

The U.S. Equity-First Vaccination Initiative

Early Insights

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About This Working Paper

The Equity-First Vaccination Initiative (EVI) aims to reduce racial disparities in coronavirus disease 2019 (COVID-19) vaccination rates in the United States and, over the longer term, to strengthen the public health system to achieve more-equitable outcomes. To accomplish these goals, The Rockefeller Foundation has funded demonstration sites in Baltimore, Maryland; Chicago, Illinois; Houston, Texas; Newark, New Jersey; and Oakland, California, to plan and implement hyper-local, place-based strategies to increase vaccine confidence and access for communities that identify as Black, Indigenous, and people of color (BIPOC). This interim report introduces the initiative and the anchor partners in each of the five demonstration sites, highlights the initial work of selected community-based organizations to which the anchor partners are making subgrants, synthesizes lessons learned across the EVI in its first three months, and suggests policy implications for decisionmakers to consider as they seek to support hyper-local, community-driven efforts to reduce inequities in COVID-19 vaccination.

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Summary

Overview

The Equity-First Vaccination Initiative (EVI) (Equity-First Vaccination Initiative, 2021) aims to reduce racial disparities in coronavirus disease 2019 (COVID-19) vaccination rates in the United States and, over the longer term, to strengthen the public health system to achieve more-equitable outcomes. To accomplish these goals, building on its legacy of supporting place-based investments, The Rockefeller Foundation has committed \$20 million over one year to fund demonstration sites in five major cities—Baltimore, Maryland; Chicago, Illinois; Houston, Texas; Newark, New Jersey; and Oakland, California—to plan and implement hyper-local, place-based strategies to increase vaccine confidence and access for communities that identify as Black, Indigenous, and people of color (BIPOC). The EVI has identified anchor partners in each demonstration site that, in turn, have selected and provided subgrants to dozens of local community-based organizations (CBOs) in their respective cities to support them in implementing equity-first COVID-19 vaccination strategies. The foundation engaged the RAND Corporation as a learning partner to collect, distill, and disseminate cross-site learnings to promote equitable vaccination efforts both within and across the EVI demonstration sites, as well as nationally.

About This Interim Report

This interim report introduces the initiative and the anchor partners in each of the five demonstration sites, highlights the initial work of selected CBOs to which the anchor partners are making subgrants, synthesizes lessons learned from the EVI in its first few months (through September 2021) about promoting equitable COVID-19 vaccination, and concludes with policy implications for decisionmakers to consider as they seek to support hyper-local, community-driven efforts to reduce inequities in COVID-19 vaccination. This report focuses specifically on access to and delivery of COVID-19 vaccines. The extensive work of the EVI's communication partners, anchor partners, and CBOs to promote access to accurate and trustworthy information about vaccination will be described in an upcoming report led by the Brown University School of Public Health, another learning partner of this initiative.

Our Approach

We conducted a scan of national media and peer-reviewed literature to identify common access barriers to COVID-19 vaccination, as well as strategies to address those barriers. Informed by the scan, we then collected and analyzed qualitative data. First, we abstracted details about the anchor partners' planned approaches from their original proposals submitted to The Rockefeller Foundation and from anchor partners' strategic plans, which described their approaches as of May 2021. Between April and mid-May of 2021, the RAND team interviewed staff at each anchor organization to understand the progress they were making toward increasing vaccination access for BIPOC communities and to identify early lessons from their efforts to plan and implement these strategies. Then, we conducted a second round of interviews with anchor partners in late August 2021 to understand their progress to date; we also interviewed representatives from some CBOs, staff at The Rockefeller Foundation, and members of the foundation's Equitable Vaccination Advisory Council for this initiative. To complement this qualitative data collection, we collected and analyzed quantitative data from each demonstration site in the form of four Key Progress Indicators reported monthly: (1) the number of vaccination events held, (2) the number of instances in which individuals received assistance to get vaccinated, (3) the number of individuals who received a vaccination, and (4) the number of online and offline contacts made through communications campaigns. We also analyzed data from publicly available sources or from data requests of local public health

departments (e.g., vaccination rates in each community and data on COVID-19 cases, hospitalizations, and deaths).

Key Findings from a National Scan of Access Barriers and Strategies to Address Them

Around the country, organizations that serve BIPOC communities are confronting multiple access-related barriers to increasing COVID-19 vaccination rates. These barriers are multidimensional, reflecting the impact of systems and structures that are not inclusive and fail to address the social determinants of health and structural racism. They include

- **information:** Accurate, timely, and understandable information about where, when, and how to get vaccinated can be hard to find.
- **physical accessibility:** COVID-19 vaccination sites are often placed in inconvenient locations or in locations without accommodations for those with poor health or mobility limitations.
- **trustworthiness:** Institutions and systems administering COVID-19 vaccinations might not be trusted, reflecting current and historical systemic racism and xenophobia.
- **technology:** Vaccination access depends on consistent internet access and high levels of technological literacy (e.g., registering for a vaccination, making an appointment, using apps to schedule rides to vaccination sites).
- **cost:** Although the vaccinations themselves are free, individuals could incur other costs related to accessing them (e.g., transportation costs and missed work hours because of vaccination appointments or side effects, which leads to lost income).

Organizations are using various strategies to address those barriers, and some strategies address multiple barriers simultaneously. The specific strategies fall into five broad categories:

- sharing accurate, trustworthy, and accessible information
- providing transportation assistance
- maximizing convenience of receiving a vaccination
- making registration and appointment processes streamlined and inclusive
- offering incentives.

The EVI Anchor Partners

The five anchor partners that were selected to lead the equity-first vaccination efforts in each EVI demonstration site vary by type of organization. Two are grant makers, two are nonprofits, and one is a community health center. While each demonstration site is distinct, they share some vital elements. Anchor partners are supporting their communities to drive their equity-first vaccination approaches through subgrants to CBOs of varying sizes. The partners are also leveraging existing relationships and forging new partnerships to address the myriad needs of BIPOC communities, including, but not limited to, access to COVID-19 vaccination. The CBOs are providing hyper-local knowledge and serving as trusted messengers. In some of the demonstration sites, the foundation has funded other key partners to advance the work of the EVI. We introduce each of the anchor partners below.

The Open Society Institute-Baltimore

The Open Society Institute-Baltimore (OSI-Baltimore) is a grantmaking organization founded in 1998 whose mission is “to disrupt the long-standing legacy of structural racism in Baltimore by supporting powerful social change movements led by, and centering the needs, interests and voices of, historically marginalized communities and communities of color” (Open Society Institute-Baltimore, 2021a).

According to its vision statement, OSI-Baltimore focuses on the root causes of three interrelated issues: “addiction, an over-reliance on incarceration, and obstacles that impede youth in succeeding inside and out of the classroom” (Open Society Institute-Baltimore, 2021b).

The Chicago Community Trust

The Chicago Community Trust “has convened, supported, funded, and accelerated the work of community members and change-makers committed to strengthening the Chicago region” for over 100 years (Chicago Community Trust, 2021). According to its vision statement and strategic plan, to realize the region’s full potential, the Trust is focusing on addressing its “fundamental challenge—racial and ethnic wealth inequity”—by reducing the wealth gap and building toward a “thriving, equitable, and connected Chicago region where people of all races, places, and identities have the opportunity to reach their potential” (Chicago Community Trust, 2021).

Houston in Action and Key EVI Partners in Houston

Houston in Action is a nonprofit organization founded in 2017 to support “community-led civic participation and organizing culture in the Houston region” (Houston in Action, 2021). It is focused on strengthening the “systems, services, and structures” designed to support local communities (Houston in Action, 2021). Houston in Action’s approach centers on organizing and empowering people and local organizations to drive transformative change, particularly by building an infrastructure that strengthens grassroots capacity. As a collective impact organization that unites partners from various sectors around a common goal, it comprises community members, community leaders, local organizations, and city and county representatives, whose collective mission is to “increase access to, and remove barriers to, civic engagement opportunities” (Houston in Action, 2021). The collective also focuses on advocacy, community development and mobilization, and trust-building. Houston in Action has a track record of coordinating with participating members in organizing neighborhood-level projects and campaigns to advance civic participation and community health and well-being.

The Rockefeller Foundation is also funding Bread of Life, a separate nonprofit organization in Houston that will be a key partner for the EVI. Founded in 1992, Bread of Life provides “services, resources, and support to families in need” and individuals experiencing homelessness in Houston (Bread of Life Inc., 2021).

In September 2021, The Rockefeller Foundation funded the City of Houston to serve as an additional key partner in Houston. The City of Houston, Houston in Action, and Bread of Life are expected to coordinate their EVI efforts closely to maximize resources and opportunities to promote COVID-19 vaccine access and uptake.

United Way of Greater Newark and Key EVI Partners in Newark

United Way of Greater Newark (UWGN), founded in 1923, aims to address the root causes of poverty by convening “local government, funders, foundations, and corporations,” collaborating with those addressing the impacts of poverty (“social service providers, public health sectors, and local food pantries”) and supporting community-based organizations that serve families in Newark (United Way of Greater Newark, 2021).

Key partners of the initiative in Newark include the Tara Dowdell Group, a strategic marketing and communications firm, and Medina = CITI, which provides expertise in visual and multimedia design.

Roots Community Health Center and Key EVI Partners in Oakland

Roots Community Health Center (Roots) is a multi-campus, multi-county community health center established in 2008 that provides health services to more than 10,000 residents in East Oakland, many of whom are Black and Latinx individuals earning low wages. In addition to providing health services, Roots aims to “uplift those impacted by systemic inequities and poverty” (Roots Community Health Center, 2021). To do so, health navigators connect patients with needed social and legal services, physical and behavioral health care, benefits enrollment, job training for individuals who were formerly incarcerated, outreach, and advocacy training to mobilize community members in shaping local legislation and policies that impact them (Roots Community Health Center, 2021).

The nonprofit organization Faith in Action is serving as a key EVI partner to help advance vaccine equity in Oakland. Founded in 1972, it is the country’s largest faith-based community-organizing network. Its mission is to promote “racial and economic justice” by organizing congregations of all denominations and faiths that can engage communities to bring local and systematic changes on a range of public policy issues, such as housing, education, health, and public safety (Faith in Action, 2021).

Early Cross-Site Learnings from the EVI

In the first few months of the initiative, we have learned a great deal from the anchor partners and their CBO subgrantees about the value of a hyper-local, community-driven approach to COVID-19 vaccination and how such an approach can be implemented. We have organized these lessons into three broad categories:

- key principles underlying the EVI and how they guide the EVI partners’ work
- strategies that EVI partners are using to promote equitable COVID-19 vaccination
- factors that have supported implementation of the hyper-local, equity-first approach:
 - internal organizational factors
 - relationships and connections with other organizations
 - external supports.

Key Principles of the EVI

The EVI is guided by three key principles: 1) The equity-first programming must be delivered at a **hyper-local level**—at the level of neighborhoods and ZIP codes, not states, counties, or cities; 2) efforts to increase access to COVID-19 vaccinations and accurate information about them should be **led by the communities** in which they are implemented; and 3) the goal of the EVI is not simply to achieve equity in vaccination rates, but rather to take a holistic approach and promote **equitable outcomes across all sectors of society, including, but not limited to, health, education, housing, and economic opportunity**.

Three key principles guiding the EVI are that equity-first programming

- must be delivered at a **hyper-local level**
- should be **led by the communities** in which it is implemented
- should be **holistic**, aiming to achieve vaccination equity in the context of equitable outcomes in health, economic opportunity, and other sectors.

As the pandemic continues to evolve, EVI partners have recognized that they must reach deeper and deeper into their communities to identify individuals who may face multiple barriers to getting vaccinated, ranging from not knowing where to go or what the benefits are of vaccination to not having transportation or child care. Partners have also recognized that they must intensify and become increasingly creative with strategies to provide trustworthy, evidence-based, and

relevant information to people as they weigh their vaccination decision.

EVI partners have demonstrated that when it comes to tailoring information and strategies to break down access barriers, there is almost no such thing as *too* hyper-local. As one CBO from Houston said, “We recognize that each community is different. . . . What you do on the east side of Kashmere Gardens [a Houston neighborhood] may or may not work on the west side of Kashmere Gardens.” The characteristics of the community that the organization serves play a crucial role in the organization’s equitable vaccination efforts. The community’s composition, culture, norms, and history can all affect which strategies are needed, which strategies are appropriate, and how each strategy plays out in the community. For instance, trusted messengers likely differ from one community to the next, as does the most convenient location for a pop-up COVID-19 vaccination event.

Each of the EVI partners described how grassroots efforts, led by nimble CBOs who are *from the communities they serve*, have been critical to the success of the EVI in its first few months. One CBO noted that when vaccination strategies for West Baltimore are designed and implemented by an organization that “lives and breathes within West Baltimore . . . [and is] building and planting where we live,” then the strategies are truly tailored *by* the community *for* its members.

Hyper-local, one-on-one, intensive outreach to provide information and vaccinations presents new and different challenges for the CBOs leading this work. It is time- and labor-intensive in a different way than mass communications and mass vaccination events were when COVID-19 vaccines first became available. The CBOs typically have small staffs and operating budgets. Careful planning and coordination are also required to ensure that hyper-local efforts, such as pop-up vaccination events within the same neighborhood, are not duplicative or competing with one another for the same attendees.

Finally, although the EVI is focused on equitable vaccination, the foundation intentionally selected anchor organizations that are community organizers and, with one exception, are not health care or public health organizations. This approach demonstrates a commitment to the guiding principle that the EVI’s ultimate goal is not only vaccination equity or even health equity, but equity across all aspects of society.

Strategies That Organizations Are Using to Promote COVID-19 Vaccination Equity

Here are several examples of the creative, hyper-local strategies that EVI partners are using to increase access to COVID-19 vaccination and to reliable information about the vaccines:

- Organizations are **sharing information** about how to access vaccinations through a variety of mechanisms, ranging from neighborhood flyers to social media messaging.

- To ensure that messaging is heard and understood, organizations are translating messages into different languages and working with community members to tailor messages so that they are relevant to the target population. As one key partner indicated, “That may sound like a no-brainer, but [we have to figure out] the best way to reach audiences who speak both languages.

There was also some discussion about making sure that those messages were appropriate in terms of the colloquialisms, if you will, of the different communities so that the message can be heard.”

CBOs highlighted several **key elements of successfully communicating information** about vaccinations: The messenger must be trusted; the message must convey content that is important to the target audience, not what “matters to the whole country”; people need access to public health and medical experts to answer their questions about the vaccines; messaging campaigns must be coupled with one-on-one outreach; and relationships with community members take time to build.

- EVI partners are focused on making vaccines more **convenient to access**.
 - Typically, this includes placing vaccination events in locations that are closer and/or more trusted by the target population and increasing hours of operation to attract people with different schedules. In some cases, the EVI partners addressed very specific concerns of the target population. For example, one organization reassured parents who did not have child care at the time of their vaccination that appointment length was strictly limited; thus, if they brought their children with them, they would not be waiting for a long time in a place where the children could potentially be exposed to the virus. Several organizations focused on back-to-school events, such as providing COVID-19 vaccination at backpack drives or at vaccine clinics for other vaccinations required for school attendance.
- Many EVI partners are helping people **navigate the registration process and are providing transportation**.
 - As one CBO staff person stated, “[W]hen the pandemic hit, it really hit our neighborhood very hard. We were considered a red zone. So, we were involved in getting our families vaccinated, sharing information, keeping people informed, if we needed to take them to a [vaccination] site, helping navigate registration for different COVID sites.” Others partnered with Lyft and Uber to provide rides to a vaccination appointment. However, transportation barriers are part of a larger systemic problem and are an important component of addressing inequities in the social determinants of health and COVID-19 simultaneously.
- Some organizations are **offering incentives** to help boost vaccination rates. The incentives might have been designed by others—e.g., at the state level.
 - Organizations can pay participants directly to encourage them to get vaccinated, offer a lottery-based incentive, or incentivize people to attend events, such as street festivals or cookouts, where the vaccines are also offered. CBOs have learned that, to be effective, the incentive must be meaningful to the population. As one anchor partner stated, “[W]e’re dealing with the people who are reluctant, so it’s been very difficult. [To reach them,] we are giving away things in terms of debit cards and food and providing some kind of a payment whenever we can. We’re giving out backpacks today and for the rest of the week.” Another key lesson learned is that incentives can open the door, but when there are many competing demands, people might need another strong motivation to get vaccinated, such as fear of the highly transmissible Delta variant. As one CBO staff member said, “They’re trying this hundred-dollar [incentive]. I am not sure how much that’s going to really make a difference for people. I think that the Delta variant will make a difference for a lot of people. That’s changing things [and motivating more people to get vaccinated].” Of note, as this report was going to press in fall 2021, the Biden administration announced new vaccination mandates for certain groups (e.g., federal employees, health care workers, private businesses with more than 100 employees). These are distinct from, but related to, incentives in that they are both intended to shift the perceived cost-benefit ratio of getting vaccinated. Future reports will discuss how these mandates affected the work of the EVI partners.

Factors That Have Supported Implementation of an Equity-First Approach to COVID-19 Vaccination

By implementing the strategies described above, EVI partners have made substantial progress since the initiative fully launched in summer 2021. In just the first few months of the EVI initiative, the CBOs in the five demonstration sites

- held nearly 1,200 vaccine-related events
- provided assistance more than 42,000 times to get people vaccinated (e.g., transportation, registration)
- made almost 2 million connections with community members through campaigns and information sessions
- administered almost 16,000 COVID-19 vaccinations.

What Has Made This Progress Possible?

EVI partners identified three **characteristics of their organizations** that have been critical to the implementation of hyper-local approaches to COVID-19 vaccination:

- mission-driven, committed staff who reflect or come from the communities they serve
- deep knowledge of, and history in, their communities
- agility to respond to the constantly changing pandemic.

EVI partners also identified **partner relationships** as critical. Relationships within the EVI are multidimensional—with interactions among anchor partners, CBOs, learning partners, and the foundation. Forming or strengthening those relationships during the COVID-19 crisis has involved overcoming multiple challenges and ensuring sustained commitment from all entities. Each of these EVI partners shared important lessons for how they built and maintained effective relationships within the initiative and, crucially, within the communities that they serve. These lessons include building on past successful partnerships, focusing on the assets each partner brings to the table, and creating additional partnerships beyond the EVI to fill gaps and create a united front. Trust and clear communication were the two main facilitators of engagement; having a collaborative infrastructure that supports both of those facilitators was key to effective partnerships.

Partnerships based on trust and clear communication, as well as a strong collaborative infrastructure for the EVI as a whole, are necessary for success.

There are numerous factors that affect what CBOs can do and how effective they can be with their equitable COVID-19 vaccination strategies. The EVI partners identified four **external supports** that they felt were particularly important to their efforts to implement a hyper-local equity-first approach to vaccination. They indicated a need for **policy leadership, adequate and stable funding, technical assistance, and access to high-quality data**.

Policy leadership shapes the environment in which the CBO is operating. If state, and particularly local, leadership is generally supportive of vaccination and its policies reflect that, the CBO's job becomes easier in multiple ways. If equitable vaccination is a policy priority, it could lead to greater funding for and

To do this work, CBOs need

- policy leadership
- adequate and stable funding
- technical assistance
- access to high-quality, timely, race/ethnicity-disaggregated data.

attention to the CBO's efforts. It might also improve coordination across the different local organizations promoting vaccination and improve the consistency of messages that the community is receiving. Most of the EVI anchor CBOs are partnering with their local health department and viewed the collaboration with local government as essential to their success.

Funding is critical to CBO efforts to implement hyper-local equity-first vaccination strategies. For example, one CBO was excited about new funding it had received that would fill gaps and reach additional high-risk communities. Although the CBOs appreciate the support they have received, many noted challenges around generating and sustaining adequate levels of funding. Most CBOs were piecing together funding from multiple sources.

This fragmentation can create extra administrative work for the CBOs because each source of funding has its own time frame and requirements, such as meetings, performance measures, and progress reports.

Technical assistance can amplify CBO efforts to implement equitable vaccination strategies. As part of the EVI, CBOs are supported by the partners who provide communications training, support data collection and analysis, and facilitate cross-site learning. The Rockefeller Foundation designed the initiative to support local organizations not just financially, but also to “surround them with the resources that they need to be able to measure, evaluate, and learn, and then scale that learning.” The technical assistance that is most helpful varies across communities and must be tailored, contextualized, and, often, “just in time.”

Access to **high-quality data** supports a hyper-local approach. Timely and detailed data, disaggregated by race/ethnicity, can help CBOs promote equity by identifying neighborhoods and specific populations (e.g., youth) where vaccination rates are low so that CBOs can target their outreach and vaccination activities. CBOs that have a strong relationship with their local health department have gained access to such data and use the information to adjust their strategies in real time. However, the availability of race/ethnicity–disaggregated data varies across the demonstration sites. Each of the local health departments in the demonstration sites collects COVID-19 outcome and vaccination rates, but not all have such data, or make them available, at the neighborhood (e.g., ZIP code) level or disaggregated by race/ethnicity.

Recommendations

Based on what we have learned from the CBOs to date about the strategies they are using, what has made progress possible, and what they need to accomplish their missions, the following are overarching lessons for initiatives such as the EVI that are working at the hyper-local level to promote equitable COVID-19 vaccination and address inequities more broadly. These practices can be seen as the start of an equity-first framework that will be developed by all EVI partners over the course of this initiative:

Build authentic, ongoing relationships to meet community needs before, during, and long after a public health emergency.
Amplify and support the CBOs who are doing the grassroots work; don’t direct them. As experts in, and on, their communities, they know what strategies will be most effective.
Provide a consistent, stable source of funding , not just during times of crisis, and ensure that funding opportunities are accessible to CBOs who have limited time and/or experience with grant-writing.
Focus on building capacity within CBOs that will last long after the initiative is over (e.g., to counter vaccine misinformation, interpret and act on vaccination data, apply for grant funding).
Co-create messaging and information campaigns and co-design strategies to expand vaccine access in partnership with affected communities; engage with and listen to communities from the outset, not just when asking for feedback on how something was received.
Build bridges across sectors. Vaccination equity intersects with housing, employment, food insecurity, and infrastructure, among other social dimensions.
Dig deeply to understand access barriers and hidden costs of vaccination for those without a social safety net; making vaccines available does not automatically mean that people can access them.
Partner with various types of trusted messengers in a community. Think creatively with communities about who their trusted messengers are.
Apply a harm reduction approach; if individuals, particularly those who have been the recipients of misinformation and disinformation, are not ready to get vaccinated or do not plan to be vaccinated in the future, share information about how they can protect themselves and others from COVID-19.
Reframe the narrative around access barriers and vaccine confidence; rather than blaming individuals who are not vaccinated, strive to fix the broken systems (e.g., health care) that create barriers and lead people to mistrust them.

Options for Policymakers to Support This Work in the Near Term

Policymakers and public health officials at all levels of government, health care organizations, philanthropy, and the private sector each play an important role in providing the resources, leadership, and implementation supports that enable organizations such as the EVI anchor partners and CBOs to do their work successfully. Table S.1 summarizes **selected external supports, including policy actions**, that we identified through (1) our national scan of media and academic literature and (2) interviews with EVI partners. Because these supports are implementable in the short term, they could make the equitable vaccination strategies being used in the EVI and across the country more feasible, scalable, effective, and sustainable. These supports could also serve as the beginning of the critical longer-term process of addressing structural inequities that impact all aspects of our society. These illustrative supports and policy actions are organized by **type of strategy** (e.g., providing information, streamlining registration and appointment processes) and by the **groups** that might be best positioned to provide those supports or enact policies that facilitate implementation of equity-first vaccination strategies. Those who are best positioned to take a leadership role to provide the selected external supports are represented in dark green; those who might act in more of a supportive role are highlighted in light green.

Table S.1. External Supports and Groups That Are Best Positioned to Provide Them

External supports to facilitate implementation of equitable COVID-19 vaccination strategies	Who is best positioned to provide the supports? Dark green: leadership role; light green: supportive role				
	Federal policymakers and public health officials	State, tribal, local, and territorial policymakers and public health officials	Health system leadership	Private sector and philanthropy	
Strategy: Share accurate, trustworthy, and accessible information					
Provide funding to CBOs to enable them to identify and collaborate with trusted messengers in their communities and/or hire additional staff, such as community health workers	X	X	X	X	
Coordinate messaging and recommendations with CBOs, giving them time to prepare to amplify the message or work to address any unintended effects	X	X	X	X	
Build communication capacity and networks among CBOs and other local organizations to address vaccine misinformation	X	X		X	
Provide resources to primary care providers to equip them for difficult, yet efficient, conversations about COVID-19 vaccination	X	X	X	X	
Strategy: Provide transportation assistance					
Collaborate with the private sector (e.g., ride-sharing companies) to offer free or discounted rides		X	X	X	
Ensure reimbursement by public and private payers to individuals and/or organizations for transportation, including accessible options for those with limited mobility	X	X			
Strategy: Maximize convenience of receiving the vaccine					
Ensure that pediatricians can be reimbursed for vaccinating adult caregivers who accompany a child to an office visit or vaccination event	X	X			
Streamline the process for in-home vaccination and offer sufficient reimbursement	X	X	X		
Provide financial incentives for providers to vaccinate their patient population (e.g., payments for providers meeting equitable vaccination targets)	X	X	X		
Provide accessible, high-quality, real-time data that helps target vaccination efforts (e.g., where to locate pop-up events, where door-to-door canvassing is needed)	X	X	X	X	
Strategy: Streamline registration and appointment processes					
Expand funding for community health workers, patient navigators, and/or case managers to assist with registration, appointments, or locating vaccination sites	X	X	X	X	
Support development of technologies to streamline registration, document vaccine administration, and provide information to immunization information systems	X	X	X	X	
Strategy: Offset costs of vaccination					
Involve communities in designing incentives that are tailored to the community, have value, and will promote rather than hinder equity	X	X	X	X	
Ensure paid time off to get vaccinated, to assist others to get vaccinated (e.g., a child or elderly parent), and to recover from side effects; or ensure payments for lost income due to vaccination or side effects	X	X	X		

Over the Longer Term: Lasting Change Through Reimagined Systems and Structures

Although the recommendations in the previous section are important, they are also bandages (or even tourniquets). What is needed is to prevent the bleeding at its source and, better yet, to envision the systems that cause the inequities in the first place. Achieving the second goal of the EVI—in the words of one Rockefeller Foundation staff member, “building a community-centered public health system”—will require a fundamental redesign of the public health system and its financing. Achieving such systemic changes will require significant time, effort, resources, and political will.

Looking Ahead

A consistent theme in our interviews with EVI partners and The Rockefeller Foundation was that inequities in COVID-19 vaccination reflect **broader inequities** that the United States has been grappling with for many years. The pandemic has simply shone a bright light on these inequities. As an OSI-Baltimore staff member shared, “The reason there has been such a disparity in vaccine distribution is because of structural historic inequities. I guess that shouldn't be a surprise, but just seeing how much of this ties into lack of access to health care more broadly, disconnected communities, there are elements of lack of transportation, lack of child care . . . we need to fix everything in order to truly address [vaccination disparities].”

Another salient theme was the critical need to **sustain this work** and continue to address equity, related both to health and more broadly, recognizing that the aftermath of this pandemic will resonate in communities for years to come. Interviewees consistently noted that sustainability was not possible without continued funding, particularly flexible funding that organizations could decide how best to spend based on their knowledge of their community. In the words of a Newark CBO member, “Every conversation I have about sustainability, I have to say, there has to be funding attached to sustainable projects. You can't sustain anything without money. I don't care where you are and what you're doing. And so, if you're not willing to pay for it, that means that it's really not that important to you.”

Another key element of sustainability was building lasting capacity at the hyper-local level, whether by gaining experience of working with global foundations like The Rockefeller Foundation; developing new channels of communication with community members; understanding how to interpret and use public health data; identifying influential local community leaders; or deepening relationships with other CBOs, health care and public health systems, and local government.

The EVI presents an opportunity for the anchor partners, key partners, and CBOs—all of whom are committed to closing health equity gaps in their communities—to leverage their organizational capacities and hard-earned trust in their community to promote equitable COVID-19 vaccination. Together, the EVI partners have the potential to improve access to COVID-19 vaccination and information about the vaccine among those most impacted by the pandemic. In addition, the EVI could serve as a real-world test of a community-centered, community-led approach to public health, applicable to all sorts of health services, well beyond vaccination.

This interim report previews each demonstration site's efforts as part of the EVI and summarizes the lessons learned so far about increasing access to and delivery of COVID-19 vaccines. As the initiative progresses, RAND researchers will continue working with the EVI partners to update the profiles of each demonstration site, further explore lessons learned about the most effective strategies to increase access to COVID-19 vaccination for BIPOC populations, and describe the policy supports needed to implement those strategies.

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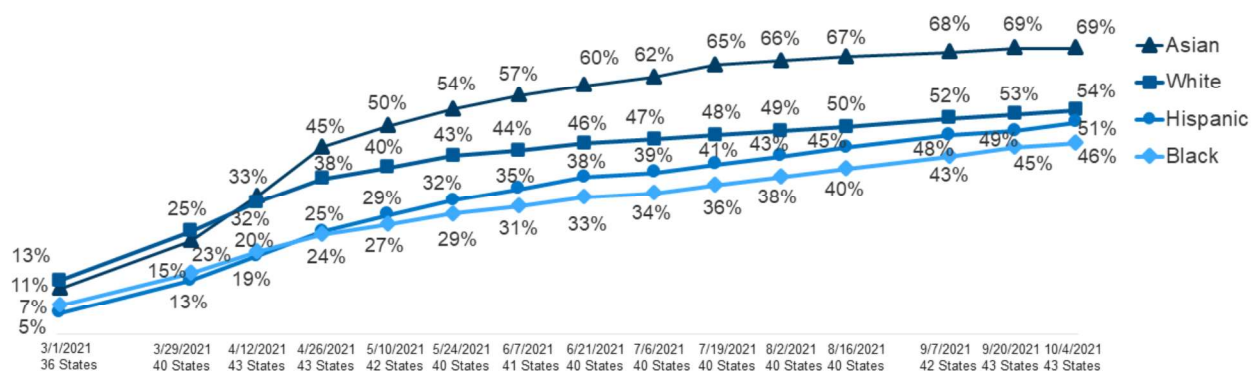
1. Background

COVID-19 Vaccination Inequities in the United States

The coronavirus disease 2019 (COVID-19) pandemic has laid bare the devastating impact of long-standing social, economic, and health inequities in the United States. Disparities in COVID-19 vaccination rates reflect this reality. Although disparities were initially attributed primarily to vaccine hesitancy, it has become increasingly clear that these disparities reflect structural racism (Corbie-Smith, 2021) and numerous barriers to vaccine access.

At the time of this writing (October 2021), 78 percent of adults in the United States had received at least one dose of a COVID-19 vaccine. But national vaccination rates mask disparities at the local level, and vaccination rates vary by race and ethnicity: By early October 2021, 46 percent of the total Black population, 51 percent of the Latinx population, 54 percent of the White population, and 69 percent of the Asian population had received at least one dose (Kaiser Family Foundation, 2021).

Figure 1.1. Percentage of Total Population That Had Received at Least One COVID-19 Vaccine Dose by Race/Ethnicity, March 1, 2021, to October 4, 2021



SOURCE: Vaccination data based on KFF analysis of publicly available data on state websites; total population data used to calculate rates based on KFF analysis of 2019 American Community Survey data.

KFF

Encouragingly, the vaccination gaps are narrowing between the White population and populations that identify as Black, Indigenous, and people of color (BIPOC), and, in many places around the country, the proportions of vaccines administered to Black and Latinx populations have increased relative to their share of the population, which is the key measure of equitable vaccination. However, BIPOC communities have been disproportionately impacted by COVID-19, and they remain less likely to have received a vaccine compared with their White counterparts.

The Equity-First Vaccination Initiative

Overview of the Initiative

To address these stark inequities, and aiming to build on its place-based work on COVID-19 testing in K-12 schools (The Rockefeller Foundation, 2021b), its 100 Resilient Cities Initiative (The Rockefeller Foundation, 2021a), and the Rockefeller Opportunity Collective work (The Rockefeller Foundation, 2020), The Rockefeller Foundation formulated the Equity-First Vaccination Initiative (EVI; <https://www.equityfirst.us/>), a hyper-local, place-based, demonstrate-and-scale model focused on community-led efforts, shared learning in real time, and data-driven decisions. The dual goals of this \$20 million, one-year investment, which officially launched on April 13, 2021, are

- (1) to reduce racial disparities in COVID-19 vaccination rates in the United States
- (2) over the longer term, to strengthen the public health system to achieve more-equitable outcomes.



How the Initiative Is Structured: Partners

To achieve these goals, The Rockefeller Foundation, led by the Equity and Economic Opportunity Initiative, funded organizations in five demonstration sites shown in Figure 1.2—Baltimore, Maryland; Chicago, Illinois; Houston, Texas; Newark, New Jersey; and Oakland, California—to plan and implement hyper-local, place-based models to increase vaccine confidence and access for communities that identify as BIPOC. These sites were selected because they were disproportionately impacted by COVID-19; in addition, in most of the sites, the foundation had long-standing existing networks developed through previous initiatives.

Figure 1.2. EVI Demonstration Sites



The EVI comprises a range of partners (all of whom are funded by the foundation directly, except the community-based organizations [CBOs], who receive subgrants from the anchor partners). The partners have individually defined but mutually reinforcing roles (Equity-First Vaccination Initiative, 2021).

- **CBOs** in the demonstration sites are the central focus of the EVI. They are the organizations on the ground, working to implement hyper-local strategies to increase equitable access to information and vaccinations, including identifying trusted messengers (and, in many cases, serving as the trusted messengers themselves). The initiative was designed and the other partners were chosen to amplify and support the CBOs' efforts. More than 80 CBOs are participating in the EVI, which primarily came on board in July 2021. The full list of CBOs for each site is included in the site profiles in the next section.
- **Anchor partners and other key partners** play a key role in planning and coordinating efforts among CBOs within their community. The partners are funded by the foundation and select CBOs in their community to whom they award subgrants. They provide leadership, track progress, foster a community of practice, and work with CBOs to ensure that they have what they need to be successful. The anchor partners are
 - *the Chicago Community Trust* in Chicago, Illinois
 - *Houston in Action* in Houston, Texas
 - *Open Society Institute-Baltimore* (OSI-Baltimore) in Baltimore, Maryland
 - *Roots Community Health Center* in Oakland, California
 - *United Way of Greater Newark* in Newark, New Jersey.
- **The equity learning community manager** provides an equity lens for this work, builds connections across all partners, serves as a liaison between each anchor partner and The Rockefeller Foundation and between each anchor partner and the learning partners, and facilitates information-sharing and knowledge-sharing across demonstration sites. An important role of the equity learning community manager is to “ensure the needs of the CBO community are heard, elevated, and addressed” (Equity-First Vaccination Initiative, 2021).
 - *Pink Cornrows*, a public policy, communications, and social impact firm, is serving as the equity learning community manager for the EVI.
- **Communication partners** are working closely with CBOs to build their capacity to provide evidence-based, misinformation-resilient messaging about vaccination with their community members. They are providing trainings and weekly tips to the EVI community and working with each site one on one to co-develop creative assets such as videos, flyers, and social media content so that campaigns and messaging are tailored to their local contexts. The communications partners are
 - *The Brown University School of Public Health*
 - *First Draft News*
 - *The Public Good Projects*.
- **Learning partners** work closely with each of the anchor partners and CBOs to gather, synthesize, and share cross-site information about the barriers to vaccination that communities are facing and the promising community-led strategies that are being used to overcome those barriers. Additionally, these partners are providing technical assistance to the CBOs in the form of support for data collection and analysis to inform their equitable vaccination approach and improve the ability to understand and track the impact of the CBOs' efforts over time. The learning partners and their primary area of focus are as follows:
 - *The Brown University School of Public Health* is designing, evaluating, and disseminating a responsive communication intervention to build vaccine acceptance. It is working with the communities to understand the drivers of vaccine hesitancy and confidence and how social determinants of health impact vaccine acceptance. It is

synthesizing these learnings to identify and disseminate effective strategies for reaching BIPOC communities.

- **Mathematica** is supporting anchor partners and CBOs in each site to field the COVID-19 Vaccination Pulse Survey to gather information about vaccination status, intentions, barriers, and more. Mathematica works with each site to develop a plan for fielding the survey, as well as analyzing the data and co-interpreting the results with the communities to inform and tailor their communications and access strategies.
- **The RAND Corporation** is focused on capturing, synthesizing, and disseminating (1) promising strategies for improving access to and delivery of COVID-19 vaccines across the five demonstration sites and (2) implementation practices that make such models more feasible, acceptable, effective, scalable, and sustainable.
- **Advocacy partners** elevate and amplify the voices of the CBOs by advocating with state and federal policymakers and others in positions of power to make near-term changes that address barriers to equitable COVID-19 vaccination and can influence systemic changes needed to create long-term access to health and wellness for communities of color. The advocacy partners are
 - **Disinfo Defense League**
 - **Families USA**
 - **Global Citizen**
 - **Health Equity Solutions**
 - **Health Leads**
 - **Manatt Health**
 - **UnidosUS.**
- **The Equitable Vaccination Advisory Council**, convened by The Rockefeller Foundation, is a group of thought leaders in the field of health equity, reflecting diverse lived experience and expertise. The group provides strategic advice and recommendations to the foundation about the direction of the initiative, emerging issues, and how to generate sustainable change.

How the Initiative Is Structured: A Place-Based Collective Action Model

The foundation designed the EVI as a **collective action model**, in which all partners collaborate in pursuit of shared goals and objectives. The structure of the EVI is centered around the anchor partners as hubs in each demonstration site and the CBOs as spokes. The anchor partner in each city identified CBOs in their community and made subgrants to them to support equitable vaccination efforts. This place-based (Hopkins and Ferris, 2015), hub-and-spoke anchor partner–CBO structure was chosen for several interrelated reasons.

- First, this structure allows anchor partners to select CBO subgrantees of varying sizes in their respective cities, rather than funding organizations that typically receive financial support from the government, the private sector, and foundations. The foundation acknowledges that by doing so, it intentionally cedes control over where the funding goes and exactly how it is used. According to a Rockefeller Foundation staff member, they had to “trust the anchor to know their CBOs and know their community and know which players understand communications best, which ones will be perfect for vaccine delivery, which ones are strongest for information and advocacy and education.”
- Second, bringing together CBOs under the umbrella of a site-specific anchor partner is intended to create a learning community within each demonstration site as well as across the

EVI. This structure should result in communities of practice so that organizations are sharing information and lessons learned and are not working in silos.

- Third, the intent was to “get dollars into communities as quickly as possible,” according to foundation staff, and break the mold of federal funding going to states that then distribute it to local entities over time. The need for speed was paramount when it came to vaccination equity for BIPOC populations, and, as Rockefeller staff noted, “there really weren't mechanisms in the early days and [we] still really aren't [able] to get money down to tiny grassroots organizations.” The foundation noted that it has been a challenge to disburse funding as quickly as it would have liked, and it took longer than expected to onboard and integrate the large number of CBOs. As a case in point, the EVI started in April 2021 but did not fully launch until July 2021, when most of the CBOs were on board.

Another unique aspect of this initiative is its explicit and, as one Advisory Council member stated, “unapologetic” **focus on BIPOC populations**. In the fall of 2020, the Council member noted, the “narrative around equity, around COVID . . . it was one of those emerging things where [the foundation] saw that there was a big unmet need.” In discussions around the design of the EVI, an Advisory Council member observed that “the fact that they were so explicit about leaning in on . . . racial and ethnic equity without reservation, without a whole lot of preamble, sad to say, but that in and of itself is incredibly innovative. That's not something that I think we've been really comfortable with doing in a lot of health care efforts and especially in crisis response.” Other populations, such as rural populations, some religious groups, and those with certain political affiliations, were also not being optimally reached by COVID-19 vaccinations. However, the foundation made the deliberate decision to concentrate on closing the gap in vaccination between BIPOC populations and their White counterparts.

A final distinguishing characteristic of the EVI is its focus on **integrating communication efforts about COVID-19 vaccination into the initiative from the outset**. Members of the foundation firmly believed that they should be funding CBOs to do (and evaluate the effectiveness of) evidence-based **public health communications** rather than expecting them to “do the work for free” or as an afterthought to their vaccine delivery efforts. To support the communications work and make it central to the EVI rather than a separate stream of work, the CBOs and anchor partners work closely with the EVI communication partners (known as MegaComms), who bring expertise in identifying and countering misinformation and disinformation about vaccines; co-develop creative assets, such as informational videos and flyers, with EVI partners so that campaigns and messaging are tailored to their local contexts; and build capacity among the CBOs to promote effective, evidence-based communication around COVID-19 vaccination. The communications work by the MegaComms partners was designed to be fully integrated into the EVI's programmatic priorities rather than running parallel to efforts to expand vaccination access.

How the Foundation Is Defining *Success*

With such a complex initiative, it is important to explore with various partners how they would define *success* for the EVI. For this interim report, we started examining this question with The Rockefeller Foundation staff. In these discussions, it was striking how many different, yet related, descriptions of success they provided. Several staff members pointed to the initiative's quantifiable “north star of really trying to achieve zero disparity between BIPOC and non-BIPOC populations as it related to vaccination. . . . We knew that to achieve zero disparity we needed 70 million BIPOC adults to be vaccinated, of the 90 million.” Another noted that success could be defined in the narrowest way as “Did BIPOC populations in these five cities get their equitable share of vaccination?”

They also identified several other markers of what would constitute a successful initiative, including more process-oriented measures of the EVI having achieved its goals:

- **Building capacity among CBOs**, including “empowering and funding community-based organizations to strengthen their infrastructure to better serve the communities that they intend to serve. . . . [so that] they were able to vaccinate more people or communicate more effectively.” Another foundation staff member added, “I’m hoping for them to have a greater appreciation and reliance on data, data analysis, data visualization moving forward, and then I’m also hoping that the linkages that we’ve made between the five cities lasts beyond this, so that they are not alone in the work that they’re doing in community development, economic development, public health, and that [they have learned how] to partner beyond your neighborhood, and share best practices, and learn from mistakes.”
- Standing up a new model that demonstrates the **importance of integrated communications** within public health response efforts to help people make informed decisions to protect their health.
- Demonstrating to a broader audience **how to form a learning community** that is “bringing very different partners from very different corners of the United States with very different perspectives together to do something in an equity-first manner, in a way that is about the community, for the community, driven by the community and their needs.”
- **Effecting lasting, tangible change** at strategy *and* policy levels: To one foundation staff

I do think right now an equity-first approach is a concept; it's not a framework and it's not concrete enough. It's an idea. It's a philosophy, but it's not something you can tell a public health department, "Here's what an equity-first approach looks like for vaccination. And this is what you need to do to take this philosophy and integrate it into your work."

- A Rockefeller Foundation staff member

member, success would mean that “we figured out really tangible, concrete, practical ways to address confidence or/and hesitancy as well as really concrete, practical ways to break down access barriers. If we can point to some real successes there and models that are potentially replicable, so that others don't have to continually reinvent this

wheel, that will also be a success. [Also] . . . if we're able to not just learn those lessons and write them up in beautiful papers, but we're able to really get those recommendations baked into our advocacy partners’ work and into some real policy change.” Another said that knowing what to do “when we have COVID-28” because of what was learned during COVID-19 would be one metric of success.

Future reports will explore how other EVI partners define success for this initiative.

Objective of This Report

As noted above, RAND is one of many partners in the EVI. Our work as a learning partner is focused on **access to and delivery of COVID-19 vaccines**. The extensive work of the communication partners, the anchor partners, and the CBOs to promote **accurate and trustworthy information** about vaccination will be described in a forthcoming report led by the Brown University School of Public Health. In this report, we focus on access to and delivery of COVID-19 vaccines in the early months of the EVI. Specifically, we address the following research questions:

- What are **promising examples** of equitable COVID-19 vaccination delivery efforts in the United States, particularly for BIPOC populations?
- **What has been learned** within and across the five demonstration sites about the most effective hyper-local and equity-first delivery models to increase access to COVID-19 vaccination for marginalized populations?
- What are **implementation practices** that make such models more feasible, acceptable, effective, scalable, and sustainable?




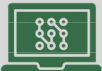

2. The Broader Context: Findings from a National Scan of Access Barriers and Strategies to Address Them

While the demonstration sites described in Chapter 1 were being chosen and the anchor partners and subgrantee CBOs were being onboarded, RAND researchers conducted a scan of national media and academic literature from March to August 2021 to identify promising practices being tried around the country to promote equity in COVID-19 vaccine access, delivery, and uptake. We examined the media and academic literature (both peer-reviewed and pre-print) on a repeated basis and supplemented this review with ten semistructured, in-depth interviews with CBOs, safety-net hospitals, health systems, and public health departments. Appendix A contains more details on our methods, and this chapter summarizes key findings from our national scan.

Types of Access Barriers and Strategies to Address Them

We identified five types of **access barriers** that hinder equitable COVID-19 vaccine distribution and uptake, which adapt an existing conceptual model of health care access (Levesque, Harris, and Russell, 2013) to the COVID-19 context (Table 2.1).

Table 2.1. Types of COVID-19 Vaccination Access Barriers

 Information	There is a 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 the community uses and/or the information is not available in appropriate languages.
 Physical Accessibility	Vaccine sites are placed in inconvenient locations (e.g., 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 often open during hours that do not meet the needs of the community.
 Trustworthiness	Institutions and systems administering the vaccine might 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 (e.g., registering for a vaccine, making an appointment, using apps to schedule rides to vaccination sites).
 Cost	Although the vaccines themselves are free, individuals can incur other costs related to accessing them, including transportation costs and missed work hours because of vaccination appointments or side effects, which leads to lost income. Incentives can alter the cost-benefit ratio for some individuals who are considering vaccination.






These access barriers are not unique to COVID-19 vaccination. They reflect ongoing access challenges faced by BIPOC communities. The barriers are multidimensional, reflecting the impact of systems and structures that are not inclusive and fail to address the social determinants of health and structural racism. Some of these barriers are easier to address in the short term than others. For example, the acute need for transportation to a vaccination appointment can be addressed in several concrete ways (e.g., vouchers, carpools) and information can be translated into appropriate languages relatively quickly, whereas improving trustworthiness of institutions is a more complicated and long-term endeavor.

Our scan identified a number of **strategies being used** to address these access barriers during the pandemic. We organized the strategies into broad categories as follows:

- **Sharing accurate, trustworthy, and accessible information:** making information about the vaccines (eligibility, where to get them, how to get them) available by translating materials into other languages, using channels of communication that people actually use, and enlisting trusted messengers to get the word out
- **Providing transportation assistance:** giving individuals vouchers for transportation (e.g., rideshare apps, buses, taxis), arranging shuttles or buses, setting up carpools, and locating vaccination sites near public transportation
- **Maximizing convenience of receiving the vaccine:** placing vaccination sites close to where people live or in settings where they might already be going for other services (e.g., grocery stores, food banks, physician offices, schools, at work), creating mobile vaccination sites, and keeping vaccination clinics open late and on weekends
- **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 vaccinations, allowing walk-ins, and not requiring identification or potentially sensitive information to receive a vaccination
- **Offering incentives:** providing perks for getting vaccinated (e.g., gift cards, tickets to sporting events, free food and beverages, lottery tickets) to change the perceived cost-benefit ratio of receiving the vaccine. More broadly, incentives could include paid time off or payments for lost income due to receiving the vaccine or recovering from side effects. Of note, in September 2021, the Biden administration announced new vaccination mandates. These are distinct from, but related to, incentives in that both are intended to shift the perceived cost-benefit ratio of getting vaccinated. Future reports will discuss how these mandates affected the work of the EVI partners.

These strategies do not map one to one to the access barriers. Instead, as shown in Table 2.2, each strategy typically addresses several barriers at the same time.

Table 2.2. Strategies to Address COVID-19 Vaccination Access Barriers

Strategies to address access barriers	 Information	 Physical Accessibility	 Trustworthiness	 Technology	 Cost
Sharing Accurate, Trustworthy, and Accessible Information	◆		◆	◆	
Providing Transportation Assistance		◆		◆	◆
Maximizing Convenience of Receiving the Vaccine		◆	◆	◆	◆
Making Registration and Appointment Processes Streamlined and Inclusive	◆			◆	
Offering Incentives					◆

These strategies are designed to address access barriers to COVID-19 vaccination in the short term. To make real strides toward improved and sustained health equity, however, will require more systemic change, addressing the social and cultural factors that underlie these barriers.

Applying These Findings from the National Scan

The findings from our scan informed our qualitative data collection and analysis. For example, we included questions and follow-up probes in our interview protocols on these barriers and strategies to compare and contrast what we learned from the national scan with the experiences of the five EVI demonstration sites.

More broadly, this classification of access barriers and strategies could be useful to policymakers, public health practitioners, foundations, CBOs, advocates, and other audiences as they examine, discuss, problem-solve around, and ultimately tackle barriers to equitable vaccination. Organizing strategies into broad categories could inspire implementers to consider approaches that they might not have tried; and it could stimulate discussion among policymakers and advocates around what policy supports could be put in place to make these strategies scale, spread, and endure.

In addition, our findings could highlight where more evidence is needed on the effectiveness of various approaches to equity in COVID-19 vaccination. The next section addresses a key question of interest to the EVI participants and to the nation as a whole: “*What works* to increase COVID-19 vaccination rates among BIPOC populations?”

Existing Literature on Effectiveness of Equitable Vaccination Strategies

Our ongoing scan of the academic literature shows that evidence supporting the effectiveness of equitable vaccination strategies (shown in the table on the previous page) remains sparse. Furthermore, the existing literature has two important limitations. First, many studies did not examine how certain strategies improved the vaccination rate among BIPOC populations specifically. In addition, many studies lacked a control group; therefore, the findings suggest associations between the interventions and changes in vaccination rate, but they cannot prove a causal relationship.

In Table 2.3, we synthesize the evidence from the most relevant studies to date, organized by strategy type. We identified studies that examined the effectiveness of strategies to increase **access to information** about the COVID-19 vaccines, studies on **maximizing the convenience** of getting vaccinated, and studies on the effectiveness of **incentives**. Although each strategy might address more than one access barrier, we categorized the studies according to the primary barrier that they were seeking to overcome.

Table 2.3. Evidence from the Literature on the Effectiveness of Equitable Vaccination Strategies

Strategy type	Specific approach	Available evidence of effectiveness
INFORMATION	Information provided by text message	A large health system notified all its patients by text message that they were eligible to receive a COVID-19 vaccine. Patients were then randomized to receive (1) a second text message reminder with a more personalized framing (e.g., “the vaccine has just been made available for you”) and a link to schedule an appointment; (2) a second text message reminder with a more personalized framing (e.g., “the vaccine has just been made available for you”), a video to dispel misinformation, and a link to schedule an appointment; or (3) no reminder text. Those who received a reminder text were more likely to make a vaccination appointment and receive their first dose than were those who did not. The informational video was not associated with vaccination rates. The authors also studied whether a third text message reminder was associated with vaccination rates and found that the additional reminder text was also associated with increased appointments and vaccination in individuals who did not respond to the second text message (Dai et al., 2021).
	Leveraging social networks and word of mouth	One report examined an organization’s grassroots, political campaign-style efforts to increase vaccination rates (e.g., door-to-door canvassing and phone and text banking, followed by pop-up vaccine sites and mobile sites). The organization also leveraged social networks: After receiving the vaccine, vaccine recipients were approached to reach out to other people in their network to encourage them to be vaccinated. To facilitate their doing so, they were given a personalized referral link to send by text message to family and friends. Over a nine-week period, the organization vaccinated 4,784 individuals, 80 percent of whom identified as people of color. Of those vaccinated, 300 asked for a personalized referral link to send to friends and family, and 471 of the vaccinated individuals had filled out the requested information in the referral link they had received from a friend or family member , providing the organization with information needed to determine their eligibility for the vaccine and schedule them for an appointment to receive it (Velasquez et al., 2021).
	Locating vaccination sites at dollar stores	Researchers simulated the impact of hypothetically locating COVID-19 vaccination sites at dollar general stores and retail pharmacies compared with retail pharmacies alone. They found that 86.3 percent of Americans live within a five-mile radius of a commercial pharmacy, while 94.3 percent of Americans live within a five-mile radius of a commercial pharmacy or a dollar general store. They concluded that placing vaccination sites at dollar general stores would increase access to vaccination for communities with high Social Vulnerability Index (SVI) scores (Agency for Toxic Substances and Disease Registry, 2021), with particular benefits for Black communities and lower income communities (Chevalier et al., 2021).
CONVENIENCE	Delivering vaccinations in community health centers	An analysis from Kaiser Family Foundation examined the impact of the Health Center COVID-19 Vaccine Program, which allocated vaccines to 250 community health centers (CHCs) in mid-February and then expanded to 1,400 health centers. The majority of people receiving the first or second dose of the vaccine at a CHC were people of color (64 percent first dose, 61 percent second dose). People of color get vaccinated at CHCs at a rate that is higher than their nationwide vaccination rate (Corallo, Artiga, and Tolbert, 2021).
	Allocating more vaccines to providers serving high-priority populations and partnering with CBOs	Several studies examined the benefits of (1) using demographic data to identify where to locate COVID-19 vaccination sites and (2) facilitating community partnerships to increase vaccination rates. An analysis of an initiative using this approach in North Carolina found a doubling of vaccination rates in Black and Hispanic/Latinx communities between December 2020/January 2021 and March/April 2021 (Wong et al., 2021). A similar approach in Maryland was associated with an increase in vaccination rates among Black and Latinx residents over a seven-week period (Maul, Reddy, and Joshi, 2021). Finally, the CVS pharmacy chain used an algorithm based on the Centers for Disease Control and Prevention’s (CDC’s) SVI, 2020 prescription volume, percentage of pharmacy users vaccinated for influenza, and percentage of pharmacy users age 75 and older to identify retail locations that serve a large BIPOC population and to distribute COVID-19 vaccines to those sites. They reported a vaccination rate that was 6.6 percentage points above their goal vaccination rate (the goal vaccination rate was based on the proportion of the population that was BIPOC in a specific ZIP code) (Fressin et al., 2021).

Strategy type	Specific approach	Available evidence of effectiveness
INCENTIVES	Offering incentives for vaccination	A small number of studies examined the association between incentives and COVID-19 vaccination rates. One study looking at a lottery-based incentive in Ohio found that it was not associated with vaccination rates and might have been associated with a decline in vaccinations (Walkey, Law, and Bosch, 2021). A study of 24 statewide incentive programs throughout the United States found a statistically nonsignificant decline in daily vaccination rates and no significant difference in vaccination trends between states with and without incentives (Thirumurthy et al., 2021).

3. The Equity-First Vaccination Initiative Demonstration Sites

With the broader context of the origins of the EVI (Chapter 1) and the national landscape (Chapter 2) in mind, we now turn to the EVI. The EVI officially launched on April 13, 2021; however, it took several months for the anchor partners to select and bring on the CBOs as subgrantees. Most CBOs had joined the EVI by July 2021. In this chapter, we describe the five EVI demonstration sites, focusing on the unique aspects of **each site's approach to promoting vaccination equity**. The next chapter provides early insights into **what has been learned** so far.

Our Approach

To develop the site profiles, we abstracted details about the anchor partners' planned approaches from the original proposals submitted to The Rockefeller Foundation and from their strategic plans, which updated their approach as of May 2021. Between April and mid-May of 2021, RAND staff interviewed staff at each anchor organization to understand the progress they were making toward increasing vaccine confidence and access for marginalized populations and to identify early lessons from their efforts to plan and implement these strategies. We conducted repeat interviews with anchor organizations in late August 2021 to understand their progress to date; we also interviewed a sample of CBOs that had recently joined the EVI, staff at The Rockefeller Foundation, and members of the foundation's Advisory Council for this initiative and its larger equity portfolio. Appendix A describes our methods; Appendix B contains figures for each city showing: (1) COVID-19 impacts and (2) inequities in vaccination rates by race/ethnicity.

The EVI Anchor Organizations at a Glance

Each EVI demonstration site is distinct, but they share some vital elements. Anchor organizations are supporting their communities to drive their equity-first vaccination approaches by making subgrants to CBOs of varying sizes. Anchor organizations are also leveraging existing relationships and forging new partnerships to address the myriad needs of BIPOC communities, including, but not limited to, access to COVID-19 vaccination. The CBOs are providing hyper-local knowledge. In some of the demonstration sites, the foundation has funded other key partners to advance the work of the EVI.

Table 3.1 introduces the anchor organizations in each of the five demonstration sites.

Table 3.1. Anchor Organizations

Organization	Type (year founded)	Focuses	Target populations for EVI
Open Society Institute-Baltimore (www.osibaltimore.org) 21 CBOs	Grantmaking organization (1998)	Addressing the root causes of addiction, incarceration, and barriers preventing youth from succeeding	People who use drugs, engage in sex work, and have unstable housing; those living with human immunodeficiency virus (HIV) and hepatitis C; low-wage workers of color; and BIPOC health care workers
Chicago Community Trust (www.cct.org) 24 CBOs	Grantmaking organization (1915)	Reducing the wealth gap and increasing opportunities for Chicagoans of all races, places, and identities	Black and Latinx residents, youth, and low-wage workers; undocumented persons; households with mixed immigration statuses; other vulnerable populations
Houston in Action (www.houstoninaction.org) 15 CBOs	Nonprofit organization (2017)	Supporting community-led civic engagement to strengthen systems and services designed to support local communities	BIPOC low-wage earners and women of color
United Way of Greater Newark (UWGN; uwnewark.org) 16 CBOs	Nonprofit organization (1923)	Improving the lives of individuals, children, and families by disrupting the cycle of poverty and strengthening the collective community	BIPOC communities, especially women and individuals who are undocumented, speak languages other than English, are experiencing homelessness, and/or who identify as part of the lesbian, gay, bisexual, trans, and queer (LGBTQ) community
Roots Community Health Center (rootsclinic.org) (Oakland)*	Community health center (2008)	Providing health care and other wrap-around services (e.g., social and legal services, job training, advocacy training)	BIPOC, particularly women, low-wage workers, and those experiencing homelessness

* Roots, the anchor partner, is not making subgrants to CBOs, but a key partner of the EVI in Oakland, Faith in Action, is making subgrants to nine CBOs.

The EVI anchor organizations vary by **type of organization** (two are grantmaking organizations, two are nonprofits, and one is a community health center) and by **how long they have been in existence** (the newest anchor partner, Houston in Action, was founded in 2017; in contrast, the Chicago Community Trust was founded over 100 years ago). These five demonstration sites are using similar strategies to promote access to vaccination and information about the vaccine, with some key nuances:

- Roots, as a community health center, is the only anchor partner with the capacity to directly deliver vaccinations both on site (at its clinic locations) and through community-based events.
- OSI-Baltimore is partnering with Johns Hopkins Hospital, which staffs the mobile vaccination clinics that CBOs arrange.
- UWGN has developed what state leaders in New Jersey are calling the *Newark model*. In this model, the anchor organization funds CBOs in each of the five city wards; in turn, the CBOs must find a clinical partner to handle the logistics of administering the vaccine. The CBOs organize the vaccination locations in key neighborhoods, and the clinical partner brings supplies and staffing to the event.
- Early in the initiative, the Chicago Community Trust prioritized engaging with youth-led CBOs to reach its younger residents once the vaccine was approved for those younger than 16 years old.

- Houston has made community health workers central to its EVI approach. The community health workers are visiting CBOs and talking to people about their basic needs, including, but not exclusively, the need for a COVID-19 vaccine. Because they know the community and they know the area, they can identify vaccination sites that they think are going to be successful and convenient for their communities.

Despite their differences, the anchor partners share a commitment to supporting community-driven work at the neighborhood level, addressing root causes of health and economic inequities, and increasing opportunities for populations that have been historically marginalized. Each of the organizations articulated a focus on BIPOC populations, low-wage earners, and women of color; they also highlighted **other vulnerable and/or marginalized populations** that they will focus on (e.g., individuals living with HIV and hepatitis C and those who engage in sex work in Baltimore; individuals who are undocumented in Chicago and Newark; those experiencing homelessness in Baltimore, Newark, and Oakland; youth in Chicago; and members of the LGBTQ community in Newark).

Profiles of the Five Demonstration Sites

The following profiles reflect the status of each demonstration site as of September 2021. Implementation of their strategies will evolve over time as the anchor partners and CBOs refine their plans and as the contexts in which they are working evolve. Maps and figures at the beginning of each profile help visualize the landscape of COVID-19 inequities in each city.

- We first display side-by-side maps to show that the communities with the highest social vulnerability are the ones with the lowest percentage of the vaccine-eligible population who are fully vaccinated. As a measure of social vulnerability, we use CDC’s SVI, which combines 15 U.S. census variables to create a picture of the “potential negative effects on communities caused by external stresses on human health” (Agency for Toxic Substances and Disease Registry, 2021).
- Where we had access to the necessary data, we also show how the percentage of each racial or ethnic group that is fully vaccinated (or, in Baltimore’s case, the percentage of each racial or ethnic group that has received at least one dose of the vaccine) has changed over time, since January 2021.
- Another way to view equity in the COVID-19 context is to examine how well the intervention (in this case, vaccination) is reaching populations most in need. This approach, which draws on HIV-prevention efforts (Siegler et al., 2018), has been used to examine disparities in vaccination-to-infection risk in Massachusetts during the COVID-19 pandemic (Dryden-Peterson et al., 2021). Given limited testing capacity at various points during the pandemic, the likelihood that infection rates in marginalized communities are underestimated, and the goal of vaccines being to prevent severe illness, we used COVID-19 deaths as a proxy for need. Therefore, the third figure in each demonstration site’s profile shows an Equity Index, which compares the ratio of receipt of the intervention (COVID-19 vaccination) to need (COVID-19 deaths). In these figures, we show how the index changed from May to September of 2021. Our Equity Index is calculated as shown below, using a numerator of fully vaccinated in the racial/ethnic group divided by the total fully vaccinated and a denominator of deaths in the racial/ethnic group divided by all deaths.

$$\text{Equity Index} = \frac{\text{Fully vaccinated by race \& ethnicity / total fully vaccinated}}{\text{Deaths by race \& ethnicity / total deaths}}$$

Index values of 1 would reflect equity—e.g., if a racial/ethnic group accounted for 25 percent of individuals fully vaccinated and 25 percent of deaths.

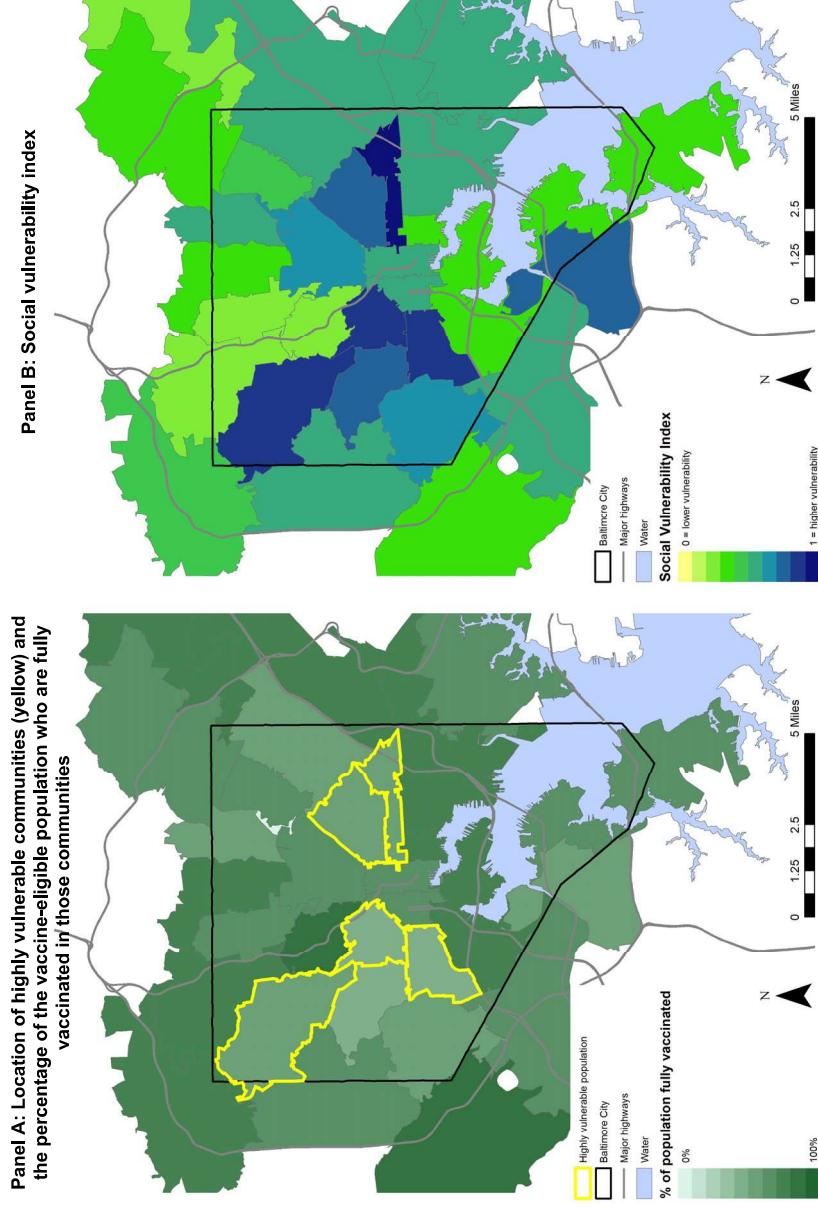
- In addition, each profile provides the **following information**:
 - details about the organization selected to be the anchor partner
 - who the anchor partner is aiming to reach with its equity-first vaccination strategies
 - what the anchor partner is doing to support the work of the EVI
 - who their local partners are in this initiative.

Each profile concludes with **selected quotations** from the in-depth interviews conveying the EVI partners' reflections on their work in their own words.

What Is the Landscape of COVID-19 Inequities in Baltimore?

Baltimore communities with the **lowest percentage of fully vaccinated individuals as of the end of September 2021** (Figure 3.1; lighter green areas in Panel A) are also the **most socially vulnerable** (outlined in yellow in Panel A and the darker blue areas on Panel B).

Figure 3.1. Communities in Baltimore with the Lowest Vaccination Rates Also Have the Highest Social Vulnerability

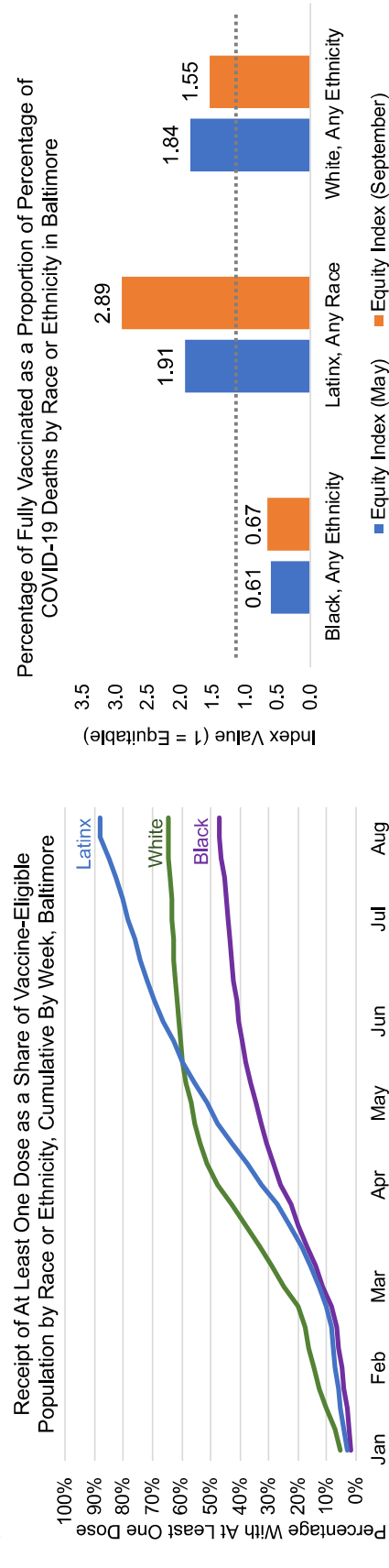


NOTES: *Vaccine-eligible population* refers to the population age 12 and older and is estimated using data from the American Community Survey. Panel A presents vaccination data through September 29, 2021. Highly vulnerable communities are highlighted in yellow and defined as ZIP code tabulation areas (ZCTAs) that have an SVI value of 0.75 or greater. ZCTAs are generalized areal representations of ZIP codes. Panel B presents the CDC SVI by ZCTA.

SOURCES: American Community Survey five-year estimates (2015–2019); Maryland Department of Health; CDC Social Vulnerability Index.

The left panel of Figure 3.2 shows that the percentage of Latinx individuals who had received at least one dose began rapidly increasing around April 2021 and continued to increase into August. The percentage of Black individuals who had received one dose gradually increased starting in March and appeared to be slightly slowing down by August. As shown in the right panel, Latinx and White individuals account for a larger share of the fully vaccinated population than of overall COVID-19 deaths (Equity Index > 1.0). Conversely, Black individuals make up a larger share of deaths in Baltimore than of the fully vaccinated population (Equity Index < 1.0). There has been some progress toward equity in Baltimore since May, however; in September, Black residents accounted for 47 percent of those fully vaccinated but 71 percent of overall deaths, for an Equity Index of 0.67.

Figure 3.2. Baltimore Vaccination Rates and Equity Index



NOTES: Baltimore data are reported separately by race and ethnicity; Latinx individuals can be of any race, while racial categories include those of any ethnicity; shares vaccinated for small populations, such as the Latinx population in Baltimore, might overstate the share vaccinated to the extent that the population has grown in very recent years and/or due to differences in recording of race/ethnicity data in the vaccination data versus in the Census data we use as the vaccine-eligible population denominators. Time series data provided by the Baltimore City Department of Health did not include individuals with race/ethnicity reported as Asian, “other” or “unknown”; *vaccine-eligible population* refers to the population age 12 and over and is estimated using data from the American Community Survey. The last week shown on the chart includes data through August 12, 2021.

SOURCES: American Community Survey five-year estimates (2015–2019); Baltimore City Department of Health.

NOTES: The Equity Index is calculated with a numerator of fully vaccinated in the racial/ethnic group divided by total fully vaccinated and a denominator of deaths in racial/ethnic group divided by all deaths; index values of 1 would reflect equity. Baltimore data are reported separately by race and ethnicity; Latinx individuals can be of any race, while racial categories include those of any ethnicity. Data are not shown for individuals with race reported as “other” (as of September, 11 percent of fully vaccinated and 3 percent of deaths), race reported as “unknown” (as of September, 3 percent of fully vaccinated and 4 percent of deaths), or ethnicity reported as “unknown” (as of September, 6 percent of fully vaccinated and 2 percent of deaths). Data are not shown for Asian individuals, because the number of deaths is suppressed due to small cell values (between one and five). May data reflect data through late May 2021; September data are through September 30, 2021.

SOURCES: Baltimore City COVID-19 Vaccination Dashboard; Baltimore City COVID-19 Dashboard.

About OSI-Baltimore

OSI-Baltimore is a grantmaking organization founded in 1998 whose mission is “to disrupt the long-standing legacy of structural racism in Baltimore by supporting powerful social change movements led by, and centering the needs, interests and voices of, historically marginalized communities and communities of color” (Open Society Institute—Baltimore, 2021a). According to its vision statement, OSI-Baltimore focuses on the root causes of three interrelated issues: “addiction, an over-reliance on incarceration, and obstacles that impede youth in succeeding inside and out of the classroom” (Open Society Institute—Baltimore, 2021b).

Who Is OSI-Baltimore Trying to Reach with Its Vaccine Equity Strategies?

OSI-Baltimore has indicated that one of its key contributions to the COVID-19 vaccine distribution effort is its long-standing relationships with marginalized populations who are at particularly high risk for poor COVID-19 outcomes. These include people who use drugs, engage in sex work, and have unstable housing. Other populations of interest include LGBTQ+ persons, those living with HIV and hepatitis C, low-wage workers of color, and health care workers who identify as BIPOC.

How Is OSI-Baltimore Promoting Equitable Vaccination?

OSI-Baltimore is funding approximately 20 CBOs with experience and expertise in reaching the target populations at the neighborhood level to accomplish the following goals:

- (1) Disseminate culturally competent, evidence-based COVID-19 vaccine information and other health information to marginalized communities.
- (2) Support resource hubs that can assist in addressing access to health care, housing, and other critical needs.
- (3) Increase access to COVID-19 vaccine distribution sites and reduce disparities in uptake by using existing mobile vans and setting up pop-up vaccination sites in strategic corridors across the city.
- (4) Use this network of CBOs to advocate for systemic change that will address community infrastructure and overall needs.

OSI-Baltimore is building on prior work for The Rockefeller Foundation in which the foundation made grants to CBOs to provide direct cash assistance and job training for marginalized populations. In addition, the foundation invested in the Baltimore Health Corps pilot, an initiative of the Baltimore City government to recruit, train, and employ community health workers from neighborhoods that were hardest hit by the pandemic. OSI-Baltimore has continued this relationship with the city by developing several initiatives with the Baltimore City Health Department.

Each of the funded CBOs will develop its own plan and approach for reaching the populations of interest and distributing vaccines. As these CBOs reach their target populations, they will share not only information on accessing vaccines but also information on accessing other social services, such as food and housing. These CBOs have learned in prior health promotion efforts (including the Baltimore Health Corps pilot) that to build trust among community members, they needed to offer more services than just their specific, planned activity (which might or might not be a priority for their clients). The CBOs are supported by a host of organizations as they develop these communication plans and vaccine distribution events. For example, Black Girls Vote was funded directly by The Rockefeller Foundation to support Black Girls Vote’s communications efforts. Baltimore Corps was funded by OSI-Baltimore to support community engagement strategies.

As the overall demand for vaccines has declined, OSI-Baltimore has expanded its communications activities to increase the number of people who are willing to get vaccinated. For example, it has expanded

its work with the Baltimore City Health Department to create a website to host all of the city's creative content around COVID-19 vaccination outreach, making the content available to organizations across Baltimore to use in their outreach efforts. The EVI communications partners are helping with the development of this content. In addition, the Baltimore EVI partners are sharing data about COVID-19 from the Health Department with a broader audience. Their data displays build on the health department's existing site but simplify some of the more complicated concepts and data to make it more user-friendly and accessible to a wider audience. In addition, the Baltimore EVI partners have started producing remote communications events that they call the Baltimore State of Vaccination. For these events, they have partnered with the mayor and the health commissioner to develop prerecorded videos that profile community heroes in the context of increasing vaccination.

OSI-Baltimore also created a youth-focused version of these events called the Baltimore Youth State of Vaccination. The youth-focused content incorporates messages from students talking about their experiences with COVID-19, remote learning, how it feels to be back in school, and why they have chosen to get vaccinated. OSI-Baltimore has partnered with the school district to distribute these videos at local schools. Black Girls Vote has played a prominent role in helping to create the website and in planning and conducting the Baltimore Youth State of Vaccination event.

OSI-Baltimore and the Baltimore City Health Department are also awarding Civic Works, a local job training and community engagement organization, a total of \$350,000 to provide microgrants to community organizations (\$100,000 from The Rockefeller Foundation grant and \$250,000 from the Baltimore City Health Department). The microgrants (about \$5,000 to \$10,000 each) are given to small grassroots organizations or individuals already doing community engagement work to buy supplies or otherwise support their needs to help address COVID-19 in communities.

The advocacy element of this work is still in development. The focus will be using the relationships developed in the EVI to help generate longer-term policy solutions to address inequity.

Once youth ages 12–15 became eligible for the Pfizer vaccine, OSI Baltimore received additional funds from The Rockefeller Foundation to focus on improving vaccinations among youth. To accomplish this aim, it has identified eight additional organizations to conduct outreach and provide vaccinations to youth across the city, and it has strengthened its partnership with the health department. Similar to the strategy to reach marginalized adults, these organizations focus on youth who are either disconnected from mainstream organizations or who are at high risk for poor outcomes. For example, one grantee will focus on LGBTQ+ youth, and another is working with the school system's reengagement center to reach students who have been disconnected from the school system because of suspension or dropout. The reengagement center generally conducts outreach to these students to ensure that they are connected to services. Through this grant, it is adding vaccination information to these efforts.

A strategy that several of these youth-focused CBOs are utilizing is to focus on youth and their families. These organizations have recognized that parental consent is needed to vaccinate individuals younger than 18; thus, outreach is needed to reach parents and guardians as well. These organizations focus not just on highlighting the importance of vaccinating youth but also the importance of vaccinating the entire family. For example, B-360 is an organization in Baltimore that engages children in science, technology, engineering, and mathematics (STEM) education through their participation in a dirt bike club that teaches dirt bike riding safety, provides safe spaces to ride, and offers dirt bike skills training. Through the grant from OSI Baltimore, B-360 is engaging the children who participate in these programs and their families with information on vaccination. The Baltimore City Health department is supporting the work with youth by training youth ambassadors who provide information on vaccinations to their peers.

Who Are OSI-Baltimore's Partners?

To support the CBOs, OSI-Baltimore is partnering with organizations that have expertise in working with specific populations or communities, in health campaigns, and in communications, including

- Baltimore Corps, a social change nonprofit organization focused on equity and racial justice. Baltimore Corps provides direct support to three of the CBOs funded by OSI-Baltimore. Baltimore Corps had deep roots in several of the communities of interest to OSI-Baltimore. This work builds on Baltimore Corps' existing plan to stand up community hubs focused on vaccine communication and distribution.
- staff from Johns Hopkins Hospital, who are working with CBOs to organize mobile vaccination sites
- the Baltimore City Health Department, which helps ensure that OSI-Baltimore's efforts complement the city government's vaccination efforts and that both organizations have aligned their communications strategies. The Health Department also helps train community members to become community health workers, including youth ambassadors who provide information about the COVID-19 vaccine to low-income communities.
- Black Girls Vote, which is supporting the communications campaign. Black Girls Vote will identify local communications firms that can help develop appropriate messages for each of the target communities, develop and host a website, and create attractive graphics. In addition, the Baltimore City Health Department has asked that OSI-Baltimore and Black Girls Vote help to create videos, such as testimonials, and other engaging materials to support its city-wide vaccine campaign. The purpose of this effort is to engage social media influencers in the city who can bring young adults into the conversation about vaccination and help them get motivated to learn about vaccines.
- Act Now, a coalition of local clergy in all 14 Baltimore city council districts. The purpose of the partnership with Act Now is to develop and disseminate a model for hosting vaccine clinics at churches to ease the burden on the health department.
- several organizations who serve residents with hepatitis C and HIV. The plan is to leverage the experience of these trusted organizations to reach populations with complex health care needs.
- local hospitals and clinics, which will develop a communications campaign specifically focused on BIPOC health care workers
- multiple youth-focused organizations, which will provide vaccine education to youth and their families
- Casa de Maryland, an organization that provides social services and advocacy for immigrant and working-class families in Maryland. Casa de Maryland is funded to develop outreach materials and activities to reach the Latinx population in Baltimore, including pop-up vaccination sites.

Subgrantees of OSI-Baltimore

B-360

Baltimore City Public School System Re-Engagement Center

Baltimore Corps

Baltimore Healthy Start

Baltimore Safe Haven

Behavioral Health Leadership Institute

CASA (Court Appointed Special Advocates for Children) of Baltimore

Center for Urban Families

Charm City Care Connection

Civic Works

Clergy United/Transformation of Sandtown

The Franciscan Center

FreeState Justice

The Movement Team

Next Generation Scholars

No Boundaries Coalition

Older Women Embracing Life

Sisters Together and Reaching

SPARC (Sex Workers Promoting Action, Risk Reduction, and Community

Mobilization) Women's Center

Wide Angle Youth Media

Y of Central Maryland

In Their Own Words: Baltimore Partners' Reflections on Their EVI Work

“So, I think the shift, in my mind, went from just everybody who wants to do a vaccine site, let's help them do it and stand it up, to thinking a little bit more strategically about what are the sort of the real opportunities where there are existing crowds of people who are unvaccinated and are willing to be vaccinated and we can help them get the resources and logistics they need.”

-OSI-Baltimore staff member

“[Community engagement] is really the thing about meeting people where they are, sort of seeing what folks' needs are and how we can move them towards healthier, safer behavior, whether that's vaccines, whether that's wearing masks, harm reduction, general access to healthcare.”

-OSI-Baltimore staff member

“It's really important to create a coalition of varied and unexpected partners. I say that because I think to try and convince people or make them feel comfortable enough to consider getting the vaccination, it requires multiple touchpoints. And so, I think the opportunity to hear from not only your provider, but also the church that you go to, or the place where you may volunteer, that multipronged approach is incredibly helpful.”

-A Baltimore CBO staff member

“So, most of the time we're in those red areas where most people don't go. So 11:00 p.m. to 4:00 a.m. . . . we're on most of the scripts. When I say scripts, this is where people are doing prostitution. We're at nightclubs, we're on corners where homeless individuals are, so this is what I mean by going into the streets and doing the work.

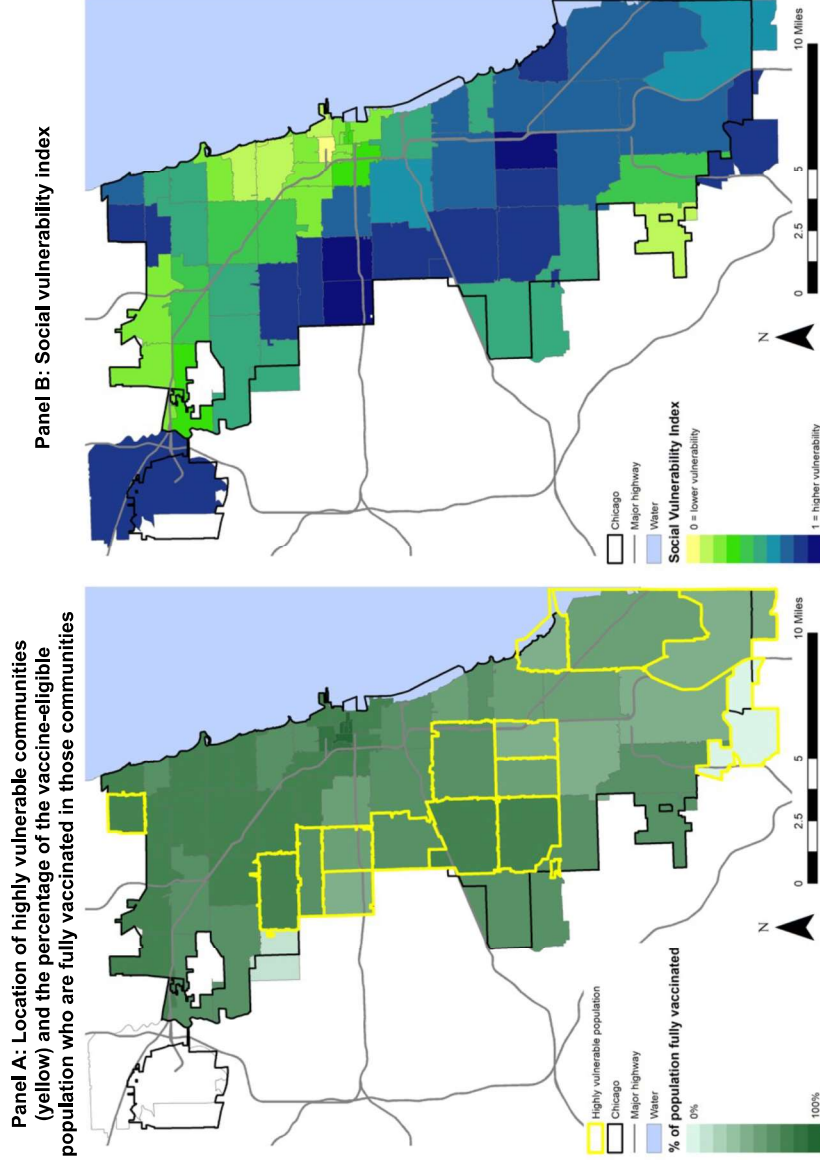
We're presenting ourselves at night with safer consumption kits, safer sex kits, we have snacks, we have clothes. And we're also going out there with the literature for COVID vaccinations and where you can get tested, where you can get a vaccine at. So, we're in the streets doing the footwork.”

-A Baltimore CBO staff member

What Is the Landscape of COVID-19 Inequities in Chicago?

Chicago communities with the **lowest percentage of fully vaccinated individuals as of the end of September 2021** (Figure 3.3; lighter green areas in Panel A) are also the **most socially vulnerable** (outlined in yellow in Panel A and the darker blue areas on Panel B).

Figure 3.3. Communities in Chicago with the Lowest Vaccination Rates Also Have the Highest Social Vulnerability

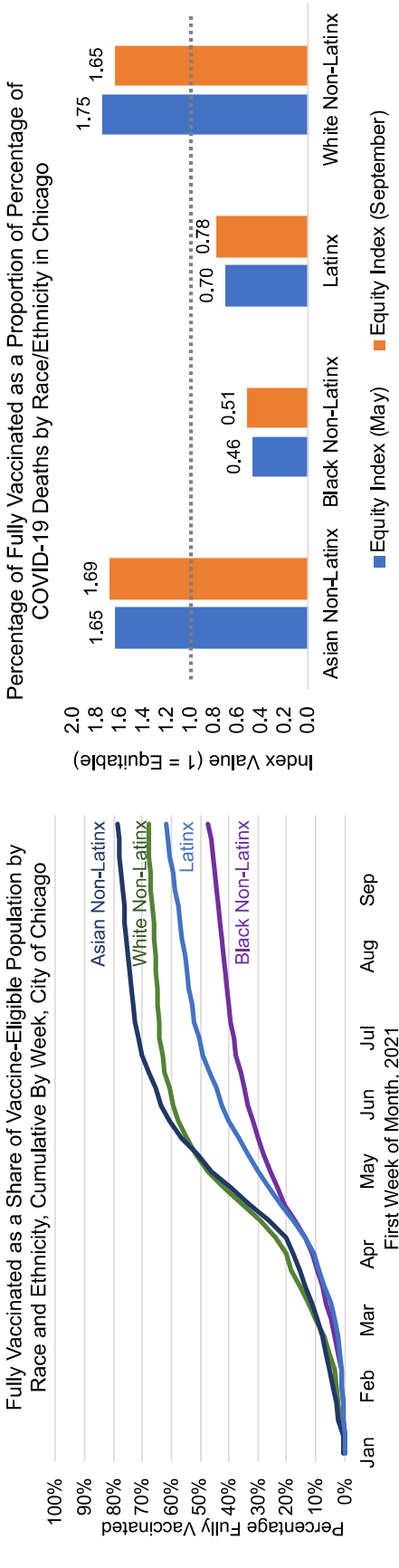


NOTES: *Vaccine-eligible population* refers to the population age 12 and older and is estimated using data from the American Community Survey. Panel A presents vaccination data through September 30, 2021. Highly vulnerable communities are highlighted in yellow and defined as ZCTAs that have a SVI value of 0.75 or greater. ZCTAs are generalized areal representations of ZIP codes. Panel B presents the CDC social vulnerability index by ZCTA.

SOURCES: American Community Survey five-year estimates (2015–2019); City of Chicago COVID Dashboard; CDC Social Vulnerability Index.

The left panel of Figure 3.4 shows that, in Chicago, the percentages of fully vaccinated White and Asian individuals increased rapidly from April to June 2021 and began leveling off in July. In contrast, the percentages of fully vaccinated Latinx and Black individuals increased slowly but steadily throughout the spring and summer. Particularly among Latinx individuals, as of September 2021, the percentage was continuing to increase without showing signs of leveling off. The right panel shows that Asian and White individuals account for a larger share of the fully vaccinated population than of overall deaths due to COVID-19 (Equity Index > 1.0). Conversely, Black and Latinx individuals make up a larger share of deaths in Chicago than of the fully vaccinated population (Equity Index < 1.0). There has been some progress toward equity in Chicago since May, however; in September, Black non-Latinx Chicago residents accounted for 21 percent of those fully vaccinated but 40 percent of overall deaths, for an Equity Index of 0.51.

Figure 3.4. Chicago Vaccination Rates and Equity Index



NOTES: Data are not shown for individuals with race/ethnicity reported as “other” or “unknown”; *vaccine-eligible population* refers to the population age 12 and over and is estimated using data from the American Community Survey; cumulative by-week values are calculated from daily data; the last week shown on the chart includes data through September 30, 2021. SOURCES: American Community Survey five-year estimates (2015–2019); City of Chicago Data Portal, COVID-19 Daily Vaccinations—Chicago Residents.

NOTES: The Equity Index is calculated with a numerator of fully vaccinated in the racial/ethnic group divided by total fully vaccinated and a denominator of deaths in racial/ethnic group divided by all deaths; Index values of 1 would reflect equity. Data are not shown for individuals with race/ethnicity reported as “other” (as of September, 6 percent of fully vaccinated and less than 1 percent of deaths) or “unknown” (as of September, 5 percent of fully vaccinated and less than 1 percent of deaths); May data reflect data through the end of May 2021; September data are current through September 30, 2021. SOURCE: City of Chicago COVID Dashboard.

About the Chicago Community Trust

The Chicago Community Trust “has convened, supported, funded, and accelerated the work of community members and change-makers committed to strengthening the Chicago region” for over 100 years (Chicago Community Trust, 2021). According to its vision statement and strategic plan, to realize the region’s full potential, the Trust is focusing on addressing its “fundamental challenge—racial and ethnic wealth inequity”—by reducing the wealth gap and building towards a “thriving, equitable, and connected Chicago region where people of all races, places, and identities have the opportunity to reach their potential” (Chicago Community Trust, 2021).

Who Is the Trust Trying to Reach with Its Vaccine Equity Strategies?

The Trust’s work as part of the EVI will supplement existing vaccination equity efforts in Chicago by focusing on distributing COVID-19 information and vaccines in suburban and urban communities that are predominantly (more than 50 percent) Black and/or Latinx and have experienced higher-than-average COVID-19 cases and/or deaths. The target populations for their equitable vaccination strategies include Black and Latinx residents and youth, as well as low-wage workers, people who are undocumented, households with mixed immigration statuses, and other vulnerable populations.

How Is the Trust Promoting Equitable Vaccination?

The Trust is working closely with partner CBOs and the Chicagoland Vaccine Partnership (described below) to

- support trusted messengers to connect with community residents about COVID-19 vaccination
- engage community residents in building hyper-local communication and education campaigns
- increase access to COVID-19 vaccines in marginalized communities by addressing logistical barriers (e.g., transportation, registration).

The Trust is funding 24 CBOs to provide outreach and communication about vaccine efficacy and safety and to organize vaccine distribution events located in Chicago neighborhoods. Nine of the CBOs serve Chicago youth, with plans to run youth-focused media campaigns and provide school-based COVID-19 vaccination; 15 of the CBOs serve adults. The identified CBOs are viewed as trusted messengers driving community-led activities, awareness-building, and information distribution. Each partner has established a unique approach to build vaccine awareness and increase rates of vaccinations (e.g., vaccine events, media campaigns, youth-directed outreach through arts, direct in-person outreach to increase awareness and counter misinformation). By coordinating activities across CBOs, the Trust and its partners aim to ensure that all residents have access to the vaccine, accurate information about the safety of the vaccine, and connections with resources to address barriers affecting vaccination decisions. The Trust team states, “We plan to give the community organizations the money, tools, and coaching they need, then let them implement things their own way.”

In addition, with partner funders, the Trust has been able to fund an additional 60 organizations across Chicago with grants of between \$5,000 and \$75,000 to engage in a variety of activities, such as providing vaccinations at food distribution events that were already planned and to support students returning to school for the 2021–2022 academic year.

Who Are the Trust’s Partners?

The Trust’s participation in the EVI builds on its prior work to address COVID-19 disparities. The Trust is part of the Chicagoland Vaccine Partnership, which is a collaboration of organizations (health

departments, health systems, CBOs, academics, and philanthropies) committed to equitable vaccination outcomes across Chicago and long-term strengthening of a public health workforce dedicated to health equity beyond the pandemic. The purpose of the Chicagoland Vaccine Partnership is to develop tools and information to amplify hyper-local, community-led, culturally competent strategies for equitable distribution of the COVID-19 vaccines in the Chicagoland region. Partners in Health is providing project management support and leadership to the Chicagoland Vaccine Partnership.

Subgrantees of the Chicago Community Trust

Access Living
After School Matters
Arab American Family Services
Austin Coming Together
BUILD (Broader Urban Involvement and Leadership Development)
Incorporated
CommunityHealth
Corazon Community Services
Equal Hope
Free Spirit Media
Greater Auburn-Gresham Community Development Corporation
Howard Brown Health Center
Illinois Coalition for Immigrants and Refugee Rights
Illinois Unidos
Increase the Peace
Inner City Muslim Action Network
Latin Women in Action (Mujeres Latinas en Acción)
Northwest Side Housing Center
Phalanx
Respond Now Inc.
Southwest Organizing Project
True Star Foundation Inc.
West Side United
Young Invincibles
Youth Crossroads

The Partnership has developed an infrastructure to connect and provide technical assistance to CBOs distributing vaccines in Chicago, and it is providing the same assistance to the grant recipients funded through the EVI. For example, the Partnership has established a speaker's bureau to connect community and faith-based organizations with public health and other experts to provide accurate, culturally relevant information about COVID-19 vaccines. In addition, the Partnership is facilitating a learning network across governmental organizations, CBOs, and health care entities that meets weekly to share updates, best practices, challenges, and successes related to equitable vaccination. These conversations facilitate sharing lessons learned across participating organizations, identifying and addressing common stress points, and iteratively adapting programming. The Partnership has created a website

and newsletter to facilitate communication among partners and to the public about all of the activities of the participating CBOs (again, inclusive of, but not limited to, EVI-specific efforts). The website highlights metrics, videos, links, materials, and reports as they are developed.

To integrate community members into the planning and refinement of the EVI, the Trust plans to leverage feedback from grant recipients, participants in the Chicagoland Vaccine Partnership, and community councils. The Trust is also partnering with the Sinai Urban Health Institute to support data collection efforts, including through surveys and interviews.

In Their Own Words: Chicago Partners' Reflections on Their EVI Work

“The reason why we're really motivated [to participate in the EVI] was because it was responding to this immediate need to make sure that we have equitable, not only distribution now, but also access to the vaccine. And also that there was this longer-term . . . [focus on] the public health infrastructure and workforce development.”

-Chicago Community Trust staff member

“[The organizations leading this work are] tiny, and yet their grasp of the issues, their understanding of how to do it, the sophistication of how they're thinking about it and recognition of what they can do as players in this space . . . I think it's a huge success.”

-Chicago Community Trust staff member

“There is a shift in people's perceptions of the vaccine. The more we are seeing breakthrough cases, the more that we are seeing the Delta variant, [the more people are saying] ‘Hmm, I don't know if the vaccine is as effective as we thought it was. . . . People are feeling very doubtful about it.’”

-Sinai Urban Health Institute staff member

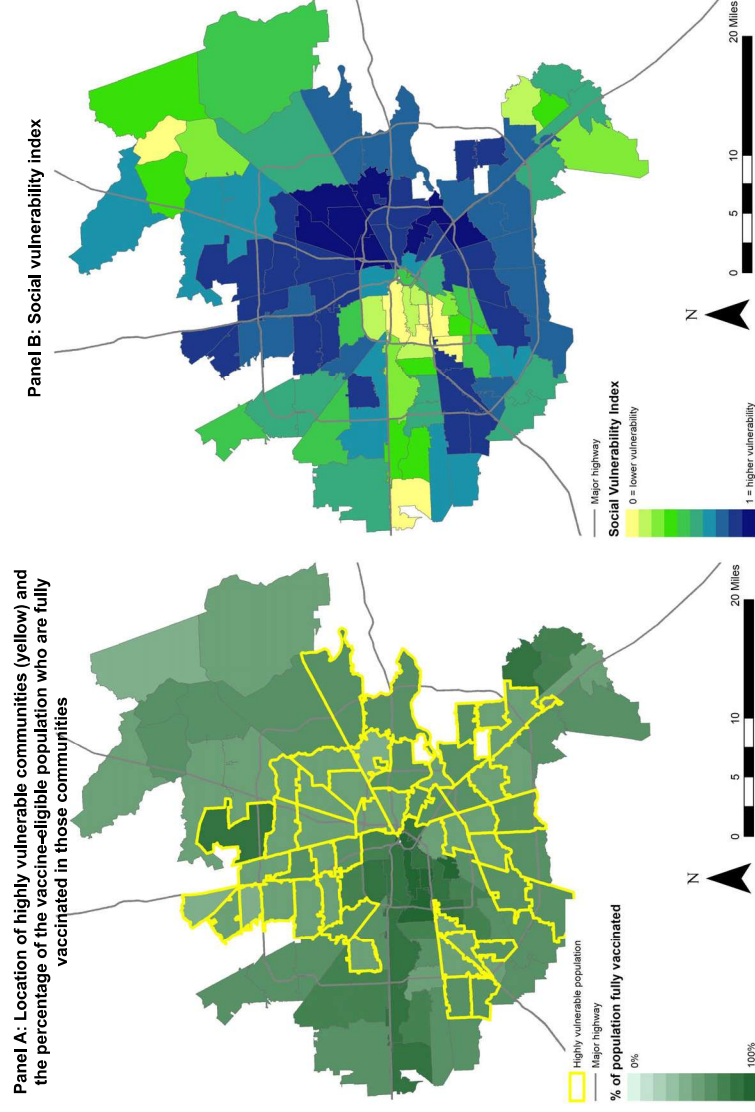
“I think we have both deep gratitude for the ongoing resilience of our community and, I think, deep concern about the widening chasm of people's ability to cope and persist and the ongoing, sort of unremitting impacts of systemic racism on the communities we care about the most.”

-Chicago Community Trust staff member

What Is the Landscape of COVID-19 Inequities in Houston?

Houston communities with the **lowest percentage of fully vaccinated individuals at the end of September 2021** (Figure 3.5; lighter green areas in Panel A) are also the **most socially vulnerable** (outlined in yellow in Panel A and the darker blue areas on Panel B).

Figure 3.5. Communities in Houston with the Lowest Vaccination Rates Also Have the Highest Social Vulnerability

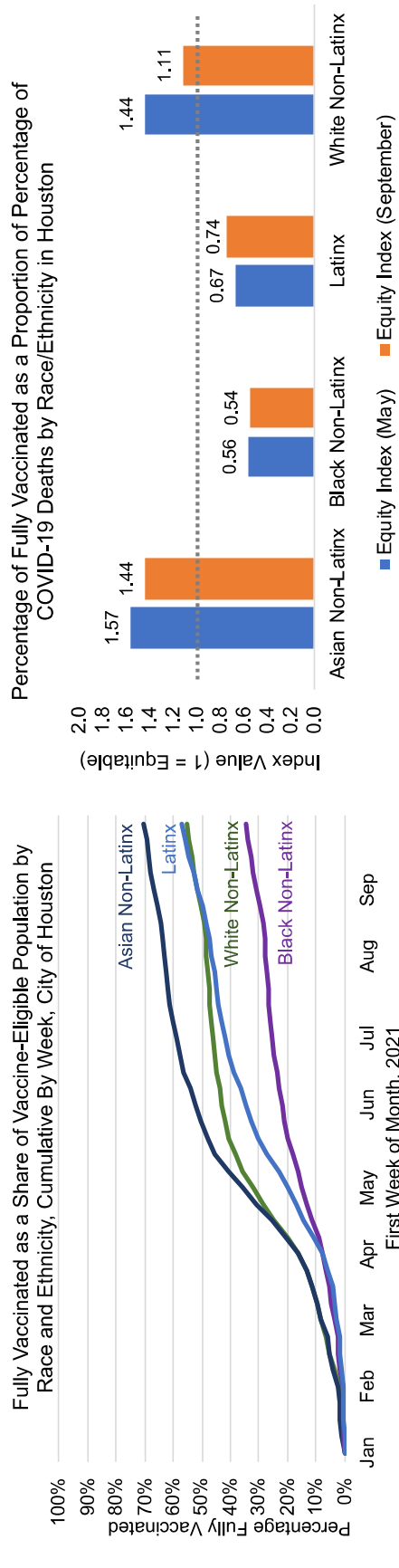


NOTES: *Vaccine-eligible population* refers to the population age 12 and older and is estimated using data from the American Community Survey. Panel A presents vaccination data through October 3, 2021. Highly vulnerable communities are highlighted in yellow and defined as ZCTAs that have a SVI value of 0.75 or greater. ZCTAs are generalized areal representations of ZIP codes. Panel B presents the CDC social vulnerability index by ZCTA.

SOURCES: American Community Survey five-year estimates (2015–2019); Texas Department of State Health Services; data provided by the Houston Health Department, ImmTrac2 (Texas Vaccine Registry); CDC Social Vulnerability Index.

The left panel of Figure 3.6 shows that, initially, the percentages of fully vaccinated Latinx and Black individuals in Houston increased more slowly than those of Asian and White individuals, but after about May 2021, the rate of increase for Latinx individuals was similar to the rate of increase for the Asian population, reaching a percentage fully vaccinated that was the same as that of the White population as of September 2021. The percentage fully vaccinated among Black individuals was steadily increasing; however, the rate of change was slower. The right panel of the figure shows that Asian and White individuals account for a larger share of the fully vaccinated population than of overall deaths due to COVID-19 (Equity Index > 1.0). Conversely, Black and Latinx individuals make up a larger share of deaths in Houston than of the fully vaccinated population (Equity Index < 1.0). There has been some progress toward equity in Houston since May 2021 for the Latinx population, with its Equity Index increasing to 0.74. However, the Equity Index decreased slightly for Black non-Latinx Houston residents, who accounted for 12 percent of those fully vaccinated but 22 percent of overall deaths as of September, for an Equity Index of 0.54.

Figure 3.6. Houston Vaccination Rates and Equity Index



NOTES: Data are not shown for individuals with race/ethnicity reported as “other” or “unknown”; *vaccine-eligible population* refers to the population age 12 and over and is estimated using data from the American Community Survey; cumulative by-week values are calculated from weekly data; the last week shown on the chart includes data through October 3, 2021. SOURCES: American Community Survey five-year estimates (2015–2019); data provided by the Houston Health Department, ImmTrac2 (Texas Vaccine Registry).

NOTES: The Equity Index is calculated with a numerator of fully vaccinated in the racial/ethnic group divided by total fully vaccinated and a denominator of deaths in racial/ethnic group divided by all deaths; index values of 1 would reflect equity.; Data are not shown for individuals with race/ethnicity reported as “other” (as of September, 14 percent of fully vaccinated and less than 1 percent of deaths) or “unknown” (as of September, 6 percent of fully vaccinated and less than 1 percent of deaths); May data reflect data through the last full week of May 2021; September data are current as of October 3–5, 2021, and include the first three to five days of October. SOURCE: Data provided by the Houston Health Department, ImmTrac2 (Texas Vaccine Registry) and Houston Electronic Disease Surveillance System.

About Houston in Action and Key EVI Partners in Houston

Houston in Action is a nonprofit organization founded in 2017 to support “community-led civic participation and organizing culture in the Houston region” (Houston in Action, 2021). It is focused on strengthening the “systems, services, and structures” designed to support local communities (Houston in Action, 2021). Houston in Action’s approach centers on organizing and empowering people and local organizations to drive transformative change, particularly by building an infrastructure that strengthens grassroots capacity. As a collective-impact organization that unites partners from various sectors around a common goal, it comprises community members, community leaders, local organizations, and city and county representatives whose collective mission is to “increase access to, and remove barriers to, civic engagement opportunities” (Houston in Action, 2021). The collective also focuses on advocacy, community development and mobilization, and trust-building. Houston in Action has a track record of coordinating with participating members in organizing neighborhood-level projects and campaigns to advance civic participation and community health and well-being.

The Rockefeller Foundation is also funding Bread of Life, a separate nonprofit organization in Houston that will be a key partner for the EVI. Founded in 1992, Bread of Life provides “services, resources, and support to families in need” and individuals experiencing homelessness in Houston (Bread of Life Inc., 2021).

In September 2021, The Rockefeller Foundation funded the City of Houston to serve as an additional key partner in Houston. The City of Houston, Houston in Action, and Bread of Life are expected to coordinate their EVI efforts closely to maximize resources and opportunities to promote vaccine access and uptake.

Who Is Houston in Action Aiming to Reach with Its Equitable Vaccination Strategies?

Houston in Action is focusing its efforts on reaching BIPOC low-wage earners and women of color, many of whom reside in neighborhoods with limited access to health care. To identify where these priority populations are concentrated, Houston in Action used multiple sources of information. It reviewed ZIP code and census tract information to identify areas with high proportions of Latinx and Black residents and non-English speakers and with limited access to health care facilities. Simultaneously, it identified neighborhoods in which it had previously worked and in which it had ties to organizations that it could engage for the EVI. It also drew on its knowledge of the region to focus on areas that have not only been hit hard by COVID-19 and lack pharmacies or vaccine providers but that have also historically confronted structural and systemic racism (e.g., neighborhoods that have not received any investments for several generations).

How Is Houston in Action Promoting Equitable Vaccination?

Houston in Action is pursuing the following neighborhood-level strategies:

- 1) coordinating multiple events and opportunities to distribute the COVID-19 vaccine to marginalized populations, paying special attention to those who might need additional assistance, such as those lacking transportation
- 2) creating and disseminating tailored messages about the vaccine that specifically target identified community concerns and barriers.

Houston in Action is targeting the neighborhood level because it believes that residents and local organizations with a shared goal can work together to have a collective impact. It recognizes that tailored messages are needed at the neighborhood level because different communities have different realities and concerns. Houston in Action is leveraging strategies, collaborations, and resources developed for prior

initiatives addressing equity-related issues in the target communities, such as initiatives developed for the 2020 census and the 2020 Presidential election, to help inform its EVI efforts.

Houston in Action has developed a network of trusted local organizations, messengers, and leaders from the target neighborhoods to support outreach and amplify key messages about the vaccine. In the words of a staff member, “[t]here are no cold calls” when Houston in Action picks up the phone to reach a local partner. It has identified four neighborhood coordinators for its priority areas to help coordinate the neighborhood-level strategies, which include community vaccine distribution events, mobile vaccination units, and pop-up clinics within the target communities, and it is promoting these vaccination opportunities using mass communication (texting, phone banking). The neighborhood coordinators are representatives from organizations subcontracted by Houston in Action to participate in the EVI. They were selected because of their deep understanding of the priority neighborhoods and because they are trusted by residents. The neighborhood coordinators have held listening sessions in their areas to better understand each community’s specific concerns and questions about the vaccine. Houston in Action and the neighborhood coordinators are using the information from these sessions to develop educational materials tailored to each neighborhood.

Houston in Action is also hosting town halls tailored for different racial/ethnic groups (many of whom do not have access to a regular health provider) that will feature health care providers to address community questions and concerns about the vaccine. These town halls are intended to help build trust in the medical community and, in turn, the COVID-19 vaccines.

Finally, Houston in Action has developed a website (<https://www.houstoninaction.org/safer-together/>) where community members can find information about the COVID-19 vaccine and vaccination sites in their neighborhoods.

Who Are Houston in Action’s Partners?

CBO subgrantees. Houston in Action has onboarded 11 CBO partners to lead the community outreach efforts and four CBO partners to lead the neighborhood-level strategies, also called neighborhood coordinators (all of which are listed here). Houston in Action helps to organize and facilitate the equitable vaccination efforts led by the CBOs, who are the ones driving the transformative changes in the communities.

Houston in Action identified these community partners through a landscape analysis of the target neighborhoods. The landscape analysis involved surveying and meeting with about 80 nonprofit organizations to assess what they were doing, their plans, and their needs to address COVID-19 in their communities. The funded organizations, and other organizations not funded by the EVI or Houston in Action that want to engage in the COVID-19 vaccination efforts, are invited to join a monthly working group meeting, which provides a space for partners to share challenges, barriers, and successes, as well as upcoming plans for their neighborhood-level strategies to address vaccine equity. The neighborhood coordinators and outreach partners also meet separately on a monthly basis.

Houston in Action selected EVI subgrantees that have a track record of successful community engagement strategies and are trusted among BIPOC communities, low-income populations, and women of color. They include nonprofit faith- and community-based organizations; organizations specifically focused on youth experiencing incarceration, immigrant/refugee populations, LGBTQIA (lesbian, gay, bisexual,

Subgrantees of Houston in Action

The Alliance
Avenue
Boat People SOS
Boys and Girls Club
Crecen
East Harris County Empowerment Council
Green House International Church
Gulf Coast Leadership Council
Jolt
Mi Familia Vota
North East Council Redevelopment District
ProSalud
Pure Justice
Urban Community Network
Young Invincibles

trans, queer, intersex, and asexual) youth, and youth of color; advocacy and social justice organizations; and community centers. As a collective impact organization, Houston in Action continues to invite new partners to maintain engagement and expand their work.

Houston in Action believes in meeting organizations where they are and letting them choose how they want to engage in the EVI based on their capacities, such as leading outreach, supporting a neighborhood coordinator, or posting information on social media. All subgrantee tasks and goals are being tracked via their internal collaboration tool, Basecamp, to monitor and show progress. Basecamp also allows Houston in Action to communicate with partners, as well as provide resources and updates. Tools and messaging around the vaccine are co-created by the subcontract organizations to help build capacity. To ensure the success of this initiative, Houston in Action is also conducting joint fundraising—i.e., it is identifying funding sources in addition to The Rockefeller Foundation—to ensure that its partner organizations are well resourced.

Bread of Life. Bread of Life is a key partner for the EVI. Specifically, it is funded directly by The Rockefeller Foundation and is supporting community health workers (CHWs) and local community leaders. Although its EVI efforts are separate from those of Houston in Action, both organizations are in communication to coordinate efforts on the ground so that they can leverage their resources and minimize overlap in outreach, information, or vaccination efforts.

Bread of Life has hired eight CHWs through the University of Houston Community Health Workers Initiative (UHCHWI), which is a Texas Department of State Health Services–certified training center. Bread of Life is coordinating with UHCHWI, the Texas Southern University School of Communications, the Texas Southern University School of Communications, and the Houston Community College Communications Department to collect, create, and distribute community-specific stories and messaging around the vaccine. To support outreach to the target populations, Bread of Life is leveraging its connection to the Church and Community Health Worker Initiative, which includes 100 churches within the United Methodist Conference that are located in majority African American and Latinx communities.

A key aspect of the partnership between Bread of Life and UHCHWI is a holistic approach to addressing the basic needs of people from marginalized communities before broaching the topic of COVID-19 vaccination. As one partner put it, “The biggest obstacle for people getting vaccinated” will be “if they're thinking about where they're going to sleep at night or how they're going to take their kids to school in the morning or what their kids are going to eat for breakfast the next day.”

The CHWs are spending about 20 hours per week visiting CBOs and talking with people about their basic needs, including, but not exclusively, the need for a COVID-19 vaccine. Their reach has been so extensive that, according to a key partner, “they're literally running out of places to visit because they visited every single organization they possibly could have at this point.” This partner noted that because “they know the community, and they know the area, they're able to identify vaccination sites that they think are going to be successful” and convenient for their communities.

City of Houston. The City of Houston, which joined the EVI in September 2021 with funding from The Rockefeller Foundation, plans to implement a community impact teams (CIT) approach to equitable vaccination acceptance and distribution. According to the grant proposal from the city, “these teams will be comprised of an Education Partner and Health Partner in coordination with Physicians of Color groups” in ZIP codes that have been identified as highest need. The CIT model has been successfully applied in similar public health interventions in Houston (maternal-child health, colorectal screening in African American men, and health insurance enrollment). The City of Houston will also be working closely with Houston in Action and Bread of Life to ensure that efforts promoting vaccine equity in the region are coordinated.

In Their Own Words: Houston Partners' Reflections on Their EVI Work

"It is important to mention that it is a very multi-tiered approach. Houston In Action very firmly believes in meeting organizations where they are and having organizations assist in any way that they are capable of, whether it is just outreach or maybe they are able to house a neighborhood coordinator. Maybe they are just posting on their social media, whatever it might be, meeting organizations where they're at. But then part of the role as the backbones for the collective impact initiative is also enhancing that capacity."

-Houston in Action staff member

"We've identified and worked closely with a Catholic church, St. Leo the Great, in the Aldine area, and the parish recently organized a vaccine clinic . . . in partnership with Harris County Public Health Department. And so St. Leo was the first site that was going to be offering the incentive before it was publicized. So it wasn't announced, it wasn't public news yet. [Even still], there [were] 300 people that came to the parish on a Sunday to receive their vaccine. And so the pastor, he's great, he's been consistently encouraging his memberships to get vaccinated. [Church] leaders posted flyers on social media, they got the word out through WhatsApp, and then they also passed out . . . a thousand flyers during a back-to-school expo event where the site was listed as well."

-A Houston CBO staff member

"...It was really an interesting experience because people are waiting in these long lines to pick up their kids' backpacks. And you could then, if people are willing, and most times they were if you didn't get too close to their car, they would take a flyer [about the COVID-19 vaccine] and you could walk them through it. [And we'd have] this 30-second conversation with them: 'See this table? That shows what's happened in Harris County with COVID in the last month. See how it's going up? . . . I know you'll read all kinds of stuff about it, but here are some real facts about who gets it and why it's so important to get vaccinated. And if you decide you want to get vaccinated, you could go there, right over to that building, and get vaccinated today.'"

-A Houston CBO staff member

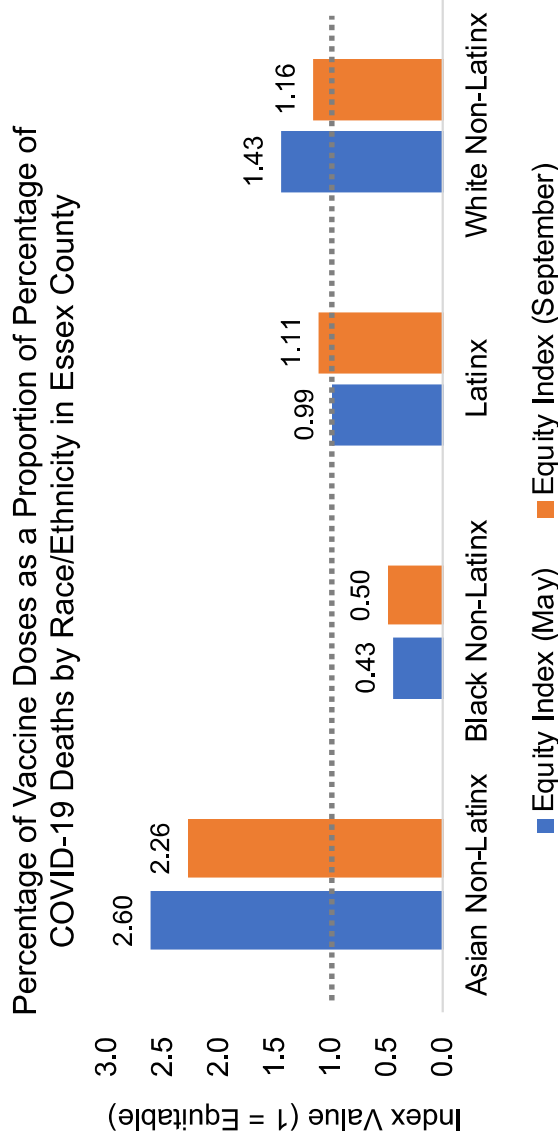
"[Our organization is] really the wheels to [the CHWs'] car. . . . We've put together this whole event, free haircuts, free food, free produce, free, free, free, basically everything and a hundred dollars if you want to get vaccinated. So, I just think that's another really great thing that [CHWs have] been able to do while they're out there engaging is also identifying good places for vaccination sites and establishing those connections with those places."

-A Bread of Life staff member

What Is the Landscape of COVID-19 Inequities in Newark?

Figure 3.7 shows that in Essex County (which includes Newark), Black individuals make up a larger share of deaths than of vaccine doses administered (Equity Index < 1.0). However, there has been some progress toward equity in Newark since May 2021 for the Black population, with its Equity Index moving slightly closer to 1. We were not able to access data that would allow us to create time-series figures for Newark similar to those shown for the other demonstration sites. The data are not publicly available, as they are in some communities, and we have not been able to obtain these data through a data use agreement with the state, county, or city, as we have in other communities.

Figure 3.7. Essex County, New Jersey, Equity Index



NOTES: Available vaccination data reflect doses administered (first, second, or single dose) in the state of New Jersey, excluding doses administered by federal programs; data are not shown for individuals with race/ethnicity reported as “other” (as of September, 9 percent of doses and 4 percent of deaths) or “unknown” (as of September, 10 percent of doses and 1 percent of deaths); data are current as of September 30, 2021.

SOURCE: New Jersey COVID-19 Information Hub.

About United Way of Greater Newark and Key EVI Partners in Newark

United Way of Greater Newark (UWGN), founded in 1923, aims to address the root causes of poverty by convening “local government, funders, foundations, and corporations,” collaborating with those addressing the impacts of poverty (“social service providers, public health sectors, and local food pantries”), and supporting CBOs that serve families in Newark (United Way of Greater Newark, 2021).

Key partners of the initiative in Newark include the Tara Dowdell Group, a strategic marketing and communications firm, and Medina = CITI, which provides expertise in visual and multimedia design.

Who Is UWGN Aiming to Reach with Its Vaccination Equity Strategies?

Newark has some of the highest rates of poverty, health disparities, food deserts, and COVID-19 vaccine disparities in the state of New Jersey. The target population for UWGN’s EVI efforts is BIPOC communities, especially women and individuals who are undocumented, those with limited English proficiency, those experiencing homelessness, and those who identify as part of the LGBTQ community. UWGN’s strategy for promoting vaccine equity is to ensure equitable distribution of vaccines and information to the five wards across the city of Newark in which these subpopulations are concentrated.

How Is UWGN Promoting Equitable Vaccination?

UWGN has awarded grants to organizations to provide services at a hyper-local level in communities across the wards whose residents include those in their target populations and those with the greatest need. Their strategy has three main components:

- (1) distributing funds through mini-grants (\$5,000–\$10,000) to local CBOs for communication and outreach
- (2) providing larger grants (\$125,000) to one CBO in each ward to launch mobile clinics and run static clinics
- (3) funding CBOs that combine communication, outreach, and vaccination administration.

UWGN is using data to strategically identify gaps in vaccine coverage. Every week, it receives ZIP code–level data provided by the City of Newark Department of Health and Community Wellness to identify where vaccination rates are lagging to highlight where there are gaps in either vaccine education and/or delivery efforts in the greater Newark region. Using these data, UWGN contacts its grantees and partners to highlight neighborhoods where communication and outreach and/or mobile clinics are needed. UWGN intends to use The Rockefeller Foundation–sponsored Pulse Surveys to measure how vaccine confidence and hesitancy are changing over time and to assess the effectiveness of its communication efforts.

As it has done in the past, it is also working with local CBOs to identify where individuals are seeking resources (e.g., food pantries) and is using these same sites to distribute information about the vaccine and potentially administer the vaccine itself. It has also identified 15 to 20 community influencers whom it has paired with public health students and CHWs. These influencers are given a public health and community organizing curriculum. Then, in pairs with the students and the CHWs, they go to neighborhood spaces (e.g., nail salons, barbershops, churches, public housing buildings) to talk about the vaccine, help schedule a vaccine appointment, or share information about the mobile vaccination sites. The community influencers incentivize individuals to come and learn about the vaccine with a \$25 gift card and with a \$75 gift card when they get vaccinated.

Who Are UWGN’s Partners?

UWGN meets weekly with a team of experts to plan and implement its EVI approach. This team includes staff at UWGN; local experts in marketing, design, and public relations who serve as key partners of the EVI (e.g., the Tara Dowdell Group and Medina = CITI); the Vice Chancellor of Rutgers Medical

School, who serves as UWGN's medical expert and has expertise in communications, public health, and health care; and staff from The Rockefeller Foundation. UWGN also hosts monthly community-of-practice meetings where all grantees come together to share challenges and successes. The medical expert who works with UWGN also attends these meetings and shares the most up-to-date public health information. The CBOs bring questions from the community about the vaccine that she then can answer. This promotes a clear and consistent message about the vaccine. CBOs also have access to UWGN's communications experts.

Subgrantees of the United Way of Greater Newark

Allen Village Community Development Corporation
Bridges Outreach, Inc.
Clinton Hill Community Action
FOCUS Hispanic Center for Community Development, Inc.
Ironbound Community Corporation
La Casa de Don Pedro
Newark Emergency Services for Families
North Jersey AIDS Alliance
Project Ready
Sarah Ward Nursery Inc.
South Ward Children's Alliance
South Ward Promise Neighborhood
Tree House Cares
United Community Corporation
Unified Vailsburg Services Organization
Urban League of Essex County

UGWN also partners with corporate leaders in the community and can call on this relationship to further vaccine equity. For example, it can call on corporate partners to identify volunteers for a vaccine event that a CBO is hosting. Additionally, UWGN is part of group that meets weekly with representatives from the City of Newark Department of Health, a representative from the health commissioner's office, the Greater Newark Healthcare Coalition, and clinical organizations to discuss vaccination rates, efforts to increase vaccination, and challenges.

In Their Own Words: Newark Partners' Reflections on Their EVI Work

"[The EVI] encouraged us to develop stronger ties with the community, which we need to be doing anyway. . . . In terms of actual people getting vaccinated, one family got vaccinated and yesterday they [were] here volunteering."

- A Newark CBO staff member

"We have community health care workers that we call navigators, they have to do three touch points with the family. And not in an overbearing way, but the one time you're asking them questions, you're sharing information, you're trying to get families to feel comfortable with being vaccinated. And if they're not, you're following up with someone else who can give them more informed data to help them make their decision. So I think it's just the persistency, but it's also the trust level between the organizations and the community that they serve."

- A Newark CBO staff member

"We take a holistic approach to serving the community. Because we understand that everything is connected. So, if someone doesn't have a home, guess what, they don't have food. If they don't have food, nine times out of ten, they have health challenges. If they don't have work, they can't afford a house. It's all connected. So we try to make sure that we check the boxes and hit the mark, but also provide those necessary supports. . . . And then also, because we've been in the community for so long and the staff is actually from the community, they represent the community that we serve."

- A Newark CBO staff member

"United Way is sort of this bridge between people who work in Newark and the corporations who exist there and the people who live there."

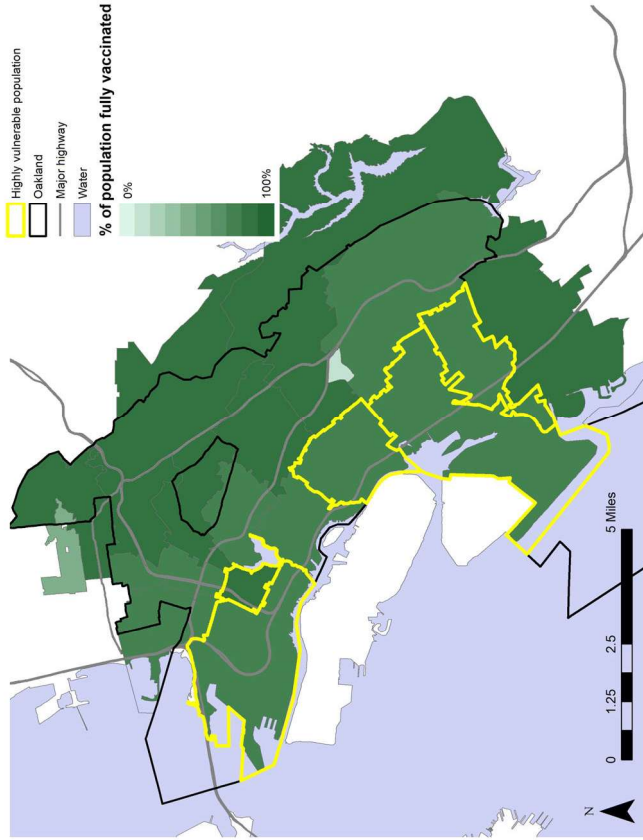
- United Way of Greater Newark staff member

What is the Landscape of COVID-19 Inequities in Oakland?

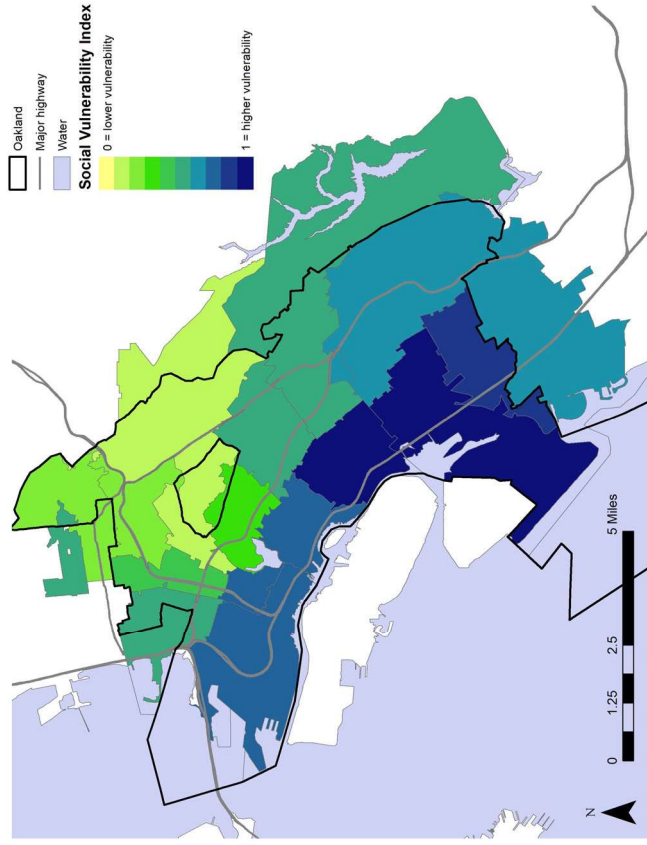
Oakland communities with the **lowest percentage of fully vaccinated individuals as of the end of September 2021** (Figure 3.8; lighter green areas in Panel A) are also the **most socially vulnerable** (outlined in yellow in Panel A and the darker blue areas on Panel B).

Figure 3.8. Communities in Oakland with the Lowest Vaccination Rates Also Have the Highest Social Vulnerability

Panel A: Location of highly vulnerable communities (yellow) and the percentage of the vaccine-eligible population who are fully vaccinated in those communities



Panel B: Social vulnerability index

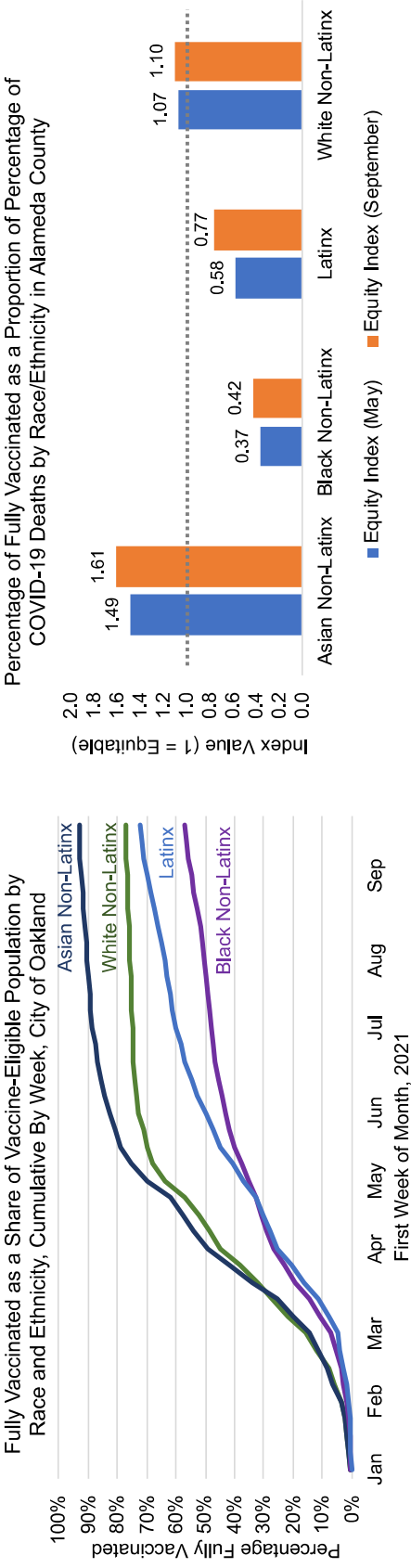


NOTES: *Vaccine-eligible population* refers to the population age 12 and older and is estimated using data from the American Community Survey. Panel A presents vaccination data through the week ending September 28, 2021. Highly vulnerable communities are highlighted in yellow and defined as ZCTAs that have a SVI value of 0.75 or greater. ZCTAs are generalized areal representations of ZIP codes. Panel B presents the CDC social vulnerability index by ZCTA.

SOURCES: American Community Survey five-year estimates (2015–2019); California Department of Public Health; CDC Social Vulnerability Index.

As the left panel of Figure 3.9 shows, in Oakland the percentages of fully vaccinated White and Asian individuals increased more rapidly through May 2021 than did the percentages of Latinx and Black individuals. Since May, the percentages have continued to increase without showing signs of leveling off for Latinx and Black individuals, though the pace of the increase has been more rapid among the Latinx population. The panel on the right shows that in Alameda County (where Oakland is located), Asian individuals account for a larger share of the fully vaccinated population than of overall deaths due to COVID-19 (Equity Index > 1.0) as of September 2021. Conversely, Black and Latinx individuals make up a larger share of deaths than of the fully vaccinated population (Equity Index < 1.0). There has been some progress toward equity since May 2021 for the Latinx and Black populations, particularly for the Latinx population, whose Equity Index increased from 0.58 in May 2021 to 0.77 in September 2021.

Figure 3.9. Oakland Vaccination Rates and Equity Index



NOTES: Data are not shown for individuals with race/ethnicity reported as “other” or “unknown”; *vaccine-eligible population* refers to the population age 12 and over and is estimated using data from the American Community Survey; cumulative by-week values are calculated from weekly data; *City of Oakland* reflects an aggregation of data from 15 zip codes with at least half their populations in the City of Oakland, but individuals could reside in or out of the City of Oakland; data were received upon request from the California Department of Public Health; the last week shown on the chart includes data through September 28, 2021.
SOURCES: American Community Survey five-year estimates (2015–2019); California Department of Public Health.

NOTES: The Equity Index is calculated with a numerator of fully vaccinated in the racial/ethnic group divided by total fully vaccinated and a denominator of deaths in racial/ethnic group divided by all deaths; Index values of 1 would reflect equity. Data are not shown for individuals with race/ethnicity reported as “other” (as of September, 3 percent of fully vaccinated and 8 percent of deaths) or “unknown” (as of September, 12 percent of fully vaccinated and 6 percent of deaths); May data reflect data through late May 2021; September data are current as of the end of September 2021; *vaccine-eligible population* refers to the population age 12 and over and is estimated using data from the American Community Survey.
SOURCES: Alameda County Public Health Department, COVID-19 Dashboard and COVID-19 Vaccination Dashboard.

About Roots Community Health Center and Key EVI Partners in Oakland

Roots Community Health Center (Roots) is a multicampus, multicounty community health center established in 2008 that provides health services to more than 10,000 residents in East Oakland, many of whom are Black and Latinx individuals earning low wages. In addition to providing health services, Roots aims to “uplift those impacted by systemic inequities and poverty” (Roots Community Health Center, 2021). To do so, health navigators connect patients with needed social and legal services, physical and behavioral health care, benefits enrollment, job training for individuals who were formerly incarcerated, outreach, and advocacy training to mobilize community members in shaping local legislation and policies that impact them (Roots Community Health Center, 2021).

The nonprofit organization Faith in Action is serving as a key EVI partner to help advance vaccine equity in Oakland. Founded in 1972, it is the country’s largest faith-based community-organizing network. Its mission is to promote “racial and economic justice” by organizing congregations of all denominations and faiths that can engage communities to bring local and systematic changes on a range of public policy issues, such as housing, education, health, and public safety (Faith in Action, 2021).

Who Are Roots and Faith in Action Aiming to Reach with Their Vaccination Equity Strategies?

The Oakland anchor and key partners are focusing their efforts on populations disproportionately impacted by COVID-19, including low-wage women and members of BIPOC communities. To identify areas with the highest proportions of these priority groups and where need is highest, Roots used area-level data to identify communities with the highest COVID-19 rates, the highest rates of poverty, and those in the lowest Healthy Places Index quartile (California Healthy Places Index, undated). Roots also used knowledge of its patient population and service areas to identify individuals from these priority groups who might need additional assistance, including those experiencing homelessness. Faith in Action has identified ZIP codes with high proportions of BIPOC populations and where there is a strong presence of trusted community organizations with whom it can partner for disseminating vaccination messages.

How Are Roots and Faith in Action Promoting Equitable Vaccination?

The Oakland partners aim to promote equitable access to vaccines and accurate information about the vaccine among the target populations through the following strategies:

- 1) organizing multiple vaccine events and outreach activities focused on marginalized populations and those who face specific access barriers, such as unstable housing and lack of transportation
- 2) disseminating targeted messaging via multiple media outlets and forums addressing community questions and concerns about the vaccine and dispelling misinformation
- 3) developing relationships with key messengers and organizations from the target communities who can help build trust and confidence in the vaccine and assist people with registering for a vaccination appointment.

Roots is leveraging its experiences delivering routine vaccinations to marginalized populations (e.g., for hepatitis, influenza, and childhood vaccinations) and is using its existing clinical and communication resources—including its multiple clinics, mobile units, pedestrian health teams (street medicine), partnerships with community organizations, and messaging tools (weekly video briefings)—to focus their vaccination equity strategies on increasing access to COVID-19 vaccination and addressing information gaps. Faith in Action will complement Roots’ communication efforts to improve vaccine confidence by leveraging its expertise and experience working with community leaders and influencers in designing and delivering health and social justice messages in the community, such as through Faith in Action’s national

campaign focused on protecting essential workers during the pandemic (e.g., LIVE FREE Masks for the People).

As of August 2021, Roots had established a fixed vaccination site in the parking lot of its main campus in East Oakland to provide access to COVID-19 vaccination and testing to marginalized communities. It created an easy-to-use web-based vaccination registration system so that its target population could sign up for an appointment. Its vaccination schedules have been consistent since it opened the vaccination site to facilitate awareness in the community. It is using community volunteers and local partnerships with other health systems and community organizations to conduct outreach and register people for a vaccination appointment. Community members can also register when they visit Roots for other medical needs. In addition, Roots is connecting with trusted organizations in other communities to host pop-up vaccination clinics and distribute educational materials about COVID-19 vaccination. To reach people who do not have transportation, Roots has partnered with Lyft to offer community members rides to their vaccination appointments. To reach populations who are unsheltered, Roots is using a street medicine approach, in which clinical teams visit encampments to offer vaccinations. Roots is planning to partner with an organization that has been doing mobile vaccinations to further increase access in the community. Because the target population groups have a myriad of social needs that have been exacerbated by the pandemic, Roots is also leveraging its navigation services to connect community members with local resources (e.g., mental health services, food assistance) in addition to vaccination. Since the beginning of the pandemic, Roots has been able to offer these additional services via telehealth visits and other means that do not involve in-person contact (e.g., drive-through services).

The anchor and key partners are also leveraging existing communication tools to address information barriers related to the vaccine. Roots is using its existing weekly *People's Health Briefing* series (Roots Community Health Center, undated), which are popular 15-minute videos on Facebook Live hosted by the chief executive officer and other physicians from the clinic, to deliver information about COVID-19 vaccination and provide a platform to address community questions and concerns. The *People's Health Briefing* is largely targeted to the Oakland community, including community members, health care workers of color, and anyone in the area who is seeking health information. Roots (along with the EVI communications partners) is also creating shorter videos, memes, and other outreach materials largely targeting individuals who are hesitant to get vaccinated because of misinformation. Roots identifies community questions and concerns by frequently surveying its staff and partners; surveying and conducting focus group interviews with patients who visit its clinic for COVID-19 vaccination or testing; scanning social media and questions submitted online via Roots' webpage; and holding information sessions with community partners to discuss what the community is hearing, asking, and expressing.

Additional community concerns and questions are identified during meetings between Roots and Faith in Action and via Faith in Action's subgrantees; this ensures that each partner is aware of the diverse perspectives across the communities with which it works. Roots carefully monitors international and national news and emerging recommendations or policies to translate that information as quickly as possible into tailored and clear messages that community members need to know. Roots attempts to interpret new information as it comes out, ensure that facts are heard and distinguished from misinformation, and maintain community trust in the science behind COVID-19 vaccination.

Roots strives to be highly transparent in communicating what it knows and does not know and places an emphasis on listening to community concerns beyond just the vaccine (e.g., mental health, social needs). Roots aims to avoid shaming people for not getting vaccinated; instead, it acknowledges people's fears while nudging them toward vaccination and not giving up when it encounters resistance. When there is resistance, Roots focuses its communication on how people can minimize their risk of COVID-19 infection, how to access testing, what to do if exposed, and treatment options (i.e., a harm reduction approach). Roots has a long history serving vulnerable communities and is therefore a credible and trusted resource for

information and services related to COVID-19 and other health conditions. Finally, its experience with being agile during previous crises has allowed it to effectively respond, using continued education and outreach, to the ripple effects of COVID-19 on community members' mental health and social needs.

Faith in Action's multifaceted communications approach involves information-gathering at the community level, monitoring social media, holding listening sessions, and distributing information via text messages. Its approach has three phases: 1) listening to community members' concerns about the vaccine via listening sessions and pop-up events; 2) educating the community to counter misinformation and disinformation about the vaccine via forums, public service announcements, key influencers, social media, and other methods; and 3) sharing narratives via strategic communications, digital storytelling, and local influencers and engaging the vibrant Oakland arts community in developing communications campaigns. Faith in Action has experience conducting national messaging campaigns (e.g., LIVE FREE) focused on equity issues such as gun violence prevention and, more recently, protecting essential BIPOC low-wage workers during the pandemic (e.g., providing personal protective equipment). Faith in Action has drawn lessons from these previous experiences to inform its COVID-19 vaccine messaging strategies as part of the EVI. It is engaging physicians from Roots to help develop short video clips (less than 30 seconds) that focus on addressing clinical questions or concerns from the community (e.g., why the vaccine was developed quickly), which are posted on its website and on social media.

Who Are Roots' and Faith in Action's Partners?

The anchor and key partners are leveraging existing relationships and engaging new partners to support either the vaccine or communication components of this initiative. Specifically, Roots is reaching out to its contacts at large health systems (e.g., Alameda Health), city and county government, CBOs, social service organizations, and faith-based organizations, among others, to help increase vaccine access.

Faith in Action is working with its strong and diverse network of partners from its LIVE FREE

Subgrantees of Faith in Action

Alameda Alliance for Health
Allen Temple Baptist Church
Building Opportunities for Self-Sufficiency
Centro Legal de la Raza
East Oakland Youth Development Center
Hard Knock Radio
Legal Services for Prisoners with Children
True Vine Ministries
The Young Women's Freedom Center

campaign, including Initium Health (a public benefit organization based in Denver that supports health systems, federally qualified health centers, and other companies with operational and technological expertise and resources), grassroots leaders, clergy, CBOs, influencers, and activists to help with vaccine message development and dissemination, as well as to reach its target populations. Specifically, Initium Health is helping Faith in Action facilitate the grassroots efforts of different organizations that make up its Advisory Council. This council includes representatives of legal

services organizations that serve members of the Latinx community or formerly incarcerated individuals; CBOs serving female, transgender, and gender-questioning youth, as well as Black youth and young adults; African American faith leaders; and well-known influencers and activists (e.g., hip hop and Black consciousness media and music figures). Faith in Action believes that the arts and influencer community can bring a local artistic component to the vaccine conversation and use social media to stimulate further discussion. The Advisory Council's role is to review the organization's EVI activities and advise on upcoming decisions. For example, they helped develop a physicians' statement on mask guidelines in schools, which was shared on social media and other outlets to help inform family decisions and policy. The Advisory Council will help gather information from the community, such as reasons for not getting vaccinated, factors that changed behaviors and increased vaccine uptake, and top vaccination myths and strategies to tackle them. All education materials developed are available in English and Spanish, and messages are reviewed to ensure that they reflect the colloquialisms of different communities.

In Their Own Words: Oakland Partners' Reflections on Their EVI Work

“ . . . it's about getting timely information out to the community from a trusted person, entity in a way that is relevant . . . and that helps demystify some of what can be really confusing. But then also provide a critique, when needed . . . of what's going on, or concerns that we may be having about how things are being communicated or how things are being rolled out. I think that not only provides actual tangible guidance that may be tailored, but also builds credibility for trusted voices as well to be able to translate all of this information that could be at a worldwide or national level and bring it down to what people need to know day to day.”

-Roots Clinic staff member

“I am finding that we are trying to respond in real time to these developments that are coming from the government, the local community itself, and then, of course, as we get additional information from people in the community, just being able to respond to how they're responding to it. I think that's the tricky part of this is, for example, we're going to put all this work into this video. . . . I think that it's important for us to be on top of the issues and to be as responsive as possible, and, from what I can see, that's what we're doing.”

-Initium Health staff member

“ . . . we've managed to work with partners [to arrange vaccination events], encourage them to let us know if they need education ahead of time, or they need information ahead of time, or even preregistering ahead of time, or whatever the case might be, and then just showing up and administering the vaccines. So we've had a number of those that I would consider successful and things that we'll want to continue as well in terms of partnering [to offer other services in the future] on top of vaccination sites.”

-Roots Clinic staff member

“ . . . we've always positioned ourselves from the beginning as kind of to bridge the gap between public health and health care delivery. That's a lot of the work that we do, that we've always done. I feel like in this [COVID-19] crisis that's probably been actually one of the major things that has helped us be in a really responsive role at the ground level, because we don't just see ourselves as solely crafting policies in education. Or solely treating you once you get sick and you're our patient, but all that in between, which is a lot in this pandemic. Community-level testing, community-level vaccination, community-level outreach and education . . . that's been important that we've been sitting in that space before now.”

-Roots Clinic staff member

4. Early Insights from the Equity-First Vaccination Initiative

In this chapter, we present early insights from the EVI. In the first few months of the initiative, we have learned a great deal from the EVI partners—and, specifically, the anchor organizations, their CBO subgrantees, and the EVI’s key partners—about the value of an effective, hyper-local, community-driven approach to COVID-19 vaccination and ways to implement such an approach. In this chapter, we highlight those learnings, organized into three broad categories:

- key principles underlying the EVI and how they guide the EVI partners’ work
- strategies that EVI partners are using to promote equitable COVID-19 vaccination
- factors that have supported implementation of the hyper-local, equity-first approach:
 - internal organizational factors
 - relationships and connections with other organizations
 - external supports.

Hyper-Local, Community-Driven, and Holistic Efforts to Promote Equity: [*Key Principles of the EVI*](#)

The EVI is guided by three principles. First, the equity-first programming must be delivered at a **hyper-local level**—i.e., at the level of neighborhoods and ZIP codes, not states, counties, or cities. Second, efforts to increase access to COVID-19 vaccines and accurate information about them should **be led by the community** in which they are implemented. Third, the goal of the EVI is not simply to achieve equity in COVID-19 vaccination rates but rather to take a holistic approach and promote **equitable outcomes across all sectors of society, including, but not limited to, health, education, housing, and economic opportunity.**

As the EVI was being conceptualized and designed, the foundation recognized that, as one foundation staff member put it, “outbreaks start and stop at a community level. So when you’re thinking about a public health intervention, you really do want to focus on [the fact that] it’s a very, very hyper-local level.” As the pandemic continues to evolve, EVI partners have recognized that they must dig deeper and deeper into their communities to reach groups who may confront multiple barriers to vaccination, including, but not limited to, not knowing where to get vaccinated, what the benefits of vaccination are, how to reach a vaccination site, or how to arrange child care. EVI partners are also realizing that they must intensify and become increasingly creative with their strategies to provide trustworthy, evidence-based, and relevant information to various groups as they are weighing the costs and benefits of their vaccination decision.

“I would have to say many of the lessons that I’ve learned around how to do community development and economic development—both so squarely applies to health equity work, right—is in terms of investing in and building capacity at the local level, recognizing and respecting the capital, political capital, social capital, intellectual capital of those closest to both the problem, and recognizing that they in many ways also will have the potential to be very much a part of the solution.”

-A Rockefeller Foundation staff member

EVI partners have demonstrated that when it comes to tailoring information and strategies to break down access barriers, there is almost no such thing as *too* hyper-local. As one CBO staff member from Houston said, “We recognize that each community is different. . . . What you do on the east side of Kashmere Gardens [one of the neighborhoods in which they work] may or may not work on the west side of

Kashmere Gardens.” In other words, the characteristics of the community that the organization serves play an important role in the organization’s equitable vaccination efforts. The community’s composition, culture, norms, and history can all affect what strategies are needed, what strategies are appropriate, and how they play out in the community. For instance, trusted messengers likely differ from one community to the next, as does the most convenient location for a pop-up vaccination event.

Each of the EVI partners described how grassroots efforts, led by nimble CBOs who are *from the communities they serve*, have been critical to the EVI’s success in its first few months. As a Baltimore EVI partner described, when vaccination strategies for West Baltimore are designed and implemented by an organization that “lives and breathes within West Baltimore . . . [and is] building and planting where we live,” then these strategies are truly tailored *by the community for its members*. In the words of an EVI partner in Houston, “We’re working with, hiring or recruiting, and deploying people from their own communities. So who better to help us engage a specific community than the actual community members?” Community-driven efforts build capacity among individuals and organizations who know their communities best, promote agency and autonomy when so much of the COVID-19 pandemic has felt out of our collective control, and bring “community voices and community eyes and minds” to the forefront of tackling vaccination inequities for BIPOC populations.

Hyper-local, one-on-one, intensive outreach to provide information and vaccinations presents new and different challenges for the CBOs that are leading this work. It is, of course, time- and labor-intensive in a different way than mass communications and mass vaccination events were when vaccines were first made available. The CBOs typically have small staffs and operating budgets. It also takes careful planning and coordination to ensure that hyper-local efforts, such as pop-up vaccination events within the same neighborhood, are not duplicative or competing with one another for the same attendees.

Finally, although the EVI is certainly focused on equitable vaccination, the foundation intentionally selected anchor organizations that were not health care or public health organizations. This approach demonstrates a commitment to the guiding principle that the goal of the EVI is not only vaccination equity or even health equity, but equity in all spheres of life, including education, food, stable housing, vibrant neighborhoods, and economic opportunity.

In the next section, we discuss some of the creative hyper-local and, in many cases, community-driven strategies that the anchor partners and their CBO partners have been implementing during the first few months of the EVI.

What *Strategies Have Organizations Used* to Promote COVID-19 Vaccination Equity?

The purpose of the EVI is to identify innovative strategies to increase vaccination rates among vulnerable populations. To do this, The Rockefeller Foundation provided sites with the flexibility to develop hyper-local approaches that are led by CBOs that are trusted, have provided services for the target population successfully over time, and have the infrastructure and broad networks to develop and implement multi-faceted approaches. These organizations focused on identifying the barriers that their target populations faced in accessing vaccines, and, at this stage of the EVI, they have begun to implement and refine solutions.

One benefit of this approach is that the participating organizations are building on infrastructure that existed before the EVI. The solutions they have developed mirror those developed in other communities and center on increasing trust in public health messages about the safety and efficacy of the COVID-19 vaccines, reducing physical barriers to accessing the vaccines, and arming CBOs in their community with the resources to identify approaches tailored to their communities.

“So we're doing our mobile outreach unit. We're equipped with literature about vaccinations. We're also having events throughout the community with pamphlets, giving out vaccinations, talking to individuals on our Facebook, taking them to get vaccinated, and doing outreach at night. We're doing the warm handoff approach. That means meeting people in the streets where they are, setting them up to the daytime hours, to be able to get vaccinated by us picking them up or giving them Ubers to be able to get to vaccination sites. Myself and one of my own peer educators, they are working as ambassadors for the City Health Department. And we're actually getting in the streets, getting the word out to the people.”

-A CBO staff member in Baltimore

In the EVI, participating organizations are demonstrating that to be effective, the strategies they deploy must address multiple, overlapping barriers that their target populations face in getting vaccinated. For example, a person might hear a message about the importance of getting vaccinated but might not have a way to get to the vaccination site, might not be able to arrange child care, or might lack the flexibility to take time off from work to attend a vaccination appointment. They could also face barriers to registering for an appointment.

In addition, because these strategies are hyper-local, they also speak to the unique concerns that community members have raised about getting vaccinated. For example, staff at one CBO realized that some older residents who live alone in several senior buildings were concerned that there would be no support if they experienced side effects from the vaccine. As a result, this CBO trained several ambassadors (including an individual who lived in one of these buildings) about potential side effects and how to manage them to ensure that residents could contact a specific person who could direct them to services if they were concerned about the severity of their symptoms post-vaccination.

The other strategies that these organizations are implementing are highlighted in more detail below, organized according to the types of strategies that emerged in the national scan of access barriers and ways to overcome them.

Strategies to Share Information About Vaccines

Organizations are **sharing information** about how to access vaccinations via multiple channels, ranging from neighborhood flyers to social media messaging. To ensure that messaging is heard and understood, organizations are translating messages into different languages and working with community members to tailor messages so that they are relevant to the community. As one key partner indicated, “That may sound like a no-brainer, but [we have to figure out] the best way to reach audiences who speak both languages. There was also some discussion about making sure that those messages were appropriate in terms of the colloquialisms, if you will, of the different communities so that the message can be heard.”

Overall, CBOs highlighted several key elements of successfully communicating information about vaccinations.

- First, simply developing information is not enough. Rather, in line with other recent research (Balasuriya et al., 2021), the person or organization delivering the message has to be **trusted**. One way the organizations have achieved this is to develop peer-to-peer approaches in which the messengers reflect the demographic characteristics of the target population. As one CBO staff person indicated, “We let them know that we're lived-experience people. We're Black also, we're people of color, and we have took it and nothing happened to us. So a lot of times we get a lot of people just thinking about it was just something that they're trying to kill us, some people think that.”
- Second, it is critical that the message has the **content** that will reach the target audience. As one CBO staff person put it, “Tell people why it matters to them, not what matters to

the whole country. How it affects you. If you don't do it for yourself, do it for your loved ones. Do it for your grandmother. Do it for your great aunt. Do it for your elderly mom, because we want to keep them safe.”

- Third, people have important questions about the safety and efficacy of the vaccines. EVI partners provided their community members with **access to experts** to answer these questions.
- Fourth, it's important to **couple messaging with one-on-one outreach**. As one CBO staff person stated, “I would say . . . communication is key. Putting information out, meeting people where they are with the information. So yes, some people think that once you post something on Facebook or Instagram, then that's it. No, you have to actually go out into the community. You have to create some outreach component. . . . And then you also need to know and understand that everyone is different. So we have disabled residents that need assistance, that they may want to come out and get vaccinated, but they can't get out or they can't get out too far. So you need to try to help make arrangements and partner with other agencies that maybe provide transportation on different days.”
- Fifth, EVI partners noted the importance of **spending time building relationships** between patients/clients and providers.

Despite best efforts, some people will decide not to get vaccinated, and several organizations have created harm reduction strategies to respond. As one anchor partner highlighted, “The challenge is with those that [are] the hard no's. And even with those, it's we're trying to change the paradigm and ask the question of ‘Then how are you staying safe?’ So, being able to kind of address the fact that, one, people have personal choice in this whole matter. So, how can we keep them safe.”

“Our initial problems where, we were putting the flyer in the bag and giving it to them and then we would call up later and ask them about it. And they were like, ‘What? We didn't see any’ And then when we first went to talk to them, they were like, ‘I'm not doing that. I remember’ Because they talk about it and they will name the different things of the past that have happened, especially with Black people in this country, and they weren't having any parts of it. And so really we had to take our time with it. It wasn't going to be quick. And so that's when we learned that we really had to take our time and sit down.”

-A CBO staff member in Newark

Strategies to Make Vaccinations More Convenient to Access

EVI partners are focused on making vaccines more **convenient to access**. Typically, this includes placing vaccination events in locations that are closer to and/or more trusted by the target population and increasing hours of operation to attract people with different schedules. In some cases, they addressed very specific concerns of the target population. For example, one organization reassured parents who did not have child care at the time of their vaccination that the length of appointments was strictly limited so that if they brought their children with them, they would not be waiting for a long time in a place where the children could potentially be exposed to the virus.

Another way organizations increased convenience was by adding vaccinations to existing events that the target population might already be interested in attending. As one anchor partner staff person stated, “So I think the shift, in my mind, went from just everybody who wants to do a vaccine site, let's help them do it and stand it up, to thinking a little bit more strategically about what are the sort of the real opportunities where there are existing crowds of people who are unvaccinated and are willing to be vaccinated and we can help them get the resources and logistics they need.”

To accomplish this, several organizations focused on back-to-school events. For example, one organization set up vaccinations at a backpack drive that provides free school supplies to low-income children and families. Another planned a vaccination clinic that included COVID-19 vaccinations with other school-related vaccinations that children need to complete before starting the school year.

Other sites used mobile vaccination vans to access marginalized populations that typically do not come to health care or social service organizations for services. This approach builds on existing street outreach activities. As one CBO staff person stated, “I would also say, do not shy away from if you have the opportunity to have a mobile site, you have to go to the places with the greatest need. . . . So, we cannot assume that our families are going to come to us because we think the site is, oh, this is the most popular site. No, sometimes it's going into a community [to learn] that it's difficult or there's a barrier for them to go somewhere where we may think it's easy or accessible.”

Strategies to Help Navigate the Registration Process and Provide Transportation

In addition to making vaccinations more convenient to access, some sites have tried to reduce the burdens that their target populations face in accessing existing vaccination services. Many are helping people **navigate the registration process and are providing transportation**. As one CBO staffer stated, “So when the pandemic hit, it really hit our neighborhood very hard. We were considered a red zone. So, we were involved in getting our families vaccinated, sharing information, keeping people informed, if we needed to take them to a [vaccination] site, helping navigate registration for different COVID sites.” Others partnered with Lyft and Uber to provide rides to a vaccination appointment. However, transportation barriers are part of a larger systemic problem and are an important element of addressing equity and COVID-19 simultaneously. As one discussant highlighted, one of the CHWs at their site had gone above and beyond by spending five hours a day driving people around not only to their vaccination appointments but to all of their health care appointments.

Strategies to Encourage Vaccination by Changing the Cost-Benefit Ratio

Some organizations are **offering incentives** (that may have been designed by others at, for instance, the state level) to help increase vaccination rates. They might pay participants directly to encourage them to get vaccinated, or they might offer incentives to participate in an event at which they could choose to be vaccinated. One of the things that they have learned is that the incentive has to be meaningful to the population in order to be effective and might not simply be about money. As one anchor partner stated, “When we first set up the [vaccination drive] they told us they want to do 50 an hour. We're doing 50 or 60 a day. This is the hardcore, we're dealing with the people who are reluctant, so it's been very difficult. [To reach them] we are giving away things in terms of debit cards and food and providing some kind of a payment whenever we can. We're giving out backpacks today and for the rest of the week, or [tickets] for events today, tomorrow, and Saturday.”

Another key lesson learned is that incentives can open the door, but people might need another strong reason, such as fear of the highly transmissible Delta variant, to motivate them to get vaccinated when they have many competing demands. As one CBO staff member said, “They're trying this hundred-dollar [incentive]. I am not sure how much that's going to really make a difference for people. I think that the Delta variant will make a difference for a lot of people. That's changing things [and motivating more people to get vaccinated]. And then there are people who will, say, ‘Oh, I want a vaccination.’ And now it's possible to get a hundred dollars.”

Summary of Strategies Being Used in the Demonstration Sites to Promote Equitable Vaccination

Overall, the EVI partners have adapted their models to intensify relationship-building, tailor messaging, combine strategies, and have multiple touchpoints if needed. Beyond the specific strategies described above, the CBOs, anchor partners, and key partners in each community see what they're doing as greater than merely implementing various strategies. They see themselves as leveraging trusted messengers within a community, coordinating among CBOs, and serving as a resource for community members. As one CBO expressed it, "Definitely to see us as a resource, for families and for the community as well because we have a multipronged approach. While we work directly with the families of the youth that are involved with the juvenile justice system, child welfare system, or at risk for involvement through the schools and other entities, we also work with the communities to ensure that they have the resources and the tools necessary to support the families. The way that we do that is by capacity-building with the organizations that are in the community. With that multipronged approach, we are able to better serve families."

What Do Organizations Need to Implement Hyper-Local Approaches to Equitable Vaccination?

CBOs and anchor partners within the EVI have leveraged many of the elements that are core to their functioning in order to implement a hyper-local approach to equitable vaccination in their communities. In our in-depth conversations with EVI partners, they identified several factors that facilitated their vaccination efforts. These include the following:

- mission-driven, committed staff who reflect or come from the communities they serve
- deep knowledge of and history in the community
- agility to respond to the constantly changing pandemic.

Mission-driven, committed staff who reflect or come from the communities they serve

Staff are a critical resource for implementing equitable vaccination strategies. Many CBOs noted that their staff's dedication to the organization's mission helped them address the multiple challenges they faced. For example, one CBO leader said, "We're very mission driven. All the staff is really amazing in terms of working towards the mission, even if all of a sudden it's a pandemic. Part of it means working a testing site or a vaccine site, or just having to really be able to shift to meet the needs." The staff must also have a diverse set of skills, such as logistics, education and advocacy, data collection and analysis, and vaccine administration. The tasks that need to be done may vary from day to day, and staff that can shift gears and fill in where needed are critical to success.

"I'm fortunate enough in my agency to have a multigenerational staff, and so when we're going out to meet with the seniors, I have my senior staff there. I have some staff members who are in their seventies, and so they're having those conversations."

-A CBO staff member in Newark

CBOs also called out the importance of the staff being diverse and reflecting their communities to build trust. A CBO staff member in Newark said, "We represent the community that we serve. And so, people, they believe us when we tell them something." Some CBOs have explicitly incorporated equitable hiring practices at their organizations to ensure equity at all levels. One CBO in Baltimore described their organization's concerted effort to employ and provide opportunities for people of color who can connect with members of their community, with the aim of supporting their livelihood and helping them make a positive difference in their community.

CBOs leaders praised their staff for working tirelessly to improve health and well-being in their communities but raised concerns about staff morale and burnout. One organization noted that although

doing the work was often uplifting, after months of COVID-19 testing and vaccination events, their staff was exhausted. To counter the potential for burnout, CBOs were seeking to promote wellness and provide a supportive environment with opportunities for self-care. For example, one CBO leader in Newark noted that she was “trying to provide some type of measurable self-care for my team, because it's been a lot. . . . I want to book massages for my whole staff. A spa day or something. Something tangible that would not only relieve immediate stress, but also something that will help them in the long run.” Others noted that they were incorporating mindfulness exercises, wellness check-ins, staff retreats, and extra paid time off to mitigate burnout.

Deep Knowledge of and History in the Community

The work of the EVI partners, and CBOs in particular, is facilitated by being rooted in the communities they serve. This has given them deep knowledge of their community and the history that has shaped it, which provides insight into the cultural and historical factors that influence community members' decisions around vaccination. CBOs' understanding of the local context supports the hyper-local approach, enabling them to develop messages, identify trusted messengers (or serve as trusted messengers themselves), and design strategies to improve access that are tailored to the specific needs of the community. For example, CBOs found it useful to know the different colloquialisms of the community, understand how different messages would be received, and work to amplify other trusted community voices. They also know whether certain strategies will likely work or falter, such as whether a mobile van will be perceived as a safe, trusted space to enter and get vaccinated or if it will be viewed fearfully and with mistrust. As a Rockefeller Foundation staff member noted, “whether that is individuals with several letters after their name, or if they've earned their Ph.D. through experience,” those who are from the communities they serve are closest to both the challenges and the solutions that are needed. Having deep roots in a community also helps generate trust. CBOs that were serving a community before the pandemic have spent time getting to know the community and have laid the groundwork for serving as a trusted source of information on vaccinations.

“[Being] a trusted resource for health-related things within the community . . . definitely helped in terms of [the fact that] we already had the credibility established.”

-A Roots Clinic staff member

Agility to Respond to the Constantly Changing Pandemic

Since the onset of the pandemic, organizations have operated in rapidly changing and highly dynamic environments. Success has required creativity and quick adaptations. As one CBO put it, “the only constant during this pandemic has been change.” Whether it was changes in vaccine supply, the emergence of the Delta variant, school reopening, or vaccination mandates, CBOs have had to roll with the punches and make on-the-ground adjustments to their messaging and vaccination strategies. For example, when use of the Johnson & Johnson (J&J) vaccine was suddenly paused to investigate a potential safety concern, organizations had to develop new protocols to administer two-dose vaccines instead, a particular challenge for those harder-to-reach populations for whom a single-dose vaccine was ideal. When the pause was lifted, organizations had to quickly develop new messages and communication materials to explain the pause and address people's concerns. As another example, as the Delta variant surged, the Roots Clinic shifted from an outdoor back-to-school vaccination event that would have involved face-to-face contact to a drive-through clinic, which still resulted in a successful event.

“We're definitely a very nimble organization. We always have been. . . . That's really served us well.”

-A Roots Clinic staff member

rethink the whole situation with the seniors because we didn't think that they were going to be as resistant as they were. We thought that they would be the easiest ones. I thought we'll go and we'll talk vaccines. Yeah, no. They were not having it. They were very adamant. And so it took us a while to earn that trust for them to even allow us in.”

One way CBOs were able to be agile was by building on their work before the pandemic, which allowed them to adapt and use systems and structures that were already in place for service delivery. For example, OSI-Baltimore, which runs an Education and Youth Development Program, was able to capitalize on the infrastructure already in place to begin implementing vaccination efforts focused on children 12 and older once the vaccine became approved. It is also collaborating with a local faith-based organization and the local school district to broaden its outreach efforts.

What [Relationships and Connections](#) Are Needed to Make These Vaccination Strategies Successful, and How Do You Build and Sustain Them?

Partner relationships within the EVI are multidimensional—with interconnections among anchor partners, CBOs, learning partners, and the foundation—and forming those relationships during the COVID-19 crisis involved overcoming multiple challenges and ensuring sustained commitment from all entities. Each of these EVI partners shared important lessons for how they built and maintained effective relationships within the initiative and, crucially, with the communities that they serve. These include building on past successful partnerships, focusing on the assets each partner brings to the table, and creating additional partnerships beyond the EVI to fill in gaps and create a united front. Trust and clear communication were the two main facilitators to engagement; having a collaborative infrastructure that supports both was essential for effective partnerships.

Several anchor partners and CBOs indicated that having a **history of collaboration** on past equity-focused initiatives was important for identifying which organizations to engage in the EVI. For example, Houston in Action turned to the community partners that were involved in its Hurricane Harvey and 2020 Census work. A Newark CBO also thought that it was a natural step to coordinate COVID-19 vaccination events with organizations with whom it had hosted prior successful community events.

In addition to leveraging existing relationships, the anchor partners also explored the **assets of each potential CBO subgrantee** to select those that could help fill the needs of the EVI or reach new vaccine-eligible populations; achieving the latter sometimes meant bringing on new partners. In particular, several anchor partners strategically prioritized funding CBOs that had already pivoted to add COVID-19 services to their main services (before joining the EVI) and those that had adequate capacity to support the initiative's needs (e.g., reporting of Key Progress Indicators). Anchor partners that identified CBOs offering COVID-19 testing or vaccination noted that such organizations were often under-resourced and saw this as an opportunity to provide them with the funding and support they needed to carry out their work.

As the pandemic evolved and new priority groups became eligible for the COVID-19 vaccine, several anchor partners recognized the **need to bring on new partners** that worked with those populations. Specifically, when the vaccine eligibility extended to those ages 12–15, the anchor partners quickly identified youth organizations, school district leaders, and parent groups to engage them in their outreach efforts. These youth-focused partners were vital not just for promoting vaccine uptake among 12- to 15-year-olds but also helping understand and address youth-specific barriers to vaccination (including information gaps), as well as advocating for safety measures in schools (e.g., masks, social distancing).

Several anchor partners sought **additional partnerships with local health departments and influential members of the community**. For example, a Newark CBO described working with the Department of Health and Community Wellness to help them with the logistics of setting up a pop-up clinic. In Houston, Bread of Life also partnered with Harris County Public Health to add a financial incentive program to its vaccine distribution events. In Oakland, an EVI partner

“I think number one is know your community and that's not just the people who live there but the people who work there and the people who have companies there. . . . I think having access to people who have influence in the community is important. I think putting together a very informal sort of personal or leadership board of directors, who are the two or three or four people that you're going to reach out to run things by depending on the topic.”

-A United Way of Greater Newark staff member

described how influential community leaders and groups were convened to create an Advisory Council whose function was to “review what is being done, advise and help derive the decisions on what things should be done next.” As such, anchor partners recognized that, to be effective, they had to engage additional trusted partners to provide logistic or resource support or help guide the work while the CBOs focused on implementing the vaccine strategies.

Trust and clear communication were identified as essential to facilitating engagement among all the partners. As noted by a Rockefeller Foundation staff member, “Trust is earned and lost in buckets.” Trust can be fragile and sensitive to differential power dynamics, particularly when there are perceived hierarchies (e.g., between funder, anchor partner, or CBO). However, The Rockefeller Foundation staff member emphasized the power of building authentic relationships, which involves continued efforts to maintain trust, respect, and valuation for one another. Transparency is also key to building trust. One Houston CBO staff member noted that they appreciated when their anchor partner acknowledged that it did not have all the answers, especially when things were changing so quickly during the pandemic.

Several partners also cited clear communication as necessary to ensure that all involved entities know their roles and responsibilities and that efforts run smoothly. Some anchor partners saw themselves as conveners of the various partner CBOs, who, in turn, were responsible for outreach and leading the work on the ground. Roots Clinic, the only anchor partner with the capacity for health care delivery, saw its role as providing direct services, including vaccination.

All anchor partners were also tasked with reporting requirements (e.g., Key Progress Indicators) from the foundation and participating in data collection efforts from the learning partners to provide insights about their EVI experiences. However, a few anchor partners noted that early in the EVI, there was a misalignment between the foundation and learning partner expectations and their realities on the ground. The anchor partners felt that clearer communication about expectations would have better prepared them to plan for these additional responsibilities. However, communication improved as all involved partners, the foundation, and learning partners participated in frequent meetings where partners could raise their questions, coordinate activities, and share experiences. Regular meetings were also essential to promote clear communication among anchor partners and CBOs within each demonstration site.

Providing opportunities for engagement and communication among partners is an integral component of the **collaborative infrastructure** of the EVI and the hyper-local approaches. For example, a Houston CBO highlighted that its anchor partner's collective action infrastructure allowed it to coordinate with other CBOs so that they were working together, instead of competing, and share best practices with one another. Overall, the partners pointed to the values of a collaborative infrastructure in supporting partner trust, cohesion, inclusion, and coordination.

"You get caught up in the work, and it can get lonely. And there's this lie that is told by the situation that you're in this alone, because you're trying to fix things in Oakland, or you're trying to fix things in Baltimore, and it can be all-encompassing. But then when you're able to look up and see that there are others fighting the same fight, and to learn and share data and information with those folks, it's a powerful thing."

-A Rockefeller Foundation staff member

The collaborative infrastructure also helped to build capacity among partners across and within sites. For example, the EVI's infrastructure allowed partners across sites to connect and share their experiences related to vaccinations, and that cross-learning provided opportunities to build capacity. United Way of Greater Newark created a *community of practice* with its CBOs, in which it provided grantees with trainings; access to a public health expert, marketing materials, and data; and a space for sharing their accomplishments and challenges. A Baltimore CBO cited its *community hub* structure as key for building capacity, such as grant writing and technical assistance, among other CBOs. One Houston CBO noted that empowering community partners with new skills and knowledge to effectively carry out the work in their communities translates to empowering community members and leaders with the information they need to make informed decisions about vaccination.

Finally, because the anchor partners and their CBOs were not working in silos, it is important to highlight how they managed relations when working in complex systems and evolving contexts in which multiple entities were simultaneously trying to promote vaccination. Early in the EVI, several anchor partners pointed to uncoordinated efforts among multiple entities within and beyond the EVI (e.g., other CBOs, local health departments, pharmacies) as creating competition for limited space and resources. Nevertheless, several CBOs saw this as an opportunity to join forces with those other entities and coordinate events. Overall, despite the multiple challenges created by the pandemic and the complexities of working within a multisite and multipartner network, the anchor partners and CBOs in the EVI identified key lessons and strategies to build, strengthen, and sustain their relationships, providing valuable guidance for future collaborations beyond the EVI to advance health equity.

What [External Supports](#) Are Needed to Implement Hyper-Local Vaccination Strategies?

There are numerous factors that affect what CBOs can do and how effective they can be with their COVID-19 vaccination strategies. The EVI partners identified four **external supports** that they felt were particularly important to their efforts to implement a hyper-local, equity-first approach to vaccination. Specifically, they indicated a need for **policy leadership, adequate and stable funding, technical assistance, and access to high-quality data.**

Policy Leadership

The policy landscape affects the environment in which the CBO is operating. If leadership is generally supportive of vaccination, and policy reflects that support, it can make the CBO's job easier in a number of ways. If equitable vaccination is a policy priority, it could lead to greater funding for the CBO's efforts. It might also improve coordination across the different organizations promoting vaccination and could

improve the consistency of messages that the community is receiving because the CBOs and local policy leaders are working toward a shared goal. Most of the EVI anchor CBOs are partnering with their local health department and felt that the collaboration with local government was important to their success.

Even when leadership is supportive of vaccination efforts, however, some policies can create challenges for the CBOs. For example, in Newark, the mayor prohibited the use of the J&J vaccine because of questions around its safety. As noted in the section on partnerships, CBOs that had been using J&J had to develop new workflows to use two-dose vaccines instead. As another example, CBOs noted that they were often unaware that changes in recommendations or policies were coming, particularly from the federal level, and thus had no time to adjust their strategies or prepare for the surge of questions and concerns that the change might raise. The use of incentives is another example of a well-intentioned policy that had unintended consequences for some populations and created challenges for the CBOs serving them. The offer of payment for getting the vaccine created additional mistrust in some populations because they felt that if the vaccine was good for them, they would not have to be paid to receive it. Others felt that incentives could be construed as coercive and could contribute to inequities.

Adequate and Stable Funding

Funding is essential to CBO efforts to implement hyper-local, equity-first vaccination strategies. For example, one CBO was excited about new funding that it had received that would allow it to fill gaps and reach additional high-risk communities. Others highlighted the importance of funding local CBOs to implement a hyper-local approach both because they know their communities best and because this approach helps build capacity in the organizations that will continue to serve the community long after the pandemic has ended. The Rockefeller Foundation explicitly designed the EVI to provide funding at the local level not only to build capacity but also to provide broader “contextualized technical assistance and supports” tailored to the needs of the CBOs (e.g., communications trainings, evaluation support, policy advocacy) from a network of learning partners.

Although the CBOs appreciate the support they have received, many noted challenges around generating and sustaining adequate levels of funding. Most CBOs were piecing together funding from a variety of sources to support their work. This fragmentation can create extra administrative work for the CBOs because each source of funding has its own time frame and requirements, such as meetings, performance measures, and progress reports.

CBOs also noted that the funding they receive is typically tied to specific activities, making it difficult to reallocate funding or change activities as the pandemic evolves and new issues emerge. Several CBOs expressed a desire for funding to be more flexible so that it supports general operations and allows them to decide how the funding is best allocated. At least one EVI anchor partner worked to build this type of flexibility into the subgrants that it made to the CBOs in its community: “Wherever we can, we try to provide general operating grants. . . . We also are trying to be as flexible as possible and recognize that that may mean you need to pay your rent or lease a van.” Another partner thought that the pandemic had opened up some funding sources for CBOs with increased flexibility and thought “that it would be great to see [this funding] maximized and amplified.”

“It’s been sporadic, it’s been from different sources. It’s \$50,000 here, it’s \$160,000 here. We just got \$300,000 from the Department of Health. . . . But it all comes with these dates. Some will start in April and end in July. Some will start in July and end in November . . . they’re not coordinated. We’re trying to manage the grants, manage the schedule, and still do the work. [It has] just made it more complicated than it has to be.”

-A United Way of Greater Newark staff member

Although there has been an infusion of funding into communities to support the health and social services needs that were created or exacerbated by the pandemic, CBOs expressed concern that the funding will not be sustained. Their work will not end when the pandemic ends, and they will need funding to support ongoing activities to promote health and well-being and address preexisting health and social inequities in their communities, as “it's going to take us a very, very, very long time to get out of this social [and] economic nightmare [of] COVID.” In short, CBOs worry that without long-term stable funding sources, capacity that has been built and progress that has been made toward health equity will erode.

Technical Assistance

Providing technical assistance and training can amplify CBO efforts to implement equitable vaccination strategies. As part of the EVI, CBOs are supported by the partners who provide communications training, support data collection and analysis, and facilitate cross-site learning. For example, the EVI communication partners (known as MegaComms) bring expertise in identifying and countering misinformation and disinformation about vaccines and work with the CBOs to co-develop creative assets, such as videos and flyers, so that campaigns and messaging are tailored to their local contexts. The strategic ownership of the communications comes from the CBOs, but the communications partners remove much of the burden of developing them. Similarly, the learning partners are supporting the CBOs in gathering data to inform their strategies. For example, Mathematica has worked with each anchor partner to help them field the COVID-19 Vaccination Pulse Survey. The survey asks a range of vaccination-related questions, including vaccination status, intention to get vaccinated, reasons for not getting vaccinated, motivators for getting vaccinated, and trusted messengers. The first round of data has been collected and is giving communities valuable insights about what is needed and how to tailor their messaging and access strategies.

A foundation staff member noted that The Rockefeller Foundation designed the initiative to support local organizations, not just financially but also by “surround[ing] them with the resources that they need to be able to measure, evaluate, and learn, and then scale that learning.” These supports are intended to amplify the work of the CBOs by building their capacity, providing them with needed data, reducing burden, and allowing them to remain focused on the work on the ground. The technical assistance that is most helpful varies across communities and must be tailored, contextualized, and, often, “just in time.”

Access to High-Quality Data

Access to high-quality data supports and informs a hyper-local approach. Detailed data on social vulnerability, COVID-19 outcomes, and vaccination rates disaggregated by race and ethnicity, age, and/or geography can help CBOs promote equity by identifying neighborhoods and specific populations (e.g.,

“We get data from the Department of Health every Monday that tells me the vaccination rates by ZIP code and demographic in every ward of the city. So I can call the partners in the south and say, ‘You need to go target this neighborhood again, or put a mobile pop-up site over there.’”

- A United Way of Greater Newark staff member

youth) where vaccination rates are low so that they can target their outreach and vaccination activities. Local health departments play a critical role in gathering and disseminating these data. CBOs that have a strong relationship with their local health department were able to gain access to these data and use them to adjust their strategies in real time. They were also able to use the data in messaging to “paint a picture of what is going on in the community in terms of cases and hospitalizations.”

However, the availability of this type of data varies across the demonstration sites. Each of the local health departments in the demonstration sites collects data on COVID-19 outcomes and vaccination rates, but not all have such data or make it available at the neighborhood (e.g., ZIP code) level, details that are vital to inform a hyper-local approach. Without access

to granular data, it is more difficult for CBOs to target their efforts, and their ability to track progress toward equity, identify emerging trends, and adjust their approach in response is limited.

5. Recommendations Based on Insights to Date

Even in a few short months, the EVI partners and, specifically, the anchor organizations and their CBO subgrantees have demonstrated several **overarching lessons for other initiatives** that are engaged in similar work or are wondering how to get started.

Overarching Lessons for Promoting Equity in COVID-19 Vaccination

Based on what we have learned from the CBOs to date about the strategies they are using, what has made progress possible, and what they need to accomplish their missions, the following are overarching lessons for initiatives such as the EVI that are working at the hyper-local level to promote equitable COVID-19 vaccination and address inequities more broadly. These practices can be seen as the start of an equity-first framework that will be developed by all EVI partners over the course of this initiative:

Build authentic, ongoing relationships to meet community needs before, during, and long after a public health emergency.
Amplify and support the CBOs who are doing the grassroots work; don't direct them. As experts in, and on, their communities, they know best what strategies will be most effective.
Provide a consistent, stable source of funding , not just during times of crisis, and ensure that funding opportunities are accessible to CBOs who have limited time and/or experience with grant-writing.
Focus on building capacity within CBOs that will last long after the initiative is over (e.g., to counter vaccine misinformation, interpret and act on vaccination data, apply for grant funding).
Co-create messaging and information campaigns and co-design strategies to expand vaccine access in partnership with affected communities; engage with and listen to communities from the outset, not just when asking for feedback on how something was received.
Build bridges across sectors. Vaccination equity intersects with housing, employment, food insecurity, and infrastructure, among other social dimensions.
Dig deeply to understand access barriers and hidden costs of vaccination for those without a social safety net; making vaccines available does not automatically mean that people can access them.
Partner with various types of trusted messengers in a community. Think creatively with communities about who their trusted messengers are.
Apply a harm reduction approach; if individuals, particularly those who have been the recipients of misinformation and disinformation, are not ready to get vaccinated or do not plan to be vaccinated in the future, share information about how they can protect themselves and others from COVID-19.
Reframe the narrative around access barriers and vaccine confidence; rather than blaming individuals who are not vaccinated, strive to fix the broken systems (e.g., health care) that create barriers and lead people to mistrust them.

Options for Policymakers to Support This Work in the Near Term

Policymakers and public health officials at all levels of government, health care organizations, philanthropy, and the private sector each play an important role in providing the resources, leadership, and implementation supports for organizations such as the EVI anchor partners and CBOs to do their work successfully. Table 5.1 summarizes **selected external supports, including policy actions**, that we identified through (1) our national scan of media and academic literature and (2) interviews with EVI partners. These supports are implementable in the short term and could make the equitable vaccination strategies being used in the EVI and across the country more feasible, scalable, effective, and sustainable. They could also serve as the beginning of the critical longer-term process of addressing structural inequities

that impact all aspects of our society. These illustrative supports and policy actions are organized by **type of strategy** (e.g., providing information, streamlining registration and appointment processes) and by the **groups** that could be best positioned to provide those supports or enact policies that facilitate implementation of equity-first vaccination strategies. Those who are best positioned to take a leadership role to provide the selected external supports are represented in dark green; those who might act in more of a supportive role are highlighted in light green.

Table 5.1. External Supports and Groups That Are Best Positioned to Provide Them

External supports to facilitate implementation of equitable COVID-19 vaccination strategies	Who is best positioned to provide the supports?				
	Dark green: leadership role; light green: supportive role	Federal policymakers and public health officials	State, tribal, local, and territorial policymakers and public health officials	Health system leadership	Private sector and philanthropy
Strategy: Share accurate, trustworthy, and accessible information					
Provide funding to CBOs to enable them to identify and collaborate with trusted messengers in their communities and/or hire additional staff, such as community health workers		X	X	X	X
Coordinate messaging and recommendations with CBOs, giving them time to prepare to amplify the message or work to address any unintended effects		X	X	X	X
Build communication capacity and networks among CBOs and other local organizations to address vaccine misinformation		X	X		X
Provide resources to primary care providers to equip them for difficult, yet efficient, conversations about COVID-19 vaccination		X	X	X	X
Strategy: Provide transportation assistance					
Collaborate with the private sector (e.g., ride-sharing companies) to offer free or discounted rides			X	X	X
Ensure reimbursement by public and private payers to individuals and/or organizations for transportation, including accessible options for those with limited mobility		X	X		
Strategy: Maximize convenience of receiving the vaccine					
Ensure that pediatricians can be reimbursed for vaccinating adult caregivers who accompany a child to an office visit or vaccination event		X	X		
Streamline the process for in-home vaccination and offer sufficient reimbursement		X	X	X	
Provide financial incentives for providers to vaccinate their patient population (e.g., payments for providers meeting equitable vaccination targets)		X	X	X	
Provide accessible, high-quality, real-time data that helps target vaccination efforts (e.g., where to locate pop-up events, where door-to-door canvassing is needed)		X	X	X	X
Strategy: Streamline registration and appointment processes					
Expand funding for community health workers, patient navigators, and/or case managers to assist with registration, appointments, or locating vaccination sites		X	X	X	X
Support development of technologies to streamline registration, document vaccine administration, and provide information to immunization information systems		X	X	X	X
Strategy: Offset costs of vaccination					
Involve communities in designing incentives that are tailored to the community, have value, and will promote rather than hinder equity		X	X	X	X
Ensure paid time off to get vaccinated, to assist others to get vaccinated (e.g., a child or elderly parent), and to recover from side effects; or ensure payments for lost income due to vaccination or side effects		X	X	X	

Over the Longer Term: Lasting Change Through Reimagined Systems and Structures

The recommendations in the previous section are important, but they are merely bandages, or even tourniquets. What is needed is to prevent the bleeding at its source—or, better yet, to envision the systems that cause the inequities in the first place. It has become clear during the pandemic that, according to a partner in Houston, the current public health systems are not working for many people, “such as those who do not have paid time off, those who speak languages other than English, or those with different cultural relationships with medicine and medical providers” (i.e., the people most impacted by COVID-19 inequities). The second goal of the EVI, which entails, in the words of one Rockefeller Foundation staff member, “building a community-centered public health system,” will require a fundamental redesign of the public health system and its financing. The EVI provides a real-world example of how such a system could work. Based on the early learnings from the EVI, we offer several examples of what is needed:

1. adequate and stable funding for state and local public health systems
2. investments in specific improvements, including, but not limited to, modernizing public health data infrastructure and expanding and diversifying the public health workforce
3. greater and continuous financial investment in CBOs that does not rely on a single or one-time campaign (e.g., COVID-19 vaccination), as well as capacity-building, upskilling, leadership development, just-in-time contextualized technical assistance, formation of peer-to-peer learning networks, and authentic engagement in decisionmaking, all of which allow organizations and communities to be proactive rather than reactive in the face of public health crises
4. stronger linkages between public health and the health care system, particularly community-based preventive and primary care services.

Achieving such changes will require significant time, effort, resources, and political will. In the meantime, the EVI partners will continue working toward the goals of equitable COVID-19 vaccination *and* community-centered systems that serve those most in need.

6. Summary and Looking Ahead

A consistent theme in our interviews with EVI partners and The Rockefeller Foundation was that inequities in COVID-19 vaccination reflect **broadier inequities** that the country has been grappling with for many years. The pandemic has simply shone a bright light on these inequities, and tackling them is the “marathon” that we must be prepared to run, even as we “sprint” to vaccinate as many people as possible, as quickly as possible. As an OSI-Baltimore staff member shared, “The reason there has been such a disparity in vaccine distribution is because of structural historic inequities. I guess that shouldn’t be a surprise, but just seeing how much of this ties into lack of access to health care more broadly, disconnected communities, there are elements of lack of transportation, lack of child care . . . we need to fix everything in order to truly address [disparities in vaccination].” Many

“There's a sprint to get these vaccinations as quickly as possible, but there's also this marathon that we need to be also running, which is how do we leverage this moment and this opportunity to make sure that we are improving health equity in the long term and that we're thinking about how these new relationships, these new partnerships, these new influx of community-based organizations and their expertise into addressing a public health problem. How do we make sure this isn't a flash in the pan, but it's something that can build towards greater health equity? . . . that's something that we really want to make sure we don't end this project without having some real concrete recommendations and learning and successes to point to.”

-A Rockefeller Foundation staff member

partners acknowledged that we will face other pandemics in the future, and they hoped that we would not become complacent and repeat our same mistakes. One Advisory Council member observed that the pandemic is “akin to September 11th” in that “we didn’t really have to deal with” terrorism on a large scale before the 9/11 attacks, and, similar to the pandemic, we believed that “this stuff wasn’t happening in the United States, except when it does, then all of a sudden, it’s like, what are we going to do about it?” Therefore, the EVI partners are considering how to apply lessons learned in the context of COVID-19 to future pandemics or to other health, economic, and social issues facing their communities and communities across the country.

Another salient theme was the critical need to **sustain this work** and continue to address equity, both related to health and more broadly, recognizing that the aftermath of this pandemic will resonate in communities for years to come. Interviewees consistently noted that sustainability was not possible without continued funding, particularly flexible funding that organizations could decide how best to allocate based on their knowledge of their community. In the words of one Newark CBO member, “Every conversation I have about sustainability, I have to say there has to be funding attached to sustainable projects. You can't sustain anything without money. I don't care where you are and what you're doing. And so if you're not willing to pay for it, that means that it's really not that important to you.” Furthermore, continued funding should not be tied to any specific campaign but instead should center on investing in the local civic infrastructure so that organizations are well equipped to respond proactively when the next crisis hits.

Another key element of sustainability was building lasting capacity at the hyper-local level, whether through gaining experience working with global foundations, such as The Rockefeller Foundation; developing new channels of communication with community members; understanding how to interpret and use public health data; identifying influential local community leaders; or deepening relationships with other CBOs, health care and public health systems, and local government. The EVI presents an opportunity for the anchor partners, key partners, and CBOs—all of whom are committed to closing health equity gaps in their communities—to leverage their organizational capacities and hard-earned trust in their community

to promote equitable COVID-19 vaccination. Together, the EVI partners have the potential to improve access to COVID-19 vaccination and information about the vaccine among those most impacted by the pandemic. In addition, the EVI could serve as a real-world test of a community-centered, community-led approach to public health, which is applicable to all sorts of health services, well beyond vaccination.

This interim report previewed each demonstration site's efforts as part of the EVI and summarizes the lessons learned so far about increasing access to and delivery of COVID-19 vaccines. At the time of data collection for this report, primarily August and September 2021, the anchor partners had been selected and onboarded, and they were in varying stages of selecting their CBO subgrantees. Each site had identified the locations of its target population and was concentrating efforts in these areas. However, the sites varied in terms of their community context, population characteristics, available resources, and partnerships.

As the initiative progresses, RAND researchers will continue working with the EVI partners to update the profiles of each demonstration site, further explore lessons learned about the most effective strategies to increase access to COVID-19 vaccination for BIPOC populations, and describe the policy supports needed to implement those strategies.

Appendix A. Methods

National Scan to Identify Promising Strategies and Best Practices

In spring 2021, while preparing for the official launch of the EVI, we worked with two research librarians to develop and execute an online media search strategy to identify different approaches being used across the country to promote vaccination equity. We initially conducted media scans three times a week and then decreased our searches to weekly and then monthly. We performed additional searches around times of notable changes in vaccine policy—for example, following the pause of the J&J vaccine. We also conducted searches of Twitter, Facebook, Instagram, and Google to identify additional best practices. We abstracted from the articles the organizations leading efforts to address vaccination equity, their location, the target population, the specific access barriers that the effort was tackling, interventions used to address the barriers, challenges encountered and solutions to those challenges, and measures of success, if any. We screened a total of 777 articles from social media and web-based searches and abstracted information from 228.

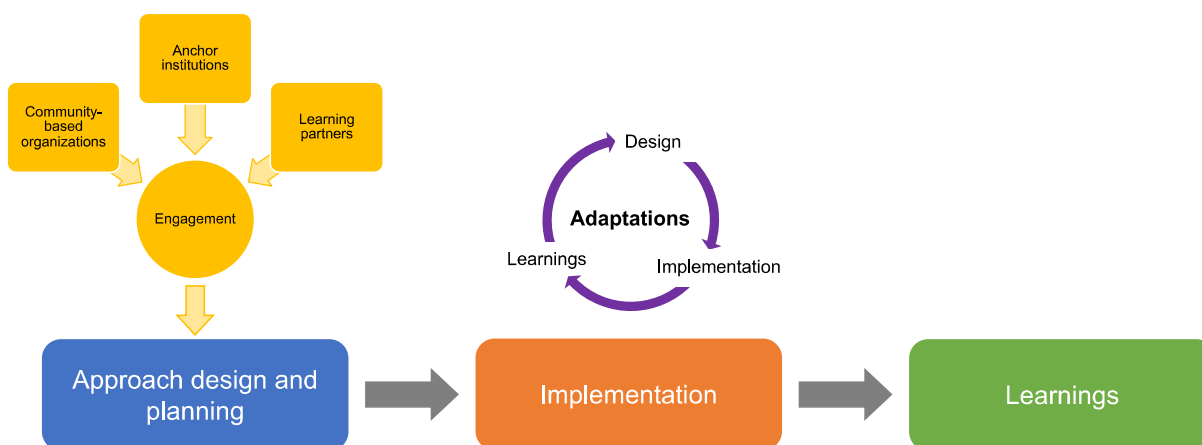
We also conducted a nonsystematic but comprehensive scan of the peer-reviewed literature to identify and synthesize commentaries on best practices in COVID-19 vaccination equity and original investigations describing interventions to improve COVID-19 vaccination equity. Although we considered including literature on other vaccinations, given the unique context of the pandemic, and the unprecedented scope, scale, and speed of the initial rollout of vaccines in the winter of 2020–2021, we opted to limit our scope to COVID-19 vaccinations. We searched PubMed and Web of Science, limiting our search to articles published between December 2020, when COVID-19 vaccines first became available outside of clinical trials in the United States, and August 2021 to allow time for abstraction and synthesis. In addition, to ensure that we captured non-peer-reviewed pre-print articles, we conducted weekly scans of pre-print services for relevant articles (i.e., medRxiv, SocArXiv, ArXiv). We included peer-reviewed and pre-print articles that (1) specifically described strategies used to overcome access barriers to COVID-19 vaccination and/or (2) reported on results of interventions to promote COVID-19 vaccination. We excluded articles that simply described the barriers or only focused on overcoming vaccine hesitancy. In total, we screened the titles and abstracts of 373 peer-reviewed and pre-print articles and abstracted information from ten full-text articles.

Using the results of our environmental scan and leveraging our professional networks, we identified ten exemplary organizations throughout the country to contact for in-depth qualitative interviews. From this information, we compiled the classifications of access barriers and strategies to overcome them presented in Chapter 2.

Conceptual Framework for Data Collection from EVI Partners

To guide our assessment of cross-site learnings to promote equitable vaccination within and across the EVI sites, we used an implementation science evaluation framework (Proctor et al., 2009) that was recently adapted to focus on addressing health care inequities among historically underserved populations (Baumann and Cabassa, 2020). See Figure A.1.

Figure A.1. Evaluation Framework



SOURCE: Modified version of the Baumann and Cabassa, 2020, adaptation of the framework in Proctor et al., 2009.

We used this framework as a guide throughout our data collection activities, our development of brief profiles of each of the demonstration sites, and the development of a standardized codebook for analyzing the qualitative data. We selected this framework given its emphasis on equity in the health care context; its focus on distinct and interrelated elements across the intervention stages (planning, implementation, adaptation, and evaluation); and its inclusion of adaptations, which we deemed critical in an evolving pandemic landscape.

The framework underscores five key elements that shape health care inequities; we adapted and applied these elements to the EVI, as shown in Table A.1.

Table A.1. Key Elements That Shape Health Care Inequities

Adapted framework element (from Proctor et al., 2009)	Application to the EVI
Focus on the extent to which underserved populations are included and engaged in health care interventions (reach)	Given the EVI's focus on underserved BIPOC populations, we shifted the focus of this element from the reach of underserved populations (potential <i>recipients</i> of the COVID-19 vaccine) to the inclusion and engagement of the EVI <i>implementors</i> targeting those underserved populations—i.e., the anchor partners and their subgrantee CBOs. For example, we assessed their organizational characteristics (e.g., mission and values, staffing capacity to address inequities, internal resources), history of addressing inequities and building trust in their communities, and experiences with prior and current partnerships (e.g., history of working together, strengths and challenges of collaboration in the EVI).
Design and select interventions that align with the needs of the underserved population and implementation context—e.g., communities	Each anchor partner described how it selected its specific approaches to promote COVID-19 vaccination equity in its target communities, including (a) identifying the problem or gap that needs to be addressed; (b) identifying which population groups and areas to target; and (c) the process for designing its approach, such as how it used data to inform its approaches; the extent to which it engaged community members in planning its EVI efforts (community participatory approach); whether it leveraged existing campaigns, tools, or partnerships; and the perceived fit of its selected approaches with the underserved communities, such as the potential of its approaches to continue benefiting these communities in the long term (sustainability).
Implement evidence-based interventions using strategies that promote their uptake in underserved populations	We assessed what strategies each anchor partner used to facilitate implementation of their broader EVI efforts, such as use of community outreach, community champions, mass media, and interactive education sessions. We also assessed internal (organizational) and external (contextual) facilitators and barriers to implementation of their EVI approaches, including those identified in the literature (information, convenience, culture and trust, technology, physical barriers) and contextual factors (e.g., changing policy landscape, evolving COVID-19 recommendations, and the emergence of new COVID-19 variants).
Track adaptations to the intervention, implementation strategies, and context (e.g., clinical practice) to align with the needs of the underserved population	We tracked whether anchor partners adapted their approaches, reasons for adaptations (e.g., in response to identified challenges), and the process for informing those changes. Adaptations could be made to the overall approaches, implementation strategies, or their implementation contexts (e.g., physical changes in the communities or clinics where vaccines are delivered).
Assess equity-focused implementation outcomes	Given that our goal was to understand learnings within and across the EVI sites, we evaluated or will evaluate both perceived learnings (e.g., challenges and successes) and objective outcomes (Key Progress Indicators, rates of COVID-19 vaccination among the target BIPOC populations).

Qualitative Data Collection and Analysis

In June 2021, to identify trends and common experiences among EVI partners in as close to real time as possible, we developed a process for collecting monthly reflections from anchor partners about their work over the preceding month. Anchor partners were given the option of responding to a brief online survey or

providing their responses during a 30-minute telephone call with RAND personnel. We compiled the written responses and recorded and transcribed the telephone conversations. At the end of each monthly reflection period, RAND personnel reviewed the transcripts and written responses to identify common themes and potential discussion prompts for upcoming EVI convenings, performing a rapid, streamlined analysis of needed resources, key insights, and other information that could be immediately discussed and used among the larger learning community.

In May–June 2021, we conducted a first round of in-depth interviews with anchor partners to understand their preparations for the launch of the EVI, their anticipated challenges, and the supports they needed. In August–September 2021, we interviewed those same anchor partners, as well as Rockefeller Foundation staff, members of the EVI’s Advisory Council, and personnel from select CBOs. We developed an interview guide that covered expectations for the EVI, successes and challenges during the early implementation phases, and facilitators of and barriers to successful implementation of vaccination strategies. Interviews were recorded and professionally transcribed. We developed a standardized codebook based on our implementation framework and coded the interview transcripts using Dedoose (Dedoose, 2018). Using a qualitative descriptive approach, we grouped and split text excerpts for each assigned code to develop the themes presented in Chapter 4. We supplemented these data collection activities with reviews of grant applications, strategic plans, and organization websites.

Quantitative Data Collection and Analysis

In parallel with the qualitative data collection described above, we compiled and analyzed quantitative data on COVID-19 vaccinations, cases, and deaths by race and ethnicity in the five cities. Data availability and granularity varied. For Chicago and Newark, we drew exclusively on publicly available data on COVID-19 vaccinations, cases, and deaths from city and state websites. For Baltimore, Houston, and Oakland, we supplemented publicly available data with detailed data by race and ethnicity from the Baltimore City Health Department, the Houston Health Department, and the California Department of Public Health. For some metrics of interest, high-quality data were available only at the county level—this was the case for all data from Newark (Essex County) and for COVID-19 deaths in Oakland (Alameda County).

We processed the data from disparate data sets to make them as uniform as possible across cities. We then combined these data with population estimates from the U.S. Census Bureau’s American Community Survey. We used the 2019 American Community Survey to obtain full population estimates for each city and estimated the ZCTA-level population and racial and ethnic distribution of the vaccine-eligible population (ages 12 and older) using American Community Survey five-year estimates spanning 2015 to 2019. Combining population data and data on vaccinations, cases, and deaths allowed us to create a set of figures that displayed the burden of the pandemic on racial and ethnic groups and to visualize trends in vaccinations by race and ethnicity (see Chapter 3 and Appendix B).

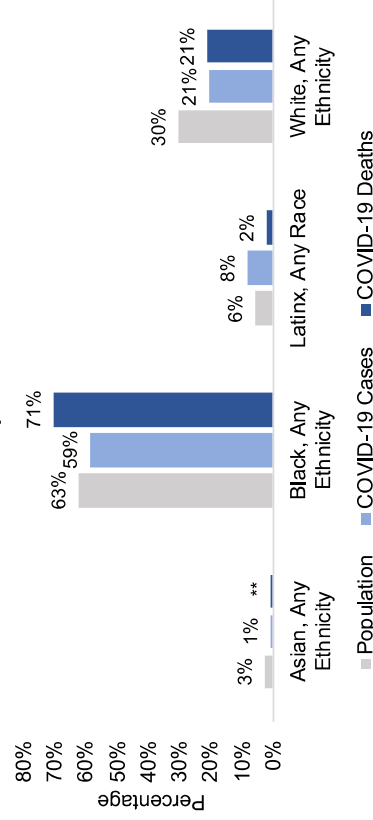
In addition to describing the rate at which people were fully vaccinated over time by race and ethnicity, we calculated the percentage of individuals in each racial or ethnic group who were fully vaccinated. The proportions of cases and vaccinations with unknown race or ethnicity posed a challenge across cities. Our figures used the total number of cases, deaths, and vaccinations as the denominator, and below each figure we note the percentages of unknown race or ethnicity.

Appendix B. What Do Available Data Tell Us About COVID-19 Impacts and Vaccination Rates in the Five EVI Demonstration Sites?

BALTIMORE

Black individuals in Baltimore have been disproportionately impacted by COVID-19. They make up 63 percent of the population but account for 71 percent of COVID-19 deaths. At the same time, they are underrepresented in vaccination; only 47 percent of those who are fully vaccinated are Black. In contrast, White individuals make up 30 percent of the population, account for 21 percent of COVID-19 deaths, and represent 33 percent of those who are fully vaccinated.

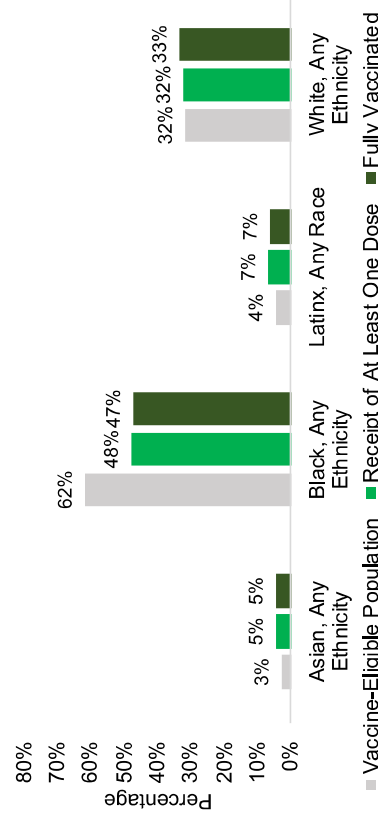
Population, COVID-19 Cases, and COVID-19 Deaths by Race or Ethnicity in Baltimore



NOTES: Population data include all ages. Baltimore data are reported separately by race and ethnicity; Latinx individuals can be of any race, while racial categories include those of any ethnicity; include those of any ethnicity; data are not shown for individuals with race reported as “other” (10 percent of cases, 3 percent of deaths); also not shown are data for individuals with “unknown” ethnicity (5 percent of cases, 2 percent of deaths); “**” indicates that data were suppressed because of small cell value; data are current as of September 30, 2021.

SOURCES: American Community Survey one-year estimates (2019); Baltimore City COVID-19 Dashboard.

Vaccine-Eligible Population, Receipt of At Least One Vaccine Dose, and Fully Vaccinated by Race or Ethnicity in Baltimore



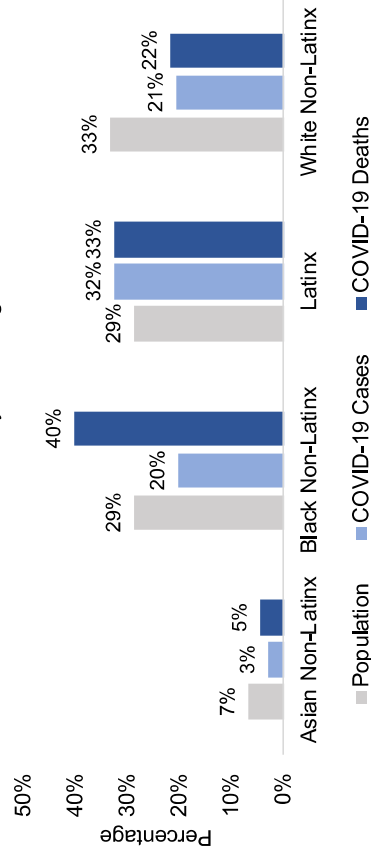
NOTES: Baltimore data are reported separately by race and ethnicity; Latinx individuals can be of any race, while racial categories include those of any ethnicity; data are not shown for individuals with race reported as “other” (11 percent at least one dose, 11 percent fully vaccinated) or “unknown” (4 percent at least one dose, 3 percent fully vaccinated); also not shown are data for individuals of “unknown” ethnicity (7 percent at least one dose, 6 percent fully vaccinated; data are current as of September 30, 2021; *vaccine-eligible population* refers to the population age 12 and over and is estimated using data from the American Community Survey.

SOURCES: American Community Survey five-year estimates (2015–2019); Baltimore City COVID-19 Vaccination Dashboard.

CHICAGO

Black individuals in Chicago have been disproportionately impacted by COVID-19. They make up 29 percent of the population but account for 40 percent of COVID-19 deaths. At the same time, they are underrepresented in vaccination: Only 21 percent of those who are fully vaccinated are Black. In contrast, the percentages of the fully vaccinated population that are Asian, Latinx, and White are nearly equal to their shares of the vaccine-eligible population.

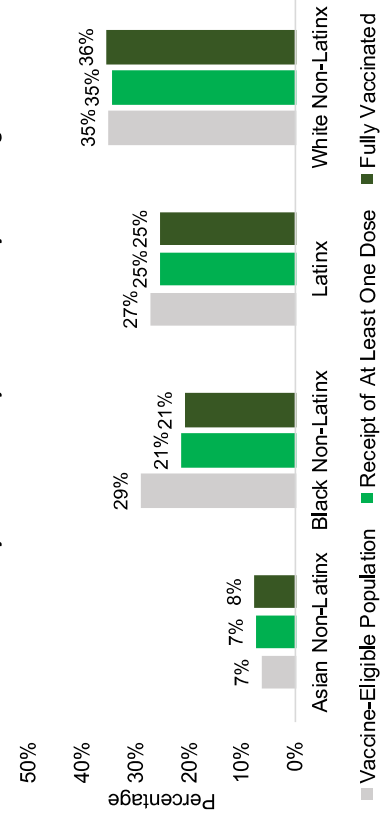
Population, COVID-19 Cases, and COVID-19 Deaths by Race/Ethnicity in Chicago



NOTES: Population data include all ages. Data are not shown for individuals with race/ethnicity reported as “other” (5 percent of cases, <1 percent of deaths) or “unknown” (19 percent of cases, <1 percent of deaths); data are current as of September 30, 2021.

SOURCES: American Community Survey one-year estimates (2019); City of Chicago COVID Dashboard.

Vaccine-Eligible Population, Receipt of At Least One Vaccine Dose, and Fully Vaccinated by Race/Ethnicity in Chicago



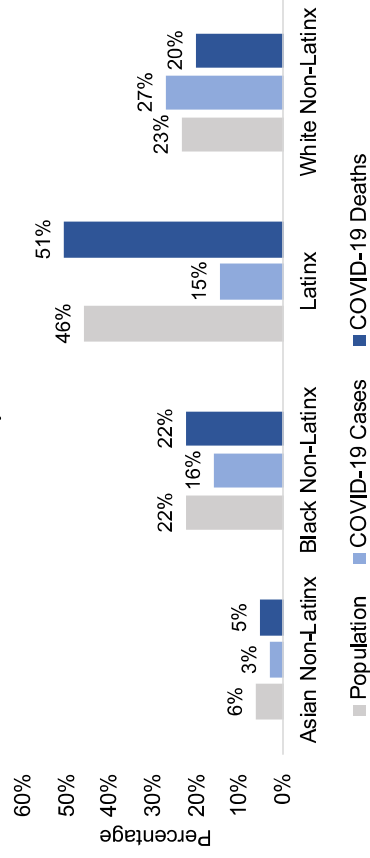
NOTES: Data are not shown for individuals with race/ethnicity reported as “other” (6 percent with at least one dose, 6 percent of fully vaccinated) or “unknown” (5 percent with at least one dose, 5 percent of fully vaccinated); data are current as of September 30, 2021; *vaccine-eligible population* refers to the population age 12 and over and is estimated using data from the American Community Survey.

SOURCES: American Community Survey five-year estimates (2015–2019); City of Chicago Data Portal, COVID-19 Daily Vaccinations—Chicago Residents.

HOUSTON

Latinx individuals in Houston have been disproportionately affected by COVID-19. They account for 46 percent of the population and 51 percent of COVID-19 deaths. In contrast, the proportion of deaths among White individuals, Asian individuals, and Black individuals is similar to their population share. The Latinx population is also underrepresented in the population that has been vaccinated. Latinx individuals make up 43 percent of the vaccine-eligible population in Houston but only 38 percent of the fully vaccinated population. The Black non-Latinx population is even more underrepresented among the fully vaccinated population, accounting for 22 percent of the vaccine-eligible population but just 12 percent of individuals who are fully vaccinated.

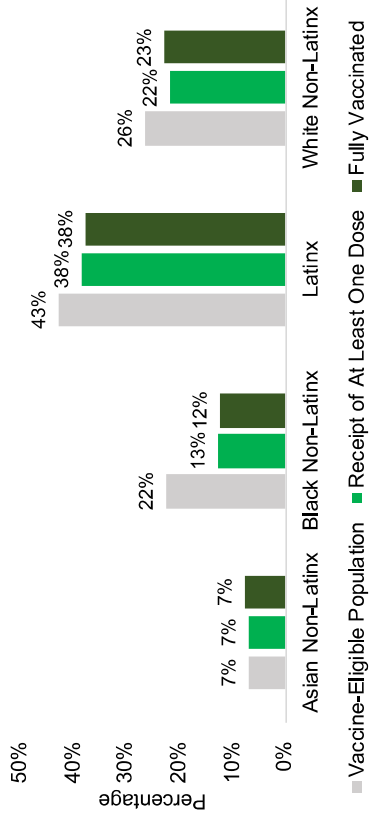
Population, COVID-19 Cases, and COVID-19 Deaths by Race/Ethnicity in Houston



NOTES: Population data include all ages. Data are not shown for individuals with race/ethnicity reported as “other” (16 percent of cases, <1 percent of deaths) or “unknown” (24 percent of cases, <1 percent of deaths); data are current as of October 5, 2021.

SOURCES: American Community Survey one-year estimates (2019); data provided by the Houston Health Department, Houston Electronic Disease Surveillance System.

Vaccine-Eligible Population, Receipt of At Least One Vaccine Dose, and Fully Vaccinated by Race/Ethnicity in Houston

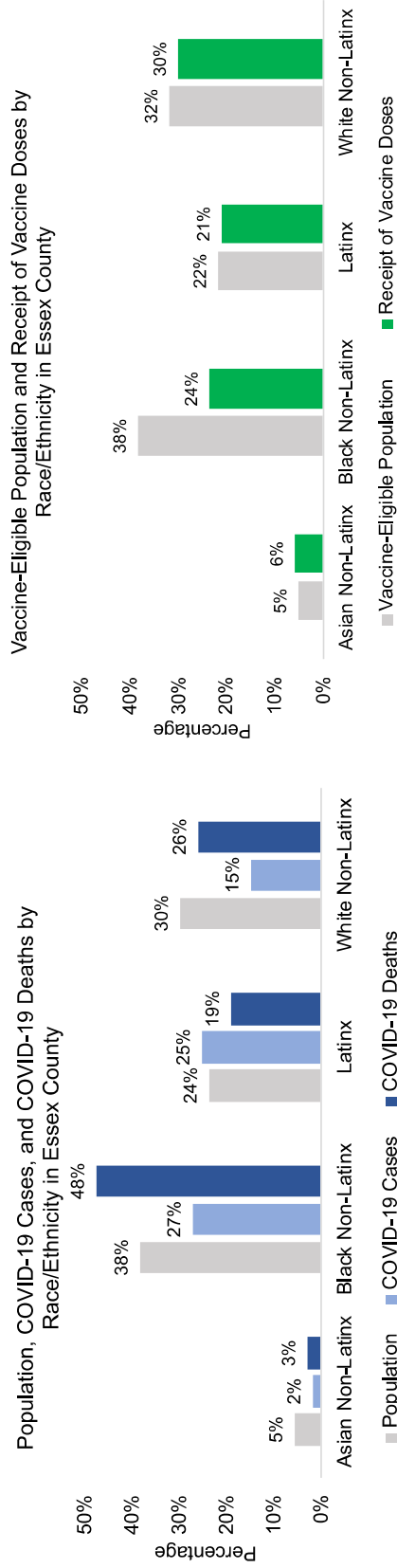


NOTES: Data are not shown for individuals with race/ethnicity reported as “other” (14 percent with at least one dose, 14 percent of fully vaccinated) or “unknown” (6 percent with at least one dose, 6 percent of fully vaccinated); Data are current as of October 3, 2021; *vaccine-eligible population* refers to the population age 12 and over and is estimated using data from the American Community Survey.

SOURCES: American Community Survey five-year estimates (2015–2019); data provided by the Houston Health Department, ImmTrac2 (Texas Vaccine Registry).

NEWARK

Although 38 percent of the Essex County population is Black, non-Latinx, they account for nearly half (48 percent) of COVID-19 deaths but only 24 percent of vaccine doses administered. In contrast, Asian, Latinx, and White populations accounted for lower shares of COVID-19 deaths and nearly equal shares of vaccine doses administered relative to their population shares.



NOTES: Population data include all ages. Data are not shown for individuals with race/ethnicity reported as “other” (16 percent of cases, 4 percent of deaths) or “unknown” (15 percent of cases, 1 percent of deaths); data are current as of September 30, 2021.

SOURCES: American Community Survey one-year estimates (2019); New Jersey COVID-19 Information Hub.

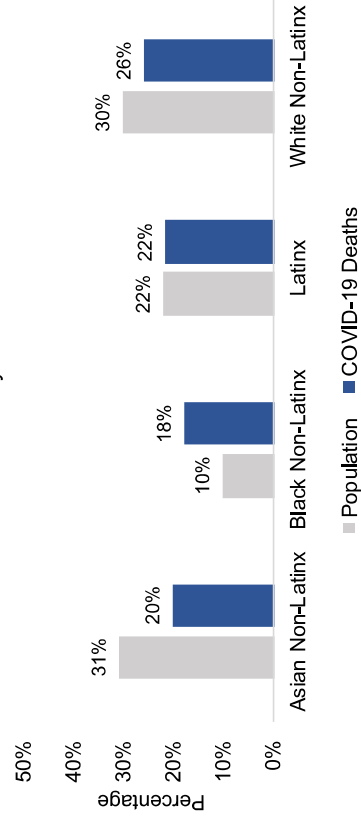
NOTES: Available data reflect doses administered (first, second, or single dose) in the state of New Jersey, excluding doses administered by federal programs; data are not shown for individuals with race/ethnicity reported as “other” (9 percent of doses) or “unknown” (10 percent of doses); data are current as of September 30, 2021; *vaccine-eligible population* refers to the population age 12 and over and is estimated using data from the American Community Survey.

SOURCES: American Community Survey five-year estimates (2015–2019); New Jersey COVID-19 Information Hub.

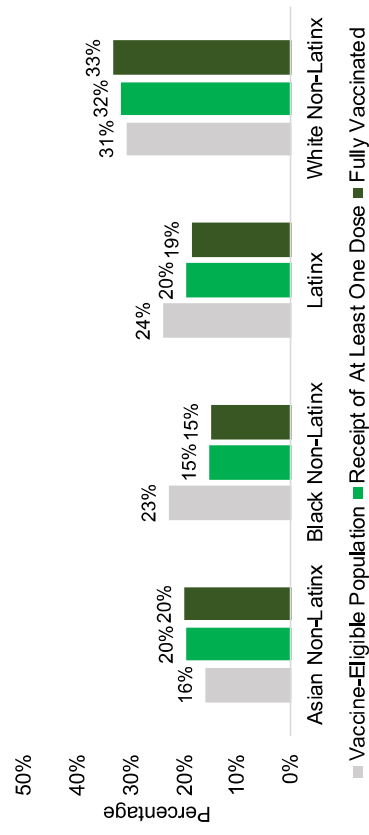
OAKLAND

Although 10 percent of the Alameda County population is Black, non-Latinx, they account for 18 percent of COVID-19 deaths. The Latinx population accounted for a similar percentage of deaths as its population share. Asian individuals account for 31 percent of the population and only 20 percent of COVID-19 deaths; White, non-Latinx individuals make up 30 percent of the population and account for 26 percent of COVID-19 deaths. The Black, Latinx, and White populations all had slightly lower shares of vaccines received (fully vaccinated or at least one vaccine dose) relative to their shares of the vaccine-eligible population.

Population and COVID-19 Deaths by Race/Ethnicity in Alameda County



Vaccine-Eligible Population, Receipt of At Least One Vaccine Dose, and Fully Vaccinated by Race/Ethnicity in Oakland



NOTES: Population data include all ages. Data are not shown for individuals with race/ethnicity reported as “other” (8 percent of deaths) or “unknown” (6 percent of deaths); data are current as of October 4, 2021.

SOURCES: American Community Survey one-year estimates (2019); Alameda County Public Health Department, COVID-19 Dashboard.

NOTES: Data are not shown for individuals with race/ethnicity reported as “other” (3 percent with at least one dose, 3 percent of fully vaccinated) or “unknown” (13 percent with at least one dose, 12 percent of fully vaccinated); data are current as of September 30, 2021; *vaccine-eligible population* refers to the population age 12 and over and is estimated using data from the American Community Survey.

SOURCES: American Community Survey one-year estimates (2019); Alameda County Public Health Department, COVID-19 Vaccination Dashboard.

Abbreviations

BIPOC	Black, Indigenous, and people of color
CBO	community-based organization
CDC	Centers for Disease Control and Prevention
CHC	community health center
CHW	community health worker
CIT	community impact teams
COVID-19	coronavirus disease 2019
EVI	Equity-First Vaccination Initiative
HIV	human immunodeficiency virus
J&J	Johnson & Johnson
LGBTQ	lesbian, gay, bisexual, trans, and queer
OSI-Baltimore	Open Society Institute-Baltimore
SVI	Social Vulnerability Index
UHCHWI	University of Houston Community Health Workers Initiative
UWGN	United Way of Greater Newark
ZCTA	ZIP code tabulation area

References

- Agency for Toxic Substances and Disease Registry, *CDC/ATSDR Social Vulnerability Index*, U.S. Department of Health & Human Services, 2021. As of October 7, 2021:
<https://www.atsdr.cdc.gov/placeandhealth/svi/index.html>
- Alameda County Health Services Agency, Public Health Department, “Alameda County COVID-19 Dashboard,” data on COVID-19 deaths downloaded October 4, 2021, covering the period through September 30, 2021. As of October 7, 2021:
<https://covid-19.acgov.org/data.page>
- , “Alameda County COVID-19 Vaccination Dashboard, vaccination data downloaded October 1, 2021, covering the period through September 30, 2021. As of October 7, 2021:
<https://covid-19.acgov.org/data.page>
- American Community Survey, 1-Year Estimates Detailed Tables, 2019, Tables B02001 (“Race”) and B03002 (“Hispanic or Latino Origin by Race”) at the County, Place, and Zip Code Tabulation Area (ZCTA) levels of geography, U.S. Census Bureau. As of October 7, 2021:
<https://data.census.gov>
- , 5-Year Estimates Summary File, 2015-2019, Tables B01001 (“Sex by Age”), B02001 (“Race”), and B03002 (“Hispanic or Latino Origin by Race”) at the County, Place, and Zip Code Tabulation Area (ZCTA) levels of geography, U.S. Census Bureau. As of October 7, 2021:
https://www2.census.gov/programs-surveys/acs/summary_file/2019/data/5_year_entire_sf/
- Balasuriya, L., A. Santilli, J. Morone, J. Ainooson, B. Roy, A. Njoku, A. Mendiola-Iparraguirre, K. O'Connor Duffany, B. Macklin, J. Higginbottom, C. Fernández-Ayala, G. Vicente, and A. Venkatesh, “COVID-19 Vaccine Acceptance and Access Among Black and Latinx Communities,” *JAMA Network Open*, Vol. 4, No. 10, October 1, 2021, p. e2128575.
- Baltimore City Health Department, Baltimore City COVID-19 Dashboard, data downloaded on October 4, 2021, reflecting data last updated October 1, 2021, covering the period through September 30, 2021. As of October 7, 2021:
<https://coronavirus.baltimorecity.gov>
- , Baltimore City COVID-19 Vaccination Dashboard, data downloaded on October 4, 2021, reflecting data last updated October 1, 2021, covering the period through September 30, 2021. As of October 7, 2021:
<https://baltimore.maps.arcgis.com/apps/dashboards/4b64b6e8c0014b6998d767fcf077bfaf>
- , BCHD analysis of COVID vaccination data (ImmuNet) provided by the Maryland Department of Health, as of August 12, 2021. Provided to RAND in response to a data request.
- Baumann, Ana A., and Leopoldo J. Cabassa, “Reframing Implementation Science to Address Inequities in Healthcare Delivery,” *BMC Health Services Research*, Vol. 20, No. 1, March 12, 2020, p. 190. As of October 7, 2021:
<https://doi.org/10.1186/s12913-020-4975-3>
- Bread of Life Inc., “Our Founders,” webpage, 2021. As of October 13, 2021:
<https://breadoflifeinc.org/founders/>
- California Department of Public Health, “COVID-19 Vaccine Progress Dashboard Data by ZIP Code,” data downloaded October 1, 2021, reflecting data last updated September 30, 2021, covering the period through September 28, 2021. As of October 7, 2021:
<https://data.chhs.ca.gov/dataset/covid-19-vaccine-progress-dashboard-data-by-zip-code>

- , vaccination data by ZIP code and race/ethnicity, for 15 ZIP codes with more than half their population in the City of Oakland: 94601, 94602, 94603, 94605, 94606, 94607, 94608, 94609, 94610, 94611, 94612, 94613, 94618, 94619, 94621, updated October 5, 2021. Provided to RAND in response to a data request.
- California Healthy Places Index, homepage, undated. As of November 28, 2021:
<https://healthyplacesindex.org>
- Centers for Disease Control and Prevention; Agency for Toxic Substances and Disease Registry; and Geospatial Research, Analysis, and Services Program, *CDC/ATSDR Social Vulnerability Index 2018 Database*, data at the Census Tract level, 2021. As of October 7, 2021:
https://www.atsdr.cdc.gov/placeandhealth/svi/data_documentation_download.html
- Chevalier, Judith A., Jason L. Schwartz, Yihua Su, and Kevin R. Williams, "Equity Impacts of Dollar Store Vaccine Distribution," *medRxiv*, 2021, p. 2021.2004.2003.21254847. As of October 7, 2021:
<https://www.medrxiv.org/content/medrxiv/early/2021/04/05/2021.04.03.21254847.full.pdf>
- Chicago Community Trust, "We Are a Platform for Change that Connects Philanthropy to Impact," webpage, 2021. As of October 13, 2021:
<https://www.cct.org/about/>
- City of Chicago, COVID Dashboard, data downloaded on October 4, 2021, reflecting data last updated October 4, 2021, covering the period through September 30, 2021. As of October 7, 2021:
<https://www.chicago.gov/city/en/sites/covid-19/home/covid-dashboard.html>
- City of Chicago Department of Public Health, "COVID-19 Daily Vaccinations-Chicago Residents," Chicago Data Portal, data downloaded on October 4, 2021, reflecting data last updated October 4, 2021, covering the period through September 30, 2021. As of October 7, 2021:
<https://data.cityofchicago.org/Health-Human-Services/COVID-19-Daily-Vaccinations-Chicago-Residents/2vhs-cf6b>
- , "COVID-19 Vaccinations by ZIP Code," Chicago Data Portal, data downloaded on October 4, 2021, reflecting data last updated October 4, 2021, covering the period through September 30, 2021. As of October 7, 2021:
<https://data.cityofchicago.org/Health-Human-Services/COVID-19-Vaccinations-by-ZIP-Code/553k-3xzc>
- Corallo, Bradley, Samantha Artiga, and Jennifer Tolbert, *Are Health Centers Facilitating Equitable Access to COVID-19 Vaccinations? A June 2021 Update*, Kaiser Family Foundation, 2021. As of October 7, 2021:
<https://www.kff.org/coronavirus-covid-19/issue-brief/are-health-centers-facilitating-equitable-access-to-covid-19-vaccinations-a-june-2021-update/>
- Corbie-Smith, Giselle, "Vaccine Hesitancy Is a Scapegoat for Structural Racism," *JAMA Health Forum*, Vol. 2, No. 3, 2021, pp. e210434-e210434. As of October 12, 2021:
<https://doi.org/10.1001/jamahealthforum.2021.0434>
- Dai, H., S. Saccardo, M. A. Han, L. Roh, N. Raja, S. Vangala, H. Modi, S. Pandya, M. Sloyan, and D. M. Croymans, "Behavioural Nudges Increase COVID-19 Vaccinations," *Nature*, Vol. 597, No. 7876, Sep, 2021, pp. 404–409.
- Dedoose, homepage, 2018. As of October 7, 2021:
www.dedoose.com
- Dryden-Peterson, Scott, Gustavo E. Velásquez, Thomas J. Stopka, Sonya Davey, Rajesh T. Gandhi, Shahin Lockman, and Bisola O. Ojikutu, "Disparities in SARS-CoV-2 Vaccination-to-Infection Risk During the COVID-19 Pandemic in Massachusetts," *JAMA Health Forum*, Vol. 2, No. 9, 2021, pp. e212666-e212666. As of September 29, 2021: As of October 7, 2021:
<https://doi.org/10.1001/jamahealthforum.2021.2666>

- Equity-First Vaccination Initiative, homepage, 2021. As of October 7, 2021:
<https://www.equityfirst.us/>
- , "Partners," webpage, 2021. As of October 9, 2021:
<https://www.equityfirst.us/#partners>
- Faith in Action, "Creating a World Where Everyone Belongs, Can Thrive, and Has a Say in the Decisions that Shape Their Lives," webpage, 2021. As of October 14, 2021:
<https://www.faithinaction.org/>
- Fressin, Francois, Amy Wen, Samta Shukla, Kelly Mok, and Sreekanth Chaguturu, "How We Achieved More Equitable Vaccine Distribution: Social Vulnerability Analytics Are Necessary, But Not Sufficient," *Health Affairs Blog*, 2021. As of October 7, 2021:
<https://www.healthaffairs.org/doi/10.1377/hblog20210721.568098/full/>
- Hopkins, E. M., and J. M. Ferris, eds., *Place-Based Initiatives in the Context of Public Policy and Markets: Moving to Higher Ground*, Los Angeles: University of Southern California, 2015. As of October 7, 2021:
<https://socialinnovation.usc.edu/files/2014/12/Prioritizing-Place-Moving-to-Higher-Ground.pdf>
- Houston Health Department, Cases and Deaths Data from the Houston Electronic Disease Surveillance System, updated October 5, 2021. Provided to RAND in response to a data request.
- , Vaccination Data from ImmTrac2 (Texas Vaccine Registry), updated October 4, 2021. Provided to RAND in response to a data request.
- Houston in Action, "About Houston in Action," webpage, 2021. As of October 13, 2021:
<https://www.houstoninaction.org/about/>
- Kaiser Family Foundation, "Latest Data on COVID-19 Vaccinations by Race/Ethnicity," webpage, 2021. As of October 7, 2021:
<https://www.kff.org/coronavirus-covid-19/issue-brief/latest-data-on-covid-19-vaccinations-race-ethnicity/>
- Levesque, Jean-Frederic, Mark F. Harris, and Grant Russell, "Patient-Centred Access to Health Care: Conceptualising Access at the Interface of Health Systems and Populations," *International Journal for Equity in Health*, Vol. 12, No. 1, March 11, 2013, p. 18. As of October 7, 2021:
<https://doi.org/10.1186/1475-9276-12-18>
- Maryland Department of Health, MD COVID ZIPCODES Vaccinations, data downloaded on October 1, 2021, reflecting data last updated September 29, 2021. As of October 7, 2021:
<https://coronavirus.maryland.gov/datasets/maryland::md-covid-zipcodes-vaccinations>
- Maul, Andrew, Kavitha Reddy, and Maulik Joshi, "Vaccine Equity Index Shows Reduction in Maryland COVID-19 Vaccination Disparity in Less than Two Months," *NEJM Catalyst*, 2021. As of October 7, 2021:
<https://catalyst.nejm.org/doi/full/10.1056/CAT.21.0126>
- Open Society Institute-Baltimore, "Mission and Values," webpage, 2021a. As of October 7, 2021:
<https://www.osibaltimore.org/about/mission-and-values/>
- , "Programs and Impact," webpage, 2021b. As of October 7, 2021:
<https://www.osibaltimore.org/programs-and-impact/>
- Proctor, E. K., J. Landsverk, G. Aarons, D. Chambers, C. Glisson, and B. Mittman, "Implementation Research in Mental Health Services: An Emerging Science with Conceptual, Methodological, and Training Challenges," *Administration and Policy in Mental Health and Mental Health Services*, Vol. 36, No. 1, January 2009, pp. 24–34.
- Roots Community Health Center, "The People's Health Briefing," webpage, undated. As of November 23, 2021:
<https://rootsclinic.org/the-peoples-health-briefing/>

- Roots Community Health Center, homepage, 2021. As of October 13, 2021:
<https://rootsclinic.org/>
- Siegler, A. J., F. Mouhanna, R. M. Giler, K. Weiss, E. Pembleton, J. Guest, J. Jones, A. Castel, H. Yeung, M. Kramer, S. McCallister, and P. S. Sullivan, "The Prevalence of Pre-Exposure Prophylaxis Use and the Pre-Exposure Prophylaxis-to-Need Ratio in the Fourth Quarter of 2017, United States," *Annals of Epidemiology*, Vol. 28, No. 12, December 2018, pp. 841–849.
- Texas Department of State Health Services, "COVID-19 Vaccine Administration Data by Zip Code," data downloaded on October 4, 2021, reflecting data last updated October 4, 2021, covering the period through October 3, 2021. As of October 7, 2021:
<https://dshs.texas.gov/coronavirus/TexasCOVID19VaccinesbyZIP.xlsx>
- The Rockefeller Foundation, *100 Resilient Cities*, 2021a. As of October 7, 2021:
<https://www.rockefellerfoundation.org/100-resilient-cities/>
- , *Covid-19 Testing in K-12 Settings: A Playbook for Educators and Leaders*, 2021b. As of October 7, 2021:
<https://www.rockefellerfoundation.org/report/covid-19-testing-in-k-12-settings-a-playbook-for-educators-and-leaders/>
- , "'The Rockefeller Foundation Opportunity Collective' Launches with \$10 Million Commitment to Promoting Inclusive Growth in 10 U.S. Cities," press release, 2020. As of October 7, 2021:
<https://www.rockefellerfoundation.org/news/the-rockefeller-foundation-opportunity-collective-launches-with-10-million-commitment-to-promoting-inclusive-growth-in-10-us-cities/>
- Thirumurthy, Harsha, Katherine L. Milkman, Kevin Volpp, Alison Bittenheim, and Devin G. Pope, "Association Between Statewide Financial Incentive Programs and COVID-19 Vaccination Rates," *SSRN Electronic Journal*, 2021. As of October 7, 2021:
<http://dx.doi.org/10.2139/ssrn.3912786>
- U.S. Department of Housing and Urban Development, Office of Policy Development and Research, Census Tract to ZIP code crosswalk file, undated. As of October 7, 2021:
https://www.huduser.gov/portal/datasets/usps_crosswalk.html
- United Way of Greater Newark, homepage, 2021. As of October 13, 2021:
<https://uwnewark.org/>
- Velasquez, David, Suhas Gondi, Richard Lu, Adam Pissaris, and Alister Martin, "GOTVax: A Novel Mobile Covid-19 Vaccine Program," *NEJM Catalyst*, 2021. As of October 7, 2021:
<https://catalyst.nejm.org/doi/full/10.1056/CAT.21.0174>
- Walkey, A. J., A. Law, and N. A. Bosch, "Lottery-Based Incentive in Ohio and COVID-19 Vaccination Rates," *Jama*, Vol. 326, No. 8, August 24, 2021, pp. 766–767.
- Wong, C. A., S. Dowler, A. F. Moore, E. F. Sosne, H. Young, J. D. Tenenbaum, C. E. Burns, S. Jones, M. Smelyanskaya, and K. H. Kinsley, "COVID-19 Vaccine Administration, by Race and Ethnicity—North Carolina, December 14, 2020–April 6, 2021," *MMWR Morbidity and Mortality Weekly Report*, Vol. 70, No. 28, July 16, 2021, pp. 991–996.