

**Infection Prevention & Control Policy  
for Management of *Clostridium*  
(*Clostridioides*) *difficile* Associated  
Infection (CDI)**

**February 2022**

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<b>Links to Other Policies, Procedures, Guidelines or Protocols:</b>	<ul style="list-style-type: none"> <li>• <a href="#">Northern Ireland Primary Care Antibiotic Guidelines</a></li> <li>• <a href="#">Secondary Care Antimicrobial Therapy Guidelines</a></li> <li>• <a href="#">Support Services Infection Prevention Cleaning Procedures</a></li> <li>• <a href="#">Disinfection and Decontamination Policy (Patient Care Equipment)</a></li> <li>• <a href="#">Infection Prevention &amp; Control Risk Assessment Guidelines for the Isolation/ Placement of Patients</a></li> <li>• <a href="#">VHP Clean Internal Protocol</a></li> <li>• <a href="#">Root Cause Analysis (RCA) Guidelines for Healthcare-Associated <i>Clostridium difficile</i>, Meticillin Resistant/ Sensitive <i>Staphylococcus aureus</i> (MRSA/ MSSA) Infections and Other Infection Related Incidents</a></li> <li>• <a href="#">Infectious Incident/ Outbreak Control Plan</a></li> <li>• <a href="#">Clostridium difficile Infection (CDI) Trigger Tool</a></li> <li>• <a href="#">Infection Prevention &amp; Control Standard Precautions Policy</a></li> </ul>		

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**QUICK REFERENCE GUIDE**

**SIGHT Protocol**

Clinicians (doctors and nurses) should apply the following mnemonic protocol (SIGHT) when managing suspected potentially infectious diarrhoea (DH, 2009).

<b>S</b>	<p><b>SUSPECT</b></p> <p>Suspect a case if there is a sudden change in bowel habit to frequent type 5, 6 or 7 stools on Bristol Stool Chart that is abnormal for the patient. Even if there are other possible causes for the diarrhoea always suspect CDI. Record all motions on a <a href="#">Bristol Stool Chart</a> (BSC).</p>
<b>I</b>	<p><b>ISOLATE</b></p> <ul style="list-style-type: none"> <li>• Isolate the patient as soon as possible until the cause of diarrhoea is established and commence on stool and fluid balance chart. Take 'Contact Precautions'.</li> <li>• Implement <a href="#">High Impact Intervention audit for CDI</a>.</li> <li>• Ask the Medical staff to review the patient. In particular the Clinical staff should review any antibiotics that patient may be currently prescribed and laxatives and stopping or reducing proton pump inhibitors (PPIs).</li> <li>• Use a combined detergent/ 1,000 parts per million (ppm) chlorine-based disinfectant solution for decontamination of patient care equipment and the environment. Steam clean spillages on soft furnishings or carpet cleaning solution where necessary as per <a href="#">Support Services Infection Prevention Cleaning Procedures</a> and <a href="#">Disinfection and Decontamination Policy (Patient Care Equipment)</a>.</li> </ul> <p><i>REMEMBER: Isolation can be difficult for some patients, e.g. patients with dementia or learning disabilities, therefore ensure strategies are in place to support them, including involving family members, the use of electronic devices and books. Non-compliance must be documented in the patient's medical notes.</i></p>
<b>G</b>	<p><b>GLOVES AND APRONS</b></p> <p>Wear gloves and aprons for all contact with the patient and their environment. Remove and wash hands before leaving room. Relatives do not need to wear gloves and aprons, unless carrying out direct patient care.</p>
<b>H</b>	<p><b>HAND WASHING</b></p> <p>Hand washing with liquid soap and water must be carried out before and after each contact with the patient and their environment. This must be readily available at the point of patient care for use by staff and visitors.</p> <p><b><i>Alcohol gel/ foam is not effective against CDI and should be removed from the patient's bedside.</i></b></p>



<b>T</b>	<b>TEST</b>  Send an immediate stool sample (of liquid faeces type 5, 6, 7, that is abnormal for the patient) for testing (once other causes have been ruled out) detailing any relevant clinical information.
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## 1.0 **INTRODUCTION**

### 1.1 **Background**

*Clostridium difficile* infection (CDI) is nearly always associated with, and triggered by, the use of antibiotics prescribed either to treat another condition or given prophylactically. *Clostridium difficile* is a spore-forming organism that can survive in the healthcare environment and colonisation is usually acquired by ingestion after contact with a contaminated environment, equipment, other patients or the hands of staff.

CDI is more common in the over 65 age group (though any other age group may be susceptible). Patients may be colonised with *Clostridium difficile* without displaying symptoms. CDI may present with malaise, abdominal pain, nausea, anorexia, watery diarrhoea, low-grade fever, and peripheral leucocytosis.

The species was transferred from the genus *Clostridium* to *Clostridioides* in 2016. This new name reflects the taxonomic (classification) differences between this species and members of the genus *Clostridium* while maintaining the common name as *C. diff.*

### 1.2 **Purpose**

The purpose of this policy is to provide guidance to all staff involved in the management and treatment of patients with CDI or those found to be colonised from laboratory testing and to prevent transmission to other patients.

## 2.0 **SCOPE OF THE POLICY**

This policy sets out details of the actions that need to be performed by all healthcare workers in the Western Health & Social Care Trust (WHST) when caring for a patient with a confirmed or suspected diagnosis of *Clostridium difficile*.

## 3.0 **ROLES AND RESPONSIBILITIES**

### 3.1 **Trust Board and Chief Executive**

The Chief Executive/ Trust Board has ultimate responsibility for the implementation of this policy. This responsibility may be delegated.

Support the control and reduction of CDI from board level downwards, prioritising the management of risk to patients and ensuring that the safety of patients is not compromised by the pursuit of other strategic objectives. They should assess the performance of all units of management through regular audit and feedback so that activity at a ward level is appropriate and consistent with Trust and national policy. Trusts should ensure that education and training of all staff on infection prevention and control actually happens in a timely manner and is informed by audit results.



### 3.2 Director of Infection Prevention & Control (DIPC)

Provides assurance to the Trust Board that strategies to reduce avoidable healthcare-associated infections are being effectively implemented across the organisation.

### 3.3 Directors/ Clinical Directors

Will take lead responsibility for the implementation of this policy, with support from the Head of Infection Prevention & Control and the Consultant Microbiologists/ Infection Prevention & Control Doctors.

**Clinical Directors** should ensure that good antimicrobial practice becomes embedded at the patient level through one or more of the following:

- Designated units where there is local concern about the level of CDI, such as units for the care of the elderly.
- Daily review of drug charts by ward pharmacists to check compliance with antibiotic guidelines and to liaise with the ward doctor.
- Antimicrobial Management Team ward rounds that give feedback to ward doctors and consultants.

### 3.4 Consultants/ Doctors in Training

Consultants should review antibiotic prescribing on all their ward rounds, stopping unnecessary prescriptions and changing those that do not comply with guidelines, as should their juniors on their own ward rounds.

Have responsibility for ensuring appropriate clinical reviews of patients, reviewing medications as appropriate to reduce the risk of CDI, prescribing the appropriate antimicrobial to treat the infection, in addition to participating in multi-disciplinary reviews, post-infection reviews (PIRs)/ root cause analyses (RCAs) and investigations of healthcare-acquired (HCA) cases.

### 3.5 Infection Prevention & Control Team (IPCT)

Provide advice on the application of CDI prevention and control measures in the care setting and on individual patient risk assessments.

Engage with staff to promote systems and processes that lead to sustainable and reliable improvements in relation to application of CDI prevention and control measures.

Ensure that senior managers are alerted to any issues (deficits in knowledge, resources, equipment and facilities, and incidents) that may result in transmission of infection or changes in the incidence and/ or severity of disease.

Assist in the investigation/ PIR/ RCA process of any HCA CDI cases.

### 3.6 Consultant Microbiologists

Have responsibility for the development and monitoring of a comprehensive antibiotic guideline and for ensuring that all prescribers have access to support and guidance to enable them to prescribe with due caution and to reduce the inappropriate use of antibiotics.

Participate in review of the progress of inpatients who have CDI.

Take part in the PIRs/ RCAs of patients with healthcare-acquired or associated (HCA) CDI.

### **3.7 Antimicrobial Pharmacists**

Work in conjunction with the Consultant Microbiologists to ensure compliance with the antibiotic guideline, providing suitable assurance data.

### **3.8 Bed Management Team**

Have responsibility for ensuring patients who are admitted with suspected or confirmed CDI are placed in an appropriate environment (such as an isolation room) to reduce the risk of transmission to others in accordance with [WHSCCT Infection Prevention & Control Risk Assessment Guidelines for the Isolation/ Placement of Patients](#) and other appropriate clinical pathways.

### **3.9 Lead Nurses/ Service Managers/ Ward Managers**

Should ensure that each clinical area has reliable systems in place for training, auditing and feeding back to staff on cleaning, isolation, hand hygiene and protective clothing practices. Some trusts have found that a network of infection control link practitioners is an effective approach to delivering these functions.

Have responsibility for ensuring that all staff comply with this policy, ensuring early identification of patients' risk factors in liaison with the Infection Prevention & Control Team.

Participating in multi-disciplinary patient reviews and PIR/ RCA investigations of HCA cases and deaths. Must provide assurance regarding adherence by staff to the actions detailed in the policy.

### **3.10 All WHSCT Employees**

Must ensure they are compliant with this policy and understand the risk of CDI and strategies to mitigate the risk.

## **4.0 KEY PRINCIPLES**

### **4.1 Risk Factors for CDI/ Risk Assessment/ Signs and Symptoms**

- Aged  $\geq 65$  years
- Severity of underlying disease
- Chemotherapy
- Chronic renal disease
- Immunocompromised
- Patients undertaking gastrointestinal procedures
- Enteral feeding
- PPI (anti-ulcer drugs) and H2 antagonists
- Recent healthcare intervention
- Antibiotic therapy – almost all cases of CDI will have had a recent history of antibiotics (NHS England, 2016).



A range of factors may cause diarrhoea and it is, therefore, essential to identify any underlying causes which are abnormal for the patient and may be indicative of infection. In order to prevent spread to other patients an assessment must be undertaken using the Flowchart for Infection Prevention & Control Management of Patients with Diarrhoea (Appendix 1) in conjunction with the Risk Assessment Table for Patients with Diarrhoea (Appendix 2) and precautions must be put in place immediately.

### Signs and Symptoms of CDI

If a patient/ resident has diarrhoea (types 5-7 on the Bristol Stool Form Scale), 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

All patients for admission must have any history of CDI documented and communicated between wards and departments.

### **The following should be checked by the admitting doctor/ nurse:**

Is the patient:

1. Currently *Clostridium difficile* toxin positive (CDT) or have they had a *Clostridium difficile* diagnosis in the past, including those who are or have been PCR Gene B positive?
2. Currently having diarrhoea?
3. Currently receiving antibiotics for an infection?

Assumptions that CDI is not the cause of new diarrhoeal episodes need to be robust and documented in the patient's notes. There should be a medical assessment of cases to assure that diarrhoea is not of infective origin.

If the patient is on treatment for CDI, then ensure they are isolated in a single room, preferably with an en-suite toilet.

### Documentation of Risk Assessment for all Hospital Admissions

Complete an Infection Prevention & Control Admission Risk Assessment Form as included in the Hospital Admission Assessment Nursing Documentation and [Infection Prevention & Control Risk Assessment Guidelines for the Isolation/ Placement of Patients](#)

**4.2 Further Episodes (Relapse or Recurrence) of *C. difficile* Infection**

A further episode of *C. difficile* infection could either be a relapse, which is more likely to be with the same *C. difficile* strain, or a recurrence, which is more likely to be with a different *C. difficile* strain. There is no agreement on the precise definition of relapse and recurrence, and it is difficult to distinguish between them in clinical practice. In the recent NICE NG199 23<sup>rd</sup> July 2021: *CDI* antimicrobial prescribing guidelines it was agreed that a relapse occurs within 12 weeks of previous symptom resolution and recurrence occurs more than 12 weeks after previous symptom resolution.

**4.3 Screening/ Testing for CDI and Interpretation of Results**

Send a diarrhoeal faeces sample (at least 5 mls) in a blue topped universal container with plastic spoon to the Microbiology Laboratory for CDT/ PCR GENE B testing as soon as possible (if other tests are required, e.g. O& S, please send a separate sample).

Do not routinely test children under the age of 2 years in whom toxigenic strains of *C. difficile* may be present in the absence of symptoms.

For the purpose of laboratory investigations, diarrhoea is defined as a stool which assumes the shape of the container into which it is put, i.e. type 5-7 on the Bristol Stool Chart.

More than one test per patient may be required. If the first test is negative and a strong suspicion of CDI remains, re-test in 24 hours, and further testing may be required in light of clinical evidence. This is due to the toxin not always being present in the initial stool sample and may take up to 14 days for toxin to be in a large enough quantity to be detected.

**Interpretation of the Test Results – a two method test is in place**

<b>Result</b>	<b>Interpretation</b>	<b>Actions</b>
PCR test for Gene B is positive	Indicates presence of Toxin gene B but no laboratory evidence of the presence of Toxin producing <i>C. difficile</i> and may suggest colonisation, however has the potential to become toxin producing.	Commence IP&C precautions as per <a href="#">C. difficile care pathway</a> .  May need to repeat specimen if patients symptoms do not improve and discuss with Consultant Microbiologist regarding any antimicrobial advice.
<i>C. difficile</i> toxin detected	This means that the bacteria are present and producing toxins, causing symptoms which can be mild to severe.	Commence IP&C precautions as per <a href="#">C. difficile care pathway</a> .  Follow treatment algorithms – <a href="#">Secondary Care Antimicrobial Therapy Guidelines</a>

PCR B gene & toxin negative	<i>C. difficile</i> or CDI is very unlikely to be present, although patient could have other potential pathogens.	Manage as potentially infectious diarrhoea.  Test for other enteric pathogens or repeat test for <i>C. difficile</i> if strong clinical suspicion remains.
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#### 4.4 Procedure for Informing Results

When will the results be available?	PCR/ <i>Clostridium difficile</i> toxin (CDT) test results are routinely available within 24 hours after the specimen has been received by Microbiology.
Who notifies the clinical area?	<p>PCR Gene B/ CDT negative results are input to the Laboratory computer system by Microbiology staff on the day of the result. They are not reported by telephone.</p> <p>PCR Gene B/ CDT positive results are notified to ward staff and IPCT by Microbiology staff.</p> <p>During normal working hours 9am-5pm Monday to Friday the Infection Prevention &amp; Control Nurse will provide advice regarding IP&amp;C management of the patient.</p> <p><b><i>Out of hours advice can be sought from the Consultant Microbiologist via switchboard.</i></b></p>
What to do if the patient is PCR GENE B positive but CDT negative	<p>This depends on the amount and frequency of diarrhoea the patient is having and the severity markers associated with CDT.</p> <p>Repeat the stool sample if patient is still having diarrhoeal symptoms.</p> <p>Use the treatment algorithms as above to assess the need for antibiotic treatment, however the patient should be isolated and managed to prevent transmission as if they were CDT positive.</p>
What if the patient is discharged home or to another care provider before result is available?	Medical or Nursing Team to communicate the result to the new care setting or to the GP.

**4.5 Initial Management of Patient with Suspected or Confirmed CDI/ Gene B**  
To prevent any further transmission of CDI the following measures must be implemented.

<p><b>Clinical/ Antibiotic/ Medication Review</b></p>	<p>A clinical review of patient severity and requirement for treatment of CDI and current antibiotic profile in line with the Trust <a href="#">Secondary Care Antimicrobial Therapy Guidelines</a>.</p> <p>Anti-motility drugs, e.g. Loperamide, should be avoided as this makes it difficult for the toxins to be expelled from the body.</p> <p>If appropriate, discontinue PPIs, H2 antagonists and any laxatives.</p> <p>Request clinical review by Dietician, if appropriate.</p> <p><b><i>If any further advice required contact Consultant Microbiologist via switchboard.</i></b></p>
<p><b>Isolation</b></p>	<ul style="list-style-type: none"> <li>• Early isolation helps to both control outbreaks and reduce endemic levels of <i>C. difficile</i>.</li> <li>• In a residential care setting any resident with confirmed or suspected <i>C. difficile</i> 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 have a terminal clean.</li> <li>• 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.</li> <li>• If no isolation facilities are available a risk assessment must be undertaken, which may result in multiple patient moves. This should be done by the nurse in charge in conjunction with the Bed Management Team and IPCT/ Consultant Microbiologist.</li> <li>• The door to the isolation or cohort room <b>MUST</b> be kept closed at all times to prevent spores of <i>C. difficile</i> from being transmitted further. If this poses a risk to patient care, i.e. patient requires close observation, a request should be made for one-to-one nursing care and must be documented in the nursing notes.</li> </ul>

	<ul style="list-style-type: none"> <li>• Place a Contact Precautions sign on the outside of the door.</li> <li>• Delays in being able to isolate must be documented in the medical and nursing notes and all precautions and controls put in place within the bay. Do not admit any further patients to the bay.</li> <li>• Cohort nursing may be required if there is more than one case of CDI and side room capacity has been exceeded. Advice should be sought from the IPCT or out of hours from the Consultant Microbiologist via switchboard.</li> <li>• Remaining patients on the ward should be closely observed for any symptoms of CDI and must be sampled immediately and reported to the IPCT.</li> </ul>
<b>Documentation</b>	<ul style="list-style-type: none"> <li>• Commence on <a href="#">Clostridium difficile High Impact Intervention Audit Tool</a> if CDT positive, or if PCR Gene B positive and on antibiotic treatment, and audit compliance of staff daily.</li> <li>• Daily review by medical staff and documentation of severity of CDI and response to antimicrobial treatment and rationale for use of any concomitant antimicrobial treatment.</li> <li>• When a patient has a confirmed laboratory positive <i>Clostridium difficile</i> result (either toxin or PCR Gene B positive) then this will be flagged on Patient Centre by use of the 'Patient Needs' alert; this flagging is undertaken by the IPCT only. Flagging onto new e-Whiteboards should be undertaken by ward staff. If this history is seen on NIECR or Patient Centre from the current or an earlier admission this should trigger the need for close monitoring of bowel habit, especially if antibiotics are to be prescribed, and consideration given to isolation of the patient.</li> <li>• Use <a href="#">Bristol Stool Chart</a>/ sampling guide to monitor progress</li> </ul>
<b>Antibiotic Treatment for <i>C. difficile</i>/ Severity Assessment</b>	<p>Refer to <a href="#">Secondary Care Antimicrobial Therapy Guidelines</a>.</p> <p>Treat depending on <b>severity of CDI</b> as follows:</p> <p><b>Mild Disease</b> – Normal WCC and &lt; 3 stools type 5-7 (BSC) per day. Observe and do not treat, re-assess daily and review antibiotics, H2 antagonists and PPIs.</p>

	<p><b>Moderate Disease</b> – Patient well. WCC &lt; 15, CRP &lt; 150, normal AXR, Creatinine rise &lt; 50% from baseline (see <a href="#">Secondary Care Antimicrobial Therapy Guidelines</a>).</p> <p><b>Severe Disease</b> – Unwell due to diarrhoea and any of the following: WCC &gt; 15, CRP &gt; 150, abnormal AXR, distended abdomen, acute rising Creatinine &gt; 50% above baseline (refer to <a href="#">Secondary Care Antimicrobial Therapy Guidelines</a>).</p>
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#### 4.5.1 Further Management to Prevent Transmission

Transmission can occur by contact with the infected faeces and the spores. In patients with profuse explosive diarrhoea there will be widespread contamination of the environment. This can be exacerbated by:

- Healthcare workers via hands,
- Equipment that has not been decontaminated appropriately,
- A contaminated environment, resulting in an increased risk of transmission to patients.

The following precautions must be implemented until the patient is no longer symptomatic (until there has been no diarrhoea, types 5-7 BSC, for 72 hours and patient has had one, preferably two, formed stools, types 1-4 BSC).

Also refer to [Infection Prevention & Control Standard Precautions Policy](#).

<b>Hand Hygiene</b>	<ul style="list-style-type: none"> <li>• Hands must be washed with liquid soap and water before and after any contact with the patient or their environment.</li> <li>• Alcohol hand sanitiser must not be used and should be removed from the room as it is not effective against CDI.</li> <li>• Inform patients and relatives/ visitors regarding hand hygiene with soap and water before and after each contact.</li> </ul>
<b>Personal Protective Equipment</b>	Gloves and aprons must be worn when having direct contact with the patient/ environment. These must be removed before leaving the room.
<b>Commodes/ Bed Pans</b>	<ul style="list-style-type: none"> <li>• Discard contents of bed pan directly into the bed pan washer and check for effective decontamination of the bed pan at the end of the cycle.</li> <li>• Carry out daily checks of bed pan washer and document in the log book, or as per the instructions relating to the model of washer/ disinfectant.</li> </ul>

	<ul style="list-style-type: none"> <li>• If a commode is required it must be cleaned immediately after use with a combined detergent/ disinfectant containing chlorine 1,000ppm product and dedicate for single patient use.</li> <li>• Before removing the contents of a commode/ bed pan from a patient's room, wash hands with soap and water and put on clean gloves and aprons to transport the commode to the sluice, and decontaminate as above.</li> <li>• As far as practical allocate a side room with en-suite facilities.</li> </ul>
<p><b>Cleaning/ Enhanced Cleaning</b></p>	<ul style="list-style-type: none"> <li>• If a patient has symptoms of diarrhoea in a multi-bedded room a terminal clean of the environment and all patient care equipment, with and a change of bed curtains/ screens around all patient beds must be undertaken before re-admitting to the room (even where there are patients still occupying the room). Dispose of toilet brush. Refer to <a href="#">Support Services Infection Prevention Cleaning Procedures</a> and <a href="#">Disinfection and Decontamination Policy (Patient Care Equipment)</a>.</li> <li>• Enhanced cleaning twice daily with a combined detergent/ disinfectant containing chlorine 1/ 1000ppm product must then be undertaken by Support Services staff, paying attention to en-suite area and frequent hand touch items. Any soiling of the room must be removed immediately. Request the enhanced clean by contacting the Domestic Supervisor via the PorterWeb System. When no longer required, cancel using the same system.</li> <li>• Support Services staff must sign the enhanced cleaning schedule and attach to the outer door of the room.</li> <li>• On discharge a terminal clean of the room must be undertaken and checked and signed off by nurse in charge.</li> <li>• During a period of increased incidence/ outbreak, deep cleaning with vaporised hydrogen peroxide (VHP) may be undertaken. Refer to <a href="#">VHP Clean Internal Protocol</a> – this will be advised by IPCT.</li> </ul>
<p><b>Patient Care Equipment</b></p>	<ul style="list-style-type: none"> <li>• All equipment must be kept to a minimum whilst the patient is in isolation.</li> </ul>

	<ul style="list-style-type: none"> <li>• Use single patient or disposable equipment where possible.</li> <li>• Equipment must be decontaminated following each use using a combined detergent/ disinfectant containing chlorine 1/ 1000ppms and as part of any terminal clean prior to removing from the room</li> <li>• On discharge disposable items must be disposed of.</li> </ul>
<p><b>Waste and Linen</b></p>	<ul style="list-style-type: none"> <li>• All linen must be bagged as infected linen. Place in a water soluble bag before placing in the red linen bag. Remove from patient's room as soon as possible.</li> <li>• All waste must be disposed of in a clinical waste bin.</li> <li>• Information for patients and carers should be given with regard to safe laundering of clothing, both verbally and in written form (<a href="#">Laundry Advice Leaflet</a>). Place laundry into a clear plastic bag and then into a patient property bag. Do not wash or sluice laundry at ward/ department level.</li> </ul>
<p><b>Investigations</b></p>	<ul style="list-style-type: none"> <li>• Unless clinically urgent the patient should remain in isolation rather than attend routine appointments whilst having active symptoms of diarrhoea.</li> <li>• If treatment/ investigation is clinically urgent, the receiving department must be notified of the patient's condition in advance so that appropriate infection control precautions can be taken. It may be more appropriate for some procedures, e.g. x-rays, to be undertaken on the ward.</li> <li>• <b>Do not send repeat specimens to see if <i>Clostridium difficile</i> is no longer present and do not test within 28 days of the previous positive specimen unless the clinical picture has changed and advice has been taken from either an IPCN or Consultant Microbiologist.</b></li> <li>• Blood samples should be monitored whilst patient is symptomatic for FBC/ CRP/ WCC to monitor severity status of CDI.</li> </ul>
<p><b>Discharge/ Transfer to Other Care Settings</b></p>	<ul style="list-style-type: none"> <li>• Patients may be discharged to their own home/ care home when considered medically fit, even if completing treatment for <i>C. difficile</i>. It is important to discuss the possibility of symptoms returning again.</li> </ul>



	<ul style="list-style-type: none"> <li>• There should be no restrictions on institutions, such as care homes, receiving patients who have had CDI and are 72 hours free of types 5-7 stools (BSC) and have had one, preferably two, type 1-4 stools (BSC). Personnel in the receiving facility should be advised in advance about the patient's diagnosis of <i>C. difficile</i> infection.</li> <li>• Transfer of symptomatic patients to another hospital or healthcare facility should be avoided if possible. If it is necessary the IPCT in the receiving hospital and other personnel must be informed verbally and in a written handover document.</li> <li>• If patients are discharged home on treatment for <i>C. difficile</i> the discharging doctor should include this information on the discharge letter to enable the patient's GP to monitor the patient's condition and ensure a prompt response to any relapse or worsening of symptoms.</li> </ul>
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#### 4.5.2 Communication with Patients and Relatives

Where patients are isolated in a single room it is important that there is clear and regular communication with the patient to ensure that feelings of fear, loneliness or isolation and feelings of stigma are prevented or recognised early and actions taken to limit such anxieties.

Every patient with CDI or PCR Gene B positive should be informed by the medical staff responsible for the care of the patient of their diagnosis and if the patient agrees, inform appropriate close relatives.

The information provided to the patient (and relatives where appropriate) should include the facts about CDI, the treatment of the disease and the relative importance of *Clostridium difficile* in relation to the patient's other health problems. Regular updates of the patient's progress should be given by nursing and medical staff and then documented in the patient's notes, clearly indicating the patient's understanding and clarity of the situation.

Nursing staff should also provide advice on personal hygiene precautions and infection control measures to be taken by the patient and their family/ visitors. This should include the laundering of the patient's personal clothing and the risk of infection to others. Provide a [Laundry Advice Leaflet](#).

Information provided to the patient and relatives should be reinforced by provision of a [Clostridium difficile Information Leaflet](#) or a [PCR Gene B Information Leaflet](#) and this should be documented in the nursing documentation.

#### 4.5.3 Guidance for WHSCT Community/ Residential Facilities

Community residential facilities should apply the following key measures with regard to the early recognition and management of CDI or those carrying the bacterium.

Situation	What Action to Take
Resident presents with diarrhoea, which is not their normal bowel habit	<p>a) Check if the patient has had antibiotic therapy recently (within the previous 3 months).</p> <p>b) Seek medical advice from GP and consider submitting a diarrhoeal sample for O&amp;S and <i>Clostridium difficile</i>.</p> <p>c) Isolate the patient in their room and apply Contact precautions until they are 72 hours free of types 5-7 stools (BSC) and have had one, preferably two, type 1-4 stools.</p>
GP advises that resident is suspected <i>Clostridium difficile</i>	<p><b>GP:</b></p> <p>a) Will review the medication the resident is currently taking, especially antibiotic therapy and other medications, including laxatives, PPIs, anti-motility agents, antacids.</p> <p>b) Ask for a diarrhoeal sample to be sent to laboratory for testing for <i>Clostridium difficile</i> and organisms &amp; sensitivity (O&amp;S). Samples x 2 to be obtained as soon as possible.</p> <p><b>Facility Manager:</b></p> <p>c) Make arrangements to isolate the resident with symptoms of infection, if the resident is not already in a room of their own.</p> <p>d) Ensure that the resident has their own toilet facilities/ ensuite (toilet or designated commode).</p> <p>e) Ensure that the staff and residents wash their hands with soap and water (NOT alcohol hand rub).</p> <p>f) Maintain high standards of infection control precautions, decontamination of equipment (e.g. commodes) and environmental cleanliness.</p>
What other control measures should I put in place and who do I need to inform?	<p>Contact the Infection Prevention &amp; Control Team for prompt advice via Altnagelvin Hospital or South West Acute Hospital switchboards during working hours Monday-Friday 9am-5pm. After hours ask for the Consultant Microbiologist on call.</p>
A patient has been discharged to your facility/	<p>a) Observe the resident closely for diarrhoea, especially in their first 72 hours following admission to your facility.</p> <p>b) If diarrhoea develops follow management as already</p>

home from hospital or other facility with a history of <i>Clostridium difficile</i>	documented in this policy.  c) Advise the resident's GP, who will urgently assess the patient's clinical needs and, as appropriate, seek the advice of the Infection Prevention & Control Nurse or Consultant Microbiologist.
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#### 4.6 Surveillance

All Trusts in Northern Ireland are required to participate in the mandatory reporting of CDI through the Healthcare-Associated Infections web-based Enhanced Surveillance System administered by the Public Health Agency (PHA) and must report all *C. difficile* toxin (CDT) positive diarrhoea in patients over 2 years of age.

There is continuous local surveillance of cases of CDI and this is regularly reported to the WHSCT Infection Prevention & Control Surveillance Sub-Group, Directorate Governance Committees, Chief Executive HCAI Accountability Forum and Trust Board meetings, along with analysis of trends and findings of increased incidence.

Increased incidences and outbreaks of CDI are reported to the PHA's Duty Room. Outbreaks are reported as serious adverse incidents (SAIs).

#### 4.7 Investigation/ Post-Infection Review/ Root Cause Analysis

An PIR type investigation will be carried out for each case that is hospital or healthcare-acquired and an RCA in the result of a HCAI death.

The meeting should take place within 7 working days, unless there are unusual or difficult circumstances, in which case it must be completed within 31 days.

Please refer to the [Root Cause Analysis \(RCA\) Guidelines for Healthcare-Associated \*Clostridium difficile\*, Meticillin Resistant/ Sensitive \*Staphylococcus aureus\* \(MRSA/ MSSA\) Infections and Other Infection Related Incidents.](#)

#### 4.8 Trigger for Action – Increased Incidence/ Outbreak

(Also refer to [Infectious Incident/ Outbreak Control Plan](#)).

Triggers for action will be in response to an increased incidence or an outbreak.

##### Definition of an Increased Incidence

Two or more new cases (occurring >72 hours post admission, not relapses) in a 28-day period on a ward.

##### Definition of an Outbreak

Two or more cases caused by the same strain related in time and place over a defined period that is based on the date of onset of the first case.

A trigger is not synonymous with the term outbreak. A trigger is a more sensitive point at which the IPCT becomes concerned that there may be the possibility of

deteriorations in systems causing an increase in cases and decides intervention is necessary to ensure patient safety (refer to [Clostridium difficile Infection \(CDI\) Trigger Tool](#)).

#### 4.9 Auditing Care of Patients with CDI/ PCR Gene B

Patients with a diagnosis of CDI or PCR Gene B and on antimicrobial treatment must have their care audited and recorded to monitor adherence to evidence based care bundles as described in the Saving Lives Campaign.

A member of ward staff must audit practice on a daily basis and any failures must be rectified immediately. Audits will also be completed by the IPCNs for patients with CDI and those who are PCR Gene B positive only and who require treatment. Once the patient's diarrhoeal symptoms have resolved for 72 hours and they have returned to their normal bowel pattern (a minimum of one, but preferably two, consecutive type 1-4 stools and no type 5, 6 or 7 stools in the preceding 72 hours) the audit can be discontinued.

Independent Peer audits (other than by IPCNs) must be carried out weekly as a minimum to ascertain level of compliance and assurance regarding standards of practice. The results of the staff audit must be entered into the database at ward level and results fed back to all clinical staff. The results must also be forwarded to the Divisional Lead Nurse (DLN) for inclusion in accountability data and ward/divisional dashboards. The DLN will report on both ward and other independent audits to the Assistant Director of Nursing at the Trust's Safe and Effective Care Meetings.

The audit tool appears as below. It is available on the Trust intranet, as follows:

- Click on Trust Documents > the lower of the two boxes called Infection Prevention & Control Guidelines > *Clostridium difficile* (*C. diff*)/ *C. diff* Toxin B Gene > [C. difficile HII Audit Tool \(Ward Version Mary18\)](#)
- Click on the three dots to the right of the document name
- Click Edit
- Click Enable Content and Yes when asked to make file a trusted document
- Click Print this sheet (or save a copy to your PC using the Save As option on the File menu).

**Care bundle to reduce the risk from Clostridium difficile:  
Prevention of spread - Review tool**

Observation	Elements					All elements? (fills in automatically)
	Prudent antibiotic prescribing	Correct hand hygiene	Environmental decontamination	Personal protective equipment	Isolation/cohort nursing	
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
<b>Total number of times an individual element was performed</b>						
<b>% When all elements of care were given</b>						

**Categories**  
1=Element performed  
0=Element not performed

Copy data to 'Observation sets' sheet

Clear observation data

Print this sheet

Audit Guidance

**Preventing the spread of Clostridium difficile**

**Prudent Antibiotic Prescribing**

- Antibiotics are prescribed according to national guidance and local guidance.
- Stop dates are included in antimicrobial prescriptions and these are adhered to (check kardex for stop date or notes for rationale).
- The use of broad spectrum antimicrobials should be minimised.
- Long duration antibiotic therapy is avoided where possible.
- The reason for antibiotic prescribing is documented in the patient's notes and kardex so that treatment decisions can be easily reviewed and for audit and training purposes.
- Antimicrobial medication should be reviewed daily and documented as such **(check medical notes and drug kardex)**.

**Correct Hand Hygiene**

Hands are washed with soap and water before and after each contact with patients with suspected or proven CDI or diarrhoea, and after contact with the patients' immediate environment **(observe a staff member)**.

**Environmental Decontamination**

**(Check room and look at cleanliness of equipment)**

- Enhanced cleaning methods are implemented in areas with patients with CDI –

twice daily clean of room and bathroom with disinfectant. To be signed off by Support Services staff on rota attached to outer door of room (**check that is has been carried out, once in am and pm**).

- Check that room is clutter free for ease of cleaning.
- Check cleanliness of room/ toilet/ commode, patient care equipment.
- Terminal clean and decontamination of rooms of CDI patients takes place following the patients' transfer or discharge. (**Nurse to check and sign off clean**)

### **Personal Protective Equipment**

#### **(Observe a staff member)**

- Personal protective equipment (PPE) (e.g. single use gloves and aprons) is used when in the immediate environment of patients with CDI.
- Disposable gloves and aprons must be worn when handling body fluids.
- PPE is correctly removed and disposed of following use and hands decontaminated.

### **Isolation/ Cohort Nursing**

- A single room, preferably with ensuite, is used if available and door kept closed at all times (**fail audit if door is open**). If a risk has been identified it must be documented and reviewed daily in nursing notes.
- Cohort care for CDI patients is used if single rooms are not available.
- An isolation ward is used if there are sufficient numbers to justify this (i.e. more than can be catered for in single rooms or by cohort care).
- Hand washing facilities are in place.
- CDI patients have their own dedicated toileting facilities.
- Equipment such as tourniquets or blood pressure cuffs, etc., are issued for single patient use.
- Where commodes are used each patient is allocated their own and they are thoroughly cleaned daily and between each use using chlorine based disinfectant (at least 1,000 ppm available chlorine) (**check commode and bedpan are clean**).

## **5.0 IMPLEMENTATION**

### **Dissemination**

The policy will be distributed to all members of the IP&C Guidance Reference Group, Staff Side Consultation Group, Chief Executive HCAI Accountability Forum, IP&C Committee, Corporate Management Team and Trust Board. Post review and approval it will be placed on the Trust intranet for staff to access.

Staff shall be alerted via Trust Communication in relation to the availability of the policy on the Trust intranet.

### **Exceptions**

There are no exceptions.

## 6.0 **MONITORING**

Monitoring of the implementation of this policy will be the responsibility of doctors, nurses and midwives, local managers, Antimicrobial Pharmacists and the IPCT. This will be through audit of the management of *Clostridium difficile* cases, review of the patient care pathway and by periodic monitoring of aspects relating to patient management, communication and Infection Prevention & Control.

## 7.0 **REFERENCES**

Public Health England 2013. Updated guidance on the management and treatment of CDI. May 2013

CDI: How to Deal with the Problem: Department of Health and Health Protection Agency, December 2008 – updated 2019.

Department of Health, June 2007, Saving Lives: Reducing infection, delivering clean and safe care.

Department of Health 2012. Updated Guidance on Diagnosis and Reporting of *Clostridium difficile*.

Marsh et al, December 2012. Association of relapse of *Clostridium difficile* disease with B1/ NAPI/ 027. Journal of Clinical Microbiology.

NHS England 2016. CDI, Objectives for NHS organisations in 2016/ 17 and guidance on sanction implementation.

NICE NG199 23<sup>rd</sup> July 2021: CDI – antimicrobial prescribing guidelines.

## 8.0 **CONSULTATION PROCESS**

Infection Prevention & Control Team  
Consultant Microbiologists  
Medical Director  
Staff Side Consultation Group  
Infection Prevention & Control Committee  
Chief Executive HCAI Accountability Forum  
Medical Directorate Senior Management Team  
Corporate Management Team  
Trust Board

## 9.0 **EQUALITY STATEMENT**

In line with duties under the equality legislation (Section 75 of the Northern Ireland Act 1988), Targeting Social Need Initiative, Disability Discrimination and the Human Rights Act 1998, an initial screening exercise to ascertain if this



guidance should be subject to a full impact assessment has been carried out. The outcome of the Equality screening for this guidance is: **Pending**

**Major Impact**

**Minor Impact**

**No Impact**

## 10.0 APPENDICES

Appendices to this policy are as follows:

- Appendix 1 – Flowchart for Infection Prevention & Control Management of Patients with Diarrhoea
- Appendix 2 – Risk Assessment Table for Patients with Diarrhoea

## 11.0 SIGNATORIES

Signed for and on behalf of the Western Health & Social Care Trust:

*CR Robertson*

\_\_\_\_\_  
Clare Robertson  
Infection Prevention & Control Nurse

*02/02/22*  
\_\_\_\_\_  
Date

*Wendy Cross*

\_\_\_\_\_  
Wendy Cross  
Head of Infection Prevention & Control

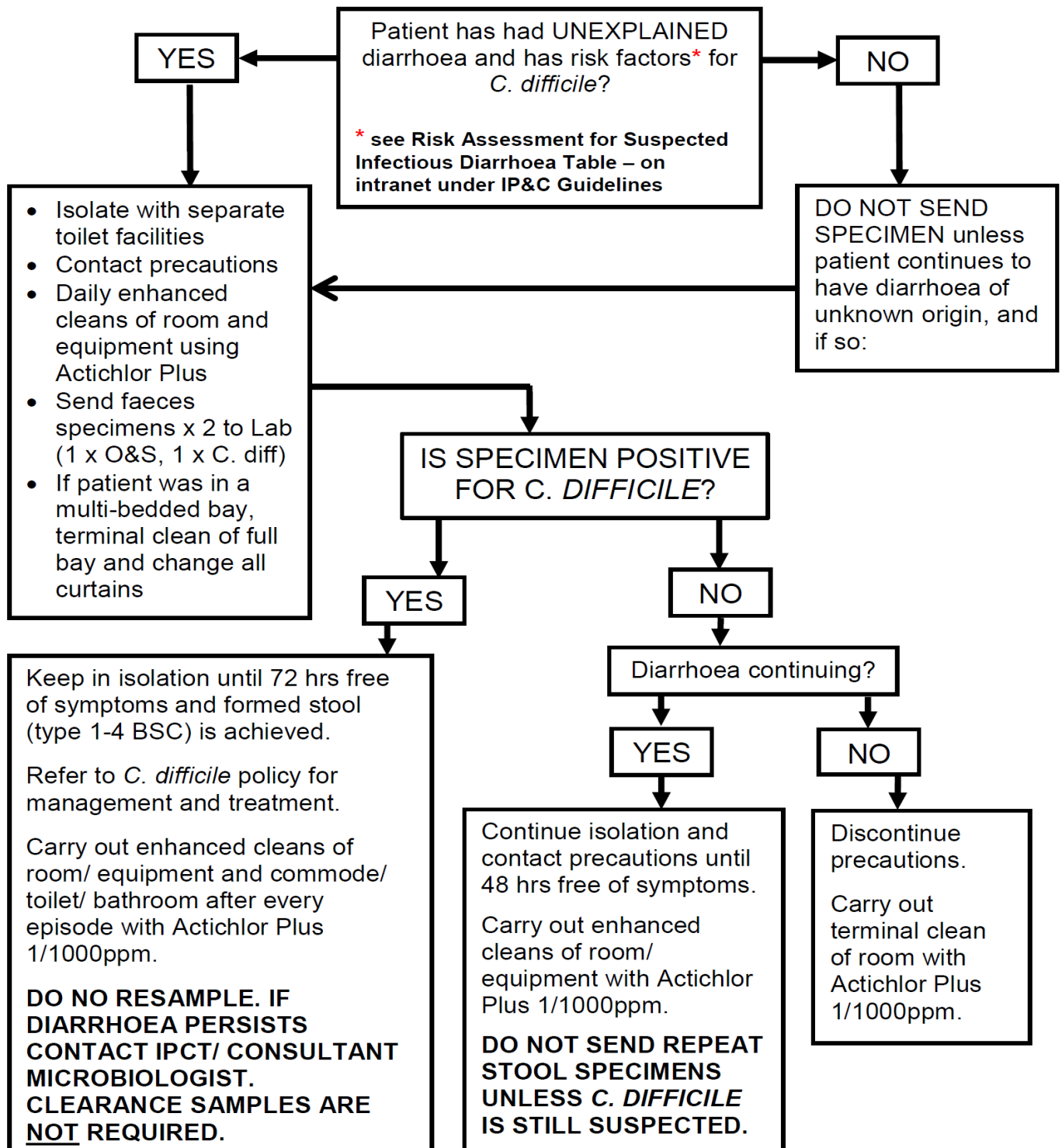
*04/02/2022*  
\_\_\_\_\_  
Date



**FLOWCHART FOR INFECTION PREVENTION & CONTROL MANAGEMENT OF PATIENTS WITH DIARRHOEA**

**(To be used in conjunction with Risk Assessment for Suspected Infectious Diarrhoea Table and *C. difficile* Policy)**

*Definition of diarrhoea: An increased number (TWO or more) of watery or liquefied stools Types 5-7 on Bristol Stool Chart within a 24hr period.*



**RISK ASSESSMENT TABLE FOR PATIENTS WITH DIARRHOEA**  
**(I.e. Type 5, 6 and 7 Bristol Stool Chart)**

<b>DOES PATIENT HAVE RISK FACTORS FOR <i>C. DIFFICILE</i>?</b>	<b>DOES PATIENT HAVE RISK FACTORS FOR ANY OTHER INFECTIOUS DIARRHOEA?</b>	<b>OTHER REASONS WHY PATIENT MAY HAVE DIARRHOEA</b>
Patient 65 years or older	Recent travel abroad	Is this normal bowel pattern for this patient
Administration of multiple antibiotics or multiple courses of antibiotics OR Prolonged course of antibiotics	Food borne	Laxative/ enema related
Is on Proton Pump Inhibitors (PPIs)/ anti-ulcer medications	Exposure to others who have had unexplained diarrhoea	Related to enteral, NG, PEG or parenteral feeding
Presence of nasogastric tube		Is diarrhoea related to any other medications known to cause diarrhoea, e.g. <b>Acarbose, Metformin, Bile salts, Colchicine, Cytotoxics, Dipyridamole, Gold preps, Iron preps, Leflunomide, Magnesium preps, Metoclopramide, Misoprostol, NSAIDs, Olsalazine, Orlistat</b>
Immunocompromised		Does patient have constipation with leakage of diarrhoea as overflow? (ensure patient does not have a history of <i>C. difficile</i> )
Poor oral intake		
Recent hospital stay or Prolonged duration of hospital stay		
Severe underlying disease		
Has previously tested positive for CDT or PCR GENE B		
Non-surgical gastrointestinal procedures		