Current PPE FAQs and Guidance
for Yale New Haven Health and Yale Medicine

Introduction:
The health system is dedicated to maintaining a safe workplace for staff and a safe care environment for patients. Our goal is to identify the risk of COVID-19 transmission, and sustain and improve upon the multiple steps in place that reduce risk of transmission. One intervention is never sufficient. We are using screening, testing, social distancing, and multiple types of PPE to make this the safest possible healthcare environment. Our strategy includes using a variety of types and brands of PPE to ensure availability of these materials and adapting to various types given current demand for PPE. As a high reliability organization, committed to employee and patient safety, we conduct research, product testing and on-site product piloting to ensure the appropriateness of PPE before placing it into circulation.

Respirator and Facemask Definitions:
- **Face mask** – Provides the wearer protection against large respiratory droplets. Protects the patient from the wearer's respiratory droplets.
- **Surgical mask** – A facemask that has been certified for fluid and resistance. These should be reserved for operating rooms and procedural areas only.
- **Respirator** – Reduces wearer’s exposure to particles including small particle aerosols and large droplets.
- **FFR** – Filtering facepiece respirators, a general term that includes N95s and KN95s.
- **N95** - Respiratory protective device designed to achieve a very close facial fit and very efficient filtration of airborne particles. Note that the edges of the respirator are designed to form a seal around the nose and mouth. KN95s provide equivalent filtration to N95s.
- **Elastomeric respirator** - Half face piece or full face piece tight-fitting respirators where the facepieces are made of synthetic or natural rubber material. These can be repeatedly used, cleaned, disinfected, stored, and re-used. They are available as alternatives to disposable half mask filtering facepiece respirators (FFRs), such as N95 FFRs, for augmenting the total supply of respirators available.
- **PAPR** - An air-purifying respirator that uses a blower to force the ambient air through air-purifying elements to the inlet covering.
- **Typical N95s** – 3M 1870, 3M 1860, 3M 1860S, Moldex XS and the equivalents of each model.
- **Other N95s being distributed** – Makrite, 9500, 3M 8000 and many other varieties.
- Refer to the YNHHS COVID site (https://www.ynhhs.org/patient-care/covid-19/for-employees/ppe.aspx) for photos and descriptions of these products, which is updated on a regular basis.
What is the current situation related to PPE, specifically the fit-tested N95 respirators at YNHHS?
Currently, YNHHS employees and members of the Medical Staffs are fit-tested primarily with 3M brand 1860, 1860S and 1870 respirators. Under normal conditions, we do not consume these respirators at a high rate. The COVID-19 pandemic, however, has created exceptionally high demand, contributing to international shortages. Supplies of the 3M models are extremely limited everywhere, forcing us and other healthcare organizations to explore alternative respiratory protection for our staff from other manufacturers. According to 3M, demand for the 3M products is 20 times greater today than it was prior to the COVID-19 outbreak. As we enter our Transformation phase, opening ambulatory centers and outpatient facilities, the demand for respirators, face masks and other PPE will also increase demand and impact our inventory.

What is our respirator strategy and what are the alternatives to the 3M N95?
YNHHS is now issuing N95 respirators from variety of manufacturers including 3M, and is increasing the availability of other equivalently effective respirators including:
- Filtering Facepiece Respirators (FFRs) (N95 or equivalent)
  - Typical 3M respirators and respirators manufactured by other companies
- Reusable elastomeric respirators
- Power Air Purifying Respirators (PAPRs)

What is an aerosol generating procedure?
CDC provides guidance around aerosol generating procedures, which can be found at https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-faq.html

What is the difference in protection represented by the various types of respirators?
Respirators provide the best protection for individuals carrying out aerosol generating procedures (AGPs) on patients with COVID-19. No study, as yet, has examined or identified differences with respect to transmission of viral respiratory diseases between the different respirators in our inventories. All respirator types that will be used in our system are tested and certified by CDC/NIOSH or authorized by FDA – while staff may find that some models conform to the shape of their face more comfortably, the effectiveness of the filter material for each product is certified at the N95 level.
What is our respiratory strategy to the use of respirators and facemasks?

- We recommend the use of non-3M respirators for the regular care of patients with COVID-19.
- We recommend the use of face masks for the regular care of patients without COVID-19.
- We recommend the use of non-3M respirators for aerosol generating procedures in patients without COVID-19.
- We recommend that anyone involved in the following situations should use a fit tested, typical 3M respirator:
  - Performance of high-risk aerosol generating procedures for a COVID-19 positive or suspected patient;
  - Performance of bronchoscopy or intubation of any patient, regardless of COVID-19 status.
- These recommendations exceed the minimum state and federal guidelines, which recommend face masks for all patients not undergoing aerosol generating procedures.
- This has been our strategy throughout the COVID-19 pandemic, and we will sustain it as long as our N95 supplies remain sufficient.

What are the other strategies for respiratory protection for healthcare workers caring for patients with COVID-19 or involved in high-risk aerosol generating procedures?

We continue to order and increase our inventory of other types of respiratory protection, including reusable elastomeric respirators and powered air purifying respirators (PAPRs). These alternatives are being distributed initially to the highest risk areas across the Health System. Distribution to the units and notification of availability will be organized and coordinated by Corporate Supply Chain, Occupational Health, and unit-based leadership. We anticipate the first round of product deployment to occur over the next two weeks.

Do these alternatives meet CDC and other federal requirements for safety?

We recommend the use of typical 3M N95, PAPRs or elastomeric respirators during the performance of high-risk aerosol generating procedures on patients with COVID-19, and during all bronchoscopy and intubation. All three options meet CDC recommendations for safety and are regarded as equivalent protection.

For respirators in general, the CDC/National Institute for Occupational Safety and Health (NIOSH) indicates that the usage and protection of alternative classes of respirators provides equal or greater protection compared to an N95 FFR. OSHA also states that other filtering face piece respirators, such as N99, N100, R95, R99, R100, P95, P99, and P100, are also permissible alternatives for those who are unable to obtain N95 FFRs.

What are the different components of protection?

Staff are to follow systemwide guidelines designed to protect staff and patient safety. These include screenings, testing, social distancing when possible, and proper use of PPE (respirators, eye protection, masks, shields, gowns, gloves, bouffant, etc.), depending on clinical situation and needs.
**What is “just-in-time” fit-testing?**
The CDC guides that during COVID response, facilities may implement the “just-in-time” method for fit testing. This method is a way to fit test large numbers of workers at one time. For individuals participating in aerosol generating procedures for COVID-19 positive or COVID-19 suspected patients, just-in-time fit-testing can be performed on clinical units if needed.

**Should all staff be re-fit tested into the other N95 respirators being distributed?**
No, because the new respirators are only being deployed in care areas where respirators exceed the state and federal guidance. When fit-testing has been studied, it has not been shown to reduce disease transmission when compared to non-fit-tested respirators. Fit testing is not required for care that does not involve AGPs.

**Who decides who gets what and when?**
The roll-out of FFR alternatives – PAPRs or elastomeric respirators – is being based on locations with the highest volume of aerosol generating procedures. We have large quantities on order and are actively receiving these reusable respirators, and are deploying them across the system as quickly as possible.

**Is this change being done to save money?**
No. Cost is not the issue. Our priority is to keep our patients and staff safe. The alternative options actually cost the Health System more than the 3M products. The Health System has dramatically increased spending on PPE, and will continue to do so to ensure we have the safest possible healthcare facilities.

**I have my own personal supply of 3M N95s at home. Can I use them at work?**
We recommend using the respirators provided within our facilities, since they are all carefully evaluated and deemed to provide the protection required before being distributed for use.

**Is this change in product type/brand temporary?**
Given the international shortage of PPE due to the COVID-19 pandemic, YNHHS and YM continue to focus on identifying alternative products that meet or exceed CDC and CT Department of Public Health guidelines. While staff have become accustomed to the 3M N95s, other types of N95s and alternative respirators are available. Projections show continued high demand that exceeds supply for PPE over the next 12 – 18 months. YNHHS continues to search for and obtain safe, high-quality solutions that protect our staff and patients, through purchasing from different manufacturers and reprocessing masks for reuse.
General Information about Respirators and Face Masks

1. Are there different types of face masks? Does it matter which one I use?
Face masks provide similar levels of air filtration though there are some differences in the level of protection against fluids. The ASTM (American Society of Testing and Materials) levels have to do with fluid resistance, with higher level 2 and 3 face masks reserved for surgical procedures while level 1 masks are used primarily in other clinical settings. Note that masks that do not have a “level” rating still provide significant respiratory protection.

2. What is the role for using face masks (not respirators) at YNHHS?
Because some people with COVID-19 do not have symptoms or show only mild symptoms, using face masks in the hospital substantially reduces the likelihood that an infected individual without symptoms could infect others. Face masks may also provide some protection to the individual wearing them. Having the patient also wear a face mask will further decrease the likelihood of COVID transmission if the patient is contagious.

3. What is Limited Reuse?
Limited reuse is recommended as acceptable practice by the CDC in times when supplies of personal protective equipment are limited. Respirators are not required to be discarded after a single use; in fact they can be used over the entirety of a work shift.

4. Is Limited Reuse safe?
YNHHS has provided video instruction regarding safe donning, doffing and re-use of personal protective equipment. Our re-use and extended use policies are in accordance with recommendations from the CDC.

5. Why are we employing Limited Reuse at YNHHS?
There are serious national shortages of personal protective equipment. We are practicing reuse and extended use to ensure we do not exhaust our supplies.

6. Why are we using paper bags to store N95s between uses? Is this standard? I’d prefer to store it in a Ziplock bag or plastic “Tupperware” container. Isn’t that better?
The CDC recommends storage in a paper bag rather than a plastic bag or container because the paper bag allows the respirator or face mask to dry between shifts.

7. When should I discard or reprocess my N95?
For those involved in patient care requiring frequent use of the N95 respirator, you should place your respirator in a bin for reprocessing at the end of the work shift. Discard respirators that have become visibly soiled or damaged. Please refrain from wearing any cosmetics as they may soil the respirators.

8. I’ve been holding on to my N95 and using it for multiple days. I’m doing this to decrease use but also because I’m concerned that there may not be one for me when I come in for my next shift. Is this OK?
Our goal is to keep you safe. We recommend reprocessing your N95 at end of shift instead of using it for multiple days. Visibly soiled or damaged PPE should not be used, and by recycling the respirator at the end of the shift we are able to ensure the device is in good condition and can be successfully reprocessed.
9. Is reprocessing safe? Are other centers doing this? What does the CDC say about it?
Yes. Reprocessing of respirators has been extensively studied and the processes being used by YNHHS are in alignment with recommendations from the CDC. Reference: https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/decontamination-reuserespirators.html

10. When will we be using reprocessed respirators?
We have already begun to use reprocessed respirators, specifically the small N95s, and will continue to use reprocess respirators.

11. How can I help with reprocessing?
Submit your respirators for reprocessing and encourage your peers to do the same. Please do not throw away respirators that are not visibly soiled or damaged. Please do not wear makeup such as foundation or lipstick as they soil the respirators making them ineligible for reprocessing. Makeup is the #1 cause of being unable to reprocess.

12. I was fit tested to a respirator and it is no longer available. What should I do?
If you are performing care of a COVID-19 patient that does not involve an aerosol generating procedure, you can safely use an alternative respirator without a fit test.

13. My face mask or respirator is soiled or damaged. Do I have to keep using it?
No. If a face mask or respirator is damp, wet or damaged, it is not to be used.

14. Should I wear a face mask over my respirator to help preserve it?
If you think the care you’ll be providing to the patient may lead to a splash or spray of body fluids which may soil your respirator, a face mask with an integrated face shield or a large face shield which covers the face mask is preferred to allow protection of your respirator. If you are using an occupational N95 in the operating room, a surgical mask can be worn over it to provide a fluid barrier.

15. I’m in Protective Services and was called to help with a COVID patient. I needed PPE and the staff at the treating location said that they couldn’t give me PPE. What should I do?
Staff safety is vitally important. When Protective Services personnel are called to intervene with a COVID-19 patient/patient under investigation (PUI), they should don gown, gloves, eye protection and a respirator. The respirator does not need to be fit tested. If issues arise with obtaining the required PPE, contact your supervisor, leadership in the clinical area where you are working, or the executive on call.

16. I work in a clinical care area. Someone from Facilities needs access to a COVID patient’s room and is asking for PPE. Should I give it to her? What if we run out in our area because of this?
Yes, please give the staff member PPE. If additional supplies are needed, follow the usual protocols and your stock will be replenished. Let’s all keep each other safe.
17. What should I do if my patient refuses to wear a mask?  
In the case where a patient or visitor does not agree to wear a facial covering or mask, the approach should be similar to any situation in which a patient or visitor will not follow an existing policy.

If the patient continues to refuse to wear a mask after discussing the rationale, please escalate to the attending physician, Patient Relations, and site leadership. Security services should be called only as a last resort. Patients and visitors without masks will not be permitted to enter. Specific scripting assistance below:

“Safety is our highest priority. Everything we’re doing is to protect you and others from the virus. We are sorry that we cannot allow you to enter our facility without a face covering or mask, but this is for everyone’s safety and our organization’s policy.”

18. What should I do if my patient is not suspected to have COVID-19, but has a cough or is sneezing?  
In addition to both you and the patient wearing a face mask, we recommend you wear eye protection as part of standard precautions.

19. Are face shields reprocessed?  
Face shields are not currently being reprocessed.

20. How should I clean my face shield?  
After the face shield is removed, it should be wiped down with a disinfectant wipe according to the instructions on the wipe container.

21. What should I do if I think I need PPE and I don’t have it?  
Speak with your supervisor. If your supervisor is not available and you are in a clinical area, speak with the PSM/Nurse Manager, Charge Nurse or other administrative leader. If all else fails, call your Corporate Supply Chain representative or the Off Shift Executive.

22. I hear people saying that we have enough PPE, but it doesn’t seem that way on the floor. Why is that?  
We currently have a sufficient supply, but need to remain vigilant. You may not see the PPE because inventory is not stored in treatment areas. Supplies are delivered regularly. In addition, in most locations, PPE is secured by floor leadership to prevent misuse or theft and is distributed as needed.

If you feel that there is not adequate PPE in your area, please discuss with your supervisor. If the supervisor finds that supplies are not adequate, they should contact Materials Management to obtain more.

23. What is a PAPR and who should use one?  
PAPR stands for Powered Air Purifying Respirator. A PAPR consists of headgear (i.e. hood), a battery-powered fan, and a filter. A PAPR is equivalent to an N95, but we have limited supplies. PAPRs should be used by staff who are unable to use more common respirators such as the N95. PAPRs can be used by providers who have failed fit-testing and perform aerosol-generating procedures.
24. I am going to intubate someone. I have an N95, but should I have a PAPR instead?
N95 and PAPRs both provide the level of respiratory protection needed for intubation and other high-risk aerosol generating procedures. Of course, eye protection is a must during splash/aerosol generating procedures.

If you failed fit testing, a PAPR is a good option for intubation and other aerosol-generating procedures.

25. What are half-faced elastomeric respirators? Are these as protective as an N95 or a respirator?
Half-faced elastomeric respirators cover the lower half of the face. They are designed and built to be reused. They are made of rubber material that allows them to be reprocessed between uses. They have detachable filters and provide the same level of protection as a N95 and PAPR respirator.

Elastomeric respirators are to be disinfected with a disinfectant wipe whenever they are removed. At the end of the shift, they should be turned in after disinfection with wipes and removal/storage of the filters so that Sterile Supply can reprocess the elastomeric device. First, squeeze the excess liquid from a disinfectant wipe and wipe across the outside plastic covering of each filter. Bleach or Oxivir wipes are preferred. Avoid dripping the disinfectant into the filter material. Store the filter for your next shift. Do not share filters between individuals. Turn in the mask to Sterile Supply to ensure that the nooks and crannies of the respirator, in addition to the elastic strap, are properly cleaned. These respirators require processing centrally between shift use.

We expect that the filters could last up to a year. The mask needs to be fit tested.

26. Can people still donate PPE?
We are no longer accepting PPE donations. Please contact the Development Office at your respective delivery network for more information.

27. Someone I know is selling PPE. Who should they contact at YNHHS?
Send an email to prospectivevendor@ynhh.org.

28. Will this guidance change?
Yes. You should expect changes as the science about SARS-CoV-2 and COVID-19 progresses and as our inventory changes.
29. What is Yale New Haven doing to prepare and to protect me?
Yale New Haven had a strategic stockpile of PPE in place prior to COVID. Since the beginning of January, Infection Prevention, Occupational Health and Corporate Supply Chain have been working together to ensure the availability of PPE as well as to ensure that the guidance for PPE use is current, changes are communicated, and PPE is available where needed.

We are using several strategies including reducing non-essential use of PPE (e.g., reducing the number of providers who enter a room), Limited Reuse, and by Reprocessing (sterilizing) PPE. We also continue to work to buy as much PPE as possible. Yale Medicine and YNHHS have been working to identify and develop relationships with new sources for PPE.

30. Do I need to wear head cover or foot coverings?
Routine use of head or foot coverings is not recommended for the routine care of patients. However, as part of Standard Precautions, staff whose head or feet may be exposed to body fluids during the delivery of patient care are to use these barriers to ensure they do not get soiled by potentially infectious body fluids.

31. Whom should I contact if:
a. Our floor is out of PPE
Discuss with your supervisor. Your floor may have PPE in a secure location. If your supervisor needs more PPE, they should contact their Materials Management representative.
b. I have questions about the signs, symptoms and treatment of COVID-19. What should I do?
If you have other questions or develop symptoms, the YNHHS COVID Call Center is available for additional assistance from 7 am to 7 pm at 866-ASK-YNHH.
c. If there are further questions regarding specific PPE products, please email COVID_InfectionPrevention@ynhh.org.