

Implementing a Successful Influenza and Updated COVID-19 Vaccination Campaign Among Healthcare Workers in a Delaware Healthcare Facility

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Abstract

Although influenza (flu) and COVID-19 vaccines are highly recommended for healthcare workers, it is known that vaccination rates are suboptimal in healthcare settings. There is a need to optimize vaccination rates among healthcare workers as there are direct correlations to increased patient safety and protection of staff from healthcare associated infections. Our health care organization employed some novel strategies to increase the uptake of both flu and COVID-19 vaccinations by identifying and addressing common barriers. Barriers were identified through team meetings, review of previous years' vaccination trends, and historical information. Strategies to overcome these barriers included dissemination of information through various team meetings; identifying peer vaccination champions among specific groups that had historically low vaccination rates; creating a sense of urgency with weekly announcements regarding vaccinations; and computer screensavers with graphics promoting vaccinations. We believed education was key to success. Our focus was not only on the vaccination rates, but also on compliance which is defined as either getting the vaccine or submitting a declination after completing an education module. These efforts resulted in the organization achieving more than 95% compliance for both vaccinations. Our vaccination uptake rates for influenza were greater than 85% and updated COVID-19 vaccination rates were around 42%. We believe that the grass-root level work initiated for this year's campaign was one of the drivers for our success and some aspects could be replicated for vaccinating the public as well.

Introduction

The Centers for Disease Control and Prevention's (CDC) MMWR weekly report¹ describes that implementing workplace strategies demonstrated increased vaccine coverage among healthcare workers for flu and COVID-19, as well as reduced morbidity and mortality among healthcare workers and their patients. Annual influenza vaccination with vaccine strains closely matching the circulating strains is widely recognized as one of the proven strategies for prevention of active cases of influenza. There is evidence supporting that influenza vaccination in healthy adults can prevent at least 64%² of laboratory confirmed cases of flu and reduce the incidence of influenza like illness (ILI) by 42%.³ Furthermore, there are implications of reducing absenteeism for health care workers by 37% and lessening workdays lost by 0.18 days per person among vaccinated healthcare workers in contrast to a comparison group.² Although COVID-19 vaccine mandates among hospitals were controversial, our health system adopted a COVID-19 vaccine mandate for all employees for the primary series (which was mainly the first two doses of a 2-dose series or a single dose vaccine) which was later lifted around 2022. Healthcare workers are often the target population when it comes to vaccination uptake as there is a moral obligation to avoid harm to patients and healthcare workers are often looked upon as role models.⁴

Vaccinating healthcare workers with both influenza and COVID-19 vaccines can effectively reduce laboratory-confirmed cases of illness and workday absenteeism.

Background and Literature Search

A meta-analysis conducted by Fan et al from 92 studies comprised of 125 vaccination data points from 26 countries concluded that the overall influenza vaccination rates among health care workers was 41.7%.³ The study identified factors that influenced vaccine uptake as age, length of employment, education level, area of work, occupation, coexisting medical conditions, perception of being at risk of infection, participation in vaccine training, and health education and knowledge of vaccine timing.³ Although some members of the public were accepting of the new COVID-19 boosters, healthcare workers also encountered barriers similar to the public, which included mistrust in vaccines, misinformation related to vaccine safety and concerns of safe vaccine use during pregnancy.⁵ The CDC's MMWR weekly report¹ describes that healthcare workers whose employers' neither required or recommended the vaccines had the lowest vaccine coverage, although the coverage with COVID-19 primary series vaccination was greater than 80% in all work settings possibly because of the prioritization of vaccination among health care workers and the vaccine mandates that existed during the pandemic. There is a lack of high-quality studies that assessed interventions to improve seasonal vaccination rates among healthcare workers. A systematic review and meta-analysis by Gualano et al identified different interventions to increase vaccination rates among healthcare workers which included availability of free vaccines, flexible worksite vaccine delivery, education materials, education sessions, reminders, incentives, dedicated staff, vaccine mandates, and availability of signed declination statements.⁶ The results from a study conducted by Flanagan et al to determine the effectiveness of interventions to increase vaccine uptake among healthcare workers concluded that a program with multiple targeted interventions increased the vaccination rates.⁷

Vaccination Campaign

This Delaware healthcare facility offers a fall vaccination drive to all employees during the months of October and November. This year's campaign was conducted between October 2, 2023, and November 30, 2023, and included both influenza and updated COVID-19 vaccines. All employees were encouraged to be vaccinated or complete an education module to submit a declination or claim exemption. Neither vaccination was mandatory for the organization. The goal was for at least 90% of the employees to comply. For those employees who would be considered for a yearly bonus by the company, participation in this program was one of the criteria for eligibility to the bonus program. The campaign kicked off with a two-week mass vaccination blitz at our major locations followed by smaller clinics in the subsequent weeks based on needs.

This was a monumental undertaking, which included around 14,500 employees spread over 100 different locations in four different states. Some barriers that were identified through team meetings included vaccine hesitancy and lack of trust in vaccines. Logistical challenges in implementing two vaccination campaigns at the same timeframe as well as budgetary constraints with the cost of vaccines were also present. Approval from the Food and Drug Administration (FDA) for the updated COVID-19 vaccine was delayed longer than anticipated, which added to the logistical constraints.

We knew that we must implement novel strategies and exhaust every measure to overcome these barriers. Some strategies to enhance vaccine uptake this year included enhanced communications, identification and support from peer champions, and other grass-root level efforts.

Communication

There was utilization of local huddles, team huddles, and system wide huddles, as well as communication in company portals and emails to employees. We capitalized on the system-wide operational huddle, which is a venue to escalate any operational concerns, to create awareness regarding the campaign. A representative from Employee Health announced the campaign weekly during our systemwide operations huddle which progressed to daily as we were nearing the campaign dates. This created increased awareness for team leaders who then disseminated the information to local teams. Additionally, all employees received an email communication from the organization's senior leader encouraging participation in the vaccination campaign. A new graphic was introduced which depicted two shots, while carrying the implicit message that both influenza and COVID-19 illness coexist, and employees need to adhere to safety measures to prevent the spread. To capture these messages, we created a new name for the campaign: *#HitMeWithYour2Shots* which was a variation of our existing and familiar influenza vaccine campaign *#HitMeWithYourFluShot*. This tagline and graphic were introduced as a screen saver on all clinical computers at least six weeks before the campaign started. Additionally, peer champions were identified from groups with historically low vaccination rates and were educated on both vaccines to disseminate information to their peers. This education was conducted in-person to rebuild trust. This strategy proved to be the most important driving force in changing the culture and narrative around vaccine uptake in this health system, as we saw an increased vaccine uptake in departments that had a peer champion.

Education

Education modules were created to provide general information about influenza and COVID-19 vaccines as well as declination statements. Employees were required to complete the education module prior to accessing the declination module. We also utilized the organization's SharePoint site to create a comprehensive vaccine page that included information about the vaccines, key vaccine clinic dates, etc. To simplify access for any vaccine-related questions or concerns, we created an Information Technology (IT) portal and deployed it to all employees. They were able to submit their confidential question in the IT portal which then got transferred to Employee Health clinicians to answer in real time.

Creating a Sense of Urgency

The electronic medical record was programmed to send at least eight reminders to employees and their direct leaders reminding them to get the vaccine or complete the education module to access the declination. Reminder communications were sent weekly, which progressed to daily for the last week of the campaign. Additionally, each leader had access to an electronic dashboard displaying compliance status of their employees.

Decentralized Vaccine Administration with Centralized Operations

We implemented unit-based vaccination efforts to capture healthcare workers working all shifts. Vaccines were also delivered to all our ambulatory sites which decentralized vaccine administration, but we kept the operations centralized. Vaccinators positioned to vaccinate peers and administrative volunteers who facilitated the events ensured that lines moved quickly and were not a disincentive to get vaccinated. These volunteers also represented the diversity of our employee population at all levels and varied job roles. Candid photos were published daily on the employee portal of those in line getting vaccinated or volunteering for the campaign, providing visibility of how well the campaign was going as well as giving “bragging rights” to many. Additionally, employees were encouraged to get vaccinated at local pharmacies or their doctor’s office and provide us with a proof of vaccination if they were unable to come to any of the vaccination events hosted.

Previously compliance rates for flu vaccination hovered close to 90% and data from COVID-19 bivalent booster vaccine administration was not captured as it was administered separate from the fall vaccination project. The goal for this year’s vaccination drive was 90% employee compliance. A combination of the strategies described resulted in more than 95% compliance for both vaccinations. Our vaccination rates for influenza were greater than 85% (global average approximately 40%) and updated COVID-19 vaccination rates were around 42% (global average for those who received at least one dose of booster dose is approximately 32%)

Discussion

In the wake of the COVID-19 pandemic and conspiracies surrounding COVID-19 vaccines, vaccination rates for all vaccines suffered. Similar to the general population, healthcare workers were also affected by all the information and misinformation about the COVID vaccines that has eroded trust for all vaccines.

To improve influenza and COVID-19 vaccine uptake for the 2023/24 season, we tried some novel strategies. The first strategy was to re-build trust. For this we utilized a grass-root level work starting with peer champions. Vaccine education was created in simple language and there was direct access to Employee Health to answer questions. The second strategy was to simplify education and make it accessible. We utilized the organizations’ SharePoint site to create a very comprehensive vaccination page and utilized our learning management system to deploy education and declination statements if needed. Another strategy was to incentivize engagement by tying the program as one of the elements for eligibility for the incentive bonus. We kept the communication simple, fun, and accessible. The lessons learned from this vaccine campaign included that vaccine acceptance behavior is complex and difficult to understand, and a multipronged approach might be more beneficial than a single prong approach to enhance vaccination rates.

Conclusion

Vaccine hesitancy is a complex behavior and multifactorial. Considering the influenza and COVID-19 illnesses peaking in the fall, we must resort to novel strategies to improve vaccination rates. There is a gap in evidence of the most appropriate strategy supporting vaccination rates among healthcare workers and most studies indicate the use of a multipronged approach. The strategies used for the fall vaccination campaign at a major healthcare facility in

Delaware might include tactics that could help the success of a mass vaccination program that could be replicated at other facilities.

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