



- Offer an antibiotic(s) within 4 hours of establishing a diagnosis. When choosing an antibiotic, take account of prescribing considerations
- For adults, follow the recommendations on microbiological tests in the NICE guideline on pneumonia
- For children and young people in hospital, consider sending a respiratory sample (for example, a sputum sample, nasopharyngeal swab or tracheal aspirate) for microbiological testing

Give advice about:

- possible adverse effects of antibiotics
- seeking medical help if symptoms worsen rapidly or significantly, or do not improve within 3 days, or the person becomes systemically very unwell

- Reassess if symptoms do not improve as expected, or worsen rapidly or significantly
- If symptoms have not improved after antibiotics, send a respiratory sample (for example, a sputum sample, nasopharyngeal swab or tracheal aspirate) for microbiological testing, if not done already



Refer adults to hospital in line with the NICE guideline on pneumonia and if:

- symptoms or signs suggest a more serious illness such as sepsis, or
- symptoms are not improving as expected with antibiotics, or
- bacteria are resistant to oral antibiotics

For children and young people, consider referring to hospital or seeking specialist advice on further investigation and management



If a respiratory sample

microbiological testing:

review the choice

of antibiotic(s)

when results

available, and

change the

antibiotic(s)

according to results.

spectrum antibiotic

using a narrower

if appropriate

has been sent for

Prescribing considerations

When choosing an antibiotic(s), take account of:

- the severity assessment (adults), or the severity of symptoms or signs (children and young people); see below
- the risk of complications, for example, a comorbidity (such as severe lung disease or immunosuppression)
- local antimicrobial resistance and surveillance data (such as flu and mycoplasma infection rates)
- recent antibiotic use
- previous microbiological results, including colonisation with multi-drug resistant bacteria

Give oral antibiotics first line if possible Review intravenous antibiotics by 48 hours and consider stepping down to oral antibiotics if possible



Severity of pneumonia

In adults, severity is assessed by clinical judgement and mortality risk score (CRB65 or CURB65):

- low severity CRB65 score
 0 or CURB65 score 0 or 1
- moderate severity CRB65 score
 1 or 2 or CURB65 score 2
- high severity CRB65 score 3 or 4 or CURB65 score 3 to 5

In children and young people, severity is assessed by clinical judgement (no validated severity assessment tools available at the time of publication)

DRAFT February 2019

Pneumonia (community-acquired): antimicrobial prescribing



Choice of antibiotic: adults aged 18 years and over

Antibiotic ¹	Dosage and course length ²
First choice antibiotic if low severity (based on clinical judgement and CRB65 score 0 or CURB65 score 0 or 1)³	
Amoxicillin	500 mg three times a day orally or IV⁴ for 5 days in total⁵
Alternative antibiotics if low severity, for penicillin allergy or if amoxicillin unsuitable (for example, atypical pneumonia suspected) ³	
Clarithromycin	500 mg twice a day orally or IV⁴ for 5 days in total⁵
Erythromycin (in pregnancy)	500 mg four times a day orally for 5 days⁵
Doxycycline	200 mg on first day, then 100 mg once a day orally for 5 days⁵
First choice antibiotics if moderate severity (based on clinical judgement and CRB65 score 1 or 2 or CURB65 score 2); guided by microbiological results when available ³	
Amoxicillin with (if atypical pneumonia suspected):	500 mg three times a day orally or IV⁴ (higher doses can be used – see BNF) for 5 days in total⁵
Clarithromycin ⁶ or	500 mg twice a day orally or IV⁴ for 5 days in total⁵
Erythromycin ⁶ (in pregnancy)	500 mg four times a day orally for 5 days⁵
Alternative antibiotics if moderate severity, for penicillin allergy; guided by microbiological results when available ³	
Clarithromycin	500 mg twice a day orally or IV⁴ for 5 days in total⁵
Azithromycin	500 mg once a day orally for 3 days⁵
First choice antibiotics if high severity (based on clinical judgement and CRB65 score 3 or 4 or CURB65 score 3 to 5); guided by microbiological results when available ³	
Co amoxiclav with:	500/125 mg three times a day orally or 1.2 g three times a day IV⁴ for 5 days in total⁵
Clarithromycin or	500 mg twice a day orally or IV⁴ for 5 days in total⁵
Erythromycin (in pregnancy)⁵	500 mg four times a day orally for 5 days⁵
Alternative antibiotics if high severity, for penicillin allergy; guided by microbiological results when available ³	
Levofloxacin	500 mg twice a day orally or IV⁴ for 5 days in total⁵

¹ See BNF and MHRA advice for appropriate use and dosing in specific populations, for example, hepatic impairment, renal impairment, pregnancy and breast-feeding, and administering intravenous antibiotics.

When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

²Oral doses are for immediate-release medicines.

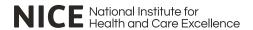
³Give oral antibiotics first-line if the person can take oral medicines, and the severity of their condition does not require intravenous antibiotics.

⁴Review intravenous antibiotics by 48 hours and consider stepping down to oral antibiotics if possible

⁵Stop antibiotic treatment after a total of 5 days (3 days with azithromycin) unless the person is not clinically stable (based on clinical judgement, taking account of fever in last 48 hours, BP, heart rate, respiratory rate and oxygen saturations).

⁶Consider adding a macrolide to amoxicillin if atypical pneumonia suspected. Review when microbiological results available and stop the macrolide if atypical bacteria are not isolated. Abbreviations: BP, blood pressure; IV, intravenous; C(U)RB65, confusion, (urea >7 mmol/l), respiratory rate ≥ 30/min, low systolic [<90 mm Hg] or diastolic [≤60 mm Hg] BP, age >65

Pneumonia (community-acquired): antimicrobial prescribing



Choice of antibiotic: children and young people under 18 years

Antibiotic ¹	Dosage and course length ²	
Children under 3 months - Refer to paediatric specialist and treat with intravenous antibiotics in line with the NICE guideline on fever in under 5s		
Children aged 3 months and over - First choice antibiotic if non-severe symptoms or signs (based on clinical judgement) ³		
Amoxicillin	Oral doses: 3 to 11 months, 125 mg three times a day for 5 days ⁴ 1 to 4 years, 250 mg three times a day for 5 days ⁴ 5 to 17 years, 500 mg three times a day for 5 days ⁴ IV dose ⁵ : 3 months to 17 years, 30 mg/kg three times a day (maximum 500 mg per dose)	
Children aged 3 months and over - Alternative antibiotics if non-severe symptoms or signs (based on clinical judgement), for penicillin allergy or if amoxicillin unsuitable (for example, atypical pneumonia suspected) ³		
Clarithromycin	Oral doses, 3 months to 11 years: Under 8 kg, 7.5 mg/kg twice a day for 5 days ⁴ 8 to 11 kg, 62.5 mg twice a day for 5 days ⁴ 12 to 19 kg, 125 mg twice a day for 5 days ⁴ 20 to 29 kg, 187.5 mg twice a day for 5 days ⁴ 30 to 40 kg, 250 mg twice a day for 5 days ⁴ IV dose ⁵ , 3 months to 11 years: 7.5 mg/kg twice a day (maximum 500 mg per dose) ⁴ 12 to 17 years: 250 mg to 500 mg twice a day orally or 500 mg twice a day IV ⁵ for 5 days in total ⁴	
Erythromycin (in pregnancy)	8 to 17 years, 250 mg to 500 mg orally four times a day for 5 days⁴	
Doxycycline	12 to 17 years, 200 mg on first day, then 100 mg once a day orally for 5 days⁴	
First choice antibiotic(s) if severe symptoms or signs (based on clinical judgement); guided by microbiological results when available ³		
Co amoxiclav	Oral doses: 3 to 11 months, 0.5 ml/kg of 125/31 suspension three times a day for 5 days ⁴ 1 to 5 years, 10 ml of 125/31 suspension three times a day or 0.5 ml/kg of 125/31 suspension three times a day for 5 days ⁴ 6 to 11 years, 10 ml of 250/62 suspension three times a day or 0.3 ml/kg of 250/62 suspension three times a day for 5 days ⁴ 12 to 17 years, 500/125 mg three times a day for 5 days ⁴ IV dose ⁵ : 3 months to 17 years, 30 mg/kg three times a day (maximum 1.2 g per dose three times a day) ⁴	
with (if atypical pneumonia suspected): Clarithromycin or	See oral and IV doses above; for 5 days in total⁵	
Erythromycin (in pregnancy)	See oral doses above; for 5 days in total⁵	

Alternative antibiotics if severe symptoms or signs (based on clinical judgement), for penicillin allergy; guided by microbiological results when available³ - consult local microbiologist

¹See BNF for children and MHRA advice for appropriate use and dosing in specific populations, for example, hepatic impairment, renal impairment, pregnancy and breast-feeding, and administering intravenous antibiotics.

²Oral doses are for immediate-release medicines. The age bands apply to children of average size and, in practice, the prescriber will use the age bands in conjunction with other factors such as the severity of the condition being treated and the child's size in relation to the average size of children of the same age.

³Give oral antibiotics first-line if the person can take oral medicines, and the severity of their condition does not require intravenous antibiotics.

⁴Stop antibiotic treatment after a total of 5 days unless the person is not clinically stable.

⁵Review intravenous antibiotics by 48 hours and consider stepping down to oral antibiotics if possible.