To: CAHAN San Diego Participants
Date: April 7, 2020
From: Epidemiology and Immunizations Services Branch, Public Health Services

Health Advisory REVISED Update #10: Coronavirus Disease 2019 (COVID-19) - Reuse and Decontamination of N95 Respirator for Crisis Capacity Strategy

Key Messages

- When N95 respirator supply is anticipated to be exhausted using conventional and contingency strategies alone, decontamination methods can be deployed as a crisis capacity strategy until N95 respirator supply is reinstated.
- Approved decontamination methods include ultraviolent germicidal irradiation (UVGI), vaporized hydrogen peroxide, and moist heat methods.
- Healthcare Personnel (HCP) should take precautions detailed below before using a decontaminated N95 respirator.

Situation

While the COVID-19 pandemic continues, personal protective equipment (PPE) supplies, filtering facepiece respirators (FFRs) including N95 respirators, are in short supply for HCP (refer to CAHAN #8). When supplies are abundant, the Centers for Disease Control and Prevention (CDC) and the National Institute for Occupational Safety and Health (NIOSH) do not recommend that filtering facepiece respirators (FFR) be decontaminated and then reused as this practice would be inconsistent with their approved use. However, during times of shortages, a crisis capacity strategy includes considering decontamination and FFR re-use.

Action Requested

1. ***Review Your N95 Respirator Utilization Rate and Prepare for Crisis Capacity Strategies During Supply Shortage.***

   CDC recommends implementing crisis strategies based upon the following assumptions:
   - Facilities understand their current N95 respirator inventory and supply chain.
   - Facilities understand their N95 respirator utilization rate.
   - Facilities are in communication with local healthcare coalitions, federal, state, and local public health partners (e.g., public health emergency preparedness and response staff) regarding identification of additional supplies.
   - Contact MOC.LOGS.HHSA@sdcounty.ca.gov to request PPE supplies.
   - Facilities have already implemented contingency capacity measures.

2. ***For Crisis Capacity when N95 Respirator Supplies are Anticipated to Become in Short Supply, Consider Deploying Decontamination Methods to Ensure Continued Availability.***
   - An effective FFR decontamination method should reduce the pathogen burden, maintain the function of the FFR, and present no residual chemical hazard. Per NIOSH and CDC, UVGI, vaporous hydrogen peroxide, and moist heat show the most promise as potential methods to decontaminate FFRs.

- The respirator manufacturer should be consulted about the impact of the method on their respirators prior to considering the use of any method.
- The CDC states, "In the absence of guidance or when information is available that a respirator cannot be decontaminated without negatively impacting the performance, respirators may still be decontaminated. However, given the uncertainties on the impact of decontamination on respirator performance, these FFRs should not be worn by HCPs when performing or present for an aerosol-generating procedure."
- Therefore, unused N95 respirators should be prioritized, when available, for aerosol-generating procedures. Institutions must consider risk versus benefit regarding the use of decontaminated N95 respirators in general, for aerosol-generating procedures, and their impact on their own HCP during crisis capacity.
- Please review information from the American College of Occupational and Environmental Medicine and CDC for guidance on appropriate methods.
- When N95 supply has been reinstated, then decontamination methods no longer are advised and use of N95 should return to normal standards.

3. HCP Should Take the Following Actions Before Using a Decontaminated N95 Respirator.

Data are evolving and vary by decontamination strategy and FFR brand used as to how many cycles of decontamination can be used before a mask degrades, affecting fit and efficiency for the user. Please contact the manufacturer and see CDC Table 2 Summary of the decontamination method and effect on FFR performance for more information. HCPs should take the following precautionary measures prior to using a decontaminated FFR:

- Clean hands with soap and water or an alcohol-based hand sanitizer before and after touching or adjusting the FFR.
- Avoid touching the inside of the FFR.
- Use a pair of clean (non-sterile) gloves when donning and performing a user seal check.
- Visually inspect the FFR to determine if its integrity has been compromised.
- Check that components such as the straps, nose bridge, and nose foam material did not degrade, which can affect the quality of the fit, and seal.
- If the integrity of any part of the FFR is compromised, or if a successful user seal check cannot be performed, discard the FFR and try another FFR.
- Users should perform a user seal check immediately after they don each FFR and should not use an FFR on which they cannot perform a successful user seal check.

Enroll in the Medical Reserve Corps and the California Health Corps to be notified about volunteer opportunities.

General public inquiries about **reuse and decontamination of N95 respirator** and other COVID-19 management strategies should be directed to 2-1-1 San Diego or to the County COVID-19 website.

Thank you for your participation.

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