GAIN

GUIDELINES AND AUDIT
IMPLEMENTATION NETWORK

REGIONAL DISCHARGE AND PATIENT TRANSFER PROTOCOL FOR PATIENTS WITH CLOSTRIDIUM DIFFICILE INFECTION

February 2009

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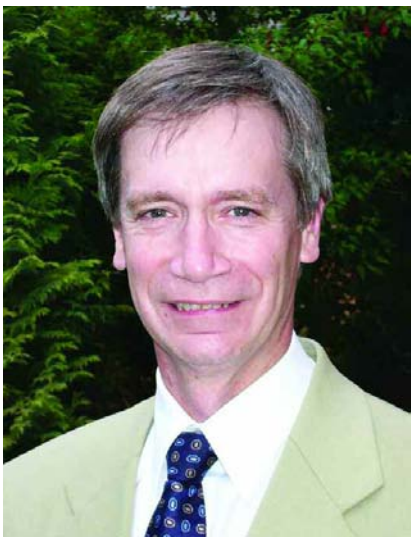
FOREWORD



Regional discharge protocol for patients with *C. difficile* infection.

These guidelines have been published by the Guidelines & Audit Implementation Network (GAIN), which is a team of health care professionals established under the auspices of the Department of Health, Social Services & Public Safety in 2008. The aim of GAIN is to promote quality in the Health Service in Northern Ireland, through audit and guidelines, while ensuring the highest possible standard of clinical practice is maintained.

This guideline was produced by a sub-group of health care professionals from varied backgrounds and was chaired by Dr Hugh Webb, Consultant Microbiologist in the Ulster Hospital.

GAIN wishes to thank all those who contributed in any way to the development of these guidelines.

Dr T Trinick
Chairman of GAIN

INTRODUCTION

Following the completion of the first phase of the RQIA Independent Review on *Clostridium difficile* and the publication of the subsequent findings, the Department of Health, Social Services & Public Safety (N Ireland) have, in response to one of the regional recommendations, asked GAIN to commission a short guideline/protocol to take account of the following recommendation:

R7 Regional guidance should be developed for effective communication about *Clostridium difficile* cases between hospitals, primary care practitioners and care homes. Systems should be established to ensure that information is available and guidance provided about treatment including antibiotic prescribing, for patients who have a recurrent episode of *Clostridium difficile* and are admitted to a different facility.

The RQIA Independent Review expressed concern that systems were not in place for hospitals to easily identify patients who had a previous history of *Clostridium difficile* infection during a previous admission to other health and social care facilities.

This guideline will aim to address this gap in the current arrangements and will also aim to improve communication and the exchange of information between acute hospitals, GPs and the independent care sector following the discharge of a patient with a diagnosis of *Clostridium difficile* infection. In addition by developing a standard protocol for all Trusts the risk from every Trust adopting a different approach will be reduced.

INFORMATION FOR GP'S AND CARE HOMES

What is *Clostridium difficile*?

Clostridium difficile (often shortened to *C diff.*) is a bacterium which can be found in the gut of approximately 3-5% of the healthy adult population. It can produce spores, which enable it to survive in the environment for long periods of time, and powerful toxins that cause a clinical illness. *Clostridium difficile* is kept under control in a healthy individual's body by other bacteria that live in the gut.

How does *Clostridium difficile* infection occur?

Clostridium difficile infection almost always occurs in patients who are on or have recently received antibiotic treatment. The normal balance of bacteria in the gut may be disrupted and the patient may acquire *Clostridium difficile* from another individual or the environment. The organism is then able to multiply in the gut and produce the toxins that cause illness. The symptoms range from mild diarrhoea to severe inflammation and, rarely, perforation of the bowel. *Clostridium difficile* occurs most commonly in the frail elderly or in a debilitated individual. Occasionally, patients may die from the illness therefore, prompt diagnosis and treatment is extremely important. Some strains of *Clostridium difficile* are capable of causing more severe illness, increased mortality, and have a greater association with relapses.

What is the treatment for *Clostridium difficile* associated diarrhoea?

The principles of treatment are; rapid assessment of the severity of the illness, review of all antibiotic therapy with discontinuation if possible, and commencement of specific antibiotic treatment for *Clostridium difficile*. Maintenance of adequate hydration is important and regular frequent review of the patient's progress is vital. The antibiotics normally prescribed for *Clostridium difficile* are metronidazole and/or vancomycin. The patient needs to be educated regarding re-hydration and

the need to finish the course of antibiotics, even if the diarrhoea resolves. Failure to complete the course is strongly associated with an increased risk of recurrence. The patient should also be told to inform their GP immediately if the diarrhoea recurs. GPs should contact the Microbiology Service in their local hospital for advice on the treatment of patients with recurrent *Clostridium difficile* infection, or who do not responding to treatment.

Can a patient who recovers from *Clostridium difficile* associated diarrhoea/illness relapse/ become infected again following treatment?

Yes. It is possible for a patient to either have a relapse/to become re-infected with *Clostridium difficile*, even after completing a course of treatment. If the patient has responded to treatment and then develops diarrhoea again it is more likely that they have been re-infected.

If a patient who previously had *Clostridium difficile* associated diarrhoea develops diarrhoea post-discharge, what specimens should be taken?

If *Clostridium difficile* infection is suspected then a liquid stool sample should be sent to the laboratory for testing. Faeces specimens will not normally be tested for the presence of *Clostridium difficile* toxins unless they are liquid. The laboratory request form should contain information about the patient's recent antibiotic history and details of previous *Clostridium difficile* infection. Formed faeces specimens are **not suitable** for testing for *Clostridium difficile* toxins.

Should special infection control precautions be taken when dealing with a patient with resolved *Clostridium difficile* associated infection in the community?

Patients discharged into the community following *Clostridium difficile* associated infection in the hospital should be at least 72 hours symptom-free prior to discharge.

However, standard infection control procedures including the use of gloves and aprons when handling body fluids should be continued. Hands should be washed with soap and warm running water and dried thoroughly, as alcohol hand rub does not destroy the bacterial spores.

If a patient in a nursing home/residential home develops diarrhoea, they should be isolated immediately in a single room. The patient should remain in isolation until they are 72 hours symptom free to prevent other vulnerable residents from acquiring *Clostridium difficile* infection. Healthcare workers should wear gloves and aprons when entering the patient's immediate surroundings and should remove protective clothing and decontaminate their hands prior to leaving the patient's area.

Enhanced environmental cleaning using detergent and chlorine releasing agent either separately or in a combination preparation should be maintained in the symptomatic patient's room. Cleaning must be thorough with particular attention to commodes, beds, mattresses and the patient's immediate surroundings which may become heavily contaminated. Commodes should be allocated for the infected patient's use only, and should be cleaned at least twice daily. The patient's linen should be treated as infected and washed separately. The room should be thoroughly and completely cleaned once the patient is asymptomatic.

When should patients with *C difficile* infection in the community be referred to hospital?

Daily review of patients with *C difficile* infection is essential as this infection can cause severe illness and increased mortality.

Features of severe C. difficile infection include:

1. Temperature > 38.5°C
2. Pulse > 100 beats/min
3. Abdominal pain /tenderness/distension
4. Patient passing > 7 stools per day
5. WCC > 15,000/mm^3

If the patient has any of these features they may have severe *C. difficile* infection and they should be considered for urgent admission to hospital.

GPs should now include a GP Patient Admission Form (as per Appendix 1) to accompany all letters and information when admitting a patient to hospital. This admission form will be available electronically to all practices. This form will help hospital staff to assess risk of *C difficile* infection in patients being admitted to hospital.

If the patient needs to be admitted or readmitted to hospital should I contact the hospital to inform them that the patient has a history of *Clostridium difficile* infection?

Yes. The Regional Guidelines and templates (See GP Referral Section and Appendix 1) must be used in all cases of transfer between different healthcare settings. This is to ensure that patients are appropriately managed immediately upon admission. If a patient is symptom free for more than 72 hours prior to admission, the ward should be made aware of any recent *C. difficile* infection in case the patient relapses.

What steps can be taken to prevent patients developing *Clostridium difficile* infection?

Healthcare workers should:

- Always wash their hands with soap and warm running water and dry them thoroughly after contact with a patient/their surroundings and before contact with another patient.

- Wear gloves and aprons when handling blood/body fluids and wash hands following removal.

- Critically assess the need for antibiotic therapy in all cases. Avoid prescribing

broad-spectrum antibiotics, particularly cephalosporins and quinolones, unless there is a proven microbiological indication.

- Advise nursing/residential homes to isolate patients with diarrhoea and to take a specimen to confirm diagnosis.

- Ensure that environmental cleaning is in accordance with recommended best practice.

Further information regarding *C difficile* infection is available on the Regional Infection Prevention and Control website at www.infectioncontrolmanual.co.ni

GP REFERRAL

The CREST 'Protocol for the Inter Hospital Transfer of Patients and Their Records' (August 2006) sets out in Sections 3.1 and 4.1 principles for patient transfer which have general applicability as best practice. These are:

- Discussing the situation with the consultant care team at the referring hospital;
- Making the decision to transfer following consultation with the care team and patient/parent/carer;
- Liaising with staff at the receiving unit and agreeing transfer arrangements and expected time of arrival;
- Ensuring the receiving unit has full details of the patient's condition and requirements;
- It is essential that a summary clinical note is transferred with the patient.

We recommend these are followed as may be appropriate in individual patient referrals.

We recognise that GP referral procedures are not yet standardised across the region. However a majority of practices use an electronically generated referral form incorporating a Minimum Data Set, (currently version 4.1). This data set does not currently include a field for *C. difficile* infection and this will need to be addressed.

In the interim, the *C. difficile* GP Patient Admission Form (Appendix 1) should accompany every patient admission referral **in addition to** the customary referral letter.

This form should be made available to all GPs electronically.

AMBULANCE TRANSFER

Ambulance staff should apply routine precautions for the transfer of all patients. There are no special precautions specific to *C. difficile.*

In the event of an adverse incident, eg a spillage of blood and/or bodily fluids including diarrhoea, recommended decontamination should follow routine protocols.

HOSPITAL ADMISSIONS AND DISCHARGES

Admissions

In all hospital admissions, the nurse admitting the patient or accepting a transfer must complete an Infection Prevention and Control Admission Risk Assessment form (Appendix 2). This form specifically addresses risk assessment for infectious diarrhoea, but also incorporates a section in which a history of other potentially significant pathogens can be noted. This avoids the necessity for specific forms for individual pathogens.

Discharges and Transfers

All discharged/transferred patients who have experienced C. difficile infection during their hospital admission must have a *C. difficile* Discharge Checklist (Appendix 3) completed by the discharging physician in addition to the customary discharge note.

COMMUNICATING WITH PUBLIC HEALTH

The European Centre for Disease Prevention and Control definitions for Healthcare Associated Cases and Community Associated Cases of *Clostridium Difficile* Associated Disease (CDAD) should be used. These are as follows:

Healthcare Associated Case

This is a CDAD case patient with onset of symptoms *at least* 48 hours following admission to a Healthcare facility, *or* with onset of symptoms in the Community within 4 weeks following discharge from a Healthcare facility.

Community Associated Case

This is a CDAD case patient with onset of symptoms *while* outside a Healthcare facility and without discharge from a Healthcare facility within the previous 12 weeks, or with onset of symptoms within 48 hours *following admission* to a Healthcare facility without residence in a Healthcare facility within the previous 12 weeks.

Unknown Case

This is a CDAD case patient who is discharged from a Healthcare facility 4 – 12 weeks before the onset of symptoms.

It is important that Trust Infection Control Teams are aware of all Healthcare Associated Cases; that CCDCs are aware of all Community Associated Cases, and that Unknown Cases are known to both groups to best enable the identification of possible outbreaks occurring, either in Healthcare or in Community settings. It is therefore proposed that the following communications should occur;

Microbiology Departments should inform the CCDC of all cases of *Clostridium Difficile* positive specimens where the patient was in the Community at the time the specimen was taken. In addition, the Trusts should make arrangements to ensure the CCDC is informed of any patients who are positive within 48 hours of admission to hospital where the patient has not been in hospital in the 4 weeks prior to admission.

For each case, the CCDC will collect information using a standard pro-forma. This will identify any cases occurring in Nursing or Residential homes and enable the identification of clusters. It will also identify if any case has been in hospital in the previous 12 weeks, in which case the CCDC will notify the relevant Trust Infection Control Team.

Audit

We recommend Audit Departments within HSC Trusts audit the appropriate use of Appendix 1, 2 and 3 initially on a 6 monthly basis initially and thereafter 12 monthly periods.

Sample audit tools are available on the Gain website at
http://www.gainni.org/Audit_Tools/index.asp

APPENDICES

APPENDIX 1

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GP Patient Admission Form

To Assess Risk of *Clostridium difficile* Infection in Patients being admitted to Hospital

To be completed for **ALL** patients being referred for admission

Patient Name ……..…… Date of Birth ……/……/…….

Health & Care Number (if known) ……

Address (own Home/Residential Home/Nursing Home……

……...

……

In the last 4 weeks this patient has:	**Yes**	**No**
1. Had antibiotic therapy	☐	☐
2. Had/has diarrhoea	☐	☐
3. Had a positive C. difficile toxin test	☐	☐
4. Ongoing *C. difficile* infection	☐	☐

Signed …… Date……..

This must be filed in the patient's medical record

APPENDIX 2

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Infection Prevention and Control Admission Risk Assessment Form
To be completed by the nurse admitting a patient OR accepting a transfer

Patient Details	Transferring Hospital Details (if applicable)
Name:	Date of Admission:
Address:	Ward:
	Consultant:
Hosp. No.	Reason for original admission/Transfer:
Date of Birth:	Name of staff member in transferring hospital supplying information:
Date of Admission:	
Ward:	

Risk Assessment for Infective Diarrhoea and/or Vomiting

Is the patient/client currently having diarrhoea and/or vomiting where infection has not been ruled out as the cause? Yes/No

Has the patient/client been in a ward or nursing home where other patients have been having diarrhoea &/or vomiting? Yes/No

Has the patient's/client's family had diarrhoea and/or vomiting Yes/No

Has the patient/client a history of *Clostridium difficile*? Yes/No

If yes, date of first *C. difficile* toxin positive specimen _____

Known History of Mutliresistant Organisms or Other Infection Risk

Has the patient/client a history of having MRSA ☐ ESBL ☐ VRE/GRE ☐ Other _____

Is the patient/client and their family aware of their diagnosis? Yes / No / Unknown	Is the patient/client currently being nursed in a single room? Yes/No
	Was the patient/client placed in an isolation room on admission? Yes/No

Other relevant information: (e.g. Current antibiotic treatment/or contact with infection).

Infection Prevention and Control Nurse informed? Yes/No

Name of staff member completing form:

Signature & Print Name:

Contact Number: Date:

APPENDIX 3

TO BE COMPLETED BY DISCHARGING PHYSICIAN

***Clostridium difficile* Transfer/Discharge Checklist**

(For patients discharged to residential/care home/GP or other health care facility)

Patient Details

Name: _____ **Date of Birth** _____/_____/_____

Address: _____

Hosp. No. _____ **Date of Admission:** _____/_____/_____ **Ward** _____

Date of last positive *Clostridium difficile* toxin specimen:

Patient treated with Metronidazole **Yes** ☐ **No** ☐

Total Number of courses = ☐

1st Course
Start Date _____
Stop Date _____

Most Recent Course
Start Date _____
Stop Date _____

Patient treated with Vancomycin **Yes** ☐ **No** ☐

Total Number of courses = ☐

1st Course
Start Date _____
Stop Date _____

Most Recent Course
Start Date _____
Stop Date _____

Is patient still on antibiotic therapy **Yes** ☐ **No** ☐

If YES, please give details
Name of Antibiotic:_____
Continue for_____

If Tapered course, please give exact details
Tapered Course detail_____

Patient now 72 hours symptom free from diarrhoea **Yes** ☐ **No** ☐

If YES, date of last episode of diarrhoea Date: _____

If NO, Infection Control Risk Assessment for transfer undertaken **Yes** ☐ **No** ☐

Name of Infection Prevention and Control Specialist carrying out risk assessment Name: _____ Date _____

Signature: _____ Print Name _____

Designation: _____ Date: _____

APPENDIX 4

Membership of the GAIN Sub-Group looking at a Regional discharge protocol for patients with *Clostridium difficile* infection

Chairman

Dr Hugh Webb	Consultant Microbiologist	South Eastern HSC Trust

Members

Miss Bernie McCullagh	Antimicrobial Pharmacist	South Eastern HSC Trust
Mrs Mary Hanrahan	Infection, Prevention & Control Nurse	Belfast HSC Trust
Dr Richard Smithson	Consultant in Communicable Disease Control	Western HSS Board
Dr David Johnston	General Practitioner	Maine Medical Centre
Mr Hugh Fullerton	Senior Systems Analyst	DIS, DHSSPS
Dr Lorraine Doherty	Consultant Epidemiologist/ Senior Medical Officer	DHSSPS
Denise Lynd	General Manager, HSC Records	Belfast HSC Trust
Dr Maria Dowds	General Practitioner	Northern HSC Trust
Nicola Porter	Guideline & Audit Manager	GAIN

Further copies of this guideline can be obtained by either contacting the GAIN Office or by logging on to the website.

GAIN Office
DHSSPS
Room C4.17
Castle Buildings
Stormont
BELFAST
BT4 3SQ

www.gain-ni.org

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