



# Reusing N95 Respirators is Dangerous

Months into the COVID-19 pandemic, health care employers continue to dangerously ration N95 filtering facepiece respirators. N95s are made to be single-use devices and can become contaminated with viral particles after just one use with a COVID-19 patient.<sup>1</sup> Health care employers have implemented different N95 reuse policies.

## Any N95 reuse endangers nurses and their patients

- » **Extended use.** Wearing the same N95 for longer than one patient interaction can endanger both nurses and patients.
  - › Wearing the same N95 for multiple patient interactions increases the potential for spread of COVID-19 or other infectious diseases within the facility.
  - › Wearing an N95 for an extended period of time can result in physiological impacts for nurses, including:<sup>2 3 4</sup>
    - » Increased heart and respiratory rates
    - » Thermal stress and increased fatigue
    - » Increased transcutaneous carbon dioxide
    - » Headache and lightheadedness
    - » Difficulty breathing and communicating
- » **Reusing an N95.** Many employers have restricted nurses' access to N95s, such as providing only one N95 per shift. These policies require nurses to repeatedly don and doff the same N95, which endangers nurses and patients.
  - › Nurses' risk of exposure increases with each donning and doffing of a contaminated N95.
  - › Repeated donning and doffing can damage the fit of the N95 and elasticity of the straps. The N95 may no longer protect the nurse, increasing exposure to COVID-19.<sup>5 6</sup>
- » **Decontamination of N95s.** Many employers have begun implementing methods to "decontaminate" N95 respirators between uses. No decontamination method has been shown to be both safe and effective.
  - › Putting an N95 in a paper bag for five days does not "decontaminate" the N95. Research has shown that the virus that causes COVID-19 can survive for extremely long periods outside the human body, including for at least 21 days on N95 respirators.<sup>7 8</sup>
  - › Other methods may be ineffective, can damage N95s, or may pose a hazard to nurses wearing the N95s. For more information on NNU's research into N95 decontamination methods: <https://www.nationalnursesunited.org/covid-19-ppe-decontamination>.

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» **Locking up N95s.** If nurses do not have immediate access to N95s, this can result in dangerous delays in care for patients. Employers must ensure nurses have access to the PPE they need to do their jobs safely.

Instead of dangerous reuse policies, health care employers should turn to more protective options that are designed to be safely cleaned and reused, including powered air-purifying respirators (PAPRs) and elastomeric respirators.

## Endnotes

- 1 COVID-19 patients emit significant amounts of virus when they breathe, cough, sneeze, and talk and when procedures are performed, including intubation, suctioning, bronchoscopy, etc. These viral particles can end up on and trapped within the N95 respirator.  
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- 3 Chen, Yumiao, et al., "Physiological and subjective responses to breathing resistance of N95 filtering facepiece respirators in still-sitting and walking," *International Journal of Industrial Ergonomics*, 2016, 53: 93-101.
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- 5 Roberge, Raymond, George Niezgod, and Stacey Benson, "Analysis of Forces Generated by N95 Filtering Facepiece Respirator Tethering Devices: A Pilot Study," *Journal of Occupational and Environmental Hygiene*, 2012, 9(8): 517-23.
- 6 Bergman, Michael S., et al., "Impact of multiple consecutive donnings on filtering facepiece respirator fit," *American Journal of Infection Control*, 2012, 40(4): 375-80.
- 7 Kasloff, Samantha B., et al., "Stability of SARS-CoV-2 on Critical Personal Protective Equipment," *medRxiv*, June 12, 2020, <https://www.medrxiv.org/content/10.1101/2020.06.11.20128884v1>.
- 8 Chin, Alex W H et al. "Stability of SARS-CoV-2 in different environmental conditions," *The Lancet Microbe*, April 2, 2020, <https://www.sciencedirect.com/science/article/pii/S2666524720300033?via%3Dihub>.