Guidance for use of Personal Protective Equipment for COVID-19

March 20, 2020

The safety of all members of our healthcare team is a top priority for CMH as we manage the rapidly evolving situation around COVID-19. As we gain experience and learn more about this infection, we are able to refine our practices, keeping them in line with recommendations from the CDC, WHO, and practice at other major academic medical centers and integrated health systems for the appropriate use of PPE while also conserving supplies.

These key guidelines are:

1. Airborne plus Contact precautions – only for known or suspected COVID-19 patients who are critically ill or undergoing aerosol-generating procedures like non-invasive ventilation, intubation, CPR, high-flow oxygen, and nebulizer treatments:
   - PAPR or
   - N-95 respirator with eye protection (goggles or face shield)
   - Gown
   - Gloves

2. Droplet and Contact precautions - for all other ambulatory, acute care, and ED patients with known or suspected COVID-19 disease:
   - Face mask
   - Eye protection (goggles or face shield)
   - Gown
   - Gloves

3. Respirators, goggles, and face shields can be re-used under specific circumstances

CMH COVID-19 Change in Infection Precautions Effective 3/20/2020

The safety of all members of our healthcare team is a top priority for cmh as we manage the rapidly evolving situation around COVID-19. As we gain experience and learn more about this infection, we recognize that using Airborne Precautions in all clinical situations is not necessary. As a result, CMH is now recommending Droplet (including eye protection) plus Contact Precautions for most ambulatory, acute care, and ED patients with known or suspected COVID-19. Patients who may have or are known to have COVID-19 who require aerosol generating interventions like mechanical ventilation, non-invasive ventilation, nebulizer treatments, or use of high-flow nasal cannula will continue to be cared for in Airborne plus Contact Precautions with eye protection. This change is in line with the World Health Organization (WHO) use of personal protective equipment for coronavirus disease 2019 (COVID-19) recommendations, recently revised CDC guidance, and in keeping with the revised practices in most other academic centers throughout the U.S.
Why are we changing to droplet + contact Precautions? Droplet + contact Precautions is clinically appropriate for care of patients who are not requiring aerosol generating interventions and is consistent with guidelines from WHO and other countries.

- Ensures that we are able to maintain appropriate PPE for the highest risk patients
- Simplifies PPE use in most settings and streamlines care for these patients
- Allows all sites to get patients into precautions more consistently

What about patients who test positive?

Patients who are not requiring aerosol generating interventions will remain in Droplet + Contact Precautions. This approach will facilitate testing among patients entering our system while keeping our workforce safe and ensuring the most rational use of PPE for the highest risk scenarios.

Which patients should remain in Airborne Precautions?

Patients with suspected or confirmed COVID-19 requiring mechanical ventilation, high-flow nasal cannula, non-invasive ventilation, or tracheostomy, CPR, intubation, extubation, and bronchoscopy.

CMH Guidance on PPE to be Worn When Collecting Specimens for Diagnostic Testing Effective 3/20/20

ONE nasopharyngeal (NP) swab should be collected for COVID-19 testing

Testing should be performed in a room with a door that is closed. Negative pressure is not required by the CDC.

PPE for healthcare personnel obtaining specimens:

1) N-95 respirator. If N-95 is not available, a facemask must be utilized
2) Eye protection: goggles or full face shield
3) Gown
4) Gloves

If a facility sets up a testing station, the person performing the tests should change gloves and perform hand hygiene between patients. Other PPE should be changed if it becomes soiled or wet.
Guidance for Conservation of N95 Respirators

Respirators filter inspired air. They provide respiratory protection with droplet-nuclei sized particles, which can remain suspended in the air, as seen with specific microorganisms and those created during aerosol generating procedures. At CMH, both re-usable PAPRs and N95 disposable respirators are acceptable for use with patients on Airborne Precautions.

The effectiveness of an N95 respirator is highly dependent upon their proper fit and use. Care needs to be taken during donning, doffing, and performing the “fit check” to determine whether a tight seal around the face is protective.

In times of limited supply, regulations are relaxed to allow HCW access to supplies that can be made available to them. Currently, we are not fit testing to wear an N95, due to the additional respirators that get “wasted” during the fit testing process. Additionally, we are given permission to use PPE past the printed expiration dates and to be able to use N95s supplied from different manufacturers from the one we were fit tested to use. This is why the “fit check” becomes so essential to ensure that no matter what type of N95 we use, our respirator is providing protection.

When used for diseases, such as TB, the respirator can be removed by its straps and stored in a bag labeled with the HCW name, in a dry safe area where it will not be crushed or damaged.

When used for diseases which are also spread by a Contact component, such as COVID-19, respirators cannot be re-used in this manner because they would serve as a source of contamination and disease transmission.

Therefore, we must look to other methods to conserve our N95s.

- DO NOT wear an N95 for anything other than entering an Airborne Precaution room or performing an aerosol generating procedure on a COVID-19 patient
- An N95 may be used when caring for successive patients with the same diagnosis, ex. more than one confirmed COVID-19 patient. Do not remove it from your face between patients. Do not touch the external portion of the respirator because of self-contamination.
- N95s may be used in conjunction with a full face shield in order to provide a protective barrier over the respirator in order to preserve their use.
- When performing potentially aerosol generating procedures, such as intubation in an OR, an N95 respirator may be re-used. The concept is that the respirator is “part of the face” and a surgical mask is donned over the respirator while in the OR room. Surgical masks are removed and replaced with each patient, making sure not to contaminate the N95 while removing it and washing hands after its removal. When it is removed to eat, etc. it must be discarded.
- N95s must be replaced:
  o When they become wet, soiled, or damaged in any way
  o When they no longer allow for a proper fit
  o After any aerosol generating procedure where there’s potential for contamination
  o After approximately 5 uses or one work shift
Guidance for Conservation of Facemasks and Eye Protection

Facemasks protect the wearer from splashes and sprays of larger droplets. By providing a coughing patient with a mask, and “containing the source”, you are preventing those droplets generated from escaping into the environment. When HCP are also masked, it is an additional layer of protection. Facemasks are required for use with patients on Droplet Precautions.

Facemasks are to be used as a protective barrier when a HCW or visitor has mild respiratory symptoms or for those who did not receive an influenza vaccination this season.

Facemasks are not to be worn universally as protection throughout the hospital and practices.

In order to correctly wear and preserve our supply of facemasks:

- Extended use of facemasks may be permitted. This is wearing the same one for repeated close contact encounters with several different patients, without removing between patient encounters. Best practice is to use them with multiple patients sharing the same confirmed diagnosis if on precautions and not to wear them between precaution patients and “clean”.
- It should be removed and discarded if soiled, damaged, hard to breathe through, or upon exiting a single isolation room.
- Take care not to touch the external portion of the mask, which is most heavily contaminated, with your hands, phone, etc. Clean immediately if this occurs.
- Do not allow the facemask to dangle or fall under the nose or chin. This spreads contamination.

Eye Protection

Eye protection comes in different styles: full face shields, half face shields with face mask, re-usable goggles, disposable or re-usable protective glasses. Eye protection does not include regular glasses because the sides, top and bottom of the lenses need to be extended to prevent droplets or splashes from entering the eye.

- Extended use of eye protection is acceptable, do not remove between patients, do not touch the exterior portion of the lenses in order to prevent self-contamination.
- Remove and reprocess when eye protection becomes visibly soiled, difficult to see through, or if exiting an isolation patient’s room before caring for a “clean” patient.
- Reprocessing eye protection includes:
  - While wearing gloves, carefully wipe the inside, followed by the outside of the face shield or goggles using a clean cloth or disinfectant wipe to remove any visible contamination.
  - Wipe the outside of the face shield or goggles a second time to disinfect.
  - If necessary, wipe with water or alcohol to remove residue
  - Fully dry
  - Remove gloves and perform hand hygiene

As with all PPE, if it is worn correctly, including removal, it will protect from disease transmission. If it is not worn correctly, it can be a major source of self-contamination.