



MedStar Health

Frequently Asked Questions: Personal Protective Equipment (PPE) Conservation

MedStar Health remains dedicated to providing safe and effective Personal Protective Equipment (PPE). Given national constraints and increased use of PPE supplies due to the novel 2019 coronavirus (COVID-19) hospitalizations, MedStar Health is responsibly and proactively adopting PPE conservation practices, including safe PPE extended use, reuse and decontamination.

Q. Why are we collecting and decontaminating used N95 respirators?

A. The COVID-19 pandemic—with more than 3.5 million confirmed cases in 216 countries—is constraining global PPE supply chains. MedStar Health is continuing to do everything within its power to acquire new PPE to meet the need and keep our associates and patients safe; however, supply is constrained. In addition, caring for COVID-19 patients takes more PPE than mathematical models predicted. Local COVID-19 case numbers continue to increase, and many patients have an extended in-hospital course, all of which impacts and increases PPE requirements. Given the supply constraints and entity use rate, we are collecting and decontaminating N95 respirators as one of many tactics to conserve PPE.

Q. Why didn't we start collecting N95 respirators sooner?

A. Throughout the past several weeks, MedStar Health carefully explored several conservation options and has taken every step to ensure associates continue to have adequate, safe and effective PPE supplies. Pilot processes to determine best practices were conducted at several entities, including face shield/goggle sterilization, N95 respirator extended use (using one respirator for multiple COVID-19 patients) and reuse (saving an N95 respirator in a bag for use throughout the day and using a procedural mask or face shield over the N95 respirator). Now that the pilots have concluded, we are applying the knowledge and data to expand these conservation measures across the system.

Q. What company is MedStar Health using for N95 respirator decontamination?

A. MedStar Health is participating in a Vaporized Hydrogen Peroxide (VHP) decontamination program for N95 respirators through the Battelle Memorial Institute, which received Emergency Use Authorization (EUA) for this program from the U.S. Food and Drug Administration (FDA).

Q. Is Battelle decontamination safe? Do the N95 respirators still protect? Is COVID-19 removed?

A. VHP, the decontamination method used by Battelle, has been safely and effectively used to decontaminate medical supplies for many years. Recent studies on N95 respirator decontamination have simulated donning/doffing and evaluated respirator fit and function between and following decontamination cycles and concluded that VHP is also safe and effective for N95 decontamination.¹⁻⁸ Current crisis guidance from the National Institutes of Health (NIH), Centers for Disease Control and Prevention (CDC) and FDA also suggests VHP decontamination is safe and effective. Hundreds of U.S. hospitals are using decontaminated N95 respirators as part of their pandemic response.

Q. What is the decontamination process?

A. MedStar Health entities label and collect N95 respirators, which are double-bagged and boxed. The PPE is shipped to the decontamination location, where it is logged into an inventory database using barcodes. The N95 respirators are individually examined for visible soil or stains, breakage or decomposition and any damaged masks are discarded. Battelle loads the PPE into a decontamination chamber, where it undergoes a decontamination cycle and is verified to ensure it is free of residual VHP.

The decontaminated PPE is then packaged and returned to MedStar Health, where it is distributed to specific entities via our supply chain process.

Q. Is the decontamination process toxic?

A. There are no toxic by-products because the hydrogen peroxide rapidly degrades into water after the decontamination process. When the decontamination process is complete, the N95 respirators are re-inspected to ensure there is no remaining residue of VHP.

Q. Do I still discard an N95 respirator if it has blood on it or gets wet?

A. Yes. Any N95 respirator that is wet or visibly stained or soiled should be discarded immediately.

Q. Why do we need these actions when we have been saying we have enough PPE?

A. MedStar Health proactively increased its PPE inventory, secured large orders of new PPE and intends to continue to do so. However, factors such as the constrained supply, the PPE use rate per COVID-19 patient, surge of patients regionally and unpredictable global demands on new supplies all require greater efforts at conservation. Considering an unpredictable future and to best position MedStar Health for the duration of the COVID-19 pandemic, it is important to take all available actions to conserve and maintain our supply of PPE.

Q. Will we use decontaminated N95 respirators when we still have new ones? If so, why?

A. The decontaminated N95 respirators have started arriving and are combined with all N95 respirator supplies. The goal is to extend our supply and make every effort at conservation. This also ensures we have the greatest variety of brands, sizes and shapes of N95 respirators to meet the fit needs of as many different associates as possible.

Q. With some new N95 respirators, it seems like air is escaping. How do I know it's properly sealed?

A. Please see the two videos on how to perform a seal check on [StarPort](#) or the Patient Care & Associate Safety Resources website at [MedStarHealth.org/COVID19Resources](#) (outside the network). If an N95 respirator does not feel sealed, reposition and mold the nose and tighten the straps. Follow up with Occupational Health if those measures do not achieve an effective seal. Nurse educators and infection preventionists are also available for assistance.

Q. What does extended use mean?

A. Extended use means wearing one N95 respirator and face shield/goggles for successive COVID-19 positive patients. Rather than doffing the entire N95 respirator/eye protection ensemble, which requires caregivers to touch their face, with extended use only the gown and gloves are changed and hand hygiene is performed before proceeding to the next COVID-19 positive patient. The N95 respirator is covered by a procedural mask, protecting it from droplet contamination. The procedural mask and eyewear are changed if they become soiled or if moving from a COVID-19 positive patient to a Person Under Investigation (PUI). When moving from a COVID-19 positive patient or PUI to a non-COVID-19 patient or non-PUI, all PPE, including the N95 respirator, is doffed and fresh PPE is donned.

Q. Why do we need extended use in addition to decontamination?

A. Extended use reduces the number of times a caregiver may be exposed to the possibility of contamination to the eyes, nose and mouth. In addition, it is one of many PPE conservation methods and helps preserve the N95 respirator through sequential treatment of cohorted patients.

Q. Are we only conserving N95 respirators?

A. Several entities are already conserving eye protection (face shields and goggles) by decontaminating them in between uses with appropriate wipes. We are also conserving isolation stethoscopes for reuse by cleaning after patient discharge with appropriate wipes. We are also preserving gowns as much as possible. MedStar Health recommends that gowns are not changed—only gloves, with hand hygiene—when consecutively treating two COVID-19 positive patients cohorted together in a semi-private room.

Q. What other actions can we take to preserve PPE?

A. In addition to bundling care (using each entry into the patient’s room to maximize the number of tasks performed at one time versus repeated entries) and extended use, we have implemented a number of processes to preserve PPE: temporarily suspending elective and non-urgent surgeries and procedures, strict supply management, cohorting patients with similar diagnoses, moving some equipment outside the room to limit entries, and using walkie talkies to communicate with clinicians outside of the room. If you have any additional ideas for PPE preservation or conservation, please send them to:

PPEConservation@medstar.net.

References

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