



WISCONSIN DEPARTMENT
of HEALTH SERVICES

Strategies to Optimize PPE

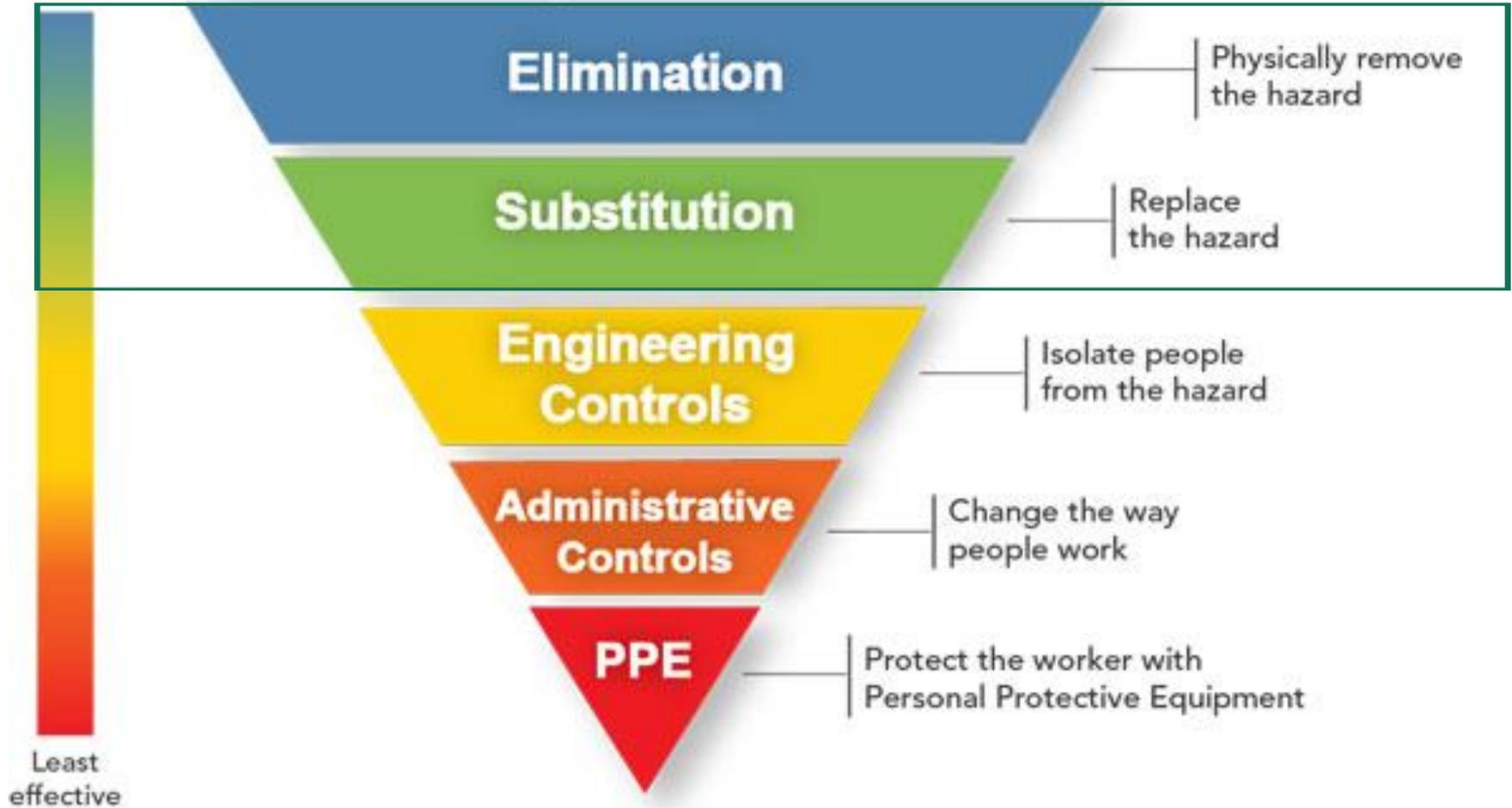
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Key Topics

- Hierarchy of Controls
- Review CDC recommended PPE
- Review Strategies to Optimize PPE
 - Optimizing gowns and N95 respirators during shortages

Hierarchy of Controls

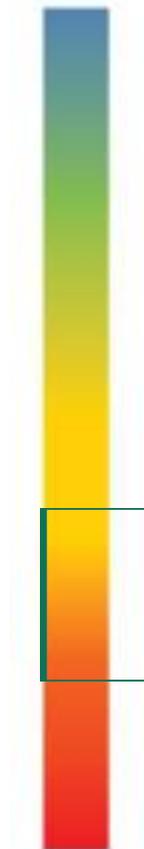
Most effective



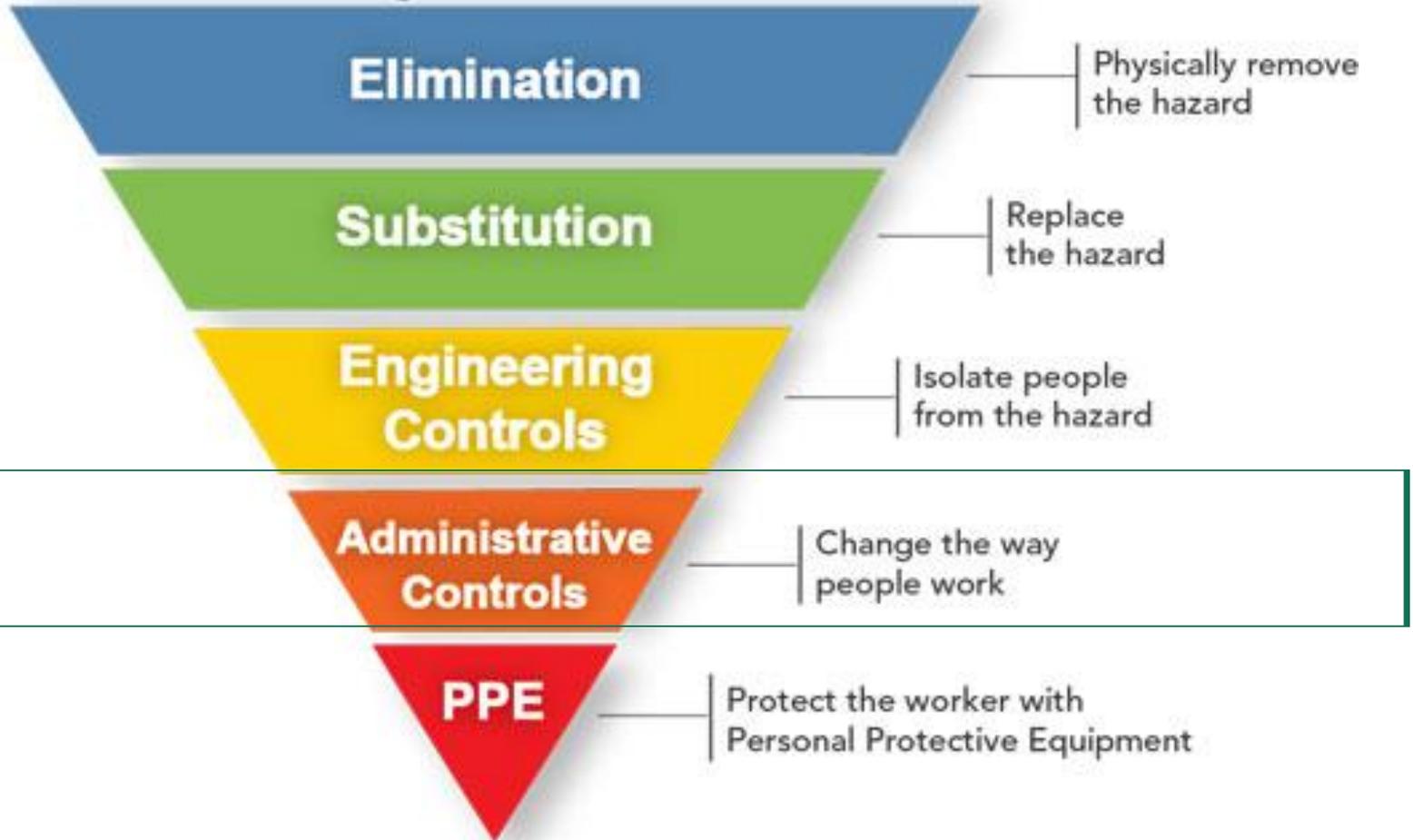
Least effective

Hierarchy of Controls

Most effective

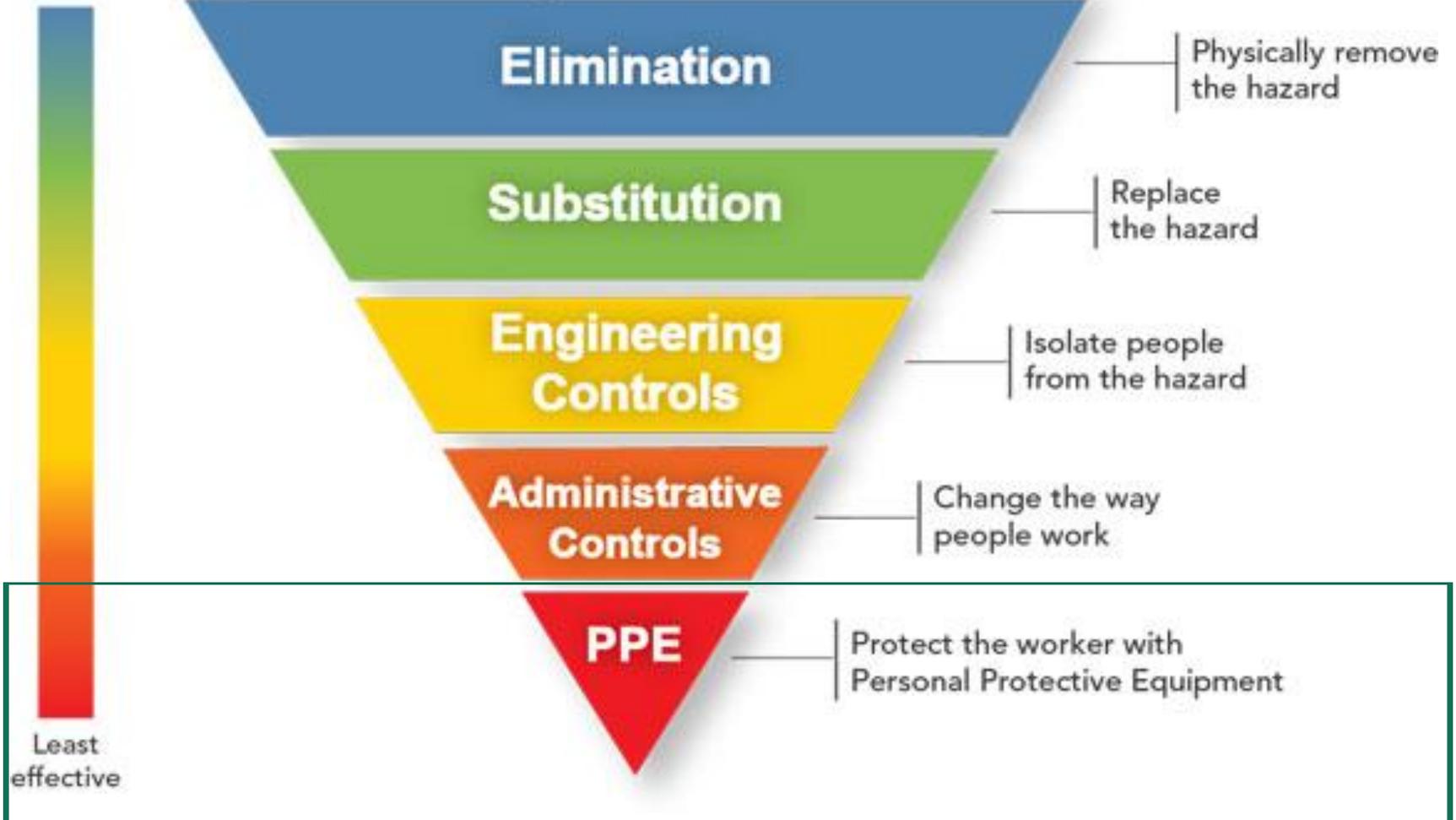


Least effective



Hierarchy of Controls

Most effective



Least effective

Testing +

Clinical Care +

Infection Control -

Considerations for Preventing Spread of COVID-19 in Assisted Living Facilities

Updated May 29, 2020

Print



Infection Control Guidance

Using PPE

Hand Hygiene

Alternate Care Sites

Assisted Living Facilities

Blood & Plasma Facilities

Dental Settings

Dialysis Facilities +

Nursing Homes & Long-Term Care Facilities +

Pharmacies

Postmortem Guidance

Summary of Changes to the Guidance:

Below are changes to the guidance as of May 29, 2020:

- Updated recommendations about visitor restrictions and group activities to assist facilities if, based on guidance from their state and local officials, they begin to relax restrictions
- Added information about the [National Healthcare Safety Network \(NHSN\) Long-term Care Facility \(LTCF\) COVID-19 module](#), which can assist with tracking infections and prevention process measures in a systematic way.

Key Actions

- Assisted living facility (ALF) owners and administrators should refer to guidance from state and local officials when making decisions about relaxing restrictions (e.g., easing visitor restrictions, allowing group activities, or restoring communal dining)
- State licensing authorities, which have oversight of ALFs, are encouraged to share this guidance with all ALFs in their jurisdiction. [State healthcare-associated infections programs](#) are an important resource to assist ALFs with responding to COVID-19 and implementing recommended practices.

Optimize PPE Supply



Given their congregate nature and population served, assisted living facilities (ALFs) are at high risk for SARS-CoV-2 among their residents. If infected with SARS-CoV-2, the virus that causes COVID-19, assisted living residents—
<https://www.cdc.gov/coronavirus/2019-ncov/hcp/assisted-living.html>

Preparing for COVID-19 in Nursing Homes

Updated June 25, 2020

Print



Testing +

Clinical Care +

Infection Control -

Infection Control Guidance

Using PPE

Hand Hygiene

Alternate Care Sites

Assisted Living Facilities

Blood & Plasma Facilities

Dental Settings

Dialysis Facilities +

Nursing Homes & Long-Term Care Facilities -

Infection Control for Nursing Homes

Responding to COVID-19

Testing Residents

Testing Facility-Wide

SARS-CoV-2 Antigen Testing in Nursing Homes

Summary of Changes to the Guidance:

- Tiered recommendations to address nursing homes in different phases of COVID-19 response
- Added a recommendation to assign an individual to manage the facility's infection control program
- Added guidance about new requirements for nursing homes to report to the National Healthcare Safety Network (NHSN)
- Added a recommendation to create a plan for testing residents and healthcare personnel for SARS-CoV-2

On This Page

Background

Core Practices

Additional Strategies

Background

Given their congregate nature and resident population served (e.g., older adults often with underlying chronic medical conditions), nursing home populations are at high risk of being affected by respiratory pathogens like COVID-19 and other pathogens, including multidrug-resistant organisms (e.g., Carbapenemase-producing organisms, *Candida auris*). As demonstrated by the COVID-19 pandemic, a strong infection prevention and control (IPC) program is critical to protect both residents and healthcare personnel (HCP).

Facilities should assign at least one individual with training in IPC to provide on-site management of their COVID-19 prevention and response activities because of the breadth of activities for which an IPC program is responsible, including developing IPC policies and procedures, performing infection surveillance, providing competency-based training of HCP, and auditing adherence to recommended IPC practices.

The Centers for Medicare and Medicaid Services (CMS) recently issued [Nursing Home Reopening Guidance for State and Local Officials](https://www.cdc.gov/coronavirus/2019-ncov/hcp/long-term-care.html) that outlines criteria that could be used to determine when nursing homes could relax restrictions on visitation and group activities and when such restrictions should be reimplemented. Nursing homes should consider the <https://www.cdc.gov/coronavirus/2019-ncov/hcp/long-term-care.html>

Testing +

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Infection Control Guidance

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Pharmacies

Postmortem Guidance

Optimize PPE Supply +

Interim Infection Prevention and Control Recommendations for Healthcare Personnel During the Coronavirus Disease 2019 (COVID-19) Pandemic

Updated July 15, 2020

Print



Summary of Changes to the Guidance

Below are changes to the guidance as of July 15, 2020:

- Added language that protective eyewear (e.g., safety glasses, trauma glasses) with gaps between glasses and the face likely do not protect eyes from all splashes and sprays.

Background

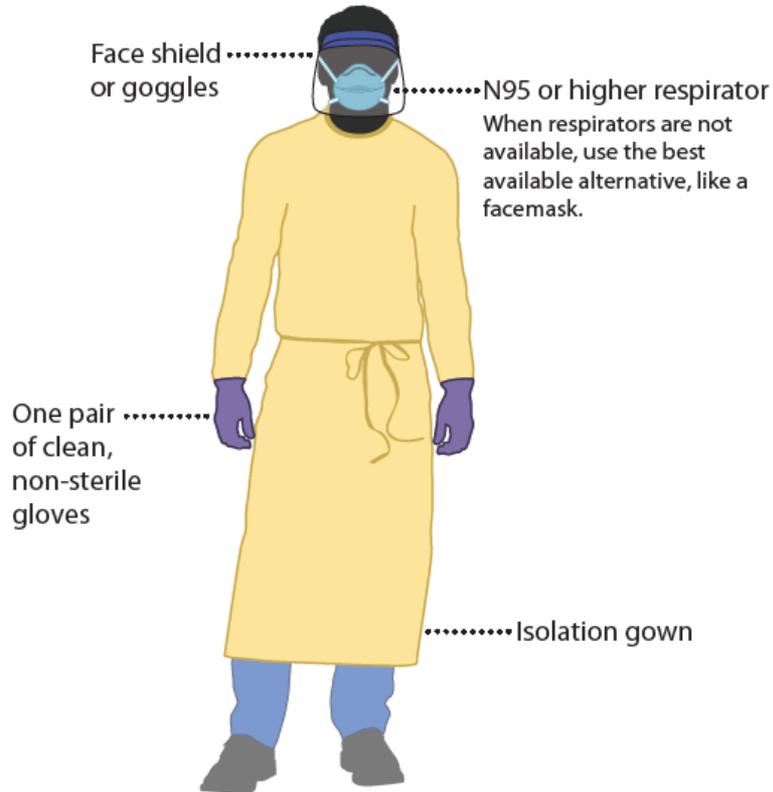
This interim guidance has been updated based on currently available information about COVID-19 and the current situation in the United States. As healthcare facilities begin to relax restrictions on healthcare services provided to patients (e.g., restarting elective procedures), in accordance with guidance from local and state officials, there are precautions that should remain in place as a part of the ongoing response to the COVID-19 pandemic. Most recommendations in this updated guidance are not new (except as noted in the summary of changes above); they have been reorganized into the following sections:

- Recommended infection prevention and control (IPC) practices for routine healthcare delivery during the pandemic
- Recommended IPC practices when caring for a patient with suspected or confirmed SARS-CoV-2 infection

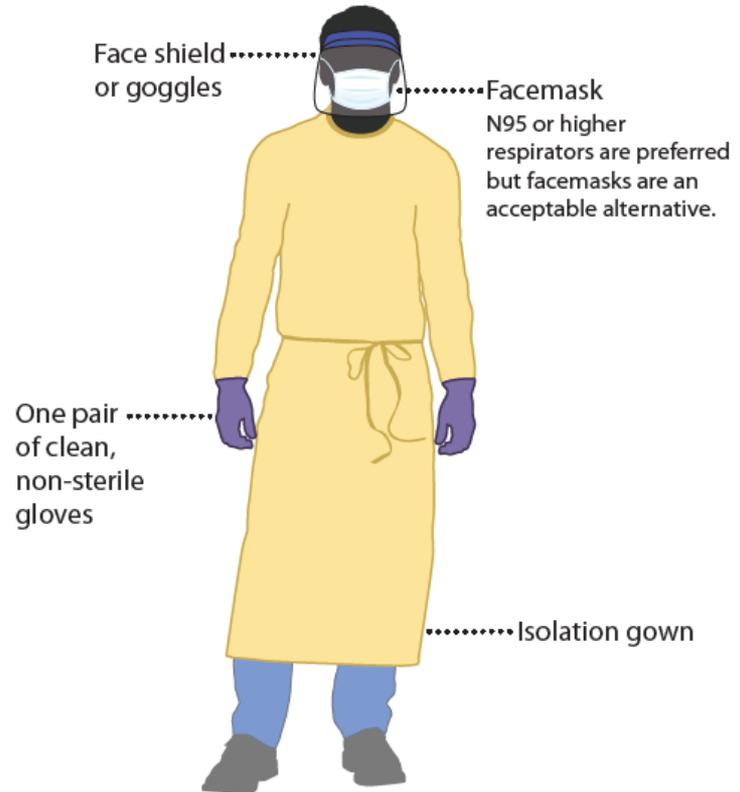
<https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-recommendations.html>

COVID-19 Personal Protective Equipment (PPE) for Healthcare Personnel

Preferred PPE – Use N95 or Higher Respirator



Acceptable Alternative PPE – Use Facemask



cdc.gov/COVID19



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Optimize PPE Supply -

Summary Optimization Strategies

PPE Burn Rate Calculator

Eye Protection

Gowns

Gloves

Facemasks

N95 Respirators +

Powered Air Purifying Respirators

Elastomeric Respirators

Ventilators

PPE FAQ

HEALTHCARE WORKERS

Optimizing Supply of PPE and Other Equipment during Shortages

Updated July 16, 2020

Print

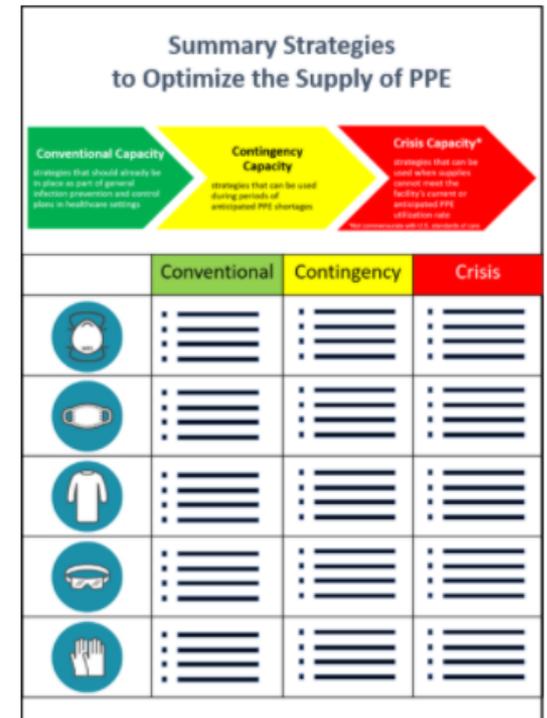


Personal protective equipment (PPE) is used every day by healthcare personnel (HCP) to protect themselves, patients, and others when providing care. PPE helps protect HCP from many hazards encountered in healthcare facilities.

The greatly increased need for PPE caused by the COVID-19 pandemic has caused PPE shortages, posing a tremendous challenge to the U.S. healthcare system. Healthcare facilities are having difficulty accessing the needed PPE and are having to identify alternate ways to provide patient care.

Surge capacity refers to the ability to manage a sudden increase in patient volume that would severely challenge or exceed the present capacity of a facility. While there are no commonly accepted measurements or triggers to distinguish surge capacity from daily patient care capacity, surge capacity is a useful framework to approach a decreased supply of PPE during the COVID-19 response. To help healthcare facilities plan and optimize the use of PPE in response to COVID-19, CDC has developed a [Personal Protective Equipment \(PPE\) Burn Rate Calculator](#). Three general strata have been used to describe surge capacity and can be used to prioritize measures to conserve PPE supplies along the continuum of care.

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/index.html>





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Elastomeric Respirators

Ventilators

PPE FAQ

Potential Exposure at Work +

First Responder Guidance

Healthcare Facility Tools +

HEALTHCARE WORKERS

Summary Strategies to Optimize the Supply of PPE during Shortages

Updated July 16, 2020

[Español](#)

[Print](#)



This quick reference 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:

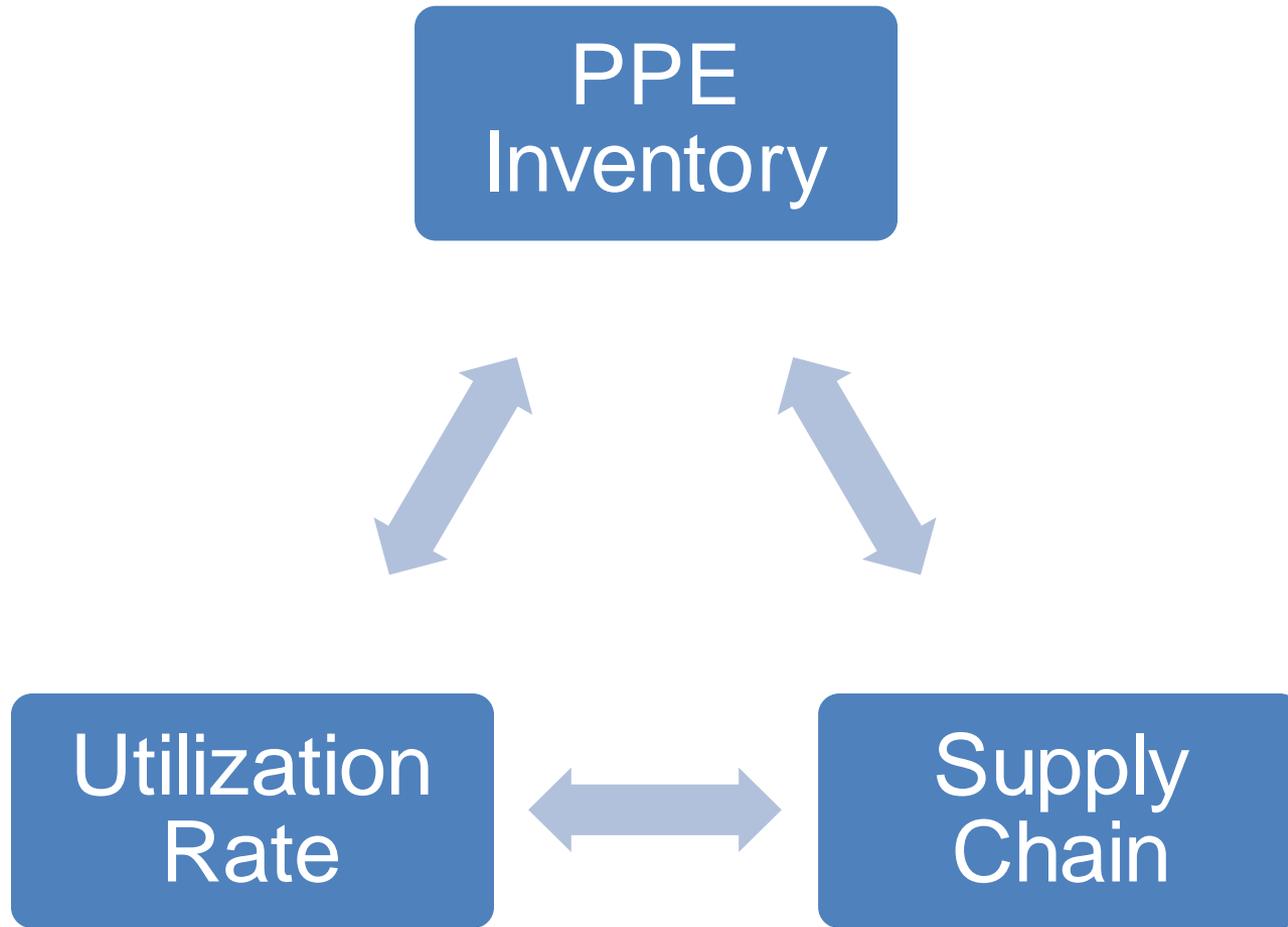
- Consider these options and **implement them sequentially**
- Understand their current PPE inventory, supply chain, and [utilization rate](#)
- Train healthcare personnel on PPE use and have them demonstrate competency with donning and doffing any PPE ensemble that is used to perform job responsibilities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



PPE Type	Conventional	Contingency	Crisis
All PPE 	<ul style="list-style-type: none"> • Use physical barriers and other engineering controls • Limit number of patients going to hospital or outpatient settings 	<ul style="list-style-type: none"> • Selectively cancel elective and non-urgent procedures and appointments for which PPE is typically used by HCP 	<ul style="list-style-type: none"> • Cancel all elective and non-urgent procedures and appointments for which PPE is typically used by HCP

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/index.html>

Providers Need to Know & Monitor



CDC PPE Optimization Strategies

Offer a continuum of options for use when PPE supplies are stressed, running low, or absent.

Contingency and then crisis capacity measures augment conventional capacity measures and are meant to be considered and **implemented sequentially**.

Three Strategies to Optimize the Supply of PPE

1

- Conventional Capacity

2

- Contingency Capacity

3

- Crisis Capacity

4

- When No _____ Are Available

Implementing Contingency & Crisis Strategies for Isolation Gowns

- Facilities understand their:
 - Isolation gown inventory
 - Supply chain
 - Isolation gown utilization rate
- Facilities are communicating with:
 - Local healthcare coalitions
 - Federal, state and local public health partners regarding identification of additional supplies

Implementing Contingency & Crisis Strategies for Isolation Gowns

- Facilities have already implemented other engineering and administrative control measures
- Facilities have provided HCP with:
 - Required education and training to include demonstrating competency in donning and doffing any PPE that is used.

Contingency Strategy

Isolation Gowns

- Shift gown use towards cloth isolation gowns
- Consider the use of coveralls
- Use expired gowns beyond the manufacturer-designated shelf life for training
- Use gowns or coveralls conforming to international standards

Crisis Strategy

Isolation Gowns

- Extended use of isolation gowns
- Re-use of cloth isolation gowns
- Prioritize gowns
 - Care activities where splashes and sprays are anticipated (aerosol generating procedures)
 - High contact resident care activities

Implementing Contingency Strategy for N95 Respirators

- Facilities understand their:
 - N95 respirator inventory and supply chain
 - N95 respirator utilization rate
- Facilities communicating with local healthcare coalitions...
- Facilities have **already implemented conventional capacity measures**

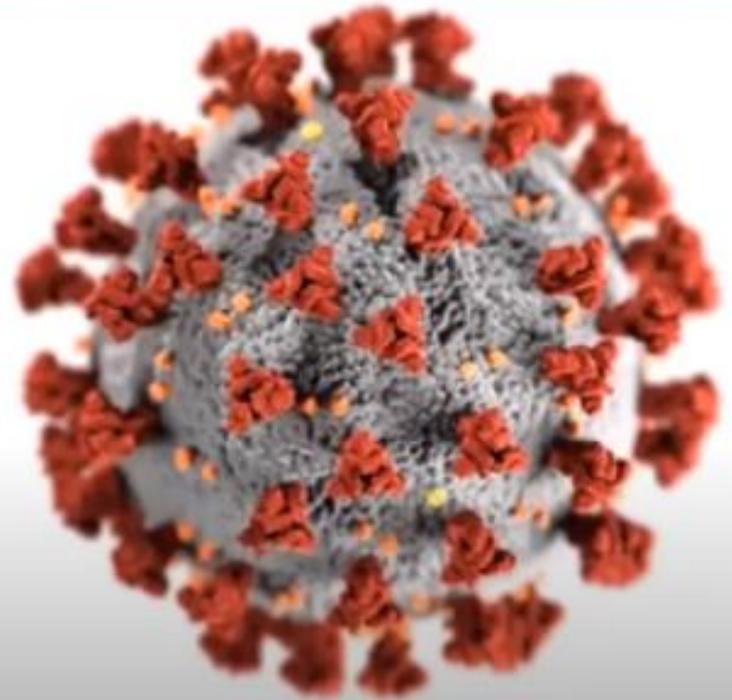
Conventional Strategy

N95 Respirators

- N95 Respirators
- Use of Alternatives to N95 respirators
 - N99, N100, P95, P99, P100, R95, R99, R100
 - Elastomeric respirators
 - PAPRs (Powered Air Purifying Respirator)

Elastomeric Respirators for U.S. Healthcare Delivery

Key Considerations



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For more information: www.cdc.gov/COVID19





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Updated July 16, 2020

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- Consider these options and **implement them sequentially**
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<https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/index.html>

Operationalizing Optimization Strategies

- Planning
 - Current inventory and supply chain
 - Utilization Rate
 - Projections based on utilization rate
 - Communication with vendor(s), healthcare coalitions, state/local public health and emergency management partners

Resources

- [Considerations for Preventing Spread of COVID-19 in Assisted Living Facilities](#)
- [DHS COVID-19: Personal Protective Equipment \(PPE\)](#)
- [Interim Infection Prevention and Control Recommendations for Healthcare Personnel During the COVID-19 Pandemic](#)
- [Preparing for COVID-19 in Nursing Homes](#)
- [Strategies to Optimize the Supply of PPE and Equipment](#)