

COVID-19 Recommendations for Negative Pressure Rooms and/or HEPA Filtration



The importance of PPE during aerosol-generating procedures

Providers wearing the correct PPE (N95/PAPR hood, gown, gloves, eye protection) while performing aerosol-generating procedures on patients with suspected or confirmed COVID-19 are protected from exposure, regardless of whether the procedure is performed in a negative pressure room or HEPA-filtered environment.



N95/ PAPR Hood



Gown



Gloves



Eye Protection

Commonly performed medical procedures that are considered aerosol-generating procedures by the CDC include:

- bronchoscopy
- cardiopulmonary resuscitation
- endotracheal intubation and extubation
- manual ventilation
- non-invasive ventilation (e.g., BiPAP, CPAP)
- open suctioning of airways
- sputum induction

Other procedures such as nebulizer administration and high-flow O₂ delivery may also generate aerosols; however, the extent to which these procedures increase risk of exposure to healthcare workers not wearing PPE is unknown.

What role does negative room pressurization or HEPA filtration play?

- Negative room pressurization and HEPA filtration remove aerosols from the environment, decrease environmental contamination of the room itself following aerosol-generating procedures, and decrease the time that a room must remain closed before it can be entered by individuals without respiratory protection.*
- If available, HEPA filters may be placed in non-negative pressure rooms prior to anticipated aerosol-generating procedures, but this is not required for safety of the staff in the room at the time of the procedure. Using N95 respirators or PAPRs will protect staff while inside the room.

What if a HEPA filter is not available?

- Staff must wear respiratory protection when entering the room for the designated time after the aerosol-generating procedure is performed.*
- Keep the door closed to prevent aerosol transmission to the hallway.

**For non-negative pressure inpatient rooms, the time period is 2 hours. For procedure rooms, please refer to your area-specific COVID plan.*



HEPA Filtration FAQs

1. What is OESO's guidance on using portable HEPA filters safely?

A portable HEPA filter is needed in a room any time that there is the potential that aerosols can be produced *and* that room does not have negative airflow and dedicated or HEPA-filtered exhaust (i.e., is not an isolation room). HEPA filters are placed in the room prior to aerosol-generating procedures and should be run during and after the procedure to help filter out airborne pathogens. Respiratory protection is still needed by anyone entering the room.

See this [OESO document](#) for more details on the indications for use, operating instructions, maintenance and troubleshooting.

2. Are HEPA filters necessary for all COVID patients?

No. If available, HEPA unit filters may be used in non-negative pressure rooms during and after anticipated aerosol-generating procedures, but this is not required for safety of the staff in the room at the time of the procedure. Using N95 respirators or PAPRs will protect staff while inside the room.

3. What is the PPE doffing process for rooms with HEPA filters?

The PPE doffing process does not change in the presence of a HEPA filter.

4. Who should I contact to obtain a HEPA filter in my hospital?

Refer to your facility's process for obtaining a HEPA filter or call the appropriate contact:

DUH contact: Equipment Distribution - 919-681-6097

DRH contact: 919-470-5145

DRaH contact: Unit leadership or Engineering - 919-954-3390

5. Where in the room should the HEPA filter be placed?

- a. Place the portable HEPA filter at maximum distance across the room from the door.
- b. Make sure that the operating panel faces room and is unobstructed.
- c. Direct the blower away from the patient to prevent any dust from blowing directly on the patient.

6. Can we take the HEPA filter out of one COVID room and move it to another? Do we need to clean it first?

Yes, portable HEPA filters may be moved from one patient room to another as long as the exterior of the machine is cleaned and disinfected using hospital-approved disinfectant wipes.

7. Can we keep a spare HEPA filter on the unit?

HEPA filters are needed throughout the hospital. It is recommended that these be returned when not in use.

8. What do we do when we no longer need the HEPA filter?

DUH contact: Equipment Distribution - 919-681-6097

DRH contact: 919-470-4159

DRaH contact: Unit leadership or Engineering - 919-954-3390