Surviving Sepsis · Campaign •

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

VENTILATION RECOMMENDATIONS CHART

VENTILATORY SUPPORT

RECOMMENDATION #23	STRENGTH & QUALITY OF EVIDENCE
In adults with COVID-19, we <i>suggest</i> starting supplemental oxygen if the peripheral oxygen saturation (Spo2) is < 92%, and <i>recommend</i> starting supplemental oxygen if Spo2 is < 90%.	StrongModerate-Quality of Evidence
RECOMMENDATION #24	STRENGTH & QUALITY OF EVIDENCE
In adults with COVID-19 and acute hypoxemic respiratory failure on oxygen, we <i>recommend</i> that Spo2 be maintained no higher than 96% (strong recommendation, moderate quality evidence).	StrongModerate-Quality of Evidence
RECOMMENDATION #25	STRENGTH & QUALITY OF EVIDENCE
For the acute resuscitation of adults with COVID-19 and shock, we	Maria
recommend using crystalloids over unbalanced crystalloids.	WeakLow-Quality of Evidence
•	Low-Quality



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 &
	OHALITY 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.

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 #29

RECOMMENDATION #31

RECOMMENDATION #30	STRENGTH & QUALITY OF EVIDENCE
In mechanically ventilated adults with COVID-19 and ARDS, we	Strong

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).

of Evidence

Moderate-Quality

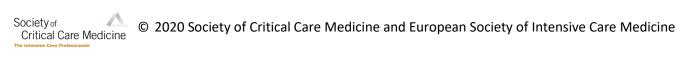
For mechanically ventilated adults with **COVID-19 and ARDS**, we **recommend** targeting plateau pressures (Pplat) of $< 30 \text{cm H}_2\text{O}$.

QUALITY OF EVIDENCE

Strong

STRENGTH &

 Moderate-Quality of Evidence





PRACTICAL CONSIDERATIONS

RECOMMENDATION #32	STRENGTH & QUALITY OF EVIDENCE
For mechanically ventilated adults with COVID-19 and moderate to severe ARDS, we <i>suggest</i> 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 H ₂ O), clinicians should monitor patients for barotrauma.	WeakLow-Quality of Evidence
RECOMMENDATION #33	STRENGTH &
	QUALITY OF EVIDENCE
For mechanically ventilated adults with COVID-19 and ARDS , we suggest using a conservative fluid strategy over a liberal fluid strategy.	WeakLow-Quality of Evidence
RECOMMENDATION #34	STRENGTH &
	QUALITY OF EVIDENCE
For mechanically ventilated adults with COVID-19 and moderate	Weak
to severe ARDS, we <i>suggest</i> prone ventilation for 12 to 16 hours,	Low-Quality
over no prone ventilation.	of Evidence
Recommendation #35.1: For mechanically Ventilated	STRENGTH &
patients with COVID-19 and moderate to severe ARDS	QUALITY OF EVIDENCE
We <i>suggest</i> using, as needed, intermittent boluses of	Weak
neuromuscular blocking agents (NMBA), over continuous NMBA	Low-Quality
infusion, to facilitate protective lung ventilation.	of Evidence
Recommendation #35.2: For mechanically Ventilated	STRENGTH &
patients with COVID-19 and moderate to severe ARDS	QUALITY OF EVIDENCE
In the event of persistent ventilator dyssynchrony, the need for	Weak
ongoing deep sedation, prone ventilation, or persistently high	Low-Quality
plateau pressures, we <i>suggest</i> using a continuous NMBA	of Evidence
infusion for up to 48 hours.	
RECOMMENDATION #36	STRENGTH &
	QUALITY OF EVIDENCE ST
In mechanically ventilated adults with COVID-19 ARDS, we	• Strong



 Low-Quality of Evidence



recommend against the routine use of inhaled nitric oxide.