

Mandatory use of a face shield for health care workers in non-COVID-19 areas of hospitals: the need of the hour

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COVID-19 is a novel phenomenon for the entire medical community, and it is certainly not like the coronavirus that causes mild illnesses and common cold. The respiratory illness caused by this virus manifests along a spectrum, ranging from mild symptoms to serious respiratory distress or even death. COVID-19 is transmitted mainly through respiratory droplets and fomites.¹⁻³ Community transmission of an infection is said to have occurred when individuals in a particular area have been

infected with no clue regarding the source of the infection or with no direct contact with an infected individual.⁴ It is difficult to trace the source of the infection because, considering that its manifestation ranges from asymptomatic to severe respiratory distress, asymptomatic individuals could be the main source of the infection.

The isolation of suspected and proven cases of coronavirus is imperative for containing the infection.

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However, this becomes challenging when community transmission occurs, which leads to an exponential increase in the rate at which the infection progresses. Globally, healthcare workers have been working relentlessly to prevent transmission and to treat those infected without causing further spread of the disease. It has led to active separation of COVID-19 and non-COVID-19 units to decrease contamination within hospitals, without compromising the functioning of the healthcare system.

During this pandemic, personal protective equipment (PPE) plays a priceless and unparalleled role in the protection of healthcare workers (HCWs) and in the prevention of virus transmission. However, with the overwhelming demand for PPE worldwide, amid community transmission with no traceable contact with proven cases, HCWs need to take all precautions while treating each patient. This is particularly important because, without the use of appropriate

PPE and precautions, there is a high probability that the HCW would contract the virus from a subclinical asymptomatic carrier, who may later become symptomatic over the course of 2 to 14 days. The HCW could also become a source of infection for other patients in the hospital and for their family members at home. Such an event could be catastrophic, as it would necessitate that HCWs be quarantined, which would further diminish the functional capacity of human resources. Therefore, we feel that the use of PPE by staff in the non-COVID-19 wing of hospitals is as vital as that by COVID-19 staff. In its recommendations for easing the currently-implemented socialization restrictions to control the community transmission of COVID-19, the Infectious Diseases Society of America (IDSA) suggested the societal use of PPE, such as masks and face shields.⁵

A face shield is a clear plastic barrier that covers the face. To provide the required protection, it

Figure 1: Low cost Face shield made up of plastic



should extend below the chin anteriorly, to the ears laterally. Additionally, there should be no exposed gap between the forehead and the shield's headpiece. They are usually made of simple and easily-available materials so that they can be produced in significant numbers locally, and at affordable costs, especially during this dire emergency.⁶ Unlike face masks, face shields can be cleaned and disinfected, and their use could be adopted quickly. Therefore, we created an indigenous, low-cost, plastic face shield in our institute that mimicked a visor (Figure 1). This face shield can be produced in huge quantities and is cost effective. It is made of plastic, and can be disinfected using 70% alcohol solution after usage. These face shields are to be worn by the HCW in addition to the N95 (or triple layered surgical mask if N95 mask is unavailable) by the HCW especially while performing aerosol generating procedures like intubation, extubation, suctioning, etc. The cost effectiveness and easy availability of the materials for this shield allows its use in all non-COVID-19 areas of all hospitals. Finally, it can also be discarded easily. We recommend that such products be produced locally and be adopted into regular practice by every health care facility to ensure that each HCW is protected during this pandemic.

Conflicts of interest

All authors report no conflicts of interest to declare.

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