Doncaster and Bassetlaw Hospitals NHS
NHS Foundation Trust

Clostridium Difficile Infection (CDI) Policy

This procedural document supersedes: PAT/IC 26 v.3 - Clostridium Difficile Infection (CDI) Policy

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Amendment

Version	Date	Brief Summary of Changes	Author
4	1 March 2016	Revised section on treatment of *Clostridium difficile* infection (5.3)	Dr Ken Agwuh
3	December 2012	• Change of policy title to ensure easier location on the Intranet. • Paragraphs re-named and re-numbered in line with (CORP/COMM 1) • Section/s added on: - Equality Impact Assessment - 2 stage testing - Vapourised Hydrogen Peroxide (VHP)	Maurice Madeo
2	January 2009	Brought up to date using Department of Health guidance – How to deal with the problem (2008). **PLEASE READ IN FULL.**	Maurice Madeo

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1. INTRODUCTION

C. difficile is a bacterium of the *Clostridium* family, a group of Gram-positive, anaerobic bacilli which is widely found in soil and in the intestinal gut of animals. When exposed to unfavorable conditions, *C. difficile* bacteria can form spores which are resistant to drying, heat, stomach acid, alcohol and can survive in the environment for long periods of time. These factors facilitate the transmission of *C.difficile* spores from infected patients and may contaminate the environment, which allows transmission of infection to other vulnerable patients (HPA 2006).

The principle route of transmission is via faecal-oralspread. This may occur directly by close contact with symptomatic patients or more commonly indirect spread from a contaminated environment or via objects such as medical equipment in hospital setting.

C.difficile is found in two thirds of babies, without causing symptoms. Asymptomatic carriage can also be seen in 3-5% of adults. However, the rate of colonisation increases to 10-20% in the elderly, especially if they have been in contact with healthcare facilities.

Factors which increase the risk of *C difficile* infection (CDI) include antibiotic treatment, age 65 or over and underlying morbidity such as, abdominal surgery, cancer, chronic renal disease and enteral feeding (HPA 2006). Antimicrobials suppress other gut bacteria allowing *C.difficile* to proliferate and produce toxins resulting in CDI(DH 2008). Any antibiotic may be associated with CDI but broad spectrum antibiotics, such as cephalosporins and fluoroquinolones are most often linked.

2. PURPOSE

To prevent the spread and reduce the level of *Clostridium difficile* infection (CDI) within Doncaster & Bassetlaw Hospitals. This policy should be read in conjunction with other Infection Prevention and Control Policies, particularly:

- Hand Hygiene (PAT/IC 5)
- Isolation Policy (PAT/IC 16)
- Standard Infection Prevention and Control Precautions Policy (PAT/IC 19)
- Cleaning and disinfection of ward based equipment (PAT/IC 24)

3. DUTIES

This policy covers infection prevention and control management issues for Trust staff this includes:-

- Employees
- Volunteers
- Agency/Locum/Bank Staff
- Contractors whilst working on the Trust premises

Each individual member of staff, volunteer or contracted worker within the Trust is responsible for complying with the standards set out in the Policy. They need to be aware of their personal responsibilities in preventing the spread of infection. It is the responsibility of Directors and Managers to ensure compliance with this standard.

4. INDIVIDUAL AND GROUP RESPONSIBILITIES

All staff working on Trust premises, outreach clinics and community settings, including Trust employed staff, contractors, agency and locum staff are responsible for adhering to this policy, and for reporting breaches of this policy to the person in charge and to their line manager.

Trust Board
The Board, via the Chief Executive, is ultimately responsible for ensuring that systems are in place that effectively manage the risks associated with Healthcare associated infections. Their role is to support the implementation of a Board to Ward culture to support a Zero Tolerance approach to Health Care Associated Infections.

Director of Infection Prevention and Control: Is responsible for the development of infection and prevention and control strategies throughout the Trust to ensure best practice.

The Infection Prevention and Control Team: will ensure that CDI results are communicated to the clinical staff promptly:

- Inform the lead Clinician to undertake a Root Cause Analysis investigation for all CDI patients.
- Provide advice on appropriate placement of patients with suspected or confirmed CDI.
- Produce timely feedback on surveillance of CDI for wards/units, CSU and Trust
- Produce reports on CDI for appropriate committees e.g. Trust Board
- Ensure that all patients over the age of two with *Clostridium difficile* toxin positive stools are reported on the HPA Health Care Associated Infection data capture website undertaking enhanced surveillance on each CDI patient

Co-ordinate the implementation of this policy and review its contents regularly.

Antimicrobial pharmacist and ward pharmacists

Monitor the use of antimicrobial agents within the Trust and feedback on areas for improvement.

Daily review of drug charts by ward pharmacists to check compliance with antibiotic guidelines and to discuss deviations with the ward or prescribing doctor.

Microbiology staff responsibilities

Ensure that testing for CDI is available 7 days per week.

Ensure that *Clostridium difficile* laboratory results are communicated promptly to clinical teams.

Provide timely advice to clinicians regarding appropriate CDI treatment.

AMT ward rounds to review antibiotic prescriptions, changing prescriptions where necessary and giving verbal feedback to the ward doctor.

Consultant and other medical staff responsibilities

Use antibiotics prudently and according to the Antibiotic Prescribing Policy.

Review antibiotic prescriptions on a daily basis on ward rounds, amending treatment according to clinical response and culture results, stopping unnecessary prescriptions, changing those that do not comply with the current Antibiotic Policy or reviewing medication that exacerbate CDI.

Commence treatment of patients with confirmed CDI in accordance with this policy or Microbiology advice.

Participate in Root Cause Analysis investigations to learn lessons and implement best practice.

Ensure that all patients with CDI are kept under review by Microbiology and other specialists with an interest in *C. difficile*

Ensure *C difficile* included on death certificate if causes or contributes to patients death.

Matrons

Are responsible for ensuring implementation within their area of best practice by undertaking regular audits and unannounced ward rounds. Any deficits identified will be addressed immediately to facilitate compliance with policy.

Ward and Department Managers

Are responsible for ensuring implementation within their area, and for ensuring all staff who work within the area adhere to the principles at all times.
Nurse in Charge must ensure that:

- Single room accommodation is used for symptomatic patients.
- The correct infection control measures are implemented (as below).
- Patient is placed on the *Clostridium difficile* nursing pathway e.g. IPOC
- Personal protective equipment is available.
- Toilets and commodes are cleaned after each use using approved disinfectant.
- Daily environmental cleaning takes place using approved disinfectant.
- Patients are not discharged/transferred to another area without prior communication with receiving ward and completion of inter/intra hospital transfer form.
- A stool chart is commenced, maintained and monitored in accordance with the Bristol Stool chart (Appendix 5).
- High impact intervention for *C.difficile* on dashboard completed.
- Escalate if isolation facilities are unavailable to matron / Site Manager.

Housekeeping responsibility

Routinely maintain a clean environment to reduce level of environmental contamination with *C.difficile* spores.

Provide special cleaning of vacated bed spaces/isolation rooms on discharge/transfer of patients with suspected or confirmed CDI using difficil S and hydrogen peroxide vapour.

Undertake environmental cleaning audits as per national cleaning specifications and liaise with ward managers and matrons if audits score fall below required levels.

Clinical Site Managers

Are responsible for ensuring patients are placed in accordance with this policy, and for escalating any situations where safe placement cannot be achieved.

On-call Managers

Are responsible for providing senior and executive leadership to ensure implementation of this policy, and for ensuring infection risks are fully considered and documented when complex decisions need to be made regarding capacity and patient flow.

5. MANAGEMENT OF PATIENT WITH CLOSTRIDIUM DIFFICLE DIARRHOEA

5.1 Clinical Features

The illness ranges from mild self-limiting diarrhoea to explosive watery and foul smelling diarrhoea.

Symptoms are often associated with antibiotic therapy.

The patient may also have fever and abdominal cramps.

Occasionally *Clostridium difficile* can lead to potentially fatal pseudo membranous colitis and perforation of the bowel.

a. Definition of Diarrhoea

One episode of diarrhoea, defined either as stool loose enough to take the shape of a container used to sample it or as Bristol Stool Chart types 5–7 (Appendix 1) that is not attributable to any other cause, including medicines (Appendix 2), and is not usual for the individual.

b. Diagnosis

Clostridium difficile causes a serious, occasionally fatal infection. The laboratory diagnosis of *C. difficile* infection (CDI) needs to be accurate to ensure optimal patient management, infection control and reliable surveillance.

The revised Department of Health guidance now recommends a **two stage** testing process is undertaken by the laboratory. This now means the stool sample will be tested for GDH (glutamate dehydrogenase) and if detected will then progress to be tested for the presence of toxins.

If GDH is identified the result is termed '**GDH positive**'. The use of Antibiotics on such patients must be reviewed, as these patients are high risk for developing *C. difficile* infection. If diarrhoea is present, the patient must be isolated and reviewed by IPC team.

If the stool samples is **GDH positive** it will then be processed for detection of toxins (A and B) which are produced by pathogenic *C.difficile* bacteria. A positive toxin test is reported as ***Clostridium difficile*** **toxin detected** and is consistent with a diagnosis of *Clostridium difficile* infection. The patient must be isolated and treated as per policy.

Clostridium difficile should be managed as a diagnosis in its own right and Clinicians (doctors and nurses) should apply the following mnemonic protocol (SIGHT) 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 (IPCT) 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

Sampling

Only test stools from symptomatic patients, i.e. only liquid/loose stools that take the shape of the container (Bristol Stool Chart types 5–7). (See Appendix 1)

• Do not retest for *C. difficile* toxin (CDT) positive cases if patients are still symptomatic within a period of 28 days unless symptoms resolve and then recur and there is a need to confirm recurrent CDI – discuss with IPCT.

- More than one test per patient may be required if the first test is negative but where there is a strong clinical suspicion of CDI. Retest a second sample 24 hours later.

- In suspected cases of 'silent' CDI, such as ileus, toxic megacolon or pseudomembranous colitis without diarrhoea, other diagnostic procedures, such as colonoscopy, white cell count (WCC), serum creatinine and abdominal CT (computerised tomography) scanning, may be required.

- It is essential to document the date and time that a specimen has been taken in order to avoid unnecessary and costly repeats.

- There is no need to submit further samples to establish when the patient is no longer infectious once they have been identified as being CDI toxin positive, this should be determined by the clinical picture e.g. asymptomatic for >48hrs.

There is no need to have a negative stool sample prior to patients being transferred to care homes or other institutions.

Patients who present with a **GDH +ve** sample but continue to have diarrhoea should be retested, please discuss all cases with the Infection Prevention and Control Team or consultant microbiologist. These patients **MUST** be isolated until symptom free for >48 hrs.

Recently diagnosed cases
Patients with CDI will be offered a wallet size card which states previous history of CDI. This card should be then given to medical staff who will then take the patients previous history into consideration when prescribing antimicrobials. The IPC team will also electronically add the CDI alert notification onto PAS system; this will remain insitu for 6 months.

5.2 Transmission

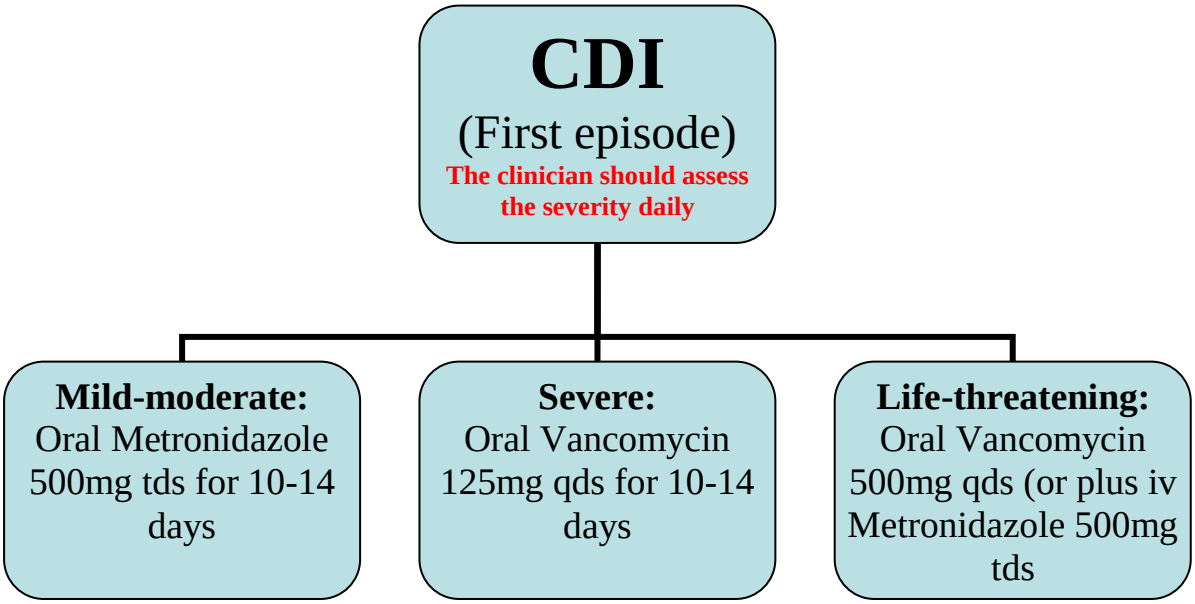
- Various studies show that 2-3% of healthy adults and possibly 20-30% of hospitalised patients may harbour *Clostridium difficile* in their faecal flora.
- Direct spread from patient to patient by faecal oral route.
- Direct spread through the hands of healthcare workers.
- Indirect spread from the patient to the environment and from the environment to the patient.

5.3 Treatment of Clostridium Difficile Infection

It is important to discontinue any inciting antimicrobial agent(s) if possible or discuss with consultant microbiologist on best narrow spectrum antimicrobial agent(s) to treat other ongoing infections.

Not all patients who test positive for *C. difficile* will require treatment, as the loose stool may resolve after stopping the inciting antimicrobial agent(s) – this will be determined by the consultant microbiologist.

Treatment algorithm for patients presenting with first episode of *Clostridium difficile* infection (CDI):



Daily assessment as follows and should be documented in the medical notes:

- **Mild CDI** is not associated with a raised WCC: it is typically associated with <3 stools of types 5–7 on the Bristol Stool Chart per day.
- **Moderate CDI** is associated with a raised WCC but <15 10^9/L: it is typically associated with 3–5 stools per day.
- **Severe CDI** is associated with a WCC >15 10^9/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).

In severe or life-threatening disease the number of stools may be a less reliable indicator of severity.

Patient does not necessarily have all the above criteria to be defined as severe (Appendix 2).

- **Life-threatening CDI** includes hypotension, partial or complete ileus or toxic megacolon, or CT evidence of severe disease.
    - oral vancomycin up to 500 mg qds for 10–14 day via nasogastric tube or rectal installation plus IV metronidazole 500 mg tds

NOTE:

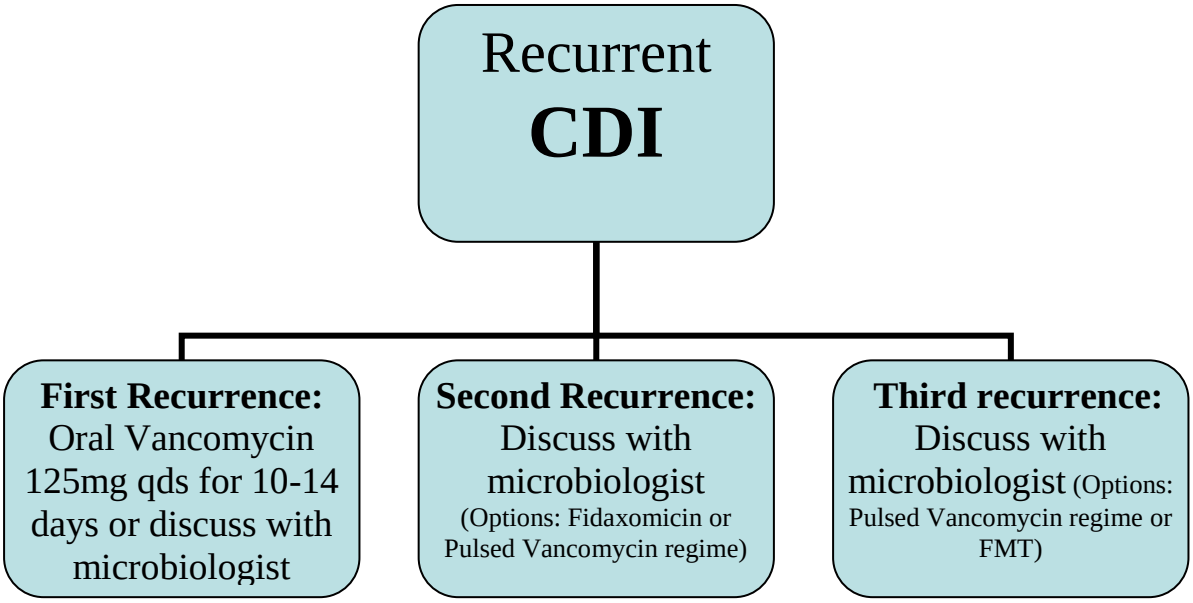
- **First Episode of CDI:** Patient who present with their first episode of CDI and fail to respond to oral metronidazole 400 mg tds within 5-7 days of treatment SHOULD switch to oral Vancomycin 125mg qds for 10-14 days.

- **First/Second Episode of CDI:** Patients on oral Vancomycin 125 mg qds with failure to respond to treatment with 5-7 days SHOULD lead to consult with Microbiologist for further advice.

- **Intolerant/allergy to Metronidazole:** Patients who are intolerant / allergic to metronidazole and for pregnant / breastfeeding women, Vancomycin should be used at 125mg qds for 10-14 days.

- **Anti-motility:** It is essential that all staff are aware that anti motility agents are contraindicated in symptomatic *Clostridium difficile* positive patients.

Treatment algorithm for patients presenting with recurrent episodes of *Clostridium difficile* infection (CDI):



If diarrhoea persists despite 20 days treatment but the patient is stable and the daily number of type 5–7 motions has decreased, the WCC is normal, and there is no abdominal pain or distension, the persistent diarrhoea may be due to post- infective irritable bowel syndrome.

Patient may be treated with an anti-motility agent such as loperamide 2 mg prn (instead of metronidazole or vancomycin) and if subsequently GDH negative. The patient should be closely observed for evidence of a therapeutic response and to ensure there is no evidence of colonic dilatation.

6. INFECTION CONTROL MEASURES

If asymptomatic, no special measures are necessary.

If symptomatic:

6.1 Isolation

Patients with suspected potentially infectious diarrhoea (at least one episode of diarrhoea) should be moved **immediately** **into** a single room with a self-contained toilet and its own hand basin. A sign should be placed on the door stating "ISOLATION PRECAUTIONS"

Specimens should be sent immediately for *C. difficile* toxin testing (see SIGHT protocol).

If the room does not have its own toilet facilities then a dedicated commode should be arranged.

The patient should remain isolated until there has been no diarrhoea (types 5–7on the Bristol Stool Chart) for at least **48 hours, and a formed stool** has been achieved (types 1–4).

If patient needs to attend a different/another department for investigations they should be last on the list unless otherwise clinically indicated and communicate effectively with receiving area.

6.2 Hand Hygiene

All healthcare workers should wash their hands with **soap and water** after contact with patients with suspected or proven CDI or any other infective diarrhoea, and after contact with the patient's immediate environment or body fluids.

Alcohol hand rub must not be used as an alternative to soap and water. However, alcohol hand rub can be used for hand hygiene *before* contact with the patient and between tasks on the same patient.

Patients must also be encouraged to wash their hands. If the patient is bed bound, wet patient wipes can be offered for hand hygiene as an alternative to soap and water especially before meals and after using the toilet.

6.3 Personal Protective Equipment

All healthcare workers must use disposable gloves and aprons for any physical contact with such patients, including the patient's immediate environment or when handling body fluids, in line with the SIGHT protocol. Gloves and aprons should be removed after use and disposed of in line with infection control guidance before washing hands as above.

Protective clothing is advised if the visitor undertakes physical care of the patient. Advise visitors to wash their hands immediately prior to leaving the isolation room. Advise visitors not to eat or drink 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 Laundry

Should be categorised as infected.

6.5 Environmental Cleaning

Environmental cleaning of rooms or bed spaces of *C difficile* patients should be carried out at least twice daily using approved disinfectant.

All commodes, toilets and bathroom areas of CDI patients should be cleaned after **each use** with approved cleaning agents.

All clinical areas should be regularly assessed for cleanliness and results fed back to clinical teams, cleaning teams and the ward Matron. Areas of concerns should be addressed immediately.

The nurse in charge must inform the service assistant on a daily basis which rooms need to be cleaned.

Once the patient has been symptom free for forty-eight hours the room should be terminally cleaned and HPV undertaken and hang new curtains.

This should take place even if the patient is not moved from the single room to the main ward area.

Terminal cleaning of a mattress, bed space, bay or ward area after the discharge, transfer or death of a patient with CDI should be thorough. All areas should be cleaned using approved cleaning agents, and the curtains should be changed.

Medical equipment should ideally be for single patient use, but if that is not possible it should be thoroughly cleaned before and after each new patient use.

Vapourised Hydrogen Peroxide (VHP) 'Fogging'

VHP has been shown to reduce HCAI's, by decontaminating environments of a wide range of micro-organisms including *C difficile* spores. This process must be undertaken on patient discharge e.g. single room / bay and also on a rolling programme within high risk units.

7. CONTINUOUS LOCAL SURVEILLANCE

The Trust will record the number of patients with *Clostridium difficile* within inpatient/ outpatient facilities, patients requiring surgery and patients dying where CDI either caused or contributed to the death. This information will be fed back to the Infection Prevention and Control Committee (IPCC).

- A root cause analysis should be carried out on all C *difficile* positive patients who acquire the infection >3 days of being an inpatient.

- All C *difficile* positive cases that require surgical intervention or have *C difficile* on Part 1 A, of the death certificate will be recorded and fed back to the IPCC (Appendix 3).

8. INCREASED INCIDENCE OUTBREAKS

A period of increased incidence (PII) of CDI is defined as two or more new ward acquired cases in a 28 day period on a ward/unit. These cases will be managed as a serious incident if proven to be cross-infection e.g. genetically linked.
Depending on the size and rate of growth of the PII, action required may include:

- Holding an incident meeting
- Partial closure of a bay to new admissions
- Closure of a ward to new admissions
- Deep cleaning of an area or entire ward using difficil S and HPV
- Review of antimicrobial prescribing
- Review of patient equipment cleaning
- PCR Ribotyping

Outbreak Definition
Two or more cases, caused by the same strain, related in time and place, over a 28 day period that is based on the date of onset of the first case.

Outbreak of *Clostridium difficile* Infection
Report all outbreaks as a Serious Incident. This should be initiated by the CSU responsible for the care of patients.

The ward will carry out a Root Cause Analysis (RCA) of all outbreaks in conjunction with the outbreak control team.

9. DEATH CERTIFICATES

If a patient with *Clostridium difficile* dies, the death certificate should state whether *C difficile* was part of the sequence of events leading directly to death or whether it was the underlying cause of death on Part 1 of the certificate. If C *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. Doctors have a legal duty to mention C *difficile* on a death certificate if it was part of the sequence of events directly leading to death or contributed in some way.

10. TRAINING AND SUPPORT

Staff will receive instructions and direction regarding infection prevention and control practice and information from a number of sources:-

- Trust Induction
- Trust Policies and Procedures available on the intranet
- Ward/departmental/line managers
- As part of the mandatory infection control education update sessions which can be delivered by a number of formats e.g. face to face and e-learning
- Infection Prevention and Control Educational displays/ posters
- Trust Infection Prevention and Control Team
- Infection Prevention and Control Link Practitioners will be provided with education sessions about the policy at their meetings which will facilitate local training and supervision to take place.
- Advice is also available from Trust IPC intranet
- Members of the public seeking advice and/or guidance on IPC issues are to be advised to contact the IPC department initially.

11. MONITORING COMPLIANCE WITH POLICY

This policy will be reviewed routinely every three years unless, when new national or international guidance are received and when newly published evidence demonstrates need for change to current practices or any action required from Root Cause Analysis Serious Incident Investigation Report. The policy will be approved and ratified by the Infection Prevention and Control Committee.

Monitoring	Who	Frequency	How Reviewed
Compliance with policy to negate cross-infection	The Infection Prevention and Control Practitioners	Weekly	"Alert organism review" to monitor adherence with the policy.
High Impact Intervention to be undertaken for CDI	Nurse on duty each Ward	Until 100% compliance achieved for 7 consecutive days.	"Alert organism review" to monitor adherence with the policy.
Hand Hygiene Compliance	Ward Manager / IPCT	Monthly	Infection Prevention & Control Committee and part of ward accreditation system.
Audits in ward rounds activities	Matron	Weekly	Deficits identified will be addressed via agree action plan to comply with policy.
Training needs for infection prevention and control	Ward and Department Managers Training and Education Department	Annually	Professional Development Appraisal. Attendance will be captured by the via OLM system.

12. DEFINITIONS

CDI: - Clostridium difficile Infection

RCA: - Root Cause Analysis

PII: - Period of increased incidence

SI: - Serious Incident

13. EQUALITY IMPACT ASSESSMENT

As part of its development, this policy and its impact on equality, an Equality Impact Assessment (EIA) has been conducted in line with the principles of the Equality Impact Assessment Policy CORP/EMP 27.

The Purpose of EIA is to minimise and if possible remove and disproportionate impact on employees and or patients on the grounds of race, sex, disability, age, sexual orientation or religious belief. No detriment was identified. (see Appendix 6).

14. ASSOCIATED TRUST PROCEDURAL DOCUMENTS

This policy should be read in conjunction with other Trust Policies and protocols for the prevention and control of HCAI in line with the Health and Social Care Action 2008. In particularly:

- Hand Hygiene – PAT/IC 5
- Glove Use Policy – CORP/HSFS 13
- Spillages of Blood and Other Body Fluids – PAT/IC 18
- Cleaning and disinfection of ward based equipment – PAT/IC 24
- Pathology Specimens – Collection & Handling of Pathology Specimens – PAT/IC 11
- Laundry Policy – Bagging Procedure for Linen – PAT/IC 21
- Waste Management Policy - CORP/HSFS 17
- Mental Capacity Act 2005 – Policy and Guidance, including Deprivation of Liberty Safeguards (DoLS) - PAT/PA 19
- Privacy and Dignity Policy – PAT/PA 28

15. REFERENCES

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Surawicz C M; Brandt L J et al. (2013). Guidelines for Diagnosis, Treatment and Prevention of Clostridium difficile Infections. *Am J Gastroenterol* 2013; 108:478-498.

APPENDIX 1 – THE BRISTOL STOOL FORM SCALE

The Bristol Stool Form Scale

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 snack, 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

APPENDIX 2 – DAILY SCORECARD TO DETERMINE SEVERITY OF CLOSTRIDIUM DIFFICILE INFECTION (CDI)

Daily Scorecard to Determine Severity of *Clostridium difficile* Infection (CDI)

	Stools	WCC	Acute Rising Serum Creatine	Temperature	Pain	Hypotension	CT or Xray evidence
Mild CDI	Less that 3 of type 5-7 on BSC	Not raised	Not raised	Less than 38.5	No	No	None
Moderate CDI	3 to 5 of type 5-7 on BSC	< than 15	Not raised	Less than 38.5	No	No	None
Severe CDI	Not reliable as indicator	Raised > 15	Over 50% increase over baseline	Over 38.5	Evidence of severe colitis	No	Present
Life threatening CDI	Not reliable as indicator	Raised > 15	Over 50% increase over baseline	Over 38.5	Partial or complete ileus or toxic megacolon	Present	Present

Treatment according to severity of CDI

Mild/moderate CDI	Oral metronidazole 400 mgs for 10-14 days
Severe CDI	Oral vancomycin 125mg qds for 10-14 days (restricted antibiotic – discuss with Consultant Microbiologist). Such patients to be closely monitored with specialist surgical input and should have their blood lactate monitored.

This reference is to be used to assess all patients isolated with *Clostridium difficile* on a daily basis. Severity of symptoms to be recorded in medical notes each day with early referral to ITU if signs of increasing severity. Treatment to be recorded in medical notes each day to confirm that treatment is in accordance with severity of CDI. Antibiotic review to be recorded in medical notes along with rationale for continuing any current antibiotic therapy. Discontinue PPIs and do not give another antidiarrhoeal therapy without seeking further advice. Patient does not require all the above criteria to be defined as severe.

APPENDIX 3 – EXAMPLES OF DEATH CERTIFICATION FOR CDI PATIENTS

Examples of death certification for CDI patients

(Modified from the November 2007 version of *Guidance for doctors certifying cause of death in England and Wales*, www.gro.gov.uk/medcert

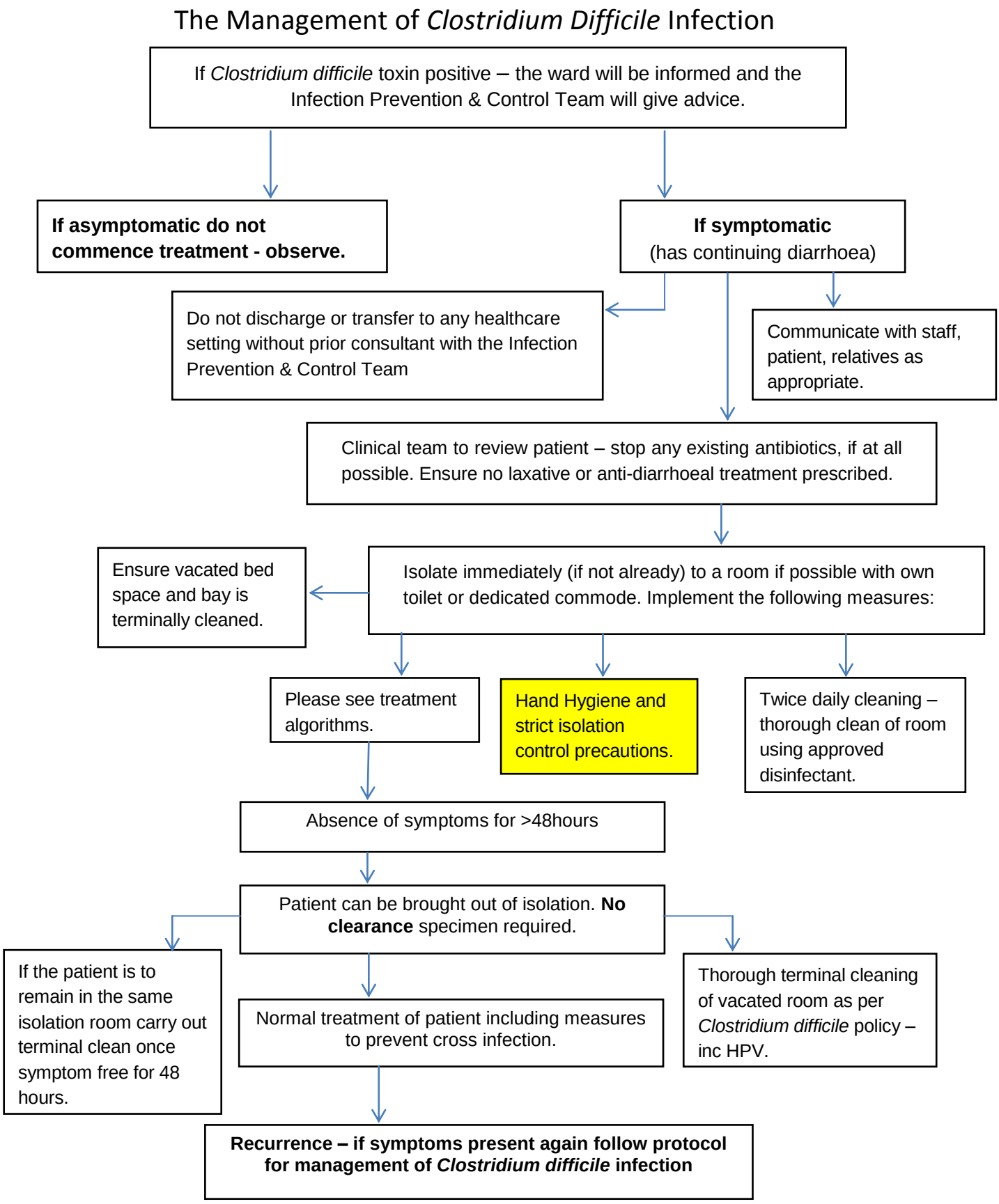
If a healthcare-associated infection (HCAI) was part of the sequence leading to death, it should be in Part 1 of the certificate, and you should include all the conditions in the sequence of events back to the original disease being treated.

Examples:
Ia. Clostridium difficile pseudomembranous colitis
Ib. Multiple antibiotic therapy
Ic. Community-acquired pneumonia with severe sepsis
II. Immobility, polymyalgia rheumatica, osteoporosis

If your patient had an HCAI which was not part of the direct sequence, but which you think contributed at all to their death, it should be mentioned in Part 2 of the certificate.

Examples:
Ia. Bronchopneumonia
Ib. Carcinomatosis and renal failure
Ic. Adenocarcinoma of the prostate
II. Clostridium difficile infection secondary to antibiotic therapy for recurrent bronchopneumonia

APPENDIX 4 – THE MANAGEMENT OF CLOSTRIDIUM DIFFICILE INFECTION



APPENDIX 5 – PROTOCOL OF CARE FOR CLOSTRIDIUM DIFFICILE

Protocol of care for *Clostridium difficile*

(Also refer to Trust IPC IPOC)

This protocol is to be used for patients with *Clostridium difficile* confirmed by a positive laboratory sample (toxin positive) and are **symptomatic**. Patients who are positive for *Clostridium difficile* but do not have diarrhoea need to have their stools recorded on a stool chart and staff continue to decontaminate hands using soap and water as risk of relapse.

Following diagnosis

- GDH +ve (with symptoms) and/or toxin +ve isolate the patient in a single room with their own toilet facilities or a dedicated commode.
- Ensure that an appropriate isolation sign is displayed outside the room. Door must be closed unless a risk assessment is carried out and documented in nursing notes.
- The Infection Prevention & Control Team can provide further information to the patient/visitors and staff both verbally and by the use of information leaflets.
- Information leaflet given to patient/family/carer by ward staff.
- Ward staff must ensure that infection control precautions are carried out in accordance with the Trust *Clostridium difficile* policy.

Daily Interventions

- Hands must be decontaminated with soap and water.
- Apron and gloves must be worn for direct patient contact and contact with the patient's environment and then disposed of as 'Hazardous Waste'.
- Hotel services must ensure they initiate the Trust regime for cleaning and terminal cleaning.
- If the patient visits another department, is transferred or discharged anywhere than the patient's home, ward staff MUST notify the staff at the destination prior to the patient arriving.
- All documentation relating to this patient must remain outside the treatment area. Any variance from the pathway must be recorded in the nursing records.
- Fluid balance and dietary intake should be closely monitored – daily.
- 'Bristol Stool Chart' must be completed and symptoms closely monitored.
- Linen to be categorised as 'infected'.
- Domestic staff record and sign room cleaned twice a day.

Additional Guidelines

- Patient should be reviewed by Microbiologist / Gastroenterologist / IPC weekly
- Patients condition should be reviewed daily – assessing severity of disease.
- The patient must be symptom free for 48 hours prior to discharge or transfer to community hospital/nursing or residential accommodation
- Use of anti diarrhoeal drugs is contraindicated.

If patient is ASYMPTOMATIC for >48 hours:

- Patient may be brought out of isolation.
- Room to be terminally cleaned even if patient is to stay in the room – HPV on discharge
- A clearance specimen is NOT required.

APPENDIX 6 – EQUALITY IMPACT ASSESSMENT - PART 1 INITIAL SCREENING

Service/Function/Policy/Project/ Strategy	Care Group/Executive Directorate and Department	Assessor (s)	New or Existing Service or Policy?	Date of Assessment
Clostridium difficile Infection (CDI)	Corporate Nursing, & IPC	Dr Ken Agwuh	Existing policy	18/02/16

1) Who is responsible for this policy? Care Groups & Infection Prevention and Control

2) Describe the purpose of the service / function / policy / project/ strategy? To prevent the spread and reduce the level of Clostridium difficile infection (CDI) within Doncaster & Bassetlaw Hospitals

3) Are there any associated objectives? Legislation, targets national expectation, standards –Public Health England

4) What factors contribute or detract from achieving intended outcomes? Nil

5) Does the policy have an impact in terms of age, race, disability, gender, gender reassignment, sexual orientation, marriage/civil partnership, maternity/pregnancy and religion/belief? No

- **If yes, please describe current or planned activities to address the impact** [e.g. Monitoring, consultation]

6) Is there any scope for new measures which would promote equality? N/A

7) Are any of the following groups adversely affected by the policy?

Protected Characteristics	Affected?	Impact
a) Age	No	Neutral
b) Disability	No	Neutral
c) Gender	No	Neutral
d) Gender Reassignment	No	Neutral
e) Marriage/Civil Partnership	No	Neutral
f) Maternity/Pregnancy	No	Neutral
g) Race	No	Neutral
h) Religion/Belief	No	Neutral
i) Sexual Orientation	No	Neutral

8) Provide the Equality Rating of the service / function /policy / project / strategy – tick (✓) outcome box

Outcome 1 ✓	Outcome 2	Outcome 3	Outcome 4

If you have rated the policy as having an outcome of 2, 3 or 4, it is necessary to carry out a detailed assessment and complete a* **Detailed Equality Analysis form in Appendix 4

Date for next review: February 2019

Checked by: Dr Ken Agwuh, Consultant Microbiologist & DIPC Date: 25/02/2016