“We’re here to take care of our community”:

Lessons Learned from the U.S. Federal Health Center Covid-19 Vaccine Program

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Background

Federally Qualified Health Centers (FQHCs) are non-profit health systems in the United States that receive federal funding to provide primary care to medically underserved communities. FQHCs are located in every U.S. state, U.S. territory, and the District of Columbia (HRSA 2022). Born out of the civil rights and social justice movements, FQHCs currently serve 30 million patients annually, 90% of whom live below 200% of the federal poverty line and 63% of whom are racial/ethnic minorities (HRSA 2021a). As such, they serve racially and economically marginalized populations which, for socio- structural reasons, have been disproportionately impacted by Covid-19 illness and death (Liao and DeMaio 2021; Tan et al. 2021; Hill and Artiga 2022). Access to the protective effects of Covid-19 vaccination is critical for mitigating racial and income disparities in Covid morbidity and mortality. Because FQHCs serve many patients who are low-income and/or from ethnically or racially minoritized groups, they are a key resource to ensure that vaccines reach people most at risk of Covid infection, severe disease, and death.

In February 2021, FQHCs emerged as a crucial partner in the effort to vaccinate the U.S. public against Covid-19 when the White House initiated the Health Center Covid-19 Vaccine Program (White House, 2021). This was early in the national vaccine roll-out, following emergency authorization of Covid vaccines by the Food and Drug Administration in December 2020 and initial roll-out to health care workers and nursing home residents and staff. The Covid-19 vaccine development timeline was noteworthy for its unprecedented speed and politicization, posing challenges for vaccine acceptance – for example, one December 2020 survey found that 27% of the general public was unlikely to seek vaccination, and that among that segment of the population, the

most common reasons they gave for their choice included concerns about the newness and politicization of the vaccine (Hamel et al. 2020; Pew, 2020). The federal Health Center Vaccine Program allocated vaccine supply directly to FQHCs in an effort to improve vaccine equity (HRSA, 2021a). The program's intention was to leverage existing trust between patients and providers within the culture of these community-based health centers (HRSA, 2021b).

Existing data shows that FQHCs have excelled in vaccinating people of color in the U.S. (Corallo et al., 2021). From January – early July 2021, over 60% of vaccinations at FQHCs went to people of color, versus less than 40% nationally (Cole et al., 2022). Because Covid-19 vaccination appointments at FQHCs were open to the general public, FQHC success in vaccinating people of color cannot be attributed simply to the diverse makeup of their patient base. This study aimed to understand how FQHC providers facilitated access and addressed patient concerns during the initial roll-out of Covid-19 vaccines. We conducted interviews with FQHC providers in two states to provide a descriptive account of on-the-ground operations under the Health Center Vaccine Program, with attention to the actions taken by FQHCs to promote equitable allocation. We describe specific strategies that FQHC staff implemented to mitigate barriers to vaccine access, respond to patient concerns about novel vaccines, and maintain and grow community trust in a climate of uncertainty and fear. We argue that FQHC efforts and outcomes offer valuable lessons for health promotion practice in primary care settings and in outreach and care for medically underserved populations.

Methods

In March and April 2021 three authors (JTC, RF, and CPN) conducted semi-structured Zoom interviews with 20 primary care providers (PCPs) and support staff at two FQHCs in two states in different regions of the U.S. (Table 1). Both FQHCs participated in the initial phase of the federal vaccine program and had existing relationships with the research team from prior studies. Interviewees were selected purposively by FQHC leadership, who identified and invited individuals with direct involvement in the vaccine roll-out and ensured that the sample reflected a variety of patient-facing roles, including physicians, nurses, and outreach workers. The interview guide was developed by the research team based on existing research and media coverage at the time,

and was revised in consultation with key FQHC staff. Questions covered Covid vaccination access, equity considerations, communication about vaccination, patient concerns about vaccination, and trust. Interviews lasted 30-40 minutes and were transcribed for analysis. This study was granted exemption by the Albany Medical Center IRB.

Transcripts were analyzed using an inductive, iterative approach (Corbin & Strauss, 2007). The research team developed analytic codes describing themes emerging from the data and piloted codes on a subset of transcripts to develop rules for consistent application (Miles & Huberman, 1994). Transcripts were coded by two teams of two researchers, all of whom were trained in qualitative analysis, using NVivo's collaboration cloud (JTC and RF; DP and CPN). Coding discrepancies were reconciled by consensus to ensure reliability.

Conceptual framework

The socio-ecological model understands health as affected by multiple intersecting levels of influence (U.S. Dept. of Health and Human Services, 2005; CDC, 2015). Because vaccination is an individual health decision nested within a host of interpersonal, community, institutional, and policy factors, we used a socio-ecological framework to understand the interrelationship between the FQHC interventions identified in our thematic analysis. We applied this conceptual framework deductively to our data to describe how FQHCs intervened at individual, interpersonal, community, institutional, and policy levels to advance vaccine equity (Fig. 1).

Results

Addressing Barriers to Vaccine Access

Providers described the majority of their patients as eager to be vaccinated: "Most are eager. [They are] reaching out to me saying, 'When can I get it?'" (Participant 9, NY). At the time these interviews were conducted during the early roll-out, most interviewees described vaccine access as a larger barrier to vaccination in their communities than hesitancy. Their experiences contrasted with media reports at the time emphasizing hesitancy among people of color and White rural residents (Farmer, 2021; Yuko & Yuko, 2021), both demographics heavily served by FQHCs.

Several providers noted that early FQHC vaccination clinics were attended by individuals who were not regular health center patients. Typically, these were individuals with greater resources to access vaccines than most patients typically served by the FQHC: “Inevitably, the people who sign[ed] up [were] folks who are well educated, they're able to access [and] navigate the internet really quickly and within moments, those slots [were] gone” (Participant 7, TN). In some cases, providers also noted that many of these well-resourced individuals were White. For example, one provider described walking into the clinic on vaccine days and seeing “the waiting room full of upper middle class White people that are not my patients” (Participant 4, NY).

Alternate booking systems and community outreach

Our study took place during a period of limited vaccine supply and tiered eligibility in the U.S., when people desiring vaccination often found securing a vaccine appointment extremely difficult (Healy, 2021; Shammas and Rozsa, 2021). Interviewees described internet-based appointment booking systems as a major barrier to vaccine access for many patients who lacked internet services and/or phone minutes. Quickly, FQHCs realized “if we want to get vaccines to the people who should most be getting vaccines – and I'm not using ‘should’ just here morally, or ethically, but medically also – we have to do something actively different” (Participant 15, NY).

Interviewees described a number of steps taken by FQHCs in the early weeks of vaccine eligibility to mitigate barriers to appointment access and promote equitable distribution of vaccines. Centers developed alternatives to internet booking, including allowing patients to book vaccine appointments by phone and in-person, as well as directly contacting eligible patients: “What we did not want is the lack of digital literacy or digital health access to be a factor” (Participant 2, TN). FQHCs established internally-managed waitlists for their existing patients separate from state-administered internet-based systems, and called patients directly when appointments became available. (FQHCs in both states described having “thousands” of patients on these waitlists in March of 2021.) In addition, FQHCs reserved blocks of vaccine appointments for especially vulnerable populations, such as undocumented individuals or unhoused people: “We will block in the schedule a certain number of vaccine slots and say, ‘We're saving these for the most high-risk people who have difficulty accessing’ (Participant 7, TN).”

In addition, interviewees described leveraging existing FQHC outreach programs to farmworkers and other essential workers to promote vaccine awareness and appointment access: “We actually go out [to farms] and speak to them about the vaccines and Covid. And not just farmworkers, but we also have daycares and other community centers that we go to . . . and then have them reach out to us and let us know what their thoughts are” (Participant 18, NY). More than one provider described reaching out to well-connected community members who then brought numerous neighbors or fellow parishioners to the center to be vaccinated: “We called one of our community stakeholders and she's a lady that's very connected to her church, and she brought her whole congregation, and everybody got vaccinated” (Participant 5, TN).

Addressing transportation and time barriers

Interviewees described transportation and time as significant barriers to vaccination. One provider in a center serving rural Tennessee noted, “Transportation is a huge thing in rural areas. Huge! Sometimes you're three hours away from the health department or a vaccine site. So far away. The gas money? Then that that's a whole day for someone. We have patients who drive three hours for an appointment” (Participant 2, TN). Lack of time off work was also a barrier to vaccination, especially when compounded by transportation difficulties: “If you can't take that day off, and you don't have the car, then you don't get vaccinated” (Participant 15, NY).
FQHCs used mobile vans and pop-up clinics to reach people without adequate transportation “We're planning some events now, with other individuals and agencies that serve people who don't have homes, to do vaccinations with our mobile clinic. Literally just going to the places where they're more likely to sleep, and vaccinating” (Participant 3, TN). Free and low-cost transportation services were also used to mitigate transportation barriers. To make vaccination more convenient, FQHCs held vaccine clinics on weekends when people were less likely to have to work, and one FQHC described scheduling vaccine appointments at the same time as an annual Medicare wellness visit (Participant 19, NY).

Responding to Patient Concerns about Vaccination

Providers described a small portion of their patients as hesitant to become vaccinated, and the reasons for reluctance were consistent with descriptions elsewhere (Lopes et al., 2021a, 2021b). Patient concerns included the novelty of the vaccines, uncertainty caused by misinformation, and ideological objections: “They're just afraid

that it's been developed so fast, that they're not sure the repercussions of it" (Participant 11, TN). Less commonly, interviewees reported religious concerns regarding fetal tissue use, misinformation about a microchip in vaccines, or the belief that Covid is a hoax. Interviewees stated most patients who were hesitant were not "hard no's" but were waiting and seeing: "A lot of them, I think, are waiting to see what happens . . . Not totally shut down on it" (Participant 17, TN).

Foregrounding medical racism

Several providers expressed frustration with discourses that emphasized vaccine hesitancy among people of color, especially Black and Brown communities: "The term vaccine hesitancy is I think an unhelpful term, especially given the historical context and trauma and reasons for lack of trust" (Participant 7, TN). These providers perceived that patients of colors' distrust was understandable skepticism and was improperly described as merely being misinformed vaccine hesitancy:

> They are rightfully fearful, particularly Black and Brown people – anything involving a needle can't be trusted. Like Depo Provera was tested on Latina women, right? Mississippi appendectomies – you go into your doctor thinking you're going to get your appendix removed, and now you got your uterus gone
>
> That's not hesitancy, that's protective. And nationally, the narrative is "they're hesitant, they're hesitant." No! (Participant 3, TN).

Reluctance to vaccinate is often seen as a failure to protect one's health grounded in lack of accurate knowledge, but some providers offered an alternative interpretation, in which it is a "protective" stance informed by medical racism. Viewed in this way, vaccine hesitancy and/or refusal is better understood as an effort to "talk back to science" about unaddressed needs and concerns, rather than as a hard "anti- science" stance or a problem of public ignorance (Benjamin, 2016; Goldenberg, 2016).

Responding to fears

Providers described a small portion of patients who were acutely ideologically opposed to vaccination: "Not only are they refusers, they are like active detractors. And I just feel like there's nothing that's going to change their minds" (Participant 2, TN). Patients whose attitudes were in between resolute refusers and those eager to vaccinate were described as the "moveable middle." When confronted with vaccine reluctance, providers

tailored responses to address patient questions and worries: “I always ask them what their concern is when they say “no” and then go from there” (Participant 12, NY). Providers described the importance of responding to vaccine refusal with respect: “Trying to figure out, you know, how to address her [the patient’s] concerns without making her feel like, okay, that's just ridiculous” (Participant 5, TN).

Interviewees described addressing hesitancy as a process, involving continued conversations: “Our approach is, ‘You may not be ready today, but I’m going to keep asking you.’” (Participant 20, NY). Frequently, staff shared their own experience with getting vaccinated as a way to allay patient concerns about side effects or safety: “I'm not telling them they have to, but I'm sharing my experience and my story. The fact that they trust me, they're more willing to either think about it or actually sign up” (Participant 3, TN).

For some providers, sharing their own initial anxiety about getting vaccinated helped strengthen the patient-provider relationship: “I was nervous, so I share that with my patients. I'm not different from them, I'm human. I didn't know what was going to happen . . . I have severe allergies to shellfish, which I've gotten very sick from. So I do share that stuff with them, you know, and I was afraid because of that. A lot of that I think has helped in in helping them make the decision to get the vaccine” (Participant 18, NY).

Trust and Trustworthiness

Providers described community trust as a cornerstone of the FQHC mission that had been built intentionally over time, and as an asset in the effort to vaccinate underserved communities. Respect and access were seen as critical to trust-building: “Poor people of color have a daily lifelong experience of not being respected by people in institutions and not having legitimate access to institutions. And so I think it takes some time to demonstrate that, in fact, one respects, one is respected. And once that happens, then there begins to be a foundation of trust. But it takes time” (Participant 15, NY).

Protecting immigrant communities

The payoff of trust-building was especially evident in FQHCs’ efforts to vaccinate immigrants, including those who are undocumented. Centers in both states relied on Spanish-speaking providers and outreach workers to reach Spanish-speaking patients, who were the dominant immigrant group served. One provider noted, “All my

Latino [patients], undocumented or otherwise, are on board with vaccines, period. I can't remember any…that have refused any kind of vaccine" (Participant 17, TN). FQHCs worked hard to build and maintain this trust in the context of nearby Immigration and Customs Enforcement raids plus the chilling effect of the public charge rule on health care utilization by immigrants during the Trump administration: "For the law enforcement stuff, our clinic is very well known as being a safe place" (Participant 17, TN). In contrast to what has been described in some other settings (Cáceres et al., 2022), staff stated that fear of law enforcement and/or immigration enforcement did not pose a significant barrier to vaccination at their sites: "Our patient population is very, very aware that as an FQHC we're very, very strong in protecting their rights. And we've never historically done anything to kind of make them disbelieve that" (Participant 10, NY).

The primary care relationship

Trust between FQHC patients and providers foregrounded the critical role of primary care in vaccine education and access. One long-time provider reflected on the significance of provider trustworthiness in the context of a novel disease and vaccine:

> "[T]his is the first time where I feel like maybe because it's so new and so different and it hasn't been around for any long period of time, they're really looking to someone they can trust to make that decision. So, I really feel like it's a big role for a provider" (Participant 4, NY).

Interviewees described the primary care relationship as providing a trustworthy context to discuss patient concerns and questions about vaccination: "Just having a good relationship with your patient is what really strengthens your word. If I say something, it would mean a lot more to a patient who trusts me than to someone who maybe doesn't know me at all" (Participant 12, NY). Providers described trust as something built over time with medically underserved communities: "With our patients, you really have to build a rapport with them, it takes a while. Just because they've been through so much for them to trust you" (Participant 11, TN). Some interviewees advocated for greater vaccine access within primary care settings as a way to leverage established trust: "If you came in to me because I'm your doc, and you've been seeing me for the last 20 years, who are [you] going to trust in terms of giving the vaccines? . . . So the PCP is where the vaccine should be" (Participant 10, NY).

Stewarding trustworthiness

FQHCs worked hard to establish and maintain their status as trustworthy providers (Warren et al. 2020; Scott et al. 2021). This often involved responding to needs typically considered beyond the practice of medical care, such as linking patients with access to food or helping them obtain photo identification cards: “It's not just medical care, it's everything and anything that they may need, they can reach out to us. So I think that's allowed them to have a lot of trust, and we kind of work like a family” (Participant 10, NY). This approach entailed considerable time commitment but effectively created strong relationships: “we talk to our patients on the phone for 20 minutes, not always about health- related issues. So we have good patient relationships, very good patient relationships” (Participant 14, TN).

During the early Covid months, FQHCs continued to safeguard and build trust by maintaining their responsiveness despite pandemic restrictions: “People were asking me [where] I can go to get tests, what can I do, who can help me about food… Sometimes I was personally going to the house dropping food” (Participant 13, NY). This ongoing responsiveness bolstered the perception of FQHCs as trustworthy and as places to depend on for Covid related care: “We’re treating them as a person and addressing all of their health needs. We want to not only vaccinate, but we want to do the things to make them lower risk for this infection and other infections. Their hypertension control, their diabetes control. And [showing] that, even in the midst of all of this, we are there and taking care of you in every way possible” (Participant 1, TN).

FQHC leadership carefully considered how to participate in the vaccination effort in ways that maintained trustworthiness – for example, by insisting on delivering vaccines at the health center “with our own people” rather than at a government-affiliated health department location that might be perceived as untrustworthy by patients (Participant 2, TN). Both FQHC networks included in this study had the opportunity to be considered as Covid vaccine clinical trial sites, but declined out of concern that it would engender patient distrust about scientific experimentation: “A research organization was doing trials, and they really wanted to come in and recruit. And we just said, ‘we'll put fliers up, but no, you're not coming in.’ We're not going to feel like any – [we

don’t want] anybody coerced” (Participant 1, TN).

Discussion and Implications for Practice

The success of the Federal Health Center Covid-19 Vaccine Program can be understood through the lens of the socio-ecological model of health. Vaccination is a health decision undertaken by individuals, but it is nested within a host of interpersonal, community, institutional, and policy factors. FQHCs intervened at each level to promote vaccine access and acceptance among medically underserved patients. These multi-level interventions serve as models for how to advance vaccine equity in practice.

At the level of interpersonal practice, FQHC providers listened and responded to patients’ vaccine questions and concerns with respect and empathy, including concerns about medical racism. They shared their own experiences with vaccination and engaged patients over time in the context of trusting physician-patient relationships, demonstrating the importance of primary care as a key site for ongoing vaccination education and promotion (Klein and Hostetter 2021). At the level of community practice, FQHCs mobilized existing outreach workers and partnerships with community leaders to provide education and promote vaccination at workplaces and churches. At the level of institutional practice, FQHCs rapidly responded to barriers preventing underserved patients from accessing vaccines by developing alternatives to internet booking systems, and implementing mobile and weekend vaccine clinics. Centers also worked hard to build and maintain community trust by protecting immigrant safety, responding to non-medical needs, and continuing to provide medical care despite Covid restrictions.

These findings add to existing studies showing that collaboration with community leaders and outreach workers, communication and booking by phone and in person, utilizing pop-up and mobile clinics, establishing health system trustworthiness, and directly addressing medical racism and immigration concerns promote equity in vaccine uptake by patients who are Black, Latinx, or undocumented (Demeke et al. 2022a; Demeke et al. 2022b; Dada et al. 2022).

At a policy level, FQHC successes demonstrate the value of the federal Health Center Vaccine Program, and support continued investment in this program. We also recommend expansion of FQHC practices to

additional settings such as academic medical centers, where community partnership has been shown to increase vaccine access and trust, and private primary care offices, where provider trust plays a critical role in 'last-mile' vaccination efforts (Klein and Hostetter 2021; Scott et al. 2021; Assoumou et al. 2022). While the Biden Administration continues to fund the Health Center Vaccine Program, unfortunately, rollbacks in state and federal pandemic funding mean that other successful "hyperlocal" state and county health department outreach programs targeting underserved communities are now in danger of being cut, even as more effective vaccines are becoming available (Mueller 2022).

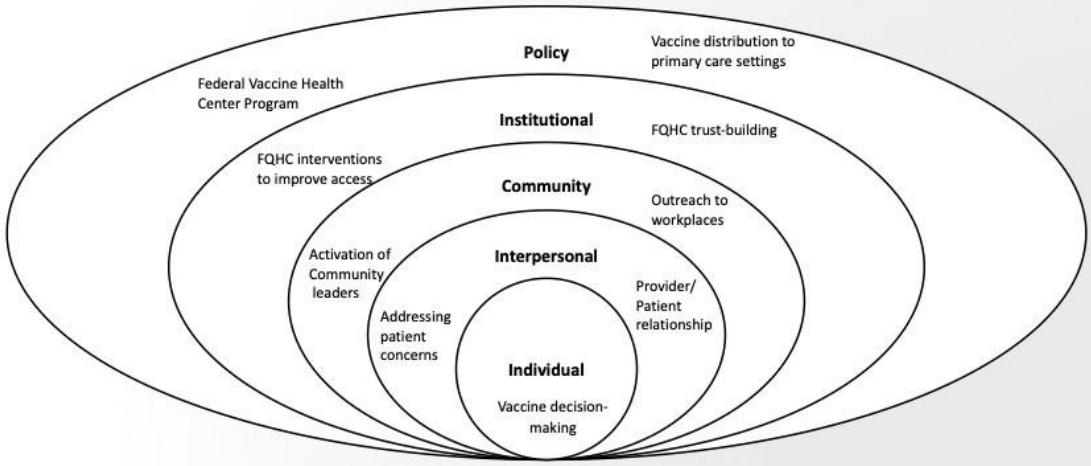
Our study is limited by a small sample size drawn from two states. Our findings offer a snapshot of the Covid vaccine roll-out at a moment in time when vaccine demand greatly exceeded supply in the U.S., which is no longer the case. Vaccine mandates mean that those who remain unvaccinated currently are more likely to be ideologically opposed to Covid vaccination, and may not be reached by the strategies described here. Nonetheless, given the persistence of Covid variants, the rollout of Omicron- tailored boosters and pediatric vaccines, and access barriers for existing and emerging therapies (Recht 2022; Wiltz et al., 2022), we feel that this snapshot offers important ongoing lessons for equitable health promotion and practice.

While U.S. media reports during the early vaccine roll-out often focused on the spectacle of large, state-run mass vaccination sites, FQHCs proved themselves to be the quiet workhorses of the vaccination effort, successfully vaccinating people of color at higher rates than other vaccine sites: "Most of what we do is under-recognized, to be entirely honest. But that's why we're here. Like, we don't need the glory. We're here to take care of our community and to partner with our community. So we keep doing it" (Participant 3, TN). In mitigating barriers, partnering with communities, and stewarding trustworthiness, FQHCs success could serve as a national blueprint for how to support just vaccine allocation and improve health equity in the US.

Table 1. Study participants

	New York ***n=10***	**Tennessee** ***n=10***	**Total** ***n=20***
Role			
Primary care provider	8	6	14
Other Health Center Staff	2	4	6
Gender			
Female	8	10	18
Male	2	0	2
Race/Ethnicity			
Asian or South Asian	3	1	4
Black	1	1	2
Latinx	2	3	5
White	4	5	9

Figure 1. Socioecological model



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