Cheat Sheet: Strategies to Optimize PPE & Equipment

Overview of CDC’s new guidelines following PPE shortages due to COVID-19

Abstract

The Centers for Disease Control and Prevention (CDC) loosened guidelines on what is acceptable for personal protective equipment (PPE) due to shortages of N95 respirators, facemasks, and gowns in the United States. The CDC shared strategies to optimize these PPE supplies in healthcare settings when there is limited supply. This document summarizes the “need-to-know” information from that guidance.

Stages of PPE capacity

The CDC uses surge capacity as its framework to approach shortages in PPE supply, however, there are no specific measurements to differentiate surge capacity from normal capacity of a healthcare facility. Surge capacity is the ability to manage a sudden, unexpected increase in patient volume. Three stages are used to describe surge capacity and can be used to prioritize actions of the healthcare facility to preserve PPE supplies during the COVID-19 response.

1. Conventional capacity
   - Strategies that should already be implemented in general infection prevention and control plans

2. Contingency capacity
   - Strategies that may be used temporarily during periods of expected PPE shortages

3. Crisis capacity
   - Strategies that may need to be considered during periods of known PPE shortages

4. No PPE available
   - Last resort strategies that may be needed when healthcare facilities have no available PPE

## Strategies to Optimize PPE & Equipment

<table>
<thead>
<tr>
<th>N95 Respirators</th>
<th>Facemasks</th>
<th>Isolation Gowns</th>
<th>Eye Protection</th>
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</thead>
<tbody>
<tr>
<td><strong>Conventional Capacity</strong></td>
<td>Surgical N95 respirators are recommended only for use by HCP(^1) who need protection from both airborne and fluid hazards.</td>
<td>Use facemasks according to product labeling and local, state, and federal requirements.</td>
<td>Use isolation gown alternatives that offer equivalent or higher protection.</td>
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<tr>
<td><strong>Contingency Capacity</strong></td>
<td>Use of N95 respirators beyond the manufacturer-designated shelf life for training and fit testing. Extended use of N95 respirators. Limited re-use of N95 respirators for tuberculosis.</td>
<td>Remove facemasks for visitors in public areas. Implement extended use of facemasks. Restrict facemasks to use by HCP, rather than patients for source control.</td>
<td>Shift gown use towards cloth isolation gowns. Consider the use of coveralls. Use of expired gowns beyond the manufacturer-designated shelf life for training. Use gowns or coveralls conforming to international standards.</td>
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<tr>
<td><strong>Crisis Capacity</strong></td>
<td>Use of respirators beyond the manufacturer-designated shelf life for healthcare delivery. Use of respirators approved under standards used in other countries that are similar to NIOSH-approved N95 respirators. Limited re-use of N95 respirators for COVID-19 patients. Prioritize the use of N95 respirators by activity type.</td>
<td>Use facemasks beyond the manufacturer-designated shelf life during patient care activities. Implement limited re-use of facemasks. Prioritize facemasks for selected activities.</td>
<td>Extended use of isolation gowns. Re-use of cloth isolation gowns. Prioritize gowns for certain activities.</td>
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<tr>
<td><strong>No PPE available</strong></td>
<td>HCP use of non-NIOSH(^3) approved masks or homemade masks. Use a face shield that covers the entire front (that extends to the chin or below) and sides of the face with no facemask. HCP use of homemade masks.</td>
<td>Consider using gown alternatives that have not been evaluated as effective.</td>
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1. Healthcare personnel (HCP) refers to all paid and unpaid persons serving in healthcare settings who have the potential for direct or indirect exposure to patients or infectious materials.
2. Recommended guidance for extended use and re-use can be found on the CDC page 'Strategies for Optimizing the Supply of PPE.'

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