



## Personal Protective Equipment (PPE) Guidance

### Universal Masking Recommendations

- [IDPH: Universal Masking Recommendations for Congregate Facilities \[web\]](#)

### PPE Required ([CDC: Interim Infection Prevention and Control Recommendations for Patients with Confirmed Coronavirus Disease 2019 \(COVID-19\) or Persons Under Investigation for COVID-19 in Healthcare Settings](#))

- **Gloves:** Clean non-sterile gloves
- **Gowns:** Put on a clean isolation gown upon entry into the patient room or area.
- **Respiratory Protection:** Put on a respirator or facemask (if a respirator is not available) before entry into the patient room or care area.
  - [How to Perform a User Seal Check](#) and [User Seal Check Video](#)
- **Eye Protection:** (e.g., goggles, a disposable face shield that covers the front and sides of the face). Reusable eye protection (e.g., goggles) must be cleaned and disinfected according to manufacturer's reprocessing instructions prior to re-use. Disposable eye protection should be discarded after use.
- [COVID-19 Personal Protective Equipment \(PPE\) Image](#)
- [Sequence for Putting on Personal Protective Equipment and How to Safely Remove Personal Protective Equipment](#)
- [Donning and Doffing Fact Sheet](#) and [Donning and Doffing Poster](#)

### FDA Emergency Use Authorization (EUA)

- [List of FDA EUAs related to the COVID-19 Crisis](#) (Tests, PPE, Medical Devices, Therapeutics )

### FEMA Coronavirus (COVID-19) Resources

- [Coronavirus \(COVID-19\) Pandemic: Personal Protective Equipment Preservation Best Practices](#)

### PPE Reuse:

- [Emory University School of Medicine: PPE Reuse](#)
- [CDC: Personal Protective Equipment \(PPE\) Burn Rate Calculator](#)
- [Decontamination and Reuse of Filtering Facepiece Respirators using Contingency and Crisis Capacity Strategies](#)
- [OSHA Enforcement Guidance for Respiratory Protection and the N95 Shortage Due to the Coronavirus Disease 2019 \(COVID-19\) Pandemic](#)

### Homemade Face Masks

- [IDPH: Universal Masking Recommendations for Congregate Facilities \[web\]](#)
- [IDPH: Guidance on the Use of Masks by the General Public \[web\]](#)
- [CDC: Use of Cloth Face Coverings to Help Slow the Spread of COVID-19](#)
- [CDC: Recommendation Regarding the Use of Cloth Face Coverings, Especially in Areas of Significant Community-Based Transmission](#)
- [CDC: FAQ Cloth Face Coverings: Questions and Answers](#)

## PPE Conservation / Crisis Strategies

### Eye Protection - Contingency/ Crisis Strategies

- [Sequence for Putting on Personal Protective Equipment and How to Safely Remove Personal Protective Equipment](#)
- [Strategies for Optimizing the Supply of Eye Protection](#)
  - [Contingency Capacity Strategies \(Shortages\)](#)
    - Shift eye protection supplies from disposable to reusable devices (i.e., goggles and reusable face shields).
    - Implement extended use of eye protection.
  - [Crisis Capacity Strategies \(Extreme Shortage/ No Supply\)](#)
    - Prioritize eye protection for selected activities such as activities splashes and sprays are anticipated or prolonged, unavoidable face to face contact.
    - Consider using safety glasses (e.g., trauma glasses) that have extensions to cover the side of the eyes.

### Isolation Gowns - Contingency/ Crisis Strategies

- [Sequence for Putting on Personal Protective Equipment and How to Safely Remove Personal Protective Equipment](#)
- [Strategies for Optimizing the Supply of Isolation Gowns](#)
  - [Contingency Capacity Strategies](#): (Shortages) shift towards cloth isolation gowns that can be laundered according to [routine procedures](#) and be reused.
    - [Guidelines for Environmental Infection Control in Health-Care Facilities \(2003\) Laundry and Bedding](#). Recommendations on laundering processes.
      - Chlorine Bleach is a preferred broad-spectrum germicide but may not be appropriate for all fabrics. Chlorine alternatives (e.g., activated oxygen-based laundry detergents) provide added benefits for fabric and color safety in addition to antimicrobial activity. Oxygen-based bleach and detergents used in health-care settings should be registered by EPA to ensure adequate disinfection of laundry
  - [Crisis Capacity Strategies](#) (Extreme shortages/ No supply) - See link for [Extended Use](#)
    - Consider using gown alternatives that have not been evaluated as effective.
      - Disposable laboratory coats
      - Reusable (washable) patient gowns
      - Reusable (washable) laboratory coats
      - Disposable aprons ect.
  - Additional Resources to help make decisions on gown alternatives
    - [CDC's FAQ about Personal Protective Equipment \(Gowns\)](#)
    - [NIOSH's National Personal Protective Technology Laboratory \(NPPTL\) also has some recommendations when considering protective clothing](#)

## Facemasks (Surgical Masks, Earloop Masks) - Contingency/ Crisis Strategies

- [Sequence for Putting on Personal Protective Equipment and How to Safely Remove Personal Protective Equipment](#)
- [Strategies for Optimizing the Supply of Facemasks](#)
  - [Contingency Capacity](#) includes extended use of facemasks and restricting facemasks to use by HCP, rather than patients for source control and using alternatives for patients.
  - [Crisis Capacity Strategies](#) include
    - [Limited re-use of facemasks](#) is the practice of using the same facemask by one HCP for multiple encounters with different patients but removing it after each encounter
      - The facemask should be removed and discarded if soiled, damaged, or hard to breathe through.
      - 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
      - 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.
    - Prioritizing facemasks for essential surgeries and procedures, care activities where splashes and sprays are anticipated, performing aerosol generating procedures, if respirators are no longer available.
  - [Crisis Capacity Strategies](#) When no facemasks are available:
    - 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: [IDPH Universal Masking](#) and [CDC Public Masking](#)
    - In settings where facemasks are not available, HCP might use homemade masks (e.g., bandana, scarf) for care of patients with COVID-19 as a last resort. However, homemade masks are not considered PPE, since their capability to protect HCP is unknown. Caution should be exercised when considering this option. Homemade masks should ideally be used in combination with a face shield that covers the entire front (that extends to the chin or below) and sides of the face.

## N95 Respirators - Contingency/ Crisis Strategies

- [Sequence for Putting and How to Safely Remove Personal Protective Equipment](#)
- [How to Perform a User Seal Check](#)
  - Once a fit test has been done to determine the best model and size of respirator for a particular user, a user seal check should be done by the user every time the respirator is to be worn to ensure an adequate seal is achieved
- [Strategies for Optimizing the Supply of N95 Respirators](#)
  - [Conventional Capacity Strategies](#) (Optimizing Supply)
  - [Contingency Capacity Strategies](#) (Guidance on Extended/ Limited Reuse)
    - [Pandemic Planning: Recommended Guidance for Extended Use and Limited Reuse of N95 Filtering Facepiece Respirators in Healthcare Settings](#)
    - Hang used respirators in a designated storage area or keep them in a clean, breathable container such as a paper bag between uses.
    - Do not touch the surface of the respirator except to perform a user seal check and immediately perform hand hygiene after seal check is complete.
    - If extended use/ reuse is implemented, and supplies are low, consider issuing HCP a respirator for each weekday. Each respirator will be used on a particular day and stored in a breathable paper bag until the same day next week.
  - [Crisis Strategies](#) (Low to no supply recommendations)
    - [Release of Stockpiled N95 Filtering Facepiece Respirators Beyond the Manufacturer-Designated Shelf Life: Considerations for the COVID-19 Response](#)
    - [FDA Current EUA with regards to COVID-19](#)
    - [CDC Guidance](#) and [OSHA Guidance](#) on Decontamination and Reuse of FFRs
    - If no masks are left:
      - Exclude HCP at higher risk for severe illness from COVID-19 from contact with known or suspected COVID-19 patients
      - Expedient patient isolation rooms for risk-reduction
      - Ventilated Headboards
      - HCP use of non-NIOSH approved masks or homemade masks
- In settings where N95 respirators are so limited that routinely practiced standards of care for wearing N95 respirators and equivalent or higher level of protection respirators are no longer possible, and surgical masks are not available, as a last resort, it may be necessary for HCP to use masks that have never been evaluated or approved by NIOSH or homemade masks. It may be considered to use these masks for care of patients with COVID-19, tuberculosis, measles, and varicella. However, caution should be exercised when considering this option
- [CDC's FAQ about Personal Protective Equipment \(Respirators\)](#)

### FDA EUAs for Imported, Non-NIOSH Approved Respirators

- [FDA EUA Imported, Non-NIOSH-Approved Respirators - and List of Authorized Respirators](#)
- [FDA EUA Imported, Non-NIOSH-Approved Respirators Manufactured in China - 04/03/20](#)
  - [Appendix A: Imported, Non-NIOSH Approved Respirators Manufactured in China](#)
- [NPPTL Respirator Assessments to Support the COVID-19 Response](#)
  - [NPPTL Counterfeit Respirators / Misrepresentation of NIOSH-Approval](#)