

COVID-19

Nursing Management of Noninvasive Ventilation for COVID+ Patients

Background:

- Noninvasive ventilation has been successfully used to stabilize and prevent intubation. It can also be used to pre-oxygenate before intubation and decrease duration of mechanical ventilation when used post-extubation.

Practice Change due to the High Risk of Aerosolization with Noninvasive Ventilation:

- **Non-vented masks should be used with COVID+ patients.** There should be minimal air leak around the mask as with traditional noninvasive ventilation.
- **Never remove the mask with flow on. Removal of mask should be coordinated with Respiratory Therapy as any break in the circuit should be avoided as much as possible. Do not remove the mask to give medications or feed the patient without turning the flow off before breaking the circuit or removing the mask.**

General Considerations:

- All associates in the room must wear a N95 respirator mask, gown, gloves, and eye protection.
- The patients should be in a negative-pressure or HEPA room if available.

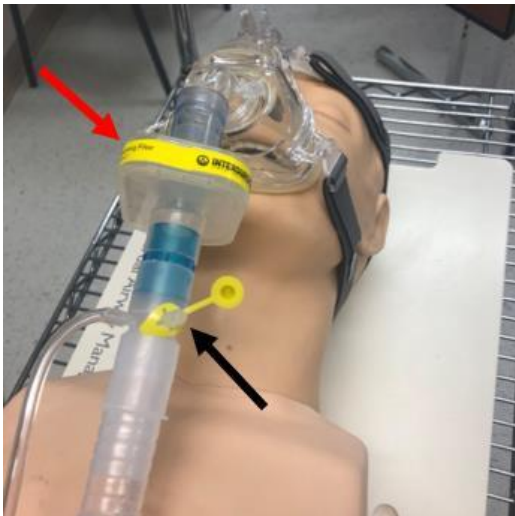
Nursing Care for COVID+ Patients:

- Conduct skin assessments per unit policy and any time the mask is removed. Inspect skin under and around the mask for signs of pressure.
- Apply foam dressings under the mask to prevent skin breakdown.
- Closely monitor patients for decreased level of consciousness, persistent hypoxemia, hemodynamic instability, vomiting, and sustained elevated work of breathing not alleviated by noninvasive ventilation. Intubation should be considered for any of these scenarios.

COVID-19

Equipment Considerations for COVID+ Patients:

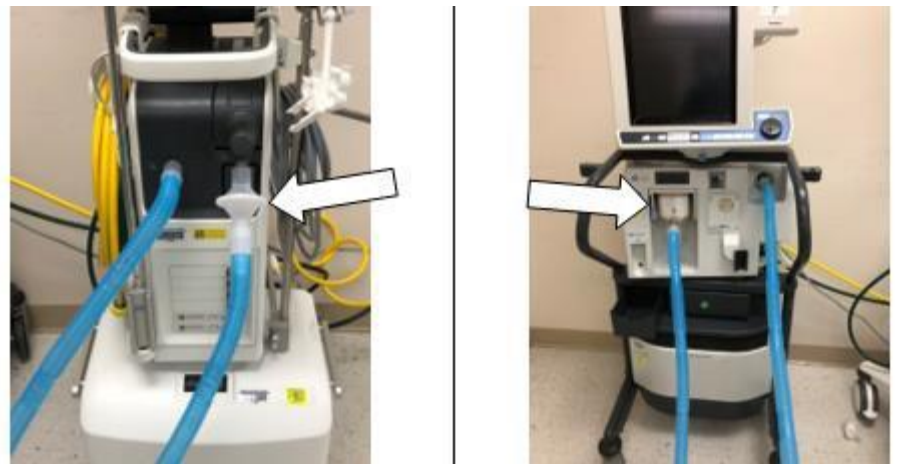
- Respiratory Therapy is responsible for set-up of noninvasive ventilation.
- Place pressure prevention dressings with initial use, do not wait until redness or pressure injury occurs.
- A dual limb circuit is preferred- HEPA filters are placed on the inspiratory and expiratory limbs.
- If a single limb circuit (V60) is used, HEPA filters must be placed before the exhalation port and at the machine.
- **Exhalation port cap (yellow cap) MUST be removed on all single limb circuits to allow for patient exhalation.**



Single limb noninvasive mask. Black arrow is pointing to exhalation port cap (yellow cap). **The exhalation port cap (yellow cap) must be removed to prevent suffocation.** Red arrow points to HEPA filter.



Non-vented masks



Dual limb noninvasive circuit. White arrow points to HEPA filter.