



Personal Protective Equipment (PPE) Conservative Measures

Adopted 4/1/2020

Revised 4/1/2020

Normal expectations for Personal Protective Equipment (PPE) for first responders may not be sustainable during the COVID-19 pandemic in King County. Fire and EMS providers are encouraged to implement strategies in support of extending existing stocks of PPE. **The safety of first responders shall continue to be a priority.**

Purpose

To establish pre-designated strategies for capacity use of PPE during a pandemic crisis by providing guidance for extending existing PPE inventories, the reuse of respiratory protection, and the use and decontamination of alternative PPE.

Capacities

- **Conventional capacity:** Measures consist of providing patient care without any change in daily contemporary practices. This set of measures, consisting of engineering, administrative, and PPE controls, should already be implemented in general infection prevention and control plans in healthcare settings.
- **Contingency capacity:** Measures may change daily standard practices but may not have any significant impact on the care delivered to the patient or the safety of healthcare personnel (HCP). These practices may be used temporarily during periods of expected isolation gown shortages.
- **Crisis Capacity:** strategies that are not commensurate with standard U.S. standards of care. These measures, or a combination of these measures, may be needed to be considered during periods of known isolation gown shortages.

Definitions

Extended Use: the practice of wearing the same N95 respirator for repeated close contact encounters with several patients, without removing the respirator between patient encounters. Extended use has been recommended as an option for conserving respirators during previous respiratory pathogen outbreaks and pandemics.

Reuse: The practice of using the same N95 respirator for multiple encounters with patients but removing it (“doffing”) after each encounter. The respirator is stored in between encounters to be put on again (“donned”) prior to the next encounter with a patient. N95 respirator reuse is often referred to as “limited reuse”. Limited reuse has been recommended and widely used as an option for conserving respirators during previous respiratory pathogen outbreaks and pandemics.

Management Strategies

- Encourage responder to use sound judgment when choosing to don full MEGG for non-symptomatic responses.
- Implement “Scout Model” to minimize the number of individuals who need to use respiratory protection.
- Practice extended use and/or limited reuse of N95 respirators when acceptable.
- Prioritized the use of N95 respirators for those personnel at the highest risk of contracting or experiencing complications of infection.
- Employ non-traditional PPE when operating in ‘contingency’ or ‘crisis’ capacity.
- Utilize non-traditional PPE in a proactive manner on low-to-moderate-risk patients.



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Reuse of N95 Masks

- Use a single N95
 - When transferring patients at area hospitals,
 - Treatment of non-COVID patients,
 - Treatment of patients outdoors.
- Reduce surface contamination of the respirator with a face shield that can be decontaminated (preferred) or a surgical mask over an N95. When appropriate, mask patients, and use engineering controls to limit contaminants.
- Hang used respirators in a designated storage area.
- Decontaminate respirators with department approved measures.
- Minimize cross-contamination by storing masks in a way that does not allow contact between masks.
- Keep masks in a clean, breathable container such as a paper bag between uses.
- Clearly identify mask's owner with obvious labels.
- Storage containers will be disposed at the end of each shift and when the mask is disposed of due to use.
- Clean hands with soap and water or an alcohol-based hand sanitizer before and after touching or adjusting the respirator.
- Do not touch the inside of the respirator.
 - If inadvertent contact is made with the inside of the respirator, perform hand washing protocols as described above.
- Use a pair of clean (non-sterile) gloves when donning a used N95 respirator and performing a user seal check.

Discarding N95 Masks

- Discard N95 respirators following use during aerosol generating procedures:
 - Cardiac Arrest,
 - Nebulizers or respiratory therapy treatments,
 - Intubations.
- Discard after contaminations with:
 - Blood,
 - Respiratory or nasal secretions,
 - Bodily fluids from patients.
- Discard after close contact with, or exiting from, the care of any confirmed COVID-19 patient.
- If the respirator becomes damaged or hard to breathe through.

Half-Mask Respirators

- Decontaminate half-mask respirators at the beginning and end of each shift.
- Consider reuse of replaceable filters, similar to reuse of N95 masks.
- Discard replaceable filters following use after aerosol producing procedures:
 - Cardiac Arrests,
 - Nebulizers or respiratory therapy treatments,
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And contact with:

- Blood,
- Respiratory or nasal secretions,
- Bodily fluids from patients.



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- Discard replaceable filters following close contact with, or exit from, the care area of any confirmed COVID-19 patient.
- Obviously damaged or filters that become hard to breathe through should be discarded.

Aprons/Alternative (reusable) gowns

- Have two aprons / gowns available every shift for each responder.
- Consider the use of aprons and sleeves for low- to moderate-risk patients.
- Don aprons in same order as standard Mask, Eye, Gown, Gloves (MEGG) nomenclature.
- Employ Tyvek sleeves for additional protection.
 - Dispose of after every use.
- Decontaminate aprons gowns after every use according to department decontamination policies.
- Store aprons /gowns in designated area to dry between uses.

Coveralls/Lab Coats/Brush Coats

- Garments used in place of disposable gowns shall be washed at the end of each shift.
 - Wash in hot water.
 - Dry on high heat.
- Alternative fabric garments shall be washed when contaminated with:
 - Blood,
 - Respiratory or nasal secretions,
 - Other bodily fluids from patients.
- Implement higher levels of PPE when use during aerosol generating procedures
 - Cardiac Arrests,
 - Nebulizers or respiratory therapy treatments,
 - Intubations.

References

- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2781738/>
- https://www.cdc.gov/niosh/nppt/topics/respirators/disp_part/respsource1quest3.html#half
- <https://www.cdc.gov/niosh/topics/hcwcontrols/recommendedguidanceextuse.html#ref10>
- <https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/isolation-gowns.html>
- <https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/decontamination-reuse-respirators.html>