How is the spread of Clostridium difficile prevented?

- Infected patients are usually segregated from non-affected patients.
- Because Clostridium difficile can form spores it can survive for long periods in the environment (including areas around the patient's bed, the toilet areas, commodes, bed pan washers, on floors etc).
- Good cleaning with hot water and disinfectant containing chlorine is an effective means of removing spores from contaminated surfaces and the environment.

- The best way to stop person-to-person spread of this infection is by healthcare staff washing their hands before and after patient contact.

What are the risks to visitors and healthcare workers?

- There is little risk to healthcare staff such as nurses and doctors as most people with Clostridium difficile have recently received antibiotics.
- Clostridium difficile diarrhoea rarely, if ever, presents a danger to the general public.
- Persons visiting should be aware of their own health status so as to avoid either putting the patient at increased risk or themselves at risk.
- It is unwise to visit any patient if you are feeling unwell, for example, if you have gastroenteritis (vomiting/diarrhoea), or a flu-like illness.
- Visitors who themselves may have a lower resistance to infection, e.g. having undergone treatment for cancer, are on antibiotic treatment or are awaiting major surgery in the near future, should seek the advice of their GP in order to evaluate if any risk exists.
- The hospital can pose risks for young children, who may not have developed full immunity to germs outside their home.
- Hand washing with soap and water is the only requirement for visitors after leaving the patient. (alcohol gel is ineffective as it does not kill the spores)

What will happen in the future if the patient needs to go to hospital?

If the patient attends any hospital in the future they should inform medical and nursing staff there that they have had *Clostridium difficile*. Swabs and other specimens may be taken for analysis.

Please do not hesitate to ask the nursing and medical staff for more information on *Clostridium difficile*.

Infection Prevention and Control Team
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Beacon Hospital

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Information Leaflet on *Clostridium difficile*

For patients and relatives

Beacon Hospital

What is *Clostridium difficile*?

Clostridium difficile or *C. difficile* is a bacterium (germ) that causes diarrhoea and may cause intestinal conditions such as colitis.

It was given this name because when it was first discovered it was difficult to grow in the laboratory.

- It is the most common cause of diarrhoea following antibiotic therapy.
- Almost all patients who develop *Clostridium difficile* diarrhoea are taking or have recently been given, antibiotic therapy.
- *Clostridium difficile* is usually found in the large intestine (bowel).
- A small portion (less than 1 in 20) of the healthy adult population carry a small amount of *Clostridium difficile* but it is kept in check by the normal "good" bacterial population of the intestine.
- *Clostridium difficile* can also form spores which allow it to survive in the environment outside the body. These spores protect it against heat and chemical disinfection.
- Most infections happen in hospitals and nursing homes but it can also occur in the community.
- In most cases it causes relatively mild illness. Occasionally it may result in serious illness in elderly patients or those with underlying illnesses (e.g. cancer).

How do people get *Clostridium difficile* disease?

Certain people are at increased risk. These include patients:

- Taking antibiotics (either currently on antibiotics or recently taken antibiotics)
- Of advanced age
- With a serious underlying illness
- With conditions that compromise the immune system (e.g. cancer chemotherapy).
- Who have had gastrointestinal surgery
- Who have spent a long time in hospital or other healthcare setting.

People in good health usually don't get *Clostridium difficile* disease. *Clostridium difficile* is found in the faeces. People can become infected if they touch items or surfaces that are contaminated with faeces and then touch their mouth or mucous membranes. Healthcare workers can spread the bacterium to other patients or contaminate surfaces through hand contact.

What are the symptoms of *Clostridium difficile* infection?

– Diarrhoea – which is the most common symptom
– Fever
– Loss of appetite
– Nausea
– Abdominal pain/tenderness

- Generally, *Clostridium difficile* can only cause diarrhoea when the normal, healthy intestinal bacteria have been killed off by antibiotics. When not kept in check by the normal bacteria, it multiplies in the intestine and produces toxins that damage the cells lining the intestine. The result is diarrhoea.
- In most patients, the illness is mild and they usually make a full recovery. However elderly patients may become seriously ill with dehydration as a consequence of the diarrhoea.
- Occasionally patients may develop a severe form of the disease 'pseudo-membranous colitis' or 'antibiotic-associated colitis' which causes significant damage to the large bowel.

How is *Clostridium difficile* diagnosed?

- Any patient who develops diarrhoea and who is taking an antibiotic, or who has received an antibiotic in the past few weeks, should be checked for *Clostridium difficile*
- *Clostridium difficile* is diagnosed in the microbiology laboratory by the detection of *Clostridium difficile* toxin in the faeces of patients
- The bowel should be directly examined, as its appearance and biopsies taken for analysis may also help to confirm a diagnosis, especially in suspected pseudo-membraneous colitis
- X-ray investigations are sometimes helpful.

How is *Clostridium difficile* treated?

- Most patients only develop a mild illness. They improve quickly when they stop taking the antibiotics (if clinically possible) and replace fluids by mouth or intravenous drip.
- Sometimes specific therapy with antibiotics is needed. Two antibiotics are known to be effective: Metronidazole, which can be taken by mouth or intravenously is usually the first choice. Vancomycin which is taken by mouth is also effective.
- Symptoms can return in about one in five treated patients and further courses of these antibiotics may be needed.