

Conservation Strategies for Personal Protective Equipment

Purpose

Washington's health care system is experiencing significant shortages of personal protective equipment (PPE) at a time when the presence of COVID-19 is placing great demand on supplies. To successfully manage this situation for the good of all Washingtonians, including frontline health care providers (HCP) and patients, healthcare facilities and EMS in Washington state must engage in consistent PPE usage strategies and reduce variation in practice. These strategies will be determined by the Department of Health in consultation with infectious disease experts.

Action Required

All healthcare facilities, long-term care facilities (LTCFs), and EMS must implement the following engineering and administrative controls to the greatest extent possible and follow the Yellow PPE Conservation Strategies outlined on page 3 of this document. If PPE supplies increase, the Department will update this document and communicate new usage strategies to facilities.

Engineering Controls (put barrier between hazard and the healthcare provider)

- ❖ Isolate patients in an airborne infection isolation room or private room with door closed.
- ❖ Use physical barriers such as plastic windows at reception, curtains between patients, etc.
- ❖ Properly maintain ventilation systems in healthcare facilities to provide air movement from clean to contaminated flow.
 - For EMS:
 - Utilize EMT/EMS scout position on EMS responses
 - Move patients outdoors if possible
 - Isolate patient compartment from cab of aid car/ambulance
 - BVMs should be equipped with HEPA filters.
 - Properly maintain ventilation systems in transport vehicles to provide air movement from clean to contaminated flow.
 - Isolate the ambulance driver from the patient compartment.
 - Use maximum ventilation during transport of any suspected COVID-19 patient.
 - Use patient compartment exhaust fans and open windows to create airflow in the back of the rig.
 - Open the outside air vents in the driver area and turn on the ventilation fans to the highest setting.

Administrative Controls (work practices that reduce or prevent hazardous exposures)

- ❖ Cancel surgeries and procedures in hospitals and ambulatory surgery centers, which if delayed, are not anticipated to cause harm to the patient within the next three months, per [Governor Inslee's Proclamation 20-24](#).
- ❖ Limit the number of personnel contacting the patient to those who are medically essential; exclude staff not directly involved in patient care from the patient's room as much as possible (e.g., dietary, housekeeping employees).

- ❖ Reduce face-to-face HCP encounters with patients.
 - Hospitals and LTCFs: bundle activities while in a room; use video monitoring or other equipment to monitor patients
 - EMS: use “Scout EMT” methodology to minimize the number of individuals who need to use respiratory protection
- ❖ Allow one asymptomatic essential caregiver to assist with the care of a patient with confirmed or suspected COVID-19 in a hospital, but exclude all other visitors.
- ❖ Cohort patients: Group together patients who are confirmed to have COVID-19.
- ❖ Cohort HCP: Assign designated teams of HCP to provide care for all patients with suspected or confirmed COVID-19.
- ❖ Encourage patients to use nurse advice lines and telemedicine before having a face-to-face encounter with a healthcare provider.
- ❖ Screen patients for acute respiratory illness either by phone or telehealth.
- ❖ Use telemedicine as much as possible.
 - Clinics: screen and manage patients by telemedicine to reduce patient visits
 - LTCF: use telemedicine to provide health care services to residents of LTCFs
- ❖ Schedule respiratory clinics to minimize PPE use.
- ❖ Use simple face masks for source control on persons with suspected COVID-19.
- ❖ When practicing universal masking, require only employees in clinical areas to wear medical grade masks. All other employees should wear non-medical grade masks.

Personal Protective Equipment

- ❖ Follow **PPE Conservation Strategies** (yellow) on page 3 of this document if resources allow. Facilities using extreme strategies will be prioritized for PPE allocation.
- ❖ Reserve N95 respirators for confirmed/suspected COVID patients in ICUs and those requiring aerosol generating procedures per [DOH Infection Control Guidance](#).
- ❖ Use alternatives to N95 respirators where feasible (e.g., other disposable filtering face piece respirators, elastomeric respirators with appropriate filters or cartridges, PAPR).
- ❖ Use a face shield over a respirator or facemask to prevent contamination.
- ❖ Limit respirators during training: Determine which HCPs need to be in a respiratory protection program; limited re-use of respirators by individual HCP for training & fit testing.
- ❖ Shift eye protection from disposable to re-usable devices (i.e., goggles, reusable faceshields).
- ❖ Shift gown use towards cloth isolation gowns; consider use of coveralls.

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



Personal Protective Equipment Usage Guideline

		N-95 Respirator	PAPR/CAPR hoods	Surgical Masks	Cloth Masks	Eye Protection	Gowns
Standard Recommended Use of PPE (Green)	Device	Fit-tested	Commercial made	Commercial made	N/A	Commercial made	Commercial made
	Duration	Change per encounter	Change per encounter	Change per encounter	N/A	Change per encounter	Change per encounter
PPE Conservation Strategies (Yellow)	Device	Fit-tested	Commercial made	Commercial made	N/A	Commercial made	Commercial made
	Duration	For HCP only, extended use or limited re-use for 8 hours or until visibly soiled or other criteria met* (Re-processing N95s may be integrated into re-use policy if needed)	For HCP only, until broken, shared between HCPs (Re-processing hoods may be integrated into re-use policy if needed)	Extended use or until visibly soiled, damaged (If universal masking, do not provide to HCP outside clinical areas or visitors)	N/A	Extended use or until visibly soiled, difficult to see through, damaged	Reuse on the same patient by the same HCP or until visibly soiled is preferred (See PPE Re-use Guidance for more information)
Extreme Strategies (Red)	Device	Fit-tested, non-fit tested, or industrial	Non-commercial made	Commercial made	Facility-designed or homemade (not NIOSH-approved) masks	Non-commercial made	Commercial made/ Home made
	Duration	Till seal integrity lost	Until broken	Reuse	Any	Re-use	Use for multiple patients or when visibly soiled or use of non-standard products (ponchos, patient gowns, etc.)

*Discard N95 respirators following use during aerosol generating procedures; Discard N95 respirators contaminated with blood, respiratory or nasal secretions, or other bodily fluids from patients; Discard N95 respirators following close contact with, or exit from, the care area of any patient co-infected with an infectious disease requiring contact precautions. Initial (baseline) fit testing to be done. Annual fit testing can be postponed during times of PPE shortage.

Definitions:

- **Extended use** refers to the practice of wearing the same PPE for repeated close contact encounters with several patients, without removing the PPE between patient encounters.
- **Reuse** refers to the practice of using the same PPE for multiple encounters with patients but removing it ('doffing') after each encounter. The respirator is stored in between encounters to be put on again ('donned') prior to the next encounter with a patient. N95 respirator reuse is often referred to as "limited reuse".



For more detailed information about safely extending and re-using PPE, see: [Reuse of PPE](#)

4/23/2020