# CARING FOR COVID19: QUICK GUIDE FOR THE INTENSIVIST

### ISOLATION CONSIDERATIONS
- Strict isolation = Contact (gown + gloves) + Droplet (surgical mask; N95 if in ICU or if w/ aerosolizing procedure)
- AVOID aerosolizing procedures when possible (Non-invasive, high flow, nebs, bronchoscopy)

### TRANSFER TO THE ICU
- Address goals of care BEFORE admission to ICU
- Patient to travel in ICU bed (if possible) wearing surgical mask + clean gown and sheet
- Travel w 2 ICU RNs (full PPE) + 2 security (N95)

### BEDSIDE PROCEDURES
- See “ICU strict isolation guidelines” for how to do sterile procedures in strict isolation
- A-line: on admission unless contraindicated
- Central line: Left IJ preferred (save R for RRT)
- Bronch: minimize; for pulmonary toilet try albuterol neb then dornase or hypertonic saline

### CONSULTS
- ID- for ALL patients, for therapies/trials + abx
- Cardiology- for new Heart failure, ACS, VT/VF, cardiogenic shock
- Oncology- call primary oncologist at arrival
- Anesthesiology- CALL EARLY for intubation
- Palliative Care- will co-round in ICU daily, page 42200 for any urgent needs (symptoms/GOC)

### IMAGING
- CT chest NOT necessary for diagnosis (if done, looks like viral PNA: bilateral, multifocal GGOs +/- consolidation +/- septal thickening)
- daily CXR NOT necessary- only if changes plan

### LABS in the ICU
- **Admission** → CBC w diff, CMP, CRP, procal, CPK, trop, d-dimer, PTT, INR, NTproBNP, ferritin
- **Daily** → CBC w diff, BMP, Mag, troponin, CPK
- **Every other day** → LFTs, LDH, CRP, d-dimer, ferritin (if on propofol also triglyceride)
- If clinical worsening → LFT, CPK, troponin, CRP, procal, LDH, ferritin, d-dimer, fibrinogen, PTT, INR

### RESPIRATORY FAILURE
- **Goal SpO2 92-96% PaO2>75**
- See “Respiratory Failure COVID Quick Guide” or full ICU COVID Guideline for details
- Expect rapidly evolving hypoxemia + ARDS
- Avoid CPAP or BiPAP for ARDS, can consider in reversible cases (e.g. flash pulmonary edema)
- @ NC 6L/min call anesthesiology to discuss intubation, or if rapid deterioration call airway ext 26555 or page 39265 covid airway pager
- Lung Protective Ventilation: Vt 6cc/kg ideal body weight, initial PEEP 10 (for BMI<35) 12 (for BMI 35-50) and 15 (for BMI >50)
- Titrate PEEP w PV tool (Hamilton G5 vent) or Best PEEP (by RT) or ARDSnet table lower PEEP
- for refractory hypoxemia try in this order: 1)PEEP titration 2)increased sedation 3)continuous paralysis 4)PRONING (for P:F<150 of FiO2 >0.75) 5)inhaled epoprostenol 6)inhaled NO 7)ECMO, if candidate
- FYI: only absolute contraindication to proning is spinal cord injury or open chest
- Sedation for ARDS: fentanyl / hydromorphone + propofol +/- midazolam (adjunct)

### FLUIDS
- Conservative fluids, “dry lungs = happy lungs”
- Assess fluid responsiveness, +/- bedside ultrasound, only small boluses (250-500cc)
- Target CVP 4-8mmHg and EVEN fluid balance

### SHOCK
- Distributive (DS) vs. Cardiogenic Shock (CS) (see “ICU Care COVID Quick Guide” for details)
- DS: work-up per BWH sepsis guidelines
- CS suggested by high NT-proBNP, CVO2 <60% +/- bedside ultrasound w decreased LV function
- CS management:
  - Norepinephrine upfront for MAP 65-75
  - Diuretics if CVP>14 for goal CVP 6-14
  - Dobutamine (inotropy) if MAP>65 for goal CVO2 >60 (start at 2mcg/kg/min, up by 1-2 q30-60 min, to max dose 10)
  - Lactate and CVO2 q4-6hrs; LFTs daily
  - Mechanical support if CVO2 <60 and lactate >4 @ dobutamine 5mcg/kg/min

### THERAPEUTICS
- Do NOT give steroids (unless for other indication, then use lowest dose possible)
- Discuss therapy options with ID; see ID guidelines for up to date recommendations, criteria for trials (Tocilizumab, Remdesivir, etc.)

### PROGNOSIS
- Evolving data, worse outcomes if >65 yrs
- Lab markers of severe disease: lymphopenia, increased troponin, LDH, d-dimer, CRP
- Calculate SOFA score to assess organ dysfunction (epic smartphrase: “.sofascore”)