VENTILATOR/FLUID MANAGEMENT IN ADULT CRITICALLY ILL COVID PATIENTS – UCHealth
adapted from “Clinical Management of SARI when COVID-19 Disease is Suspected – Interim Guidance, 13 March 2020, WHO”

1. INCLUSION: Acute onset PaO2/FiO2 ≤300 & bilateral infiltrates & hypoxia not fully explained by cardiac failure/volume

2. LUNG PROTECTIVE VENTILATION
   - Calculate predicted body weight: Males = 50+2.3*[height (inches)–60]; Females = 45.5+2.3*[height (inches)–60]
   - Start at 6 mL/kg PBW, maximum respiratory rate (RR) 35. (Up to 8 mL/kg PBW if dyssynchrony or pH < 7.15)
   - Adjust tidal volume and RR to achieve pH and plateau pressure goals.

   • Deep sedation may be required to control respiratory drive and achieve tidal volume targets.
   • Titrate PEEP / FiO2 to achieve goal oxygenation 90 – 98%

   • Avoid disconnecting patient from the ventilator, which results in atelectasis.

3. PRONE VENTILATE for 16h per day if P/F < 120 on FiO2 ≥ 0.6, PEEP ≥ 5, VT close to 6 mL/kg PBW after 12-24h on vent.

4. USE A CONSERVATIVE FLUID MANAGEMENT STRATEGY IN PATIENTS WITHOUT TISSUE HYPOPERFUSION: See NHLBI ARDSnet FACTT. Net effect ≤1500mL net positive first 24h, net negative daily thereafter. Goal UOP 0.5 ml/kg/hr, CVP <4.

5. MAY CONSIDER the following therapies in patients with PaO2/FiO2 < 150 refractory to above maneuvers. Evidence for their mortality benefit is variable, and these should only be undertaken under the direct supervision of an intensivist.
   - Higher PEEP strategies, recruitment maneuvers, neuromuscular blockade, esophageal manometry.

Note: These are recommendations, but can be modified based upon clinician discretion.