6) **Summary of Surviving Sepsis Campaign: Guidelines on the Management of Critically Ill Adults with Coronavirus Disease 2019 (COVID-19)**

*Not a final version. Has undergone peer-review and been accepted for co-publication in the Journals of Intensive Care Medicine (ICM) and Critical Care Medicine (CCM)*

An expert panel of 36 members from 12 countries reviewed the literature for direct and indirect evidence on the management of critically ill COVID-19 patients. Based on the quality of available evidence, recommendations made are classified as either "strong" or "weak" as they pertain to the care of COVID-19 positive adults in an ICU setting.

**STRONG Recommendations for the care of COVID-19 patient in the ICU**

- Target SpO2 for patients in acute hypoxemic respiratory failure on oxygen should be no higher than 96%; threshold to initiate supplemental O2 90-92%
- Ventilation strategy for adults with COVID-19 and ARDS:
  - Low tidal volume ventilation (4-8mL/kg of predicted body weight)
  - Target plateau pressures <30cm H2O
  - Higher PEEP strategy (with monitoring for barotrauma at PEEP >10)
  - If recruitment maneuvers are used, recommend AGAINST staircase (incremental PEEP) maneuvers
- Recommend AGAINST the use of hydroxyethyl starches for acute resuscitation of patients in shock
- Recommend AGAINST the use of dopamine if norepinephrine is available

**Notable best practice guidelines**

- Those performing aerosol-generating procedures on patients with COVID-19 should wear fitted respirator masks (N95 respirators, FFP2, or equivalent), as opposed to surgical/medical masks, in addition to other personal protective equipment (i.e. gloves, gown, and eye protections, such as face shield or safety goggles)
- Recommend performing aerosol-generating procedures in a negative pressure room
- Endotracheal intubation should be performed by the HCW with the most experience in airway management to minimize number of attempts and risk of transmission

**Notable suggestions (weak recommendations):**

- Use a conservative over liberal fluid resuscitation strategy in the acute resuscitation of a patient in shock
- Suggest norepinephrine as the first line vasoactive agent; vasopressin or epinephrine as alternatives if norepinephrine is not available
- For mechanically ventilated adults with moderate to severe ARDS, suggest prone ventilation for 12 to 16 hours, over no prone ventilation
- For mechanically ventilated adults with moderate to severe ARDS, suggest intermittent boluses of neuromuscular blocking agents (NMBA) over continuous NMBA to facilitate protective lung ventilation
  - In event of persistent dyssynchrony with ventilator, ongoing deep sedation, prone ventilation or persistently high plateau pressures, suggestion continuous NMBA infusion for up to 48 hours
- In mechanically ventilated adults with refractory hypoxemia despite optimizing ventilation, use of rescue therapies, and proning, suggest venovenous ECMO
- In mechanically ventilated patients with respiratory failure, suggest empiric antimicrobials/antibacterial agents, over no antimicrobials (with daily assessment for de-escalation)