

## Updated advice on antimicrobial management of *Clostridioides difficile* (C.diff) Infection (CDI) in children

**Action Required:** Antimicrobial Management Teams should review current CDI prescribing guidance

The National Institute for health and Care Excellence (NICE) guideline on [Clostridioides difficile infection: antimicrobial prescribing](#) was published in July 2021. Scottish Antimicrobial Prescribing Group (SAPG) and the Paediatric Stewardship Steering Group (PSSG) has reviewed the guidance and has made updated recommendations below. These antibiotic choice recommendations supersede those included in [Scottish guidance on Clostridioides difficile infection \(CDI\)](#) published by the Scottish Health Protection Network (SHPN). Only antibiotic prescribing advice has been updated and the remainder of the guideline remains relevant to clinical practice and will be updated within the full guideline review.

These recommendations for first and second line treatments of CDI in children differ from current guidance and clinical practice in Scotland and SAPG and PSSG recommends boards review their current recommendations and adapt guidance locally.

For drug doses please refer to the British National Formulary for Children ([BNFC](#)) or Summary of Product Characteristics ([SmPC](#))

### Changes in recommendation:

First line treatment	<b>First line treatment of CDI: vancomycin irrespective of severity*</b>
Second line treatment	<b>Definition: Patients who fail to improve after 7 days or worsen with oral vancomycin</b>  <b>Discuss with paediatric infection specialist. Treatment will depend on severity</b>  Either:  Fidaxomicin <b>or</b> High dose* oral vancomycin PLUS intravenous metronidazole (see notes below)
First and second line treatment ineffective OR life-threatening CDI	<b>Seek urgent specialist advice. Treatment may involve surgery. Antibiotic therapy offered may include:</b>  High dose* oral vancomycin PLUS intravenous metronidazole(see notes below)
Further CDI <b>within 12 weeks</b> of symptom resolution ( <i>relapse</i> )	<b>Treat with fidaxomicin</b>  <b>Exceptions:</b>  <b>1. Treatment failure identified as incomplete primary treatment course – treat as per first line treatment</b>  <b>2. Children weighing &lt;12.5kg – oral vancomycin PLUS IV metronidazole (where fidaxomicin granules not available)</b>
Further CDI <b>after 12 weeks</b> of symptom resolution ( <i>recurrence</i> )	<b>Treat with oral vancomycin as per first line treatment</b>
Second recurrence of CDI	<b>Second recurrence of CDI: Discuss with paediatric infection specialist</b>



**Special considerations:**

**\*Vancomycin dosing:** The BNFC and SmPC recommend a single dosing schedule for children aged 2-11 years which is applied at all stages where vancomycin is recommended treatment. For children aged 12 years and above, 'high dose' oral vancomycin refers to recommendations in the BNFC and SmPC for life-threatening or refractory infection.

**Community setting:** Metronidazole may be prescribed in community if delays in supply of oral vancomycin would result in delayed initiation of treatment. Metronidazole should be substituted with oral vancomycin as soon as availability is resolved to complete a total of 10 days treatment. Where patients cannot swallow vancomycin capsules, fidaxomicin should be considered the first line option in community setting.

**Hospital setting:** Vancomycin injection can be used via the oral route in the hospital setting where capsules are not available or where the calculated dose cannot be administered using available capsule strengths. Guidance on administration is available in the SmPC.

**Fidaxomicin:**

Fidaxomicin tablets are licensed for children weighing at least 12.5kg. Fidaxomicin granules for oral suspension (40mg/ml) will be available in the UK from May 2022. For children weighing less than 12.5kg consider oral vancomycin PLUS IV metronidazole if fidaxomicin granules are unavailable or seek specialist advice.

**Treatment of suspected or confirmed *Clostridioides difficile* (C.diff) Infection (CDI) in children (<18 years)**  
 For all drug doses refer to the BNF for Children or Summary of Product Characteristics (SmPC)

First episode	Life-threatening CDI or treatment failure	Recurrent infection				
<p><b>1<sup>st</sup> Line Option</b>            Oral vancomycin FOUR times a day            Duration: 10 days</p> <p><b>2<sup>nd</sup> Line Option</b>            If vancomycin ineffective  <b>Discuss with paediatric infection specialist</b>            Oral fidaxomicin TWICE a day            Duration: 10 days  <b>OR</b>            High dose oral vancomycin FOUR times a day  <b>PLUS</b>            IV metronidazole THREE times a day            Duration: 10 days            (Review: IV metronidazole and consider discontinuation if patient improving)</p> <p><b>Advise on:</b></p> <ul style="list-style-type: none"> <li>• Drinking enough fluids to avoid dehydration.</li> <li>• Preventing the spread of infection.</li> <li>• Seeking medical help if symptoms worsen rapidly or significantly at any time</li> </ul>	<p><b>Seek urgent specialist advice, including surgical review</b></p> <p><b>Life-threatening CDI including where any of the following is attributable to CDI:</b>            Hypotension, admission to ICU, ileus or significant abdominal distension, change in mental status, WBC <math>\geq 35 \times 10^9/L</math> or <math>&lt; 2 \times 10^9/L</math>, serum lactate greater than 2.2 mmol/L, or end organ failure (including mechanical ventilation, renal failure).</p> <p><b>Specialists may offer:</b>            High dose oral vancomycin FOUR times a day  <b>PLUS</b>            IV metronidazole THREE times a day            Duration: 10 days            (Review: IV metronidazole and consider discontinuation if patient improving)</p>	<p><b>1<sup>st</sup> recurrence</b></p> <table border="1"> <tr> <td>Within <math>\leq 12</math> weeks (relapse)</td> <td>More than 12 weeks (recurrence)</td> </tr> <tr> <td>If initial treatment course was not completed - treat as 1<sup>st</sup> episode</td> <td>Oral vancomycin FOUR times a day Duration: 10 days</td> </tr> </table> <p>Oral fidaxomicin TWICE a day Duration: 10 days</p> <p><b>2<sup>nd</sup> recurrence</b></p> <p>Discuss with paediatric infection specialist</p>	Within $\leq 12$ weeks (relapse)	More than 12 weeks (recurrence)	If initial treatment course was not completed - treat as 1 <sup>st</sup> episode	Oral vancomycin FOUR times a day Duration: 10 days
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For more details on evidence supporting the guideline please refer to the [NICE guidance](#).