

N-95 RESPIRATOR REUSE AND REPROCESSING

PURPOSE

Provide strategies to optimize supplies of disposable N95 filtering face-piece respirators (commonly called "N95 mask or respirators") when there is limited supply. During pandemic of COVID-19, as an interim alternative during shortages, N95 masks or other respirator masks will be reprocessed using procedures successfully demonstrated by other hospitals (e.g., heat or hydrogen peroxide vapors).

GENERAL

- Same provider may reuse N-95 respirator unless it becomes moist, physically damaged, soiled or contaminated with blood or body fluids.
- There is no limit for respirator use in terms of number of times or length of time.
- Reuse N95 respirator for different patient encounters as long as it is the same care provider.
- Protect the N95 mask from contamination such as use of face shield and/or other steps (e.g., masking patients, use of engineering controls), when feasible to reduce surface contamination of the respirator. If a face shield is not available, use a facemask as a layer of protection for the N95 mask.
- Provide a process to recycle and issue clean N95 or respirator mask, which are free of germs to healthcare workers during the pandemic and mask shortage.
- If a N95 mask is used for aerosol generating procedures (AGP) for COVID patient, place this mask in the reprocessing bin.
- If a N95 mask is used for AGP for a patient with a negative COVID test, N95 mask is not indicated if being done related to pandemic protocol. Do use N95 for known negative COVID patient when indicated for non-pandemic purposes, e.g., tuberculosis, operating room smoke plume or measles.
- Test asymptomatic patients for COVID-19 to increase safety of healthcare workers and patients and reduce use of PPE for patients with negative test.
 - Positive patients identified via asymptomatic patients should be co-horted to COVID Care zones.
 - Negative patients identified should be co-horted with COVID-free zones.
 - When asymptomatic inpatients have negative COVID-19 result and visitation is restricted, N95 mask not indicated for routine AGP based on pandemic protocol. Follow standard precautions for personal protective equipment.

DEFINITIONS

- Compromised integrity*- mask that has been torn or contaminated with blood and body fluids, including those visibly soiled (e.g. make-up residue.)
*Do not placed these mask into the reprocessing bins. Place mask with compromised integrity into the trash.
- Aerosol generating procedures- procedures that are likely to induce coughing (e.g., sputum induction, open suctioning of airways).
- Reprocessing of mask- used and potential contaminated mask, which are

- “reprocessed” such as dry heat or disinfected with hydrogen peroxide vapors.
- Clean N95 mask-reprocessed N95 that are free of germs including COVID-19 virus.
 - Clean transport container – rigid container with secure lid used to transport clean mask after reprocessed.

STEPS FOR SAFE RE-DONNING (REUSE) OF N-95 RESPIRATORS USED FOR KNOWN COVID-19 OR COVID-19 SUSPECTS

Place N95 masks used for COVID-19 in bin for reprocessing/disinfection. Do not reprocess N95 masks used for other purposes, e.g., tuberculosis or measles.

1. Perform hand hygiene.
2. Take out new respirator.
3. Put on respirator and fit check.
4. Get paper bag, write your name on bag, leave on counter, and enter in patient room. Paper bags reduce risk of moisture build up that can promote microbial growth.
5. After exiting patient room, perform hand hygiene, don new pair of gloves, remove N-95 respirator. Avoid touching the inside portion of respirator.
6. Place N-95 respirator in a paper bag labelled with your name for later use.
7. Perform hand hygiene.
8. Use a pair of clean (non-sterile) gloves when donning a used N95 respirator and performing a user seal check. Put on N95 and make any adjustments to ensure the respirator is sitting comfortably on your face with a good seal. Then discard gloves.
9. When N95 is used, don gloves and remove N-95 from bag, being careful not to touch inside of respirator.
10. Put on N95 mask and perform fit check.
11. Throw away bag after one use. Perform hand hygiene (and repeat process).

SAFETY OF REPROCESSING:

- COVID-19 cannot survive at 65°C (149°F) for 30 minutes.
- Treatment of N95 mask may include dry heat at 70°C (158°F) for 30 minutes or hydrogen peroxide vapors to kill COVID-19 virus.
- N95 mask reprocessing is appropriate for the following situations:
 - N95 Mask used in aerosol generating procedures
 - N95 mask without compromise of integrity
 - N95 mask that is moist

- Do not reprocess N95 mask with compromised integrity. Compromised integrity includes masks that are physically damaged, soiled or contaminated with blood or body fluids. Mask with compromised integrity are discard into trash.
- Do not reprocess N95 mask when used for care of Mycobacterium Tuberculosis or Measles patients.

STEPS FOR REPROCESSING N95

1. Label N95 Mask

- Label your own individual compatible N95 respirator using a permanent marker; do not label others' or ask others to label for you.
- Label new N-95 mask before initial use. Label mask legibly by writing on the outside OR inside of each N95 respirator as shown below.
- Label N95 respirators with the Hospital/ Facility code as below, unit-location and your first and last name.
- Facility code:

Methodist University	MUH
Le Bonheur	LBCH
Methodist North	MHNH
Methodist Germantown	MLGH
Methodist South	MHSH
Methodist Olive Branch	MOB

2. Place mask in paper bag when it is ready for the reprocessing bin.

- Transport the mask inside a paper bag to the reprocessing bin.
- Place the mask and bag in the reprocessing bin.

3. Collection of contaminated N95 Mask

- Each MLH facility will designate a transport container to collect used and potentially contaminated N95/respirator mask.
- Designated containers for contaminated masks and label as **"Biohazard N95 for Reprocess"**.
- Containers placed in areas that have high volume of use for N95 mask (e.g. emergency department, GI Lab and operating rooms, and/or COVID cohort units.) Keep lid on container. When the Biohazard N95 for Reprocess container is full, EVS will deliver the container to an area designated by the facility for the collection of the biohazard N95 mask containers.

4. Biohazard Bins for N95 for Reprocessing

- A courier will pick up the reprocessing bins from the hospital and deliver to the reprocessing location.
- A team will sort and prepare the used N-95 mask for reprocessing.



5. Delivery of clean N95 Mask

- Facility responsibility
 - Each MLH hospital will designate a *clean* transport container for transport of reprocessed N95 masks.
 - Label the transport container as "**Clean N95 Masks**".
 - Deliver the clean bins to the reprocessing center. Avoid transport of clean and dirty in the same vehicle.
- Reprocessing team
 - Sort clean mask at the central processing location.
 - Package each mask individually in a manner that protects the integrity of the mask.
 - Place the packaged mask in the clean transport container.
 - Deliver clean mask to each hospital to the hospital central supply room (CSR).