Antimicrobial Stewardship in COVID-19 (Version 1 23/04/20)

The COVID-19 pandemic challenges all aspects of healthcare including both recognition and management of serious acute bacterial infection and effective delivery of antimicrobial stewardship.

Target audience:

Community & Hospital Prescribers, Antimicrobial Stewardship Teams.

Guidance statements:

1. Serious bacterial infections may be missed when all attention focuses on COVID-19. It is therefore important to consider (investigate and empirically treat) bacterial infection when assessing the febrile patient.
2. "Start smart then focus" principles apply in those who have commenced antibiotics:
    - Review the diagnosis and management plan as more clinical information becomes available and ideally at 48-72 hours, if there is no continued indication for an antibiotic it should be discontinued;
    - Ensure antibiotic duration is short as possible and as per guidance;
    - In those receiving IV antibiotics consider IV to oral switch daily.
3. COVID-19 is a viral infection, CRP is usually raised in COVID-19 and does not necessarily predict bacterial co-infection and secondary bacterial infection appears uncommon in COVID-19 patients.
4. Antimicrobial prescribing guidance in suspected or proven COVID-19 infection:
    - No purulent sputum and no evidence of pneumonia: Do not prescribe antibiotics for the treatment of secondary bacterial pneumonia
    - Purulent sputum AND one of: Bronchitis/pneumonia (community-acquired CURB 0-2) OR if known underlying chronic lung disease where patient has history of secondary bacterial infection in winter months:
      First line: Day 1: doxycycline 200 mg, then 100 mg once a day for 5 days in total
      Alternative: amoxicillin 500 mg every eight hours for 5 days
      or agents of choice as per local guidelines
    - Pneumonia (community CURB 3-5 or healthcare onset): in community consult www.antibioticprescribing.ie or in hospital consult local hospital guidelines
    - Ventilator associated pneumonia: consult local hospital guidelines and microbiology/infectious diseases and respiratory physicians advice
5. Antibiotics have unintended consequences for each individual patient and so prudent use is vital. Inappropriate use may cause side effects in the individual patient, reduce availability if used indiscriminately, and broad-spectrum antibiotics in particular may lead to *Clostridioides difficile* infection.
    - Frail elderly patients are at greater risk of complication and death from all infections. Although there may be a lower threshold for prescribing antibiotics, older patients are also at greater risk of harm from antibiotics.
6. Currently antivirals or agents with antiviral properties for COVID-19 remain experimental; use is restricted to hospitalised patients for treatment only, and ideally as per a clinical trial. These agents should not be prescribed in the community for treatment or prophylaxis.