VIEWPOINT

COVID-19 Vaccination of Health Care Personnel as a Condition of Employment

A Logical Addition to Institutional Safety Programs

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Viewpoint

The consequences of the SARS-CoV-2 pandemic have been far-reaching, particularly among health care personnel (HCP) and within health care settings. HCP have been directly affected, sustaining occupationally acquired COVID-19 infections, and indirectly through a substantial alteration in health care delivery. With the advent of highly effective and safe SARS-CoV-2 vaccines, case rates and hospitalization rates are declining, and the promise of a return to some semblance of pre–COVID-19 health care is growing. Recently, several medical centers have announced a requirement for SARS-CoV-2 vaccination of all HCP (allowing for medical and religious exemptions), and the impending licensure of the mRNA SARS-CoV-2 vaccines (following the previous Emergency Use Authorization [EUA]) will move many other centers to consider a similar policy. A recent outbreak in a skilled nursing facility attributed to an unvaccinated HCP member clearly illustrates the risk unvaccinated HCP can pose to their patients and other HCP.[1]

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The recognition of HCP vaccination as an essential component of patient and HCP safety programs emerged in the mid-2000s with a focus on influenza vaccination. Prior to the 2009-2010 influenza season, despite increased awareness of the importance of HCP influenza vaccination and large-scale, resource-intensive voluntary vaccination campaigns, vaccination rates remained very low. While HCP influenza vaccination was first recommended by the Advisory Committee on Immunization Practices in 1978, innovative, patient safety–focused programs at hospitals like Virginia Mason Medical Center paved the way for stronger expectations surrounding HCP vaccination.[2] The success at these institutions, professional society endorsements of influenza vaccination as a condition of employment policies, and the addition of HCP influenza vaccination as a publicly reported quality measure were associated with increases in vaccination rates from around 45% to nearly 80%, with higher rates among acute care facilities, physicians, and nursing personnel.[3] During the 2019-2020 season, the percentage of hospital-based HCP who reported working under an employer influenza vaccination requirement reached 72.1%.[3] Very few HCP have had their employment terminated due to policy refusal, particularly considering the thousands encompassed by these policies.

Mandatory influenza vaccination programs for HCP have been associated with high vaccination rates and a significant decrease in HCP absenteeism and health care–associated influenza among hospitalized patients.[4] The importance of mandatory influenza vaccination for HCP is best reflected by the decision of the National Patient Safety Foundation board to establish the inaugural "must do" list for all HCP to ensure patient safety: hand washing and HCP influenza vaccination.[5]

With the advent of highly effective SARS-CoV-2 vaccines, the HCP vaccination discussion has turned their direction. Health care systems should learn from the decisions on influenza vaccination requirements for HCP in drafting SARS-CoV-2 vaccination policies for HCP.[4] The rationale to move from an HCP voluntary program to a condition of employment policy for a vaccine-preventable infection centers on several important questions:

Do HCP become infected with the pathogen? Are HCP at an increased risk for infection due to their occupation? HCP clearly become infected with SARS-CoV-2, with many experiencing severe outcomes, including some deaths. Whether HCP are at higher risk for SARS-CoV-2 infection is less clear. Studies early in the pandemic reflected a higher infection risk in this population but that risk may have been mitigated by increased availability and use of universal personal protective equipment.

Can HCP have asymptomatic infection with the pathogen? Do these HCP still spread the pathogen to others? As with the general population, the proportion of SARS-CoV-2 infections among HCP that are asymptomatic is substantial. These individuals often have a high quantity of virus in their upper airways and have accounted for many instances of transmission.[6]

Is there a vaccine that is safe and effective in preventing infection? One of the true scientific triumphs of the COVID-19 pandemic has been the development of safe and highly effective vaccines against SARS-CoV-2. With widespread SARS-CoV-2 vaccination across the world, similar effectiveness has been noted. Reassuringly, the safety profile of the vaccines has also remained excellent.

Does vaccination affect pathogen transmission? While not specifically studied in the clinical trials, mounting evidence suggests that the vaccines are associated

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with decreased asymptomatic infections and transmission (as measured in household contact studies) of SARS-CoV-2.[7] A lower risk of COVID-19 infection was noted among household contacts of vaccinated HCP in the United Kingdom compared with household members of unvaccinated HCPs (absolute rates, 5.93 vs 9.40 per 100 person-years; hazard ratio, 0.70 [95% CI, 0.63-0.78]),[8] whereas a study examining infection rates in 223 discrete communities in Israel identified a strong negative correlation between community rates of vaccination and a later decline in infections among a cohort of unvaccinated persons younger than 16 years old.[9]

Do HCP have frequent contact with individuals who cannot mount a robust immune response to vaccination (and, therefore, rely on others to reduce exposure)? HCP, by nature of their occupation, have direct contact with patients (and other HCP) who will not be as protected by their own SARS-CoV-2 vaccination. Data are emerging of lower, if not negligible, immune responses postvaccination in certain populations (eg, recipients of solid organ transplants). Even HCP without direct contact with these immunocompromised persons will have contact with HCP who do, and the efficient spread of a respiratory pathogen makes anyone working in a health care facility a potential vector to the most vulnerable patients.

Do voluntary HCP vaccination programs attain high enough coverage to prevent pathogen transmission? Uptake of SARS-CoV-2 vaccination among HCP, while greater than the general public, is below the level necessary to prevent introduction and spread of the virus in health care settings. While population-level COVID-19 vaccination rates among HCP are not widely available, in one survey from early March 2021, only 52% of 1327 HCP reported receipt of at least 1 dose of a COVID-19 vaccine.[10]

Examination of these key questions drove the implementation of influenza vaccination as a condition of employment policies for HCP. Examining them through the lens of COVID-19 finds that the arguments for SARS-CoV-2 vaccination as a condition of HCP employment are even stronger.

As health care facility leaders evaluate whether to include SARS-CoV-2 vaccination within such policies for HCP, several important logistic concerns should be noted. First, whether any vaccine approved under an EUA by the US Food and Drug Administration can actually be mandated is unclear. Legal scholars have cited the language in the EUA portion of the Federal Food, Drug, and Cosmetic Act around an option to "refuse" a product approved under an EUA but noted mention of "consequences" of such refusal. Leaders of health care facilities have expressed a desire to place a hold on any COVID-19 vaccination requirement for HCP while the vaccines are under EUA approval. With the impending full licensure of the mRNA COVID-19 vaccines, however, this concern will soon become moot.

Second, any such program should make allowances for individuals who cannot be vaccinated. While the currently approved vaccines have very few medical contraindications, some HCP may develop allergic reactions to the first dose of an mRNA vaccine and may not be able to receive the second dose necessary for full immunity. Such HCP could opt for other types of COVID-19 vaccines (such as a viral vector vaccine), so even in those instances, HCP unable to take any COVID-19 vaccine due to a medical contraindication should be rare. Exemptions to vaccination on religious or personal beliefs are more complicated. With the example of influenza, most organized religions endorse receipt of vaccines, and allowance of such exemptions can increase the risk of SARS-CoV-2 introduction into the health care setting. Nonetheless, providing a venue for such concerns to be thoughtfully reviewed can be important for acceptance of these policies.

Third, as with many influenza vaccination policies for HCP, alternative approaches for HCP who are unable or refuse to be vaccinated should be included. These may be a requirement for use of infection prevention measures to protect patients and other HCP (eg, masking when working in the health care facility) or added assessments of asymptomatic infection among unvaccinated HCP (eg, periodic testing for asymptomatic infection) when SARS-CoV-2 is circulating. Unlike influenza, however, COVID-19 has yet to exhibit seasonal trends that would allow clear delineation when such interventions for unvaccinated HCP should be in place.

As the SARS-CoV-2 vaccines move closer to full licensure and the data on their excellent effectiveness against both symptomatic and asymptomatic COVID-19 infection emerge, the question of whether to implement a SARS-CoV-2 vaccination policy for HCP as a condition of employment is becoming clearer. HCP should not inadvertently spread contagious infections like measles and influenza to their patients and other HCP. The time is coming to add COVID-19 to that list.

ARTICLE INFORMATION

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