



Strategies to Optimize Provision of Mechanical Ventilation

Alternative strategies for ventilator support can and should be implemented, consistent with crisis standards of care, when resources are limited relative to the clinical demand.

1. Cancel elective surgeries and other elective procedures that could result in the use of mechanical ventilators. Transfer ventilators, supplies, and personnel from ambulatory surgery centers and other facilities not being utilized for COVID-19 patients.
2. Transfer ventilators, supplies, and personnel from areas of the state not experiencing COVID-19 outbreaks, or transfer COVID-19 patients to those areas when feasible.
3. Anesthesia ventilation machines capable of providing controlled ventilation or assisted ventilation may be used outside of the traditional use for anesthetic indication. The ASA and FDA provide specific guidance on how to convert anesthesia machines for use on COVID-19 patients in respiratory failure.
4. Transport ventilators may be used for prolonged ventilation in certain patients.
5. Continuous ventilators labeled for home use may be used in a medical facility setting depending on the features of the ventilator and provided there is appropriate monitoring (as available) of the patient's condition.
6. Noninvasive Ventilation (NIV) Patient Interfaces capable of prescribed breath may be used for patients requiring such ventilator support, including NIV Patient Interfaces labeled for sleep apnea. Channeling exhalation through a filter is recommended to prevent aerosolization.
7. Continuous Positive Airway Pressure (CPAP), auto-CPAP, and bilevel positive airway pressure (BiPAP or BPAP) machines typically used for treatment of sleep apnea (either in the home or facility setting) may be used to support patients with respiratory insufficiency. BiPAP may be used for invasive ventilation.
8. If all other alternatives are exhausted, care providers could consider ventilation of two patients on a single ventilator for short-term use, although there are significant limitations to this strategy. Alternatively, manual bag-valve-mask ventilation done by ancillary providers can be considered as a bridging option to mechanical ventilation.