As the COVID-19 pandemic continues it is critical that local antibiotic treatment guidelines are followed and that unnecessary antibiotic use is minimised. Bacterial co-infection is uncommon and antibiotics are rarely indicated in COVID-19. Dexamethasone is recommended for those hospitalised with severe COVID-19 but there is no evidence for steroids in patients with mild COVID-19. Although there are no trials supporting use in the community, steroids may be considered in those with severe symptoms either choosing to be cared for at home or in whom home care is agreed to be more appropriate. Steroids should be prescribed for patients with infective exacerbations of chronic obstructive pulmonary disease (IECOPD) or asthma if required. Inhaled budesonide is beneficial in reducing hospitalisation of patients aged > 50 years with COVID-19-like illness in the community and those with significant co-morbidity. Trials of azithromycin and doxycycline have shown no benefit for patients with COVID-19-like illness. This guidance based on Scottish Antimicrobial Prescribing Group (SAPG) advice, is recommended by the NHS Grampian Antimicrobial Management Team (AMT) to support health and social care teams in managing people with symptoms of respiratory infection presenting in the community.

**DIAGNOSIS OF BACTERIAL RESPIRATORY TRACT INFECTION IN COVID-19**

- COVID-19 is characterized by persistent dry cough/fever/anosmia/loss of taste although gastrointestinal symptoms or delirium may predominate in the elderly. Lymphopenia is usual and CRP is typically raised.
- New COVID-19 variants may be associated with other symptoms such as headache, sore throat, runny nose.
- Low severity pneumonia/bacterial IECOPD are suggested by purulent (green/brown) sputum.

Antibiotics are rarely indicated in patients with COVID-19 in the community or in hospital outside of critical care.

- Antibiotics are recommended if pneumonia is strongly suspected.
- Antibiotics may be appropriate in bacterial IECOPD but are not recommended in mild respiratory tract infections in those without COPD.
- For both pneumonia and IECOPD duration of antibiotics should be limited to 5 days.
- Antibiotics should be reviewed and discontinued if a SARS-CoV-2 result is confirmed positive.
**USE OF EMPIRICAL ANTIBIOTIC TREATMENT**

<table>
<thead>
<tr>
<th>Low or moderate severity pneumonia*</th>
<th>High severity pneumonia</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRB65/CURB65 0-2 OR</td>
<td>CRB65 3-4 or CURB65 3-5</td>
</tr>
<tr>
<td>IECOPD with purulent sputum</td>
<td>Consider admission for further assessment/management particularly if COVID-19 is suspected. Atypical pneumonia cover unlikely to be required therefore no change from adjacent treatment recommendation if patient to stay in community.</td>
</tr>
<tr>
<td>Amoxicillin 500mg every 8 hours for 5 days</td>
<td></td>
</tr>
<tr>
<td>Or Doxycycline 200 mg on first day, then 100 mg once a day for 4 days.</td>
<td></td>
</tr>
</tbody>
</table>

*Clarithromycin is no longer recommended routinely for patients with CRB65 1-2 or CURB65 2 based on NICE guideline [NG138] September 2019.

**SPECIFIC ADVICE ON CARE OF FRAIL OLDER PATIENTS**

- **COVID-19 mortality is ≥ 30% in unvaccinated hospitalised elderly patients with significant co-morbidity.**
  - Where appropriate see SAPG Recommendations for use of antibiotics towards end of life
- **Frail elderly patients are at greater risk of harm from antibiotics:**
  - Consider symptomatic relief before antibiotics if a cause other than bacterial infection is suspected. See Palliative Care Guidelines
  - Avoid co-amoxiclav and fluoroquinolones due to *C. difficile* and other adverse effects
  - Clarithromycin is associated with QT prolongation. Some COVID-19 patients have cardiac injury and arrhythmias so avoid unless ECG can be performed.

Reference:

Updated Advice On Management Of People With Respiratory Infections Presenting In The Community During The COVID-19 Pandemic: July 2021