

## Coronavirus Disease 2019 (COVID-19)

# Summary Strategies to Optimize the Supply of PPE during Shortages

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This quick reference table summarizes CDC's strategies to optimize personal protective equipment (PPE) supplies in healthcare settings and provides links to CDC's full guidance documents on optimizing supplies. These strategies offer a continuum of options using the framework of surge capacity when PPE supplies are stressed, running low, or absent. When using these strategies, healthcare facilities should:

- Consider these options and implement them sequentially
- Understand their current PPE inventory, supply chain, and utilization rate
- Train healthcare personnel on PPE use and have them demonstrate competency with donning and doffing any PPE ensemble that is used to perform job responsibilities
- As PPE availability returns to normal, promptly resume standard practices

#### **Conventional Capacity**

strategies that should already be in place as part of general infection prevention and control plans in healthcare settings

### Contingency Capacity

strategies that can be used during periods of anticipated PPE shortages

#### Crisis Capacity\*

strategies that can be used when supplies cannot meet the facility's current or anticipated PPE utilization rate

\*Not commensurate with U.S. standards of care

PPE Type	Conventional	Contingency	Crisis
All PPE	<ul> <li>Use physical barriers and other engineering controls</li> <li>Limit number of patients going to hospital or outpatient settings</li> <li>Use telemedicine whenever possible</li> <li>Exclude all HCP not directly involved in patient care</li> <li>Limit face-to-face HCP encounters with patients</li> <li>Exclude visitors to patients with known or suspected COVID-19</li> <li>Cohort patients and/or HCP</li> </ul>	<ul> <li>Selectively cancel elective and non-urgent procedures and appointments for which PPE is typically used by HCP</li> <li>Decrease length of hospital stay for medically stable patients with COVID-19</li> </ul>	<ul> <li>Cancel all elective and non-urgent procedures and appointments for which PPE is typically used by HCP</li> </ul>

PPE Type	Conventional	Contingency	Crisis
N95 Respirators	<ul> <li>Implement just-in-time fit testing</li> <li>Limit respirators during training</li> <li>Implement qualitative fit testing</li> <li>Use alternatives to N95 respirators such as other filtering facepiece respirators, elastomeric respirators, and powered air purifying respirators</li> <li>Additional guidance</li> </ul>	<ul> <li>Temporarily suspend annual fit testing         <ul> <li>Use N95 respirators beyond the manufacturer-designated shelf life for training and fit testing</li> </ul> </li> <li>Extend the use of N95 respirators by wearing the same N95 for repeated close contact encounters with several different patients</li> <li>Additional guidance on contingency capacity strategies</li> <li>Additional guidance on extended use</li> </ul>	<ul> <li>Use respirators beyond the manufacturer designated shelf life for healthcare delivery</li> <li>Use respirators approved under standards used in other countries</li> <li>Implement limited re-use of N95 respirators. During times of crisis, it may be needed to practice limited re-use on top of extended use</li> <li>Use additional respirators beyond the manufacturer-designated shelf life that have not been evaluated by NIOSH</li> <li>Prioritize the use of N95 respirators and facemasks by activity</li> <li>Additional guidance on crisis capacity strategies</li> <li>Additional guidance on re-use</li> </ul>
Facemasks	<ul> <li>Use facemasks according to product labeling and local, state, and federal requirements</li> <li>Additional guidance</li> </ul>	<ul> <li>Place facemasks in a secure and monitored site</li> <li>Provide facemasks to symptomatic patients upon check-in at entry points</li> <li>Implement extended use of facemasks</li> <li>Restrict facemasks for use by HCP, rather than asymptomatic patients (who might use cloth face coverings) for source control</li> <li>Additional guidance</li> </ul>	<ul> <li>Use facemasks beyond the manufacturer-designated shelf life during patient care activities</li> <li>Implement limited re-use of facemasks</li> <li>Prioritize facemasks for selected activities such as essential surgeries, activities where splashes and sprays are anticipated, prolonged face-to-face contact with an infectious patient, and aerosol-generating procedures</li> <li>When no facemasks are available:</li> <li>Use a face shield that covers the entire front (that extends to the chin or below) and sides of the face with no facemask</li> <li>Additional guidance</li> </ul>
Gowns	<ul> <li>Use isolation gown alternatives that offer equivalent or higher protection</li> <li>Additional guidance</li> </ul>	<ul> <li>Shift gown use toward cloth isolation gowns</li> <li>Consider the use of coveralls</li> <li>Use gowns beyond the manufacturer-designated shelf life for training</li> <li>Use gowns or coveralls conforming to international standards</li> <li>Additional guidance</li> </ul>	<ul> <li>Extend the use of isolation gowns</li> <li>Re-use cloth isolation gowns</li> <li>Prioritize gowns for activities where splashes and sprays are anticipated and during high-contact patient care</li> <li>When no gowns are available:</li> <li>Consider using gown alternatives that have not been evaluated as effective</li> <li>Additional guidance</li> </ul>
Eye Protection	<ul> <li>Use eye protection according to product labeling and local, state, and federal requirements</li> <li>Additional guidance</li> </ul>	<ul> <li>Shift eye protection supplies from disposable to re-usable devices</li> <li>Extend the use of eye protection</li> <li>Additional guidance</li> </ul>	<ul> <li>Use eye protection devices beyond the manufacturer-designated shelf life</li> <li>Prioritize eye protection for activities where splashes and sprays are anticipated or prolonged face-to-face or close contact is unavoidable</li> <li>Consider using safety glasses that cover the sides of eyes</li> <li>Additional guidance</li> </ul>

PPE Type	Conventional	Contingency	Crisis
Gloves	<ul> <li>Continue providing patient care as in usual infection control practice</li> <li>Additional guidance</li> </ul>	<ul> <li>Use gloves past their manufacturer-designated shelf life for training activities</li> <li>Use gloves conforming to other U.S. and international standards</li> <li>Additional guidance</li> </ul>	<ul> <li>Use gloves past their manufacturer-designated shelf life for healthcare delivery</li> <li>Prioritize the use of non-sterile disposable gloves</li> <li>Consider non-healthcare glove alternatives</li> <li>Extend the use of disposable medical gloves</li> <li>Additional guidance</li> </ul>

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