Case report: Vaccine Brigade Chicago, Illinois: From founding February to July, 2021

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Abstract
The COVID 19 epidemic disrupted every aspect of American life and imposed severe trauma as a result of lockdown, fears of disease or death, separation from and death of loved ones, and daily media coverage of the unfolding pandemic. The following case report describes the experiences of the Vaccine Brigade, a group of Public Health Nurses (PHNs) and other professionals, mostly retired, who organized themselves to provide assistance with vaccine administration in the city of Chicago and Cook County, Illinois. The report describes the founding of their organization in February, 2021 and their work to support vaccine administration in communities of color and other underserved communities. This case report presents a successful model of volunteerism, built on foundational principals of collective decision making, democracy and social justice. Its members developed existing social networks and skills they had learned during their careers as PHNs and activists to create a functional organization that could assist with the task of getting shots into arms.

Keywords
Case report, vaccination, volunteers, partnerships

1 | INTRODUCTION

The COVID 19 epidemic disrupted every aspect of American life and imposed severe trauma as a result of lockdown, fears of disease or death, separation from and death of loved ones, and daily coverage of the pandemic in the media. One systematic review of the literature found that during the COVID epidemic, the general population experienced unprecedented assaults on mental health. These effects included high rates of anxiety, depression, post-traumatic stress disorder, and general psychological stress (Serafini et al., 2020; Xiong et al., 2020).

Early in the COVID 19 pandemic in the United States, many retired health care professionals tried to volunteer to work in NYC hospitals, the first urban epicenter of the US pandemic. Unfortunately, they confronted roadblocks and obstacles to participation in an already overwhelmed health care system (Hong, 2020). Providing structures for volunteers to do their work during the pandemic became a national issue. In order to integrate volunteers, hospitals at a minimum would have needed a coordinating mechanism to incorporate their use—sadly, an efficient structure to integrate volunteers did not exist first in New York or later, anywhere across the United States. This case report describes an example of how volunteers became integrated into vaccine efforts in the city of Chicago.

These attempts to volunteer come as no surprise. Volunteerism as a practice is deeply embedded into the history of American society. When Alexis de Tocqueville observed American society in 1830, he saw a public spirit demonstrated in their creation of a variety of voluntary associations to improve the common good (Tocqueville, 1838). Faith-based organizations, unions, social groups, membership associations and political organizations allow Americans to build community, pursue shared goals, and influence social and political affairs (Skocpol et al., 2000). In addition, volunteers enjoy better mental health and decreased stress, as well as an expanded social network (Wilson, 2012).

The following case report describes the experiences of a group of Public Health Nurses (PHNs) and other professionals, mostly retired, who have organized themselves to provide assistance with vaccine administration in the city of Chicago.
administration in the city of Chicago and Cook County, Illinois. The report describes the founding of their organization in February, 2021 and their continued work.

In late January, 2021, a small group of PHNs and activists responded to a call from a veteran public health nurse to come together to form a group that they named the Vaccine Brigade. These nurses created the Brigade because of its members' desire to be of service during the COVID pandemic. For a year, many of the PHNs had attempted to volunteer, signing up for the state medical reserve corps and the local health department's website, but had been frustrated by the lack of response. Despite the election of President Biden, the creation of the federal COVID Taskforce, and with it, a real plan to distribute vaccines, obstacles to volunteer participation continued with the initiation of the new vaccine campaign.

1.1 Background: Chronic underfunding of public health

Because of the stress of historic underfunding on state and local governmental public health agencies, units of government across the US had little or no ability to use volunteers in public health crises. This stress was exacerbated by the pandemic.

Himmelstein and Woolhandler (2016) concluded that US per capita public health spending (inflation adjusted) rose from $39 in 1960 to $281 in 2008, but had fallen 9.3% to $255 in 2014. In a 2021 report, Trust for America's Health attributes America's botched response to the pandemic to chronic underfunding of the US public health system, leaving it ill equipped to respond to crisis and deal with widening health disparities (McKillop & Lieberman, 2021). Funding for the state and local public health workforce, a critical component of the public health system's infrastructure, suffered from reductions—from 2008 to 2019 the estimated number of full-time local public health agency staff decreased by 16%, while state health agencies lost almost 10% of their collective workforce between 2012 and 2019. These personnel cuts translated into fewer trained professionals available to do critical work as the COVID-19 pandemic was spreading across the country.

Under-resourced, understaffed, and overburdened health agencies responded to a major pandemic with inadequate systems, and the country's longstanding failure to invest in disease prevention, address the root causes of poor health, and promote health equity made the nation less resilient (McKillop & Lieberman, 2021, p. 4).

Public health departments, historically underfunded and lacking necessary infrastructure and staff, were hardly in a position to absorb volunteers.

1.2 Formation and internal organization of the vaccine brigade

As vaccine supply increased and became more widely available, public officials and some providers began to realize volunteer nurses could be useful in assisting with vaccination efforts. That became the Brigade's main mission; to help get shots into arms in Chicago's hardest hit areas, especially communities of color. Members had worked together in the state nurses' association, the women's movement, and other political and social justice campaigns. Each member knew at least one other member or sometimes several members of the original group. Brigade members collectively possessed decades of activism and leadership in labor, political and community organizing experience so they reached out to networks and colleagues to build membership. Members attempted explicit outreach to colleagues of color as the initial group was majority white. An interview of one of the founding members by the local public radio station in March significantly boosted membership (Vevea, 2021).

1.3 Building organization: Leadership and communication strategies

On February 21, founding members created a steering committee with weekly zoom meetings. General membership meetings were held every 2 weeks, and members divided into committees: administration, vaccinators, outreach, and internal education. The steering committee discussed structure and function and how best to move forward. Decisions were arrived at through consensus building with an emphasis on a collective, democratic process. A group email account enhanced communication and then a website (www.vaccinebrigade.com) went live on March 21, 2020 to communicate the Brigade's mission to the public. One volunteer posted relevant information about how to join the Brigade and monitored the Gmail account so that anyone who sent an email expressing interest was sent a survey to assess their skills, interests and availability. Contact information was added to the ever-growing excel database. These forms of social media were deliberately chosen to be the most efficient and functional in reaching additional potential volunteers. Member expertise in administrative work was critical to tracking events and members; this group's capacity functioned as a key component to guarantee that the Brigade ran smoothly.

1.4 Role of intersectoral coalition building and outreach

Overall vaccine organization and coordination was facilitated by a regional coalition organized by Partners In Health (PIH), a Boston based global not for profit whose main focus is to “collaborate with national governments to provide care and strengthen public health systems in areas including cancer and chronic disease, child health, emergency response, HIV/AIDS, maternal health, mental health, and tuberculosis” (https://www.pih.org). During the COVID-19 pandemic, PIH established a US initiative, with one hub in Chicago. PIH convened weekly zoom meetings, called the Chicagoland Vaccine Partnership. The mission of the Partnership is "to advance equitable access to health solutions for all Chicaagans through its incubation, grantmaking and advocacy programs" (CVP, https://chicagolandvp.org). CVP became an important partner for the Vaccine Brigade.
These meetings were open to all, and grew to 160 participants, including city and county health departments, community-based organizations, funders, providers and advocates. Because of their international reputation, PIH was viewed as a trusted messenger, was in a position to bring together people together regionally, and to broker relationships across sectors. Each zoom meeting began with data updates on the current epidemiology of the pandemic as well as the status of vaccine administration from the city and county local health departments. These presentations were followed by a featured local organization’s work showcasing exemplars of best practices so they could be duplicated. Challenges could be quickly identified and dealt with. Robust chat sessions allowed for the creation of real time connections among individuals and organizations. The common goal of equitable vaccine access by getting shots into arms to those at highest risk served as a unifying call to action.

As the Brigade participated as an active member of the Partnership, it learned about more CBOs requesting help. One coincidence was that a local funder ‘saw’ some of our members at the Partnership meetings, and the Brigade was offered an opportunity to apply for a small grant to continue its work and pay for expenses like the website, materials, badges and mailings. As the Brigade’s reputation spread, members were asked to provide support and assistance to more organizations. Through the Partnership, Spanish speaking Brigaders worked with Illinois Unidos, a consortium of over 150 public officials, health professionals and CBOs, with a focus on supporting COVID relief efforts in the Latinx community in Chicago and Cook County. One member, an expert in motivational interviewing, provided training in Spanish to the Latinx community in Chicago and Cook County. One member, an expert in motivational interviewing, provided training in Spanish to CBOs about motivational interviewing, as well as answering questions at community meetings.

A more recent outgrowth of the CVP is participation in the Educators Roundtable, another city/county broad coalition of governmental public health, the Chicago Public Schools and a variety of youth serving organizations tasked with reaching out to youth and organizations which serve the 12 and up population. The Brigade’s representative to that formation is a retired CPS principal and chair of the outreach committee.

1.5 | Brigade in action

In the beginning of the life of the Brigade, volunteering to give vaccines was still difficult; there were many bottlenecks and barriers. But it became clear that regular institutional staff were stressed and needed support. Large institutions and some Federally Qualified Health Centers wanted volunteers, but they also required them to engage in complicated in person onboarding processes, treating volunteers as if they were regular employees. These human resources requirements included physical exams, proof of vaccination or blood draws, and educational training including documentation of sexual harassment, HIPPA, computer security, etc. Some members participated in these orientations, and they volunteered giving shots in a limited way at hospital sites as well as conducting online scheduling.

After a number of false starts with these the larger institutions, the breakthrough to the ability to put shots in arms occurred in March when one primary care organization (Oak Street Health) was identified which only required that RNs show a license to volunteer at vaccine sites. Next the Brigade met with a second primary care practice, the clinical partner for the Suburban Area Agency on Aging. The Brigade had established a relationship with the Agency on Aging and that agency was anxious to include volunteers. Brigade members were finally able to begin to work to administer vaccines at mass vaccination sites.

Individual members learned about new opportunities for vaccination distribution from colleagues, organizations they were in touch with, the CVP, or emails to the website. These requests were sent to one person at the Brigade who consolidated the information and then announced them in a weekly email to the membership. This same information was also posted on the website. Committee chairs helped to answer inquiries and direct members to various sites. Outreach to community organizations became a key focus. As the pandemic evolved, new website posts included links to relevant research, news about the pandemic and educational opportunities. The Brigade also conducted internal education on all aspects of the vaccine itself. One focus of this education was vaccine hesitancy.

1.6 | COVID and vaccine hesitancy

Vaccine hesitancy refers to “...delay in acceptance or refusal of vaccination despite availability of vaccine services. It is complex and context specific, varying across time, place and vaccines. It is influenced by factors such as complacency, convenience and confidence” (Macdonald, 2015, p. 4163). Hesitancy is not a new phenomenon. During the winter of 2021, racial and ethnic disparities in COVID-19 vaccine uptake emerged; in the US, hesitancy was higher among Blacks and Hispanic populations than Whites (Nguyen et al., 2021). In a review of 13 studies Khubchandani & Macias (2021) found the following major predictors of hesitancy: sociodemographic characteristics (e.g., age, gender, income, education, and household size); medical mistrust and history of racial discrimination; exposure to myths and misinformation, perceived risk of getting infected with COVID-19; beliefs about vaccines and past vaccine compliance, and concerns about the safety, efficacy, and side effects from the COVID-19 vaccines. Motivational interviewing (MI) has been identified and successfully used as a non-judgmental framework to overcome vaccine hesitancy in the past, and could help with increasing Covid vaccine uptake (Breckenridge et al., 2021). One of the Brigade members was an expert in MI; the group embraced the framework, and conducted multiple internal trainings with members.

1.7 | Protect Chicago plus

Oak St. Health served as a major clinical partner with the Chicago Department of Public Health (CDPH) in its Protect Chicago Plus, an initiative that “dedicates vaccine and additional resources” to
communities most impacted by COVID-19, especially Black and Latinx residents, and then partners with local community stakeholders to develop tailored vaccination and engagement strategies to help community residents get vaccinated (CDPH.org). Figure 1 (map of the city of Chicago) shows the Protect Chicago Plus communities in blue. These communities, on the city’s south and west sides, are where the highest concentrations of people of color reside. These areas were experiencing, and continue to experience, the most cases of COVID-19. This work was part of a larger plan by the CDPH’s plan to push vaccines into 15 priority communities with the highest case rates by partnering with community stakeholders to open local vaccine clinics using institutions like schools, community centers, faith-based organizations and municipal buildings that were convenient for residents. Though the Health Department supervised and coordinated the initiative, several city hospitals, primary care practices, and later, Federally Qualified Health Centers, implemented mass vaccination events from February to May, 2021. These health care organizations partnered with a broad swath of community organizations and elected officials to turn out their residents to get shots at local sites. As vaccines became more widely available, alderpersons (local elected officials) stood up their own events. The Brigade participated in aldermanic events in Wards 2, 27, 25, 43, 22, 33, 40, 48, and 49.

1.8 | Publicizing and managing events

Meanwhile, the Brigade leadership soon realized that actually administering vaccines was only one way to volunteer. Substantial work was required to publicize events and conduct outreach so community residents knew when and where to show up. This outreach—getting people to events—developed into a significant role for the group. Initially, the outreach committee had contacted ward offices and community-based organizations to introduce itself and make them aware of the Brigade’s services. Responses were often positive, especially after groups realized the labor intensity of the large vaccination events. Brigade members participated in pre-event activities, including making phone calls to determine the vaccination status of individuals, setting up vaccine appointments, and providing reminders. The Brigade conducted street leafletting in busy areas like at grocery stores and train stations prior to and on the day of an event to increase turn out. As part of the Brigade’s outreach strategy, it also participated in several coalitions like Illinois Latinos Unidos and the Chicago Hispanic Health Coalition.

Vaccine Brigade members wore name tags and lanyards with the Brigade’s name as a means of identification. Contacts were often made during events which led to information about other events in the community where volunteers would be needed. Community organizations came to know the Brigade as a reliable partner, so it began to get additional requests to help with outreach and logistics.

Another significant area of work was management of site logistics. Onsite logistical management was a challenge for community organizations which were not necessarily familiar with what was needed to put on a vaccine event. Sites had the potential to become overwhelmed with people wanting to be immunized. Attending just one or two events provided Brigade members logistical knowledge, enabling them to offer appropriate support and leadership throughout the spring in the city and greater Cook County. Providing this support to community organizations became a regular and systemized aspect of the Brigade’s work. Basic activities of the Brigade process to support vaccine administration included:

- Recruit community members partnering with CBOs, telephone and street outreach
- Registration
- Assist with filling out consents
- Traffic control (inside and outside lines)
- Load syringes, administer vaccines
- Supervise 15–30-min post injection waiting period
- Complete and hand out CDC proof of vaccine cards
- Provide health education and information about health care access and community benefit

At each step of the process, Brigade members provided health education and support to community members. For example, during the post shot waiting period, participants had many questions about the vaccine including immunization side effects, use of antipyretics, when and where second doses were available, how to save vaccine cards, etc. Members were able to discuss issues like enrollment in primary care at FQHCs for uninsured clients, as well as provide information about other community benefits available during the pandemic like rental assistance, food assistance and other basic social services. Brigade members fluent in languages other than English were able to provide
In summary, over the course of 4 months, Brigade services provided in the Chicago and Cook County Metro area included vaccine administration, onsite logistics, turn-out as well as providing education to multiple agencies in both English and Spanish. In a summer report to its funder, the Brigade listed 43 different organizations it had worked with; many of these organizations held dozens of events that provided thousands of vaccinations. Members developed ongoing relationships with health care organizations and participants in local events because of their consistency of participation, leadership, and willingness to work. At the height of the vaccine initiative, dozens of opportunities were posted on the weekly mailing to the group.

1.9 Providing services in a changed environment

By the end of May, 2021, the focus of the citywide vaccine initiative began to change and evolve as demand declined. As of July 1, 2021, 56% of Chicagoans had received one dose of vaccine, and 49.9% had completed the two doses of series. Many communities remained unvaccinated, and at highest risk: lowest rates ranged completed series of 27.9% (Englewood) to 36.0% (East Side), both predominantly African American neighborhoods (CDPH.org). Over time, as more vaccines were administered, the need for mass sites diminished and both health departments (City and County) adopted a more focused strategy, coining the term "hyperlocal."

For the entire vaccination effort including, this change meant adopting the use of smaller pop-up clinics instead of huge mass sites, and as well as the use of a reconverted Chicago Transit Authority bus which became a vaccine van that could easily move around the city (Chicago Sun Times, 2021).

CDPH recently implemented a door-to-door canvassing campaign to identify unvaccinated people in communities with the lowest rates. City canvassers are able to either make an appointment for those who want to get vaccinated, or arrange to have a vaccinator come to the home and give shots to up to ten people with a $100 VISA gift card as an incentive. As of July, 2021, the Vaccine Brigade was in the process of joining this new effort by meeting with potential partners, evaluating hyperlocal data obtained from CDPH and piloting door-to-door canvassing efforts.

1.10 Assessment of activities

Program evaluation is the systematic collection of information about program activities, characteristics and outcomes of programs to guide future activities (Patton, 2105). People engage in activities to change the world, and evaluation helps participants understand if they are accomplishing what they seek to accomplish. Evaluation activities guide program choices for more effective future activities.

As part of program evaluation, the Brigade surveyed its members to determine future directions. The evaluation was sent electronically to its members during the months of May-June, 2021 and had a 40% response rate. Professionally, 42% were nurses, 18.8% educators, 7.2% physicians or dentists; and 27.5% other professions, including information technology, public health, and musician. The majority were older (86.8% over age 60).

At the time of the survey, 94.2% of respondents had volunteered with the Brigade. Respondents indicated that they had volunteered as vaccinators (27.5%), onsite assistance (58%), outreach (34.8%), data management/website development (8.7%), scheduling (2.8%), and education committee work (2.8%). Brigade members worked at locations across the city and county, including health department sites, area agencies on aging, alderman offices, community sites (churches, community-based organizations, etc.), health centers, public schools, and hospital-based clinics.

Responses to questions about the positive effects of volunteerism found members experiencing overwhelmingly positive effects in sense of accomplishment, isolation, frustration and understanding of the pandemic (Table 1). Additional positive comments included developing compassion for others; renewing a sense of purpose and activism; deepening of friendships; seeing firsthand unequal access to health care; so many people in underserved communities had many health problems and disabilities; feeling connected to the community at large; feeling good to give back and help; and wishing I could do more.

| TABLE 1 Responses to participation |
|-----------------------------------|
| Sense of accomplishment            |
| Considerable                       | 76.8% |
| Some                              | 14.5% |
| Not at all                         | 8.7%  |
| Decreased isolation                |
| Considerable                       | 42.0% |
| Some                              | 37.7% |
| Not at all                         | 20.3% |
| Decreased frustration              |
| Considerable                       | 29.9% |
| Some                              | 52.2% |
| Not at all                         | 18.8% |
| Increased understanding of pandemic |
| Considerable                       | 50.7% |
| Some                              | 33.3% |
| Not at all                         | 15.9% |

2 DISCUSSION

Nursing is a health equity and social justice profession, with a history of improving the health of individuals and populations by addressing social disparities (Rudner, 2021) and the spirit and work of the Brigade harkens back to the earliest days of public health nursing (Blacksin, 2021). Nurses assessed the situation produced by the pandemic and
identified a need to broaden the scope of vaccine administration to the most underserved communities and communities of color. They created an interdisciplinary organizational structure to fill that need, reached out to diverse partner organizations, and then organized to help bring services to underserved communities to achieve vaccine equity. They developed new skills and gained new knowledge during the process, as they built a model that worked at that moment.

During the group’s formation, members tried to increase its diversity by reaching out to nurse friends/colleagues of color. Many of these individuals were working in their community organizations and neighborhoods, and believed these spaces were a better fit for their vaccine work. Those relationships helped to steer the Brigade to opportunities for volunteering in minority communities, though most of these nurses (and others) did not join. However, while conducting community outreach, the group established connections and working relationships with diverse organizations across the city. The Chicagoland Vaccine Partnership, in particular, provided an opportunity to offer service to organizations of color.

Key to successful volunteer work is partnering with community-based organizations. An overarching coordinating body like the Chicagoland Vaccine Partnership that can facilitate coordination and collaboration, as well as play a brokering role between governmental, non-governmental organizations, funders and volunteers is also a critical aspect of the work. Policy changes that enable the quick mobilization and integration of volunteers should be made at the local, state and federal level in preparation for the next pandemic.

Volunteerism is defined as “freely chosen” and deliberate helping activities that extend over time, are engaged in without expectation of reward or other compensation and often through formal organizations, and that are performed on behalf of causes or individuals who desire assistance (Snyder & Omoto, 2008 in Wilson, 2012). Respondents’ survey answers show they experienced the major effects of volunteerism—a sense of accomplishment, decreased frustration and isolation, as well as building a network (Wilson, 2012). One limitation of the survey was that we failed to ask about the concept of social justice activism which fueled the work of many of its members, given their long histories of commitment of social justice causes and the ways they discussed their work informally at meetings and events.

3 | CONCLUSION

The Chicago Vaccine Brigade serves as a successful model of volunteerism, constructed on the foundational principles of collective decision making, democracy and social justice. Its members built on their existing social networks using skills they had learned during their careers as PHNs and activists to create a functional organization that could assist with the task of getting shots into arms. Volunteers are never intended to replace a robust public health workforce. However, they may offer a useful expansion to a stressed public health infrastructure during crisis periods.

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CONFLICT OF INTEREST

I was a founding member of the Vaccine Brigade. Otherwise, I have no conflicts of interest.

DATA AVAILABILITY STATEMENT

Research data are not shared.

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