

Strategies to Optimize the Supply of Personal Protective Equipment (PPE)



Due to shortages in personal protective equipment (PPE) and the likelihood that COVID-19 will continue to circulate until community immunity is established, improved treatments are available, and/or a vaccine is available, providers will likely continue to experience difficulty accessing needed PPE. As a result, it is important that providers track their PPE utilization closely and prepare for shortages. The Center for Disease Control and Prevention (CDC) has a [“PPE Burn Rate Calculator”](#) that can help calculate the consumption rate of PPE supplies to assist with tracking inventory and needs.

The CDC and the California Department of Public Health (CDPH) have provided guidance on strategies to optimize PPE supplies. The summarized guidance below focuses on the use of PPE in *contingency* (when shortages in supplies are anticipated) or *crisis* (when supplies are critically low) capacity situations. These temporary strategies can help stretch PPE supplies and maximize patient and staff safety in instances when PPE supplies are low. As PPE availability normalizes, health settings should promptly resume standard PPE practices.

CONTINGENCY CAPACITY

WHAT TO DO WHEN PPE IS EXPECTED TO BE IN LIMITED SUPPLY

Most providers should begin using PPE contingency capacity strategies NOW to conserve PPE supplies.

These PPE contingency capacity strategies include:

- a. Reserve PPE only for staff whose roles require direct patient contact.
- b. Change staff work practices to minimize patient contacts, such as by using telehealth or telephone to deliver services.
- c. Establish triage areas for the evaluation of patients to minimize potential staff exposures and the number of staff who need PPE.
- d. Establish separation areas within the facility to care for patients with confirmed or suspected COVID-19 infection and those who may have been exposed (cohorting) to minimize potential staff exposures and the number of staff who need PPE.
- e. Use reusable PPE (such as washable gowns and non-disposable goggles) and ensure use of the following practices to minimize transmission risk (please note that some facilities/employers may need to follow regulations that do not allow for these measures):
 - i. Clean face shield or goggles using a clean cloth or wipe with neutral detergent solution.
 - ii. Wipe the outside of the face shields or goggles using a clean cloth or wipe with EPA-registered hospital disinfectant solution or alcohol to remove residue.
 - iii. Fully dry (air dry or use clean towels) face shields or goggles.
 - iv. Remove gloves and perform hand hygiene.

When using face masks, face shields or eye protection, staff should:

- Examine PPE prior to use and discard if visual inspection reveals concerns or damage.
- Avoid touching their face mask, face shield or eye protection, and immediately perform hand hygiene if they do.
- Leave the patient care area before removing face mask, face shield or eye protection.

CRISIS CAPACITY

WHAT TO DO IF PPE SUPPLY IS CRITICALLY LOW

If PPE supply is critically low, providers may need to implement PPE crisis capacity strategies.

These PPE crisis capacity strategies include:

- a. Allow staff to extend use of face masks and goggles beyond a single patient contact to maximize use of PPE while preventing cross-contamination.
 - i. Extended use is when the same PPE is worn for repeated encounters without removing the PPE between encounters.
 - ii. Extended use is utilized when patients have the same infectious diagnosis and are staying together in the same area of the facility (cohorting).
- b. Use intact PPE that is beyond the manufacturer-designated shelf life for patient care activities.
- c. Carefully prioritize PPE use for select care activities that present higher risk (direct patient contact, contact with body fluids and secretions, etc.).
- d. Implement limited reuse of face masks, when feasible:
 - i. Use the same face mask for multiple encounters with different patients, removing the face mask after each encounter. Not all face masks can be re-used; face masks with elastic ear hooks may be more suitable for re-use.
 - ii. To facilitate reuse, fold the outer surface of the mask inward against itself and store the mask between uses in a clean, sealable paper bag or breathable container.
- e. If no commercial PPE is available, use of alternative approaches (e.g., homemade face masks or shields, disposable or washable lab coats, etc) may reduce the risk of preventable exposures.

Personal Protective Equipment*

*NOTE: Non-medical face coverings are recommended primarily for the general public anytime they will be in contact with other people who are not household members in public or private spaces. They are not intended for use by healthcare workers and others whose work requires close contact with individuals who are ill, unless as a crisis capacity strategy.



Face Masks
Protects mouth and nose - fits snugly over mouth and nose



Face Shields
Protects entire face - covers the forehead, extends beyond the chin, and wraps around the side of face



Eye Protection
Protects eyes - covers entire area around eyes, and does not include personal prescription eyewear



Gloves
Protects hands - use nonsterile, disposable gloves



Gowns
Protects skin and clothes - use nonsterile, disposable gowns