

Respiratory Protection - Even in the Bigger Picture, it is Often the Smallest Details that Take Your Breath Away

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It is surprising and even endearing in a way that we, as humans, live life looking ahead with hope, always believing in a better tomorrow, sometimes being oblivious to risks and dangers, often telling ourselves that bad things probably only happen to others and that the threats mentioned are in reality not as bad as they seem [1]. As health care workers, although fear is supposed to be one of the greatest motivators, we bring a bit of this nonchalant attitude to our workplaces in being slightly indifferent especially to the dangers we know but can't see and thus do not fear, in what is often referred to as the 'health belief model' [2-4].

Much like how it took the AIDS pandemic to bring about a need to wear gloves as a universal precaution, it has taken a series of respiratory pandemics to highlight the need for respiratory protection [5-8]. But then again in spite of Centers for Disease Control and Prevention (earlier the Communicable Disease Center or CDC) advisories in 1996 that were updated stressing on the need for gloves as part of the standard precautions and the fact that patients were more comfortable with doctors treating them with gloves on, there has surprisingly been much debate over the need and efficacy of gloves citing problems like doubtful efficiency in view of micro pores, allergy to materials like latex or even decreased manual dexterity and tactile perception [9-21]. A study also concluded that training in itself by way of infection control education need not positively enforce compliance [22].

One of the most neglected aspects of healthcare workers' health has been that of respiratory health [23-26]. Two reasons for this are a lack of implementation of a stress on respiratory protection in educational settings coupled with a lack of a disciplined approach towards the same including a dedicated donning and doffing protocol

[27,28]. If one takes just a moment to check the plethora of variants of respiratory protection available as per the Occupational Safety and Health Administration (OSHA) regulations for general, construction and maritime industries or the guidelines laid down in the National Institute for Occupational Safety & Health (NIOSH) guide to industrial respiratory protection of 1987, one might actually be truly concerned as to why we never considered ourselves worthy enough of similar protection [29]. The first attempt at introducing respirators into the healthcare arena was probably with the release of the NIOSH TB Respiratory Protection Program in Health Care Facilities, administrative guide in 1999 [30]. This was assumed to be a mandatory guideline in areas where there would be definite exposure to patients infected with tuberculosis. The discomfort associated with wearing even a simple three-ply surgical mask and the need to feel presentable or even clearly audible while discussing aspects of the treatment plan or expenses with a patient has more often than not prompted the removal of respiratory protection thus defeating any attempt at thoroughly complying with respiratory protection guidelines [1-34]. Most often a mask is removed by a healthcare worker soon after a procedure is complete oblivious to the suspended aerosol that still lingers, suspended, in the very same room for almost half an hour unless engineering controls exist to evacuate contaminated air from the room [35]. There have been infection control advisories released by regulatory or advisory bodies, as with the CDC advisories that were updated after the 2009 H1N1 pandemic, that have tried laying down standard protocols including methods of controlling or minimizing aerosol and most of these originate from the universal precautions safeguarding against blood borne infections with the inclusion of protection against exposure to other body fluids or any

other potentially infective material [12,13,36,37].

The stress, however, on respiratory protection has been very cursory especially in its acceptance or compliance. If there had been emphatic insistence much like that for an industrial worker you would have filtration protection of probably the highest filtration efficiency becoming the standard norm for healthcare institutions even prior to the H1N1 Pandemic. Having used a surgeon's mask for more than 100 years there was limited acceptance of the tighter fitting N95 type respirators [32,33]. Enter a pandemic like Covid-19 and the sudden realization hits that what we need now is probably the very same respiratory protection we should have been using all along but now there's a short supply. The next realization is that as we don't seem to use respiratory protection that much which is why we do not have enough supplies backed up and we desperately search for others who might be using similar protection. We turn to the supplies that in actual reality were meant for the common industrial man working with wood, stone, steel or chemicals. In a bid to save lives we need every single non-medical particulate respirator that is available because their filtration efficiency is the exact same standard of the medical equivalent with just a small difference that the surface is not as splash resistant. In Asian countries wearing a mask has always been a social norm [38]. We have seen a shift in advisories for the general public ranging from no need for a mask to the current suggestion that at least some form of facial covering is desirable. Now we see a shift in global preferences for respiratory protection as our perceptions have been forced to change radically as the truth slowly dawns upon us all.

Let us, for a moment, forget about Covid-19, the opportunistic airborne infection. We have around us obligate airborne infections like tuberculosis too. Apart from the risk of contracting respiratory diseases in settings outside a health care facility shouldn't there have been mandatory respiratory protection protocol enforced in all healthcare setups all along making us better prepared to handle the current pandemic instead of allowing it to just ...take our breath away!

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