The dominant respiratory feature of severe COVID-19 is arterial hypoxemia greatly disproportionate to abnormalities in respiratory system mechanics. This flowsheet is a concise approach for \(O_2\) therapy and clinical indicators for potential rapid decline and/or need for intubation.

Striving to achieve oxygenation using a ladder approach is central to care. This process is resource-intensive, involving proning and turning of patients as well as close monitoring. Collaborative, team-based approaches will be necessary.

**OXYGEN LADDER**

**PUT SURGICAL MASK OVER OXYGEN**

1) Nasal prongs/cannulae: 1-6 L/min
2) Simple face mask: 6-20 L/min
3) Non-rebreather: 10-15 L/min
4) Oxymask: 1-15 L/min (if available)

**Early ICU Consultation & Transport Call**

For transport, follow the local facility procedures. RUDi or ROSe virtual link can assist with decision making. Ambulance is unable to transport with HFNC, thus probably requires intubation for transfer – consider goals of care prior to commencing & discuss on PTN call. Decision re. intubation now, or late, with transport team.

**PPE level (non-AGMP):**

- Standard droplet & contact precautions
- Surgical mask on patient

**PPE level (AGMP):**

- Airborne precautions are indicated as therapeutic options include AGMPs
- Fit-tested N95 respirator, in addition to gloves, gown and eye protection
- Place in negative pressure isolation room if available
- Dedicated closed isolation room or single room with closed door are alternatives

**Clinical features of severe COVID-19 disease:**

- \( \uparrow \uparrow \) work of breathing, overt distress, impending exhaustion
- Hypoxemia refractory to increased \( FiO_2 \)
- Hypercarbia with associated acidosis

**Threshold to intubate should be guided by clinical judgement (not by \( FiO_2 \) alone):**

- Excessive work of breathing/exhaustion
- Co-existing shock, altered LOC, multi-system organ failure
- Failure of oxygenation

**OPTIMIZE PHYSIOLOGY**

PRE-INTUBATION IF POSSIBLE

Pressor – now/ready? Cautious fluids?

**Consider \( SpO_2 \) target 88-92%**

**Minimize flow titrated to \( SpO_2 \)**

**Proning if \( O_2 > 6L/minute \)**

Assist the patient to move
- 30-120 minutes each position
- fully prone
- right side
- sitting up 30-60 deg
- left side

Monitor \( SpO_2 \) with each change
Pillows under torso to aid comfort when fully prone

**Suggested initial generic labwork, if available:**

CBC, lytes, BUN creat, lactate, venous gas, CRP, glucose, lipase, liver function, troponin, D-dimer, fibrinogen, LDH, ferritin, blood cultures, urine culture, NP swab

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