

What do we know

- ARDS denotes severity of disease.
- Most patients have good lung compliance and acceptable driving pressures.
- Septic shock is not common.
- Myocarditis and elevated troponin noted in patients who die.
- Lymphopaenia common.
- CRP & D-Dimer correlate with severity and used to assess response to therapy.
- PCT is usually normal and if increased, consider a bacterial infection.
- Initial PCR may be negative but repeat after 3 days if clinical suspicion still high.

Poor Outcomes in Following Patients:

- Late onset respiratory failure
- Two, or more organ failures
- Elderly patients
(especially >65 years)
- Comorbidities
(especially diabetes, hypertension, or ischemic heart disease)
- Need for dialysis
- Immunocompromised
- No improvement despite 5 days of mechanical ventilation

Not Recommended

- Non-invasive ventilation
- High flow nasal oxygen

High risk for viral transmission during

- | | |
|------------------------------|----------------|
| • Intubation | • CPR |
| • Bronchoscopy | • Nebulisation |
| • Bag mask ventilation (BMV) | • Transfer |

Intubation

- **When:** Hypoxaemia or severe respiratory distress despite standard O₂ therapy
Early intubation is preferable
- **How:** Refer to separate intubation guideline.

CPR

- High risk with BVM
- If BVM:
 - Ensure good seal
 - Use high efficiency particulate filter
 - Hold mask with 2 hands (2 persons)
- Consider mechanical CPR devices

Investigations

- **Imaging:**
Bedside CXR & lung U/S rather than moving to CT scan
- **Bronchoscopy:**
Not routine because of risk

Management

- **Generally similar to respiratory failure attributed to a viral pneumonia**
- **Lung protective ventilation**
(TV: 4-6mL/kg IBW) with PEEP (initiate at 14 cm H₂O and titrate)
- **Target SaO₂ of 88-90% and aim to reduce F_iO₂ to <0.6**
- **Permissive hypercapnia provided stable hemodynamically and pH > 7.15**
- **Consider prone ventilation early if refractory hypoxemia and if local experience**
(after adequate PEEP and use of recruitment manoeuvres as atelectasis predominates)
- **Consider Airway Pressure Release Ventilation early (if experienced)**
- **Role of ECMO unclear**
(Consider V-V ECMO in young patients with single organ failure. Discuss with ECMO centre)
- **Amoxicillin-Clavulanate + Macrolide + Oseltamavir: For all suspected CAP patients**
- **Corticosteroids to be used only if septic shock (Not for pure pneumonia)**

General Management

- **Judicious fluid therapy**
Limit IV fluids; calculate daily fluid balance (including for drug administration)
- **Ulcer prophylaxis**
If at high risk for stress ulcers or unable to feed enterally
- **Vasopressor use**
Low threshold to initiate rather than fluid loading
- **Initiate thromboprophylaxis if no contraindication**
- **Initiate enteral feeding if no contraindication**
- **PPE and infection control** - refer to separate PPE guideline

Experimental Therapies

- **Several agents are currently being explored**
- **There is currently no evidence to support their inclusion as standard therapy.**
- **Includes:**
Lopinavir/Ritonavir; Antiviral combinations; Plasmoquine or Chloroquine.
- **If considering these agents, seek expert opinion.**