriate languages, and/or the information is not accessible by people with visual or hearing impairments.
Physical accessibility	Vaccine sites are placed in inconvenient locations (eg, far from public transport or only in affluent neighborhoods) or in locations without accommodations for those with poor health or mobility limitations. Vaccine sites are open during hours that do not meet the needs of the community.
Trustworthiness	Institutions and systems administering the vaccine may not be trusted, reflecting current and historical systemic racism and xenophobia.
Technology	Vaccine access depends on consistent internet access and high levels of technological literacy (eg, registering for a vaccine, making an appointment, using apps to schedule rides to vaccine site).
Cost	Although the vaccines themselves are free, individuals may incur other costs from accessing them, including transportation costs or missed work hours and lost income due to vaccine appointments or side effects.

^aAdapted from Faherty et al.⁶ and Levesque et al.⁷

access to evidence-based information to build vaccine confidence and counter misinformation is outside our scope but is a crucial part of the overall initiative.

Starting in early April 2021, we conducted repeated online media searches to identify strategies being used across the United States to promote equity in COVID-19 vaccination.⁶ We initially conducted these media scans 3 times per week and then decreased the frequency of our searches to weekly, then monthly, through June 14, 2021. We also monitored social media channels, including Twitter, Facebook, Instagram, and Google (through an automated alert), daily to identify additional promising practices. We screened 777 media articles, leading to a total of 228 included articles that (1) described approaches to overcoming access barriers to COVID-19 vaccination and/or (2) contained results of interventions to increase COVID-19 vaccination rates. We excluded articles that only identified barriers to vaccination access without discussing solutions to address them or focused exclusively on overcoming vaccine hesitancy. From those 228 included articles, we abstracted into a Microsoft Excel spreadsheet the following information: the organization(s) leading efforts to address vaccine equity, their location, the target population, the barriers to vaccine access the organization was tackling, interventions used to address those barriers, challenges encountered and solutions to those challenges, and measures of effectiveness, if any.

Using a qualitative descriptive approach, in which we sorted the data to identify patterns and synthesized findings into meaningful groups, we organized the most common access barriers into 5 broad categories: information, physical accessibility, trustworthiness, technology, and cost. To do so, we drew on an existing conceptual model of health care access⁷ that integrates the supply side (accessibility of services) with the demand side (the person's ability to access those services), adapting the model to the unique COVID-19 context (Table 1).

Similarly, the strategies organizations are using to address barriers to access and promote COVID-19 vaccine equity can be organized into 5 categories:

- **Sharing accurate, trustworthy, and accessible information**—making information about the vaccine (eligibility, where to receive it) available by translating materials into multiple languages, using culturally appropriate channels of communication, and enlisting trusted messengers and building their capacity to share evidence-based information that addresses questions and concerns.
- **Providing transportation assistance**—providing transportation vouchers (eg, rideshare applications [apps], buses, taxis), arranging shuttles or buses, setting up carpools, and locating vaccination sites near public transportation.
- **Maximizing convenience of receiving the vaccine**—placing vaccine sites close to where people live or in settings where they may already be going for other services (eg, grocery stores, food banks, physician offices, work), creating mobile vaccination sites, keeping vaccine clinics open late and on the weekends, and offering vaccination to family members, caregivers, and friends who are accompanying others to receive their vaccine.
- **Making registration and appointment processes streamlined and inclusive**—helping people schedule appointments, having multiple ways to schedule an appointment including online and offline systems, expanding hours for vaccines, allowing walk-ins, and not requiring identification or potentially sensitive information to receive a vaccine.
- **Offering incentives**—providing culturally tailored perks for getting vaccinated, such as gift cards to local businesses, tickets to sporting events, and free food and beverages.⁶

Table 2. Equity-focused strategies to promote COVID-19 vaccination^a

Strategy	Examples
Sharing accurate, trustworthy, and accessible information	<ul style="list-style-type: none"> • Multiple localities and organizations are sharing educational materials in different languages. For instance, Greenville County, South Carolina, launched a Spanish-language campaign online,⁸ on billboards, and on the radio and partnered with the South Carolina Hispanic Chamber of Commerce and the Greenville Hispanic Business Council to email business owners who identify as Hispanic. • Organizations are using creative mechanisms to share vaccine-related information with individuals and communities. For instance, the Muckleshoot Indian Tribe,⁹ located south of Seattle, is using digital and hard-copy newsletters, a video made by high school students, and virtual meetings with health care professionals and tribal members to share information on COVID-19 vaccines.
Providing transportation assistance	<ul style="list-style-type: none"> • The Garrett County Health Department in Maryland is partnering with community-based organizations (CBOs) to transport¹⁰ community members to vaccine appointments. • Volunteers from the Seward Vaccine Equity Project in Minneapolis, Minnesota, hired taxi services for and offered rides¹¹ directly to community members for their vaccination appointments and worked with Medicaid to cover transportation costs to appointments. • United Way of Cincinnati used a 2-1-1 line to assist people with transportation¹² to vaccine appointments. • Uber¹³ and Lyft¹⁴ are providing free transportation for vaccine appointments. For example, in Chicago, Uber is partnering with the city government, Walgreens, and faith-based organizations to provide individuals with transportation¹⁵ to vaccine appointments.
Maximizing convenience of receiving the vaccine	<ul style="list-style-type: none"> • Health agencies and clinics throughout the United States have partnered with CBOs to offer vaccines in trusted community spaces and to provide vaccines coupled with other services. Several CBOs partnered with the Maricopa County Department of Public Health to organize an Asian market-based¹⁶ vaccine clinic for Asian and Asian American populations. Many states are offering vaccinations in churches and Historically Black Colleges and Universities.¹⁷ In New York City, Black Hustlers Aid and Freedom Boutique hosted a cookout¹⁸ where Black sex workers could be vaccinated and receive free health services from Callen Lorde Community Health Center. • Service providers for individuals experiencing housing insecurity have provided vaccines along with essential items¹⁹ and food²⁰ during regular distribution events. • Organizations are also working to meet people where they are. Boston Healthcare for the Homeless has taken the vaccine “to the street”²¹ to vaccinate those experiencing homelessness and has provided individuals with a 24-hour hotline to call with any questions about side effects from the vaccine. • Growers, agricultural producers, and county farm bureaus throughout California have hosted clinics at local farms and processing plants for agricultural employees during regular work hours.²² Large-scale employers²³—including Amazon, Ford Motor Co, and Chobani—have partnered with local health systems to offer workplace vaccination.
Making registration and appointment processes streamlined and inclusive	<ul style="list-style-type: none"> • Several organizations lowered the barriers to vaccination by allowing walk-ins and expanding hours. For instance, the Black Doctors COVID-19 Consortium in Philadelphia offers appointments and a walk-in, first-come, first-served system to meet the needs of the community.²⁴ Other organizations have increased access by operating into the evening²⁵ and on the weekends.²⁶ • Multilingual information on registration and at vaccination events is available across the country. Hennepin Healthcare in Minneapolis, Minnesota, is supporting Spanish- and Somali-speaking populations with limited English proficiency by offering live automated calls, emails, and texts in an individual's preferred language.²⁷ • <i>Promotoras</i> in Travis County, Texas, with the Latino HealthCare Forum register individuals waiting in line²⁸ at food and supply distribution events.
Offering incentives	<ul style="list-style-type: none"> • Many states, localities, and organizations are offering a variety of incentives²⁹ to promote vaccination among the general population. Some incentives are tailored for populations affected by inequities in COVID-19 vaccination rates. For example, the National Association of Community Health Centers and Direct Relief have partnered with DoorDash to offer a gift card for a free meal³⁰ through the delivery service to those who get vaccinated at a community health center. • In partnership with the Biden administration, a growing number of childcare providers are providing free childcare³¹ for parents or caregivers to get vaccinated or recover from the vaccine. • Many companies such as Kroger supermarkets, Amtrak, Target, and Trader Joe's have started to offer incentives to employees,³² such as gift cards and extra pay,³³ to get vaccinated, while customers³⁴ receive free tickets, food, and other products. Others have provided up to 4 hours of paid time off to accommodate employee vaccination, including Cargill,³⁵ Tyson Foods,³⁶ and Dollar General.³⁷

^aAdapted from Faherty et al.⁶

We illustrate examples of efforts in each type of strategy (Table 2). For example, the United Way of Cincinnati used a 2-1-1 line to arrange transportation to vaccination appointments.¹² Additionally, growers, agricultural producers, and county farm bureaus throughout California have hosted clinics at local farms and processing plants for agricultural employees during their regular work hours.²²

Potential Pitfalls and Missteps in the Implementation of These Strategies

Although these vaccination strategies are inspiring and represent just a sampling of the work that is occurring every day around the country, it was clear from this national scan that in some situations, even the most well-intentioned strategies for equitable vaccine distribution encountered challenges as they were implemented in the real world of a vast, complicated, and urgent vaccine rollout (Table 2). Organizations discovered that even small missteps were thwarting their efforts. Here are just a few examples, organized by the 5 types of strategies:

- **Sharing information:** Organizations are making a huge effort to provide written and nonwritten information about where and when to get vaccinated to communities in their preferred language(s). However, it can be challenging to ensure that once individuals who are non-English speakers get to the vaccination site, they are able to navigate the site, understand the anticipatory guidance of the potential side effects, and make an appointment for a second dose if needed, if no one at the vaccination site speaks their language.
- **Providing transportation:** Expanding access to ride-sharing companies is a promising way to provide transportation, but some people encounter operational challenges. For instance, to use the app-based service (Uber also offers a telephone-based service to request a ride), the user must have a smartphone, be able to download and use an app that may not be available in their primary language, and have a credit card. Riders were not always accustomed to the service, so connecting with the driver at the designated location could also be a challenge.
- **Maximizing convenience:** Lack of coordination among the multiple organizations working to maximize the convenience of vaccination in a community could lead to multiple pop-up vaccination sites being inadvertently located a few blocks from one another on the same day, while leaving other parts of neighborhoods without convenient access.
- **Streamlining and making registration inclusive:** Organizations encountered several challenges: access

codes intended to be given to communities of color for appointments were shared on social media and misused, forcing some vaccination sites to pause operations temporarily or switch to walk-in only; and, in one organization, well-intentioned volunteers called people to confirm appointments or schedule second doses, but those individuals did not know their telephone numbers had been shared, causing fear and mistrust.

- **Offering incentives:** Several organizations indicated that locally tailored incentives can be a useful tool, but they are concerned that if incentives are not deployed equitably, they may have little impact on inequities and, worse, may solidify people's skepticism about and mistrust of the vaccine. People may think that if the vaccine were safe and effective, people would not need to be paid to receive it.

As these unintended consequences show, the devil is truly in the details when it comes to equitably delivering COVID-19 vaccines in the context of historic and current structural racism, xenophobia, worsening politicization, and declining trust in institutions.³⁸ In other words, a strategy that seems reasonable and sounds like it should succeed may not be effective if policy makers and implementers do not have the full, detailed picture of the local context in which the strategy is being deployed.

Summary and Policy Implications

Based on the experiences of exemplary organizations at various levels, the first few months of the COVID-19 vaccination rollout showed us that even as we celebrate our progress, public health officials and other policy makers at the federal, state, local, and hyperlocal levels must recommit to closing persistent equity gaps, learning from these early missteps, and sustaining progress toward health equity beyond the pandemic. To do so, structural changes are needed to maximize the chances that the strategies we described will be successful. Specifically, policy makers may consider several actions as they seek to address inequities in COVID-19 vaccination (Table 3).

As we put our public health principles into practice, we need to continuously and critically examine proposed solutions to overcoming access barriers. These solutions should be designed by members of historically marginalized communities, and their input should be put front and center when implemented and adapted to local contexts. If we fail to do this, our "solutions" at best will not help those they are intended to reach and, at worst, will exacerbate existing inequities in COVID-19 vaccination.

Table 3. Policy actions to support hyperlocal efforts to promote equitable COVID-19 vaccination

Policy actions that could support implementation of hyperlocal vaccination strategies	How this action supports local organizations and promotes equitable vaccination efforts
Invest in BIPOC-led communications and graphic design organizations, which can create locally and culturally tailored informational materials and know best how to help individuals who speak languages other than English navigate the complex vaccination process.	Builds capacity in local organizations that understand the community and the local context and so are best positioned to develop content that will resonate and be effective.
Increase health insurance reimbursement rates for various transportation options and support the use of transportation vouchers.	Supports organizations to address transportation barriers that communities may face in getting to vaccination appointments.
Provide sufficient paid sick leave and pursue options to make childcare more affordable so that individuals do not have to choose between their employment and their health.	Addresses key barriers to vaccination faced by low-income populations. Making vaccination as low cost and convenient as possible can increase uptake.
Invest in public health data infrastructure in local communities so that public health entities can support community-based organizations to develop data-driven hyperlocal planning around where and when to organize vaccination sites or events.	Granular data can help local organizations identify neighborhoods or populations that are particularly vulnerable and/or have low vaccination rates, allowing them to tailor and target their outreach and access strategies.
Involve communities in designing incentives that are tailored to the community, have value, and will promote rather than hinder equity.	Engaging the community in developing policies and programs that affect them can improve implementation and effectiveness because the policy addresses the specific community needs and context.

Abbreviation: BIPOC, Black, Indigenous, and People of Color.

Authors' Note

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