### Signs/Symptoms

<table>
<thead>
<tr>
<th>Signs/Symptoms</th>
<th>Score ONE point for each feature present</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Confusion</strong> New onset or worsening of existing state if cognitive impairment present</td>
<td></td>
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<tr>
<td><strong>Oxygen Rate</strong> PaO$_2$ &lt;60mm Or O$_2$ sat &lt; 90%</td>
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<tr>
<td><strong>Respiratory Rate</strong> ≥30/min</td>
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<tr>
<td><strong>Blood Pressure</strong> systolic BP &lt;90mmHg or diastolic ≤ 60mmHg</td>
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**Total Score**

### Empiric Antibiotic Therapy

<table>
<thead>
<tr>
<th>MILD score = 0</th>
<th>MODERATE score = 1</th>
<th>SEVER/ICU/HDU$^1$ score = 2 or more</th>
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<tbody>
<tr>
<td><strong>First line</strong></td>
<td>Penicillin G 1.2g q6h IV</td>
<td>Penicillin G 1.2g q4h IV AND gentamicin$^2$ 5mg/kg daily IV AND azithromycin 10mg/kg up to 500mg/day IV (max 5d usual)</td>
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<tr>
<td>Amoxycillin 500mg tds oral</td>
<td>After inpatient team review +/- Doxycycline</td>
<td></td>
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<tr>
<td><strong>Penicillin allergy</strong></td>
<td>Doxycycline 200mg stat, then 100mg daily</td>
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**Notes**

- **MRSA pneumonia has high mortality: always consult Infectious Diseases**

- 1 Add vancomycin if staph pneumonia possible: 1g IV 12-hourly (max infusion 1g/h). Target trough=10-20mg/

  - 2 Gentamicin dose is based on calculated "ideal" body wt. Avoid gentamicin if hearing/vestibular problems.

**Investigations In ED**

- FBC, U/E/C, Blood culture, Store serum (virology), BSL
- Add: LFTs, Blood culture (2 sets), Mycoplasma IgM (acute serum), Sputum micro/culture, Severe: add Legionella culture and urine LP antigen, viral throat/nose swabs (influenza PCR and extended respiratory virus pcr)

**Likely suitable for home treatment**

- Social Supports
- No unstable co-morbidities

**Hospital Admission**

- Consider ICU Consultation (2 or more CORB factors or respiratory failure)

All immunocompromised patients: seek consultant advice
Community-Acquired Pneumonia (CAP) Guidelines for Adults
A synopsis of this guideline is available as a laminated ID-sized card from your hospital pharmacy.

Key Points:

Correct identification of severe pneumonia enables appropriate investigation, early broad spectrum antibiotic therapy (that includes Legionella cover) and necessary respiratory support.

Time to Antibiotic: One of the PhD (Maggie) project key performance indicators is the time taken from MO review until first antibiotic administered. Antibiotic administration within 4 hours of arrival is associated with decreased mortality and length of stay.¹

Streptococcus pneumoniae remains the most important cause of CAP in our community. Amoxycillin and penicillin G retain efficacy in CAP due to pneumococcal strains with raised MICs to betalactams. Penicillin-G is also active against most (80%) of Haemophilus influenzae.

Serology testing: Acute serum sent for Mycoplasma IgM will be stored by Virology for later testing. Testing for other causes will proceed once a convalescent sample (at least 3 weeks after on set) is received with a pathology request.

PCR diagnosis strategy for respiratory viruses: The combined nose/throat sample for flu PCR has a special collection procedure (see below). Extended respiratory virus PCR currently should be requested on all Severe CAP cases.

Atypical pathogens: Legionella diagnosis has important public health implications. Please do not neglect the additional tests for legionella, particularly if renal failure and/or GI symptoms present. If atypical pneumonia is suspected, seek consultant advice and consider possible addition of doxycycline.

Azithromycin is retained for severe CAP in order to provide cover against pertussis and other atypical pathogens.

MRSA strains with enhanced potential for causing pneumonia are circulating in the community. Adult vancomycin dosing recommendations have changed recently. Doses are calculated on total body weight.

Immunocompetency: patients with chronic cardiias, respiratory or neurological problems or who are immunocompromised patient with CAP seek consultant advice.

Community Procedure: nasal/throat swab for Influenza PCR

Equipment (Emergency Departments in JHH and Belmont have available a collection kit)
- Viral swabs (green top viral transport swab) x 2 (must be correct swab type)
- Normal saline (0.9%) 10mL disposable plastic ampule
- Wooden or plastic disposable tongue depressor
- Personal protective equipment (surgical mask, eye goggles)
- Alcohol hand gel (Aqium)

Procedure
1. Explain the procedure to the patient.
2. Clean hands with alcohol gel (aqium) and put on PPE (protective glasses and mask)
3. Take viral culture nasal swab
   - moisten swab with sterile normal saline
   - sample the anterior nostril by gently abrading the nasal mucosa on both sides
   - insert swab into transport medium.
4. Take viral culture Throat swab
   - take the other swab and moisten in sterile normal saline
   - sample both tonsils and the posterior oropharynx with the swab. Avoid touching the swab on the tongue or other parts of the mouth.
   - insert swab into transport medium
5. Forward the labelled specimens to HAPS ASAP
6. Discard PPE and clean hands with alcohol gel or hand wash.