



## A summary of prescribing recommendations from NICE guidance

This edition includes two antimicrobial prescribing guidelines:

1. Community-acquired pneumonia and 2. Hospital-acquired pneumonia

## 1. Community acquired pneumonia: antimicrobial prescribing

### NICE NG138: 2019

This guideline sets out an antimicrobial prescribing strategy for adults, young people, children and babies aged 72 hours and over with a confirmed diagnosis of community-acquired pneumonia. It aims to optimise antibiotic use and reduce antibiotic resistance.

#### Antibiotic Treatment

- ◆ Offer an antibiotic – see **Box 1**
- ◆ When choosing an antibiotic take account of:
  - the severity assessment for adults, as set out in the [NICE guideline on pneumonia in adults](#).
  - the severity of symptoms or signs for children and young people, based on clinical judgement,
  - the risk of developing complications,
  - local antimicrobial resistance and surveillance data,
  - recent antibiotic use,
  - recent microbiological results.
- ◆ Start antibiotic treatment as soon as possible after establishing a diagnosis of community-acquired pneumonia, and certainly within four hours (within one hour if the person has suspected sepsis and meets any of the high risk criteria for this – see the [NICE guideline on sepsis](#)).
- ◆ For adults with community-acquired pneumonia, follow the recommendations on microbiological tests in the [NICE guideline on pneumonia in adults](#).
- ◆ For children and young people in hospital with community-acquired pneumonia, and severe symptoms or signs, or a comorbidity, consider sending a sample (for example, a sputum sample) for microbiological testing.

#### Advice

- ◆ Give advice to adults, young people and children with community-acquired pneumonia about:
  - possible adverse effects of the antibiotic(s),
  - how long symptoms are likely to last (see also the [NICE guideline on pneumonia in adults](#)),
  - seeking medical help (if the person is receiving treatment in the community) if:
    - ❖ symptoms worsen rapidly or significantly, **OR**
    - ❖ symptoms do not start to improve within 3 days, **OR**
    - ❖ the person becomes systemically very unwell.

**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.

Please go to [www.nice.org.uk](http://www.nice.org.uk) to check for any recent updates to this guidance.

#### Box 1

##### Choice of antibiotic for treatment of community-acquired pneumonia

- ◆ Take account of local antimicrobial resistance data and follow the tables in the NICE three-page [visual summary](#):
  - Table 1 for adults ≥18 years,
  - Table 2 for children and young people from 1 month to 18 years.
- ◆ Give oral antibiotics first line if the person can take oral medicines, and the severity of their condition does not require intravenous antibiotics.
- ◆ Review intravenous antibiotics by 48 hours and consider stepping down to oral antibiotics where possible.
- ◆ Refer children under 1 month to a paediatric specialist.

#### Reassessment

- ◆ Reassess adults, young people and children with community-acquired pneumonia if symptoms or signs do not improve as expected or worsen rapidly or significantly.
- ◆ When reassessing adults, young people and children with community-acquired pneumonia, be aware of possible non-bacterial causes, such as flu.
- ◆ If a sample has been sent for microbiological testing:
  - review the choice of antibiotic(s) when results are available, **AND**
  - consider changing the antibiotic(s) according to results, using a narrower-spectrum antibiotic, if appropriate.
- ◆ Send a sample (for example, a sputum sample) for microbiological testing if symptoms or signs have not improved following antibiotic treatment, and this has not been done already.

#### Referral and seeking specialist advice

- ◆ Refer adults with community-acquired pneumonia to hospital as set out in the [NICE guideline on pneumonia in adults](#), or if they have:
  - any symptoms or signs suggesting a more serious illness or condition (for example, cardiorespiratory failure or sepsis), **OR**
  - symptoms that are not improving as expected with antibiotics.
- ◆ Consider referring adults with community-acquired pneumonia to hospital, or seek specialist advice, if they:
  - have bacteria that are resistant to oral antibiotics, **OR**
  - cannot take oral medicines (exploring locally available options for giving intravenous antibiotics at home or in the community, rather than in hospital, if this is appropriate).
- ◆ Consider referring children and young people with community-acquired pneumonia to hospital, or see specialist paediatric advice on further investigation and management.

#### Further resource

[NICE \(NG15\) - Antimicrobial stewardship](#)

## 2. Hospital-acquired pneumonia: antimicrobial prescribing

**NICE NG139; 2019**

This guideline sets out an antimicrobial prescribing strategy for adults, young people, children and babies aged 72 hours and over with a confirmed diagnosis of hospital-acquired pneumonia. It does not cover ventilator-associated pneumonia. It aims to optimise antibiotic use and reduce antibiotic resistance.

### Antibiotic Treatment

- ◆ Offer an antibiotic – see **Box 2**
- ◆ For adults, young people and children with symptoms or signs of pneumonia starting within 48 hours of hospital admission, follow the [NICE antimicrobial guideline on community-acquired pneumonia](#).
- ◆ When choosing an antibiotic take account of:
  - the severity of symptoms or signs,
  - the number of days in hospital before onset of symptoms,
  - the risk of developing complications, for example, if the person has a relevant comorbidity such as severe lung disease or immunosuppression,
  - local hospital and ward-based antimicrobial resistance data,
  - recent antibiotic use,
  - recent microbiological results, including colonisation with multidrug-resistant bacteria,
  - recent contact with a health or social care setting before current admission,
  - the risk of adverse effects with broad-spectrum antibiotics, such as *Clostridium difficile* infection.
- ◆ Start antibiotic treatment as soon as possible after establishing a diagnosis of hospital-acquired pneumonia, and certainly within 4 hours (within 1 hour if the person has suspected sepsis and meets any of the high risk criteria for this – see the [NICE guideline on sepsis](#)).
- ◆ Send a sample (for example, sputum sample, nasopharyngeal swab or tracheal aspirate) for microbiological testing.

**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.

### Box 2

#### Choice of antibiotic for treatment of hospital-acquired pneumonia

- ◆ Take account of local antimicrobial resistance data and follow the tables in the NICE three-page [visual summary](#):
  - Table 1 for adults ≥18 years,
  - Table 2 for children and young people <18 years.
- ◆ Consider following the [NICE antimicrobial guideline on community-acquired pneumonia](#) for choice of antibiotic for adults, young people and children with symptoms or signs of pneumonia starting within days three to five of hospital admission who are not at higher risk of resistance.
- ◆ Give oral antibiotics first line if the person can take oral medicines, and the severity of their condition does not require intravenous antibiotics.
- ◆ Review intravenous antibiotics by 48 hours and consider stepping down to oral antibiotics where possible.

#### Reassessment and seeking specialist advice

- ◆ When microbiological results are available:
  - review the choice of antibiotic(s), **AND**
  - change the antibiotic(s) according to results, using a narrower-spectrum antibiotic, if appropriate.
- ◆ Reassess adults, young people and children with hospital-acquired pneumonia if symptoms do not improve as expected or worsen rapidly or significantly.
  - Seek specialist advice from a microbiologist for adults, young people and children with hospital-acquired pneumonia if they have:
    - symptoms that are not improving as expected with antibiotics, **OR**
    - multidrug-resistant bacteria.
- ◆ Follow the [NICE guideline on care of dying adults in the last days of life](#) when caring for adults with hospital-acquired pneumonia who are approaching their end of life.

Please go to [www.nice.org.uk](http://www.nice.org.uk) to check for any recent updates to this guidance.

### NICE Antimicrobial prescribing guidelines

NICE antimicrobial prescribing guidelines aim to provide evidence-based, clinical syndrome specific guidance and advice in order to help slow the development of antimicrobial resistances.

Existing Public Health England (PHE) guidance on management of management and treatment of common infections will be replaced over the next few years by new NICE /PHE antimicrobial prescribing guidelines.

For further information and topics available, go to:

[www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/antimicrobial-prescribing-guidelines](http://www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/antimicrobial-prescribing-guidelines)