

Hospitals may Become “Disease Hotspots” for COVID-19 amid Shortage of Personal Protective Equipment

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Over the past 4 months, the world is facing exceptionally dangerous health hazards as the coronavirus disease 2019 (COVID-19) rapidly advanced worldwide and declared as a pandemic. Case fatality in the current COVID-19 pandemic has been seen not only in elderly people but also in their 30s and 40s.¹ In an infectious disease outbreak, the brunt of attack can be on healthcare workers (HCWs) due to the nature of their work exposure. A substantial number of COVID-19 cases have been documented in HCWs which could be due to a lack of preventive measures. Taking into account of contagious nature of COVID-19, precautionary measures require considerably more than putting on a mask and gown.^{2,3} Various educational, supervisory, and contrive measures may be often neglected while following safety steps.

Many individuals are asymptomatic even after acquiring virus infection and these carriers can further fan outspread of the virus to their companions due to frequent interface in the limited area.⁴ Such infections in HCWs can be a source of unintentional nosocomial outbreaks, making hospitals as disease hotspots.⁵ Infections in HCWs is a sinister sign of an epidemic as they need to be quarantined or treated in hospitals, putting on additional stress on the already weakened healthcare system in such a crisis in a developing country like India. Considering the training and skill of HCWs, it is very difficult to replace them in a short span of time.³ In addition to this, some important factors could influence the vulnerability of medical staff for COVID-19. These include misjudging the ongoing pervasive spread of the virus; tendency to examine patients without adequate safety measures; lack of regular surveillance of HCWs along with refusal and underreporting of community spread can lead to ignorance in them; a shortfall of personal protective equipment (PPE) and related issues; some patients can hide contact exposure and high-risk travel history endangering HCWs at work; long working hours leading to tiredness amid crisis can expose them to infection.^{2,3,6}

Among these, the scarcity of PPEs has been commonly blamed worldwide for infections in HCWs and should be addressed as a priority. Indiscriminate usage can lead to wastage, hence PPEs should be judiciously utilized. Unwarranted reuse as well as inconsistent use of PPEs may be the end result of shortages.^{3,7,8} Also, faulty use of PPEs especially steps in donning and doffing of PPE are error-prone, which can be implicated for infection in HCWs. This needs special training and mistakes can be avoided with careful supervision and repeated training programs.⁹ Ignorance of policymakers and national authorities that every individual person in the workforce will follow directives accurately can be

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a larger issue which should be ascertained with repeated audits and proactive steps of continuous training. Precisely formulating checklists to get rid of errors and team-based simulation training is significantly important in such a scenario.¹⁰ Measures like traffic control bundling have effectively prevented HCW infections in previous epidemics which we need to stress upon now.⁵ Additionally, inferior and poor quality of PPE may be contributory in HCWs infection as a economize strategy to get profits amid demand-supply mismatch. Though regulatory authority has provided guidance on quality assurance of PPE with process validation, the issue is complicated as stringent surveillance may not be happening as per media reports.^{7,8,11} By just providing advisory and guidelines will not be sufficient, but we need to have the right perspective for issues related to PPE with regulatory authority taking proactive steps in a managerial role to fill in gaps to safeguard medical personal.

With all of this, it is not surprising that HCWs have to face the impact of COVID-19 with a matter of life and death but we must talk honestly regarding how it is influencing medical professionals globally.^{3,9} Recovering from the current pandemic really needs that we have to protect HCWs by vigilant training which helps to contain disease among them. Therefore, we have to be attentive by not dropping down on the downsides of ignorance toward

this pandemic. It is praiseworthy to have pragmatic strategies to facilitate patient care while a must for safeguarding HCWs.

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