



## Classification of North Carolina Issued Personal Protective Equipment\*

This document offers a series of strategies or options to optimize supplies of personal protective equipment (PPE) in healthcare settings when there is limited supply. Because of a critical shortage of respiratory protection devices, the Centers for Disease Control and Prevention (CDC), the Food and Drug Administration (FDA), and the Occupational Safety and Health Administration (OSHA) have provided interim guidance to employers on the use of PPE.

PPE shortages are currently posing a tremendous challenge to the US healthcare system because of the COVID-19 pandemic. Healthcare facilities are having difficulty accessing the needed PPE and are having to identify alternate ways to provide patient care. [CDC's Strategies for Optimizing PPE](#) offer options for use when PPE supplies are stressed, running low, or absent.

All U.S. healthcare facilities should currently be implementing PPE contingency strategies:

- Maximize use of engineering controls, such as barriers and maintained ventilation systems, and administrative controls, such as altering work practices to minimize patient contacts.
- Cancel elective and non-urgent procedures/appointments.
- Reserve PPE for HCP and replace PPE normally used for source control with other barrier precautions such as tissues.
- Use re-usable PPE that can be reprocessed.
- Use PPE beyond the manufacturer-designated shelf life for training.
- Consider allowing HCP to extend use of respirators, facemasks, and eye protection, beyond a single patient contact.

### *Classification System for PPE*

The classification system below is to assist in making decisions on sourcing, purchasing, prioritizing, and delivering PPE to both healthcare workers and non-healthcare public service agency workers that have requested protective equipment. The classifications are presented in order of preferred use by level of protection, with Tier I and Tier II PPE being specifically designed for medical use. Tier III and Tier IV PPE are ideal for use by non-healthcare public service workers or healthcare workers when Tier I and Tier II PPE are no longer available.

**Healthcare workers should not use Tier II, III and IV PPE unless Tier I PPE is not available. As PPE becomes available, healthcare facilities should promptly resume standard practices.**

Tier I: N-95 Respirators	Tier I: Additional respirators
<ul style="list-style-type: none"> <li>All N95 respirators that are approved by the National Institute for Occupational Safety and Health (NIOSH). <b>NIOSH</b> will be somewhere on the respirator.</li> <li>A surgical N95 respirator is a NIOSH-approved N95 respirator that has also been cleared by the FDA as a surgical mask. <b>NIOSH</b> will be somewhere on the respirator.</li> </ul> <div data-bbox="467 569 634 751" data-label="Image"> </div> <div data-bbox="451 758 646 793" data-label="Caption"> <p><i>Example of N95</i></p> </div>	<ul style="list-style-type: none"> <li>Other NIOSH approved respirators are at least as protective as the N95. These include N99, N100, P95, P99, P100, R95, R99, and R100</li> </ul> <div data-bbox="1013 394 1224 577" data-label="Image"> </div> <div data-bbox="1024 611 1219 646" data-label="Caption"> <p><i>Example of N99</i></p> </div>
Tier I: Surgical and procedural masks	Tier I: Other PPE
<ul style="list-style-type: none"> <li>ASTM Level 1, 2, or 3 procedural and surgical masks <ul style="list-style-type: none"> <li>A <b>surgical mask</b> is used inside the operating room and it also protects the healthcare worker from contaminated fluid or debris generated during the procedure. <div data-bbox="391 1129 613 1352" data-label="Image"> </div> <div data-bbox="347 1356 656 1392" data-label="Caption"> <p><i>Example of surgical mask</i></p> </div></li> </ul> </li> <li>A <b>procedure mask</b> is used for performing patient procedures and are used to protect both patients and staff from the transfer of respiratory secretions, fluids or other debris. <div data-bbox="402 1646 597 1801" data-label="Image"> </div> <div data-bbox="331 1833 672 1869" data-label="Caption"> <p><i>Example of procedural mask</i></p> </div></li> </ul>	<ul style="list-style-type: none"> <li><b>FDA cleared Medical gloves-</b> Nonsterile or sterile disposable patient examination gloves. <div data-bbox="1016 961 1224 1171" data-label="Image"> </div> <div data-bbox="967 1176 1276 1211" data-label="Caption"> <p><i>Example of medical glove</i></p> </div></li> </ul> <ul style="list-style-type: none"> <li><b>Isolation and surgical gowns-</b> Nonsterile, disposable patient isolation gowns are appropriate when caring for patients with suspected or confirmed COVID-19. <div data-bbox="1084 1444 1203 1646" data-label="Image"> </div> <div data-bbox="987 1650 1305 1686" data-label="Caption"> <p><i>Example of isolation gown</i></p> </div></li> </ul>

Tier II: Non NIOSH approved/FDA EUA	Tier II: Other PPE
<ul style="list-style-type: none"> <li>• <a href="#">OSHA</a>, <a href="#">FDA</a>, and the <a href="#">CDC</a> are allowing certain respirators from other countries to be used during COVID-19. They are acceptable in their country.</li> </ul>  <p data-bbox="394 640 605 667"><i>Example of KN95</i></p>	<ul style="list-style-type: none"> <li>• <b>Non medical gloves</b>- those used for food service, embalming, cleaning, or other industrial-grade gloves.</li> </ul>  <p data-bbox="941 571 1299 598"><i>Example of non-medical glove</i></p> <ul style="list-style-type: none"> <li>• <b>Coveralls</b>-typically provide 360-degree protection.</li> </ul>  <p data-bbox="998 896 1242 924"><i>Example of coverall</i></p>
Tier III: Utility Mask	Tier III: Other PPE
<ul style="list-style-type: none"> <li>• Simple physical barrier for exams and visitations or for dry, short procedures that do not produce fluid, spray or aerosols. Also, dust masks that are sold at hardware stores.</li> </ul>  <p data-bbox="365 1421 641 1449"><i>Example of utility mask</i></p>	<ul style="list-style-type: none"> <li>• <b>International gowns and coveralls:</b> In times of shortages, healthcare facilities can use international gowns and coveralls that conform to international standards.</li> </ul>  <p data-bbox="820 1421 1404 1449"><i>Example of Coverall from an international vendor</i></p>

Tier IV: Homemade masks	Tier IV: Other PPE
<ul style="list-style-type: none"> <li>• For use as a last resort for healthcare providers.</li> <li>• Homemade masks are not considered PPE, since their capability to protect HCP is unknown.</li> <li>• Healthcare providers should wear face shield with homemade mask if facility is resorting to use.</li> </ul> <div data-bbox="370 541 630 766" style="text-align: center;"> </div> <p data-bbox="332 766 669 793" style="text-align: center;"><i>Example of homemade mask</i></p>	<ul style="list-style-type: none"> <li>• In a situation of severely limited or no availability, the following PPE can be used: <ul style="list-style-type: none"> <li>○ Disposable laboratory coats</li> <li>○ Reusable (washable) patient gowns</li> <li>○ Reusable (washable) laboratory coats</li> <li>○ Disposable aprons</li> </ul> </li> </ul> <div data-bbox="1096 508 1188 703" style="text-align: center;"> </div> <p data-bbox="987 709 1302 739" style="text-align: center;"><i>Example of disposal apron</i></p>

**Important Things to Know about Wearing a Mask:**

When you wear your PPE, its surface becomes contaminated by particulate, which may include viruses and bacteria. PPE may also endure wear affecting their integrity due to handling, donning/doffing processes.

Wearers should be careful how they handle PPE after it has been worn and avoid touching the contaminated area. Continued strict adherence to hand hygiene practices, particularly after touching PPE, is critical.

*\*This document has been reviewed by North Carolina Department of Labor/ Occupational Safety and Health Division on April 8, 2020.*