NHS
Cheshire and Wirral Partnership
NHS Foundation Trust

Document level: Trustwide (TW)
Code: IC5
Issue number: 5

Clostridium difficile policy

Lead executive	Director of Infection Prevention and Control
Authors details	Infection prevention and Control Team - 01244 397700

Type of document	Policy
Target audience	All CWP staff
Document purpose	The aim of this policy is to increase awareness and promote understanding regarding Clostridium difficile infection and, in so doing, to educate all Trust staff in the prevention and control of this organism.

Approving meeting	Infection Prevention and Control Sub Committee	22-Jul-20
Implementation date	22-Jul-20	

CWP documents to be read in conjunction with	
HR6	Trust-wide learning and development requirements including the training needs analysis (TNA)
IC7	Patient isolation policy
IC2	Hand decontamination policy and procedure
MP1	Medicines policy
IC1	Trustwide infection prevention and control operational policy
SOP23	Handling of linen and clothing
GR30	Decontamination and disinfection policy
GR1	Incident reporting and management policy

Document change history	
What is different?	Background information.
Appendices / electronic forms	Appendix 1 updated information Appendix 2 Bristol stool chart
What is the impact of change?	Low

Training requirements	Yes - Training requirements for this policy are in accordance with the CWP Training Needs Analysis (TNA) with Education CWP.

Document consultation	
Clinical Services	Who within this service have you spoken to
Corporate services	Who within this service have you spoken to
External agencies	Who within this service have you spoken to

Financial resource implications	Low

External references
1. Department of Health. (2003). National Clostridium difficile Standards Group Report to the Department of Health. Department of Health. London

2. Department of Health. (2007b). Changes to the mandatory healthcare associated infection surveillance system for Clostridium difficile associated diarrhoea from April 2007.http://www.dh.gov.uk/en/Publicationsandstatistics/Lettersandcirculars/Professionalletters/Chiefmedicalofficerletters/DH_073767
3. Department of Health. (2009). Clostridium difficile infection:How to deal with the problem.http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_093220
4. Department of Health. (2015). Updated Guidance on the Diagnosis and Reporting of Clostridium difficile.
5. Healthcare Commision. (2006). Investigation into outbreaks of Clostridium difficile at Stoke Mandeville Hospital, Buckinghamshire Hospitals NHS Trust.
6. Health and Social Care Act 2008: Code of Practice on the prevention and control of infections and related guidance (Department of Health, 2015).
7. Hoffman P, Bradley C and Ayliffe G (2004). Disinfection in Healthcare. 3rd ed. Blackwell Publishing: Oxford.
8. McCulloch J. (2000). Infection Control. Science, Management and Practice. London.
9. Public Health England (2013) Updated guidance on the management and treatment of Clostridium difficile infection

Equality Impact Assessment (EIA) –	**Yes/No**	**Comments**
Does this document affect one group less or more favourably than another on the basis of:		
- Race	No	
- Ethnic origins (including gypsies and travellers)	No	
- Nationality	No	
- Gender	No	
- Culture	No	
- Religion or belief	No	
- Sexual orientation including lesbian, gay and bisexual people	No	
- Age	No	
- Disability - learning disabilities, physical disability, sensory impairment and mental health problems	No	
Is there any evidence that some groups are affected differently?	No	
If you have identified potential discrimination, are there any exceptions valid, legal and/or justifiable?		
Select		
Is the impact of the document likely to be negative? - If so can the impact be avoided? - What alternatives are there to achieving the document without the impact? - Can we reduce the impact by taking different action?	No N/A N/A N/A	
Where an adverse or negative impact on equality group(s) has been identified during the initial screening process a full EIA assessment should be conducted. If you have identified a potential discriminatory impact of this procedural document, please refer it to the human resource department together with any suggestions as to the action required to avoid / reduce this impact. For advice in respect of answering the above questions, please contact the human resource department.		
Was a full impact assessment required?	No	
What is the level of impact?	Low	

Contents

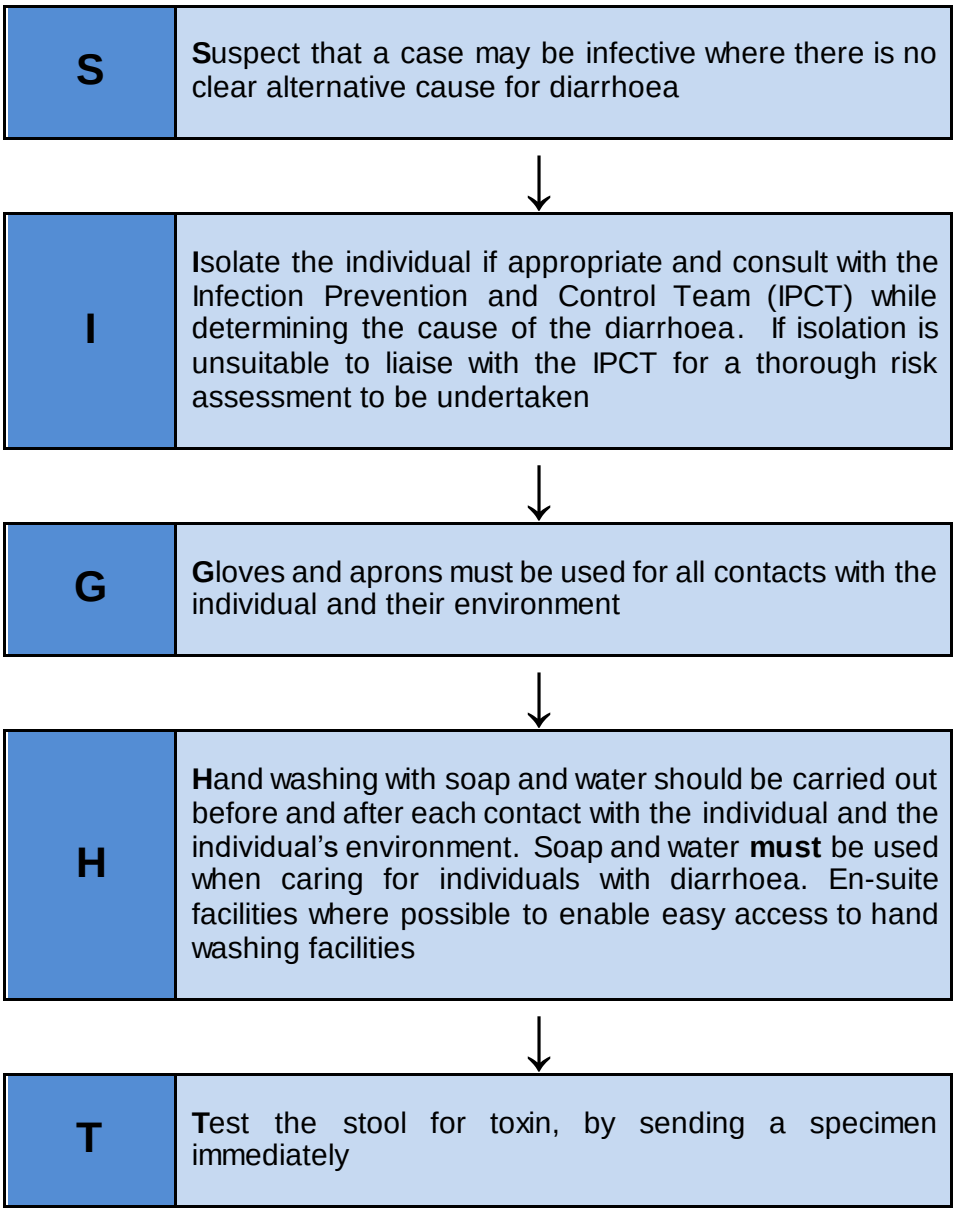
Quick reference flowchart 4

1. Introduction 5
2. Background 5
3. Definition 5
3.1 Mode of spread 6
3.2 Signs/symptoms 6
4. Management procedure 6
4.1 Environmental cleaning 7
4.2 Treatment 7
4.3 Specimens 7
5. Duties and responsibilities 8
5.1 All Trust Employees 8
5.2 All Prescribers 8
5.3 Infection Prevention and Control Team 8

Appendix 1 - Guidance regarding the safe use of antibiotic treatment and usage within the trust 9
Appendix 2: The Bristol Stool Form Scale 10

Quick reference flowchart
For quick reference the guide below is a summary of actions required.

Healthcare staff should follow the following protocol – **SIGHT** (Department of Health, 2009), when managing suspected potentially infectious diarrhoea



1. Introduction

This policy sets out Cheshire and Wirral (CWP) NHS Foundation Trusts approach to the prevention and management of Clostridium difficile infection. The aim of this policy is to inform all CWP staff of the causes of Clostridium difficile (C.difficile) infection, its mode of transmission and the appropriate infection control precautions required when caring for an individual with C.difficile infection. Infection Prevention and Control is everybody's responsibility and staff must ensure it is applied in the management of individuals affected by Clostridium difficile infection.

2. Background

C. diffiicle is a spore forming bacteria that can inhabit the human intestinal tract as part of the normal flora. It is the major cause of antibiotic associated diarrhoea and should be considered as a cause of infection when an individual presents with diarrhoea.

It is a bacterium of the family Clostridium (the family also includes the bacteria that cause tetanus, botulism, and gas gangrene). It is an anaerobic bacterium (i.e. it does not grow in the presence of oxygen) and produces spores that can survive for a long time in the environment. Its usual habitat is the large intestine, where there is very little oxygen. It can be found in low numbers in a small proportion (less than 5%) of the healthy adult population. It is kept in check by the normal, 'good' bacterial population of the intestine. It is common in the intestine of babies and infants, but does not cause disease because its toxins (poisons) do not damage their immature intestinal cells. However, the normal microbial population of the colon declines with age and together with a reduced immune response may explain, why, after the age of 65, rates of C.difficile colonisation and infection increase. Although C.difficile was first described in the 1930s, it was not identified as the cause of diarrhoea and colitis following antibiotic therapy until the late 1970s (Department of Health, 2007).

The infection usually occurs in the normal gut flora which is altered by the use of broad spectrum antibiotics, leading to multiplication of the organism, toxin production / release and the symptoms of colitis. Severe cases can lead to Pseudomembraneous colitis and toxic megacolon, which can be fatal. Recurrence of symptoms after treatment is common and may be associated with persistence of spores in the gut. Affected individuals can continue to excrete the organism for prolonged periods (refer to appendix 1: Guidance re antibiotic usage)

3. Definition

Suspect Clostridium difficile infection if the individual has one episode of diarrhoea defined either as stool loose enough to take the shape of a container used to sample it or as a Bristol Stool Chart types 5-7 (Appendix 2), that is not attributable to any other cause including medication (Department of Health, 2009). Individuals with diarrhoea should be monitored daily for frequency and severity of diarrhoea using the Bristol Stool Chart (see appendix 2).

Healthcare staff should follow the following protocol – **SIGHT** (Department of Health, 2009) – 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 individual 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 individual and their environment
H	Hand washing with soap and water should be carried out before and after each contact with the individual and the individual's environment
T	Test the stool for toxin, by sending a specimen immediately

3.1 Mode of spread

A symptomatic individual leads to contamination of their immediate environment – staff hands, equipment and general environment. Spore formation by the Clostridium difficile can lead to persistence of the organism in the environment (McCulloch, 2000). In outbreaks of infection extensive contamination of the environment has been implicated as an important factor in its spread, (Healthcare Commission, 2006).

3.2 Signs/symptoms

Usually diarrhoea with a distinctive odour, sometimes containing mucous. Affected individuals may also experience abdominal pain and in severe cases pyrexia.

4. Management procedure

Single room with en-suite facilities where possible. If this is not achievable then please contact the Infection Prevention and Control team as soon as possible on 01244 397700. This is to enable an appropriate risk assessment to be undertaken by the Infection Prevention and Control Team.

One of the most important infection prevention and control measures to be taken when dealing with a case of Clostridium difficile diarrhoea is that of thorough hand washing before and after all contact with an individual and contact with contaminated equipment. However, it must be emphasised that alcohol hand gel cannot eradicate the spores which can be disseminated in high numbers from affected individuals, therefore hands must be washed using soap and water and dried thoroughly with disposable paper hand towels after contact with an affected individual or their environment (Hoffman et. al. 2004).

Appropriate personal protective equipment (PPE) should be worn when entering an individual's room for all contact with the individual and their environment. Hands must be decontaminated with soap and water before and after each contact with an individual (Department of Health, 2009). PPE must be disposed of as per the Trust's waste policy and hands washed as outlined previously.

Linen should be treated as infected and placed in red soluble bags. It is not recommended that clothing belonging to individuals which becomes grossly contaminated with faeces is laundered at ward level. Further guidance can be found in SOP23 Handling of linen and clothing.

4.1 Environmental cleaning

All horizontal surfaces should be cleaned in the vicinity of the individual at least daily using a hypochlorite solution of at least 1,000ppm as regular cleaning should reduce the number of spores present in the environment (Department of Health, 2009). Special attention should also be paid to sanitary fittings. Hypochlorite solution of at least 1,000ppm should be used to clean toilet areas. Additional cleaning precautions may be recommended by the Infection Prevention and Control Team.

Commodes must be thoroughly washed using a hypochlorite solution of at least 1,000ppm and dried after each use. Commodes must be allocated to individuals while they remain symptomatic.

Deep cleaning of a mattress, bed space, bay or ward area after the discharge, transfer or death of an individual with C.difficile must be thorough. All areas must be cleaned using hypochlorite solution of at least 1,000ppm and the curtains should be changed (Department of Health, 2009).

All other equipment should be cleaned with hot water and detergent where applicable. Further information on individual pieces of equipment can be obtained from the GR30 Decontamination and disinfection policy.

Chlorine containing cleaning products must be made up to the correct concentration and stored in accordance with the manufacturers' instructions.

All clinical areas should be regularly assessed for cleanliness and results fed back to clinical and cleaning teams. The Infection Prevention and Control Team, Matrons and Head of Facilities will meet monthly to discuss results. Particular attention will be paid to bathroom and toilet scores (Department of Health, 2009).

4.2 Treatment

Appropriate antibiotic treatment must be instigated as soon as possible. Advice should be sought from a Microbiologist at the nearest Acute NHS Trust such as Clatterbridge, the Countess of Chester, or Macclesfield Hospitals depending on the location. Out of normal working hours advice is also available via the on call public health. An individual with C. difficile infection must be reviewed on a daily basis by their clinical team including an electrolyte replacement nutritional review. Their drug chart must also be reviewed on at least a weekly basis by the pharmacist (Department of Health, 2009).

Appropriate infection prevention and control precautions must be maintained until the individual is passing formed stools (types 5-7 on the Bristol Stool Chart) or their bowel habit has returned to what is normal for them. It is not necessary to send repeat stool specimens to the laboratory for "clearance".

4.3 Specimens

Stool specimens submitted to the Microbiology Laboratory must be accompanied by a request form clearly stating Clostridium difficile examination in addition to the routine culture. Only diarrhoeal specimens that take the shape of a specimen container will be tested in accordance with the Clostridium difficile Working Group recommendations (Department of Health, 2003). All diarrhoeal specimens from individuals aged between 2 and 65 are tested for Clostridium difficile (Department of Health, 2007).

5. Duties and responsibilities

For overarching duties and responsibilities in Infection Prevention and Control please refer to IC1 Trustwide infection prevention and control operational policy. For additional and specific duties and responsibilities related to this policy please see below.

5.1 All Trust Employees

All Trust employees will ensure that they adhere to this policy. On admission and on transfer, ward staff will identify any individual with existing C. difficile infection and they will inform the Infection Prevention and Control Team as soon as practicable.

5.2 All Prescribers

All prescribers will ensure that antibiotic prescribing and review is in accordance with Best Practice guidelines (Appendix 1) and that prescribing is within the agreed National Formulary.

5.3 Infection Prevention and Control Team

The Infection Prevention and Control Team will support and advise staff caring for people with C.difficile infection. They will report each case of C.difficile infection to the Director of Infection Prevention and Control and the Trusts IPSC and carry out a Route Cause Analysis of all cases of C.difficile infection that are detected less than 48 hours after an individual is admitted to an inpatient area in CWP.

Appendix 1 - Guidance regarding the safe use of antibiotic treatment and usage within the trust

As of January 2019 the Government published The UK's 20-year vision for antimicrobial resistance: Contained and controlled and The UK's five-year national action plan: Tackling antimicrobial resistance 2019-2024. The NHS Long Term Plan also states that the health service will continue to support implementation and delivery of the government's new five-year action plan on Antimicrobial Resistance. The infection prevention and control team for the Trust will support these plans in optimising usage, reducing the need for and unintentional exposure to antibiotics.

The infection prevention and control team promote prudent antimicrobial stewardship.

Guidance from the infection prevention and control team for the Trust advises that:

1. Antibiotics will only be prescribed after a treatable infection has been recognised / diagnosed, or there is a high degree of suspicion of infection.
2. The choice of antibiotic will normally be governed by local information about trends in antibiotic resistance or a known sensitivity of the organism.
3. Antibiotics will only be prescribed using WCCCG antimicrobial formulary over the correct period at the correct dose.
4. Prescription of antibiotics for children will be carefully considered; they are not to be prescribed for common viral infections.
5. Support for prudent antibiotic prescribing within the Trust will be provided by the clinical pharmacists and the local host Trusts medical microbiologists. Out of office hours information and advice can also be obtained from the on call public health team.
6. Antibiotics will only be used for prevention of infection, where benefit has been proven.
7. Narrow spectrum antibiotics should be considered before the broad spectrum groups.

The Health and Social Care Act 2008: Code of Practice on the prevention and control of infections states that providers should develop a local antimicrobial policy based on national guidance (including the BNF and NICE) that takes into account local antibiotic resistance patterns.

The Infection Prevention and Control Team and the clinical pharmacists are available for advice, which will include information on treatment within the Trust.

Appendix 2: The Bristol Stool Form Scale

(New chart - this is from PHE updated guidance on the management and treatment of Clostridium difficile infection)

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, a mushy stool
Type 7		Watery, no solid pieces ENTIRELY LIQUID