

COMMUNITY ACQUIRED PNEUMONIA IN CHILDREN V1.0

Comments from the Expert Advisory Group

- Pneumonia in children age ≤ 2 years is usually caused by viruses and should not be routinely treated with antibiotics
- Wheeze is strongly correlated with viral pneumonia
- The absence of tachypnoea makes pneumonia very unlikely
- It is very difficult to distinguish between viral or bacterial pneumonia based on clinical signs and symptoms
- Bacterial pneumonia should be considered in children when there is:
 - Persistent or repetitive fever $>38.5^{\circ}\text{C}$ AND
 - Chest recession AND
 - Raised respiratory rate
- Risk factors for bacterial pneumonia are similar to the risk factors for sepsis. They include:
 - Immunodeficiency
 - Prematurity
 - Neuro-disability
 - Chronic respiratory disease i.e. cystic fibrosis
- Reassess if symptoms do not improve as expected or worsen rapidly
- Influenza antiviral therapy should be administered as soon as possible to children with moderate to severe pneumonia consistent with influenza virus infection during widespread local circulation of influenza.

General management for child in community setting:

The general management of a child who does not require hospital referral comprises advising parents and carers about:

- management of fever
 - use of antipyretics when child is off form with pyrexia (refer to [paracetamol](#) and [ibuprofen](#) weight based dosing tables)
 - avoidance of tepid sponging
- preventing dehydration by encouraging fluids
- identifying signs of deterioration
- identifying signs of other serious illness
- how to access further healthcare (providing a 'safety net'). The 'safety net' should be one or more of the following:
 - provide the parent or carer with verbal and/or written information on warning symptoms and how further healthcare can be accessed
 - arrange a follow-up appointment at a certain time and place
 - liaise with other healthcare professionals, including out-of-hours providers, to ensure the parent/carer has direct access to a further assessment for their child.

Over-the-counter remedies: No over-the-counter cough medicines have been found to be effective in pneumonia.

Indications for hospital referral:

Family unable to provide appropriate observation or supervision

Infants (up to 1 year old):

- O₂ saturation $<92\%$, or cyanosis
- Respiratory rate >70 breaths/min
- Difficulty breathing
- Intermittent apnoea or grunting
- Not feeding (taking $<2/3$ normal feeds)

Children (>1 year old):

- O₂ saturation $<92\%$, or cyanosis
- Respiratory rate >50 breaths/min
- Difficulty breathing
- Grunting
- Signs of dehydration

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Treatment

Community acquired pneumonia in children antibiotic treatment table			
Drug	Dose	Duration	Notes
1st choice options			
Amoxicillin	Refer to dosing table	5 days	Avoid in penicillin allergy
2nd choice options / penicillin allergy			
Doxycycline only if ≥8 years*	Refer to dosing table	5 days in total	*For children over 8yrs, doxycycline can be used if benefit outweighs risk
Clarithromycin**	Refer to dosing table	5 days	For pneumococcus, resistance to macrolides is becoming increasingly common, so reserve for bacterial pneumonia if documented penicillin allergy, or if treating suspected <i>Mycoplasma</i> or other "atypical" pathogen**

**Mycoplasma pneumonia infections occur in outbreaks approx. every four years and are more common in school aged children

Doxycycline sample calculation for children ≥8 year olds (information for dispensing pharmacist)

Child requiring treatment using Doxycycline 100 mg unlicensed dispersible tablets:

Child weight=30 kg (specify child weight on prescription)

Dose: 4.4 mg per kg

30 kg x 4.4 mg/kg = 132mg dose required i.e. 100 mg + 32 mg

How to disperse tablet to give a part dose of 32 mg:

Dissolve 1x 100 mg dispersible doxycycline tablet in 5mL of water

100 mg=5 mL so 32 mg=1.6 mL. (Draw up and give 1.6 mL using 5 mL syringe supplied by pharmacist to give 32 mg).

Therefore for a total dose of 132mg, give the appropriately dispersed 100 mg tablet plus 1.6 mL (32 mg) of the dispersed liquid prepared as above.

Discard remaining dose by returning to local pharmacy in child resistant closure container.

If required, to improve palatability, can add squash/fruit juice to water. Make dose fresh each time.

Patient Information

- [HSE > Symptoms, Condition and Treatment: Pneumonia](#)