Title	**Community Acquired Pneumonia**
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Equality & Diversity Impact Assessed	**-**

This guideline applies to community-acquired pneumonia only.
Hospital acquired infections have a different history and aetiology therefore should be managed accordingly.
This document has been adapted from the BTS community acquired pneumonia guideline with local antibiotic guideline advice.

Pneumonia Definition

Symptoms and signs consistent with an acute lower respiratory tract infection associated with new radiographic shadowing for which there is no other explanation.

This should be clearly differentiated from infective exacerbations of COPD where the CXR is often 'normal'.

History and Examination

Symptoms: Malaise, fever, rigors, myalgia
Dyspnoea, chest pain, cough, sputum, wheeze

Signs: Cyanosis
Focal chest signs
Herpes labialis
Tachypnoea
Tachycardia

Immediate Investigations:

ABG (record FiO_2) in patients with SaO_2 <92%
CXR
FBC/U&E/LFT
CRP

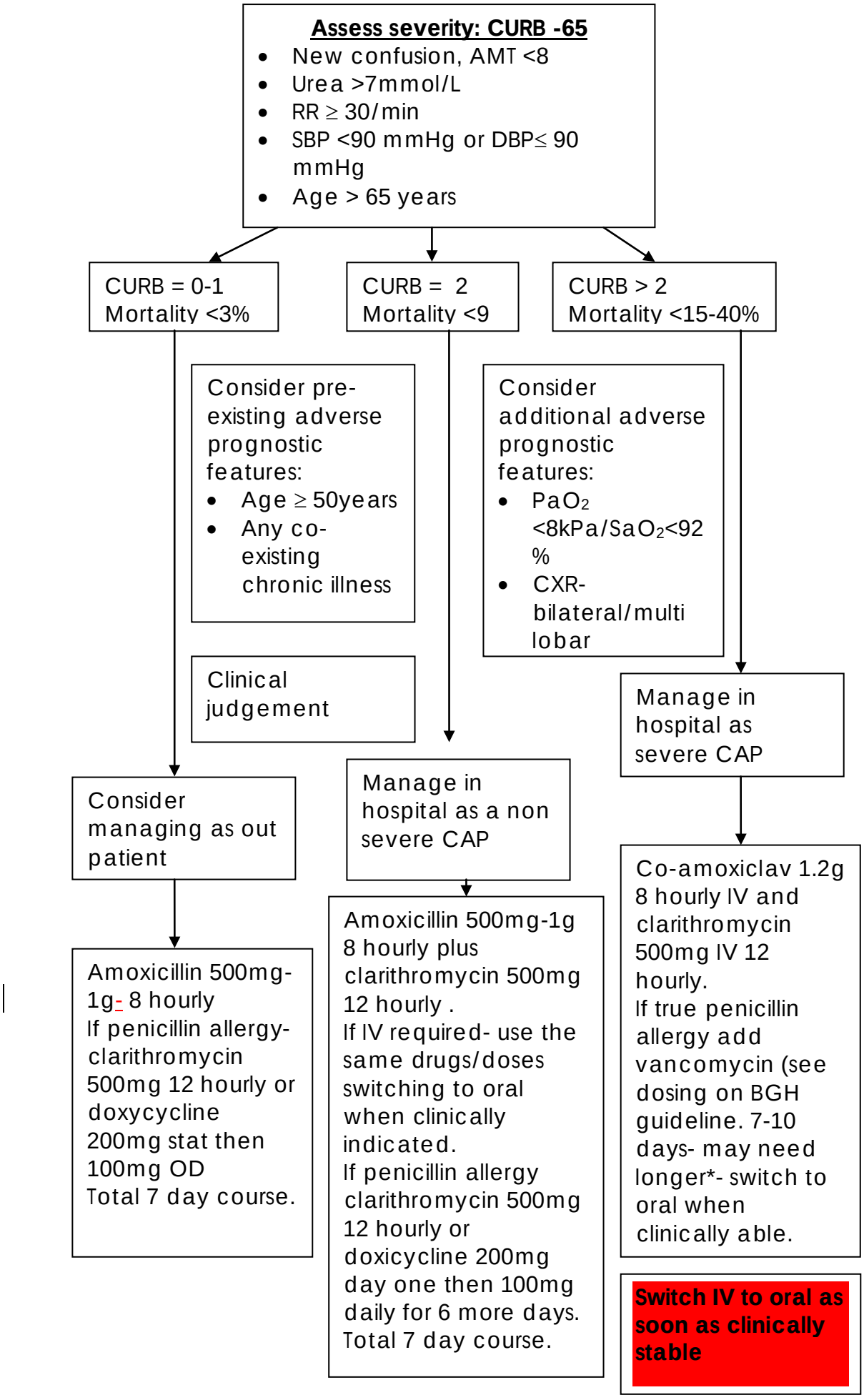
REMEMBER SEPSIS 6!

Micro: Blood cultures
Sputum MC&S
Pleural fluid if available for MC&S and inoculate into blood culture bottles

In selected patients: e.g. history of travel, admission to ITU
Legionella antigen in urine
Legionella antibody in blood
Throat swab for respiratory viruses and *Mycoplasma*

Likely organisms:

Streptococcus pneumoniae
Legionella pneumophilia
Mycoplasma pneumoniae
Chlamydia pneumoniae
Coxiella burnetti
Staphlococcus aureus
Haemophilus influenzae
Respiratory Syncitial Virus
Influenza
Et al


Assess severity: CURB -65
New confusion, AMT <8
Urea >7mmol/L
RR ≥ 30/min
SBP <90 mmHg or DBP≤ 90 mmHg
Age > 65 years
CURB = 0-1
Mortality <3%
CURB = 2
Mortality <9
CURB > 2
Mortality <15-40%
Consider pre-existing adverse prognostic features:
Age ≥ 50years
Any co-existing chronic illness
Consider additional adverse prognostic features:
PaO2 <8kPa/SaO2<92 %
CXR- bilateral/multi lobar
Clinical judgement
Consider managing as out patient
Manage in hospital as a non severe CAP
Manage in hospital as severe CAP
Amoxicillin 500mg-1g- 8 hourly
If penicillin allergy- clarithromycin 500mg 12 hourly or doxycycline 200mg stat then 100mg OD
Total 7 day course.
Amoxicillin 500mg-1g 8 hourly plus clarithromycin 500mg 12 hourly .
If IV required- use the same drugs/doses switching to oral when clinically indicated.
If penicillin allergy clarithromycin 500mg 12 hourly or doxicycline 200mg day one then 100mg daily for 6 more days.
Total 7 day course.
Co-amoxiclav 1.2g 8 hourly IV and clarithromycin 500mg IV 12 hourly.
If true penicillin allergy add vancomycin (see dosing on BGH guideline. 7-10 days- may need longer*- switch to oral when clinically able.
Switch IV to oral as soon as clinically stable

General management:

Oxygen : Prescribe oxygen where necessary aiming for a target saturation of 94-98% as per the emergency oxygen guideline.
Caution in COPD patients and target saturation may be set lower at 88-92%.

Intravenous fluids:
Assess patients for volume depletion and prescribe IV fluids where necessary.

Nutritional Support:
Consider in prolonged illness.

DVT prophylaxis:
Subcutaneous low molecular weight heparin should be used in all in patients unless contra-indicated.

Physiotherapy:
In patients should be assessed by physiotherapy to aid sputum clearance as appropriate.

<u>Parenteral v oral treatment</u>

Follow guideline as per flow chart, using IV medication where the CURB score is > 2, impaired consciousness, poor/loss of swallow reflex or functional/anatomical reasons for malabsorption.

Switch from IV antibiotics as soon a clinical improvement occurs.

Pointers to clinical improvement:

- Resolution of fever > 24hours
- Pulse rate <100bpm
- Resolution of tachpnoea
- Clinically hydrated
- Resolution of hypotension
- Absence of hypoxia
- Improving WCC
- Non-bacteraemic infection
- No microbiological evidence of leigionella, staphylococcal or gram negative enteric bacilli infection
- No concern regarding GI absorption

NB: Haematology/neutropaenic patients should follow the neutropaenic protocol regimen.

Duration of treatment:

Non severe CAP	7 days
Severe CAP	7-10 days
'Atypical pathogen'	14 days
Legionella infection	14-21 days
Staphlococcal infection	14-21 days
Gram negative enteric bacilli	14-21 days

**If in doubt discuss with Consultant/ microbiology.*

Management

CAP CURB 0-1:

- Oral antibiotics as per protocol.
- Usually can be managed in the community
- Follow-up CXR 4-6 weeks to ensure resolution.

CAP CURB 2+:

- Oral or IV antibiotics as per protocol.
- Ensure adequately resuscitated.
- Involve critical care outreach/ITU as appropriate.
- NIV is generally not suitable for patients with pneumonia as the consolidated lung is stiff and poorly compliant.

- Monitor for complications such as parapneumonic effusion or empyema.

- Follow up CXR in 4-6 weeks to ensure resolution.

Local Antimicrobial policy link:

intranet/new_intranet/microsites/index.asp?siteid=423&uid=8

BTS Guideline link:

www.brit-thoracic.org.uk/clinical-information/pneumonia/pneumonia-guidelines.aspx