



A summary of prescribing recommendations from NICE guidance

Pneumonia

NICE CG191; 2014

This guideline covers the diagnosis and management of community- and hospital-acquired pneumonia in adults.

Definition of terms

CAP	community-acquired pneumonia
CRP	C-reactive protein
LRTI	lower respiratory tract infection

Assessment

Presentation in primary care

- For people with symptoms of LRTI, consider a point of care CRP test if after clinical assessment a diagnosis of pneumonia has not been made and it is not clear whether antibiotics should be prescribed.
- Use the results of the CRP test to guide antibiotic prescribing as follows:
 - Do NOT** routinely offer antibiotic therapy if the CRP concentration is <20mg/litre,
 - consider a delayed antibiotic prescription (a prescription for use at a later date if symptoms worsen) if the CRP concentration is between 20mg/litre and 100mg/litre,
 - offer antibiotic therapy if the CRP concentration is >100mg/litre.

Community-acquired pneumonia

Severity assessment in primary care

- When a clinical diagnosis of CAP is made, determine whether patients are at low, intermediate or high risk of death using the **CRB65 score** (see box 1).
- Use clinical judgement in conjunction with the CRB65 score to inform decisions about whether patients need hospital assessment as follows:
 - score of 0: consider home-based care,
 - all other patients, particularly if score ≥ 2 : consider hospital assessment.

Severity assessment in hospital

- Ensure a process is in place to allow diagnosis (including X-rays) and treatment of CAP within 4 hours of presentation to hospital.
- When a diagnosis of CAP is made at presentation to hospital, determine whether patients are at low,

intermediate or high risk of death using the **CURB65 score** (see box 1).

- Use clinical judgement in conjunction with the CURB65 score to guide management, as follows:
 - score of 0 or 1: consider home-based care,
 - score ≥ 2 : consider hospital-based care,
 - score ≥ 3 : consider intensive care assessment.
- Stratify patients presenting with CAP into those with low-, moderate- or high-severity disease. The grade of severity will usually correspond to the risk of death.
- Consider measuring a baseline CRP concentration in patients with CAP on admission to hospital, and repeat the test if clinical progress is uncertain after 48 to 72 hours.

Microbiological tests

- Do NOT** routinely offer microbiological tests to patients with low-severity CAP.
- For patients with moderate- or high-severity CAP:
 - take blood and sputum cultures and consider pneumococcal and legionella urinary antigen tests.

Pharmacological treatment

Antibiotic therapy

- Offer antibiotic therapy as soon as possible after diagnosis, and certainly within 4 hours to all patients with CAP admitted to hospital.

Low-severity CAP

- Offer a 5-day course of a single antibiotic.
- Consider amoxicillin in preference to a macrolide or a tetracycline except for patients allergic to penicillin.
- Consider extending the course of antibiotic for >5 days as a possible management strategy for patients whose symptoms do not improve as expected after 3 days.
- Explain to patients treated in the community, and when appropriate their families or carers, they should seek further medical advice if symptoms do not begin to improve within 3 days of starting the antibiotic, or earlier if their symptoms are worsening.
- Do NOT** routinely offer:
 - a fluoroquinolone, e.g. levofloxacin,
 - dual antibiotic therapy.

Box 1. Mortality risk assessment

CRB65 score in primary care	CURB65 score in hospital
<p>CRB65 score is calculated by giving 1 point for each of the following prognostic features:</p> <ul style="list-style-type: none"> confusion (abbreviated Mental Test score ≤ 8, or new disorientation in person, place or time), raised respiratory rate (≥ 30 breaths per minute), low blood pressure (diastolic ≤ 60 mmHg, or systolic < 90 mmHg), age ≥ 65 years. <p>Patients are stratified for risk of death as follows:</p> <ul style="list-style-type: none"> 0: low risk (<1% mortality risk) 1 or 2: intermediate risk (1 to 10% mortality risk) 3 or 4: high risk (>10% mortality risk). 	<p>CURB65 score is calculated by giving 1 point for each of the following prognostic features:</p> <ul style="list-style-type: none"> confusion (abbreviated Mental Test score ≤ 8, or new disorientation in person, place or time), raised blood urea nitrogen (> 7 mmol/litre), raised respiratory rate (≥ 30 breaths per minute), low blood pressure (diastolic ≤ 60 mmHg, or systolic < 90 mmHg), age ≥ 65 years. <p>Patients are stratified for risk of death as follows:</p> <ul style="list-style-type: none"> 0 or 1: low risk (<3% mortality risk) 2: intermediate risk (3 to 15% mortality risk) 3 to 5: high risk (>15% mortality risk).

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Moderate- and high-severity CAP

- ◆ Consider a 7- to 10-day course of antibiotic therapy.
- ◆ Moderate-severity CAP: consider dual antibiotic therapy with amoxicillin and a macrolide e.g. erythromycin, clarithromycin or azithromycin.
- ◆ High-severity CAP: consider dual antibiotic therapy with a macrolide and beta-lactamase stable beta-lactam e.g. co-amoxiclav, cefotaxime, ceftazidime, ceftazidime/avibactam, ceftriaxone, cefuroxime and piperacillin with tazobactam.

Glucocorticosteroid treatment

- ◆ **Do NOT** routinely offer a glucocorticosteroid to patients unless they have other conditions for which it is indicated.

Discharge from hospital

- ◆ **Do NOT** routinely discharge patients with CAP if in the past 24 hours they have had ≥ 2 of the following:
 - > temperature $>37.5^{\circ}\text{C}$,
 - > respiratory rate ≥ 24 breaths per minute,
 - > heart rate >100 beats per minute,
 - > systolic blood pressure ≤ 90 mmHg
 - > oxygen saturation $<90\%$ on room air,
 - > abnormal mental status,
 - > inability to eat and drink without assistance.
- ◆ Consider delaying discharge for patients if their temperature is $>37.5^{\circ}\text{C}$.

See [NICE pathway: Pneumonia](#)

Counselling

- ◆ Explain to patients with CAP that after starting treatment their symptoms should steadily improve, although the rate of improvement will vary with the severity of the pneumonia, and most people can expect that by:
 - > 1 week: fever should have resolved,
 - > 4 weeks: chest pain and sputum production should have substantially reduced,
 - > 6 weeks: cough and breathlessness should have substantially reduced,
 - > 3 months: most symptoms should have resolved but fatigue may still be present,
 - > 6 months: most people will feel back to normal.
- ◆ Advise patients to consult their healthcare professional if their condition is deteriorating or not improving as expected.

Hospital-acquired pneumonia

- ◆ Offer antibiotic therapy as soon as possible after diagnosis and certainly within 4 hours.
- ◆ Choose antibiotic therapy in accordance with local hospital policy (which should take into account knowledge of local microbial pathogens) and clinical circumstances.
- ◆ Consider a 5-to10-day course of antibiotic therapy.

Recommendations – wording used such as ‘offer’ and ‘consider’ denote the [strength of the recommendation](#).

Drug recommendations – the guideline assumes that prescribers will use a drug’s [Summary of Product Characteristics \(SPC\)](#) to inform treatment decisions.

The table below lists all NICE guidance included in NICE Bites in 2014

NICE Guidance	NICE Guidance	NICE Bites Month/issue number
Atrial fibrillation	NICE CG180: 2014	August 2014/66
Bipolar disorder	NICE CG185: 2014	Nov/Dec 2014/70
Chronic kidney disease	NICE CG182: 2014	September 2014/67
Dyspepsia and gastro-oesophageal reflux disease	NICE CG184: 2014	October 2014/68
Lipid modification	NICE CG181: 2014	July 2014/65
Long-acting reversible contraception (update)	NICE CG30: 2014	October 2014/69
Managing medicines in care homes	NICE SC1: 2014	April/May 2014/63
MI: secondary prevention	NICE CG172; 2013	January 2014/60
Pressure ulcers: prevention and management	NICE CG179; 2014	June 2014/64
Prostate cancer	NICE CG175; 2014	February 2014/61
Psychosis and schizophrenia in adults	NICE CG178; 2014	March 2014/62