ALERT for Extended Use or Re-Use of N95 Respirators

June 11, 2020

Situation
A recent research letter published in JAMA on a very small sample of 68 participants reviewed 102 N95 respirators and the extended use or re-use of the respirators and fit failure in an emergency department at the University of California.

Extended Use: the user wears the respirator from room to room (such as a cohorted COVID unit)
Re-Use: the user stores the respirator in a paper bag between uses and re-wears the same respirator on another shift

Background
The respirators included in the evaluation were dome-shaped and duckbill models as shown in the image below.

![Image of N95 respirators](image)

Specifically, the respirators are the dome-shaped (3M 1860) and duckbill (Kimberly-Clark 46727 or Halyard 46867) types. The study findings could potentially be applicable to any brand of N95 respirator. These respirators may be used within our MercyOne site, but a note of caution as referenced in our PPE guidebook cautions the wearer about using the respirators when a proper seal check is not achieved.

Assessment
Supply chain will continue to review our use of these respirators. Every effort will be made to communicate findings or recalls should this be required.

This was a cross-sectional study of N95 fit among convenience sample of respirators in use at the UCSF ED; 4/4/20- 4/6/20 among healthcare workers who had successful fit testing in prior year. Overall, 38.2% of participants failed the fit test. In review of each respirator, the failure rate with the 3M was 14 of 51 (27.5%) and the failure rate was 12 of 17 (70.6%) for the duckbill respirators.
Recommendation
Because fit test and seal check failure can be influenced by duration of wear and increased donning and doffing, we want to remind colleagues to refer to the PPE guidebook and to make use of their PPE safety coaches for proper use, reuse and reporting of issues. Colleagues must also complete a seal check each time they don their N95 respirator.

Assure personnel perform seal check (for proper seal of the N95 respirator) prior to each use. **If the colleague cannot achieve a seal:**

- See a PPE Coach. The coach will assess whether the respirator is damaged or faulty.
- If the respirator is not damaged or faulty but the colleague cannot achieve a seal, the coach will send the mask for reprocessing following MercyOne site guidelines.
- If the respirator is damaged or faulty, the PPE Coach will discard the respirator and report the issue to Supply Chain for tracking.
- This applies to all N95 respirators.
- When needed, the PPE Coach will assist the colleague in identifying the appropriate respirator or alternative respiratory protection device (such as a PAPR or CAPR).

Refer to the [PPE Guidebook](#) and [policies on scheduled](#).