HealthCap
RISK MANAGEMENT SERVICES

Capacity Strategies – N95 – CDC Updates

Once personal protective equipment (PPE) supplies and availability return to normal, healthcare facilities should promptly resume conventional practices.

Decisions to implement contingency and crisis strategies are based upon these assumptions:

1. Facilities understand their NIOSH-approved respirator inventory and supply chain
2. Facilities understand their NIOSH-approved respirator utilization rate
3. Facilities are in communication with local healthcare coalitions and federal, state and local public health partners (i.e., public health emergency preparedness and response staff) to identify additional supplies
4. Facilities have already implemented other engineering and administrative control measures including:
    a. Use of physical barriers and other engineering controls
    b. Limit number of patients going to hospital or out-patient settings
    c. Use telemedicine whenever possible
    d. Limit all HCP not directly involved in patient care
    e. Limit face-to-face HCP encounters with patients
    f. Limit visitors to the facility to those essential for the patient's physical or emotional well-being and care (i.e., care partner, parent)
    g. Cohort patients and/or HCP
5. Facilities have provided HCP with required education and training, including having them demonstrate competency with donning and doffing with any PPE ensemble that is used to perform job responsibilities, such as provision of patient care.

Personal Protective Equipment: Respiratory Protection – Contingency Capacity Strategies

Use of N95 respirators beyond the manufacturer-designated shelf life for training and fit testing

In times of shortage, consideration can be made to use N95 respirators beyond the manufacturer-designated shelf life. However, expired respirators might not perform to the requirements for which they were certified. Over time, components such as the strap and material may degrade, which can affect the quality of the fit and seal. Because of this, use of expired respirators could be prioritized for situations where HCP are NOT exposed to pathogens, such as training and fit testing. As expired respirators can still serve an important purpose, healthcare facilities should retain and reserve all N95 respirators during the pandemic

Extended Use of N95 respirators

Practices allowing extended use of N95 respirators, when acceptable, can also be considered. The decision to implement policies that permit extended us or N95 respirators should be made by the professionals who manage the institutions' respiratory protection program, in consultation with their occupational health and infection control departments with input from the state/local public health departments. Extended use has been recommended and widely used as an option for conserving respirators during previous respiratory pathogen outbreaks and pandemics.

Extended use refers to the practice of wearing the same N95 respirator for repeated close contact encounters with several different patients, doffing after each encounter. If no manufacturer guidance is available, ***data suggest limiting the number of reuses to no more than five uses (five donnings) per device by the same HCP*** to ensure an adequate respirator performance. ***HCP should always inspect the respirator and perform a seal check upon donning a re-used respirator***. For N95 respirators that have been donned more than five times and may need to be re-used again, respiratory protection program managers should consider implementing a qualitative respirator fit performance evaluation. N95 and other disposable respirators should not be shared by multiple HCP. Extended use is well suited to situations wherein multiple patients with the same infectious disease diagnosis, whose care requires use of a respirator, are cohorted (i.e., housed on the same unit). It can also be considered to be used for care of patients with tuberculosis, varicella and measles, other infectious diseases where use of an N95 respirator or higher is recommended. When practicing extended use of N95 respirators over the course of a shift, considerations should include:

1. The ability of the N95 respirator to retain its fit
2. Contamination concerns
3. Practical considerations (i.e., meal breaks)
4. Comfort of the user

Ideally, N95 respirators should be discarded after extended use. If it is necessary to re-use N95 respirators in addition to extended use, please see reuse section under crisis capacity strategies. N95 respirators should be discarded when contaminated with blood, respiratory or nasal secretions, or other bodily fluids from patients. HCP can consider using a face shield or facemask over the respirator to reduce contamination of the respirator, especially during aerosol generating procedures or procedures that might generate splashes and sprays.

Respirators soiled or grossly contaminated with blood, respiratory or nasal secretions, or other bodily fluids from patients should be discarded. HCP can consider using a face shield or facemask over the respirator to reduce/prevent contamination of the N95 respirator, especially during aerosol generating procedures or procedures anticipated to generate splashes and sprays. It is important to perform hand hygiene before and after the previously worn N95 respirator is donned or adjusted.

The surfaces of a properly donned and functioning NIOSH-approved N95 respirator will become contaminated with pathogens while filtering the inhalation air of the wearer during exposures to pathogen laden aerosols. The pathogens on the filter materials of the respirator may be transferred to the wearer upon contact with the respirator during activities such as adjusting the respirator, improper doffing of the respirator or when performing a user-seal check when redonning a previously worn respirator. One potentially effective strategy to mitigate the contact transfer of pathogens from the respirator to the wearer could be to ***issue each HCP who may be exposed to patients with SARS-CoV-2 infection a minimum of five respirators***. Each respirator will be ***used on a particular day and stored in a breathable paper bag until the next week***. This will result in each worker requiring a minimum of five N95 respirators if they put on, take off, care for them, and store them properly each day. ***This amount of time in between uses should exceed the 72-hour expected survival time for SARSCoV-2 (the virus that causes COVID-19).*** If this strategy is used, the ***total number of donnings should still not exceed five***

times before discarding the respirator, when no manufacturer instructions are provided to indicate otherwise. For N95 respirators that have been donned more than five times and may need to be re-used again, respiratory protection program managers should consider implementing a qualitative respirator fit performance evaluation.

Crisis Capacity Strategies (during known shortages)

Use of respirators beyond the manufacturer-designed shelf life for healthcare delivery

Consideration can be made to use N95 respirators beyond the manufacturer-designated shelf life for care of patients with diseases for which a respirator is recommended during their care (i.e., COVID-19, tuberculosis, measles, and varicella). Many models found in U.S. stockpiles and stockpiles of healthcare facilities have been found to continue to perform in accordance with NIOSH performance standards. However, fluid resistance and flammability were not assessed. Use of the N95 respirators recommended in "Release of Stockpiled N95 Filtering Facepiece Respirators Beyond the Manufacturer-Designated Shelf Life: Considerations for the COVID-19 Response" can be considered. It is optimal to use these respirators in the context of a respiratory protection program and includes medical evaluation, training and fit testing. If used in healthcare delivery, it is particularly important that HCP perform the expected seal check, prior to entering the patient care area. CDC does not recommend using N95s beyond the manufacturer-designated shelf life in surgical settings. On March 2, 2020, FDA issued an Emergency Use Authorization (EUA) authorizing the use of certain NIOSH-approved respirator models in healthcare settings. This EUA includes respirator units that are past their designed shelf life.

https://www.cdc.gov/coronavirus/2019-ncov/hcp/respirators-strategy/index.html

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