

The Federal Retail Pharmacy Program (FRPP) Impact on COVID-19 Vaccine Distribution During Pandemic: Effectiveness, Limitations, and Implications

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Abstract

The coronavirus disease 2019 (COVID-19) has altered the healthcare landscape for pharmacy practice and continues its global onslaught. As the COVID-19 vaccines began to reach the general population, many were left wondering where and when they would get the vaccine. With 90% of the American population living within 5 miles of a community pharmacy, vaccine distribution to these locations is vital for a successful vaccine campaign. The Biden Administration launched the Federal Retail Pharmacy Program (FRPP) in February 2021, a public-private partnership with 21 national pharmacy partners representing over 40,000 pharmacy locations to help expand the vaccine rollout. Community pharmacists are uniquely positioned to fulfill this mission by being a point of contact for the COVID-19 vaccination efforts. The FRPP has experienced some limitations, including the variable vaccine allocation, limited support from the healthcare system, and the lack of overwhelming public confidence in the vaccines. Improving the FRPP would require strong partnership with other healthcare professionals and the adoption of flexible vaccine dissemination. These can stem future pandemics.

Keywords: Federal Retail Pharmacy Program (FRPP), COVID-19, Community Pharmacies, Partnerships, Vaccines, Pharmacists

Background

The Coronavirus disease 2019 (COVID-19) has dramatically impacted the healthcare landscape and delivery of healthcare globally. The World Health Organization (WHO) declared COVID-19 a pandemic on March 11, 2020, after the virus spread from Wuhan, China, in late 2019 [1]. Some measures to control the spread of the COVID-19 infection were explored, including restrictions to large gatherings, lockdown of agencies and non-essential businesses, and search for a treatment (e.g., vaccine). During the global lockdown periods, several challenges emerged, such as working with limited healthcare staff, dealing with the availability of personal protective equipment, and finding a suitable treatment for COVID-19 [2]. As of November 06, 2021, there were over 46 million cases of COVID-19 and over 750,000 deaths due to the disease in the United States (US) [3]. A race to develop a safe and effective vaccine intensified throughout 2020 and ensuring an equitable and rapid vaccine distribution to the United States (US) population was challenging [4]. Disproportioned vaccine supply and inadequate vaccine quantities resulted in populations being missed early during the initial vaccine release in December 2020 [5]. Also, during the COVID-19 pandemic when lockdown had been implemented, community pharmacies remained operational to supply patients with medications and essential services. This showed that community pharmacies played a vital

role in the fight against COVID-19, which also strategically positioned them to administer the COVID-19 vaccines [1,6]. The ease of access of the community pharmacies to the general population further makes them a unique healthcare entity targeted for the COVID-19 vaccine administration.

Historically, the pharmacy profession has been involved with vaccines, a vital measure of controlling outbreaks in communities [7]. The COVID-19 pandemic further amplified the importance of the pharmacy profession in emergency preparedness and response through mass vaccinations of the diverse population [1,2]. Community pharmacies are primed to aid in the COVID-19 vaccination efforts because they are highly visible, accessible, and administer vaccines to the public [7,8]. It has been shown that immunizations provided through retail pharmacy settings can substantially increase the number of vaccinated patients in a community [1]. These connections between the pharmacy settings and the public are vital for a successful vaccine campaign. Community pharmacies are equipped to reach the general population. They have built trust and confidence with a community to disseminate medical information, along with providing essential vaccination care because of ease of access for the communities [7]. Effective vaccine distribution requires pharmacy locations to provide vaccinations which increase the healthcare system's capacity under emergency conditions [1,6,9].

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Description of the Policy

The Federal Retail Pharmacy Program (FRPP) is a collaboration between the United States (US) federal government and 21 national public-private pharmacy partnerships representing over 40,000 pharmacy locations to increase access and directly supply COVID-19 vaccines across all 50 states [10-12]. These

vital partnerships between the federal government and pharmacy partners will help increase the distribution of the vaccines. The FRPP was designed to efficiently send COVID-19 vaccine supply from the federal government directly to community pharmacies allowing the public access to the most up-to-date vaccines, especially in underserved areas [13]. The pharmacy partners within the FRPP include major retail giants, including Costco, CVS, Hy-Vee, Kroger, Rite Aid, Walgreens, and Walmart [14]. These partnerships have opened doors to increase vaccine access and convenience for the public. Private and public partnerships can ensure that the COVID vaccine supply is equally and effectively disseminated to the general population. The FRPP utilizes the social vulnerability index (SVI) tool to make informed, evidence-based decisions about which areas could benefit the most from the vaccine distribution program to ensure equity and evaluate the vaccine distribution plan [10, 11].

FRPP helped to ensure equitable and expanded access to the vaccine. The CDC worked with states to select initial pharmacy partners based on some factors, including their ability to reach populations most at risk for COVID-19, the number of available stores, and those who had a positive alignment with existing vaccination strategies and provide them with an initial number of COVID-19 vaccines [12, 15]. This limited initiation phase was used to gauge the infrastructure response, so once vaccine production increases, that system was ready for a large-scale mass immunization campaign [15]. As vaccine production increased, vaccine allocation was adjusted to reflect partner size, community reach, and ability to vaccinate [15]. The initial pharmacy partners were starting points, and once vaccine production increased, more pharmacies were able to join the FRPP. The pharmacy partners decided in close coordination with the CDC exactly how many doses were to be shipped to each individual store based on supply and demand [15]. Pharmacy partners underwent weekly allocation assessments to ensure adequate supply and that their infrastructure was ready for large-scale demand. Two to three weeks after the first vaccine allocation, the second allocation of vaccines was sent to ensure the second round of vaccines were available at the locations. If states opted out of the FRPP, they did not receive federal COVID-19 vaccines [15]. Since its inception, FRPP has delivered over 580 million doses across the US [3]. Under the FRPP partnerships, the vaccine supply quickly escalated as doses were sent out related to the state's SVI index, thus ensuring a more robust and abundant vaccine source [11].

There are three vaccination phases of FRPP. Dolan (2020) outlined the three phases the vaccine will be distributed. Phase 1 prioritizes the vaccine to specified groups, Phase 2 expands access to all, and Phase 3 ensures supply meets demand [4]. Efforts were made throughout the FRPP to increase the excess of COVID-19 vaccines to ensure the vaccine was free for the public [12,16]. The FRPP's main goal was to use the strength and expertise of pharmacy partners to help rapidly vaccinate the American people [3].

One reason to include community pharmacy locations in a vaccine campaign is to help establish herd immunity early during the COVID-19 crisis. Distribution models involving pharmacies have increased vaccination coverage and assisted in achieving herd immunity [11]. Research has shown that widely immunized populations result from having evidence-based vaccine delivery strategies that generate demand, allocate and distribute vaccines, and verify coverage [17]. Community pharmacies satisfy the demand because they serve as patients' first point-of-contact and can allocate and distribute vaccines within their pharmacy locations [2].

Benefits of the Policy

The benefits of the FRPP are to decrease the operational and logistic burden for state and local public health departments, and to offer free COVID-19 vaccines at a local pharmacy that is trusted, trained, and a familiar healthcare source [15]. Community pharmacies can help curb the COVID-19 pandemic by administering vaccines to the population and addressing vaccine misinformation nationwide [18]. Reports show that 45% of pharmacy retail sites in the FRPP are in highly socially vulnerable areas, and over 65% of the federal doses are allocated to community pharmacies [11]. The COVID-19 infection has negatively impacted vulnerable populations, including high hospitalization and mortality rates; thus, having vaccines readily available and accessible to these populations can increase vaccine uptake. With roughly over 60,000 pharmacies nationwide, over 60% of pharmacies are represented within the FRPP. Within the FRPP, over 26,246 make up the retail pharmacy stores that belong to a chain, while the other half belong to independent pharmacies [10]. With good demand, supply, and outreach within metropolitan and non-metropolitan areas, these pharmacies can serve a substantial US population.

The FRPP created extensive partnerships that made the US one of the first countries to transition from vaccine scarcity to abundance [10]. The benefit of these private and public partnerships is that pharmacies are often the first point of contact for the public to get information about vaccinations [2]. This represents a highly accessible point in healthcare that can be utilized during a pandemic. Without the FRPP, state governments would have to develop their distribution networks which could raise concerns about access and equity during the distribution of the COVID-19 vaccines [11]. Being a part of the FRPP created the advantage of vaccine access, such that COVID-19 vaccines were free for the public [11]. Besides, relying on the federal government agency to disseminate the vaccines alleviated the US states' responsibility of preparing and developing their vaccination plans from scratch, creating a window of opportunity to focus resources on other sectors that required attention [11].

The established partnerships between the FRPP and pharmacies expanded access to the COVID-19 vaccine [19].

Improving vaccine access is believed to improve vaccination rates [16]. The success of the FRPP has led to new partnerships, including dialysis clinics to provide COVID-19 vaccines to inpatients and outpatients [19]. Without the FRPP partnerships, it would have taken seven weeks longer to vaccinate 80% of the adult population if community pharmacies were not included during the pandemic [20]. As of April 8, 2022, the FRPP has resulted in the administration of about 454 million COVID-19 vaccine doses, with over 71% of the US population over 18 years old being fully vaccinated [3]. Economically, the FRPP enhanced the ability of US businesses to operate to full/pre-COVID capacity creating an opportunity for economic recovery.

Limitations of the Policy

There are three major limitations to FRPP. The first is the impact FRPP had on how the vaccines were disproportionately allocated between pharmacies and demographic areas. The second limitation is the lack of workforce support, such as workforce shortages, training, and burnout. The third limitation is vaccine hesitancy which affected vaccination rates.

The vaccine allocation was in a phased approach. The phased approach led to inconsistent supply flows and poor federal support; thus, pharmacies experienced intermittent vaccine supplies and interruptions to the normal supply chain channels [5,10]. In addition, the vaccines were disproportionately allocated based on geographic areas, as hard-to-reach/remote areas with non-established partners experienced delays in receiving the vaccines from the phased rollout. This left some pharmacy chains only offering vaccines when specific vaccines were available, leading to patients missing their vaccine doses. Discrepancies in vaccine allocation led to pharmacies not knowing when they would receive the vaccines and, therefore, could not accurately track inventory. Phased approach heterogeneity in distribution plans among states led to early communication challenges and vaccination delays [11]. Short planning timelines, sometimes only three weeks long, led to confusing vaccine schedules and allocation [5]. Independent pharmacies reported difficulties in securing vaccine supply.

The second limitation was the lack of pharmacy workforce support. There was insufficient vaccination training at the onset, and pharmacists became burnt out over the increased vaccination workload. Inadequate training of pharmacists in dispensing the COVID-19 vaccination led to vaccine waste [10]. Less than 28% of states have adequate licensed staff to give vaccinations, leading to a workforce being ill-prepared to handle the surge of patients, which led to long wait times at pharmacies [4,17]. The COVID-19 mitigating factors, including physical distancing and other social factors such as caring for a workforce shortage during the pandemic translated to pharmacies' inability to operate at full capacity, with limited pharmacy operation hours, further limiting the number of vaccinations that could be given in a day [10]. Pharmacies were not physically staffed with technicians or pharmacists and had

to shut down during the Pandemic which negatively affected FRPP vaccine availability. Because the FRPP did not anticipate or factor in pharmacist shortages during the vaccine rollout, working pharmacists experienced physical, mental, and financial burnout [22]. Pharmacists are vital stakeholders in the FRPP and thus, need the proper training and support to succeed.

The third limitation is vaccine hesitancy, an issue that was amplified from the program rollout. The FRPP did not address vaccine hesitancy, and there was virtually no guidance on how to address vaccine hesitancy. Individuals at high risk for severe COVID-19 infections were more likely to be vaccinated in a doctor's office and less likely to be vaccinated in a community setting [9]. With inadequate orientation, this could have limited the public's willingness to access the COVID-19 vaccine in retail pharmacies. The inability of some individuals to keep track of the constantly changing vaccine eligibility criteria resulted in communication failures, giving room for misinformation and patient unwillingness to receive the vaccines [4]. Limited access to the vaccine, lack of customized information, and mistrust of the medical system all contribute to vaccine hesitancy and low vaccination rates [16,23]. Some patients who had taken the first dose of the COVID-19 vaccine failed to return for their second shots due to misinformation or the lack of information [23]. Tracking is vital to ensure patients receive the correct vaccine in a timely manner, and that the patient also receives any requested information. This limitation brought equity and access issues to the surface, showcasing the prevalence of vaccine hesitancy [20]. Tracking vaccination efforts proved difficult especially in Black, Indigenous, People of Color and Latinx communities [24]. Social determinants for health issues heavily influenced the vaccine uptake and outcome, something that the FRPP did not account for.

Implications and Areas of Improvement for FRPP

This program has already significantly improved access to the COVID-19 vaccines throughout the US by utilizing pharmacy partnerships. Community pharmacies are the second most common healthcare destination by providing essential services, ensuring uninterrupted care, providing evidence-based information, and promoting infection control [2]. Community pharmacies in the FRPP have generated vaccine demand, demonstrated consistency, and improved vaccine compliance [18]. Including community pharmacists in the vaccine distribution plans could improve the vaccine's availability and access to the vaccine, which can shorten the time it could take to achieve an 80% vaccination rate in the US [7]. Geographic location, large scale of clientele, local storage, and distribution can aid the COVID-19 vaccine efforts [11]. As the disease evolves and variants emerge, booster vaccines will be disseminated along these same distribution channels [9,25]. The partnerships will need to also adapt to the growing demand and vaccine changes to help combat the COVID-19 virus. Keeping the partnerships throughout an emergency can ensure consistent and reliable vaccines are available when new

vaccines are available. Having a familiar and reliable vaccine source can enhance a successful rollout of future vaccines [9].

Despite the success of the FRPP, gaps exist within the policy. The policy needs to develop a robust state and private reimbursement portal, making it easier for community pharmacies to use with real-time reimbursement metrics [7]. No single stakeholder in the healthcare system possesses all the necessary healthcare data; therefore, continued partnerships must be expanded and looked at across a diverse healthcare environment [26]. Cross-industry alliances are needed to prevent systemic vaccine uptake disparities and ensure adequate vaccine supplies [26]. One of such alliance includes an interdisciplinary partnership between Walmart and Humana which can shed light on how best to disseminate vaccines to vulnerable populations using prescription claims data [26]. This partnership represents a scalable approach to promoting equity in COVID-19 vaccination dissemination [26].

If FRPP can utilize federal government resources, the program can improve equity in vaccine distribution, give vulnerable populations vaccine access and eliminate misinformation, which could lead to a higher population of vaccinated individuals and lessen the prevalence of COVID-19 [11,20]. Public health officials should investigate whether disparities continue to exist and review vaccine supply, vaccine availability, lack of prioritization, and vaccine hesitancy [20]. Without further investigation, the policy could fail to achieve its primary goal. Utilizing resources can improve the rollout of vaccination services and pharmacy infrastructure to account for the increase in the supply of vaccines [27].

This commentary focuses on the FRPP partnerships; however, it is worth mentioning that West Virginia was the only state in the US to opt out of the FRPP. Their vaccination strategy utilized independent pharmacies in their vaccination efforts which positively impacted vaccination uptake in their state [18]. West Virginia is an example of how tailored approaches within FRPP should be adopted in specific states, including blueprints to help prepare more proactively and adequately control future pandemics. There is a potential area for further research to examine how the West Virginia vaccination model could improve the FRPP.

Conclusion

While acknowledging how much the FRPP can help increase COVID-19 vaccine access, improve vaccination coverage, lower healthcare spending, and garnish strong pharmacy partnerships, issues of poor allocation of the vaccine, disruptions in pharmacy workflows, and vaccine hesitancy still exist. Patient willingness and trust in the vaccines were lacking within the FRPP, and vaccine allocation was lower in highly vulnerable areas. This begs for stakeholders' active engagement to tackle vaccine coverage issues strategically during an outbreak. The ability to develop public-private

pharmacy partnership programs, such as the FRPP, is critical for a successful vaccine campaign. Community pharmacies, as a active entity of this partnership, are resourceful in ensuring the success of disseminating the COVID-19 vaccine.

With COVID-19 still present, FRPP is being utilized to disseminate vaccines across the US. The FRPP is designed to get the COVID-19 vaccination out to the public through public-private pharmacy partnerships. The public-private partnership of FRPP gives increased access to the vaccines by working with multiple stakeholders to ensure vaccine allocation remains equitable and accessible to patients. The location of community pharmacies, including the ease of access it provides for patients to receive information about the COVID-19 vaccine, makes them vital to the success of the FRPP. As the bivalent COVID-19 vaccination is ongoing, it is expected that the FRPP will continually catalyze improved health outcomes in the US.

Abbreviations: FRPP (Federal Retail Pharmacy Program), COVID-19 (Coronavirus 2019), World Health Organization (WHO)

The opinions expressed in this paper are those of the authors.

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