

Research & Practice Notes

‘Our Community Our Health St. Louis’: Learning from COVID-19 vaccine outreach

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The national rollout of the COVID-19 vaccine in the United States failed to produce equitable vaccine uptake across racial and class lines, repeating well-known patterns of health disparities. In mid-2021, community leaders in St. Louis identified the need for improved vaccine access in underserved areas. Washington University in St. Louis responded by launching the ‘Our Community Our Health St. Louis’ program, targeting fifteen zip codes with high COVID-19 hospitalization rates and low vaccine uptake. ‘Our Community Our Health’ formed partnerships with trusted community organizations to deliver vaccines through flexible, neighborhood-based pop-up clinics and used a design framework to interrogate vaccine ‘hesitancy’. Over two years, the program administered 1,354 COVID-19 and influenza vaccines to 874 individuals through 89 events. A design framework was employed to learn from vaccine recipients directly what vaccine availability and acceptability looked like to them. The program’s community-driven approach revealed critical insights for designing and scaling a hyperlocal vaccine distribution system that meets people where they are to deliver equity.

Background

The national rollout of the COVID-19 vaccine in the USA failed to produce equitable uptake across racial and class lines, repeating well-known patterns of health disparities (Kriss 2022). Public health and healthcare planners could not deliver an equitable response at scale even though an alarm had been sounded more than a decade earlier, warning that racial and ethnic minorities in the United States were

at a grave disadvantage in surviving a pandemic (Hutchins et al. 2009). In *The Viral Underclass*, Thrasher shows how this disadvantage operates: how viruses rampage along structural lines, easily finding those whom society has excluded from affordable housing, jobs with protections, and comprehensive health insurance (Thrasher 2022).

Systems are made up of policies, procedures, relationships, networks, habits, and assumptions (powell 2013). System change is a multi-level endeavor that requires redirecting resources – an act of disruption and redesign (Young 2008). Although system change is slow, there were indications at a more local level that efforts to steer the system toward equity were taking place.

A study of the COVID-19 vaccine rollout in Missouri offers a view into how public health planners both failed initially and succeeded later in delivering a more equitable rollout across race, ethnicity, income, and social vulnerability (Mody et al. 2022). Initially, the rollout reached people who were white, insured, and in areas with low social vulnerability at greater rates than people of color, the uninsured, and those living in areas with high social vulnerability; these disparities lessened over time as vaccines became available in pharmacies and through mobile efforts (Mody et al. 2022). Public health planning was able to course-correct and redesign the distribution system to include venues that were more accessible. Yet there remained a sizable fraction of the population – principally those most disconnected from social systems, including healthcare – that remained unreached and unvaccinated.

We report and reflect here on a hyperlocal instance – the vaccine distribution system designed to serve areas in St. Louis, Missouri with the highest rates of COVID-19 hospitalizations and the lowest vaccine uptake. In 2022, community leaders in St. Louis called for greater access to vaccines in underserved areas. Public health leadership at Washington University in St. Louis (WashU) answered that call and provided funding. Fifteen zip codes were prioritized. The neighborhoods in these zip codes have been blighted by long-standing racial and economic segregation and chronic health disparities. Of the 244,000 people residing in these zip codes, 80% were Black/African American and 33% had an income of \$25,000 or less (as high as 50% in several) (U.S. Census Bureau n.d.).

The effort was named Our Community Our Health – St. Louis (OCOH). The team posited that for communities cut off from health systems, traditional narratives of vaccine hesitancy would prove irrelevant. The aim was to design and build a piece of the vaccine distribution system that would serve such communities, using intentional design to go beyond ‘shots in arms’ and learn directly from community members what an acceptable vaccine experience looked like. We assumed we did not know what this experience included and would build it using a design framework and methods. We share our process and key insights to support a more equitable response in the next pandemic.

Team Composition and Partner Selection Process

The OCOH program was housed at WashU’s Center for Community Health Partnership and Research (CCHPR), which provides infrastructure for community-engaged research and has long-standing community relationships. The OCOH team included three WashU School of Medicine faculty; four CCHPR staff (administrator, staff scientist, data coordinator, and community outreach specialist); and two community health workers (CHWs) with ties to the neighborhoods, hired specifically for the project. Several WashU clinicians volunteered as vaccinators. Three team members lived in priority neighborhoods.

OCOH leveraged CCHPR’s relationships to identify potential partners. The team committed to delivering vaccinations only in collaboration with community organizations so vaccines could be given in familiar spaces and in the presence of trusted people. Partner criteria were: 1) located in priority zip codes; 2) providing regular basic outreach services (e.g., food distribution); 3) interested in offering vaccination services; and 4) trusted by residents. The first two criteria were determined through mapping

and internet searches; the third through direct inquiries. Enthusiasm about vaccination was important because we hypothesized partners' warm hand-off of their clients to the OCOH clinic would be key.

Trust required a more nuanced assessment, involving direct observation to verify whether organizations provided what they promised and whether those they served appeared comfortable receiving services. CCHPR staff knew people may seek services from organizations they do not trust if they need the resources, making utilization an unreliable indicator of trust.

The first partnership was with Centennial Christian Church, which hosted an active food and health ministry; the second with the mayor of Pine Lawn, who hosted a monthly food distribution; and the third with Ferguson Municipal Library, which hosted service providers on a monthly schedule. One-time vaccine events with additional partners were held to increase coverage for specific subgroups (e.g., adults aged 65+) and at key times (e.g., new booster recommendations).

Designing the Clinic

The team applied the 'Double Diamond' design framework (Nessler 2018) to ensure the clinic schedule and operations were human-centered. The first 'diamond' guided interrogation of assumptions about the 'problem' (e.g., that lack of uptake was due to hesitancy); the second guided iterative solutioning with end users (e.g., inviting partners to prioritize clinic features and submit questions so their needs were central).

OCOH v1

The initial clinic was designed by OCOH faculty, staff, and CHWs. To operationalize convenience, OCOH operated on existing partner schedules. For example, Centennial's weekly hot lunch program determined clinic days and times. This allowed a warm hand-off from lunch providers to CHWs, who welcomed and engaged people.

Clinic flow was designed to remedy common 'pain points' observed elsewhere, such as fragmented processes and unclear communication about incentives. At OCOH, recipients remained seated the entire visit while paperwork, vaccination, and follow-up were brought to them. All vaccine recipients received a gift card to offset expenses; the amount varied over time based on funds.

During the first year, the team conducted: 1) a qualitative study of the 2021 vaccination experience; and 2) ongoing synthesis of CHW observations. The qualitative study (Trolard et al. 2024) found limited and frustrated access was common and contributed to mistrust. Bi-weekly team meetings surfaced three features linked to success: 1) convenient locations and times; 2) a diverse team prioritizing dignity, empathy, and a positive atmosphere; and 3) trust-building with both partners and residents. As a result, the team emphasized convenient access, and added two features: 1) brief vaccine summaries sent to partners after each event (building partnerships); and 2) screening volunteer vaccinators for kindness and empathy during their first shift.

OCOH v2

In the second year, the team hosted two more design activities to learn directly from participants. First, a listening session asked participants to write questions about vaccines. Two were prioritized: 1) 'What is in the COVID vaccine?' and 2) 'When should I get my flu vaccine?' The team developed an easy-to-read COVID vaccine ingredient list to include with consent forms and used sandwich boards to share timing information (e.g., get a flu shot between Halloween and Thanksgiving).

Second, a brief vaccine experience survey (approved by Institutional Review Board #202304147) was administered in fall 2024. Ninety-five recipients completed the survey (86% of those vaccinated during that period). When asked why they chose to be vaccinated that day, the largest category (34%) was

summarized as ‘You were here.’ When asked to select up to three important attributes of a vaccine experience (from 14 options), the top three were: 1) ‘easy for me to get to’; 2) ‘the team cares about me’; and 3) ‘I don’t have to wait too long’. These findings informed scale-up planning.

Program Summary

From August 2022–October 2024, OCOH delivered 1,354 COVID-19 and influenza vaccines to 874 individuals across 89 events with 20 community organizations. Seventy-three percent of vaccinations were with three primary partners; the rest at one-time events. Vaccine recipients ranged in age from 8–97 (median 61; IQR 48–72); 57% were female; and 88% were Black/African American, 10% white, and <1% Asian, American Indian/Alaskan Native, or Hispanic/Latinx. Seventy-five percent came from a priority zip code. OCOH’s standing schedule supported relationship-building, evidenced by recipients who visited two or more times 33% at one primary site, and 20% across all sites.

Key Insights

Operating a vaccine clinic for two years in different neighborhoods gave us insight into how scaling the OCOH model would lead to a hyper-local vaccine distribution system, meeting people where they lived. Contrasted with infrastructure that requires vaccine recipients to plan for transportation, time away from daily responsibilities, and navigation of unfamiliar spaces, a hyper-local infrastructure minimizes the resources needed to access vaccines. Indeed, the resource intensity is shifted onto the vaccine distribution infrastructure, perhaps making it difficult to scale. Nonetheless, we share some key ingredients that can be taken forward.

To ensure equitable vaccine access, public health leaders and planners need to understand what vaccine availability and accessibility, two key constructs in the definition of vaccine ‘hesitancy’, mean across their jurisdictions (MacDonald 2015). In OCOH communities, ease of getting to the clinic and short wait time were highly valued, indicating physical location and timing were crucial elements of availability and accessibility. It will not be possible to rely solely on tools such as geocoding to design for these features. Communities and individuals who suffer the effects of racist and classist societal infrastructure, and especially those who struggle to meet basic needs and have very limited resources for health, frequently design their own strategies to meet basic needs and receive healthcare. Understanding how people want and need to access services, including vaccines, requires understanding of the contexts in which they think, plan, and live. Defining availability and accessibility is a first step in designing equitable vaccine infrastructure.

Relationships and partnerships with trusted community organizations are the foundation of a scalable hyper-local vaccine distribution infrastructure. There are existing networks to tap into, including YMCAs, churches, and libraries. Relationships with leaders in these existing networks may be one way to build minimal viable trust for vaccination across communities at scale. Partnerships facilitate access to local spaces, which also bring safety and comfort.

As John a Powell notes, breaking down systems of racialization requires nothing less than transformation (Powell 2013). OCOH prioritized administration of not just a dose of vaccine but a positive vaccine experience. Ensuring people had a positive experience meant caring for them holistically. The cues for this orientation came from the community health workers who served as front-line staff for the clinic. It also came from observing how the community partners interacted with their constituents. At the OCOH clinic these behaviors included front-line staff greeting vaccine recipients warmly and addressing individual questions and concerns; vocal modulation to signal engagement and enthusiasm; and giving vaccine recipients the time and space they needed to prepare for vaccination, including

working through fears of needles and making plans for dealing with potential vaccine side effects. There is emerging evidence for the importance of kindness in healthcare. Kindness describes acts of generosity and consideration that promote well-being. When healthcare workers engage with patients in kind ways (with compassion, active listening, and empathy), it leads to better understanding and trust among patients (Greco et al. 2025). A survey of patients in Zambia living with HIV who had been lost to follow up showed they would be willing to expend considerable effort (time, money) to access a provider with a ‘nice’ attitude (Zanolini et al. 2018). Our own survey found vaccine recipients valued ‘a team that cares about me’ more than reliability, waiting, and receiving a gift card. The training that clinicians receive for vaccine administration should include a module on the importance of kindness and key behaviors needed to deliver it. It is simply not enough to be competent and efficient when it comes to administering vaccines in communities who have suffered generations of racialization.

Aiming to provide a positive vaccine experience helped us reframe the notion of acceptability in healthcare. Acceptability is different from satisfaction and includes intervention coherence, opportunity costs, and self-efficacy among others as component constructs (Sekhon et al. 2017). Giving vaccine recipients opportunities to share what an acceptable healthcare interaction looks like to them is categorically different from asking if a certain existing service is acceptable. Through their encounters and engagement with the OCOH program vaccine recipients shared what they valued in a vaccine experience. These attributes included ease of access, a caring, reliable, and competent team, not having to wait long, and not feeling pressured. Further, the OCOH team felt a key ingredient for vaccination was the trust passed from the community partner to the OCOH team and clinic when the partners referred their clients to OCOH for vaccination.

Finally, while scaling a hyper-local vaccine infrastructure may not be feasible, employing design frameworks and methods to vaccine planning is scalable. To design is to create a plan and make decisions about an object being built or created. If public health planners across the country solicited and centered the experiences and preferences of people who struggle to access vaccination it would generate a list of critical pain points in the existing system that could be targeted for redesign. While this may not quickly correct for all the system’s failures and harms, incremental progress may be the most realistic approach.

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Conflicts of interest

None

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