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COMMENTARY

Growing Shortage of Healthcare Workers Poses an Existential Threat to the Public Health System

Strategies to Mitigate this Challenge in the Face of COVID-19 Pandemic

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The growing shortage of essential healthcare workers has been a chronic challenge worldwide. The COVID-19 pandemic has exacerbated this challenge and has undermined the ability of many health systems to continue to offer optimal and timely clinical care to its patients. Many factors are responsible for this outcome not to mention the aging healthcare workforce, early retirements due to the COVID-19 pandemic, mental and physical exhaustion, lack of strategic planning for workforce retention, and national and international mobility (1-3). Collectively, these factors have created an ambiguous future and a precarious disproportion between the demand and supply of essential healthcare workers. The burgeoning primary and breakthrough infections with Omicron variant of SARS-CoV-2 has placed yet additional burden on the healthcare system and its frontline workforce.

Recognizing this advancing catastrophe, the Centers for Disease Control and Prevention (CDC) recently forwarded some guidelines to help assuage the same (4). At the core of these guidelines was the understanding that healthcare organization will:

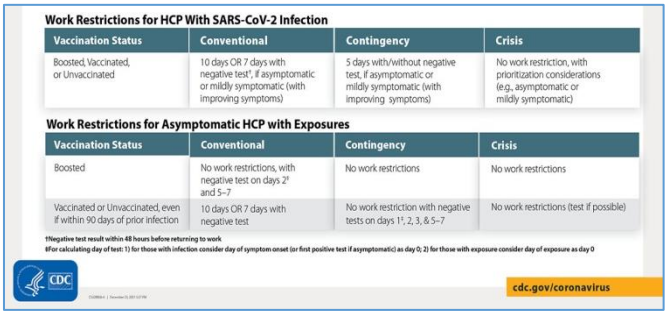
- Ensure any COVID-19 vaccine requirements for HCP are followed, and where none are applicable, encourage vaccination, including booster dose, as recommended by the CDC (5)
- Understand their normal staffing needs and the minimum number of staff needed to provide a safe work environment and safe patient care under normal circumstances

- Understand the local epidemiology of COVID-19-related indicators (e.g., community transmission levels)

- Communicate with local healthcare coalitions and federal, state, and local public health partners (e.g., public health emergency preparedness and response staff) to identify additional healthcare personnel (e.g., hiring additional healthcare personnel, recruiting retired healthcare personnel, using students or volunteers), when needed

Under these revised CDC guidelines, healthcare workers who either have asymptomatic SARS-CoV-2 infection and/or higher-risk exposure (6) are allowed to return to onsite work as long as there is strict screening and surveillance protocol in place (Table 1). If fully implemented these measures are predicted to have some impact on mitigating the shortage of healthcare workers. However, it is undetermined at this stage if the healthcare workers, members of their families, co-workers, patients, and caregivers would be willing to accept the inherent risk associated with this significant structural change in policy.

Table 1: CDC Guidelines for Work Restrictions for Frontline Healthcare Workers with SARS-CoV-2 Infections and Exposures*



Work Restrictions for HCP With SARS-CoV-2 Infection

Vaccination Status	Conventional	Contingency	Crisis
Boosted, Vaccinated, or Unvaccinated	10 days OR 7 days with negative test†, if asymptomatic or mildly symptomatic (with improving symptoms)	5 days with/without negative test, if asymptomatic or mildly symptomatic (with improving symptoms)	No work restriction, with prioritization considerations (e.g., asymptomatic or mildly symptomatic)

Work Restrictions for Asymptomatic HCP with Exposures

Vaccination Status	Conventional	Contingency	Crisis
Boosted	No work restrictions, with negative test on days 2§ and 5–7	No work restrictions	No work restrictions
Vaccinated or Unvaccinated, even if within 90 days of prior infection	10 days OR 7 days with negative test	No work restriction with negative tests on days 1§, 2, 3, & 5–7	No work restrictions (test if possible)

†Negative test result within 48 hours before returning to work
§For calculating day of test: 1) for those with infection consider day of symptom onset (or first positive test if asymptomatic) as day 0; 2) for those with exposure consider day of exposure as day 0

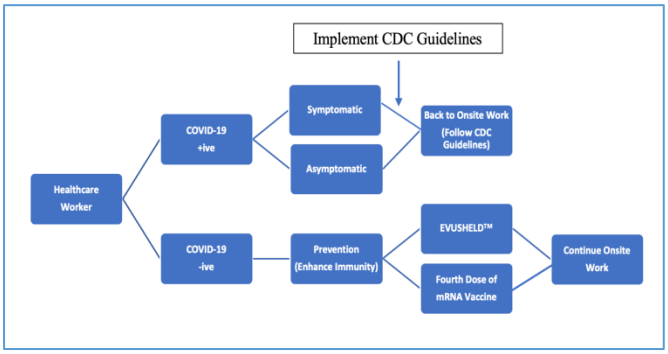
cdc.gov/coronavirus

*https://www.cdc.gov/coronavirus/2019-ncov/hcp/mitigating-staff-shortages.html

It is abundantly clear that the need to protect the healthcare workers and the environment in which they practice is quintessential to mitigate this crisis. It is also imperative that to continue to retain public trust in our healthcare system, we adopt policies that are widely accepted and easily implemented. It is also perturbing that we have arbitrarily and conveniently segregated healthcare workers into those at high risk of exposure and otherwise. The reality on the ground is that ALL healthcare workers are at an equally high risk of exposure and therefore must be treated accordingly. However, it is understandable that to gain maximum benefit, we may need to prioritize the implementation and distribution of limited resources.

Fortunately, we have the tools to accomplish these outcomes without placing undue risk on both the patients and the providers. Our recommendations are outlined in Figure 1 and briefly iterated herein. In most institutions, the healthcare workforce is vaccinated with at least the two-dose primary vaccination. This followed the mandatory ruling by the Centers for Medicare and Medicaid Services requiring that all Medicare and Medicaid-certified providers and suppliers must be vaccinated, and they must meet this requirement to continue to participate in the Medicare and Medicaid programs (7). For symptomatic and/or asymptomatic COVID-19 positive healthcare workers, we recommend that we follow the recently published CDC guidelines (Table 1). On the contrary, every attempt should be made to protect those healthcare workers who are COVID-19 negative and prevent breakthrough SARS-CoV-2 infections in this cohort. In an attempt to accomplish this outcome, we are recommending that the immunity against SARS-CoV-2 in frontline healthcare workers who are actively engaged in patient care must be passively enhanced by treating them with the recently authorized monoclonal antibody – EVUSHELD^{TM} (8). Given the observed long-acting benefit of treatment with this monoclonal antibody, it is postulated that its use would minimize the risk of getting infected with SARS-CoV-2 (9). Additionally, with waning immunity, we are advocating that ALL healthcare workers must be considered for a 4th dose (or 2nd booster dose) of mRNA vaccine at least 90-days after their last booster dose. While still awaiting approval from the Ministry of Health, the Israel's Pandemic Response Team has already recommended this later protocol providing 4th dose of mRNA COVID-19 vaccine to all healthcare workers; at-risk people; and those who are >60 years of age (10).

Figure 1: Proposed Interventions to Mitigate the Prevailing Shortage of Healthcare Workers



This is a watershed moment in the history of healthcare industry, and it demands that we think innovatively in an attempt to moderate this nascent crisis. The focus of this manuscript was to underscore the impact of COVID-19 pandemic on healthcare industry and to propose innovative solutions to mitigate the shortage of healthcare workers.

Nevertheless, we must continue to address other intractable challenges that are more impactful in developing a long-term sustainable strategy to overcome the burgeoning shortage of frontline healthcare workers.

Diclosures

SR declares no conflicts of interest.

MS declares no conflicts of interest.

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