



## PERSPECTIVE PIECE

## Healthcare Workers in the Time of COVID

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The Centers for Disease Control and Prevention (CDC) recently reported a rate of COVID-19 of 11% among healthcare workers (HCWs) in the United States, with approximately 10% of infected HCWs requiring hospitalization [1]. We need to focus some of our research efforts to understand the harm that this pandemic is causing to HCWs, and to develop interventions to mitigate this harm.

The physical and mental health of HCWs are impacted by the current pandemic at two different levels. The first level of impact involves working on the frontline of the pandemic, which can result in physical and mental health consequences. The second level of impact is when a HCW becomes infected with SARS-CoV-2 and becomes a patient with COVID-19, suffering additional physical and mental health consequences (**Figure 1**).

For the HCW in the first level of impact, the work environment is one of constant stress. This may be due to the influx of severely ill patients with a contagious infection and inconsistent availability of personal protective equipment. This creates a work environment where the HCW is constantly aware of the risks of acquiring the infection and the added risks of transmitting infection to family members, friends, patients, or other HCWs. Further, the varying availability of mechanical ventilators and other pieces of medical equipment critical for patient care and survival may place HCWs in the extreme position of determining which patients have access to lifesaving equipment and which

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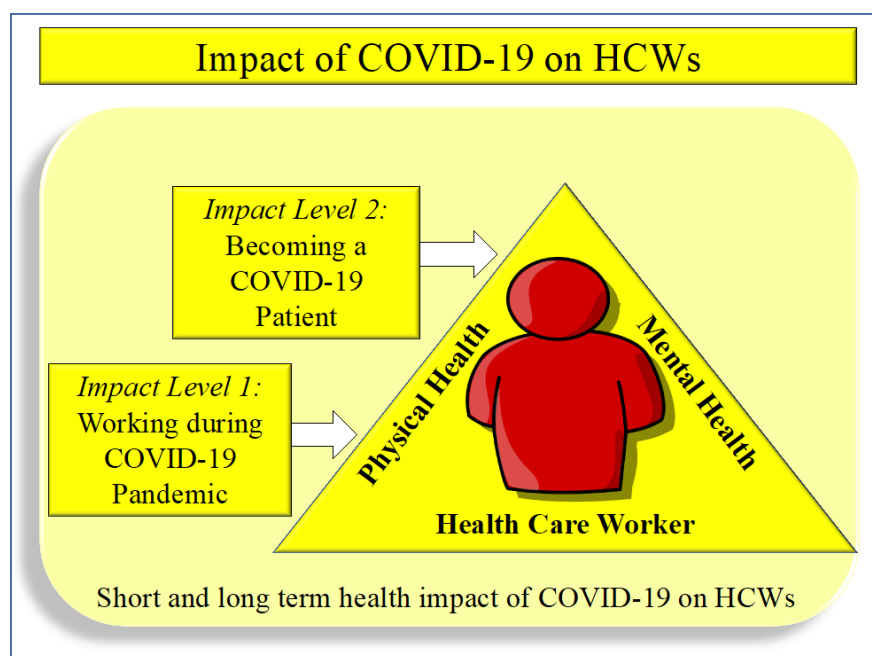
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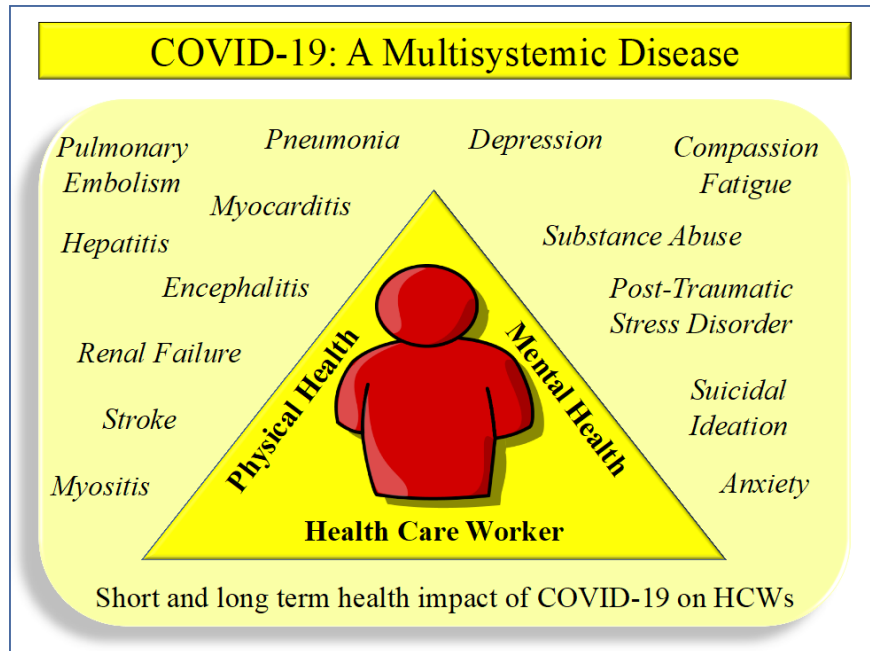


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**Figure 1.** Two levels of physical and mental health impact of the COVID-19 pandemic on HCWs.



**Figure 2.** Potential physical and mental health impact of COVID-19 on HCWs.

do not. For the HCW in the second level of impact, experiencing COVID-19 themselves results in additional physical and mental health consequences, as COVID-19 is a multi-system disease (**Figure 2**).

Data continue to accumulate regarding the short-term effects of COVID-19 on the lungs, heart, kidneys, nerves, muscles, gut, liver and brain. Data on long-term effects of COVID-19 is mostly unknown, but it is expected that a significant number of patients who recovered from COVID-19 will suffer long-term health consequences.

As we move forward through this pandemic, we need to recognize that HCWs are a special population that has been extremely affected by COVID-19. We will need significant basic clinical and epidemiological research in this area to develop appropriate preventive and treatment strategies. Maintaining a healthy healthcare workforce is not only critical in fighting this pandemic, but it will be critical if we want future generations to pursue a career in healthcare.

**References**

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