

Summary for Healthcare Facilities: Strategies for Optimizing the Supply of N95 Respirators during the COVID-19 Response



[This summary](#) is intended to help healthcare facilities optimize supplies of disposable N95 filtering facepiece respirators when there is limited supply during the COVID-19 pandemic. The strategies are categorized in a continuum of care and further organized according to the hierarchy of controls, as defined below.

Conventional Capacity Strategies (should be incorporated into everyday practices)

Engineering Controls reduce exposures for healthcare personnel (HCP) by placing a barrier between the hazard and the HCP.

- Place patients with suspected or confirmed COVID-19 in an airborne infection isolation room (AIIR) for aerosol generating procedures.
- Use physical barriers such as glass or plastic windows at reception areas, curtains between patients, etc.
- Properly maintain ventilation systems to provide air movement from a clean to contaminated flow direction.

Administrative Controls refer to employer-dictated work practices and policies that reduce or prevent hazardous exposures.

- Limit the number of patients going to hospitals or outpatient settings by screening patients for acute respiratory illness prior to non-urgent care or elective visits.
- Exclude all HCP not directly involved in patient care. (e.g., dietary, housekeeping employees).
- Reduce face-to-face HCP encounters with patients (e.g., bundling activities, use of video monitoring).
- Exclude visitors to patients with known or suspected COVID-19.
- Implement source control: Identify and assess patients who may be ill with or who may have been exposed to a patient with known COVID-19 and recommend they use facemasks until they can be placed in an AIIR or private room.
- Cohort patients: Group together patients who are infected with the same organism to confine their care to one area.
- Cohort HCP: Assign designated teams of HCP to provide care for all patients with suspected or confirmed COVID-19.
- Use telemedicine to screen and manage patients using technologies and referral networks to reduce the influx of patients to healthcare facilities.

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- Train HCP on indications for use of N95 respirators.
- Train HCP on use of N95 respirators (i.e., proper use, fit, donning and doffing, etc).
- Implement just-in-time fit testing: Plan for larger scale evaluation, training, and fit testing of employees when necessary during a pandemic.
- Limit respirators during training: Determine which HCP do and do not need to be in a respiratory protection program and, when possible, allow limited re-use of respirators by individual HCP for training and then fit testing.
- Implement qualitative fit testing to assess adequacy of a respirator fit to minimize destruction of N95 respirator used in fit testing and allow for limited re-use by HCP.

Personal Protective Equipment: Respiratory Protection

- Use surgical N95 respirators only for HCP who need protection from both airborne and fluid hazards (e.g., splashes, sprays). If needed but unavailable, use faceshield over standard N95 respirator.
- Use NIOSH approved alternatives to N95 respirators such as [other disposable filtering facepiece respirators](#), elastomeric respirators with appropriate filters or cartridges, powered air purifying respirators where feasible.

Contingency Capacity Strategies (during expected shortages)

Administrative Controls

- Decrease length of hospital stay for medically stable patients with COVID-19 who cannot be discharged to home for social reasons by identifying alternative non-hospital housing.
- Temporarily suspend annual fit testing per [interim guidance](#) from OSHA.

Personal Protective Equipment and Respiratory Protection

- Use N95 respirators beyond the manufacturer-designated shelf life for training and fit testing.
- Extend the use of N95 respirators by wearing the same N95 for repeated close contact encounters with several different patients, without removing the respirator (i.e., [recommended guidance](#) on implementation of extended use).

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Crisis Strategies (during known shortages)

When N95 Supplies are Running Low

Personal Protective Equipment and Respiratory Protection

- Use respirators [as identified by CDC](#) as performing adequately for healthcare delivery [beyond the manufacturer-designated shelf life](#).
- Use respirators [approved under standards used in other countries](#) that are similar to NIOSH-approved N95 respirators but that may not necessarily be NIOSH-approved.
- Implement limited [re-use](#) of N95 respirators by one HCP for multiple encounters with different patients, but remove it after each encounter.
- Use additional respirators identified by CDC as NOT performing adequately for healthcare delivery beyond the manufacturer-designated shelf life.
- [Prioritize the use of N95 respirators and facemasks by activity type](#) with and without masking symptomatic patients.

When No Respirators Are Left

Administrative Controls

- Exclude HCP at higher risk for severe illness from COVID-19 from contact with known or suspected COVID-19 patients (i.e., those of older age, those with chronic medical conditions, or those who may be pregnant).
- Designate convalescent HCP for provision of care to known or suspected COVID-19 patients (those who have clinically recovered from COVID-19 and may have some protective immunity to preferentially provide care).

Engineering Controls

- Use an expedient patient isolation room for risk-reduction.
- Use a ventilated headboard to decrease risk of HCP exposure to a patient-generated aerosol.