**Code Blue**

- **Before entering room:** don full PPE
- **Before compressions:** bedsheet over face until intubated
- **Minimize personnel:** 2 compressors, code leader, code RN, anesthesiologist, RT
- **Consider reversibility:** > 90% COVID patients PEA/asystole

**Airway Clearance**

Tenacious secretions common, pulmonary toilet needed to avoid mucus plugging.

- **First line:** normal saline nebs, guaifenesin
- **Second line:** NAC, hypertonic, or dornase nebs
- **Third line:** mechanical clearance, *treat as AGP*
  - flutter devices (Acapella/Aerobika)
  - manual chest PT (MIE only if approved by RT)
  - bronchoscopy if other options fail

**Procedures**

- **Airway:** glidescope, most experienced operator, *avoid* bag valve masking if possible
- **Bronchoscopy:** *minimize providers*; if safe, perform rapidly during ventilator apneic hold to minimize aerosolization
- **Tubes, lines, drains:** perform as normal
  - arterial lines: consider heparinized saline if clotting
  - NG tubes: treat as aerosol-generating procedure (AGP)

**Labs**

<table>
<thead>
<tr>
<th>Schedule</th>
<th>Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>On admission</strong></td>
<td>CBC w Diff, BMP, Mag, LFTs, Trop, CPK, NT-proBNP, LDH, CRP, D-dimer, Procalcitonin, PTT/INR, Ferritin, Fibrinogen, EKG, full viral panel only if it would change management</td>
</tr>
<tr>
<td><strong>Daily</strong></td>
<td>CBC w Diff, BMP, Mag, Trop, CPK, PTT, PT, Fibrinogen</td>
</tr>
<tr>
<td><strong>Every other day</strong></td>
<td>LFTs, LDH, CRP, D-dimer, Ferritin, SCvO2, NT-proBNP; if on propofol: Triglycerides, Lipase</td>
</tr>
<tr>
<td><strong>Twice weekly</strong></td>
<td>sIL-2R</td>
</tr>
</tbody>
</table>

Expect: lymphopenia, mild thrombocytopenia, elevated CRP/LDH/D-dimer, mildly elevated AST/ALT (if severe, consult hematology or GI)

**Imaging**

- **CXR** on admission or PRN for change; avoid daily CXR
- **Do not order** routine CT Chest; obtain only for alternate concerns (eg, abscess, empyema, PE)

**Shock Management**

### CYTOKINE STORM SYNDROME

**Suspect if:** *escalating O2, shock, myocardial dysfunction*

- CRP > 50 mg/L and at least two of...
  - Ferritin > 500 mg/mL
  - LDH > 300 U/L
  - D-dimer > 1000 ng/mL (*r/o* VTE)
- Other markers: neutrophilia, lymphopenia, elevated LFT and ESR, DIC markers (TCP, falling fibrinogen, prolonged PT/PTT). sIL2R (sCD25), IL-6

**Management**

- **Corticosteroids** (see Drugs & Treatment guide for doses)
- **Work up for bacterial co-infection:** consult Rheum and Pulm for consideration of Anti IL-6 or Anti IL-1 agents

### SEPSIS

- **Norepinephrine** for goal MAP > 65
- **Conservative fluid management:** use 250–500 cc boluses with dynamic measures of responsiveness (delta CVP > 2, delta MAP or pressors, PPV, SLR)

### CARDIOGENIC SHOCK

- **Norepinephrine** gtt for goal MAP 65–75, SVR 800–1000
- **Diuretic** for goal CVP 6–14, PCWP 12–18, PAD 20–25
- **Dobutamine** gtt for SCvO2 < 60%, CI < 2.2
  - start at 2 mcg/kg/min
  - up-titrage by 1–2 mcg/kg/min every 30–60 mins
  - call Cardiology and ECMO if dose exceeds 5 mcg/kg/min

**Support Teams**

- **Airway:** p11668 (if STAT, p26555)
- **ECMO:** p35010
- **Infection Control:** p11482
- **Medicine Bedside Procedure Service:** p38552
- **Palliative team:** p42200
- **COVID clinical questions:** ID team following, or p39634
- **COVID flag management:** p39635
- **COVID Nurse Administrator:** p39284

See https://covidprotocols.org/ for current full manual.