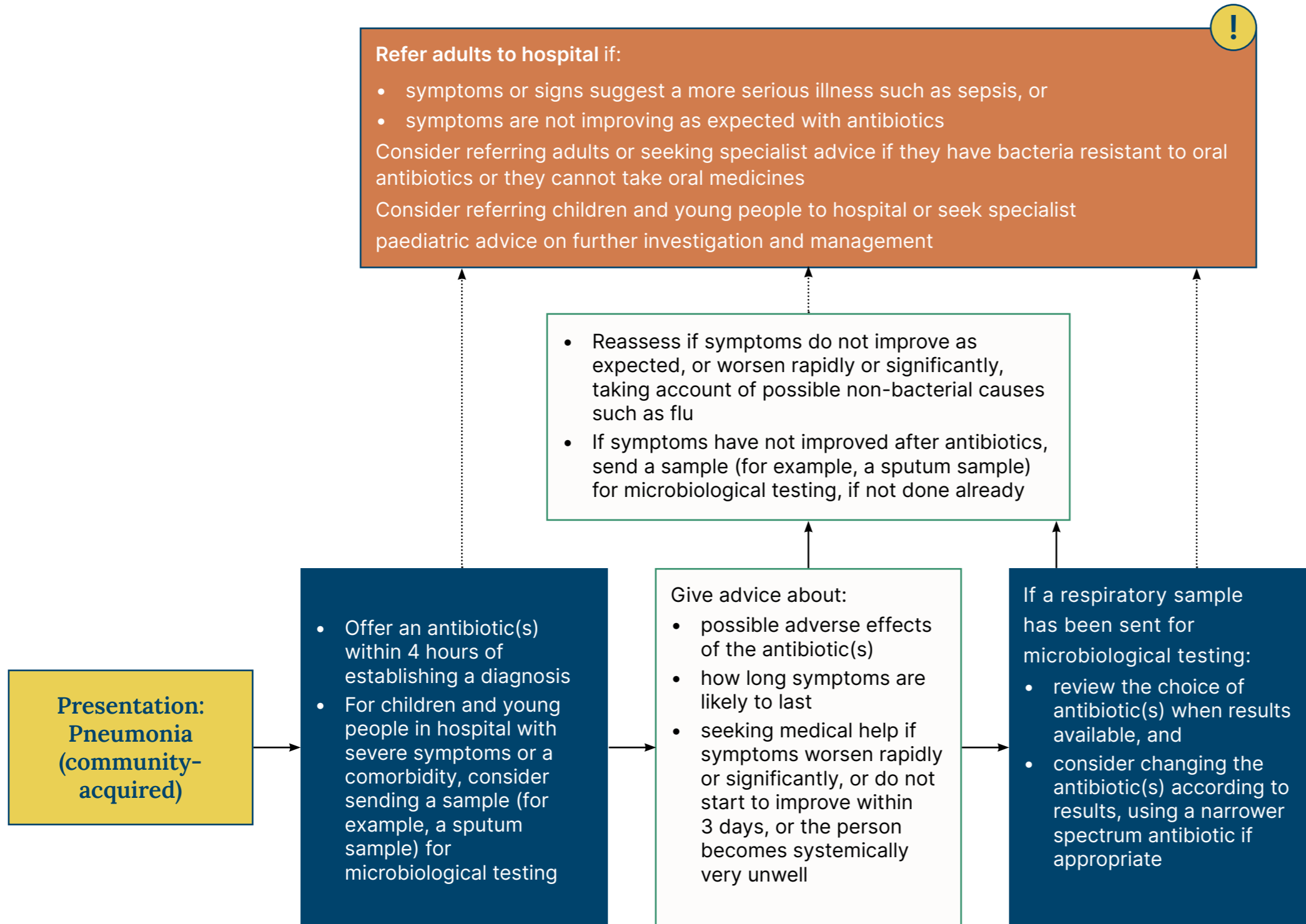


Pneumonia (community-acquired): antimicrobial prescribing



i Severity of pneumonia

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

- 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

Prescribing considerations

When choosing antibiotics, take account of:


- the severity assessment (adults), or the severity of symptoms or signs (children and young people)
- the risk of complications, for example, a relevant comorbidity (such as severe lung disease or immunosuppression)
- local antimicrobial resistance and surveillance data (such as flu and Mycoplasma pneumoniae 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 switching to oral antibiotics if possible

Pneumonia (community-acquired): antimicrobial prescribing

Choice of antibiotic: adults aged 18 years and over

Antibiotic	Dosage and course length
First-choice oral antibiotic if low severity (based on clinical judgement and guided by CRB65 score 0 or CURB65 score 0 or 1 when calculated)	
Amoxicillin	500 mg three times a day (higher doses can be used - see BNF) for 5 days
Alternative oral antibiotics if low severity, for penicillin allergy or if amoxicillin unsuitable (for example, atypical pathogens suspected)	
Doxycycline	200 mg on first day, then 100 mg once a day for 4 days (5-day course in total)
Clarithromycin	500 mg twice a day for 5 days
Erythromycin (in pregnancy)	500 mg four times a day for 5 days
First-choice oral antibiotics if moderate severity (based on clinical judgement and guided by CRB65 score 1 or 2, or CURB65 score 2 when calculated); guided by microbiological results when available	
Amoxicillin	500 mg three times a day (higher doses can be used – see BNF) for 5 days, PLUS ONE of the following 2 options if atypical pathogens suspected
clarithromycin	500 mg twice a day for 5 days OR
erythromycin (in pregnancy)	500 mg four times a day for 5 days
Alternative oral antibiotics if moderate severity, for penicillin allergy; guided by microbiological results when available	
Doxycycline	200 mg on first day, then 100 mg once a day for 4 days (5-day course in total)
Clarithromycin	500 mg twice a day for 5 days
First-choice antibiotics if high severity (based on clinical judgement and guided by CRB65 score 3 or 4, or CURB65 score 3 to 5 when calculated); guided by microbiological results when available	
Co-amoxiclav	500/125 mg three times a day orally or 1.2 g three times a day intravenously for 5 days, PLUS ONE of the following 2 options if atypical pathogens suspected
clarithromycin	500 mg twice a day orally or intravenously for 5 days OR
erythromycin (in pregnancy)	500 mg four times a day orally for 5 days
Alternative antibiotic if high severity, for penicillin allergy; guided by microbiological results when available (consult a local microbiologist if fluoroquinolone not appropriate)	
Levofloxacin 	500 mg twice a day orally or intravenously for 5 days

Notes

See over page.

Pneumonia (community-acquired): antimicrobial prescribing

Choice of antibiotic: adults aged 18 years and over, continued

Notes

For **all antibiotics**: see [BNF](#) for appropriate use and dosing in specific populations, for example hepatic impairment, renal impairment, pregnancy and breast-feeding, and administering intravenous (or, where appropriate, intramuscular) antibiotics. Give oral antibiotics first-line if the person can take oral medicines, and the severity of their condition does not require intravenous antibiotics. Stop antibiotic treatment after 5 days unless microbiological results suggest a longer course is needed or the person is not clinically stable (fever in the past 48 hours, or more than 1 sign of clinical instability [systolic BP less than 90 mm Hg, heart rate more than 100/min, respiratory rate more than 24/min, arterial oxygen saturation less than 90% or PaO₂ less than 60 mmHg in room air]).

For **intravenous antibiotics**: review by 48 hours and consider switching to oral antibiotics if possible.

For **erythromycin**: erythromycin is preferred if a macrolide is needed in pregnancy, for example, if there is true penicillin allergy and the benefits of antibiotic treatment outweigh the harms. See the [Medicines and Healthcare products Regulatory Agency \(MHRA\) Public Assessment Report on the safety of macrolide antibiotics in pregnancy](#).

For **amoxicillin with clarithromycin or erythromycin if atypical pathogens suspected**: mycoplasma pneumoniae infection occurs in outbreaks approximately every 4 years. If used as first-choice oral antibiotics if moderate severity, consider adding a macrolide to amoxicillin if atypical pathogens suspected. Review when microbiological results available.

⚠ Warning: for **levofloxacin**, see the [MHRA January 2024 advice on restrictions and precautions for using fluoroquinolone antibiotics](#) because of the risk of disabling and potentially long-lasting or irreversible side effects.

Pneumonia (community-acquired): antimicrobial prescribing

Choice of antibiotic: children and young people under 18 years

Antibiotic	Dosage and course length
Children under 1 month: refer to paediatric specialist	
First-choice oral antibiotic if non-severe symptoms or signs (based on clinical judgement)	
Amoxicillin	1 to 11 months, 125 mg three times a day for 5 days 1 to 4 years, 250 mg three times a day for 5 days 5 to 17 years, 500 mg three times a day for 5 days (higher doses can be used for all ages - see BNFC)
Alternative oral antibiotics if non-severe symptoms or signs (based on clinical judgement), for penicillin allergy or if amoxicillin unsuitable (for example, atypical pathogens suspected)	
Clarithromycin	1 month to 11 years: <ul style="list-style-type: none"> Under 8 kg, 7.5 mg/kg twice a day for 5 days 8 to 11 kg, 62.5 mg twice a day for 5 days 12 to 19 kg, 125 mg twice a day for 5 days 20 to 29 kg, 187.5 mg twice a day for 5 days 30 to 40 kg, 250 mg twice a day for 5 days 12 to 17 years, 250 mg to 500 mg twice a day for 5 days
Erythromycin (in pregnancy)	8 to 17 years, 250 mg to 500 mg four times a day for 5 days
Doxycycline	12 to 17 years, 200 mg on first day, then 100 mg once a day for 4 days (5-day course in total)

Choice of antibiotic: children and young people under 18 years, continued

Antibiotic	Dosage and course length
First-choice antibiotic(s) if severe symptoms or signs (based on clinical judgement; guided by microbiological results when available)	
Co-amoxiclav	Oral doses: <ul style="list-style-type: none"> 1 to 11 months, 0.5 ml/kg of 125/31 suspension three times a day for 5 days 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 (or 5 ml of 250/62 suspension) 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 12 to 17 years, 500/125 mg three times a day for 5 days Intravenous doses: <ul style="list-style-type: none"> 1 to 2 months, 30 mg/kg two times a day 3 months to 17 years, 30 mg/kg three times a day (maximum 1.2 g per dose three times a day) PLUS ONE of the following 2 options if atypical pathogens suspected
clarithromycin	Oral doses: see left column for clarithromycin, for 5 days Intravenous doses: 1 month to 11 years, 7.5 mg/kg twice a day (maximum 500 mg per dose); 12 to 17 years, 500 mg twice a day OR
erythromycin (in pregnancy)	8 to 17 years, 250 mg to 500 mg four times a day for 5 days

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

Notes

For **all antibiotics**: see [BNFC](#) for use and dosing in hepatic impairment, renal impairment, pregnancy and breast-feeding, and administering intravenous (or, where appropriate, intramuscular) antibiotics. 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. Give oral antibiotics first-line if the person can take oral medicines, and the severity of their condition does not require intravenous antibiotics. Stop antibiotic treatment after 5 days unless microbiological results suggest a longer course length is needed or the person is not clinically stable.

For **antibiotics if atypical pathogens suspected**: Mycoplasma pneumoniae infection occurs in outbreaks approximately every 4 years and is more common in school-aged children.

For **intravenous antibiotics**: review by 48 hours and consider switching to oral antibiotics if possible.

For **erythromycin**: erythromycin is preferred if a macrolide is needed in pregnancy, for example, if there is true penicillin allergy and the benefits of antibiotic treatment outweigh the harms. See the [Medicines and Healthcare products Regulatory Agency \(MHRA\) Public Assessment Report on the safety of macrolide antibiotics in pregnancy](#).

For **doxycycline**: See [BNFC](#) for use of doxycycline in children under 12.