

COVID-19 Personal Protective Equipment (PPE) Guidance - v. 1.3

Highlighted text is new information since the last revision.

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Section 1 – Purpose & Definitions

Purpose:

This document is for guidance purposes only. This document is not tied to supply procurement or allocation. The guidance included in this document, including guidance addressing specific types of PPE, does not in any way avow that those materials will be made available by the State of Vermont or any other supplier.

Definitions:

Personal Protective Equipment (PPE): Personal protective equipment (PPE) includes an array of supplies that healthcare facilities utilize to keep their employees and patients safe. These include eye protection (e.g., goggles, face shields), isolation gowns, facemasks, respirators (e.g., N95s, PAPRs), and gloves. The Centers for Disease Control and Prevention (CDC) note that PPE shortages are currently posing a tremendous challenge to the US healthcare system because of the COVID-19 pandemic. As such, CDC recommends that use of specific types of PPE discussed in this document (e.g., facemasks, respirators) be limited to healthcare personnel and very few other groups (e.g., corrections staff, law enforcement). For many others, recommended interventions include use of non-PPE controls such as social distancing and cloth face coverings.

Healthcare Personnel (HCP): HCP include, but are not limited to, emergency medical service personnel, nurses, nursing assistants, physicians, technicians, therapists, phlebotomists, pharmacists, students and trainees, contractual staff not employed by the healthcare facility, and persons not directly involved in patient care, but who could be exposed to infectious agents that can be transmitted in the healthcare setting (e.g., clerical, dietary, environmental services, laundry, security, engineering and facilities management, administrative, billing, and volunteer personnel).

Eye protection: Goggles or a face shield that covers the front and sides of the face. Personal eyeglasses and contact lenses are NOT considered adequate eye protection.

Cloth face covering: Textile (cloth) covers that are intended to keep the person wearing one from spreading respiratory secretions when talking, sneezing, or coughing. They are not PPE and it is uncertain whether cloth face coverings protect the wearer. Guidance on design, use, and maintenance of cloth face coverings is available.

Facemask: Facemasks are PPE and are often referred to as surgical masks or procedure masks. Use facemasks according to product labeling and local, state, and federal requirements. FDA-cleared surgical masks are designed to protect against splashes and sprays and are prioritized for use when such exposures are anticipated, including surgical procedures. Facemasks that are not regulated by FDA, such as some procedure masks, which are typically used for isolation purposes, may not provide protection against splashes and sprays.

Respirator: A respirator is a personal protective device that is worn on the face, covers at least the nose and mouth, and is used to reduce the wearer's risk of inhaling hazardous airborne particles (including dust particles and infectious agents), gases, or vapors. Respirators are certified by the CDC/NIOSH, including those intended for use in healthcare. There are several types of respirators, including N95s, KN95s, N99s, N100s, and powered air-purifying respirators (PAPRs).

Section 2 – Recommended PPE by Setting

Note: The guidance included here is based on best-practice recommendations from authorities such as the Centers for Disease Control and Prevention (CDC). The amount of published scientific literature pertaining to SARS-CoV-2 (the virus that causes COVID-19) is growing, so these recommendations, and the guidance included here, are subject to change.

A. Adult Day Services

Classification of Individual Wearing PPE	Respirator (e.g., N95)	Facemask	Eye Protection	Gloves	Gown / Coveralls	Cloth Face Covering (Not PPE)
HCP in care areas of patients/clients with suspected or confirmed COVID-19	X	X (if respirator not available)	X	X	X	
HCP in the facility but not in care areas for patients/clients with suspected or confirmed COVID-19		X (preferred)				X (not preferred)
Clients/Patients and any of their contacts (e.g., family members) who must enter the facility		X (if they do not have a cloth face covering)				X (if able to tolerate)
<p>Setting Notes: “Adult Day Services offer community-based non-residential supports to assist adults with physical and/or cognitive impairments to remain as active in their communities as possible. Adult day centers provide a safe, supportive environment where people can come during the day and receive a range of professional health, social and therapeutic services, as well as a nutritious meal and valuable social interaction. Adult day services also provide respite, support and education to family members and caregivers.” – Vermont Department of Disabilities, Aging, and Independent Living As of 3/17/2020, Vermont Adult Day and Senior Centers received guidance strongly recommending temporary closure.</p>						
<p>Guidance relevant to this setting:</p> <ol style="list-style-type: none"> CDC's Guidance for LTCF CDC's COVID-19 Infection Control Guidance 						

B. Assisted Living Facilities

Classification of Individual Wearing PPE	Respirator (e.g., N95)	Facemask	Eye Protection	Gloves	Gown / Coveralls	Cloth Face Covering (Not PPE)
HCP in care areas of patients/clients with suspected or confirmed COVID-19	X	X (if respirator not available)	X	X	X	
HCP in the facility but not in care areas for patients/residents with suspected or confirmed COVID-19		X (preferred)				X (not preferred)
Residents		X (may be provided if cloth mask not available upon presentation)				X (when outside room if able to tolerate)
Visitors (limit as possible)		X (may be provided if cloth mask not available upon presentation)				X

Setting Notes: “Assisted living is part of a continuum of long term care services that provides a combination of housing, personal care services, and health care designed to respond to individuals who need assistance with normal daily activities in a way that promotes maximum independence.” – National Center for Assisted Living

Guidance relevant to this setting:

1. [CDC’s COVID-19 Considerations for Assisted Living](#)
2. [CDC’s Guidance for LTCF](#)
3. [CDC’s COVID-19 Infection Control Guidance](#)

C. Community-based Essential Services (e.g., DCF)

Classification of Individual Wearing PPE	Respirator (e.g., N95)	Facemask	Eye Protection	Gloves	Gown / Coveralls	Cloth Face Covering (Not PPE)
Essential workers						X
The general public						X
<p>Setting Notes: The role of non-PPE-based control measures, such as strategies to promote social distancing and implementation of remote or tele-appointments, play an important role in protecting essential workers and the persons they interact with. Vermont’s Department of Children and Families, Family Services Division, has determined that when in-person contact is necessary, clients will first be screened for signs/symptoms of illness, and hand hygiene measures and social distancing will be reinforced (source: https://dcf.vermont.gov/sites/dcf/files/CVD19/FSD-Stakeholder-Updates.pdf).</p>						
<p>Guidance relevant to this setting:</p> <ol style="list-style-type: none"> CDC’s Guidance on How to Protect Yourself and Others 						

D. Community-based Healthcare Services (e.g., visiting nurse services)

Classification of Individual Wearing PPE	Respirator (e.g., N95)	Facemask	Eye Protection	Gloves	Gown / Coveralls	Cloth Face Covering (Not PPE)
Healthcare personnel conducting home visits to patients with suspected or confirmed COVID-19	X	X (if respirator not available)	X	X	X (particularly when splashes / sprays anticipated)	
Healthcare personnel conducting home visits to asymptomatic patients with no known COVID-19 exposure		X (preferred)				X (not preferred)
Clients / the general public						X (if able to tolerate)
<p>Setting Notes: The role of non-PPE-based control measures, such as strategies to promote social distancing and implementation of remote or tele-appointments, play an important role in protecting essential workers and the persons they interact with. Employment of pre-visit questionnaires to screen for signs/symptoms of illness can help reduce risk.</p>						
<p>Guidance relevant to this setting:</p> <ol style="list-style-type: none"> CDC's Guidance on How to Protect Yourself and Others CDC's Guidance on Implementing Home Care for People Not Requiring Hospitalization for COVID-19 						

E. Correctional and Detention Facilities

Classification of Individual Wearing PPE	Respirator (e.g., N95)	Facemask	Eye Protection	Gloves	Gown / Coveralls	Cloth Face Covering (Not PPE)
Asymptomatic incarcerated/detained persons (under quarantine as close contacts of a COVID-19 case)		X (as supply allows)				
Incarcerated/detained persons who are confirmed or suspected COVID-19 cases, or showing symptoms of COVID-19		X				
Incarcerated/detained persons in a work placement handling laundry or used food service items from a COVID-19 case or case contact				X	X	
Incarcerated/detained persons in a work placement, cleaning areas where a COVID-19 case has spent time	Additional PPE may be needed based on the product label. See CDC guidelines for more details.			X	X	
Staff having direct contact with asymptomatic incarcerated/detained persons under quarantine as close contacts of a COVID-19 case* (but not performing temperature checks or providing medical care)		Face mask, eye protection, and gloves as local supply and scope of duties allow.				
Staff performing temperature checks on any group of people (staff, visitors, or incarcerated/detained persons), or providing medical care to asymptomatic quarantined persons		X	X	X	X (required for medical care; consider for brief low/no contact temp checks)	
Staff having direct contact with (including transport) or offering medical care to confirmed or suspected COVID-19 cases (see CDC infection control guidelines)	X (preferred)	X (if respirator not available)	X	X	X	
Staff present during a procedure on a confirmed or suspected COVID-19 case that may generate respiratory aerosols (see CDC infection control guidelines)	X		X	X	X	
Staff handling laundry or used food service items from a COVID-19 case or case contact				X	X	

Staff cleaning an area where a COVID-19 case has spent time	Additional PPE may be needed based on the product label. See CDC guidelines for more details.	X	X	
Setting Notes:				
Guidance relevant to this setting:				
<ol style="list-style-type: none"> CDC's COVID-19 Guidance for Correctional and Detention Facilities CDC's COVID-19 Infection Control Guidance 				

F. Dental Facilities

Classification of Individual Wearing PPE	Respirator (e.g., N95)	Facemask	Eye Protection	Gloves	Gown / Coveralls	Cloth Face Covering (Not PPE)
Dental HCP providing direct care to patients (should be limited to emergency visits only during the pandemic)	X	X (if respirator not available; pair with full-face shield)	X (full-face shield if not using respirator)	X	X	
Dental HCP in the facility but not in-patient care areas		X (preferred)				X (not preferred)
Patients		X				
<p>Setting Notes: “If emergency dental care is medically necessary for a patient who has, or is suspected of having COVID-19, Airborne Precautions (an isolation room with negative pressure relative to the surrounding area and use of an N95 filtering disposable respirator for persons entering the room) should be followed. Dental treatment should be provided in a hospital or other facility that can treat the patient using the appropriate precautions.”</p> <p>“If a patient must be seen in the dental clinic for emergency care, systematically assess the patient at the time of check-in. The patient should be asked about the presence of symptoms of a respiratory infection and history of travel to areas experiencing transmission of COVID-19 or contact with possible patients with COVID-19. If the patient is afebrile (temperature < 100.4°F) and otherwise without symptoms consistent with COVID-19, then emergency dental care may be provided using appropriate engineering controls, work practices, and infection control practices.”</p> <p>(source: https://www.cdc.gov/coronavirus/2019-ncov/hcp/dental-settings.html).</p>						
Guidance relevant to this setting:						
<ol style="list-style-type: none"> CDC's COVID-19 Guidance for Dental Settings CDC's COVID-19 Infection Control Guidance 						

G. Dialysis Facilities

Classification of Individual Wearing PPE	Respirator (e.g., N95)	Facemask	Eye Protection	Gloves	Gown / Coveralls	Cloth Face Covering (Not PPE)
Healthcare personnel caring for patients with suspected or confirmed COVID-19	X	X (if respirator not available)	X	X	X	
HCP in the facility but not in care areas for patients/clients with suspected or confirmed COVID-19		X (preferred)				X (not preferred)
Patients		X (may be provided if they do not have a cloth face covering)				X

Setting Notes:

Guidance relevant to this setting:

1. [CDC's COVID-19 Guidance for Dialysis Facilities](#)
2. [CDC's COVID-19 Infection Control Guidance](#)

H. First Responders

Classification of Individual Wearing PPE	Respirator (e.g., N95)	Facemask	Eye Protection	Gloves	Gown / Coveralls	Cloth Face Covering (Not PPE)
EMS responders who will have close contact (< 6') with any potential emergency medical patient	X	X (if respirator not available)	X	X	X	
EMS responders who will have close contact (< 6') with any potential emergency medical patient undergoing an aerosol-generating procedure	X		X	X	X	
Law enforcement, firefighters, and other first responders who will have close contact (< 6') with individuals with possible COVID-19	X	X (if respirator not available)	X	X	X	
Patients/Clients		X (if possible)				
Family members and contacts (should be excluded from riding in transport vehicle if possible)		X (if in transport vehicle)				
<p>Setting Notes: From CDC's Guidance for EMS, linked below: "If information about potential for COVID-19 has not been provided by the PSAP, EMS clinicians should exercise appropriate precautions when responding to any patient with signs or symptoms of a respiratory infection. Initial assessment should begin from a distance of at least 6 feet from the patient, if possible. Patient contact should be minimized to the extent possible until a facemask is on the patient. If COVID-19 is suspected, all PPE as described below should be used. If COVID-19 is not suspected, EMS clinicians should follow standard procedures and use appropriate PPE for evaluating a patient with a potential respiratory infection."</p>						
<p>Guidance relevant to this setting:</p> <ol style="list-style-type: none"> CDC's COVID-19 Guidance for EMS CDC's COVID-19 Guidance for Law Enforcement Personnel 						

I. Grocery Stores & Essential Retail Establishments

Classification of Individual Wearing PPE	Respirator (e.g., N95)	Facemask	Eye Protection	Gloves	Gown / Coveralls	Cloth Face Covering (Not PPE)
Essential workers						X
Essential workers contacting ready-to-eat foods				X		X
Customers / the general public						X
<p>Setting Notes: Governor Scott’s March 24th Executive Order details several essential business categories, including grocery stores, pharmacies, animal feed and essential supplies, fuel products and supply, hardware stores, and more. That list is available in the executive order linked below. Any parties interested in additional guidance or clarification can submit inquiries via the Agency of Commerce and Community Development’s form linked below.</p> <p>The role of non-PPE-based control measures, such as strategies to promote social distancing and enhance environmental cleaning play an important role in settings such as essential businesses. Per FDA “The cloth face coverings recommended by CDC are not surgical masks or N-95 respirators. Those are critical supplies that must continue to be reserved for healthcare workers and other medical first responders, as recommended by current CDC guidance.”</p>						
<p>Guidance relevant to this setting:</p> <ol style="list-style-type: none"> FDA’s Guidance on Food Safety and COVID-19 Governor Scott’s Executive Order No. 01-20, Dated 3/24/2020 Vermont Agency of Commerce and Community Development Form to Request Guidance on Stay Home, Stay Safe Executive Order 						

J. Hospitals

Classification of Individual Wearing PPE	Respirator (e.g., N95)	Facemask	Eye Protection	Gloves	Gown / Coveralls	Cloth Face Covering (Not PPE)
HCP in care areas of patients with suspected or confirmed COVID-19	X	X (if respirator not available)	X	X	X	
HCP in the facility but not in care areas for patients with suspected or confirmed COVID-19		X (preferred)				X (not preferred)
Patients		X (may be provided if cloth mask not available upon presentation)				X (When outside room if able to tolerate)
Visitors (limit as possible)		X (may be provided if cloth mask not available upon presentation)				X
Setting Notes:						
Guidance relevant to this setting:						
1. CDC's COVID-19 Infection Control Guidance						

K. Independent Living Facilities and Senior Living Communities

Classification of Individual Wearing PPE	Respirator (e.g., N95)	Facemask	Eye Protection	Gloves	Gown / Coveralls	Cloth Face Covering (Not PPE)
Essential Personnel						X
Residents						X (when outside their home)
Visitors (consider limiting non-essential)						X (when outside a residence)
Setting Notes:						
Guidance relevant to this setting:						
1. CDC's COVID-19 Guidance for Retirement Communities and Independent Living Facilities						

L. Inpatient Psychiatric Care Facilities

Classification of Individual Wearing PPE	Respirator (e.g., N95)	Facemask	Eye Protection	Gloves	Gown / Coveralls	Cloth Face Covering (Not PPE)
HCP in care areas of patients with suspected or confirmed COVID-19	X	X (if respirator not available)	X	X	X	
HCP in the facility but not in care areas of patients with suspected or confirmed COVID-19		X (preferred)				X
Patients		X (may be provided if cloth mask not available upon presentation)				X (when outside room if able to tolerate)
Visitors (limit as possible)		X (may be provided if cloth mask not available upon presentation)				X
Setting Notes:						
Guidance relevant to this setting: 1. CDC's COVID-19 Infection Control Guidance						

M. Nursing Homes

Classification of Individual Wearing PPE	Respirator (e.g., N95)	Facemask	Eye Protection	Gloves	Gown / Coveralls	Cloth Face Covering (Not PPE)
HCP in care areas of patients/clients with suspected or confirmed COVID-19	X	X (if respirator not available)	X	X	X	
HCP in the facility but not in patient/resident care areas		X (preferred)				X (not preferred)
Visitors (limit as possible)		X (may be provided if cloth mask not available upon presentation)				X
<p>Setting Notes: From CDC’s Guidance for LTCF, linked below: “Because of the higher risk of unrecognized infection among residents, universal use of all recommended PPE for the care of all residents on the affected unit (or facility-wide depending on the situation) is recommended when even a single case among residents or HCP is identified in the facility; this should also be considered when there is sustained transmission in the community. The health department can assist with decisions about testing of asymptomatic residents.”</p>						
<p>Guidance relevant to this setting:</p> <ol style="list-style-type: none"> CDC's Guidance for LTCF CDC's COVID-19 Infection Control Guidance 						

N. Primary Care and Community Health Centers

Classification of Individual Wearing PPE	Respirator (e.g., N95)	Facemask	Eye Protection	Gloves	Gown / Coveralls	Cloth Face Covering (Not PPE)
HCP in care areas of patients with suspected or confirmed COVID-19	X	X (if respirator not available)	X	X	X	
HCP in the facility but not in care areas of patients with suspected or confirmed COVID-19		X (preferred)				X (not preferred)
Patients		X (may be provided if cloth mask not available upon presentation)				X
Visitors (limit as possible)		X (may be provided if cloth mask not available upon presentation)				X
Setting Notes:						
Guidance relevant to this setting: 1. CDC's COVID-19 Infection Control Guidance						

O. Public Transit Operators

Classification of Individual Wearing PPE	Respirator (e.g., N95)	Facemask	Eye Protection	Gloves	Gown / Coveralls	Cloth Face Covering (Not PPE)
Transit Operators						X
Transit Operators coming in direct contact with passenger belongings or surfaces contaminated by body fluids				X		X
Transit Operators who must come in prolonged direct contact with passengers (e.g., performing wheelchair safety services)		X (if available)	X (if available)	X		X (if facemask not available)
Passengers						X
<p>Setting Notes: Protecting the health and safety of transit operators and passengers involves several levels of controls before the use of PPE. These include interventions to promote appropriate social distancing (> 6') and effective hand hygiene. In instances where transit operators must have direct contact with passengers or their belongings, use of at least gloves is indicated.</p>						
<p>Guidance relevant to this setting:</p> <ol style="list-style-type: none"> 1. CDC's COVID-19 Guidance for Bus Transit Operators 2. CDC's Guidance on How to Protect Yourself and Others 						

P. Shelters for Marginally Housed Persons

Classification of Individual Wearing PPE	Respirator (e.g., N95)	Facemask	Eye Protection	Gloves	Gown / Coveralls	Cloth Face Covering (Not PPE)
Essential personnel				X (if handling client belongings)		X
Essential personnel conducting temperature checks		X	X	X		
Shelter clients						X
Shelter clients with signs or symptoms of illness		X				
Setting Notes:						
Guidance relevant to this setting: 1. CDC's COVID-19 Guidance for Homeless Service Providers						

Q. Therapeutic Community Residences and Recovery Facilities

Classification of Individual Wearing PPE	Respirator (e.g., N95)	Facemask	Eye Protection	Gloves	Gown / Coveralls	Cloth Face Covering (Not PPE)
HCP in care areas of patients/clients with suspected or confirmed COVID-19	X	X (if respirator not available)	X	X	X	
HCP in the facility but not in care areas of patients/clients with suspected or confirmed COVID-19		X (preferred)				X (not acceptable in any patient care areas)
Essential personnel conducting temperature checks		X	X	X		
Residents		X (when symptomatic)				X (consider implementing in shared spaces)
Visitors (consider limiting non-essential)						X
Setting Notes:						
Guidance relevant to this setting: <ol style="list-style-type: none"> CDC's COVID-19 Infection Control Guidance CDC's Guidance on How to Protect Yourself and Others 						

R. Veterinary Practices

Classification of Individual Wearing PPE	Respirator (e.g., N95)	Facemask	Eye Protection	Gloves	Gown / Coveralls	Cloth Face Covering (Not PPE)
Veterinary HCP	PPE selection and use not primarily driven by concern for COVID-19 spread from patients/animals. PPE selection and use <i>should</i> be informed by supply optimization strategies.					

Clients/Animal Owners/Visitors		X (consider offering if no cloth face covering upon arrival)				X
Setting Notes: “We do not have evidence that companion animals, including pets, can spread the virus that causes COVID-19 to people or that they might be a source of infection in the United States.” (source: https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/animals.html).						
Guidance relevant to this setting: 1. CDC’s COVID-19 Guidance If You Have Animals						

Section 3 – PPE Supply Optimization

Who needs PPE?

1. **HCP** working in care areas of patients/clients with suspected or confirmed COVID-19 should wear full PPE
 - **HCP** not directly involved in patient care or entering into patient care areas may still need to wear some PPE (e.g., facemask)
2. **Patients** with confirmed or possible COVID-19 infection should wear a facemask when being evaluated medically
3. **Certain sub-sets of essential workers** including law enforcement and correctional officers may need to wear PPE during close interactions with persons with confirmed or possible COVID-19 infection

Contingency strategies for conserving PPE – ALL U.S. HEALTHCARE FACILITIES SHOULD BE IMPLEMENTING (AT LEAST) CONTINGENCY CAPACITY STRATEGIES

In contingency mode, strategies should be implemented to reduce opportunities that require PPE and extend the life of PPE that is necessary.

Facilities using PPE should:

- Selectively cancel elective and non-urgent procedures and appointments for which PPE is typically used by HCP.
- Shift from disposable PPE to reusable PPE (e.g. reusable eye protection including goggles and face shields and cloth isolation gowns).
- Implement extended use policies for eye protection, facemasks, and N95s. Extended use is the practice of wearing the same PPE for repeated close contact encounters with several different patients, without removing PPE between patient encounters (Table 3.1).
- Utilize expired PPE for fit testing and providing training in donning and doffing.

Table 3.1 Contingency Capacity Extended Use Details

PPE	Extended Use Details
Eye Protection	<ol style="list-style-type: none"> 1. Eye protection should be removed and reprocessed if it becomes visibly soiled or difficult to see through 2. Eye protection should be discarded if damaged 3. HCP should take care not to touch their eye protection. If they touch or adjust their eye protection, they must immediately perform hand hygiene. 4. HCP should leave patient care area if they need to remove their eye protection
Masks	<ol style="list-style-type: none"> 1. The facemask should be removed and discarded if soiled, damaged, or hard to breathe through. 2. HCP must take care not to touch their facemask. If they touch or adjust their facemask, they must immediately perform hand hygiene. 3. HCP should leave the patient care area if they need to remove the facemask. 4. Restrict facemasks to use by HCP, rather than patients for source control. 5. Have patients with symptoms of respiratory infection use tissues or other barriers to cover their mouth and nose.
N95s	<ol style="list-style-type: none"> 1. When practicing extended use of N95 respirators, the maximum recommended extended use period is 8–12 hours. 2. Respirators should not be worn for multiple work shifts and should not be reused after extended use. 3. N95 respirators should be removed (doffed) and discarded before activities such as meals and restroom breaks. 4. Consider suspending the requirement for annual N95 fit testing for HCP who have completed the initial medical evaluation and fit test.
Gowns	<p>Extended use of gowns is a crisis capacity strategy. Contingency capacity strategies for optimizing gown supplies include:</p> <ol style="list-style-type: none"> 1. Shift gown use toward reusable (i.e., washable) gowns. 2. Consider the use of coveralls. 3. Use expired gowns beyond the manufacturer-designated shelf life for training. 4. Use gowns or coveralls conforming to international standards.
Guidance relevant to PPE optimization strategies	

[CDC's Guidance for Laundering Reusable Gowns](#)

[CDC's Guidance for Optimizing PPE](#)

[CDC's Guidance for Using PPE](#)

Crisis strategies for conserving PPE –U.S. HEALTHCARE FACILITIES SHOULD ASSESS NEED FOR CRISIS CAPACITY STRATEGIES

In crisis mode, strategies should be implemented to prioritize PPE use for necessary patient encounters and implement limited PPE re-use to extend supplies.

Facilities using PPE should:

- Cancel all elective and non-urgent procedures and appointments for which PPE is typically used by HCP.
- Implement extended use of gowns when working with all COVID-19 positive cohorts.
 - Extended use of gowns should be implemented only if there are no additional co-infectious diagnoses transmitted by contact (such as *Clostridioides difficile*) among patients.
 - If the gown becomes visibly soiled, it must be removed and discarded.
- When no gowns are available, consider using gown alternatives that have not been evaluated as effective
 - In situation of severely limited or no available isolation gowns, the following pieces of clothing can be considered as a last resort for care of COVID-19 patients as single use. However, none of these options can be considered PPE, since their capability to protect HCP is unknown. Preferable features include long sleeves and closures (snaps, buttons) that can be fastened and secured.
 - Disposable laboratory coats
 - Reusable (washable) patient gowns
 - Reusable (washable) laboratory coats
 - Disposable aprons
 - Combinations of clothing: Combinations of pieces of clothing can be considered for activities that may involve body fluids and when there are no gowns available:
 - Long sleeve aprons in combination with long sleeve patient gowns or laboratory coats
 - Open back gowns with long sleeve patient gowns or laboratory coats
 - Sleeve covers in combination with aprons and long sleeve patient gowns or laboratory coats
 - Reusable patient gowns and lab coats can be safely laundered according to [routine procedures](#).
 - Laundry operations and personnel may need to be augmented to facilitate additional washing loads and cycles

- Systems are established to routinely inspect, maintain (e.g., mend a small hole in a gown, replace missing fastening ties) and replace reusable gowns when needed (e.g., when they are thin or ripped)
- Use eye protection, facemasks, and N95s beyond the manufacturer-designated shelf life during patient care activities.
- Prioritize which patient encounters require PPE (Table 3.2).
- Implement limited re-use of N95s, cloth isolation gowns, and facemasks (Table 3.3).
 - Limited re-use is the practice of using the same PPE by one HCP for multiple encounters with different patients but removing it after each encounter. As it is unknown what the potential contribution of contact transmission is for SARS-CoV-2, care should be taken to ensure that HCP do not touch outer surfaces of the PPE during care, and that doffing and replacement be done in a careful and deliberate manner.

Table 3.2 Prioritizing PPE During Crisis Capacity

PPE	Encounters to Prioritize Using PPE
Eye Protection	<ol style="list-style-type: none"> 1. During care activities where splashes and sprays are anticipated, which typically includes aerosol generating procedures. 2. During activities where prolonged face-to-face or close contact with a potentially infectious patient is unavoidable.
Masks	<ol style="list-style-type: none"> 1. For provision of essential surgeries and procedures 2. During care activities where splashes and sprays are anticipated 3. During activities where prolonged face-to-face or close contact with a potentially infectious patient is unavoidable 4. For performing aerosol generating procedures if respirators are no longer available
N95s	<ol style="list-style-type: none"> 1. When HCP will be present in the room during aerosol generating procedures performed on symptomatic persons 2. When a procedure necessitates unmasking a symptomatic patient while a HCP is within 6 feet
Gowns	<ol style="list-style-type: none"> 1. During care activities where splashes and sprays are anticipated, which typically includes aerosol generating procedures 2. During the following high-contact patient care activities that provide opportunities for transfer of pathogens to the hands and clothing of healthcare providers, such as: <ol style="list-style-type: none"> a. Dressing, bathing/showering, transferring, providing hygiene, changing linens, changing briefs or assisting with toileting, device care or use, wound care 3. Surgical gowns should be prioritized for surgical and other sterile procedures. Facilities may consider suspending use of gowns for endemic multidrug resistant organisms (e.g., MRSA, VRE, ESBL-producing organisms).
<p>Guidance relevant to PPE optimization strategies CDC's Guidance for Laundering Reusable Gowns CDC's Guidance for Optimizing PPE CDC's Guidance for Using PPE</p>	

Table 3.3 Crisis Capacity Extended Use Details

PPE	Reuse Details
Eye Protection	Continue implementing extended use procedures (Table 3.1)
Masks	<ol style="list-style-type: none"> 1. The facemask should be removed and discarded if soiled, damaged, or hard to breathe through. 2. Not all facemasks can be re-used. <ul style="list-style-type: none"> ○ Facemasks that fasten to the provider via ties may not be able to be undone without tearing and should be considered only for extended use, rather than re-use. ○ Facemasks with elastic ear hooks may be more suitable for re-use. 3. HCP should leave patient care area if they need to remove the facemask. Facemasks should be carefully folded so that the outer surface is held inward and against itself to reduce contact with the outer surface during storage. The folded mask can be stored between uses in a clean sealable paper bag or breathable container.
N95s	<ol style="list-style-type: none"> 1. Unless otherwise specified by the manufacturer, limit the number of reuses to no more than five uses per device. 2. N95 and other disposable respirators should not be shared by multiple HCP. 3. Respirators grossly contaminated with blood, respiratory or nasal secretions, or other bodily fluids from patients should be discarded. 4. HCP can consider using a face shield or facemask over the respirator to reduce/prevent contamination of the N95 respirator. HCP re-using an N95 respirator should use a clean pair of gloves when donning or adjusting a previously worn N95 respirator. 5. It is important to discard gloves and perform hand hygiene after the N95 respirator is donned or adjusted. 6. Consider issuing each HCP who may be exposed to COVID-19 patients a minimum of five respirators to be used on a particular day and stored in a breathable paper bag until the next week to ensure the amount of time in between uses should exceed the 72 hour expected survival time for SARS-CoV2.
Gowns	<ol style="list-style-type: none"> 1. Cloth isolation gowns could potentially be untied and retied and could be considered for re-use without laundering in between. 2. In a situation where the gown is being used as part of standard precautions to protect HCP from a splash, the risk of re-using a non-visibly soiled cloth isolation gown may be lower. However, for care of patients with suspected or confirmed COVID-19, HCP risk from re-use of

	<p>cloth isolation gowns without laundering among (1) single HCP caring for multiple patients using one gown or (2) among multiple HCP sharing one gown is unclear. The goal of this strategy is to minimize exposures to HCP and not necessarily prevent transmission between patients.</p> <p>3. Any gown that becomes visibly soiled during patient care should be disposed of or cleaned.</p>
<p>Guidance relevant to PPE optimization strategies</p> <p>CDC's Guidance for Laundering Reusable Gowns</p> <p>CDC's Guidance for Optimizing PPE</p> <p>CDC's Guidance for Using PPE</p> <p>CDC's Guidance for Extended Use and Limited Reuse of N95s</p>	