ICU COVID-19 – Testing and antimicrobials

**For all admissions to ICU:**
- Check COVID combined deep nasal/throat swab sent
- Send tracheal aspirate for COVID if ventilated
- Send influenza viral swab only if COVID negative
- For all ventilated send tracheal aspirate for MCS/fungal culture send in addition
- HIV, urinary legionella

**If swab test result for COVID is negative:**
- but clinically still highly likely (*i.e. influenza like illness +/- cough, bilateral pneumonia, lymphopenia, low PCT*) then treat as such - do not sent repeat sample
- if clinically unlikely then do not repeat sample and de-isolate patient
- if clinically equivocal send a repeat sample (with tracheal aspirate preferable) at 48hrs

**Empiric antibiotics for community acquired pneumonia:**
- Amoxicillin 1g IV TDS
- + Doxycycline 200mg PO OD or Clarithromycin 500mg IV BD
- For penicillin allergy, Levofloxacin 500mg IV BD
- No need for oseltamivir in addition as low levels of influenza in community

**Empiric antibiotics for healthcare associated pneumonia**
- For non ventilated patients: Amoxicillin 1g IV TDS and Temocillin 2g IV BD
- For ventilated or immunosuppressed patients with risk of pseudomonas then Tazocin 4.5g QDS (*adjust for renal function*)
- For penicillin allergy, Levofloxacin 500mg IV BD

**Antifungals**
Please discuss all cases with microbiology on call
- For immunosuppressed+/− prolonged illness pre admission, and <1 week in ICU: Voriconazole 6mg/kg IV BD for first day and after 4mg/kg IV BD. If not tolerated then Caspofungin 70mg IV OD (reducing to 50mg IV if <70kg)
- For patients >1 week in ICU: Anidulafungin 200mg IV then 100mg IV OD
ICU COVID-19 – Procalcitonin
New admissions to ICU

On admission to ICU
Send PCT (if none in last 48hrs)
Start Empiric Antibiotics (Microguide)

Repeat PCT at 48 hours post ICU admission

PCT at 48hrs <0.25µg/L
- Stable
  - Consider stopping antibiotics

Admission PCT <0.25µg/L
- PCT at 48hrs >0.25µg/L
  - Stable
  - Consider other causes
    - Antifungal if prolonged course of illness > 3 weeks or other immunosuppression risk factors

Admission PCT >0.25µg/L and PCT at 48hrs > admission PCT
- Deteriorating
  - Re-culture
    - Consider reimagining
    - Escalate antibiotics
    - Look for alternative source of sepsis

If in hospital for ≥ 5 days follow HAP guidelines for antimicrobials. If deteriorates whilst on ICU resend PCT on point of deterioration and follow the above guidelines. Consider imaging and alternative sources of sepsis.