Clostridium difficile infection (CDI) in adults

Healthcare workers should use the "**SIGHT"** mnemonic when managing suspected potentially infectious diarrhoea. Use the **Bristol Stool Chart** to monitor frequency and severity of diarrhoea.

S	**Suspect** that the diarrhoea may have an infective cause where there is no clear alternative cause for diarrhoea (drugs eg laxatives, underlying bowel disease) – if you suspect CDI on clinical grounds, start treatment for CDI empirically pending test results and then review that treatment when the results become available
I	**Isolate** the patient immediately - consult the bed managers or infection control team (ICT), if necessary, particularly if no isolation facilities available
G	**Gloves** and aprons must be used for all contacts with the patient and their environment (in the patient "zone")
H	**Hand washing** with soap and water should be carried out before and after each contact with the patient and the patient's environment
T	**Test** the stool for evidence of toxigenic Clostridium difficile, by sending a specimen immediately

The Bristol Stool Form Scale (Bristol Stool Chart)

Type 1		Separate hard lumps, like nuts (hard to pass)
Type 2		Sausage-shaped but lumpy
Type 3		Like a sausage but with cracks on its surface
Type 4		Like a sausage or snake, smooth and soft
Type 5		Soft blobs with clear-cut edges (passed easily)
Type 6		Fluffy pieces, a mushy stool
Type 7		Watery, no solid pieces ENTIRELY LIQUID

Reproduced by kind permission of Dr K. W. Heaton, Reader in Medicine at the University of Bristol.

Table 1. Initial assessment and management
If CDI is suspected, send a stool (faeces) specimen to the microbiology lab and start antibiotic treatment immediately (see table 2). Review CDI therapy if initial test result is negative. If symptoms continue despite a negative result, and clinical suspicion of CDI remains, send a further stool specimen for testing after 5 days. Repeat CDI testing during therapy or as "test of cure" is not required
Assess clinical severity of CDI at diagnosis and then daily (use "stickers") **Mild CDI:** not associated with a raised WCC; typically associated with <3 stools of types 5–7 per day **Moderate CDI:** associated with a raised WCC <15 x 10^9/L; typically with 3–5 stools per day **Severe CDI** if any of the following: • White Blood Cell count >15x10^9/L • Acutely rising blood creatinine (e.g. >50% increase above baseline) • Temp >38.5°C • Evidence of severe colitis (abdominal signs, radiology) **Life-threatening CDI** includes hypotension, ileus, toxic megacolon or CT evidence of severe disease **Note: diarrhoea may be absent in life-threatening CDI due to ileus** **Request early gastroenterology and/or surgical and/or critical care review in severe / life-threatening CDI**
Fluid & electrolyte replacement and nutrition review as necessary
Isolate patient in a single room
Review current therapy, **stop antibiotics and any other drugs that might cause diarrhoea if possible**
Avoid anti-motility drugs (e.g. loperamide)
Stop PPIs/H_2 antagonists unless required acutely

Table 2. Specific antibiotic therapy for CDI

First episode of Mild/Moderate severity

METRONIDAZOLE 400mg po tds for 10-14 days
If Nil by mouth use: METRONIDAZOLE 500mg iv tds for 10-14 days

If increasing severity of CDI **OR** no response to therapy within 7 days, change to:

VANCOMYCIN 125mg po qds for 10-14 days
(Do not administer vancomycin by the IV route for *C. difficile.* IV vancomycin may be given via NG tube)
Note : Patients with mild disease may not require specific *C. difficile* antibiotic treatment

First episode of Severe disease

VANCOMYCIN 125mg po qds (or via NG tube qds) for 10-14 days
If evidence of severe CDI continues or worsens:

- **ADD in Metronidazole 500mg iv tds** + increase vancomycin dose to 250mg po/NG qds
- Discuss potential additional / alternative therapy with consultant medical microbiologist*****
- Obtain surgical / gastroenterology / critical care review as appropriate

*****options may include vancomycin po/NG up to 500mg qds, fidaxomicin[#] 200mg po bd, intracolonic vancomycin *(500 mg in 100–500 ml saline 4–12-hourly, given as retention enema: 18 gauge Foley catheter with 30 ml balloon inserted per rectum; vancomycin instilled; catheter clamped for 60 minutes; deflate and remove),* intravenous immunoglobulin 0.4g/kg as 1 dose (consider repeat)

Second episode of CDI

Assess severity as above, if assessed as severe CDI then manage as severe disease (see above)

Review medication; stop any predisposing antibiotics, PPIs/H2 antagonist if possible

In non-severe disease commence **VANCOMYCIN 125mg po qds for 10-14 days**

- If poor response discuss potential alternative therapy with consultant medical microbiologist

Subsequent episode of CDI i.e. ≥ third episode

Assess severity as above, if assessed as severe CDI then manage as severe disease (see above)

Review medication; stop any predisposing antibiotics, PPIs/H2 antagonist if possible.

In non-severe disease commence **VANCOMYCIN 125mg po qds (or via NG tube qds)** pending discussion with consultant medical microbiologist regarding potential additional / alternative therapy***.**

Obtain gastroenterology review

*****options may include a 6 week tapering po vancomycin regime *(125 mg qds for one week, 125 mg tds for one week, 125 mg bd for one week, 125 mg od for one week, 125 mg on alternate days for one week, 125 mg every third day for one week)* or fidaxomicin[#] 200mg po bd 10-14 days, intravenous immunoglobulin 0.4g/kg as 1 dose (consider repeat), donor stool transplant.

[#] **Fidaxomicin use is restricted and requires approval by consultant medical microbiologist**