



Preliminary Guidance on Facial Hair and Respiratory Protection in the Healthcare Setting in the Context of COVID-19 and other pathogens transmitted by the same route.¹

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Background

Healthcare workers (HCWs) are at increased risk of exposure to a variety of respiratory hazards including transmissible respiratory diseases. One element of protecting HCWs against infectious respiratory hazards is the effective use of specific items of personal protective equipment (PPE). Surgical face masks and respirator masks are the most commonly used types of PPE in this context.

1. Surgical masks

Surgical masks are intended to protect the wearer against the mucosa of the nose and mouth and most of the surrounding skin from impact of respiratory droplets originating from the respiratory tract of the patient. The degree of protection afforded is related to the properties of the mask and how it is applied in particular the fit of the mask to the face. Facial hair that is sufficient to prevent the mask from fitting flush against the skin of the face is likely to result in reduced protection against droplet impact.

2. Respirators

In this context, respirators are intended to provide protection from infectious agents spread by the airborne route (small aerosols) including aerosols generated during Aerosol Generating Procedures (AGPs).

There are two types:

(a) Respirator masks (flat or cone shaped, FFP2 or FFP3)

These are disposable masks and are intended to protect the wearer against inhalation of infectious aerosols in addition to protection against droplet impact. The degree of protection afforded is related to

the properties of the mask and how it is applied, in particular the fit of the mask to the face. The filtration of aerosols is entirely dependent on forcing inhaled air to pass through the fabric of the mask. This works if the seal of the mask against the face prevents air circumventing the mask. Respirator masks that do not fit flush because of facial hair along the sealing area of the respirator cannot be considered as providing adequate protection against exposure to aerosols.

Fit testing of respirator masks and the fit checking of the mask each time used is required to ensure that the mask fits properly to the wearers face shape, with no gaps between the mask and face for air to escape unfiltered.

(b) Powered Air Purifying Respirators (PARPs)

PARPs enclose the entire head in a hood. Protection is provided against droplets (head is enclosed) and aerosols (air is pumped by a battery-powered pump through an appropriate filter into the hood). As the entire head is enclosed, PARPs do not require a seal against the skin. The protection afforded is not reduced by facial hair. PARPs are not generally used and are not widely available. There may be significant challenges in relation to use of PARPs. They may not be easy to source, costs are significant, staff need to be trained in their use, they must be cleaned and decontaminated according to the manufacturer's instructions and there can be issues of user comfort.

Options for Management

There is no one solution that will work for every facility and for every healthcare worker. The options for healthcare workers with facial hair that prevents a surgical mask or respiratory mask from fitting flush against the skin are as follows:

1. Remove facial hair that interferes with the fit of the mask flush against the skin. This is the most practical way to ensure that staff can benefit fully from protection provided by surgical masks and properly fitted respirator masks.
2. For healthcare workers for whom removal of facial hair that interferes with the fit of the mask flush against the skin is not an acceptable option
 - a) surgical masks are likely to provide useful protection against droplet transmitted infection but this may be at a reduced level.
 - b) respirator masks cannot be expected to work effectively
3. Risk management options include

- a) Consider if they can be assigned duties that do not involve direct care for patients for whom aerosol precautions are required.
- b) Wear a PARP when caring for patients for whom airborne precautions are required.

Notes.

1. This note relates only to use of respiratory protection related to infectious disease. Exposure to other hazardous substances is beyond the scope of this document.
2. For an illustration of facial hairstyles that may impact on the function of respirator masks see <https://blogs.cdc.gov/niosh-science-blog/2017/11/02/noshave/>

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