

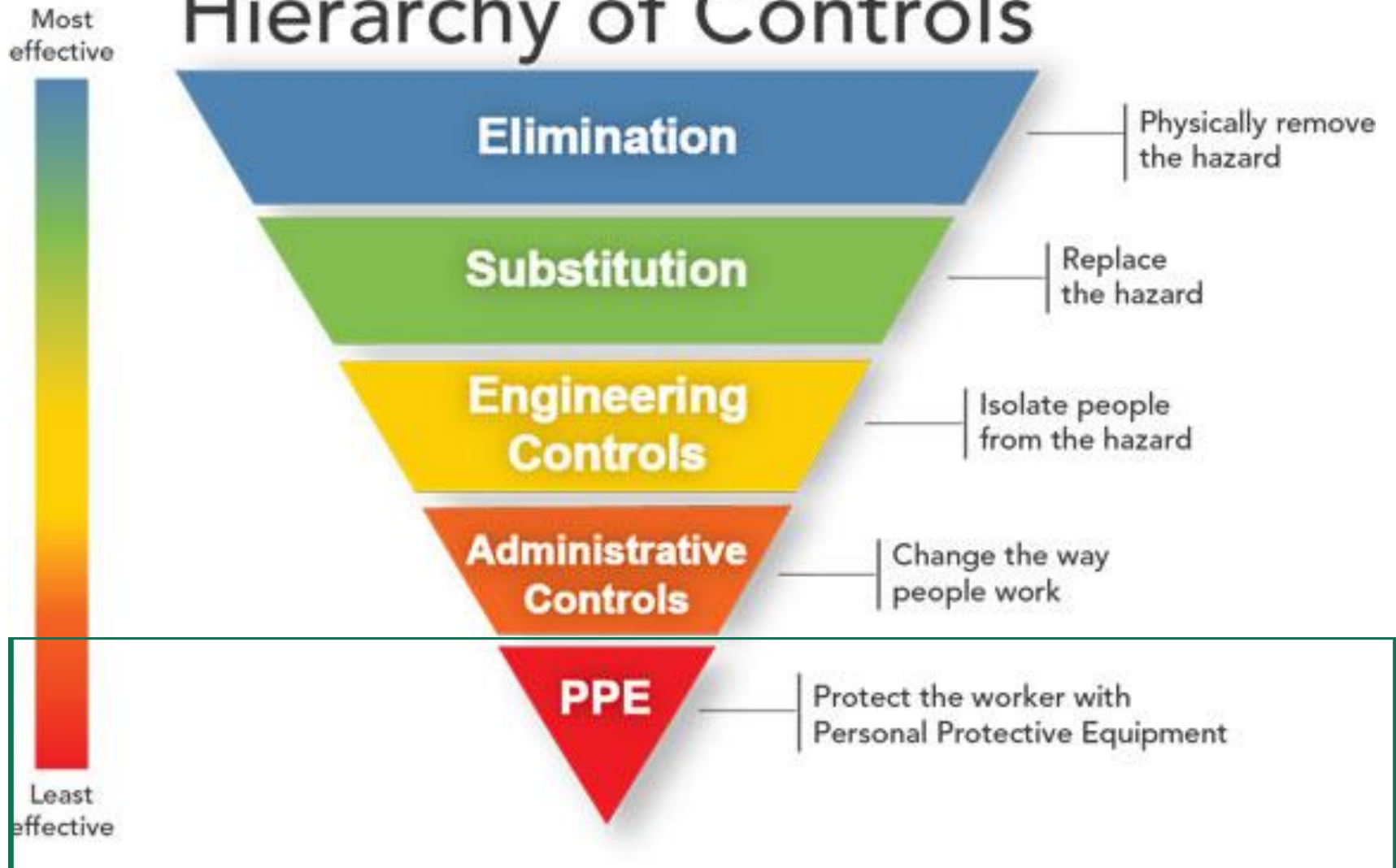


WISCONSIN DEPARTMENT
of HEALTH SERVICES

Strategies to Optimize PPE – N95s

Vicky Griffin, BSN, RN
Infection Preventionist / Nurse Consultant
Division of Quality Assurance

Hierarchy of Controls



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:

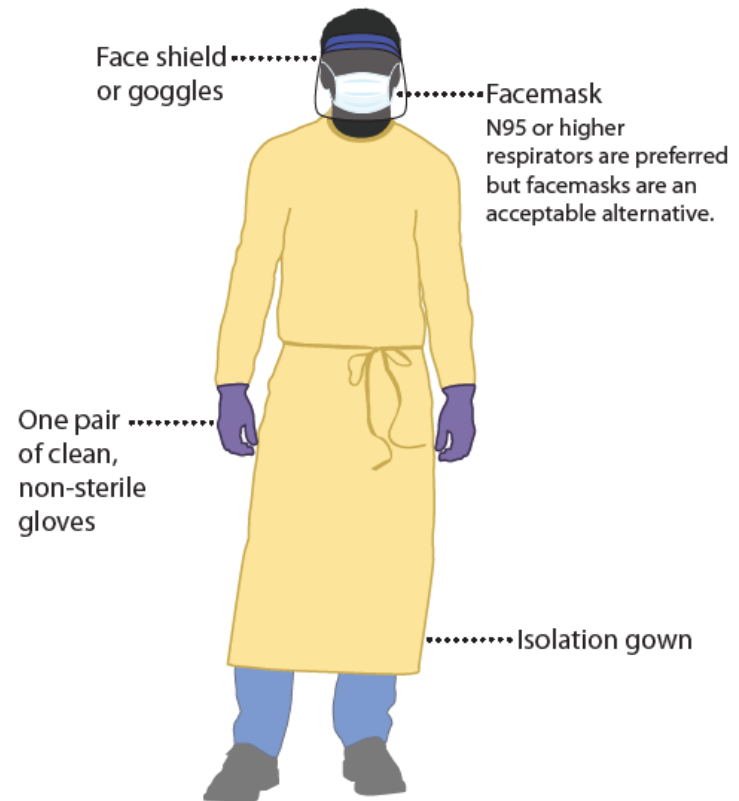
- Recommended infection prevention and control (IPC) practices for routine healthcare delivery during the pandemic
- Recommended IPC practices when caring for a patient with suspected or confirmed SARS-CoV-2 infection

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

Preferred PPE – Use N95 or Higher Respirator



Acceptable Alternative PPE – Use Facemask



cdc.gov/COVID19



Your Health ▾

Community, Work & School ▾

Healthcare Workers & Labs ▾

Health Depts ▾

Cases & Data ▾

More ▾

🏠 Healthcare Workers

Testing +

Clinical Care +

Infection Control +

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





Healthcare Workers

Testing +

Clinical Care +

Infection Control +

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

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

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*

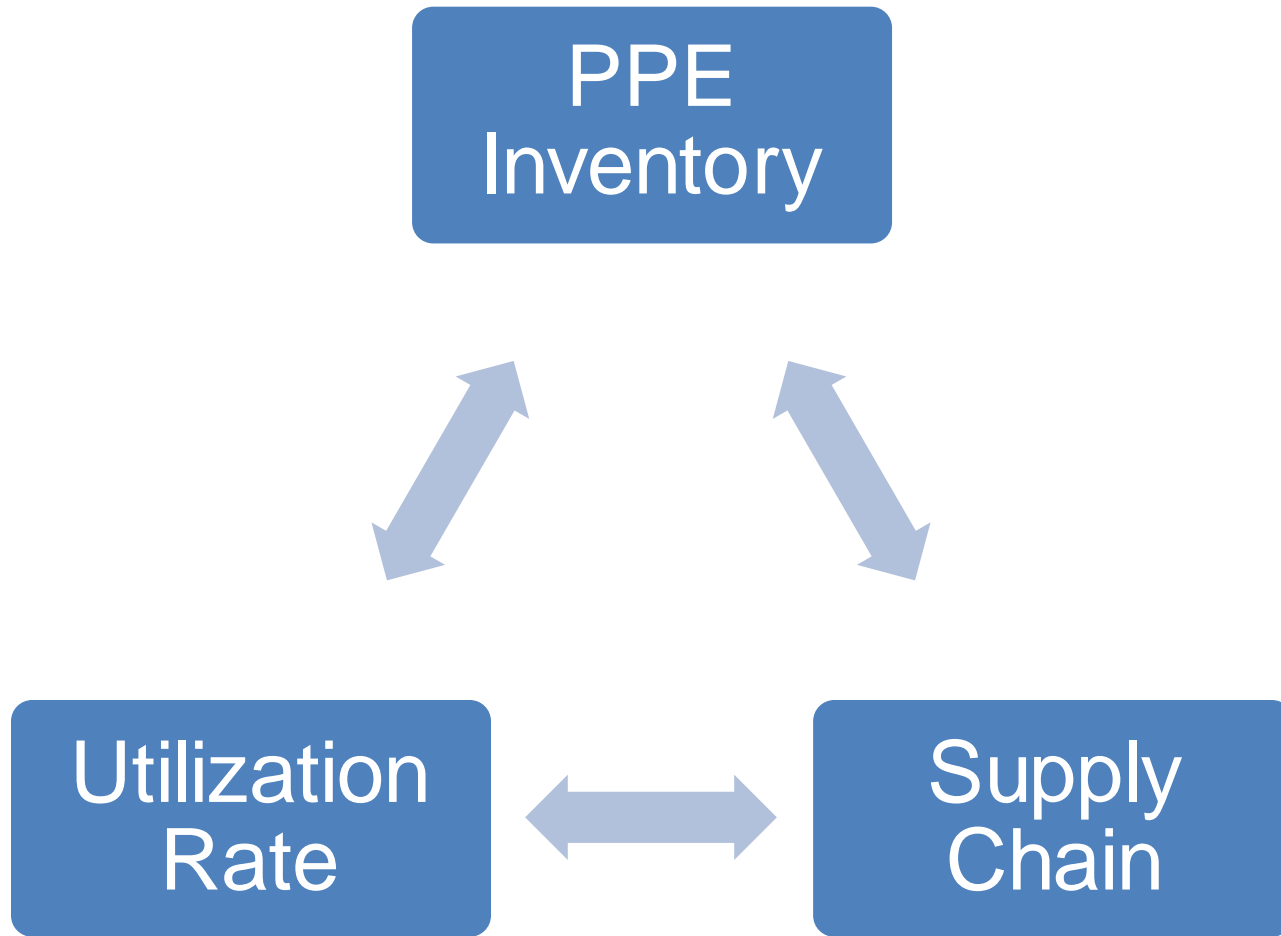
strategies that can be used when supplies cannot meet the facility's current or anticipated PPE utilization rate

*Not commensurate with U.S. standards of care

PPE Type	Conventional	Contingency	Crisis
All PPE	<ul 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 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**

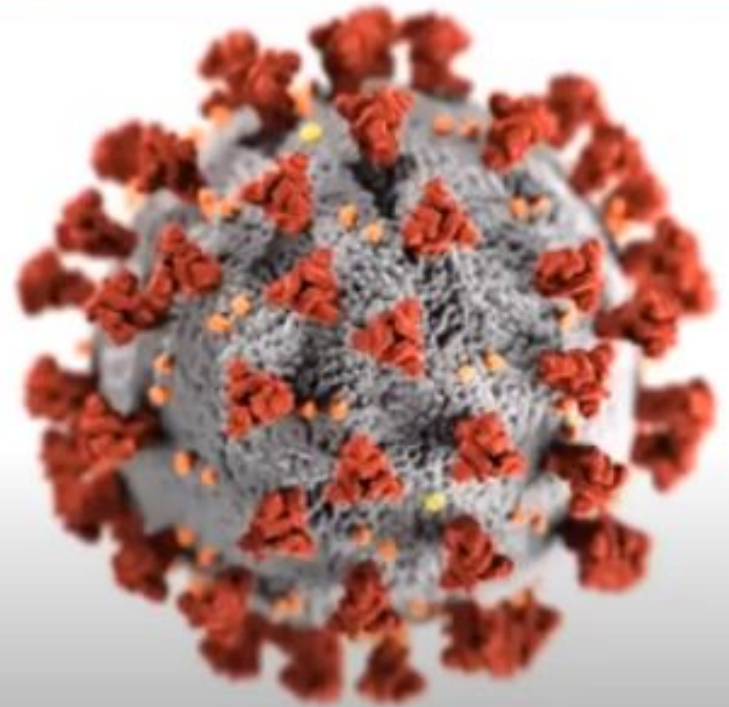
Conventional Strategy

N95 Respirators

- N95 Respirators
- Use of Alternatives to N95 respirators
 - N99, N100, P95, P99, P100, R95, R99, R100
 - Elastomeric respirators
 - PAPRs

Elastomeric Respirators for U.S. Healthcare Delivery

Key Considerations



0:03 / 51:03

For more information: www.cdc.gov/COVID19





Healthcare Workers

Testing +

Clinical Care +

Infection Control +

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

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

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 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>

Contingency Strategy

N95 Respirators

- Temporarily suspend annual fit testing
- Use N95s beyond the manufacturer-designated shelf life
- Extend the use of N95s by wearing the same N95 for repeated close contact with several patients

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

- [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](#)
- [Summary for Healthcare Facilities: Strategies for Optimizing the Supply of PPE during Shortages](#)