Non-invasive ventilation:

- Early intubation is preferred
- *If ventilator scarcity* makes non-invasive ventilation trial appropriate:
    - First choice: high-flow nasal cannula with surgical mask over prongs in a negative pressure room (requires AIRBORNE PRECAUTIONS)
    - Second choice: CPAP/BiPAP in a negative pressure room (requires AIRBORNE PRECAUTIONS)

Intubation:

- Staffing: 1 RN, 1 respiratory therapist, 1 intubator
- Location: negative room pressure preferred; if patient too unstable to move to negative pressure room, use single patient room
- Pre-oxygenation: non-rebreather at 15L with surgical mask over vents
- Avoid BVM if possible
- Apneic oxygenation with nasal cannula ≤ 6 L/min
- See separate checklist for equipment and PPE guidelines
- Drug dosing quick reference:
    - Etomidate 0.3mg/kg TOTAL BODY WEIGHT
    - Rocuronium 1mg/kg **(preferred over succinylcholine)** IDEAL BODY WEIGHT
    - Succinylcholine 1.5 mg/kg TOTAL BODY WEIGHT
    - Versed 0.02-0.1 mg/kg/hr
    - Fentanyl: 0.7-10mcg/kg/hr
    - Dexmedetomidine: loading 1 mcg/kg over 10 min, 0.15-1.5mcg/kg/hr
    - Propofol: 5-50mcg/kg/min

Ventilation:

- PRVC mode, initial tidal volume: 6-8 mL/kg of predicted body weight (link)
- If initial plateau pressure is persistently > 30 cm H_2O, reduce the tidal volume by 1 mL/kg, until plateau pressure <30 H_2O
- Goal: SpO2 88-96%: Adjust PEEP and FiO2 as per table below

FiO_2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
PEEP	12-14	14-16	18	18-20	18-20	22	22	22-24

- **If SpO2 <88%** despite maximum FiO2 and PEEP on table above, intervene in the following order. If goal SpO2 is *not* achieved, proceed to the next step on the list.
    1. Prone the patient
    2. Observe for signs of dyssynchrony with the ventilator (e.g. initiating a new breath before full exhalation, coughing/auto-triggering). If present, first increase sedation to RASS of -4. If persistent, give single dose non-depolarizing paralytic (e.g. vecuronium 0.1mg/kg)
    3. Seek expert (MICU) consultation to place patient on APRV
    4. If above steps **and MICU consultation** fail to stabilize oxygenation of patient, V-V ECMO may be considered for select patients. Contact trauma attending to reach Dennis Kim.

Antibiotics:

- CAP treatment for intubated patients with ARDS per surviving sepsis guidelines

Fluid resuscitation:

- For hemodynamically stable patients with ARDS, **avoid** fluid resuscitation
- For hemodynamically unstable patients with ARDS, consider small (500mL) fluid boluses and early norepinephrine