

# HCA Healthcare Facility Guidance: PPE Reuse

**Version 4 - April 3, 2020**

HealthTrust Supply Chain

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Version	Date/Time	Summary of Updates
1	3/20/20 @ 1300	Document Created
2	4/2/20 @ 1200	Updated, combined multiple related documents into one central guidance document.
3	4/3/20 @ 9:15	Document Reformatted
4	4/3/2020 @355	PPE Donning and Doffing Guidelines Updated

# Respiratory and Eye Protection for Healthcare Workers Specific to the COVID-19 Response

## Purpose

HCA Healthcare Infection Prevention continues to work with supply chain partners in the judicious and safe use of our PPE. With the shortage of PPE including facemasks and N-95 respirators across the enterprise and US, this guidance is being provided in tandem with CDC recommendations (updated 3/30/20 and 4/1/2020). This document provides comprehensive guidance for respiratory protection of HCA Healthcare colleagues specifically in reference to caring for COVID-19 Persons Under Investigation (PUIs) or confirmed cases.

## Universal Masking

- Utilize a Level 1 procedural mask when in the general patient care area; and when a higher level of mask is not required. Level 1 mask will be assigned per department at beginning of each shift.
- Level 1 mask should be utilized for shift; or replaced when wet, damp, torn, visibly soiled or hard to breathe through.
  - When removed for one of above reason, discard in a designated container.
- Staff without direct patient contact (i.e., front desk, screeners, etc.) can reuse masks for multiple days unless it becomes wet, damp, torn, visibly soiled or hard to breathe through.
  - When removed for one of above reason, discard in a designated container.
- Keep mask on for restroom break
- During meal and water hydration breaks: utilize a disposable container to store the mask, outside surface of mask should be placed face down inside the container.
- Contact with the mask at any time should be followed by hand hygiene

## N-95 Respirator Extended Use and Limited Re-use Guidelines

- Extended Use refers to the practice of wearing the same N-95 for repeated encounters with several patients, without removing between patient encounters.
- Limited Reuse refers to the practice of using the same N-95 for multiple encounters but removing it (doffing) after each encounter. The N-95 is stored in-between encounters to be put on again (donned) prior to the next encounter with a patient.

## Considerations

- Greatest risk is from contamination by contact and requires extra steps for removal and storage in between uses

- Reuse of a single N-95 respirator is limited to a single caregiver for one shift and will be distributed per protocol. Do not discard N-95 masks between patients unless compromised.
- Note that gowns & gloves should be changed in between patients per standard process in the absence of gown reuse or extended use strategies
- N-95 respirator should be used in conjunction with a face shield to provide a physical barrier to contamination
- N-95 respirators should NOT be reused if:
  - Contaminated with blood, respiratory or nasal secretions, or other body fluids
  - Compromised, obviously damaged, wet, or difficult to breathe through

## **PPE Supplies Required**

- Gown – standard isolation
- Gloves
- N-95 respirator mask
- Facemask
- Eye protection – face shield (preferred) or goggles

## **Donning with Unused PPE**

1. Perform hand hygiene
2. Don gown
3. Don N-95 respirator – carefully pinch nose piece and perform self-fit test around sides
4. Don facemask instead of N-95 respirator for appropriate work and care activities
5. Don face shield or goggles
6. Don clean gloves
7. Perform patient care

## **Doffing Eye Protection and N-95 in Reuse Scenario**

NOTE: The following steps take place in designated location in proximity to the patient room as appropriate given the facility layout. Consult with IP and Nursing for the appropriate location at your facility.

1. Remove dirty gloves
2. Perform hand hygiene
3. Don clean gloves
4. Disinfect designated counter surface with hospital approved disinfectant wipe
5. Place two breathable bags or cartons (one for N-95 and one for face shield or goggles) labeled with caregiver name on counter surface
6. Remove face shield
7. Disinfect face shield with low level disinfectant wipe and place on clean counter surface to dry

8. Remove gloves
9. Perform hand hygiene
10. Don clean gloves
11. Keeping eyes closed, remove N-95 respirator with one hand on face piece and the other on the strap
12. Place skin contact side down in breathable bag or carton with strap under skin contact side
13. Remove dirty gloves
14. Perform hand hygiene
15. Don clean gloves
16. Close bag or container
17. Remove dirty gloves
18. Perform hand hygiene
19. Don clean gloves
20. Store dried face shield or goggles skin contact side down in the second bag or carton (now dried and may be placed in plastic)
21. Doff and discard gloves and gown
22. Perform hand hygiene
23. Store breathable bags or cartons with N-95 and face shield or goggles in designated area ensuring containers do not touch each other
24. Perform hand hygiene

NOTE: When glove conservation strategies are implemented, perform hand hygiene with alcohol based hand rubs on one set of dirty gloves to disinfect at steps 9, 14 and 18 which replaced steps 8 & 10; 13 & 15; and 17 & 19.

## **Re-donning in Eye Protection and N-95 Reuse Scenario**

1. Perform hand hygiene
2. Don clean gloves
3. Retrieve bag or container with N-95 respirator
4. Remove dirty gloves
5. Perform hand hygiene
6. Don clean gloves
7. Don gown
8. Carefully remove stored N-95 respirator from breathable paper bag or carton with one gloved hand on external side and the other glove capturing the loop
9. While holding external side of mask, apply respirator to face
10. With clean gloved hand loop around head/ears
11. AVOID TOUCHING FACE WITH DIRTY GLOVE\*\*
12. Remove dirty gloves
13. Perform hand hygiene
14. Don clean gloves

15. Carefully pinch nose piece and perform self-fit test around sides of respirator
16. Discard breathable bag or carton. A new one should be used each time.
17. Remove dirty gloves
18. Perform hand hygiene
19. Don clean gloves
20. Carefully remove stored face shield or goggles from breathable paper bag or carton.
21. Don face shield or goggles over N-95 respirator, careful not to touch your face\*\*
22. Remove dirty gloves
23. Perform hand hygiene
24. Don clean gloves
25. Perform patient care

\*\*If contamination occurs on face/skin, immediately wash area with soap and water

NOTE: When glove conservation strategies are implemented, perform hand hygiene with alcohol based hand rubs on one set of dirty gloves to disinfect at steps 13 and 18 which replaced steps 12&14; and 17&19.

## Education Materials

- Huddle Card: See Appendix
- Instructional Video: See Appendix

## Use of N-95 Respirators Beyond the Manufacturer-Designated Shelf Life

Some U.S. stockpiles include N-95 respirators that have exceeded their manufacturer designated shelf life. In times of respiratory protective device shortage, such as during the COVID-19 response, supplies must be managed so that protection against exposure is adequate. Information is provided below that may be used to inform these product release decisions.

[Link to CDC Strategies for Optimizing the Supply of N95 Respirators article](#)

## Considerations

- As part of the collaboration with supply chain partners for the judicious and safe use of our PPE, HCA Healthcare has requested that supplies of N-95 respirators past manufacturer-designated shelf life NOT be disposed of.
- Based on preliminary information gained in a CDC study, many models of N-95 respirators have continued to perform in accordance with NIOSH performance standards after manufacturer-designated shelf life. Accordingly, CDC/NIOSH believes the following products should

provide the expected level of protection to the user if the stockpile conditions have generally been in accordance with the manufacturer-recommended storage conditions and an OSHA-compliant respiratory protection program is used by employers.

- HCA Healthcare Division & Facility leaders should work through Supply Chain and EEOC to access any stockpiled supplies.

## Steps for Evaluation of N-95 Respirators Past Manufacturer-Designated Shelf Life

- Prior to using N-95 respirators past manufacturer-designated shelf life, consideration should be given to use of other available NIOSH-approved respirators including all types of filtering face piece respirators, elastomeric respirators, or powered air purifying respirators (PAPRs).
  - Visually inspect the N95 to determine if its integrity has been compromised.
  - Check that components such as the straps, Nose Bridge, and nose foam material did not degrade, which can affect the quality of the fit, and seal and therefore the effectiveness of the respirator.
  - If the integrity of any part of the respirator is compromised, or if a successful user seal check cannot be performed, discard the respirator and try another respirator.
  - Users should perform a user seal check immediately after they don each respirator and should not use a respirator on which they cannot perform a successful user seal check.

## Steps by Role for Use of N-95 Respirators Past Vendor Shelf Life

<b>Supply Chain</b>	Retain inventory, do not discard expired masks
	Place into service when in-date supply is dwindling
	Match vendor product to minimize fit testing to a different product
<b>Facility Designees (Suggest Employee Health, Nursing, IP)</b>	Implement just in time fit testing of the N-95 respirators to a limited number of high risk healthcare personnel (i.e. ER, ICU, etc.) that might need to use the respirators
<b>Frontline Staff/ End User</b>	Prior to use, visually inspect the respirator for integrity (strap material, intact foam on nose piece, etc.) and perform a seal check.
	If the integrity of any part of the respirator is compromised, or if a successful user seal check cannot be performed, discard the respirator and try another respirator.
	Use only respirators that meet self-seal check.
	Follow extended use or limited reuse guidelines

Note: For facilities using PAPRs or elastomeric respirators in lieu of N-95 respirators, follow manufacturer's instructions for use and cleaning/disinfection

## PPE Re-use Frequently Asked Questions (FAQs)

Questions from our clinical education teams that have been received from our hospitals related to guidelines of collection and reprocessing of PPE.

1. Our hospital has instructed us to put all types of PPE, including the isolation gowns into the green bags. Based on the guidelines it only references any type of mask, face shield or goggles, should we put isolation gowns and gloves into these bags?

**ONLY N-95 respirators, goggles and face shields should be collected (updated 3.31.20). Gowns are not being collected at this time.**

2. One division has adopted these guidelines for TB and varicella patients, should we only follow these new guidelines for only PUI and diagnosed COVID-19 patients?

**Extended and limited N-95 reuse has been an accepted practice for TB and varicella patients. With COVID-19 pandemic, ALL N-95 respirators, goggles and face shields should be collected (updated 3.30.20).**

3. Do we need to take off facemasks in between patients? (Earlier guidance suggested that was the action we needed to do.)

- **Universal masking for all staff and providers in patient care areas. Level one masks can remain on throughout a shift except when eating or drinking.**
- **Facemasks can remain on for multiple encounters. (N-95 can be worn for entire shift unless compromised)**
- **Face shields and goggles should be disinfected between encounters per the re-use instructions here**
- **ALWAYS wash hands or use alcohol based hand gel after touching face protective PPE and again before donning new PPE.**

4. We have been asked to provide a sign in and out sheet for PPE, do we have a sample that you can provide?

**A log is being developed by supply chain that will be shared with each division to share with facilities.**

5. The video via QR code says reuse of N-95 up to 5 times, based on the latest guidelines we need clarification that no longer applies and a clinician can wear the same mask for their entire shift.



**The same face mask (including N-95 respirator) can be worn until it is compromised, in which case can be collected in designated bag and a new one can be donned (again effective hand hygiene must be practiced).**

6. Can clinicians wear regular face mask for their entire shift?

**If facemask stays intact and viable for an entire shift without getting wet, soiled, hard to breathe through or compromised, the mask may last the shift (updated 3.30.20).**

7. Since N-95 respirators are for aerosolizing procedures only, are they single use or can we continue to use the entire shift?

**N-95 respirators are not reserved only for aerosolizing procedures, but are the only appropriate masks to wear during aerosolizing procedures. N-95s used for aerosolizing procedures can be reused, but should be discarded and not reused if:**

- **Contaminated with blood, respiratory or nasal secretions or other body fluids**
- **Compromised, obviously damaged, wet, or difficult to breathe through.**

8. A couple of our hospitals are working with Respiratory Therapy to try reuse of N-95 respirators when there is same caregiver/patient combination. Should we be doing this or can a clinician wear the same face mask for all patients?

**If RT is using an N-95 for aerosolizing procedures, follow answer for question 7.**

9. Staff anxiety is a concern because they don't understand that HCA Healthcare has secured a vendor for re-processing.

**We are working closely with supply chain in securing a vendor to reprocess facemasks. The FDA approval process is underway and we are in close contact.**

10. If the patient's room does not have an ante-room, should the donning and doffing be done outside or just inside a patient's room?

**Each facility may have a different designated area based on the unit design. This process should be in an area that is a safe distance from the patient (generally 6 feet). If in an airborne (negative pressure) room, doffing is preferred in the ante-room; however doffing may occur in proximity to the patient room door.**

11. Can we include the "why" and the CDC guidance in the document? It would help that we are all saying the same message.

- [CDC Strategies to Optimize the Supply of PPE and Equipment](#)
- [CDC Decontamination and Reuse of Filtering Facepiece Respirators](#)

12. When educators are making rounds the clinicians are asking about home-made mask. Is HCA Healthcare researching the effectiveness or use for homemade masks? Staff are seeing online and community members are reaching out to offer to help hospitals by making. Even though they are likely not appropriate for COVID, PUI is there any other use for them that might help us preserve PPE?

**This is a great effort by the community and offers such as these are growing. Please have the staff send this type of information to the EOC mailbox along with detailed information on the prototype. Also please thank them for their generosity and thoughts.**

13. How will a staff nurse know who the PPE Czar is in their hospital?

**The administrative leaders should be able to identify and provide this information for the frontline and communicated at each daily huddle. The Czar will also be wearing a vest or other means of identification.**

## Links and Resources:

- [CDC Recommended Guidance for Extended Use and Limited Reuse of N95 Filtering Facepiece Respirators in Healthcare Settings](#)
- [CDC Decontamination and Reuse of Filtering Facepiece Respirators](#)

## COVID-19 PPE: Donning and Doffing Guidelines

### PPE Reuse Huddle Card

- [Click here](#) to download the PPE Reuse Huddle Card.

## COVID-19 PPE: Donning and Doffing Guidelines

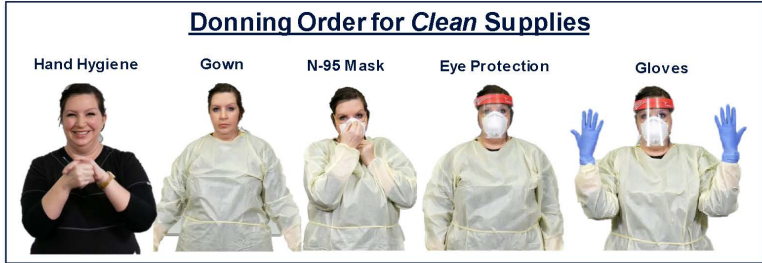
NOTE: Reuse of N-95 masks and face shields is not routine and should only be practiced during times of supply shortage as part of a strategy for judicious and safe use of PPE.

### Required Supplies:

- Gown – Standard Isolation
- N95 Respirator Mask
- Eye Protection (face shield or goggles)
- Gloves
- Storage Container
- Disinfectant Wipes



### Donning Order for Clean Supplies



### Doffing and Storage of N-95 Mask and Face Shield for Re-use

<ol style="list-style-type: none"> <li>1. Remove dirty gloves</li> <li>2. Perform hand hygiene</li> <li>3. Don clean gloves</li> </ol>	<ol style="list-style-type: none"> <li>4. Disinfect countertop with wipe</li> <li>5. Place two bags or disposable meal cartons labeled with caregiver name on counter surface</li> </ol>	<ol style="list-style-type: none"> <li>6. Remove face shield and disinfect with disinfectant wipe. Allow it to dry on clean counter surface.</li> <li>7. Remove gloves</li> <li>8. Perform hand hygiene</li> <li>9. Don clean gloves</li> </ol>	<ol style="list-style-type: none"> <li>10. Remove N-95 respirator with one hand on face piece and the other on the strap</li> <li>11. Place skin contact side down in paper bag or breathable carton</li> </ol>	<ol style="list-style-type: none"> <li>12. Remove dirty gloves</li> <li>13. Perform hand hygiene</li> <li>14. Don clean gloves</li> <li>15. Close bag or container</li> <li>16. Remove dirty gloves</li> <li>17. Perform hand hygiene and don clean gloves.</li> </ol>	<ol style="list-style-type: none"> <li>18. Store dried face shield or goggles skin-contact-side-down in the second bag (now dried and may be placed in plastic) or disposable meal carton.</li> <li>19. Doff and discard gloves and gown</li> <li>20. Perform hand hygiene</li> <li>21. Store bags or disposable food cartons in designated area ensuring cases do not touch each other</li> <li>22. Perform hand hygiene</li> </ol>
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## COVID-19 PPE: N-95 and Face Shield RE-USE DONNING

NOTE: Reuse of a single N-95 respirator is limited to a single caregiver for five times or one shift, whichever comes sooner. An N-95 respirator should NOT be reused if: contaminated with blood, respiratory or nasal secretions, or other body fluids or compromised, obviously damaged, or difficult to breathe through or used in an aerosol generating procedure.

### When reusing a personal N95 respirator mask and face shield, follow the below donning order

<p><b>Hand Hygiene</b></p> <ol style="list-style-type: none"> <li>1. Perform hand hygiene</li> <li>2. Don clean gloves</li> <li>3. Retrieve bags or containers with N-95 respirator and face shield or goggles</li> </ol>	<p><b>Gown</b></p> <ol style="list-style-type: none"> <li>4. Remove dirty gloves and perform hand hygiene</li> <li>5. Don clean gloves</li> <li>6. Don Gown</li> </ol>	<p><b>Retrieve N95</b></p> <ol style="list-style-type: none"> <li>7. Carefully remove stored N-95 respirator from paper bag or disposable meal carton with one gloved hand on external side and the other glove capturing the loop</li> </ol>
<p><b>Application of N95 Mask</b></p> <ol style="list-style-type: none"> <li>8. While holding external side of mask, apply respirator to face</li> <li>9. With clean gloved hand, loop around head/ears</li> <li>10. Remove dirty gloves and perform hand hygiene</li> <li>11. Don clean gloves</li> <li>12. Carefully pinch nose piece and perform self-fit test around sides of N-95 respirator</li> <li>13. Discard paper bag or breathable carton. A new one should be used each time</li> </ol>	<p><b>Face Shield</b></p> <ol style="list-style-type: none"> <li>14. Remove dirty gloves and perform hand hygiene</li> <li>15. Don clean gloves</li> <li>16. Carefully remove stored face shield or goggles from bag or breathable carton.</li> <li>17. Don face shield or goggles over N-95 respirator, careful not to touch your face.</li> <li>18. Remove dirty gloves and perform hand hygiene</li> </ol>	<p><b>Patient Care</b></p> <ol style="list-style-type: none"> <li>19. Don clean gloves</li> <li>20. You are ready to perform patient care</li> </ol>

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Scan the QR code for a video demonstration.

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