COVID-19 ICU Care: Best Practices

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• **Low tidal volume ventilation**
  - 6-8 cc/kg IBW
  - Solid evidence in ARDS (not specifically tested in COVID-19)

• **Prone positioning**
  - Good evidence in ARDS when PaO$_2$:FiO$_2$<150
  - Growing evidence for non-intubated patients with COVID-19 related hypoxemia
    - PRON-COVID, *Lancet*

• **Paralytics**
  - As needed to prevent dyssynchrony & facilitate LTVV
  - No systematic COVID-19 specific data
Good ICU Care

• Quality Care Bundle (ABCDEF, Fast Hugs BID)
  • Sedation
    • Anecdotally, frequent dyssynchrony is resulting in increased benzodiazepine use
  • Anticoagulation
    • Prophylactic – definitely beneficial
    • Therapeutic – questionable benefit

• Treat bacterial infections
  • Estimates for rates of bacterial co-infection: 8%-50%
  • Our practice: broad spectrum abx ~48 hrs, de-escalation per cultures

• NSAIDs likely ok to use
  • Consider usual risks – GI bleeding, AKI, etc.

Many other agents have been proposed, but with very limited data.
Other Considerations

- NIPPV or HFNC: Unclear benefit in COVID – no RCTs, observational data low quality
- ECMO: Widely used as rescue therapy in COVID-19 ARDS. Be prepared for a LONG course (mean: 29.9 days)
- Inhaled nitric oxide or inhaled epoprostenol: Improves oxygenation in ARDS, no proven mortality benefit. RCT in progress for COVID-19 associated ARDS

Mustafa AK, Alexander PJ, Joshi DJ, Tabachnick DR, Cross CA, Pappas PS, Tatooles AJ. Extracorporeal Membrane Oxygenation for Patients With COVID-19 in Severe Respiratory Failure. JAMA surgery.
Protecting Staff

- **Thoughtful use of aerosol generating procedures and diagnostics**
  - Bronchoscopy, suctioning, sputum culture, chest PT, nebs
  - Daily CXR, CT scans, ultrasounds, etc.
  - Bundled care where possible

- **Adequate PPE**
  - Institution dependent
  - At minimum (for intubated patients or those with aerosol generating procedures): Gown, gloves, N95, goggles or faceshield
Psychosocial concerns

- **Staff burnout**
  - Encourage regular breaks
  - Utilization of debriefs and team check-ins

- **Families**
  - Frequent updates by nursing and doctors crucial
  - Video conferencing to allow families to see & talk to their loved one
  - Visitation as able
  - Consider weekly meetings

- **Delirium and PICS**
  - Likely long-lasting consequences of ICU stay for patients and their families