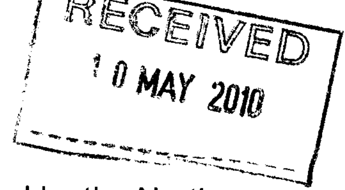


My name is Carol Ferguson. I am a Ward Manager employed by the Northern Health and Social Care Trust at Inver Intermediate Care Unit, Moyle Hospital Site, Gloucester Avenue, Larne.

During the period of the Clostridium Difficile (cdiff) Outbreak the unit was known as Inver House and consisted of two wards – Inver One and Inver Two. Both wards provided rehabilitation for older adults, with 23 beds in Inver One and 22 beds in Inver Two, 2 of which were palliative care beds.

I was ward manager of Inver Two during this period.

Patients are transferred to Inver from various hospitals in the province, the majority transferring from Antrim Area Hospital. We also accept admissions from Whiteabbey Hospital, the Royal Victoria Hospital, Belfast City Hospital and a small number from Musgrave Park Hospital. A number of patients are admitted directly from home for Palliative Care.

For my statement I have been asked to address various staff themes with regard to my personal experience, and also to address my perception of the impact of the outbreak on staff in the Moyle. I have found it difficult to give my perception of the impact of the outbreak on staff in the Moyle for two reasons. Firstly, I was not a staff member of Inver one although we would have had similar systems of care. Secondly, I have not spoken to every individual to obtain their perception of events.

However, in relation to my personal experience, and perception of events as a ward manager and member of the nursing team, I have attempted to address each theme as fully, honestly and openly as possible based on my recollection of events and consideration of relevant records.

1. **Personal Experience**

As a ward manager an important and vital part of my role during this period was to ensure the team were fully aware and clear about all infection control policies and procedures and their role within this, to monitor compliance and to assess and facilitate training needs. This was particularly challenging due to the volume of information, frequent changes and amendments as the trust worked through a continuous improvement cycle. To address this, information was given at ward handover, safety briefings and team meetings. Staff were required to read and sign policies, protocols, memos as they were received.

Information was displayed on a notice board so that it was readily available should clarification be sought. I believe the team were very committed to reducing the risk to patients, were compliant with policies and were proactive in identifying and managing risk. I had previously completed an infection control course; I also had within the team two infection control link nurses and two infection control link nurse assistants. I and the above mentioned staff delivered training on infection control issues to other members of the team. Therefore I believe the team had a good working knowledge of infection control issues. Compliance was audited by the infection control link nurses and me in areas such as hand washing, environmental cleanliness, decontamination and labelling of equipment and staff knowledge of policy. An equally important part of my role and that of the team was ensuring good communication with patients, their family and visitors to provide appropriate information relating to cdiff, prevention and reduction of spread/cross infection. Overall I found this a difficult period. Many of our patients are frail and elderly with multiple disease related pathology; it was distressing for staff and families alike if a patient was unwell due to cdiff. All staff felt we provided a high standard of care and were dismayed that despite our best efforts such events did occur. Even though I believed we did not compromise patients I still felt we had let them down in some way.

2. **Workload and Resources.**

I believe the workload increased greatly during the period of the outbreak. A patient who had active toxin positive infection had increased needs in terms of personal care, observation and monitoring, to ensure comfort and safety and monitor progress. Isolation rooms along with all equipment used within that area had to be cleaned and decontaminated twice daily and also after each use. There was an increased level of deep cleaning and decontamination within the entire ward. Patients who were confused and with a tendency to wander required increased levels of supervision to ensure they did not compromise other patients by entering or leaving isolation rooms. Patients in isolation were required to have their room doors closed to prevent spread of spores, this could also be socially isolating for some elderly patients. In response to this staff were required to increase the level of communication

and observation of this group of patients. These patients also required increased monitoring in terms of physiological observation and investigation. An increased period of time was spent communicating with visitors to reduce risk of spread to other patients or indeed themselves. Regular auditing took place to ensure compliance and identify any action required. Whilst this was important it was also time consuming in many instances. Completion of Root cause analysis documentation and meetings also took up a lot of time. Resources available to us included the infection control team who were always helpful and easily contacted. The laboratory team were prompt in identifying infection which was telephoned to the ward immediately. The policies, procedures and directives were available to ensure the team were aware of correct procedure. Whilst we were not offered additional staff during this period I was aware that my manager gave me the authority to supplement staffing levels should this be required. Within Inver we are fortunate also to have a dedicated domestic services team who were very aware of their roles and responsibilities. They provided and continue to provide a high standard of service.

3. **Systems.**

In Inver we always had our own system in place to attempt to identify patients with infection who were requested to be transferred to us. This involved asking referring hospitals about history of infection, vomiting or diarrhoea and about formed stool should diarrhoea have been a previous problem. This arrangement was formalised during the outbreak with the introduction of the Gain Tool (1). Patient charts were checked for infection alert signs and history was checked. Patients with infections were always placed in single rooms or very occasionally cohort bays if a room is not available. Patients displaying symptoms such as diarrhoea were placed in an isolation room immediately and appropriate precautions commenced. Their previous area was cleaned and decontaminated. Medical assessment was carried out as soon as possible and specimens were sent to the laboratory as available. Should a patient be confirmed positive the laboratory would notify the ward immediately and also contact the Infection Control team. The nurse in charge in Inver would have contacted the medical officer to assess the patient and initiate

appropriate treatment. The infection control team and lead nurse would also be informed at this time. The patient and next of kin would be notified and an explanation given regarding information and infection control guidance. Root Cause Analysis forms (2) were completed by appropriate staff and a meeting was organised to attempt to determine causative factors and any appropriate action. Daily clinical progress forms (3) were completed for each patient to monitor progress or detect deterioration. High impact interventions (4) were introduced to ensure compliance with hand washing, decontamination, prudent antibiotic prescribing and treatment. Patients would be discussed at handover to ensure all staff were aware of status. Infection control procedures would be reinforced at this time. A member of the infection control team would be in contact on a daily basis either in person or via the telephone to monitor the situation.

4.Priorities.

For the trust the highest priority was to put in place policy and procedure to stop the outbreak and to prevent future occurrence. This involved examining our practice and ensuring correct systems were in place. Within Inver, staff understood the importance of this and therefore our priority was to ensure appropriate care was given to patients to ensure their comfort and safety. Early identification of potential infection was also uppermost in the minds of staff. Compliance with infection control policy was and continues to be mandatory with all staff aware of the importance of challenging non compliance and reporting concerns. Infection control training is required for all staff on an annual basis.

5.Responsibility and Accountability.

As registered nurses we are bound by the NMC code of professional conduct and as such are responsible and accountable for our action and omissions. We are responsible and accountable to our patients and the public for the standard of care given and also to our employer to ensure we operate within policy and procedure. I believe in regard to the outbreak clear lines of responsibility were established, in that infection control became everyone's responsibility regardless of the role in which they were employed. Staff within

Inver understood this and were not afraid to challenge and report concerns. I would also refer to paragraph 1 of this statement in relation to my role and the role of the team.

6. **Communication.**

Communication came from numerous sources such as the Infection Control team, lead nurses, laboratory, chief executive, director, and chairman. This was due to the need to address issues, make amendments or change policy ultimately to improve practice and prevent infection. This came in the form of policies, letters, e-mails and telephone calls. Many of the team found the changes and amendments frustrating at times as they may have been asked to change an aspect of their practice only to find it was to be changed again. They did however understand the need for this as a quality improvement cycle and complied as required. Communication within the team was vital to ensure that each new piece of information was given to and understood by all the team. This took the form of handovers, safety briefings, team meetings and an information board. Staff would inform me as ward manager or my deputy about any issues or problems with compliance. We would regularly contact the infection control team to seek advice or clarification as required. The infection control link nurses acted as a resource who would attend regular infection control meetings and discuss issues arising with the team. Patients and visitors were informed both verbally and with written information on facts about cdiff, prevention of infection, hand washing and the use of hand sanitiser gels, and laundering of items of clothing. My perception of events is that some staff found it difficult when we were informing patients and relatives about a positive infection status. Inver staff has always taken a pride in the standard of cleanliness within our unit –something that is regularly commented on by visitors and patients alike. Media coverage appeared to focus on dirty hospitals as the cause of this infection, therefore it was a cause for concern that patients and visitors may feel we were not operating to a good standard. In my view I and my team worked to a very high standard of care.

7. **Microbiology.**

Microbiology would contact ward by telephone immediately with positive results and would also inform Infection Control team. They also provided information on sample testing. The microbiologist was available at outbreak meetings and was also available via telephone for advice on appropriate antibiotic prescribing. A policy on appropriate antibiotic prescribing was developed which was given to staff and displayed on the notice board to inform medics as required. Staff in Inver found microbiology and the infection control team a very helpful resource during this time.

8. **Access to relevant meetings.**

As a ward manager I attended root cause analysis meetings as required. Monthly ward manager meetings with the lead nurse would always have infection control items on the agenda. This information was delivered to the ward team at safety briefings and staff meetings. Infection control link nurses would attend infection control meetings and information was delivered to the team as described before. Minutes from meetings were displayed on the staff notice board to be read and signed by each team member. I believe staff would have found information readily available at ward level from relevant meetings.

9. **Media Handling by the Trust**

It was not part of my role or that of the Inver team to be involved in media handling, other than to display appropriate information within the ward to provide information to visitors and staff. The general opinion of the team was that the trust appeared open about figures and about what they were doing to address the situation. It was felt that the media appeared to focus solely on dirty hospitals and poor practice; other causes of cdiff were rarely reported such as the use of antibiotics.

10. **Support**

Management – In my opinion staff felt supported by management. Senior management gave this situation the highest priority. Regular letters would be received from the chief executive. The trust chairman visited the ward on a number of occasions during which he would discuss infection control issues

and question staff. As a ward manager I believe I supported the team. We are fortunate in that we are a small unit with staff who have worked together for some time. During difficult periods the team has always pulled together to support one another. It was no different in this instance.

11. **Public and Visitors**

I believe staff found that whilst some visitors would be very careful about infection control, they were probably in the minority. Information and advice given to visitors and patients was not always adhered to. Staff spent a considerable amount of time reinforcing expected behaviours.

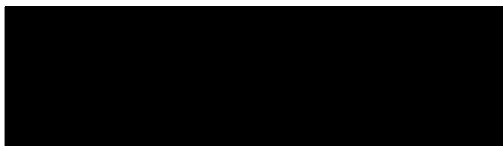
12. **Morale of Staff**

My perception of staff morale was that it remained reasonably good. It was a difficult period, however nurses are used to working under difficult circumstances and the team supported each other. As a manager and team member I did not perceive low morale. Staff continued to do their job to the best of their ability. I had no increase in levels of sickness which can be an indicator of stress or low morale. Staff who were registered on the nurse bank and who worked part – time hours were willing to work extra shifts if required.

13. **Stress**

From my perception the team did not appear unduly stressed. There were certainly lots of changes and the workload was greater, however they appeared to cope well and used this period as a learning opportunity to improve practice.

From my recollection of events I confirm that the contents of this statement are true.



Carol Ferguson

6.5.10

Appendices

1. Gain Tool
2. Root Cause Analysis Form
3. Daily Clinical Progress Sheet
4. High Impact Intervention

Northern Health and Social Care Trust

GAIN TOOL

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
Name:	Date of Admission:
Address:	Ward:
	Consultant:
Hosp. No. Date of Birth:	Reason for original admission/Transfer:
Date of Admission:	Name of staff member in transferring hospital supplying information:
Ward:	

Admission/Transfer Risk Assessment for Infective Diarrhoea

Is the patient/client currently having diarrhoea where infection is the suspected 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

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

Is viral Gastroenteritis/Norovirus suspected or confirmed? Yes/No Suspected ☐ Confirmed ☐

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

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

Known History of Multiresistant Organisms

Has the patient/client a known history of? MRSA ☐ ESBL ☐ VRE/GRE ☐ Other ____________________

Is the patient/client and their family aware of the 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 information: (e.g. Current antibiotic treatment/part of outbreak/MRSA decolonization history). Yes/No

MRSA Yes/No

Decolonisation (successful) Yes/No

Infection Prevention and Control Nurse informed? Yes/No

Name of staff member completing form:

Signature & Print Name:

Contact Number:

Date:

9 October 2008

Northern Health and Social Care Trust

ROOT CAUSE ANALYSIS FOR HEALTHCARE ASSOCIATED INFECTION

One of your patients has been diagnosed with a Healthcare Associated Infection (HCAI), either *Clostridium difficile* infection or *Staphylococcus aureus* bacteraemia.
At the request of the Medical Director, and as part of the Trust's ongoing drive to reduce HCAI, we are piloting an updated Root Cause Analysis (RCA) tool.

Root Cause Analysis is an educational process to identify preventable causes of HCAI. The process consists of: data collection; a root cause analysis meeting, an action plan and a review meeting if deemed necessary. Data collection is mandatory for all cases. Following this an RCA meeting and action plan may be required; the RCA lead will contact you with the time and venue of this meeting, as necessary.

1. Data collection

RCA is a method of identifying problems in real time. As such the completed forms must be returned to Sister Shaunagh Small, Infection Control, Bretten Hall, Antrim Hospital **WITHIN 2 WORKING DAYS.**

The new tool has twenty topics divided into three sections. We would ask the following staff to oversee the completion of the different sections:

C. difficile root cause analysis tool

Section 1, Q 1-6, Patient History:	**Consultant**
Section 2, Q 7-11, Patient Management:	**Consultant/ Ward Manager**
Section 3, Q 12-20, Organisational and Practice environment:	**Ward Manager/Senior Nurse**
Q 12-15	**ICT support if necessary**

Staph aureus bacteraemia root cause analysis tool

Section 1, Q 1-5, Patient History:	**Consultant**
Section 2, Q 6-10, Patient Management:	**Consultant**
Section 3, Q 11-20, Organisational and Practice environment:	**Ward Manager/Senior Nurse**
Q 11-15	**ICT support if necessary**

2. Root Cause Analysis meeting

You, or your representative, may be required to attend a meeting to identify preventable causes for the HCAI. If this is necessary the RCA lead will contact you with the time and venue of the meeting.

3. Action plan

An action plan will be agreed to address any issues uncovered during the Root Cause Analysis meeting. The progress of this plan will be monitored by the governance department in the Northern Trust and by the public health doctor in the Northern Board area. It should be noted that if you are unable to attend the meeting actions may be assigned to you in your absence.

Sister Shaunagh Small
Infection Prevention and Control/RCA Lead
Bretten Hall
Antrim Hospital

[illegible] Gathering Tool: Instruc[illegible]

[illegible] below. Indicate the relevance [illegible] CDI by putting a ✓ or x [illegible]

Patient History

No.	Item	Relevant (✓ / x):
1	Previous CDI history	
2	Episodes of health and social care	
3	Prior treatments / interventions	
4	Contact with *C.difficile*	
5	Transfers	
6	Antibiotic history	

Patient Management

No.	Item	Relevant (✓ / x):
7	Diagnosis of CDI	
8	Treatment of CDI	
9	Prolonged symptoms	
10	Patient awareness and behaviour	
11	Location and isolation	

Organisational Environment

No.	Item	Relevant (✓ / x):
12	CDI policy	
13	Antibiotic prescribing policy	
14	Isolation policy	
15	Cleaning and decontamination policy	

Practice Environment

No.	Item	Relevant (✓ / x):
16	High impact intervention No. 7	
17	Hand Hygiene	
18	Cleaning and equipment decontamination	
19	Unifrom and PPE	
20	Care environment	

Trust name:

Patient identifier:

Date:

Patients Initials	DOB:	Date:	Name and designation of person filling the form:
Hospital Number:	Consultant/GP:	Admission Date	Current patient location: (Home/ Hospital/ Ward)
Patient address:			

PATIENT HISTORY

1. Previous CDI history	**Yes/No**	**Dates/ Details**
Has the patient been confirmed as *C. difficile* positive within the last 6 months?		
2. Episodes of health and social care last 12 months	**Yes/No**	**Dates/ Details *(Include names of hospitals and wards attended)***
Has the patient been hospitalised?		
Been resident in a nursing or care home?		
Been in contact with primary care? (eg.GP)		
3. Prior treatment / interventions last 12 months	**Yes/No**	**Dates/ Details**
Has the patient received antibiotics?		*(Give full details in section 6 below)*
Has the patient taken PPIS?		
Has the patient received immunosuppressive therapy (e.g. chemotherapy or corticosteroids)?		
Has the patient been taking laxatives?		
Has the patient been taking anti diarrhoeal medicine?		
Has the patient had any GI surgery, including endoscopy?		
4. Contact with *C. difficile* in last 28 days	**Yes/No**	**Details *(Include names of hospitals and wards attended)***
Has the person been in direct contact with someone with known CDI?		
Is there evidence that this patient may be part of a cluster or outbreak of CDI?		
In a hospital bay/shared room?		
Ward/open plan environment?		
5. Has the patient been transferred between care settings within the last 6 months?	**Yes/No**	**Details**
Intra hospital?		
Inter hospital?		
Between residential /nursing homes?		
Between day services?		
By patient transport?		

6. Antibiotic history : has the patient been prescribed antibiotics within the last 3 months?

Drug		Dose	Route	Start date	Finish date	Indications

(affix adressograph here) Name: Hospital Number: Patient address:	Patient DOB:	Date:	Name and designation of person filling the form:
		Consultant/ GP:	Current patient location: (Home/ Hospital/ Ward)

PATIENT MANAGEMENT

7. Diagnosis of CDI	Yes/No	Details
Date of onset of symptoms?		
Has current antibiotic prescription been reviewed?		
Were antibiotics prescribed in accordance with Trust policy?		
Date and time of specimen		
Date and time specimen result reported		
Date and time result received on ward		
Is this a new episode/ a relapse or recurrence/unknown?		
Is the patient receiving nutritional supplements?		
Does the patient have a naso gastric tube?		
Does the patient have a PEG-tube?		

8. Treatment of CDI	Yes/No	Details
Has treatment of CDI started in accordance with Trust policy?		*(document drug/ dosage/ route/ dates)*
Whilst being treated for CDI has the patient received antimicrobials dor any other infection?		*(document site of infection/ drug/ dosage/ route/ dates)*
Is the daily progress sheet in use?		
Is a stool chart in use?		
Is CDI care plan/pathway in use?		
Is fluid balance chart in use?		
Is patient's condition reviewed daily by a doctor?		
Has the patient been reviewed by Microbiologist?		
Has te patient required surgery for CDI?		

9. Prolonged symptoms	Yes/No	Details
In the case of prolonged symptoms has there been a full MDT review?		
Has antibiotic treatment been changed to reflect prolonged symptom management?		

10. Patient awareness and behaviour	Yes/No	Details
Have patients/relatives/carers been given information regarding *C difficile* ?		
Is the patient confused or disoriented?		
Is the patient compliant with staff instructions regarding isolation (including use of toilet facilities) ?		

11. Location and isolation	Yes/No	Details
Date and time of isolation		
Was the patient isolated according to Trust Policy?		
If unable to isolate, was patient cohort nursed?		

(affix adressograph here) Patient Name: Hospital Number: Patient address:	DOB:	Date:	Name and designation of person filling the form:
		Consultant/ GP:	Current patient location: (Home/ Hospital/ Ward)

ORGANISATIONAL ENVIRONMENT

Policy	Is policy compliant with best practice?	Date of last revision	Was there any breach of policy, if so, what?
12. CDI policy			
13. Antibiotic prescribing policy			
14. Isolation policy			
15. Cleaning & decontamination policy			

PRACTICE ENVIRONMENT

16. CDI Care bundle			
Date of last audit		Compliance score	
Elements of non compliance			
Actions to improve compliance			

17. Hand hygiene	**Details**
When was the last hand hygiene audit undertaken?	
What is the level of compliance with hand hygiene?	
Are hand hygiene facilities readily available?	
Are all staff compliant with trust dress code?	
18. Cleaning / cleaning products and equipment decontamination	**Details**
When was the last environmental cleaning audit?	
What was the score?	
How do you know if bed space was clean before admission?	
Are roles, responsibilities and accountabilities with regards to cleaning and decontamination clear (Y/N)?	
Are chlorine based products used for environmental decontamination?	
Are chlorine based products used for equipment decontamination?	
Is enhanced cleaning available 24/7? (Y/N)	
If no, what arrangements are in place out of hours?	
19. PPE	**Details**
What was the compliance score for the PPE element in the last HII audit?	
20. Health Care Setting activity during the week beforeCDI was reported	**Details**
Was the ward staffed to its full establishment?	
What was the ratio of permanent /temporary staff?	
What was the bed occupancy?	
Is the environment clean and free from clutter?	
Is bed spacing adequate to deliver clinical care?	

[illegible] Data Gathering Tool [illegible]

[illegible] record all the issues [illegible] relevant from [illegible]

[illegible] document to all [illegible] review meeting [illegible]

Trust name:	Patient identifier:	Date:

Key Issue	Details

Data prepared by:	Job title:

NHSCT CDAD Clinical Progress Sheet

Patient Details/Addressograph:
Patient Name: ____________________
Date of Birth: ____________________
Hospital Nº ____________________
Consultant ____________________

Date of onset of diarrhoea
___/___/___

Date of first *C.difficile* Toxin A/B positive sample ___/___/___

Date patient placed in side room/cohort bay ___/___/___

DATE																
Stool Type 1 -7																
Stool Frequency/day																
Highest Temperature Recorded																
Normal Abdominal Examination Yes/No																
Abdominal Tenderness Yes/No																
Abdominal Tenderness + Distension Yes/No																
AXR																
WCC /mm^3																
CRP																
Serum Creatinine																
Serum Albumin																
Serum Lactate																
Metronidazole 400mg TIDpo																
Metronidazole 500mgTID IV																
Vancomycin 125mg QID po																
Vancomycin 250mg QID po																
Vancomycin 500mg QID po																
Pulsed Vancomycin																
Tapering Vancomycin																
Rifampicin 600mg BD po																
Immunoglobulin 400mg/kg																
Non-CDI Infection																
Non-CDI Antimicrobial																
PPIs Yes/No																
RECOVERING																
RECOVERED																

Treatment Failure is where there is no improvement after 7 days or clinical condition deteriorates: in severe cases/outbreak this is reduced to 3 days
Recovering status is defined as a decrease in stool frequency, normal abdominal examination, normalising WBC and CRP <50
Recovery is defined as, two formed stools at least 24 hours apart or a return to bowel movements at a frequency or consistency which is normal for the patient **following completion of successful therapy**

Care bundle to reduce the risk from Clostridium difficile:
Prevention of spread - Review tool

Observation	Elements					All elements? (fills in automatically)
	Prudent antibiotic prescribing	Correct hand hygiene	Environmental decontamination	Personal protective equipment	Isolation/cohort nursing	
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
Total number of times an individual element was performed						
% When all elements of care were given						