Gastrointestinal tract infections

Prescribing information: these guidelines do not include all the prescribing information for all the drugs. Please refer to the BNF or consult a pharmacist for appropriate use in specific populations, for example, hepatic impairment, renal impairment, pregnancy and breastfeeding.

Self-care: treatments marked as [OTC] are available to buy from pharmacies. Patients can be advised to purchase them as self-care where appropriate.

Guidelines about COVID-19: use COVID-specific guidance issued by NICE during the COVID pandemic.

Candidiasis, oral

Oral candidiasis is rare in immunocompetent adults. Consider undiagnosed risk factors, including HIV. Consider offering testing for HIV in unexplained or severe or recurrent cases.

Topical azoles are more effective than topical nystatin. Topical treatments should not be swallowed immediately but kept in the mouth as long as possible.

Check carefully for drug interactions with both miconazole oral gel and fluconazole.

Laboratory testing: mouth swabs only indicated in severe or recurrent infection.

Last updated: Dec 2019

First choice: miconazole 20 mg/g oral gel 2.5ml QDS for 7 days. Continue for 7 days after symptoms have cleared.

If not tolerated: nystatin 100,000 units/ml suspension 1 ml QDS (half in each side) for 7 days. Continue for 2 days after symptoms have cleared.

Severe or extensive candidiasis: fluconazole capsules 50 mg OD for 7 days. For persistent infection continue for a further 7 days.

HIV, immunocompromised or unusually difficult infection: fluconazole capsules 100 mg OD for 7 days. For persistent infection continue for a further 7 days.

Cholecystitis, acute

Caution: hospital admission is usually recommended as serious complications can occur.

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Provide symptomatic relief prior to admission. [4]

Only if treatment in the community is appropriate

First choice: co-amoxiclav 500/125 mg TDS for 7 days.

Penicillin allergy: ciprofloxacin 500 mg BD for 7 days **and** metronidazole 400 mg TDS for 7 days.

Diverticulitis, exacerbations

Treatment of uncomplicated diverticulitis includes a low residue diet and bowel rest. [2] Antibacterial drugs are recommended only when the patient presents with signs of infection or is immunocompromised; there is no evidence to support routine administration. [2]

Consider admission for severe cases. [4] Review within 48 hours or sooner if symptoms deteriorate. Arrange admission if symptoms persist or deteriorate. [4]

Laboratory testing: stool specimen only if infectious complication suspected to exclude bacterial gastroenteritis.

NICE diverticular disease 2-page visual summary

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Suspected infection or immunocompromised: co-amoxiclav 500/125 mg TDS for 5 days. [12]

Non-severe penicillin allergy: cefalexin 500 mg TDS for 5 days **and** metronidazole 400 mg TDS for 5 days. [12]

Severe penicillin allergy: ciprofloxacin 500 mg BD for 5 days **and** metronidazole 400 mg TDS for 5 days.

Helicobacter pylori

Always test for *H. pylori* using stool antigen testing before giving antibiotics. [1] Treat all positives if known duodenal ulcer, gastric ulcer, or low grade MALToma. [1,2]

Do not offer eradication for gastro-oesophageal reflux disease. [1,2]

Do not use clarithromycin, metronidazole or a fluoroquinolone if used in the past year for any infection. [1,2,4]

Retest for H. pylori using a breath or stool test post duodenal ulcer, post gastric ulcer, or relapse after second line therapy. Consider referral for endoscopy and culture. [1,2]

Laboratory testing: stool antigen testing.

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Always use a PPI. [1,2] Always treat for 7 days or MALToma for 14 days. [1,2,4]

First line: PPI BD **and**
amoxicillin 1000 mg BD **and**
either clarithromycin 500 mg BD or metronidazole 400 mg BD.

Penicillin allergy: PPI BD **and**
clarithromycin 500 mg BD **and**
metronidazole 400 mg BD.

Penicillin allergy and previous clarithromycin: PPI BD **and**
bismuth subsalicylate 525 mg QDS (use Pepto-Bismol chewable tablets 2 QDS) **and**
metronidazole 400 mg BD **and**
tetracycline 500 mg QDS.

Second line: PPI BD **and**
amoxicillin 1000 mg BD **and**
either clarithromycin 500 mg BD or metronidazole 400 mg BD (whichever was not used first line).

Previous clarithromycin and metronidazole: PPI BD **and**
amoxicillin 1000 mg BD **and**
tetracycline 500 mg QDS (or, if tetracycline cannot be used, levofloxacin 250 mg BD).

Penicillin allergy and no previous fluoroquinolone: PPI BD **and**
metronidazole 400 mg BD **and**
levofloxacin 250 mg BD.

Penicillin allergy and previous fluoroquinolone: PPI BD **and**
bismuth subsalicylate 525 mg QDS (use Pepto-Bismol chewable tablets 2 QDS) **and**
metronidazole 400 mg BD **and**
tetracycline 500 mg QDS.

Infectious diarrhoea

Campylobacter

Notifiable to Public Health England. [4] Antibiotic therapy is not usually indicated unless patient is systemically unwell. [1]

Consider antibiotics in patients with:

- Severe symptoms (high fever, bloody diarrhoea, > 8 stools/day).
- Immunocompromise.
- Worsening symptoms.
- Symptoms lasting longer than 7 days.

If the symptoms are severe or prolonged, take advice from the consultant gastroenterologist or consultant microbiologist. [3]

Last updated: Dec 2019

Encourage fluid intake. Consider oral rehydration salt solution for adults at increased risk of a poor outcome. [8]

[**If antibiotic treatment is considered appropriate**: clarithromycin 250-500 mg BD for 7 days]

For suspected or confirmed *C. difficile* infection, see Public Health England's guidance on diagnosis and reporting.

- Assess severity and for relapse of infection (previous episode within 12 weeks) or recurrence (previous episode more than 12 weeks).
- If *C. difficile* is suspected, a stool sample should be requested (NICE CKS Antibiotic Associated Diarrhoea), however *C. difficile* treatment should be started immediately and not delayed whilst awaiting stool sample.
- Review and stop any existing antibiotics unless essential. If still essential, consider changing to one with a lower risk of *C. difficile* infection.
- Review the need to continue proton pump inhibitors, other medicines with gastrointestinal activity or adverse effects (such as laxatives), medicines that may cause problems if people are dehydrated (such as NSAIDs). Do not offer antimotility medicines such as loperamide.

Refer to hospital if severely unwell or the person has life-threatening infection or if they could be at high risk of complications due to age, frailty or co-morbidities.

Definition of severe disease: temperature > 38.5 °C, white cell count > 15 x 10^9 /L, rising creatinine, or signs and symptoms of severe colitis.
Life-threatening infection: symptoms and signs include hypotension, partial or complete ileus, toxic megacolon or CT evidence of severe disease

If antibiotics have been given for suspected infection and stool sample tests do not confirm *C. difficile* infection, consider stopping these antibiotics.

First episode of mild, moderate or severe:

First line: oral vancomycin 125 mg QDS for 10 days.

Second line (if vancomycin ineffective): fidaxomicin 200mg BD for 10 days

If first and second line antibiotics are ineffective, seek specialist advice.

Use clinical judgement to determine whether antibiotic treatment is ineffective. This may not be possible until day 7 as diarrhoea may take 1 to 2 weeks to resolve.

For further episode within 12 weeks of symptom resolution (relapse): fidaxomicin 200mg BD for 10 days

For further episode more than 12 weeks after symptom resolution (recurrence): vancomycin 125mg QDS for 10 days if less severe, first recurrent episode or a long time between episodes or;

fidaxomicin 200mg BD for 10 days if the recurrence is more severe, more recent or multiple recurrent episodes.

Contact microbiology for advice on any further recurrent episodes.

For adults, offer an oral antibiotic to treat suspected or confirmed *C. difficile* infection. In children under 18, treatment should only be started by, or with advice from a microbiologist, paediatric infectious diseases specialist or paediatric gastroenterologist.

Advise patients with suspected or confirmed infection about:
- drinking enough fluids to avoid dehydration
- preventing the spread of infection
- to seek medical advice if symptoms worsen rapidly

Reassess patients if symptoms have not improved or worsen rapidly or significantly at any time.

Fidaxomicin is high cost and may not be routinely stocked in Community Pharmacies, therefore local commissioning arrangements may need to be considered.

Refer to NICE guideline NG199 and the NICE Visual Summary for further information

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Diarrhoea or gastroenteritis

Food poisoning is notifiable to Public Health England. [4] Usually viral and self-limiting. [4] Antibiotics only tend to prolong the carrier state, do not shorten the duration of illness and may be contraindicated.

Laboratory testing, send a stool specimen if:

- Patient is systemically unwell.
- There is blood or pus in the stool. **Sample essential**.
- Patient is immunocompromised.
- History of recent hospitalization or antibiotic treatment or both.
- Recent foreign travel to anywhere other than Western Europe, North America, Australia, or New Zealand.
- Persistent diarrhoea and giardiasis are suspected.
- There is uncertainty about the diagnosis of gastroenteritis.
- Advised by Public Health England.

Last updated: Dec 2019

Encourage fluid intake. Consider oral rehydration salt solution for those at increased risk of a poor outcome. [2,8]

Antimotility agents (e.g. loperamide) should only be considered for short term management of symptoms (1-2 days) in the absence of fever or bloody diarrhoea. [4]

Review and stop any prokinetic treatment. [4]

Giardiasis

Consider 'blind' treatment of family contacts only if they are symptomatic. [4]

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Encourage fluid intake. Consider oral rehydration salt solution for adults at increased risk of a poor outcome. [8]

Suspected or confirmed giardia: metronidazole 2 g OD for 3 days or 400 mg TDS for 5 days. [1]

Salmonella

Notifiable to Public Health England. [4] For most cases antibiotic treatment is not indicated. [2,4]

If systemically unwell, immunocompromised, or prosthetic vascular grafts seek microbiology advice. [2,4] If they are a food handler seek Public Health England advice. [2]

Laboratory testing: stool specimen. Please indicate if patient has had recent travel.

Last updated: Dec 2019

Encourage fluid intake. Consider oral rehydration salt solution for adults at increased risk of a poor outcome. [8]

Threadworm

Washing hands and scrubbing nails before eating and after visiting the toilet are essential. A bath in the morning removes ova laid overnight.

Treat all household contacts at the same time and advise hygiene measures for two weeks:

- hand hygiene; pants at night; morning shower, including perianal area and
- wash sleepwear, bed linen, and dust, vacuum on day one. [1,2,4]

Laboratory diagnosis: laboratory confirmation not usually indicated. Discuss with local microbiology laboratory if required.

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First line: mebendazole 100 mg STAT 1 dose. Repeat in 2 weeks if persistent. [1,2,4]

In pregnancy (at least in the first trimester): only hygiene measures for 6 weeks. [1]

Traveller's diarrhoea

Standby treatment for traveller's diarrhoea must not be prescribed at NHS expense. [2,4] Consider standby antimicrobial only for patients at high risk of severe illness or visiting high-risk areas. [1,2]

Prophylaxis is rarely, if ever, indicated. [1]

Laboratory testing: stool specimen.

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Standby (private prescription only): azithromycin 500 mg OD for 3 days. [1]

Prophylaxis or treatment: bismuth subsalicylate 525 mg QDS for 2 days (use Pepto Bismol chewable tablets 2 QDS).