

Saving Lives: a delivery programme to reduce Healthcare Associated Infection including MRSA

High Impact Intervention No6:

Reducing the risk of infection from and the presence of *Clostridium difficile*



Aim

To reduce the risk of infection from and the presence of *Clostridium difficile*

Context

Guidance on the prevention and management of *Clostridium difficile* Associated Disease (CDAD) from a joint Department of Health (DH) and Public Health Laboratory Service working group was published in 1994¹. The National *Clostridium difficile* Standards Group was established by the Health Protection Agency (HPA) on behalf of the DH in 2003 to review evidence pertaining to the diagnosis and control of CDAD. The group produced a report² which reviewed the evidence and made recommendations for the development of a surveillance system. NHS acute Trusts in England and Wales are now required to report cases of CDAD in patients over 65 years old. The total number of reports of CDAD in England between January and December 2004 was 44,488 for 166 Trusts³.

With an average increased length of stay of 21 days, the total cost of CDAD has been estimated at over £4000 per case⁴. With 40,000 cases per year, a 10% reduction in infection could save 84,000 bed days and £16m per year.

CDAD is associated with the use of antibiotics and causes a spectrum of disease from mild diarrhoea to severe and life threatening conditions. CDAD is transmitted by clostridial spores which are shed in large numbers by infected patients and are capable of surviving for long periods of time in the environment.

In December 2003, the Chief Medical Officer's strategy document *Winning Ways*⁵ recommended that hospital staff apply "rigorously and consistently the measures known to be effective in reducing the risks of healthcare associated infection". This was followed in July 2004 by the DH Action Plan *Towards Cleaner Hospitals and Lower Rates of Infection*⁶ which established a NHS-wide programme led by the Chief Nursing Officer.

Those most at risk of CDAD are older patients and those who have had a recent (within the last four weeks) course of antibiotics⁷. Five main factors have been identified as being necessary to reduce the incidence of CDAD^{2, 8} which if rigorously applied using a 'care bundle' approach would contribute to a reduction.

- Prudent antibiotic prescribing⁹
- Hand hygiene^{10, 11, 12, 13, 14, 15, 16, 17}
- Enhanced environmental cleaning^{14, 15, 16, 17, 18, 19}
- Isolation of infected patients^{18, 19, 20}
- Personal protective equipment^{19, 20}

In 2001, The Department of Health commissioned the EPIC guidelines for the prevention of HCAI¹⁸. In 2004, the Infection Control Nurses Association published an audit tool which provides the methodology for monitoring infection control activities in Acute Trusts¹⁹. The 'cleanyourhands' campaign was also implemented in most Acute Trusts in England. Compliance with good hand hygiene using soap and water / alcohol rubs is an essential element of the care process to reduce the risk of cross infection²⁸.

Most recently a survey and report by the Healthcare Commission and the HPA⁸ showed gaps in implementation of guidance. The CMO and CNO therefore issued a letter to all Trusts re-emphasising the recommendations¹².

Elements of the clinical process

The elements of this component are based on the above evidence and expert advice. The list of elements does not replace existing guidelines but acts as a method for improving the reliability of the clinical process for prevention and control of *Clostridium difficile*. Where local guidance and policies already exist, their use in clinical practice can be assessed by using this intervention, or by tailoring the review tool to meet local needs.

High Impact Interventions

Five key elements have been described as being necessary to reduce the incidence of *Clostridium difficile*. They include:

Prudent antibiotic prescribing

- Prescribe antibiotics as per local policy

Hand Hygiene

- Wash hands with soap and water before and after each patient contact
- Implement cleanyourhands campaign trust wide

Enhanced environmental cleaning

- Use chlorine based disinfectant to reduce environmental contamination with *Clostridium difficile* spores as per local policy

Isolation

- Always use a single room if available
- Cohort patient care should be applied if single room is not available

Personal protective equipment

- Always use disposable gloves and apron when handling body fluids and when caring for CDAD infected patients

Organisational considerations

Questions	Actions
Do you know how well your trust is doing and where there is scope for improvement in reducing CDAD and HCAI generally?	Staff should use the Saving Lives High Impact Interventions to improve patient care and reduce risks from HCAI
Are you using best practice to reduce HCAs?	Using relevant national guidance, implementing best practice through local policies. Update staff on local antibiotic policy
How are you providing information/data to staff that is meaningful for their use?	Ensure that staff receive HCAI briefing as part of their induction programme, education and training and are involved in organisational awareness raising. Ensure that this is evaluated and reviewed regularly
What measures are in place to allocate beds?	Beds should be allocated to minimise the risk of infection. Bed Management policies need to reflect infection control principles

Clinical considerations

<p>Antibiotic prescribing How are the prescriptions reviewed and how often?</p>	<p>Action Prescribers should review medication regularly in line with local policy, to minimise use of broad spectrum antibiotics</p>
<p>Isolation questions How do you ensure that all staff know their role and responsibility in relation to the need to isolate patients? Do staff understand the criteria for isolating patients? How do you ensure that patients and visitors understand the isolation procedures?</p>	<p>Actions Isolation policy should be regularly reviewed and included in training, inductions and ongoing education of staff. Staff should provide consistent, accurate information to patients and visitors about infection control procedures.</p>
<p>Diagnosis questions Are staff aware when and how to obtain stool specimens?</p>	<p>Actions All clinical staff need to understand the signs and symptoms of diarrhoea. Specimens should be sent (via local arrangements) when a patient presents with ANY diarrhoeal symptoms. This should form part of infection control update for all staff.</p>
<p>Cleaning questions How do staff access cleaning services? Are domestic staff aware of infection control procedures?</p>	<p>Actions Local procedures should be developed to sustain appropriate cleaning in order to maintain a safe environment. Staff should be aware of the importance of the correct cleaning of patient equipment and roles clearly defined. Include domestic staff in mandatory updates and ensure ongoing infection control training for all domestic staff.</p>
<p>Hand hygiene questions Are you effectively implementing the cleanyourhands campaign and how are you measuring compliance amongst staff? (Including handwashing with soap and water after contact with CDAD patients)</p>	<p>Actions Compliance should be monitored regularly and measures applied to raise awareness Staff should be educated in the importance of hand hygiene.</p>

Clostridium difficile review tool

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Regular Observations

Observation	Elements	Antibiotic policy applied?		Correct hand hygiene		Effective environmental cleaning completed?		Gloves and apron worn?		Single room / cohorting used?		All elements performed	
		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
Total													
% Compliance													

How to use this review tool

Indicate 'YES' when the element was performed or considered not applicable and 'NO' to show that it was not performed.

- The tool is designed to facilitate rapid feedback for improvement and should be repeated at regular intervals to gauge progress
- The objective is to ensure that all elements of the clinical process are performed all of the time
- The percentage compliance gives an indication of which particular element needs attention

Recommended reading

- *Clostridium difficile* infection: Prevention and Management. A Report by a Department of Health/PHLS joint working group. BAPS Health Publications Unit, Heywood Manchester 1994
- National *Clostridium difficile* Standards Group: report to the Department of Health 2003 The Stationery Office London
- A simple guide to *Clostridium difficile* (www.dh.gov.uk/hcai)
- Department of Health. Infection caused by *Clostridium difficile*. London: Department of Health 2005. (Professional letter: Chief Medical Officer PLCMO (2005) Chief Nursing Officer PLCNO (2005) Available at <http://www.dh.gov.uk/assetRoot/04/12/55/23/04125523.pdf> (Accessed January 2006)

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