KISS: COVID-19 Webinar – Module 1 – Primary Care Assessment & Management

NICE [NG163 3.4.20](#) & [NG165 3.4.20](#); [Centre for EBM COVID-19](#);

- SARS-CoV-2 is the new coronavirus that causes the infectious disease COVID-19
- Bear in mind virtually all data is from confirmed cases in hospitalised patients

- **COVID-19 can be divided into three stages** [Nature](#)

  - **Stage 1**: asymptomatic incubation period, proportion unknown but thought maybe as high as 50%; variable incubation period but usual is 5 to 6 days with range from 1 to 14 days; asymptomatic transmission possible for 1 to 2 days prior to symptoms
  - **Stage 2**: non-severe symptomatic period, generally lasts about a week (but highly variable) and then recovery, approx 80% of symptomatic patients
  - **Stage 3**: a severe stage with complications; 15% severely unwell, 5% critically unwell, mortality rate 1% to 3% and as high as 20% in patients aged over 80
    - **Severe complications** typically occur from day 5 (median times to hospital admission are 7 days and to ITU 10 days)
    - **Main severe complications**
      - **Acute respiratory distress syndrome**, leading to respiratory failure
      - **Sepsis** can occur secondary to bacterial or viral pneumonia
      - **Cytokine release syndrome** ('cytokine storm'), a systemic later hyper immune response leading to a flood of inflammatory proteins and cells into the lungs and other organs leading to respiratory and multi-organ failure
      - *Rapid deterioration may occur at any time with increasing breathlessness and a sepsis-like picture, and this needs appropriate safety netting*

Risk factors for severe complications

- Older age, especially aged over 80
- Co-morbidities, especially asthma, COPD, hypertension, heart disease and diabetes
- Immune suppression
- Note elderly and those with immune suppression may have atypical presentations
- Men are twice as likely to get a severe illness or to die
- *However, anyone can get a severe disease and people with risk factors can deteriorate rapidly*

Presenting symptoms:

- Fever 80% and cough 80% are the most common symptoms, *but may be absent*
- Fatigue & myalgia 50%, Dyspnoea 44%, Headaches 34%
- Diarrhoea and GI symptoms 8%
- Loss of taste and smell commonly reported (59% of patients who test positive

Investigations:

- Currently based on respiratory tract secretions/swabs, using **reverse transcriptase PCR** (RT-PCR).
  - Sensitivity not great (66-80%) especially if taken early in disease course or via naso-pharyngeal swab.
  - Among patients with suspected COVID-19 and initial -ve PCR repeat PCR becomes positive in ~23%.
  - Important implication in primary care, a **single negative RT-PCR does not rule out the disease**.
- Serum antibody tests to look for evidence of infection in development.

Assessment:

- Minimise face-to-face contact by offering telephone and video consultations (**free webinar available from NB medical on remote consulting** [click here](#))
- Use clinical judgement based on symptoms, including SOB a rest or minimal exertion, difficulty in breathing, haemoptysis, confusion, cold and clammy, falling urine output

- **Assessing respiration**:
  - Is important, however, **assessing dyspnoea remotely is difficult**
  - The ROTH score should NOT be used [CEBM 2.4.20](#)
  - **Focus questions on breathing** in context of (for further detail see [CEBM 23.3.20](#))
    - *'How is your breathing today?'* Then listen for the ability to complete sentences.
    - A change in symptoms, a clear story of deterioration is likely to be more important than whether the patient feels short of breath.
  - **Oxygen saturations**:
    - Have a low threshold for measuring sats and respiratory rate in unwell patients with dyspnoea (which may mean a limited face-to-face consultation) to exclude hypoxaemia and respiratory failure
    - An oxygen saturation of < 92% on air is predictive of adverse outcomes in patients with pneumonia
- **Assessment tools?**
  - **CRB65** not validated in people with coronavirus and requires BP measurement *'which may be difficult or undesirable during the COVID-19 pandemic and risks cross-contamination* NICE*'.*
  - **NEWS2** score may be useful to help decisions on hospital admission but has not been validated for COVID-19 in primary care and *'a face to face assessment should not be arranged solely to calculate a NEWS2 score* NICE*'*

Symptom management:

- **Cough**: avoid lying on back; a teaspoon of honey; consider codeine linctus or tablets 15mg to 30mg every 4 hours if cough distressing; second choice morphine sulphate oral solution if severe and distressing
- **Fever**: do not use antipyretics with the sole aim of reducing fever; paracetamol preferred to NSAID
- **Dyspnoea**: keep the room cool and open windows; encourage relaxation and breathing techniques

If pneumonia is clinically suspected, is it viral or pneumonia?

- Viral pneumonia is more likely if previous typical coronavirus symptoms for ~1 week, severe myalgia, anosmia, breathless with no pleuritic pain.
- Bacterial more likely if secondary deterioration after a few days of symptoms, pleuritic pain, purulent sputum.
- **Antibiotics**? Not routinely, but consider if likely bacterial cause or unclear if viral or bacterial, or patient at high risk of complications (NB we do not want to miss possible treatable disease in these groups)
  - 1st line doxycycline 5 days (200mg stat day 1 then 100mg daily remainder) or amoxicillin 5 days (500mg TDS); do not routinely use dual antibiotics

Who should we admit to hospital?

- NICE give no clear guidance on who should be admitted, so follow local guidance
- This will be very patient-specific depending on frailty, co-morbidities and personal wishes/care plans.
- **Features associated with a severe illness** which should prompt consideration of urgent admission unless advance directive to the contrary include
  - SOB with minimal exertion, unable to complete full sentences or get out of bed, no urine output, cyanosis or mottled skin
  - RR ≥ 25, HR 125, O2 SAT ≤ 94%

Safety netting:

- RCGP suggests we tell patients to seek urgent medical advice if they become significantly breathless, develop chest pains, become pale and clammy ('like someone who is about to vomit') or seem more muddled or confused.
- Warn patients there is a small risk of rapid deterioration, usually day 5-8

Conclusion: *We can reassure that whilst for most people COVID-19 will be a mild and self-limiting illness, serious complications and rapid deterioration may occur at any age or stage and this needs appropriate safety netting*