Extended Use & Limited Reuse of Disposable Facemasks, Respirators & Protective Eyewear

EFFECTIVE IMMEDIATELY: 03/24/2020

OVERVIEW:
These recommendations are temporary while there are national and international shortages of protective equipment.
These guidelines apply to the following:

- Respirators include powered air purifying respirators (PAPRs)
- Disposable N95 respirators
- Protective eyewear (whichever is available):
  - Face shields
  - Safety glasses
  - Goggles

PURPOSE:

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

DEFINITIONS:

- Extended Use
  - Refers to the practice of wearing the same N95 respirator for repeated encounters with several patients, without removing the respirator between the encounters.
  - Extended use may be implemented when multiple patients are infected with the same respiratory pathogen and patients are placed together in dedicated waiting rooms, clinics or hospital units.
  - Eye protection may be left in place with the N95 respirator for extended use.
Extended Use & Limited Reuse of Disposable Facemasks, Respirators & Protective Eyewear

DEFINITIONS (Continued):

- **Reuse**
  - Refers to the practice of using the same N95 respirator for multiple encounters with patients but removing it (‘doffing’) between at least some of the encounters.
  - The respirator is stored in between encounters and reused.
  - Re-use of full face shields will be permitted.
  - Face shields will be dedicated for use by individual healthcare personnel.
  - Disinfection of the face shield will be required between uses.

GUIDING PRINCIPLES

- **Extended use is preferred over re-use**
  - On the assumption that it is safer for the employee to leave their mask and eye protection in place, to reduce the risk of self-contamination through frequent donning and doffing of the same equipment.
  - Facemasks, PAPR hoods, N95s and eye protection can be re-used in a careful and limited way during periods of short supply.
  - Guidance is for reuse by a single person (NO SHARING). This principle applies to respirators and eye protection.
  - Disposable N95 respirators worn for COVID-19 PUIs may be re-used or worn for extended use as long as:
    - It was not worn during an aerosol generating procedure.
    - It has reached the end of its use by being damaged or moist from sweat or insensible fluid loss through breathing.
  - The use of N95 respirators is prioritized for those personnel at the highest risk of contracting or experiencing complications of infection.
  - 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.
    - Use of telemedicine where possible.
Extended Use & Limited Reuse of Disposable Facemasks, Respirators & Protective Eyewear

(APPLICABILITY)

These guidelines apply to all healthcare workers (HCW) who need to wear respiratory protection during patient care or as a requirement of their work responsibilities.

GENERAL GUIDELINES

- **N-95 Respirators**
  - Re-use guidelines apply only to those who are fit-tested for a disposable N95 respirator.
  - Extended use or re-use is *not* recommended if worn during an aerosol generating procedure or if the N95 respirator has reached the end of its use through being damaged or moistened.
  - All supplies of N95 respirators will be stored in locked or secured, designated areas and will be issued to staff with an appropriately handled paper bag or container that allows breathability.
  - Label the N95 respirator and paper storage bag with the user’s name before using to prevent reuse by another individual. Write name on mask where straps are attachment or on elastic straps of N95 mask.
  - Write dates and times used on the bag to track overall use.
  - Full face shields (if available) are dedicated to individual healthcare personnel as the foam piece and elastic band cannot be adequately disinfected between uses.
  - Re-use of full-face shields is permitted following disinfection guidelines.
  - Label the full-face shield across the top with name.

GUIDANCE FOR REUSE & EXTENDED USE OF FACEMASKS (Surgical/Procedure Masks)

- **Doff facemask**
  - Perform hand hygiene
  - Remove the procedure mask by holding the ear loops or ties. The front is contaminated, so remove slowly and carefully.
  - After removing facemask, visually inspect for contamination, distortion in shape/form. If contaminated or wet the mask should be discarded.
  - If the facemask is NOT visibly contaminated or distorted, carefully store in the paper bag to avoid destroying the shape of the mask.
  - The facemask should be stored in a well-ventilated container (i.e., paper bag with handles) with user name & date.
  - A disposable facemask can be worn for several hours if not wet or distorted, and not touched while delivering patient care.
Extended Use & Limited Reuse of Disposable Facemasks, Respirators & Protective Eyewear

(Continued):

INSTRUCTIONS FOR LIMITED REUSE OF DISPOSABLE N95 RESPIRATORS

- Extended use is preferred over re-use.
- You can continue to wear the N95 respirator and eye protection for your entire shift. N95 and eye protection may be removed and stored appropriately for re-use later.

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 handles) 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 (per CDC and NIOSH, pandemic response).

PROCESS TO REUSE YOUR DISPOSABLE N95 RESPIRATOR

- Remove N95 mask from paper 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 respirator.
  - Perform hand hygiene over gloves.
  - Perform a negative/positive seal 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.
    - If not a tight seal, the respirator cannot be re-used.
  - Ensure the mask is breathable, if unable to breathe in the mask, the respirator cannot be re-used.
  - PERFORM HAND HYGIENE over gloves following seal check as the mask has been previously used.
  - Don procedure mask with goggles or full face shield over N95.
  - Continuing donning order of other PPE.
Extended Use & Limited Reuse of Disposable Facemasks, Respirators & Protective Eyewear

(Continued):

INSTRUCTIONS FOR LIMITED REUSE OF PROTECTIVE SAFETY GLASSES OR GOGGLES

- Remove safety glasses per doffing procedure, ensuring to only touch the slides of the safety glasses or goggles.
- Don clean gloves and wash the safety glasses with soap and water, utilizing friction to remove any contaminants.
- Allow to dry before donning again.
- Store in your brown paper bag with the rest of your PPE.
- Item has been decontaminated prior to storage so it can be placed at the bottom of the bag.
- If contamination occurs from the mask stored on the bag, decontaminate again with soap and water.

INSTRUCTIONS FOR THE LIMITED REUSE OF FULL FACE SHIELDS (if available)

- Full face shields are dedicated to individual healthcare personnel as foam piece and elastic head band cannot be adequately disinfected between personnel.
- Don gloves and adequately disinfect inside then outside surfaces, avoid using PDI Sani wipe on foam and elastic band.
- Store reused full face shield alongside your labeled paper bag containing your re-used N95

INSTRUCTIONS FOR THE LIMITED REUSE OF PAPR HOODS

- Donning:
  - After performing a safety check, assemble the PAPR to connect the hood, hose belt and motor.
  - Write name on the hood.
  - Perform hand hygiene.
  - Don the PAPR by donning the belt, turning on the PAPR motor and donning the ½ hood.
  - Don gown over the PAPR tubing and belt.
    - Use easy to undo bows to secure the ties
    - Tuck gown under the PAPR motor to avoid the gown occluding air inlet to the PAPR motor.
  - Don gloves.

- Doffing
  - While in the patient’s room, remove gown then gloves prior to leaving.
  - Perform hand hygiene.
  - After exiting the patient’s room, turn off PAPR motor, undo belt, remove the PAPR hood, clean, and store appropriately (see below).
  - Perform hand hygiene.
Extended Use & Limited Reuse of Disposable Facemasks, Respirators & Protective Eyewear

(Continued):

DISINFECTION & STORAGE OF PAPR COMPONENTS INCLUDING HOOD FOR REUSE

• Don gloves and a procedure mask
• Visually inspect the PAPR hood for contamination; discard and do not re-use if visibly contaminated.
  o If visible contamination is not observed, do not disconnect any of the PAPR components if it will be reused during the shift.
  o Do not remove the PAPR filters from the motor unless flow test fails due to clogged filters.
    ▪ Disinfect the PAPR motor, belt, hose and hood using PDI Bleach Wipes, while observing the 1 minute contact time necessary to kill human coronavirus using the following order:
      o PAPR motor and filters (avoid introducing liquid into the filter holes).
      o Belt
      o Tubing
      o Hood (wipe the hood inside then the outside)
• Once completely dry, place the PAPR in a clean area close to where it will be reused.

DISINFECTION, DISPOSAL & STORAGE OF USED PAPR COMPONENTS

• Follow above procedure for cleaning and disinfecting PAPR with the following exceptions
  o Disconnect PAPR belt to disinfect separately and reattach to PAPR motor when dry.
  o Disconnect and dispose of PAPR hood.
  o Return PAPR motor with filters, belt and tubing attached to unit storage area.
• Plug in PAPR motor to recharge battery.
Extended Use & Limited Reuse of Disposable Facemasks, Respirators & Protective Eyewear

(Continued):

BAG EXAMPLES:

References:


This document was adapted from Guidance for Extended Use and Reuse of Facemasks, Respirators, and Protective Eyewear, University of Maryland.