COVID-19 SUMMARY

1st week: Fever, non-productive cough
Vomiting, nausea, diarrhoea

2nd Week: Deterioration – Dyspnoea, SOB, Chest tightness

Typical evolution:
Day 6 post exposure – Dyspnoea
Day 8 - Admission
Day 10 - ICU admission / Intubation
Deterioration or recovery most commonly occurs at Day 6-7 of illness

The most associated co-morbidities with ICU admission were diabetes and hypertension.
Most patients are around 70 years old
Obesity is a frequent co-morbidity
Net prevalence in the male population

*** Interstitial pneumonia / Reps failure +/- Flu like symptoms treat as COVID +ve
DO NOT BLINDLY trust negative swab if symptoms / pneumonia with suggestive CXR***

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Most patients are around 70 years old
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Net prevalence in the male population

Hypoxaemic respiratory failure > 90 %
Shock 30 %
Aki 10 – 30% (RRT 20%)

ABG – Mild acidosis with normal lactates, severe base deficit, high AG.
Raised CK especially in younger patients
Lymphopenia common
Very elevated CRP
Often thrombocytopenic (mild) <100 rare
WBC tends to be normal
LFTs abnormal ~ 30%
Difficult glycaemic control – frequent ketoacidosis

CXR : Interstitial pathology, Bilat infiltrates common and gravitational distribution.

Chest CT – NOT indicated due to high difficulty in transportation, high risk of spreading the contagion
- Ground glass appearances, crazy paving, bilat infiltrates, atelectasis.

Lung USS – Diffuse B-line profile – Responds well to PEEP
Consolidation / parapneumonic / atelectasis.

ECHO – Attention to dyskinesias – Proportion of patients have troponin rise. Thought to be secondary to stress cardiomyopathies secondary to virus. Not ACS.
COVID-19 SUMMARY

**Airway**
- Pre Oxygenate with C-Circuit and tight fitting face mask / two handed grip to minimise leak
- Avoid bagging if able (Aerosalising) – If required insert LMA
- Consider videolaryngoscopy as first line
- Do not positive pressure ventilate until cuff inflated – Attach to ventilator immediately post intubation
- Use closed suction system
- Airway management by most experienced practitioner
- Cricoid pressure case dependant – avoid if able
- Avoid unnecessary circuit disconnection – clamp ETT and place ventilator on standy
- Use out-of-room and in-room checklists and formulate plan

**Ventilation**
- PRVC
  - Lung Protective Ventilation – 6mls/kg
  - Often High PEEP required >15cmH20.
  - Patients usually have good compliance
  - PRONING – 18-22hr - Often 7 rotations necessary - Fio2 >0.60
  - NEGATIVE fluid balance
  - NMBA’s and Deep sedation
- Worsening of ventilatory failure with refractory hypercapnia in week 3 – Secretion retention /dead space ventilation
- Consider early tracheostomy <7 days – reduce sedation requirement / aid weaning
- Be careful with early spontaneous ventilation due to risk of de-recruitment
- Patients requiring 14-21 days invasive ventilation
  - ***HFNO / NIV not recommended****

**Interventions**
- NG tube post intubation – early enteral nutrition
- CVC line – Recommended USS guided (Dedicated USS for COVID-19 lines) – Needs decontamination .
- 1st line vasopressor : Noradrenaline (4mg/50ml 5% Glucose)
- In event of increased numbers of patients / limited numbers of pumps – Move to peripheral noradrenaline – (8mg/250ml) (see separate policy / ICU Cons decision)

**Renal**
- CRRT – approx. 20% pts
  - Reserve for patients with favourable outcomes:
    - Filtration / dialysis teams
    - Logistics of disposal of waste
    - Increased nursing load

**Medications**
- Steroids – No benefit in Steroid use. May increase viral shedding
- Antibiotics – Not unless severe disease with potential of bacterial overlay – Yes in late infection
- Antivirals – Consider in deterioration – scant evidence base.
The swabbing process:

Gather 3 red topped nasopharyngeal swab packets, get 6 microbiology sample bags, remove the paper from 3 of the bags (leaving just the colourless plastic pouches), attach patient labels to remaining 3 sample bags, place all 6 sample bags and 3 swabs in a white tray with sharps bin. Gather one of the large white cylindrical transport containers and place everything on a silver trolley with wheels.

Get PPE ready and don (see trust guidance)
Buddy unpeels swab packet
Swabber takes out swab and swabs the throat
Buddy takes red lid off container
Swabber places swab in container and snaps end of stick off
Swabber places end of stick in sharps bin with no-touch-technique
Buddy screws red lid on container
Buddy labels the container
Buddy places the container in an empty plastic pouch, seals the pouch then places that in to the 1st labelled sample bag and seals it

This process is repeated for sample 2 and 3.

Once all 3 samples have been taken and bagged, buddy places them inside the transport container (everything else that was in the transport container needs to stay in there too) and screws closed the lid.
COVID-19 SUMMARY

**PRINCIPLES* OF AIRWAY MANAGEMENT IN CORONAVIRUS COVID-19 FOR SUSPECTED/REPORTABLE** OR CONFIRMED CASES OF COVID-19

**BEFORE**

- **STAFF PROTECTION**
  - Hand Hygiene
  - Full Personal Protective Equipment
  - Early Preparation of Drugs and Equipment
  - Meticulous Airway Assessment
  - Use Closed Suctioning System

- **PREPARATION**
  - Minimize Personnel During Aerosol Generating Procedures
  - Adjoining Infection Isolation room (if available)
  - Formulate plan Early
  - Connect Viral/ Bacterial Filter to Circuits and Manual Ventilator

**DURING**

- **TEAM DYNAMICS**
  - Clear Delination of Roles
  - Clear Communication of Airway Plan
  - Cross-monitoring by All Team Members for Perceived Contamination

- **TECHNICAL ASPECTS**
  - Airway Management by Most Experienced Practitioner
  - Right Fitting Mask with Two Hand Grips to Minimize Leak
  - Ensure Paralysis to Avoid Coughing
  - Positive Pressure Ventilation Only Allows CO2 Inhaled

**AFTER**

- Avoid Unnecessary Great Disconnection
- Strict Adherence to Proper Degowning Steps
- Hand Hygiene

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**There are ethical and institutional variations on definition of a suspected/reportable case. Please refer to your own institutional practice.**

**Personal Protective Equipment according to your own institutional recommendations may include: Particulate Respirator, Cap, Eye Protection, Long-sleeved Waterproof Gown, Gloves**


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References:

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