



Community Infection Prevention and Control Policy for Care Home settings

C. difficile (Clostridioides difficile)

C. DIFFICILE

06

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C. DIFFICILE (CLOSTRIDIOIDES DIFFICILE)

1. Introduction

Clostridioides difficile (formerly known as *Clostridium difficile*) is a bacteria which produces spores. *Clostridioides difficile* (*C. difficile*) spores are a dormant form of the bacteria that are resistant to air, drying and heat. The spores can survive in the environment for months and even years and can be spread following contact then ingested (swallowed).

C. difficile is present harmlessly in the gut (bowel) of 3-5% of healthy adults as part of their normal gut flora. However, when antibiotics are given for an infection, they kill off some of the good bacteria in the gut, which leaves room for *C. difficile* to multiply rapidly, producing toxins causing diarrhoea. The presence or absence of these toxins is detected in the Laboratory as part of the *C. difficile* testing process.

In the majority of residents, the illness is mild and a full recovery is usual. Elderly people, often with underlying illnesses may, however, become seriously ill.

Recurrence of *C. difficile* occurs in up to 20% of cases after the first episode. This increases to 50-60% after a second episode.

C. difficile has been associated with outbreaks in health and social care settings. It is, therefore, imperative that good infection prevention and control measures are instigated so that transmission does not occur.

2. C. difficile conditions

There are two C. difficile conditions:

C. difficile colonisation

- When a stool sample is tested in a Laboratory and detects the *C. difficile* bacteria, but there are no toxins being produced, the person is said to be colonised.
- Although treatment is not usually required for colonisation it can be a long-term condition. Staff should be aware that these residents are at high risk of progressing from colonisation to infection.
- Symptoms, if present, are usually mild and antibiotic treatment is not normally required.

C. difficile infection (CDI)

- When a stool sample is tested in a Laboratory and detects both the *C. difficile* bacteria and toxins, the person is said to be infected.
- The GP or other healthcare professional will assess whether the resident requires treatment.

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3. Risk factors for C. difficile

The risk factors associated with acquiring *C. difficile* are:

- Age occurs more in those aged over 65 years
- Underlying disease or weakened immune system e.g. those with cancer, chronic disease, gastrointestinal (stomach, small and large bowel) conditions
- Antibiotic therapy those who are receiving or who have recently received antibiotic treatment (within 3 months). Having more than one type of antibiotic increases the risk
- **Recent hospital stay** those who are frequently in hospital or who have had a lengthy stay in hospital
- Bowel surgery those who have had bowel surgery
- Other medication those taking laxatives or anti-ulcer medications, including antacids and proton pump inhibitors (PPIs), e.g. omeprazole, which are used for treating reflux (heartburn and indigestion)
- Nasogastric tubes those undergoing treatments or feeding requiring nasogastric tubes
- **Previous history of** *C. difficile* **colonisation or infection** they are at greater risk of developing *C. difficile* infection (CDI)

Staff are not usually at risk of acquiring C. difficile from a resident.

4. Signs and symptoms

If a resident has diarrhoea (types 5-7 on the 'Bristol stool form scale', available to download at <u>www.infectionpreventioncontrol.co.uk</u>), that is not attributable to underlying causes, e.g. inflammatory colitis, overflow, or therapy, such as, laxatives, enteral feeding, then it is necessary to determine if this is due to C. difficile infection.

Symptoms include:

- Explosive, foul-smelling watery diarrhoea, which may contain blood and/or mucus
- Abdominal pain and fever due to the toxins causing fluid loss from the gut and cell damage
- Dehydration which can be severe due to fluid loss

The symptoms are usually caused by inflammation (swelling and irritation) of the lining of the bowel and can last from a few days to several weeks. Most people develop symptoms whilst taking antibiotics, however, symptoms can appear up to 10 weeks after finishing a course of antibiotics.

In the majority of residents, the illness is mild and a full recovery is usual. Older residents often with underlying illnesses and CDI may, however, become seriously ill. Occasionally, residents with CDI may develop a severe form of the infection called pseudomembranous

colitis which can cause significant damage to the large bowel resulting in perforation, peritonitis and death.

C. difficile relapse due to reinfection is common. If a relapse is suspected, medical attention should be sought.

5. Importance of hydration

Fluid loss due to diarrhoea can lead to dehydration. Residents with *C. difficile* should be encouraged to drink plenty of fluids, unless fluid restricted.

6. Diagnosis

It is difficult to diagnose *C. difficile* just by symptoms alone. Therefore, a diarrhoea sample should be sent to the microbiology laboratory and tested for the presence of *C. difficile*.

7. Routes of transmission

C. difficile produces invisible to the naked eye, hard to kill, microscopic spores, which are passed in the diarrhoea. The spores are resistant to air, drying and heat, and can survive in the environment for months and even years.

The main routes of transmission of C. difficile spores are:

- Contaminated hands of staff and residents
- Contact with contaminated surfaces or care equipment, e.g. commodes, toilet flush handles, toilet assistance rails

8. Preventing the spread of *C. difficile*

The main methods of preventing and reducing transmission of *C. difficile* are:

- Prudent antibiotic prescribing. Antibiotics should not be prescribed unless necessary
- Prompt isolation of residents with confirmed or suspected *C. difficile* colonisation or infection
- Promptly sending a stool sample for C. difficile testing
- Good hand hygiene practice. Refer to 'Hand hygiene' in Section 10
- Use of appropriate personal protective equipment (PPE), e.g. disposable apron and gloves. Refer 'PPE' in Section 10
- Reducing the number of spores in the environment by cleaning and then disinfecting with a sporicidal product. Refer to 'Cleaning and disinfection' in Section 10

The following mnemonic protocol (SIGHT) should be applied when managing suspected potentially infectious diarrhoea.

Table 1: SIGHT mnemonic (adapted from *Clostridium difficile* infection: How to deal with the problem)

S	Suspect that a case may be infective where there is no clear alternative cause for diarrhoea
I.	Isolate the resident in their own room
G	Gloves and aprons must be worn for all contact with the resident and their environment
н	Handwashing with liquid soap and warm running water before and after each contact with the resident and their environment
т	Test the stool for toxin by sending a specimen immediately

9. Management and treatment

The resident should be reviewed by their GP promptly:

- Antibiotics causing diarrhoea should be stopped, if possible, as should other drugs that might cause diarrhoea. If it is not appropriate to discontinue antibiotics, it may be possible to substitute agent(s) with a narrower spectrum agent
- Anti-motility agents, e.g. Imodium, Lomotil, which are given to stop diarrhoea, should not be prescribed in acute infection
- Consideration should be given to stopping/reviewing the need for PPIs in residents with or at high risk of CDI
- In mild cases of CDI, and those where the diarrhoea is settling, antibiotic treatment may not be indicated
- In cases of *C. difficile* colonisation, antibiotic treatment is not usually indicated
- Supportive care should be given to CDI cases, including attention to hydration, electrolyte balance and nutrition
- The course of treatment can be repeated if symptoms persist

The resident's bowel movements should be recorded on a 'Stool chart record' which is available to download at <u>/www.infectionpreventioncontrol.co.uk/resources/stool-chart-record/</u>.

The severity of illness should be assessed using the following table and documented daily in the resident's records.

Table 2: Severity of C. difficile infection

Sev	Severity of <i>C. difficile</i> infection	
1	Mild disease: typically <3 stools per day (type 5-7 on the Bristol stool form scale) and a normal white cell count (WCC)	
2	Moderate disease: typically 3-5 stools per day (type 5-7 on the Bristol stool form scale) and raised WCC (but $<15x10^{9}/L$)	
3	Severe disease: WCC >15x10 ⁹ /L, or a temperature of >38.5°C or acutely rising serum creatinine, e.g. >50% increase above baseline, or evidence of severe colitis (abdominal symptoms or radiological signs). The number of stools may be less reliable as an indicator of severity	
4	Life threatening disease: includes hypotension, partial or complete ileus or toxic megacolon	

Recurrence of diarrhoea following treatment

Recurrence of CDI occurs in up to 20% of cases after the first episode. A proportion of recurrences are reinfections (20-50%) as opposed to relapses due to the same strain. Relapses tend to occur in the 2 weeks after treatment stops. This increases to 50-60% after a second episode.

Studies have suggested that some of these relapses are in fact reinfection due to the person reinfecting themselves from spores in their environment, hence the need for thorough cleaning and disinfection of the environment, see Section 10. If a resident relapses, a second course of treatment is usually indicated. The resident's GP should be notified of any relapse.

10. Infection prevention and control measures

To help reduce the spread of *C. difficile*, 'Standard infection control precautions' (SICPs) should always be followed together with the following:

Isolation

- Early isolation/implementation of contact 'Transmission based precautions' (TBPs) for residents with diarrhoea or loose stools that is not attributable to non-infective underlying causes, helps to both control outbreaks and reduce endemic levels of *C. difficile*. An isolation risk assessment must take place and be documented in the resident's notes.
- Any resident with confirmed or suspected *C. difficile* colonisation or infection sharing a bedroom must be transferred to a single room, ideally with an en-suite facility, as soon as possible after diagnosis or onset of symptoms and no later than the end of the day of diagnosis/symptoms. The room they have moved from must be cleaned and disinfected thoroughly.
- If the room does not have its own toilet, then a designated commode must be provided and not be used for any other resident. A disposable cover or reusable lid should be used when transporting the pan for emptying/cleaning in the sluice room.

- The procedure for isolation should be clearly explained to residents and visitors.
- A notice should be placed on the door with advice to see the person in charge before entering. (This may be omitted if it can be assured that all relatives/visitors are made aware of the actions they need to take whilst visiting the resident and when leaving the room.)
- The door should be kept closed where possible at all times, except for entry and exit.
- Fans, including handheld ones should not be used as they can recirculate the spores in the environment.
- When a resident has been diarrhoea free for 48 hours and has passed a formed stool (type 1-4 on the Bristol stool form scale), or their bowel habit has returned to their normal type, they are no longer infectious and isolation precautions are no longer required and their room should be deep cleaned and disinfected (terminal decontamination). A negative stool sample is not required.
- Residents who develop diarrhoea following a period of being symptom free, may have been reinfected or relapsed. These residents must be isolated immediately and a stool sample sent for *C. difficile* testing if more than 28 days since the previous toxin positive result. If it is within 28 days, a repeat test is not required, but the resident must still be isolated and reviewed by the GP.

Refer to the 'Isolation Policy for Care Home settings' for further information.

Hand hygiene

- Staff should be 'Bare below the elbows' whilst on duty.
- Alcohol handrubs do not kill spores and, therefore, should not be used.
- Hands should be washed with liquid soap, warm running water and dried thoroughly with paper towels, before and after contact with the resident and their environment, including immediately prior to leaving and again after exiting the isolation room.
- Residents and their visitors should be supplied with information on hand hygiene. A 'Hand hygiene: Information leaflet for community service users and relatives' is available to download at <u>www.infectionpreventioncontrol.co.uk</u>.
- Ensure residents nails are short and clean.
- Residents should be encouraged to wash their hands with liquid soap and warm running water, particularly after using the toilet/commode and before eating/drinking. Bar soap should not be used as it can harbour *C. difficile* spores.
- Residents unable to access handwashing facilities should be provided with nonalcohol skin wipes, e.g. baby wipes, to clean their hands. Assistance should be given to those residents unable to perform hand hygiene themselves; staff should ensure all surfaces of the resident's hands are wiped sufficiently.
- Visitors should wash hands on entering, before leaving the isolation room and before leaving the establishment.

Refer to the 'Hand hygiene Policy for Care Home settings'.

PPE

• All staff (including housekeeping) should wear disposable apron and gloves for all

contact with the isolated resident and their immediate environment.

- Disposable apron and gloves are not required to be worn by visitors unless they are providing 'hands on care', but strict handwashing must still be performed.
- Gloves and apron should be changed between tasks, removed in the room, disposed of as infectious waste and hands washed with liquid soap, warm running water and dried thoroughly with paper towels.

Refer to the 'PPE Policy for Care Home settings'.

Cleaning and disinfection

C. difficile spores can survive in the environment for months or years if not adequately cleaned. Therefore, an enhanced cleaning schedule should be undertaken when a resident is suspected or confirmed to have *C. difficile*.

Cleaning with warm water and a general purpose neutral detergent/detergent wipes alone is **insufficient** to destroy *C. difficile* spores. Following cleaning, surfaces must be disinfected with a sporicidal product, e.g. 1,000 parts per million (ppm) chlorine-based disinfectant solution or equivalent product, as per manufacturer's instructions. Alternatively, a combined '2 in 1' detergent and chlorine-based disinfectant solution can be used. A fresh solution must be made up to the correct concentration every 24 hours and the solution container must be labelled with the date and time of mixing.

Surfaces contaminated with blood stained faeces should be disinfected then cleaned with a higher concentration of bleach, 10,000 ppm chlorine-based solution or equivalent product, as per manufacturer's instructions. Refer to the 'Safe management of blood and body fluid spillages Policy for Care Home settings'.

Note: Chlorine-based disinfectant solutions may damage soft furnishings, carpets and some equipment. A risk assessment of using such solutions on surfaces should be made and where deemed unsuitable to use, general purpose neutral detergent and warm water, steam cleaner or carpet cleaning machine, should be used.

- The room where the resident is isolated must be cleaned and disinfected at least on a daily basis.
- To facilitate cleaning during the isolation period, the resident's personal items should be kept to a minimum. All unnecessary items as well as unwrapped food and sweets should be removed from the isolation room.
- Antibacterial surface sprays, including Milton and Flash with bleach, are **not** effective against *C. difficile* spores.
- Any equipment required for resident management or care, should ideally be disposable or must be dedicated for that resident only. Reusable equipment must be cleaned and disinfected using a sporicidal product between use on the resident and again when the infectious period is over.
- Encourage residents to close the toilet seat lid before flushing the toilet, to reduce the possible spread of *C. difficile* spores.
- The isolated resident's commode (including underneath the seat and frame) and/or en-suite toilet (including assistance rails, raised toilet seat, flush handle/button, toilet),

should be cleaned then disinfected after each use for a bowel motion using a sporicidal product, e.g. 1,000 ppm chlorine-based disinfectant solution or equivalent product, as per manufacturer's instructions.

- Used commode pans should be washed in a washer disinfector. If a washer/ disinfector is not available, pans should be emptied in a slop hopper/toilet and washed in a designated sink or a bowl labelled for the cleaning of commode pans. After use, the sink/bowl should be filled with general purpose neutral detergent and warm water and the pan immersed, washed and dried with paper towels. It should then be wiped with a sporicidal disinfectant solution, and allowed to dry.
- When using mobility aids for the resident, e.g. hoist, frame, wheelchair, etc., these should be cleaned and disinfected daily and whenever visibly soiled.
- When the resident no longer requires isolation, the room should undergo a **deep clean** (terminal decontamination) with general purpose neutral detergent, then a sporicidal disinfectant or a combined '2 in 1' detergent and disinfectant solution. Soft furnishings, e.g. curtains, should be changed and curtain tracks disinfected. Where possible, surfaces and equipment should be steam cleaned. Refer to the 'Isolation Policy for Care Home settings' for more detailed information.
- As per the 'National colour coding scheme for cleaning materials and equipment in care homes', yellow colour coded cleaning equipment should be allocated for use only in the isolation room and should be removed from the room after each period of cleaning.
- Mops heads should preferably be disposable. Reusable mop heads should be laundered on a hot wash after each use.
- Buckets should be washed after each use, then wiped with a sporicidal disinfectant, dried with paper towels and stored inverted to air dry in the housekeeping/cleaners equipment store room.
- Any concerns regarding the standard of environmental cleanliness must be reported to the person in charge immediately.

Refer to the 'Safe management of care equipment Policy for Care Home settings' and the 'Safe management of the care environment Policy for Care Home settings'.

Waste

Waste should be securely bagged and tied, using a suitable plastic tie or secure knot, and disposed of as per local policy.

Refer to the 'Safe disposal of waste, including sharps Policy for Care Home settings'.

Linen

Disposable incontinence pads should be used if required, Kylie (reusable) incontinence pads should not be used.

- All staff should wear disposable apron and gloves for all contact with used linen and clothing.
- All faecally contaminated linen and clothing should be handled with care, using minimum handling in order to avoid dispersal of spores.

- At no time should contaminated linen be placed on the floor/surface or handled close to the body.
- All used laundry should be placed in a water soluble alginate bag.
- The alginate bag should then be taken outside the room and immediately placed in a designated infected laundry bag prior to transportation to the laundry and laundered as soon as possible.
- Contaminated linen should not be allowed to accumulate.
- At no time should contaminated personal clothing be washed/sluiced by hand.
- Washing processes should have a disinfection cycle in which the temperature in the load is maintained at either:
 - $\circ \quad$ 65°C for not less than 10 minutes; or
 - o 71°C for not less than 3 minutes
- Fabrics that will not withstand such high temperature should be washed at the highest temperature recommended by the manufacturer.
- Staff wearing their own clothes for work should make sure that clothing is clean and washed at highest temperature recommended by the manufacturer.

Refer to the 'Safe management of linen, including uniforms and workwear Policy for Care Home settings'.

11. Enhanced resident monitoring

In the event of a resident being confirmed or suspected with *C. difficile* colonisation or infection, the following measures should also be implemented:

- Instigation of enhanced monitoring of other residents for symptoms of *C. difficile* with close observation of all residents receiving antibiotic treatment
- Other residents who develop diarrhoeal stools (type 5-7 on the Bristol stool form scale) should be isolated immediately and have a stool sample sent for *C. difficile* testing. A fluid balance and stool chart should be commenced

12. C. difficile card

Some areas now issue residents who are confirmed CDI or *C. difficile* colonised with a '*C. difficile* card'. The card is provided so the resident can present it at any consultation with a healthcare professional or admission to hospital. This will alert the healthcare worker/admitting unit to the residents' diagnosis of *C. difficile* and help to ensure, if antibiotics are needed, that only appropriate ones are prescribed.

13. Referral or transfer to another health or social care provider

- Symptomatic residents should not be transferred within or to another health or social care environment until they have had no diarrhoea for 48 hours and passed a formed stool (type 1-4 on the Bristol stool form scale) or their bowel habit has returned to their normal type, unless **essential** investigations or treatment is required.
- Prior to a resident's transfer to and/or from another health and social care facility, an assessment for infection risk must be undertaken. This ensures appropriate placement of the resident.
- Transfer documentation, e.g. a patient passport or the 'Inter-health and social care infection control transfer Form' (available to download at <u>www.infectionpreventioncontrol.co.uk</u>), must be completed for all transfers, internal or external and whether the resident presents an infection risk or not.
- The ambulance/transport service and receiving area must be notified of the resident's infectious status in advance.

Refer to the 'Patient placement and assessment for infection risk Policy for Care Home settings'.

14. Death of a resident with *C. difficile* infection

No special precautions other than those for a living resident are required for a deceased resident.

Refer to the 'Care of the deceased Policy for Care Home settings'.

15. Investigation of *C. difficile* **infection cases**

An investigation may be conducted by your local Community Infection Prevention and Control (IPC) or local UK Health Security Agency (UKHSA) Team for each CDI case to identify any lapses in care. The home may be requested to supply relevant information for the investigation. By implementing any lessons learned, resident safety can be continuously improved.

16. Infection Prevention and Control resources, education and training

See Appendix 1 for the 'C. difficile: Quick reference guide'.

The Community Infection Prevention and Control (IPC) Team have produced a wide range of innovative educational and IPC resources designed to assist your Care Home in

achieving compliance with the *Health and Social Care Act 2008: code of practice on the prevention and control of infections and related resources* and CQC registration requirements.

These resources are either free to download from the website or available at a minimal cost covering administration and printing:

- 30 IPC Policy documents for Care Home settings
- Preventing Infection Workbook: Guidance for Care Homes
- IPC CQC inspection preparation Pack for Care Homes
- IPC audit tools, posters, leaflets and factsheets
- IPC Bulletin for Care Homes

In addition, we hold IPC educational training events in North Yorkshire.

Further information on these high quality evidence-based resources is available at <u>www.infectionpreventioncontrol.co.uk</u>.

17. References

Department of Health and Social Care (Updated December 2022) *Health and Social Care Act 2008: code of practice on the prevention and control of infections and related guidance*

Department of Health and Health Protection Agency (2013) *Prevention and control of infection in care homes – an information resource*

Department of Health (Updated September 2019) *Clostridium difficile infection: How to deal with the problem*

National Institute for Health and Care Excellence (Updated February 2017) *Healthcareassociated infections: prevention and control in primary and community care Clinical Guideline 139*

NHS England (Updated 2025) National infection prevention and control manual (NIPCM) for England

UK Health Security Agency (Updated September 2022) *Clostridioides difficile: guidance, data and analysis*

18. Appendices

Appendix 1: C. difficile: Quick reference guide



NHS

Clostridioides difficile (C. difficile): Quick reference guide



What is C. difficile?

Previously known as *Clostridium difficile*. A spore forming bacteria that lives harmlessly in the bowel of 3-5% of healthy adults.

Antibiotics disturb the balance of good bacteria in the gut allowing *C. difficile* bacteria to multiply rapidly causing diarrhoea.

C. difficile colonisation

- Bacteria are present in the bowel, but not producing toxins that cause diarrhoea.
- This may be a long-term condition and isolation is not required in a care home (unless symptomatic).
- Symptoms, if present, are usually very mild and antibiotic treatment is not normally required.

How is C. difficile spread?

- From person-to-person by direct contact.
- From contact with contaminated surfaces or equipment.
- Spores can survive for long periods in the environment if cleaning is inadequate.
- To the next person on contaminated hands that have not been washed thoroughly.
- Hand-to-mouth action, such as when eating from unwashed hands.

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C. difficile infection

- Bacteria are present and producing toxins causing symptoms that can range from mild to severe.
- Isolation is required until 48 hours symptom free and a formed stool, Bristol stool form scale type 1-4.
- Antibiotic treatment may be prescribed to kill the *C. difficile* bacteria.
- A clearance stool sample is not required following treatment.

Help stop the spread of C. difficile

- Maintain a high standard of cleaning.
- Use liquid soap and warm running water for washing hands.
- Do not use alcohol handrub alone, as this is not effective against *C. difficile.*
- Adequate environmental cleaning.

For further information, please refer to the full Policy which can be found at <u>www.infectionpreventioncontrol.co.uk/care-homes/</u> <u>policies/</u>