**Clostridium difficile — Information for healthcare professionals**

**Key Points**
- Restrict use of certain antibiotics
- Perform hand hygiene with alcohol based hand rubs or soap and running water before patient contact (Moments 1 and 2)
- Perform hand hygiene with soap and running water after patient/environment contact (Moments 3, 4 and 5)
- Enhanced environmental hygiene

**Why is C. difficile important?**
Virulent (aggressive) strains of C. difficile have emerged worldwide and have caused extensive outbreaks in hospitals and the community with significant mortality, especially in the elderly.

An awful tragedy occurred at Stoke Mandeville in 2004 and 2005. Over 30 people died as a consequence of two outbreaks of infection caused by the bacterium Clostridium difficile (Professor Sir Ian Kennedy)

Commission for Healthcare Audit and Inspection. Investigation into outbreaks of Clostridium difficile at Stoke Mandeville Hospital, Buckinghamshire Hospitals NHS Trust. July 2006


**What is Clostridium difficile (C. difficile)?**

C. difficile is a spore forming bacterium that can be found in stool specimens of many healthy children under the age of one year and some adults. Following antimicrobial treatment toxin-producing strains of C. difficile multiply and cause illness. C. difficile is a common cause of antibiotic-associated diarrhoea.

**Risk factors for C. difficile**
- Older patients (> 60 years)
- Significant underlying disease
- Non-surgical gastrointestinal procedures
- Presence of nasogastric tube
- Stomach acid reduction medications
- Prolonged hospital stay, intensive care stay
- Prolonged antibiotic course; administration of multiple antibiotics or course

**Specimens and diagnosis**
- Collect stool samples from symptomatic patients for C. difficile testing as soon as practicable
- Ensure all hospitalised patients who develop diarrhoea are tested for C. difficile
- Do NOT test patients without diarrhoea or who have had a previous positive test within the previous 8 weeks
- Ensure that patients with severe disease are cultured for C. difficile. Refer isolates for typing as soon as practicable
- Colonic appearances (pseudomembranous colitis) or biopsy findings at endoscopy and/or radiological appearances may be diagnostic

**Patient—symptoms, complications and treatment**

**Clinical Symptoms**
- Watery diarrhoea/green appearance
- Fever
- Loss of appetite
- Nausea
- Abdominal pain/tenderness

**Complications**
- Relapse of diarrhoea
- Pseudomembranous colitis
- Toxic megacolon
- Perforations of the colon
- Sepsis
- Death

**Monitoring and treatment**
- Ask if this could be C. difficile diarrhoea
- Quickly identify patient deterioration
- Stop all unnecessary antibiotics
- If diagnosed, treat with metronidazole (oral or IV) or vancomycin (oral only)
- Monitor fluid balance: correct dehydration
- Monitor diarrhoea: stool chart
- Monitor signs of escalating infection: rising CRP, renal failure, falling albumin, rising WBC, fever

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Antibiotic prescribing

- Comply with Therapeutic Guidelines: Antibiotic consistent with antimicrobial susceptibility results  
  1. Restrict use of certain antibiotics
  2. Contact Precautions
  3. Hand hygiene
  4. Enhanced environmental hygiene

Refer to
NSW Health
Infection Control Policy
(PD2007_036) at

Infection prevention and control

Contact Precautions

- C. difficile is spread in faeces, which can cause widespread environmental contamination. A patient with diarrhoea, their equipment (eg. commodes, rectal thermometer) and near environment are contaminated with C. difficile bacteria and spores. These can then be transferred to other patients mainly via the equipment; or hands or clothing of healthcare staff who have touched the patient or a contaminated surface.

- Isolate patients in a single room with ensuite or dedicated commode/bed pan
- Maintain Contact Precautions for patient care until > 48 hours after last diarrhoeal stool
- Gloves—put on gloves and other personal protective equipment prior to room entry. When removing gloves, take care not to contaminate hands (refer to Hand Hygiene)
- Use gown or apron made of impervious material. The choice will depend on the extent of contamination anticipated
- If wearing an apron, ensure that arms below the elbow are bare of wrist watch, rings or clothing

Hand Hygiene

- As in NSW Health policy, perform hand hygiene in accordance with the 5 Moments of Hand Hygiene
- Use alcohol based hand rub or soap and running water for Moments 1 and 2 (before patient contact) prior to putting on personal protective equipment
- Use soap and running water for Moments 3, 4 and 5 (after patient/environment contact) after removal of personal protective equipment. Alcohol based hand rub cannot kill bacterial spores
- Patients and visitors require education about correct hand hygiene practice, particularly performing hand hygiene with soap and water after toileting

Environmental Hygiene

- Follow specific advice from your Infection Control Professional
- Disinfect surfaces, including commodes and toilets with a chlorine-based disinfectant (1 in 1000 hypochlorite solution in cold water)
- Clean and disinfect reusable equipment before the next patient. Where possible dedicate such equipment for each patient. Disinfect or discard at patient transfer or when Contact Precautions cease (refer to Contact Precautions)
- Maintain enhanced levels of environmental hygiene within the endoscopy service and comply with requirements for reprocessing of endoscopes

Notifiable disease

Gastroenteritis among people of any age, in an institution (eg. among persons in healthcare, educational or residential facilities) is a notifiable disease under the Public Health Act 1991