Trust Guideline for the Management of all Patients with suspected or confirmed Clostridioides difficile (C. difficile) Infection

Document Control:

For Use In:	All areas within the Norfolk and Norwich University Hospitals NHS Foundation Trust (NNUH)		
	All Trust Staff		
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Document Author:	Sandra Tuite – Infection Prevention & Control Nurse		
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8.2	11/01/2022	Covid causing delays in review of document, further review granted.	IP&C
8.3	09/08/2022	Refresh of references, awaiting new National Guidance expected later in the year	IP&C

Previous Titles for this Document:

Previous Title/Amalgamated Titles	Date Revised
None	Not applicable

Distribution Control

Printed copies of this document should be considered out of date. The most up to date version is available from the Trust Intranet.

Consultation

The following were consulted during the development of this document:

Hospital Infection Control Committee	Matrons and Senior Nurses
Ward Sisters/Charge Nurses	Director of Nursing
Clinical Directors	Divisional Directors
OPM Consultants	Paediatric Lead Gastro Consultant
Antibiotic Lead	Microbiology Consultants
IP&C Link Staff	Clinical educators

Monitoring and Review of Procedural Document

The document owner is responsible for monitoring and reviewing the effectiveness of this Procedural Document. This review is continuous however as a minimum will be achieved at the point this procedural document requires a review e.g. changes in legislation, findings from incidents or document expiry.

Relationship of this document to other procedural documents

This document is a clinical guideline applicable to the Norfolk and Norwich University Hospitals NHS Foundation Trust (NNUH); please refer to local Trust's procedural documents for further guidance, as noted in Section 5.

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1. Introduction

1.1. Rationale

C. difficile is a gram-positive spore-forming anaerobic bacillus. It is present in the gut of 3% of healthy adults and 66% of babies (UKHSA, 2019).

C. difficile carriage can increase to around 21% in those in hospital and long-term care facilities. Asymptomatic individuals are capable of shedding spores of C. difficile and serve as a reservoir for environmental contamination to other hospitalised patients. Carriage rates in new-borns and children under 2 are remarkably higher but clinical disease does not occur due to the absence of specific toxin receptors.

The organism has a unique ability to exist in two forms; a vegetative form and a spore form when conditions are not favourable. C. difficile is acquired by the faecal/oral route by ingestion of spores. C. difficile is resilient to normal cleaning methods - and can survive on inanimate surfaces for up to 5 months.

C. difficile is the most common cause of hospital acquired infectious diarrhoea (UKHSA, 2019).

C. difficile is linked to significant morbidity and mortality, causing a spectrum of illnesses ranging from mild diarrhoea to life-threatening pseudomembranous colitis, paralytic ileus, peritonitis and death. C. difficile can cause sporadic cases, periods of increased incidences (PII's) or outbreaks, especially in close environments like hospitals and care homes.

Risk factors for C. difficile colonisation/ infection include:

- Antibiotic use especially broad-spectrum antibiotics.
- Acid suppressing medication (especially Proton Pump Inhibitors (PPIs).
- Significant co-morbidity e.g., chronic renal failure, pre-existing bowel pathology, malignancy.
- Childre
- Alteration in gut motility e.g., by laxatives.
- Age over 65.
- Recent healthcare intervention/stay in care facility.

Disruption of commensal bowel microbiota by the factors above provides C. difficile spores the optimal environment to germinate and produce toxins which are responsible for clinical disease.

Although the biggest risk factor for C. difficile is prior exposure to antibiotics, cases have been associated with no obvious antibiotic exposure. Almost all antibiotics have been implicated as they all cause disruption of commensal microbiota including paradoxically Metronidazole and Vancomycin which are antibiotics used for treatment of C. difficile. However, the highest risk antibiotics are broad spectrum antibiotics such as Penicillin's, Cephalosporins and Clindamycin. Quinolones are

high risk for the 027 strain of C. difficile which is hyper virulent and hyper transmissible.

Exclusions

Antibiotic management and treatment of C. difficile is not included in this guideline and is covered in a separate policy (Antimicrobial prescribing advice for patients with Clostridioides difficile associated diarrhoea).

1.2. Objective

The objective of the clinical guideline is to:

- To provide a safe clinical environment thereby reducing the risk of acquisition of *C. difficile* by patients and staff in NNUH.
- To minimise the risk of transmission of *C. difficile* within the hospital.
- To ensure appropriate investigation and IP&C management of *C. difficile* patients.
- To reduce the risk of patients colonised with *C. difficile* spores developing active infection.
- To prevent colonised patients (*C. difficile* toxin negative, toxin gene detected) from transmitting the infection to other patients.
- To enable prompt recognition of any *C. difficile* PII or outbreak.

Specific objectives of the cohort ward

- 'To provide effective isolation of patients with *C. difficile* by cohorting on a designated ward - when clinically safe to do so.
- To ensure timely evidence-based care and facilitate the management of *C. difficile* as a disease in its own right by providing a focused multi-disciplinary team approach (UKHSA, 2019).
- To prevent the dissemination of *C. difficile* spores to other areas of the hospital
- To allow meticulous decontamination of wards contaminated with *C. difficile* spores and minimise the risk of re-contamination.
- To reduce the incidence, morbidity & mortality due to *C. difficile.*
- To facilitate effective use of side rooms on the wards for isolation of other alert organisms.

1.3. Scope

For the prevention of nosocomial transmission of Clostridioides Difficile and appropriate management of all patients with suspected or confirmed Clostridium difficile infection.

1.4. Glossary

The following terms and abbreviations have been used within this document:

Term	Definition
Community onset healthcare associated (COHA)	cases that occur in the community (or within two days of admission. Admission day being day 1) when the patient has been an inpatient in the trust reporting the case in the previous four weeks
Community onset indeterminate association (COIA)	cases that occur in the community (or within two days of admission) when the patient has been an inpatient in the trust reporting the case in the previous 12 weeks but not the most recent four weeks
Community onset community associated (COCA)	cases that occur in the community (or within two days of admission) when the patient has not been an inpatient in the trust reporting the case in the previous 12 weeks.
***C. difficile* infection**	one episode of diarrhoea (Bristol Stool Chart type 5-7 or stool loose enough to take the shape of a container) that is not attributable to any other cause, including medicines, that occurs at the same time as a positive toxin assay and / or endoscopic evidence of pseudomembranous colitis (PMC).
***C. difficile* colonisation**	occurs when a patient carries *C. difficile* but has no signs or symptoms of infection. This may be recognised by the presence of *C. difficile* toxin gene, but toxin is absent (not detected).
***C. difficile* toxin**	protein produced by *C. difficile* bacteria and released into the colon causing damage to the host by destroying other cells or disrupting cellular metabolism. The bacterium releases two types of toxin (Toxin A which is an Enterotoxin and Toxin B a Cytotoxin) which are responsible for causing diarrhoea.
***C. difficile* toxin gene detected**	strain of *C. difficile* equipped with the gene capable of producing toxins and is therefore pathogenic. Polymerase chain reaction (PCR) is the test used to detect this.
Diarrhoea	a stool classified as type 5 to 7 on the Bristol stool scale and that will take the shape of a specimen container. Bristol Stool Chart
DIPC	Director of Infection Prevention & Control
Hospital onset healthcare associated (HOHA)	cases that are detected in the hospital two or more days after admission. (Admission day being day 1)
Recurrent *C. difficile*	complete resolution of symptoms followed by subsequent reappearance of symptoms within 28 days.
Outbreak of *C. difficile*	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.
Period of Increased Incidence (PII) of *C. difficile*	two or more new hospital attributable cases (not relapses) in a 28-day period on a ward.

Relapse	patients with repeat positive results more than 28 days apart.
Spore	a small, usually single-celled reproductive body that is highly resistant to desiccation and heat and is capable of growing into a new organism, under favourable anaerobic conditions.
Toxic megacolon	a life-threatening complication of intestinal conditions, characterized by a dilated colon with severe colitis and systemic symptoms such as fever, abdominal pain, or shock.
UKHSA	United Kingdom Health Security Agency (previously Public Health England)

2. Responsibilities

Chief Executive has overall responsibility for ensuring there are effective procedures and resources are in place to enable the implementation of this policy.

DIPC is responsible for the development and implementation of strategies and policies on IP&C. The DIPC has responsibility to ensure:

- Mandatory reporting to Commissioners and UKHSA.
- Oversee continuous local surveillance of *C. difficile* cases.
- Provide monthly reports to Trust Board, Clinical Safety and Effectiveness Sub-Board, Clinical commissioning groups, NNUH clinical and operational staff and IP&C team (IP&CT).

IP&CT

- Provide specialist advice and support with regards to isolation, practices, and decontamination in management of patients with *C. difficile.*
- Assist in developing and monitoring this policy.
- Provide appropriate IP&C training to trust staff.
- Ensure mandatory reporting is maintained.
- Undertake continuous local surveillance of *C. difficile* cases.
- Undertake or attend the Root Cause Analysis (RCA)/Post infection Review (PIR) process for all Hospital assigned cases - HOHA/COHA

Consultant Microbiologist/Microbiology Laboratory

- Alert IP&CT, clinical teams and ward areas of patient *C. difficile* results.
- Provide clinical specialist advice and lead a MDT approach to the management of patients with *C. difficile* and advice/ management of outbreaks.
- Attend RCA/PIR meetings.

- Assist with developing and monitoring of antimicrobial advice for patients with *C. difficile* associated diarrhoea.

Consultants and their junior doctors

- Responsible for judicious and appropriate use of antibiotics in line with local and national guidelines.
- Reviewing patients with suspected/ confirmed *C. difficile* including medication review.
- Reviewing patients with confirmed *C. difficile* to see if appropriate to transfer to cohort ward and document.
- Conducting *C. difficile* severity score at time of result.
- Support the RCA/PIR process.
- Commence appropriate antibiotic treatment for *C. difficile* in a timely manner.
- Should review each patient daily and monitor bowel function using the Bristol stool scale chart.
- Feedback at clinical governance meetings.

Antimicrobial stewardship group/ antimicrobial pharmacist

- Responsible for providing specialist input in antimicrobial management of *C. difficile* and overseeing *C. difficile* treatment policy (Antimicrobial Prescribing Advice for Patients with *Clostridioides difficile* Associated Diarrhoea).
- Auditing antibiotic prescribing in general and specifically during a PII for *C. difficile.*

Ward and departmental managers/Matron

- Ensure all staff in areas of responsibility are aware of and comply with this guideline.
- To ensure that staff are up to date with mandatory IP&C training.
- Facilitate isolation of patients with suspected/known diarrhoeal infections as soon as possible according to Assessment and Management of Diarrhoea Guideline.
- Assist in monitoring this guideline.
- Ensure daily review of patients continuing need for isolation to free up single rooms that are no longer required for isolation purposes and update ward view room boarders.
- Support the RCA/PIR process and feedback learning/good practice to areas.

Estates are responsible for ongoing maintenance of ventilation systems and general ward environments including isolation facilities.

Domestic Service Provider is responsible for cleaning to ensure all areas are cleaned accordingly to the agreed standard and that their staff follows NNUH IP&C guidelines.

Workplace health and wellbeing (WPH&W) to alert DIPC/IP&CT to any infection issue amongst Trust employees that may have an impact on patients. WPH&W provide advice to staff with *C. difficile*/Colonisation.

Site Operations Team to facilitate isolation of patients with suspected / confirmed infections as soon as possible and at most **within 2 hours of suspicion** or confirmation. In any situations where safe placement cannot be achieved this will be escalated as appropriate to Executive on call and documented on the Situation Report under "IP&C issues". The operation Centre is also responsible for resolving operational issues in outbreak situations.

All clinical staff as relevant have a responsibility to:

- Understand, implement, and abide by the information provided in this guideline.
- Be aware of the procedural documents which relate to their department/area of practice.
- Ensure they are up to date with mandatory IP&C training.
- Review patients continuing need for isolation daily in order to free up single rooms that are no longer required for isolation purposes.
- Lead/participate in RCA/PIR process of hospital attributable cases *Clostridioides difficile* RCA process chart.
- Keep the patient informed of their infection status regularly as necessary.
- Look up the results on ICE and action them as per Trust guidelines.
- Regular documentation of bowel motion.
- Stool sampling in a timely manner.
- Thorough cleaning of equipment.

3. Processes to be followed

Suspected infectious diarrhoea must be managed by applying the SIGHT mnemonic (DH 2012).

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 IP&CT while determining the cause of 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 *C. difficile*, by sending a specimen immediately **

* By sending a suspected infectious diarrhoea form on ICE.
** If patient tested positive within previous 28 days, discuss with duty microbiologist. Retest in 7 days if negative or discuss with Microbiology if wish to test sooner.

3.1. Suspected infectious diarrhoea

All cases of suspected infectious diarrhoea should be notified to the IP&CT via the suspected infectious diarrhoea notification on ICE requests, confirming that best practice has been followed (refer to Trust Guideline for the Assessment and Management of Diarrhoea).

3.2. Isolation

See Trust Policy for the Management of Isolation Procedures

The transmission of *C. difficile* can be patient to patient, via contaminated hands of health care workers or via contaminated healthcare equipment or environments. Under certain conditions, the bacterium produces spores. These spores are resistant to alcohol and acids in the stomach. They can also survive in patients and the surrounding environments for long periods of time.

Ward staff must isolate symptomatic patients on first suspicion of *C. difficile* at the **onset** of symptoms in a single room, preferably with en-suite toilet facilities. Staff must document time of isolation in the patients care record, ensure Patient Administration System (PAS) is updated to reflect bed movement and clinical clean bed space if in a bay to include any toilet used by the patient. Enteric Isolation Precautions should be clearly displayed.

Every effort must be made to find a single room for the symptomatic patient as soon as possible and no later than 2 hours from onset of symptoms. If unable to achieve this, the reasons for the delay must be clearly documented in the patient care record with a clear plan of action. Any problems must be escalated to the Site Operations team (refer to Patient Flow Policy).

Duration of isolation
Isolation can be discontinued when the patient has been symptom-free for at least 72 hours and has passed formed stool or stool is normal for patient within that time. There is no requirement to submit further faeces samples for toxin detection, as toxin may be present in the gut for some time after the patient has become asymptomatic. When patients have been symptom-free for 72 hours, they should be moved back from the *C. difficile* cohort ward to their speciality ward (move patient to a single room or bay bed space), only taking with them their personal belongings onto a clean bed. Ensure that the single room is clinically cleaned, and the mattress checked as per the Guidelines for Cleaning and Disinfection of Mattresses. Where it is not possible to move the patient back to their speciality ward, the patient should move to a clean bed space or side room.

3.3. Use of PPE (i.e., Gloves and aprons)

All staff and visitors on entering an isolation-room should put on disposable gloves and aprons, if visitors decline to wear appropriate PPE this can be documented into the patient care record. PPE must be removed, and hands washed with soap and water before leaving the isolation room.

3.4. Equipment

Use disposable and dedicated products where possible (observation equipment e.g., BP cuff and O2 sats probe, must be dedicated). Do not stockpile equipment in isolation room e.g., laundry and dressing packs. Ensure re-usable equipment is appropriately cleaned/disinfected /sterilised after use.

Commodes must be cleaned with chlorine releasing agent after every use and taped, signed, and dated.
Any item for repair must be decontaminated first & the appropriate decontamination certificate attached.

Hoist slings must be disposable and allocated per patient.

3.5. Hand Hygiene

- Hand washing with soap and water should be carried out according to WHO five moments and Hand Hygiene Policy, but particularly before and after each contact with the patient and the patient's environment.
- Remove hand sanitiser from room/ bed space as this is ineffective against C. difficile.

Staff must observe stringent hand-washing procedures, using soap and water. Alcohol based hand gels **do not inactivate** *C. difficile* spores and are not therefore appropriate for use for hand hygiene when caring for a patient with *C. difficile*. Hands must be washed before and after handling a patient, bed pans, commodes, or other soiled equipment. Ensure hands are washed thoroughly following the removal of PPE e.g., aprons and gloves. Refer to Trust Policy for Hand Hygiene.

Visitors are advised to wear appropriate PPE whilst in the isolation room and wash their hands with soap and water prior to leaving.

Staff should ensure that patients' hands are cleaned with soap and water after 'toileting'. For immobile patients, hand wipes may be used.

3.6. Stool Chart

A stool chart must be started on admission, documenting the patient's normal bowel habit or as soon as diarrhoea is noted/reported as per Core Care Domain 7 and kept up to date until the patient is discharged. The stool chart must be updated each shift, upon every bowel motion and even if bowels not opened (BNO) to aid clinical assessment of *C. difficile* i.e., deteriorating/resolving.

Stool charts should also be started for any patients with a *C. difficile* alert for the duration of admission to monitor for relapse.

3.7. Stool Testing

Stool Specimen Collection and Laboratory Diagnosis

- Availability: *C. difficile* testing is available 7 days a week. Request via ICE providing relevant clinical details e.g., diarrhoea, antibiotic use, PPIs etc.
- Once an assessment has been undertaken and the loose stool is suspected as being infectious, send the collected stool cultures to the laboratory immediately. A delay in sampling, delay diagnosis and samples can degrade over time. Samples can be sent via the POD system.
- If a stool sample is reported as *C. difficile* not detected but symptoms continue after 7 days, a repeat sample can be sent. If the team wish to retest before this, it is to be discussed with a microbiologist.
- Only diarrhoea stools are tested. The lab will not test formed stool samples (1-4 on Bristol stool chart)**.** Send the first available stool sample as soon as suspected infectious diarrhoea is noted.
- Do not send stool samples from patients on laxatives or following enema administration. Document reason for not sending. Review and suspend laxatives to monitor output. Allow 48 hours to elapse to observe bowel habit before testing for *C. difficile* if symptoms continue. If in doubt or patient acutely unwell obtain senior clinical review.

- Do not repeat C. difficile testing during the same episode unless specifically discussed with a Microbiology Consultant.
- Children under 2 years are not routinely tested for *C. difficile* because the toxin may be present in the absence of clinical disease. If *C. difficile* is clinically suspected e.g., paediatric oncology or patient transfer from a tertiary centre, discuss with Microbiology Consultant.

Interpretation of *C. difficile* test results (see flowchart)

- *C. difficile* toxin detected; this means the patient has *C. difficile* and should be treated if still symptomatic. This case is subject to mandatory reporting to Department of Health.
- *C. difficile* toxin not detected; *C. difficile* toxin gene DETECTED; Patient is likely to be colonised with *C. difficile.* They should be reviewed and assessed for treatment. This case is not subject to mandatory reporting.
- Clearance specimens **are not required**, a patient is deemed to be resolved when they are asymptomatic of diarrhoea for 72 hours and have passed types 1-4 stool or stool normal for patient.

3.8. Action following diagnosis of *C. difficile*:

Positive results are telephoned by the Microbiology doctors to the clinical team.

The clinical team receiving the result must:

a) Explain the diagnosis to the patient.

b) Clinicians/Nurse to give an information leaflet to the patient and document this in the patient's notes and discharge checklist. This leaflet can be found by following this link: *Clostridioides difficile* Infection Information for Patients.

c) Doctor/Nurse to inform the patient's next of kin if appropriate and information leaflet given. This process must be documented in the patient care record.

d) Ward staff to check with the clinician if patient can move to the designated C. *difficile* cohort ward - then to contact patient flow co-ordinators to request transfer to the cohort ward. Once on the cohort ward, ward staff can update the C. *difficile* whiteboard.

e) Transfer the patient to the *C. difficile* cohort ward. If the patient needs to be transferred on a bed, a clean bed must be taken from the intended cohort room to the patient.

f) If the patient cannot be transferred to the cohort ward due to clinical need this must be risk assessed and documented in the patient care record by the senior clinicians in charge. This decision must be reviewed regularly and documented accordingly (including on the severity scoring form).

g) Complete the relevant section of the RCA/PIR form if hospital attributable.

The medical team must:

a) Review the patient as soon as possible, following the result, using the *Clostridioides difficile* severity scoring form and commence treatment. If the patient cannot be moved, document in patient care record.

b) Review the patient daily to include stool chart, drug chart for antibiotics, proton pump inhibitors, iron preparations, laxatives, prokinetic agents, opiates and antiperistaltic agents immediately and where possible discontinue these. If not suitable to discontinue state reason.

c) Commence treatment for *C. difficile* as indicated. See NNUH *Clostridioides difficile* Antibiotic Policy for treatment.

d) Document this review and their action in the PCR.

e) Complete the relevant section of the RCA/PIR form if hospital attributable.

If a patient is discharged prior to a positive *C. difficile* result becoming available:

a) The clinician must inform the patient of their result and advise any action necessary (e.g., arrange treatment prescription).

b) IP&CT will formally notify the patient's GP by sending a *C. difficile* notification letter.

c) IP&CT will notify the - community -IP&C Team if the patient was discharged to a community care bed.

The ward Pharmacist/Antimicrobial Pharmacist must:

a) Review their drug chart for high-risk medications i.e., antibiotics, protein pump inhibitors, iron preparations, laxatives, prokinetic agents and anti-peristaltic agents.

b) Complete the relevant section of the RCA/PIR form if hospital attributable.

3.9. Movement of patients

Movement of patient for clinical investigation and/or treatment

- The principle of reducing movement to a minimum should be observed. The clinician should sanction urgent investigations required for the clinical management of the patient; however non-clinical/ non-urgent investigations may be postponed until diarrhoea stops. Clinical risk assessment will be necessary in some instances, contact the IP&C Nurses for advice via 5847 in hours or Site Operations team for urgent out of hours support. Receiving areas should be alerted so appropriate IP&C precautions can be implemented e.g., end of list/clinical cleans.
- Patients with explosive *C. difficile* diarrhoea should not be transferred to other wards in the hospital, except for purposes of isolation or cohort nursing. Visits to other departments should be kept to a minimum. When this is necessary, (for investigation or treatment), prior arrangements should be made with the Senior Staff of that department so that infection control measures can be applied, and enteric precautions maintained.
- Porters must be informed that the patient is in isolation.
- Where possible the patient should have the last appointment of the morning or afternoon session to allow time for cleaning.
- Patients should not wait in waiting areas with other patients.
- All unnecessary equipment should be removed from the room/area before the patient arrives.
- All procedures should be planned in advance to keep equipment and staff to a minimum and to ensure adequate supplies of cleaning materials. Use disposable equipment where possible. Any other equipment must be decontaminated according to policy.
- All clinical staff must wear disposable aprons and gloves when dealing with the patient. Meticulous IP&C measures should be employed when dealing with faecal material.
- The patient should return to the ward immediately after the procedure. Surfaces and any equipment used should be thoroughly disinfected by the clinical/ departmental staff with trust approved disinfectant. Refer to Cleaning and Disinfection Policy. Linen, waste etc. should be bagged and disposed of according to the Trust policy, refer to Soiled Linen Bagging Policy. If patient has been symptomatic whilst in the department, the appropriate clinical clean from Serco must be requested.
- All discharged summaries/electronic discharge letters MUST include any *C. difficile* diagnosis and any treatment given.

3.10. Visitors

All visitors entering an enteric isolation room should be advised to use aprons and gloves and wash their hands with soap and water before and after each patient contact - (UKHSA, 2019) and prior to leaving the room. Any refusal to do so should

be addressed by senior members of the clinical team and records of advice given be documented in the patient care record.

3.11. Disposal of waste, Laundry

All contaminated disposable materials must be placed into clinical waste bag, please refer to Waste Management Policy in the Health & Safety Manual.

All used laundry and linen must be processed as 'Infected laundry'. Handle, transport, and process in a manner which minimises cross infection.
For full details see Enteric Isolation Precautions, or the full Isolation Procedures Policy which can be found on the IP&C Manual.

Please note sinks are for hand washing only, disposal of wash water and bodily fluids should be discarded in the slop hopper in the dirty utility.

3.12. Room cleaning

Daily cleaning
Room/bed space and en-suite to be cleaned and disinfected at least once daily and damp dusted by domestic services using a Trust approved chlorine releasing agent.

Medical and other Equipment Use dedicated equipment (BP cuff, thermometer and stethoscope as minimum & ideally pulse oximeter). Ensure re-usable equipment is appropriately cleaned/ disinfected/sterilised after use and between patients. Re-usable instruments that require sterilisation should be returned to SSD after use. Do not stockpile equipment in isolation room, e.g. laundry and dressing packs.

Cleaning following discharge/ transfer
Following discharge/ transfer of the patient, the room and its contents should be disinfected thoroughly. A clinical clean should be ordered by phoning the Serco service desk on extension 3333 or via iSERco once the room has been prepared and Medical equipment has been decontaminated according to the Cleaning and Disinfection Guideline or the manufacturer's instructions. Clinical clean codes

Special attention should be paid to removing all faecal soiling, and in particular to cleaning of furniture, toilets, commodes, call bells etc. fittings, and to horizontal surfaces.

- Mattress and pillow covers should be checked, cleaned, and disinfected by clinical staff and replaced if torn or leaking. Guidelines for Cleaning and Disinfection of Mattresses
- As part of the clinical clean all curtains must be removed from the bed space. Should curtains become soiled and require changing whilst the patient is in the room (request a curtain change via iSERco/x3333).
- Trust staff must inspect and sign off all clinical cleans.

3.13. Management of PII or Outbreaks of *C. difficile*

C. difficile PIIs/outbreaks are expensive, disruptive to the delivery of healthcare services and often result in prolonged in-patient care. Wards and services may be

closed temporarily leading to increases in bed pressures and waiting lists. Prompt and vigorous prevention and control measures taken as soon as a problem of *C. difficile* is recognised are the best way of ensuring the safety of patients and continued hospital activity.

Definition of PII/ Outbreak (Refer Section 4)
C. difficile results for the Trust are reviewed daily during normal working hours and are reported monthly by the IP&CT in both the monthly report and on the intranet page. An epidemiological assessment is carried out regularly and when there are two cases of hospital attributable *C. difficile* cases within 28 days, extra supportive measures are instituted.

If a PII appears likely, the IP&CT will advise further action and implement necessary infection control supportive measures.

Decisions about ward closures will be made by the Infection Control Doctor (ICD), duty Microbiologist or on call Microbiology consultant in the ICD's absence/out of hours respectively. The DIPC/ICD will notify Trust Management, the CCDC in local UKHSA unit in Thetford and the Clinical commissioning group (Commissioners) of C. *difficile* outbreaks in line with national guidance and local contracts.

Managing a *C. difficile* outbreak
This will be based on DH guidance

- Regular meetings (minimum weekly), between the IP&CT, Service Lead/Lead Consultant, Matron, Ward Sister/Charge Nurse, and Directorate Manager.
- Daily review of new and existing cases of *C. difficile.*
- Review and maximise isolation procedures.
- Institute intensive local surveillance of diarrhoea.
- Optimise ward environmental and equipment cleaning and disinfection.
- Communicate diagnostic Microbiology results as rapidly as possible.
- ICD to request urgent molecular typing from *C. difficile* reference lab.
- Enhance communications with all parties and staff.
- Reduce the movement of patients and staff to an operationally effective minimum.
- Minimise the movement of beds, commodes, trolleys, and other equipment between areas.
- IP&CT/staff from affected ward to - each carry out weekly Tendable, isolation room, hand hygiene, commode and bed pan audits.
- Antibiotic pharmacists to institute specific PII/outbreak antibiotic policy and conduct antibiotic compliance audit.

Refer to Major & Limited Outbreaks of Infection Policy.

3.14. Cohort Ward Specific Issues and transfer/ discharge

Admission/ Transfer
Only patients with diarrhoea type 5-7 and stool sample **confirmed as** *C. difficile* toxin **detected** will be admitted/ transferred to the *C. difficile* cohort isolation beds. The single room or bed space vacated plus the corresponding bathroom and toilet must have a clinical clean. Refer to Clinical Clean Code Guide

Patients unsuitable for transfer to *C. difficile* cohort ward
If a patient is deemed by the clinical team not to be suitable for transfer to the cohort ward because of their clinical needs, the Consultant, or senior medical staff in charge of the case or on call clinician must document the rationale for this decision in the patient care record and review this decision daily. Retaining symptomatic patients on wards increases the risk of transmission; clinical teams must be reminded of this risk by the IP&CT. This practice is not supported by the IP&CT unless clinically indicated.

Discharge/Transfer out of cohort ward
Patient can be discharged/transferred when the patient has been symptom-free and passing a formed stool or stool normal for patient for at least 72 hours. The decision to transfer a patient out of the cohort ward will be made by the clinical team and supported by the IP&CT. A single room is not required for a resolved case (unless needed for other reasons). Ideally the patient should be transferred back to their speciality ward. Patients that are 48 hours asymptomatic will also be identified and notified by the clinical team to Site Operations team to plan for possible transfer out of the cohort area the next day if the patient remains asymptomatic. An accurate stool chart should be maintained for the duration of that inpatient episode to identify any signs of *C. difficile* relapse promptly.

Transfer to other wards within NNUH
Patients with *C. difficile* must not be transferred to other wards unless to move them to the *C. difficile* cohort area if appropriate.

Exception – if a symptomatic patient requires transfer to a specialist area e.g., ICU, CCU due to their clinical need, they must be isolated in a single room with enteric precautions. The nurse in charge must inform the IP&CT and Site Operations team.

Transfer to another healthcare institution
The clinical team must notify the Ward/receiving institution of the patient's *C. difficile* diagnosis and treatment (if applicable) before transfer. Patients with active *C. difficile* diarrhoea should not be transferred to a community care setting unless specifically discussed prior to the transfer with the community care setting. This information should be included in the transfer letter by the clinical team even if the patient is no longer symptomatic with diarrhoea.

Discharge home

1. The electronic discharge letter (EDL) must include information about the diagnosis of *C. difficile*, treatment given and possibility of relapse. Specialist advice is available from the Duty Microbiologist.
2. Emphasise the patient's need to contact the GP immediately if diarrhoea re-occurs as per *Clostridioides difficile* patient information leaflet.

Clinical responsibility
Patients on the cohort ward will remain under the care of the specialist consultant responsible for their overall clinical care. A member of their medical team must review the patient daily. This is similar to having a patient as an outlier.

IP&C input and *C. difficile* MDT ward round
The IP&CT will review the *C. difficile* patients regularly, at least weekly.

The ICD, IP&C Nurses, Antibiotic Pharmacist, Consultant Microbiologist and Microbiology registrar, will liaise & advise on the management of *C. difficile*. The DIPC/Microbiologist will provide training for their medical colleagues & the IP&C Nurses will provide training and support for any other infection control issues. *C. difficile* specialist MDT input will occur weekly either by MDT ward round or telephone.

Other services

Therapy services
All therapy services will continue as clinical need dictates. The cohort area will be visited last after other areas staff will adhere strictly to the use of PPE & hand hygiene.

Non-essential services
Non-essential services including the following: Newspaper trolley, Library trolley, sweet trolley, hospital radio will not go into the *C. difficile* cohort rooms but will continue on other areas of the ward not used for *C. difficile* patients. Patients requiring items can request that staff to go to the trolley on their behalf.

Porters
When moving patients on beds/wheelchairs to or from the isolation rooms, there is no requirement to wear gloves and aprons unless there is a requirement to physically assist the patient.

Hands must be washed with soap and water when entering and leaving the *C. difficile* cohort ward.

Audits
Audits relevant to IP&C in general and specific to *C. difficile* e.g., supportive measures during a PII, isolation audits, commode audits, hand hygiene, environmental, cleaning, and antibiotic audits will occur regularly on the designated ward/where *C. difficile* patients are cared for (refer to Monitoring Compliance table pg. 22 for details

Bed flow
During core hours, when the co-ordinator for the cohort ward receives a name of a patient for the last vacant direct admission room, escalation to the senior nurse for the cohort ward will occur to ensure expedition of suitable patients out of direct admission rooms to create capacity. During out of hour's period this process will occur through the Site Operations Team.

3.15. Re-admission following previous *C. difficile* result:

Patients who have previously been found to be colonised or infected with *C. difficile* (Toxin or Toxin Gene Detected) require some additional consideration if re-admitted to the acute setting to minimise the risk of any recurrent *C. difficile*. A patient's history of *C. difficile* should be checked on admission and documented in the patient care record. The admitting area should have a process in place to check. Patients identified by the local laboratory will have an ICE alert in place.

- If the patient has been asymptomatic of diarrhoea for 72hours and passing a formed/normal stool for patient, they can be cared for in the main ward area once other infection risks have been considered.
- If they are passing loose stool, follow the Assessment and Management of diarrhoea guideline and SIGHT mnemonic.
- Commence a stool chart (even those passing formed stools on admission) and maintain this whilst an inpatient, recording each bowel motion (and lack of bowel motion) accurately each shift to monitor for recurrent *C. difficile.*
- Request a clinical review regarding the risk of recurrent *C. difficile* infection.
- Review current medications for any high risk and discontinue if clinically able, discuss with pharmacist if advice needed.
- De-escalation of isolation should be as per the Assessment and Management of diarrhoea guideline

3.16. Death certification

If *C. difficile* is entered on a Death Certificate in Part 1 (i.e., if *C. difficile* was part of the sequence of events leading directly to death or was the underlying cause of death) then the certificate must be completed by the patient's ***Consultant or Registrar*** and the death must be reported as a Serious Incident (SI). Discuss with DIPC/Microbiology consultant.

If a doctor is in doubt about the circumstances of death when writing the certificate, they should consult with the Infection Control Doctor or Consultant Microbiologist.

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. (Ref DH 2009)
For last offices - see Trust Guideline for Care after Death.

3.17. Antibiotic Treatment of *C. difficile*

Refer to the Trust Guideline for Antimicrobial Prescribing Advice for patients with *Clostridioides difficile* associated diarrhoea

3.18. Root Cause Analysis (RCA/PIR Process Chart)

HOHA Cases

An RCA/PIR will be conducted on all patients who are confirmed *C. difficile* toxin positive on samples collected on day 2 or more days after admission. The aim is to identify any risk factors and lapses in care and share any lessons to prevent further cases in the hospital. This process will also determine whether the case is trajectory (lapses in care) or non-trajectory (no lapses in care).

COHA Cases

An RCA/PIR will be conducted for all patients who are confirmed *C. difficile* toxin positive on samples collected within 2 days of admission when the patient has been an inpatient in the trust reporting the case in the previous 4 weeks.

4. Training & Competencies

All staff working on Trust premises, including Trust employed staff, agency and Locum staff are responsible for accessing all relevant IP&C policies (via intranet) in order to assist in the optimal management of their patients. The basic IP&C principles are incorporated in all mandatory IP&C training programmes which all staff have, and line managers have a responsibility to keep up to date with.

5. References

Clostridioides difficile: guidance, data and analysis (2019) https://www.gov.uk/government/collections/clostridium-difficile-guidance-data-and-analysis

DH (2019) *Clostridium difficile* infection: How to deal with the problem. Online at Clostridioides difficile infection: how to deal with the problem - GOV.UK (www.gov.uk) [accessed 8thth August, 2022]

DH (2012) Update guidance on the diagnosis and reporting of *Clostridium difficile* https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/215135/dh_133016.pdf [accessed 08/08/2022]

Public Health England webpage https://www.gov.uk/government/organisations/public-health-england

Rea, M.C., O'Sullivan, O., Shanahan, F., Toole, P.W., Stanton, C., Ross, R.P. and Hill, C (2012) *Clostridium difficile* Carriage in Elderly Subjects and Associated Changes in the Intestinal Microbiota. Online at http://jcm.asm.org/content/50/3/867.full.pdf+html [accessed - 29/07/2022]

UKHSA (2019) Clostridium difficile: guidance, data and analysis. Online at https://www.gov.uk/government/collections/clostridium-difficile-guidance-data-and-analysis [accessed - 29/07/2022]

6. Monitoring Compliance

Compliance with the process will be monitored through the following:

Key elements	Process for Monitoring	By Whom (Individual / group /committee)	Responsible Governance Committee /dept	Frequency of monitoring

Clinical Assurance	Isolation audit	Matron	Trust Board, HICC	Monthly
Antibiotic Prescribing for Periods of Increased Incidence	Audit	Antibiotic Pharmacists		Ad-hoc
C. difficile statistics	IP&C Information officer	DIPC	Trust Board, IP&C Monthly report	Weekly
Monitoring of completion of RCA/PIR actions	Review	DIPC	IP&C dashboard, HICC, Clinical Safety Board	Monthly via Trust Board safety dashboard
Death Certification	Bereavement office data	DIPC		Ongoing
Documentation of *C. difficile* on Electronic Discharge Letter (EDL)	IP&C Admin to provide data to DIPC	DIPC/IP&CT	Reported yearly at HICC	Monthly

The audit results are to be discussed at relevant governance meetings to review the results and recommendations for further action. Then sent to HICC who will ensure that the actions and recommendations are suitable and sufficient.

7. Equality Impact Assessment (EIA) ,

Type of function or policy	Existing

Division	Clinical Support Services	**Department**	Infection Prevention and Control
Name of person completing form	Sandra Tuite	**Date**	21/09/2022

Equality Area	**Potential Negative Impact**	**Impact Positive Impact**	**Which groups are affected**	**Full Impact Assessment Required YES/NO**
Race	None		N/A	No
Pregnancy & Maternity	None		N/A	No
Disability	None		N/A	No
Religion and beliefs	None		N/A	No
Sex	None		N/A	No
Gender reassignment	None		N/A	No
Sexual Orientation	None		N/A	No
Age	None		N/A	No
Marriage & Civil Partnership	None		N/A	No
EDS2 – How does this change impact the Equality and Diversity Strategic plan (contact HR or see EDS2 plan)?		N/A		

- **A full assessment will only be required if: The impact is potentially discriminatory under the general equality duty**
- **Any groups of patients/staff/visitors or communities could be potentially disadvantaged by the policy or function/service**
- **The policy or function/service is assessed to be of high significance**

IF IN DOUBT A FULL IMPACT ASSESSMENT FORM IS REQUIRED

The review of the existing policy re-affirms the rights of all groups and clarifies the individual, managerial and organisational responsibilities in line with statutory and best practice guidance.