

Surviving Sepsis Campaign®

SURVIVING SEPSIS CAMPAIGN: GUIDELINES ON THE MANAGEMENT OF CRITICALLY ILL ADULTS WITH CORONAVIRUS DISEASE 2019 (COVID-19)

VENTILATION RECOMMENDATIONS TABLE

VENTILATORY SUPPORT

RECOMMENDATION #23	STRENGTH & QUALITY OF EVIDENCE
In adults with COVID-19, we suggest starting supplemental oxygen if the peripheral oxygen saturation (Spo2) is < 92%, and recommend starting supplemental oxygen if Spo2 is < 90%.	<ul style="list-style-type: none"> • Strong • Moderate-Quality of Evidence
RECOMMENDATION #24	STRENGTH & QUALITY OF EVIDENCE
In adults with COVID-19 and acute hypoxemic respiratory failure on oxygen , we recommend that Spo2 be maintained no higher than 96% (strong recommendation, moderate quality evidence).	<ul style="list-style-type: none"> • Strong • Moderate-Quality of Evidence
RECOMMENDATION #25	STRENGTH & QUALITY OF EVIDENCE
For the acute resuscitation of adults with COVID-19 and shock, we recommend using crystalloids over unbalanced crystalloids.	<ul style="list-style-type: none"> • Weak • Low-Quality of Evidence
RECOMMENDATION #26	STRENGTH & QUALITY OF EVIDENCE
For the acute resuscitation of adults with COVID-19 and shock, we suggest using buffered/ balanced crystalloids over unbalanced crystalloids.	<ul style="list-style-type: none"> • Weak • Low-Quality of Evidence

RECOMMENDATION #27

STRENGTH & QUALITY OF EVIDENCE

In adults with COVID-19 and acute hypoxemic respiratory failure, if HFNC is not available and there is no urgent indication for endotracheal intubation, we suggest a trial of NIPPV with close monitoring and short-interval assessment for worsening of respiratory failure.

- Weak
- Very Low-Quality
- of Evidence

RECOMMENDATION #28

STRENGTH & QUALITY OF EVIDENCE

We were not able to make a recommendation regarding the use of helmet NIPPV compared with mask NIPPV. It is an option, but we are not certain about its safety or efficacy in COVID-19.

RECOMMENDATION #29

STRENGTH & QUALITY OF EVIDENCE

In adults with COVID-19 receiving NIPPV or HFNC, we **recommend** close monitoring for worsening of respiratory status, and early intubation in a controlled setting if worsening occurs.

Best Practice Statement

INVASIVE MECHANICAL VENTILATION

RECOMMENDATION #30

STRENGTH & QUALITY OF EVIDENCE

In mechanically ventilated adults with **COVID-19 and ARDS**, we **recommend** using low tidal volume (Vt) ventilation (Vt 4–8mL/kg of predicted body weight), over higher tidal volumes (Vt > 8mL/kg).

- Strong
- Moderate-Quality of Evidence

RECOMMENDATION # 31

STRENGTH & QUALITY OF EVIDENCE

For mechanically ventilated adults with **COVID-19 and ARDS**, we **recommend** targeting plateau pressures (Pplat) of < 30cm H₂O.

- Strong
- Moderate-Quality of Evidence

PRACTICAL CONSIDERATIONS

RECOMMENDATION #32

For mechanically ventilated adults with **COVID-19 and moderate to severe ARDS**, we **suggest** using a higher PEEP strategy, over a lower PEEP strategy (weak recommendation, low-quality evidence). **Remark: If using a higher PEEP strategy (i.e., PEEP > 10 cm H₂O), clinicians should monitor patients for barotrauma.**

STRENGTH & QUALITY OF EVIDENCE

- Weak
- Low-Quality of Evidence

RECOMMENDATION #33

For mechanically ventilated adults with **COVID-19 and ARDS**, we **suggest** using a conservative fluid strategy over a liberal fluid strategy.

STRENGTH & QUALITY OF EVIDENCE

- Weak
- Low-Quality of Evidence

RECOMMENDATION #34

For mechanically ventilated adults with **COVID-19 and moderate to severe ARDS**, we **suggest** prone ventilation for 12 to 16 hours, over no prone ventilation.

STRENGTH & QUALITY OF EVIDENCE

- Weak
- Low-Quality of Evidence

Recommendation #35.1: For mechanically Ventilated patients with COVID-19 and moderate to severe ARDS

We **suggest** using, as needed, intermittent boluses of neuromuscular blocking agents (NMBA), over continuous NMBA infusion, to facilitate protective lung ventilation.

STRENGTH & QUALITY OF EVIDENCE

- Weak
- Low-Quality of Evidence

Recommendation #35.2: For mechanically Ventilated patients with COVID-19 and moderate to severe ARDS

In the event of persistent ventilator dyssynchrony, the need for ongoing deep sedation, prone ventilation, or persistently high plateau pressures, we **suggest** using a continuous NMBA infusion for up to 48 hours.

STRENGTH & QUALITY OF EVIDENCE

- Weak
- Low-Quality of Evidence

RECOMMENDATION #36

In mechanically ventilated adults with **COVID-19 ARDS**, we recommend against the routine use of inhaled nitric oxide.

STRENGTH & QUALITY OF EVIDENCE **ST**

- Strong
- Low-Quality of Evidence