



COVID-19 RESPONSE

Guidance for Extended Use and Reuse of Facemasks, Respirators, and Protective Eyewear (3/12/20)

Executive Summary for the Extended Use of Facemasks, Disposable Respirators (N95) and PAPRS

These recommendations should be applied across all UMMS entities where surgical and procedural masks (henceforth in this document collectively referred to as **facemasks**) and **respirators** are worn. Respirators include powered air purifying respirators (PAPRs), N95s referred to as “disposable N95 respirators” and elastomeric respirators referred to as “reusable elastomeric respirators.” These recommendations are temporary while there are national and international shortages of respiratory protection products.

Guiding Principles:

- Extended use (i.e., wearing mask continuously for several hours) is preferred over re-use (i.e., taking the mask off and putting back on) on the assumption that it is safer for the employee to leave their mask in place, and reduce the risk of self-contamination through frequent donning and doffing of the SAME mask.
- When available, elastomeric reusable respirators should be the primary type of reusable respirators, however, PAPR hoods and disposable N95s can be re-used in a careful and limited way during this shortage.
- Guidance is for reuse by a single person (no sharing). Facemasks may NOT be worn for extended use and need to be discarded upon extended. Disposable N95 respirators worn for COVID-19 PUIs may be re-used or worn for extended use as long as they were not worn during an aerosol generating procedure.
- Limit room traffic where possible by ensuring that only those essential for patient care enter the room; strategies include bundling of care, limiting or avoiding bedside clinical teaching, limiting operating room traffic, and use of telemedicine where possible.

Purpose

- To prevent a shortage or exhaust our supply of facemasks and respirators.
- To ensure that our staff have access to the necessary supplies to be able to perform patient care safely.

Applicability

These guidelines apply to the following groups:

- All health care personnel (HCPs) who need to wear respiratory protection during patient care or as a requirement of their work responsibilities.

Guidance for Re-use and Extended Use of Respirators

Disposable N95 Respirators: General Guidelines

- This applies to only those who are fit-tested for a disposable N95 respirator
- Extended use or re-use not recommended if worn during an aerosol generating procedure
- All supply of N95 respirators are will be stored in locked or secured, designated areas (ex. Supply Chain, Unit Manager, Charge Nurse, or Lab Supervisor) and will be issued to staff with an appropriate receptacle or container that allows breathability.
- Label both the N95 respirator and receptacle with user's name before using to prevent reuse by another individual. Write name on elastic straps of N95 mask.
- Write dates and times used on the bag to track overall use.

Requirements for the Reuse of Disposable N95 respirators

- Donning
 - Once the disposable N95 respirator is donned and the safety check is performed to confirm a seal, a surgical mask with face shield or a full face shield should be applied over the N-95 respirator protecting **the N95 from surface contamination.**
 - During patient care, take care to NOT TOUCH your masks.
- Doffing
 - While in the patient's room, ONLY remove gloves and gown close to the doorway.
 - Perform hand hygiene.
 - After exiting patient's room, Remove the mask with face shield (barrier) and discard. The front is contaminated, so remove by holding by the ear loops.
 - If wearing reusable eye goggles or full face shield
 - Perform hand hygiene before removing goggles or full face shield
 - After completing all doffing steps, disinfect and store goggles or full face shield for reuse.
 - Exit room & perform hand hygiene.
- You can continue to wear N95 respirator for your entire shift remove the N95 respirator and store appropriately for re-use (see below). Perform hand hygiene after removal.

Storage of Previously Worn Disposable N95 Respirators:

- After removing N-95, visually inspect for contamination, distortion in shape/form. If contaminated/wet, creased or bent, N95 should be discarded.
- If the N95 is NOT visibly contaminated or distorted, carefully store to avoid destroying the shape and consistency of the mask.
- The N95 should be stored in a well-ventilated container (i.e., paper bag) with user name & date.
- A disposable N95 can be worn for several hours and multiple shifts if not wet or distorted, not touched while delivering patient care, and not involved in an aerosol-generating procedure (CDC and NIOSH, pandemic response).

Process to re-use your disposable N95 respirator

- Remove N95 mask from storage bag and visually inspect for distortion. If creased or bent do not re-use
- Donning

- Perform hand hygiene
- Don gown and gloves.
- Don the N-95 mask. Ensure a tight seal – if not a tight seal, the respirator cannot be re-used.
- Perform a negative/positive fit check by doing the following:
 - No air should be felt around the perimeter while blowing out. If you feel air coming out it is not a tight seal.
 - When taking a small breath in, the mask should pucker in slightly. If it does not, it is not re-usable.
- Ensure the mask is breathable, if unable to breathe in the mask, the respirator cannot be re-used.
- Don mask with face shield or full face shield over N95.

Reuse of PAPRs including Hoods

- Donning:
 - The PAPR should be applied first after a safety check. Don the gown after the PAPR to protect the hose and module from surface contamination.
- Doffing
 - While in the patient’s room, ONLY remove gloves and gown prior to leaving.
 - Perform hand hygiene.
- Upon exiting the patient’s room, remove the PAPR, clean, and store appropriately (see below).
- Perform hand hygiene.

Disinfection and Storage of USED PAPR components including the Hood

- Visually inspect the PAPR hood for any contamination; discard and do not re-use the device if visibly contaminated
- Disinfect the PAPR module and hose using hospital’s approved disinfectant, per instructions below
- Return the PAPR module and hose to the central supply location per hospital or unit protocol
- Store the PAPR hood in the provided receptacle labeled with your name.

Process for Re-using PAPR hood

- Visually inspect for any contamination; discard and do not use the device if visibly contaminated.
- Perform hand hygiene
- Assemble your PAPR components including your personal PAPR hood labeled with your name.
- Don the PAPR
- Don your gown.
- Perform hand hygiene.
- Don gloves

Process for Re-using Reusable Elastomeric Respirator

- Before wearing an elastomeric, visually inspect for any contamination; do not use the device if visibly contaminated. Notify the manager of respiratory protection program for appropriate cleaning and disinfection.
- Donning
 - Perform hand hygiene

- Don the reusable elastomeric respirator. Ensure a tight seal – if not a tight seal, the respirator cannot be re-used.
- Don your gown
- Don face shield
- Perform hand hygiene.
- Don gloves
- Doffing
 - While in the patient’s room, ONLY remove gloves and gown prior to leaving.
 - Perform hand hygiene.
 - After exiting patient’s room, remove the mask with face shield (barrier) and discard. The front is contaminated, so remove by holding by the ear loops.
 - If wearing reusable eye goggles or full face shield
 - Perform hand hygiene before removing goggles or full face shield
 - Remove goggles or full face shield
 - After completing all doffing steps, disinfect and store goggles or full face shield for reuse.
 - Remove the elastomeric respirator and perform hand hygiene.
 - Clean per instructions below and store.

Decontamination of reusable elastomeric respirators and PAPR hoods:

Directions for cleaning elastomeric respirator:

Wearing clean gloves, determine that 4 wipes of the hospital’s approved disinfectant are available:

1. Remove filters and strap harness
2. Wipe the outer surface of the facemask with one wipe (1st)
3. Wipe the inner surface of the facemask with a new wipe (2nd)
4. Wipe filters with a new wipe (3rd)
5. Wipe strap and harness with new wipe (4th).
6. Allow to air dry for 2 minutes.
7. Remove any cleaning agent residue with a towel or towelette wetted with water or saline
8. Let air dry

Directions for cleaning PAPR hoods:

Wearing clean gloves, determine that 4 wipes of the hospital’s approved disinfectant are available:

1. Detach the PAPR hose and battery pack module from the hood
2. Wipe the outer surface of the PAPR hood with one wipe (1st)
3. Wipe the inner surface of the PAPR hood with a new wipe (2nd)
4. Wipe hose with a new wipe (3rd)
5. Wipe battery pack module with new wipe (4th).
6. Allow to air dry for 2 minutes.
7. Remove any cleaning agent residue with a towel or towelette dampened with water or saline

8. Let air dry

References:

Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health (NIOSH)
<https://www.cdc.gov/niosh/topics/hcwcontrols/pandemic-planning.html>