Prevention and Management of Clostridium Difficile Infection Policy

V7.0

March 2022
Summary

The Bristol Stool Chart indicates the patient has type 5, 6 or 7 stools

A Diarrhoea Risk Assessment is completed and a potentially infective cause is suspected

- Inform the IPAC team
- Submit a stool specimen for testing
- Isolate the patient & follow the guidance set out in the isolation policy
- Deep clean the bed space
- Ensure gloves & aprons are worn for all contact with the patient and their environment
- Soap and water to be used for hand hygiene
- Maintain an accurate stool chart

*Clostridium difficile* is confirmed

Additional actions:
- Provide the patient with verbal and written information
- Consider patient transfer to an isolation ward
- Medical staff to review the patient’s current medications and

Clinical team to assess patient condition daily

Patient to receive a weekly multidisciplinary clinical team review to ensure that the *Clostridium difficile* infection is being treated optimally and that the patient is receiving all necessary supportive care

Isolation precautions to continue until the patient has had 72 hours without diarrhoea and normal bowel habits have returned

A deep clean must be undertaken once the patient has vacated the bed space (including mandatory HPV - RCHT only)
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Data Protection Act 2018 (General Data Protection Regulation – GDPR) Legislation

The Trust has a duty under the Data Protection Act 2018 and General Data Protection Regulations 2016/679 to ensure that there is a valid legal basis to process personal and sensitive data. The legal basis for processing must be identified and documented before the processing begins. In many cases we may need consent; this must be explicit, informed, and documented. We cannot rely on opt out, it must be opt in.

Data Protection Act 2018 and General Data Protection Regulations 2016/679 is applicable to all staff; this includes those working as contractors and providers of services.

For more information about your obligations under the Data Protection Act 2018 and General Data Protection Regulations 2016/679 please see the Information Use Framework Policy or contact the Information Governance Team.

Royal Cornwall Hospital Trust   rch-tr.infogov@nhs.net
1. **Introduction**

1.1. The toxin produced by Clostridium difficile (CDI) was first identified as the cause of antibiotic associated colitis and diarrhoea in 1977.

1.2. The bacterium produces two potent toxins (toxin A & B) that cause mucosal damage and inflammation of the large bowel. Although in most cases it causes a relatively mild illness, occasionally, particularly elderly patients may develop a severe form of the disease called 'pseudomembranous colitis'. This condition is characterised by significant damage to the large bowel and may lead to gross dilation with possible rupture or perforation of the bowel leading to sepsis and/or even death.

1.3. Clostridium difficile infections are often acquired in Hospital, and almost all patients who develop a Clostridium difficile are taking or have recently been given antibiotic therapy. Nearly all antibiotics have been causally associated with Clostridium difficile; however, some such as Cephalosporin’s, Piperacillin with Tazobactam, Co-Amoxiclav, Ciprofloxacin, Levofoxacin, Clindamycin and Meropenem are more strongly associated. Whereas Gentamicin, Vancomycin and Trimethoprim are much less often associated.

1.4. It has been firmly established that person to person transmission can occur in the hospital setting, and major outbreaks have resulted. Staff hands are the most frequent mode of transmission; however studies have also demonstrated that Clostridium difficile (as a spore forming organism) can survive for long periods of time in the environment, and on contaminated equipment.

1.5. The sensible use of antibiotics is the key to the prevention of Clostridium difficile infection. Unnecessary use of antibiotics must be avoided. Where possible, short courses of narrow-spectrum antibiotics, of only three to five days, are preferred to longer courses. All antibiotic prescriptions should be kept under review. Trust antimicrobial prescribing guidance must be followed. Antimicrobial prescribing audits will be conducted regularly.

1.6. There is increasing evidence that acid-suppressing medications, in particular proton pump inhibitors (PPI’s) may be a risk factor for Clostridium difficile. Given that acid suppression drugs, especially PPIs, may be overprescribed and frequently not reviewed to determine if long-standing prescriptions are still justifiable, consideration should be given to stopping/ reviewing the need for PPIs in patients with or at high risk of Clostridium difficile.

1.7. This version supersedes any previous versions of this document.

2. **Purpose of this Policy/Procedure**

This policy provides details on how to reduce the risk of transmission of *Clostridium difficile* within healthcare settings, and information on the appropriate treatment of patients with *Clostridium difficile* infection. This document takes into consideration the prevalence of *Clostridium difficile* both locally and nationally, as well as national guidance.
3. **Scope**

This policy applies to all Staff working in the Royal Cornwall Hospitals NHS Trust (RCHT)

4. **Definitions / Glossary**

Definitions are also contained within the text:

- CDI - *Clostridium difficile*
- GDH - Glutamate dehydrogenase
- CDAB VIDAS - *Clostridium difficile* A & B Vitek Immuno Diagnostic Assay System
- IPAC – Infection Prevention & Control
- DIPC - Director of Infection Prevention & Control
- CDRNE - *Clostridium difficile* Ribotyping Network for England
- PCR - Polymerase chain reaction

5. **Ownership and Responsibilities**

5.1. **Role of the Care Group Triumvirate and Matrons:**

Care Group Triumvirate and Matrons must ensure that resources are available for health care workers to undertake effective standard and isolation precautions.

5.2. **Role of Ward Sister/ Charge Nurses and Departmental Managers:**

Ward Leaders and Departmental Managers are responsible for ensuring that Staff are aware of this guidance and that it is implemented.

5.3. **Role of Medical Staff:**

Medical Staff are responsible for managing *Clostridium difficile* as a diagnosis in its own right.

5.4. **Role of the Hospital Infection Prevention and Control Committee:**

The Infection Prevention and Control Committee are responsible for approving this policy & monitoring the compliance and implementation of this policy.
5.5. **Role of Individual Staff:**

Every individual has a clinical and ethical responsibility to carry out effective infection prevention and control procedures, and to act in a way which minimises risk to the patient.

6. **Standards and Practice**

6.1. **Principles of management:**

Clinicians should apply the following mnemonic protocol when managing suspected potentially infectious diarrhoea:

| S | Suspect that a case may be infective where there is no clear alternative cause for diarrhoea |
| I | Isolate the patient and consult with the Infection Prevention and Control team (IPAC) while determining the cause of the diarrhoea |
| G | Gloves and aprons must be used for all contacts with the patient and their environment |
| 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 toxin by sending a specimen immediately |

6.2. **Diagnosis:**

Based on national guidelines the diagnosis of Clostridium difficile is done by a two-test strategy. All stool samples are initially screened by GDH (Glutamate dehydrogenase) assay. GDH concentration in stools increase during Clostridium difficile overgrowth in the gut. Therefore, detection of GDH indicates Clostridium difficile colonisation, but not necessarily toxin production. GDH positive specimens are tested by cytotoxin/ CDAB VIDAS assay for confirmation of toxin production. A positive toxin production confirms the diagnosis of Clostridium difficile infection (Appendix 8 and 9). If a sample is positive for GDH but negative for *Clostridium difficile* toxin, PCR (polymerase chain reaction) may be used to identify the presence of toxigenic C. difficile in symptomatic patients.

- Specimens must be obtained and sent promptly from patients with suspected infective diarrhoea. Stool samples submitted from all hospital inpatients (excluding neonates) will be tested routinely for *Clostridium difficile* toxin.

- In General Practice, only stool samples from patients over 65 years of age will be tested routinely for *Clostridium difficile* toxin. If a GP requires a *Clostridium difficile* toxin test on a younger patient, this must be specifically requested.
• Other departments specifically requiring a *Clostridium difficile* toxin test (e.g. outpatients) must request that test on the form when sending the sample.

• Samples taken early in *Clostridium difficile* infection may be toxin negative.

• Samples should be repeated after 48 hours in patients presenting a clear clinical picture of *Clostridium difficile* infection with ongoing symptoms and a negative initial sample.

• A microbiology request form must be completed appropriately, and the specimen container closed securely to avoid leakage.

6.3. **Management of a patient with diarrhoea/ suspected Clostridium difficile infection:**

(See good practice guide to *Clostridium difficile* – Appendix 6)

6.3.1. **Isolation:**

- The patient must be isolated in a single room, with en-suite facilities where possible and dedicated items of equipment. Where en-suite facilities are unavailable, a dedicated commode should be allocated. Source isolation procedures as per the Isolation Policy must be followed.

- If there are several cases on a ward and there are not enough single rooms to isolate all cases, considerations should be given to cohorting cases in a designated bay with a toilet specifically allocated to the bay.

- Symptoms must be assessed using the Diarrhoea Assessment form CHA2993 and documented using a Bristol Stool Chart (Appendix 3).

- The vacated bed space must be cleaned prior to admitting the next patient as per instructions for deep cleaning in Source Isolation Policy.

6.3.2. **Hand Hygiene**

Staff hands are the most important mode of transmission from patient to patient. *Soap and water* must be used for hand hygiene rather than alcohol gel as soap and water is far more effective. Patients must also be encouraged to wash their hands. If the patient is bed bound, patient wet wipes should be offered for hand hygiene as an alternative to soap and water.

6.3.3. **Maintaining Standards of Care**

Infection control measures should not compromise the patient’s care and should not affect the patient’s freedom to be mobilised or attend other departments for health care related visits.
6.3.4. **Protective Clothing**

Gloves and aprons must be worn for direct patient contact with symptomatic patients or when cleaning the isolation room/ bay. Hands must be washed with soap and water following the removal of protective clothing.

6.3.5. **Family Visitors**

Protective clothing is unnecessary unless involved in personal care. Visitors should be advised to wash their hands immediately prior to leaving the isolation room. Visitors should be advised to avoid eating and drinking within the room. If visitors disclose the fact that they are taking antibiotics, they should be advised of the increased risk of infection.

6.4. **Action required once Clostridium difficile confirmed**

6.4.1. **Isolation precautions**

Transfer to the isolation ward must be considered and should be arranged via the Site Co-Ordinator. Previously described isolation precautions in single room or cohort must be maintained. Hand hygiene and protective clothing measures as above.

6.4.2. **Hand Hygiene**

Staff hands are the most important mode of transmission from patient to patient. Soap and water must be used for hand hygiene rather than alcohol rub - soap and water is far more effective. Patients must also be encouraged to wash their hands. If the patient is bed bound, patient wet wipes should be offered for hand hygiene as an alternative to soap and water.

6.4.3. **Protective Clothing**

Gloves and aprons must be worn for direct patient contact with symptomatic patients or when cleaning the isolation room/ bay. Hands must be washed with soap and water following removal of protective clothing.

6.4.4. **Patient Information**

The affected patient should be provided with an explanation of *Clostridium difficile* infection and an information leaflet.

6.4.5. **Staff**

Staff very rarely suffer from symptoms related to *Clostridium difficile*. However, should staff be receiving antibiotics then they may be at some risk of infection, and therefore should avoid contact with known cases of *Clostridium difficile* infection.
6.4.6. **Family visitors**

Protective clothing is unnecessary unless involved in personal care. Visitors should be advised to wash their hands immediately prior to leaving the isolation room. Visitors should be advised to avoid eating and drinking within the room. If visitors disclose the fact that they are taking antibiotics, they should be advised of the increased risk of infection.

6.4.7. **Cleaning**

A chlorine-based disinfectant must be used for daily routine cleaning of the environment where patients with *Clostridium difficile* are being nursed. This may be single rooms or a cohort bay.

6.4.8. **Treatment**

- *Clostridium difficile* infection must be treated as a diagnosis in its own right.
- Stop antibiotics if possible. This may suffice to prevent diarrhoea developing further. If symptoms are judged enough to warrant treatment, refer to the Antibiotic Policy.
- Refer to treatment algorithm (Appendices 4 & 5).
- Treatment days should be counted from the end of any course of other antibiotics if they cannot be stopped immediately.
- Do NOT give anti-motility agents such as Loperamide (due to the risk of toxic megacolon).
- For advice contact the duty Medical Microbiologist.
- If patient develops bloody diarrhoea or signs of an acute abdomen the possibility of pseudomembranous colitis must be considered, and an urgent surgical opinion should be sought, in addition to further discussions with a Microbiologist.
- After 5 days treatment with metronidazole or vancomycin, if the patient still has diarrhoea reconsider diagnosis.

6.4.9. **Monitoring of condition**

The severity of CDI must be assessed each day by the clinical team as follows:

- Mild CDI is not associated with a raised WCC; it is typically associated with less than 3 stools of type 5–7 on the Bristol Stool Chart (see Appendix 3) per day.
- Moderate CDI is associated with a raised WCC that is <15 x10⁹/L; it is typically associated with 3–5 stools per day.
- Severe CDI is associated with a WCC >15 x 10⁹/L, or an acute rising serum creatinine (i.e. >50% increase above baseline), or a temperature of >38.5°C, or evidence of severe colitis (abdominal or radiological signs). The number of stools may be a less reliable indicator of severity.

- Life-threatening CDI includes hypotension, partial or complete ileus or toxic megacolon, or CT evidence of severe disease.

- NB: Neutropenic patients will have a low WBC/ no WBC. Advice must be sought from a Microbiologist and/or the patient’s Consultant.

An accurate stool chart and fluid balance chart must be maintained & a nutritional assessment undertaken.

6.4.10. Clearance

- It is not necessary to send specimens to confirm a patient is negative for *Clostridium difficile* toxin unless asked to by a member of the IPAC team or Microbiologist.

- Follow up stool samples are of no value since they often remain positive even in patients who have recovered symptomatically.

- Once a patient has had 72 hours without diarrhoea and a return to normal bowel habits, they can be considered non-infectious. Source isolation precautions can then be stopped.

6.4.11. Relapse

If further diarrhoea occurs, relapse must be suspected. The patient must be isolated, and treatment discussed with a Medical Microbiologist. The IPAC team must also be informed.

6.4.12. Transferring of Patients with Clostridium difficile

- Minimising the movement of patients between wards will reduce the exposure of other patients to *Clostridium difficile* when a case of infection has been identified.

- If it is necessary to transfer a patient with *Clostridium difficile* due to clinical need, the receiving area must be informed prior to transfer.

- The IPAC team must be informed of the transfer as soon as possible.

- When a patient has been positive, but symptoms have resolved, the receiving area should be informed. This will ensure that the diagnosis of *Clostridium difficile* is considered if the patient has any further diarrhoea.
6.4.13. **Discharge**

- Medical staff must ensure that the diagnosis of *Clostridium difficile* infection is noted on the information sent to the patient's GP's, and the patient should be advised to report to their GP if they experience further diarrhoea.

- Patients must be advised not to take anti-diarrhoeal agents such as Loperamide, if they experience further diarrhoea.

- If a patient still has symptoms on discharge, agencies that will provide care for the patient must be informed and the information completed on the transfer form.

6.4.14. **Cleaning of the vacated bed space**

Deep cleaning of the single room/bay must be undertaken once the bed space becomes vacant (Appendix 7). Hydrogen Peroxide Vapour should be used for the terminal cleaning of the single room.

After a case of *Clostridium difficile*, the mattress (static and pressure relieving) must be cleaned with a chlorine-based detergent. A check of the mattress integrity must be carried out. Any potential damage must be reported to the equipment library immediately so that an alternative mattress can be supplied. All items of equipment must be cleaned (having consulted with manufacturer’s guidance) with a chlorine-based detergent.

6.5. **Increased Incidence and Outbreak**

**A period of increased incidence (PII) is defined as:** two or more new cases (occurring >48 hours post admission, not relapses) in a 28-day period on a ward.

**An outbreak of *Clostridium difficile* diarrhoea:** 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.

**The following actions must be undertaken if a PII is identified on a ward**

- The Care Group Triumvirate, Matron, Ward Sister/Charge Nurse must be informed by the IPAC team.

- A weekly *Clostridium difficile* ward audit must be undertaken jointly by the Ward Staff and the IPAC team, using the CDI acquisition enhanced measures audit form.

- The audit should continue until the weekly score is >80% in the three sections for three consecutive weeks and there have been no further >48 hours cases of CDI on the ward during that period. The audit results must be fed back to the Matron.

- A weekly antibiotic review in the ward (using local tools); must be carried out by the antibiotic Pharmacist.
• The whole ward must be cleaned with chlorine-based detergent agent until no further symptomatic patients are present on the ward. Each bed space must be cleaned separately with separate cloths.

• The Microbiology Laboratory must use the HPA *Clostridium difficile* Ribotyping Network for England (CDRNE) or Centre for Infections to undertake PCR (polymerase chain reaction) Ribotyping of all isolates from patients in the ward.

• An incident meeting must be held as determined by the size and rate of growth of the PII by assessment of the situation by the Director of Infection Prevention & Control (DIPC) and/or the duty Microbiologist with the Clinical Director and Consultants, depending on the number of cases.

• The IPAC team should carry out an automatic review of ward PIIIs each week.

6.4.1. **Root Cause Analysis (RCA)**

A RCA must be undertaken for all reported cases of *Clostridium difficile*. The investigation will be co-ordinated by the IPAC team (see Appendix 10).

6.4.2. **Death**

• If *Clostridium difficile* causes or contributes to the death of a patient, the clinician in charge of the patient’s care must discuss the case with the coroner prior to the death certificate being issued (this is a local policy agreement with the coroner).

• If a patient with *Clostridium difficile* dies, the death certificate must state whether *Clostridium difficile* was part of the sequence of events leading directly to death or whether it was the underlying cause of death. If either case applies *Clostridium difficile* should be mentioned in part 1 of the certificate.

• If *Clostridium difficile* was not part of the sequence of events leading directly to death but contributed in some way to it, this should be mentioned in part 2.

• A root cause analysis investigation must be implemented for patients where *Clostridium difficile* is mentioned on part 1 of the death certificate.

7. **Dissemination and Implementation**

This policy will be implemented via the following routes:

• Information regarding the policy will be included in the IPAC newsletter.

• The policy will be included in the Trust’s Document Library.

• The policy will be circulated to all Link Practitioners and Matrons.
8. Monitoring compliance and effectiveness

<table>
<thead>
<tr>
<th>Information Category</th>
<th>Detail of process and methodology for monitoring compliance</th>
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<tr>
<td>Element to be monitored</td>
<td>The management of patients with <em>Clostridium difficile</em>.</td>
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<tr>
<td>Lead</td>
<td>IPAC team.</td>
</tr>
<tr>
<td>Tool</td>
<td>Through practice review and audits recorded on a word or excel template.</td>
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<tr>
<td>Frequency</td>
<td>Weekly during ward visits and documented on ICNet.</td>
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<tr>
<td>Reporting arrangements</td>
<td>Reporting to Ward Leader on the day if isolation not carried out appropriately. Reporting to Microbiologists any concerns regarding treatment. Report by exception to the Infection Prevention and Control Steering Group persistent non-compliance with policy.</td>
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<tr>
<td>Acting on recommendations and Lead(s)</td>
<td>Ward Leader to take immediate action where non-compliance with policy identified.</td>
</tr>
<tr>
<td>Change in practice and lessons to be shared</td>
<td>Required changes to practice will be identified and actioned immediately. A lead member of the team will be identified to take each change forward where appropriate. Lessons will be shared with all the relevant stakeholders.</td>
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9. Updating and Review

This policy will be reviewed within 3 years.

10. Equality and Diversity

10.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the ‘Equality, Inclusion & Human Rights Policy’ or the Equality and Diversity website.

10.2. Equality Impact Assessment

The Initial Equality Impact Assessment Screening Form is at Appendix 2.
## Appendix 1. Governance Information

<table>
<thead>
<tr>
<th>Information Category</th>
<th>Detailed Information</th>
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<tr>
<td><strong>Document Title:</strong></td>
<td>Prevention and Management of Clostridium Difficile Infection Policy V7.0</td>
</tr>
<tr>
<td><strong>This document replaces (exact title of previous version):</strong></td>
<td>Prevention and Management of Clostridium Difficile Infection Policy V6.0</td>
</tr>
<tr>
<td><strong>Date Issued/Approved:</strong></td>
<td>February 2022</td>
</tr>
<tr>
<td><strong>Date Valid From:</strong></td>
<td>March 2022</td>
</tr>
<tr>
<td><strong>Date Valid To:</strong></td>
<td>March 2025</td>
</tr>
<tr>
<td><strong>Directorate / Department responsible (author/owner):</strong></td>
<td>Infection Prevention and Control Department</td>
</tr>
<tr>
<td><strong>Contact details:</strong></td>
<td>01872 254969</td>
</tr>
<tr>
<td><strong>Brief summary of contents:</strong></td>
<td>This policy has been developed to provide a practical document to equip all healthcare staff at the Royal Cornwall Hospitals NHS Trust with the necessary information on the recognition, management and treatment of Clostridium difficile infection.</td>
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<tr>
<td><strong>Suggested Keywords:</strong></td>
<td>GDH, Clostridium difficile, diarrhoea.</td>
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| **Target Audience:** | RCHT: Yes  
                      CFT: No  
                      KCCG: No |
<p>| <strong>Executive Director responsible for Policy:</strong> | Director of Nursing, Midwifery and Allied Health Professionals |
| <strong>Approval route for consultation and ratification:</strong> | Infection Prevention and Control Committee IPAC Steering Group meeting |
| <strong>General Manager confirming approval processes:</strong> | Louise Dickinson |
| <strong>Name of Governance Lead confirming approval by specialty and care group management meetings:</strong> | Louise Dickinson |
| <strong>Links to key external standards:</strong> | Regulation 12 |</p>
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<td>Health Protection Agency. Regional Microbiology Network. (2007) A good practice guide to control <em>Clostridium difficile</em>.</td>
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<th>Clinical / Infection Prevention &amp; Control</th>
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### Version Control Table

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<th>Changes Made by</th>
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<tr>
<td>01 Jan 08</td>
<td>V1.0</td>
<td>Initial issue.</td>
<td>IPAC Team</td>
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<tr>
<td>11 Mar 10</td>
<td>V2.0</td>
<td>Revised and updated.</td>
<td>Louise Dickinson Consultant Nurse/ DIPC</td>
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<tr>
<td>21 Jan 13</td>
<td>V3.0</td>
<td>Revised and re-formatted. Inclusion of Hydrogen Peroxide Vapour for deep clean.</td>
<td>Louise Dickinson Consultant Nurse/ DIPC</td>
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<tr>
<td>18 Oct 13</td>
<td>V4.0</td>
<td>GDH testing procedure added. Note made regarding treatment of third episode of Clostridium difficile.</td>
<td>Louise Dickinson Consultant Nurse/ DIPC</td>
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<tr>
<td>29 Jan 16</td>
<td>V5.0</td>
<td>Specific information on GDH added.</td>
<td>Dr Chakrabarti Infection Control Doctor</td>
</tr>
<tr>
<td>28 Nov 18</td>
<td>V6.0</td>
<td>Full review, reformatted, current Bristol Stool Chart added, reference to Care</td>
<td>Jean James</td>
</tr>
<tr>
<td>Date</td>
<td>Version Number</td>
<td>Summary of Changes</td>
<td>Changes Made by</td>
</tr>
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<tr>
<td>02 Dec 21</td>
<td>V7.0</td>
<td>Groups added, Health Protection Agency flow chart removed, deep clean schedule updated, treatment. Algorithm updated, GDH Protocol updated</td>
<td>IPAC Lead Nurse</td>
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<td></td>
<td>Full review. Revised and updated. Information added regarding the use of PPI's. Treatment Algorithms updated.</td>
<td>Lauren Duncanson IPAC Specialist Practitioner, Liam Wade, Antimicrobial &amp; HIV Specialist Pharmacist</td>
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All or part of this document can be released under the Freedom of Information Act 2000

This document is to be retained for 10 years from the date of expiry.
This document is only valid on the day of printing

Controlled Document
This document has been created following the Royal Cornwall Hospitals NHS Trust Policy for the Development and Management of Knowledge, Procedural and Web Documents (The Policy on Policies). It should not be altered in any way without the express permission of the author or their Line Manager.
Appendix 2. Equality Impact Assessment

Section 1: Equality Impact Assessment (EIA) Form

The EIA process allows the Trust to identify where a policy or service may have a negative impact on an individual or particular group of people.

For guidance please refer to the Equality Impact Assessment Policy (available from the document library) or contact the Equality, Diversity & Inclusion Team rcft.inclusion@nhs.net

<table>
<thead>
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<th>Information Category</th>
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<td>Prevention and Management of Clostridium Difficile Infection Policy V7.0</td>
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<td>Directorate and service area:</td>
<td>Infection Prevention and Control</td>
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<tr>
<td>Is this a new or existing Policy?</td>
<td>Existing</td>
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<tr>
<td>Name of individual completing EIA (Should be completed by an individual with a good understanding of the Service/Policy):</td>
<td>Lauren Duncanson</td>
</tr>
<tr>
<td>Contact details:</td>
<td>01872 254969</td>
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<tbody>
<tr>
<td>1. Policy Aim - Who is the Policy aimed at? (The Policy is the Strategy, Policy, Proposal or Service Change to be assessed)</td>
<td>To provide staff with the necessary information and knowledge to effectively reduce the risk of Clostridium difficile introduction to the Trust, and to put in place systems to control and contain cases of Clostridium difficile as and when they occur.</td>
</tr>
<tr>
<td>2. Policy Objectives</td>
<td>To provide clinical staff with guidelines for management of patients with Clostridium difficile and to identify strategies for the prevention and control of cross infection to other patients, staff and visitors.</td>
</tr>
<tr>
<td>3. Policy Intended Outcomes</td>
<td>To reduce the risk of transmission of infection.</td>
</tr>
<tr>
<td>4. How will you measure each outcome?</td>
<td>Through route cause analysis.</td>
</tr>
<tr>
<td>5. Who is intended to benefit from the policy?</td>
<td>All staff and patients.</td>
</tr>
<tr>
<td>Information Category</td>
<td>Detailed Information</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------------------</td>
</tr>
</tbody>
</table>
| 6a. Who did you consult with? (Please select Yes or No for each category) | - Workforce: Yes  
- Patients/visitors: No  
- Local groups/system partners: No  
- External organisations: No  
- Other: No |
| 6b. Please list the individuals/groups who have been consulted about this policy. | Please record specific names of individuals/groups:  
Infection Prevention and Control Committee  
IPAC Steering Group |
| 6c. What was the outcome of the consultation? | Policy approval |
| 6d. Have you used any of the following to assist your assessment? | National or local statistics, audits, activity reports, process maps, complaints, staff or patient surveys: No |

### 7. The Impact

Following consultation with key groups, has a negative impact been identified for any protected characteristic? Please note that a rationale is required for each one.

Where a negative impact is identified without rationale, the key groups will need to be consulted again.

<table>
<thead>
<tr>
<th>Protected Characteristic</th>
<th>(Yes or No)</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>No</td>
<td>Infections may affect any age</td>
</tr>
<tr>
<td>Sex (male or female)</td>
<td>No</td>
<td>Infections may affect any gender</td>
</tr>
<tr>
<td>Gender reassignment (Transgender, non-binary, gender fluid etc.)</td>
<td>No</td>
<td>Infections may affect any gender</td>
</tr>
<tr>
<td>Race</td>
<td>No</td>
<td>Infections may affect any groups.</td>
</tr>
<tr>
<td>Disability (e.g. physical or cognitive impairment, mental health, long term conditions etc.)</td>
<td>No</td>
<td>Infections may affect all regardless of disability</td>
</tr>
<tr>
<td>Religion or belief</td>
<td>No</td>
<td>Infections may affect any religion</td>
</tr>
<tr>
<td>Protected Characteristic</td>
<td>(Yes or No)</td>
<td>Rationale</td>
</tr>
<tr>
<td>--------------------------------------------------------------</td>
<td>-------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Marriage and civil partnership</strong></td>
<td>No</td>
<td>Infections may affect all people – married or otherwise</td>
</tr>
<tr>
<td><strong>Pregnancy and maternity</strong></td>
<td>No</td>
<td>Although unlikely to occur in this group cases have been reported</td>
</tr>
<tr>
<td><strong>Sexual orientation</strong> (e.g. gay, straight, bisexual, lesbian etc.)</td>
<td>No</td>
<td>Infections may affect all regardless of sexual orientation</td>
</tr>
</tbody>
</table>

A robust rationale must be in place for all protected characteristics. If a negative impact has been identified, please complete section 2. If no negative impact has been identified and if this is not a major service change, you can end the assessment here.

I am confident that section 2 of this EIA does not need completing as there are no highlighted risks of negative impact occurring because of this policy.

Name of person confirming result of initial impact assessment: Lauren Duncanson

If a negative impact has been identified above OR this is a major service change, you will need to complete section 2 of the EIA form available here:

Section 2. Full Equality Analysis
## Appendix 3. Bristol Stool Chart

### Indication and frequency for monitoring

<table>
<thead>
<tr>
<th>Date / Time</th>
<th>Type of stool (use number from Bristol Stool Chart)</th>
<th>Quantity of stool</th>
<th>Pain and/or distress when passing stool</th>
<th>Interventions eg. enema, laxatives etc</th>
<th>Date specimen obtained</th>
<th>Signed and designation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Large</td>
<td>Yes</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Medium</td>
<td>Yes</td>
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<tr>
<td></td>
<td></td>
<td>Small</td>
<td>Yes</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>None</td>
<td>Yes</td>
<td></td>
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<td></td>
<td>No</td>
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<td>Some</td>
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</tbody>
</table>

### Nursing Documentation

**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 with ragged edges, a mushy stool

**Type 7**: Watery, no solid pieces. Entirely liquid

**Types 1 - 2**: Indicate constipation

**Types 3 - 4**: Normal stools

**Types 5 - 7**: Diarrhoea

Refer to Risk Assessment
Appendix 4. Treatment Algorithm - First episode

FIRST EPISODE of *Clostridium difficile* infection (CDI)

- Diarrhoea **AND** one of the following:
  - Positive *C. Difficile* toxin test **OR** results of *C. Difficile* toxin test pending **AND** clinical suspicion of CDI

- If clinically appropriate discontinue non-*C. Difficile* antibiotics to allow normal intestinal flora to be re-established
  - Suspected cases must be isolated

- **Review GI medications:**
  - Proton pump inhibitors
  - Antimotility agents e.g. Loperamide – not recommended in acute CDI
  - AKI risk medications (e.g. NSAIDs, ACEi, diuretics)

- **Oral Vancomycin 125mg QDS for 10 days**
  - If poor response to vancomycin or not tolerated, consider:
    - **Fidaxomicin 200mg 12-hourly for 10 days**
  - **Note:** Should not normally be considered treatment failure until day 7 of treatment

- **DAILY ASSESSMENT**
  - (Include review of severity markers, fluid/electrolytes)

- **Symptoms not improving or worsening**
  - Should not normally be deemed treatment failure till day 7 of treatment
  - However, if evidence of severe CDI continues or worsens:
    - Surgery/GI/Micro consultation

- **Consider (under microbiology advice only):**
  - **Oral Vancomycin up to 500mg QDS for 10 days**
  - **WITH** or **WITHOUT:**
    - **Metronidazole IV 500mg TDS for 10 days**

- **If no improvement**
  - Further discussion with Surgery/GI/Micro
Appendix 5. Treatment Algorithm – Relapse

Relapse *C. difficile* Infection (CDI)

Relapse defined as *C. Difficile* infection **WITHIN** 12 weeks of symptom resolution of previous case

Relapse (within 12 weeks of symptom resolution)
Diarrhoea **AND** one of the following:
- Positive *C. Difficile* toxin test **OR** results of *C. Difficile* toxin test pending **AND** clinical suspicion of CDI

If clinically appropriate, **discontinue non-*C. Difficile* antibiotics** to allow normal intestinal flora to be re-established

**Suspected cases must be isolated**

**Review GI medications:**
- Proton pump inhibitors
- Antimotility agents e.g. Loperamide – not recommended in acute CDI
- AKI risk medications (e.g. NSAIDs, ACEi, diuretics)

Fidaxomicin 200mg 12-hourly for 10 days

**DAILY ASSESSMENT**
(Include review of severity markers, fluid/electrolytes)

**Symptoms not improving or worsening**
- Should not normally be deemed treatment failure till day 7 of treatment
- However, if evidence of severe CDI continues or worsens:
  - **Surgery/GI/Micro consultation**

Prevention and Management of Clostridium Difficile Infection Policy V7.0
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Appendix 6. Treatment Algorithm – Recurrence

**Recurrent C. Difficile infection**
Recurrence defined as a further episode of C. Difficile more than 12 weeks after symptom resolution

Recurrence (more than 12 weeks after symptom resolution)
Diarrhoea AND one of the following:
Positive C. Difficile toxin test OR results of C. Difficile toxin test pending AND clinical suspicion of CDI

If clinically appropriate **discontinue non-C. Difficile antibiotics** to allow normal intestinal flora to be re-established
**Suspected cases must be isolated**

Review GI medications:
Proton pump inhibitors
Antimotility agents e.g. Loperamide – not recommended in acute CDI
AKI risk medications (e.g. NSAIDs, ACEi, diuretics)

Oral Vancomycin 125mg 6-hourly for 10 days OR
Fidaxomicin 200mg 12-hourly for 10 days

**DAILY ASSESSMENT**
(Include review of severity markers, fluid/electrolytes)

Symptoms not improving or worsening
Should not normally be deemed treatment failure till day 7 of treatment
However, if evidence of severe CDI continues or worsens:
**Surgery/GI/Micro consultation**
### Appendix 7. Terminal Clean Schedule

| Product                        | Detergent: Hospec liquid detergent  
|-------------------------------| Actichlor solution or Hydrogen Peroxide Vapour |
| Equipment Required            | High dusting tool, High dusting mop head, Dust control system (Applicator tool), Hygienic mop roll, Disposable/microfibre cloths, Mop and Bucket, Cleaning Trolley, Gloves, Warning signs |
| Cleaning Standard             | Area must be clean, tidy and free from potential infection. Area should be safe and inviting for further occupancy |
| Health and Safety (Pre)       | Always clean from top to bottom and outside to in  
|                               | Work in a systematic fashion from left to right  
|                               | Display warning signs  
|                               | Cleanse hands and fit disposable gloves and apron prior to entering room/area  
|                               | Once cleaning in progress no items to be returned to the room |
| Cleaning Method               | Prior to Domestic Services arriving, ward staff should ensure that: |
|                               | All patients and their belongings are removed from the room/area to be cleaned  
|                               | All linen, both clean and dirty, is placed in a soluble bag followed by a white bag for laundering  
|                               | Crockery, cutlery, water jugs and glasses are placed in the dishwasher  
|                               | Medical equipment i.e. monitors, hoists, drip stands, linen holders, Zimmer frames, commodes, scales are cleaned with chlor wipes and placed in the appropriate storage area  
|                               | 1. Operative checks room/area prior to commencement of cleaning  
|                               | 2. Remove curtains (from left to right), place in a clinical waste bag. Dispose of remaining excess items i.e. magazines, newspapers, flowers, plants, serviettes, tissues, disposable bags, air pipes, handtowels, tissues, open cloths in a clinical waste bag  
|                               | 3. Remove all radiator covers  
|                               | 4. Remove all large items of litter and debris from floor and place in a clinical waste bag and tie it with a black tag  
|                               | 5. Dispose of clinical and domestic waste including sharps bins – clinical waste bags will be used for all waste disposals in an isolation room as per clinical waste stream. |
| Using detergent:              | 6. Clean bin from top to bottom and outside in  
|                               | 7. All remaining furniture to be placed to one side of room i.e. beds, tables, chairs, lockers, footstools  
|                               | 8. Clean High Dust area, including vents, high window ledges, around ceiling corners and light fittings (Refer to High Dusting procedure)  
|                               | 9. Hand wash wall from hand height to floor (if surfaces visibly soiled)  
|                               | 10. Clean periphery of room/area especially ledges, notice boards, cupboards inside and out, lamps, Bedside TV units, pipe work, radiators, radiator covers – outside in, light sockets and frames and hand basins (Particular attention to frequently touched areas i.e. door handles, radio control, taps etc)  
|                               | 11. Clean all furniture especially underneath framework i.e. beds, mattresses, pillows, note holders, tables, chairs, lockers, footstools (Refer to damp dusting procedure)  
|                               | 12. Dust Control cleared floor area (Refer to Dust Control procedure)  
|                               | 13. Damp mop cleared floor area. (Refer to Damp mopping procedure)  
|                               | 14. All cleaned furniture to be placed to clean side of room i.e. beds, tables, chairs, lockers, footstools  
|                               | 15. Repeat steps 8-14 |
Appendix 7. Terminal Clean Schedule (continued)

<table>
<thead>
<tr>
<th>Individual responsibilities</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A maximum of 5 operatives can be designated to conduct an outbreak clean in a 4-6 bedded ward bay at a time</td>
<td></td>
</tr>
<tr>
<td>Allocation of tasks / work responsibilities:</td>
<td></td>
</tr>
<tr>
<td>DOMESTIC ASST 1 – STEPS 1-13</td>
<td></td>
</tr>
<tr>
<td>DOMESTIC ASSTs 2 &amp; 3 – STEPS 3-7, 11 &amp; 14</td>
<td></td>
</tr>
<tr>
<td>DOMESTIC ASST 5 – STEPS 2, 16 &amp; 17</td>
<td></td>
</tr>
<tr>
<td>WARD STAFF – all steps prior to the point 1.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Health and Safety (Post)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>All equipment should be thoroughly cleaned after use before leaving the room/area.</td>
<td></td>
</tr>
<tr>
<td>Do not walk on wet floor</td>
<td></td>
</tr>
<tr>
<td>Wipe feet and wash hands thoroughly</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 8. GDH-cytotoxin testing protocol for Clinical Microbiology Lab

GDH VIDAS assay
7 days / week
Mon-Fri run at 14:30

GDH VIDAS assay
7 days/Week
Sat/Sun/Holiday run at 11.00

GDH VIDAS Result
Available at 16.30

GDH VIDAS Result
Available at 13.00

POSITIVE Inform IPAC Team and duty Microbiologist

NEGATIVE

VIDAS Toxin assay

NEGATIVE

EQUIVOCAL / LOW POSITIVE

Cytotoxin assay Mon-Fri

NEGATIVE

POSITIVE Inform IPAC Team and duty Microbiologist

A CASE OF CDAD

Refer to action plan for management of C. difficile based on GDH-Cytotoxin assay
Appendix 9. Action plan for diagnosis & management of Clostridium difficile associated diarrhoea (CDAD) based on GDH & cytotoxin assay

GDH / Cytotoxin assay
(Stool Bristol chart 5-7)

- GDH NEG
  - The diarrhoea is NOT due to CDI
  - No repeat testing within next 48 hrs
  - Possible exclusion of other causes e.g. Norovirus / non-infectious diarrhoea if symptom persists

- GDH POS Cytotoxin POS
  - A case of CDI diarrhoea, CDAD
  - Management as RCHT CDI guideline

- GDH POS Cytotoxin NEG
  - Colonized with CDI, NOT a case or CDAD
  - Isolate if symptomatic
  - Review antibiotics
  - STOP antibiotics if possible
  - STOP PPI/laxative if possible
  - Risk assessment for CDAD

- GDH NEG
  - The diarrhoea is NOT due to CDI

- GDH POS
  - Low risk factors
    - Stool Type 5 or below or Type 6/7 stool < 3 /day
    - No offensive smell
    - Consider oral Probiotics for 7 days if available (if NOT immunosuppressed)
    - Repeat testing after 48hr (only cytotoxin)

- Cytotoxin POS
  - GDH NEG
    - A case of CDAD
    - Repeat cytotoxin positive
    - A case of CDAD
    - Repeat Cytotoxin Negative
    - Review need for Metronidazole/ Vanc
    - Consider Probiotic for 7 days if available
    - Consider repeat after 48hr if symptomatic

- Cytotoxin NEG
  - GDH POS
    - A case of CDAD
    - Repeat Cytotoxin Negative
    - Review need for Metronidazole/ Vanc
    - Consider Probiotic for 7 days if available
    - Consider repeat after 48hr if symptomatic

If 3 samples are negative for cytotoxin, the episode is NOT due to CDAD
Possible exclusion of other causes e.g. Norovirus / non-infectious diarrhoea
Appendix 10. Process to follow on receipt of Clostridium Difficile Post 72 hours of admission

- On receipt of CDI result which has occurred 72 hours after admission, IPCN to complete Datix
  - IPAC Nurse to email the named Consultant and Ward Sister/Charge Nurse the RCA documentation (cc Care Group Triumvirate). Request they return comments within 5 working days.
  - Audit and Surveillance Co-ordinator to enter data onto HCAI DCS
  - IPAC Nurse to email Antimicrobial Pharmacist with patient details and attach the Pharmacy section of the RCA document. Request a return within 5 working days.

- RCA document to be reviewed by Consultant Nurse DIPC/Infection Control Doctor/Consultant Microbiologist/IPAC Lead Nurse.
  - Questions raised to be forwarded to the appropriate member of staff (cc Care Group Triumvirate)
  - All information to be returned within 5 working days

- IPAC Nurse to carry out a retrospective review of similar cases over the past 28 days to identify potential links/hotspots and commence a period of increased incidence where appropriate.

- Consultant Nurse DIPC/Infection Control Doctor/Consultant Microbiologist/IPAC Lead Nurse to review RCA document and responses to questions and determine if there are any lapses of care.
  - Forward completed documentation to the Ward Sister, Consultant and for discussion at the relevant Governance Meeting.
    - Cc: Care Group Triumvirate Matron, DIPC

- Governance Lead to notify IPAC Lead Nurse when this has been approved by the Care Group.
  - IPAC Lead Nurse to contact Governance Team so that the case can be put on the agenda for IRGL (Incident Review Learning Group).

- The learning and progress of the Action plan to be shared at the Infection Prevention and Control Steering Group by the Matron or Care Group Representative.

- Key points of the learning to be added to the Infection Prevention and Control newsletter