

## Clostridium Difficile Infection (CDI) Medicines Management Fact File

*C. difficile* is a bacterium that is present in the gut flora in some people. Antimicrobials can disturb the balance of the gut flora, allowing *C. difficile* to proliferate and produce a toxin which leads to inflammation of the colon. Symptoms of *C. difficile* can vary from mild diarrhoea to severe inflammation of the bowel (known as pseudomembranous colitis) which can be fatal.

*C. difficile* diarrhoea is usually green and foul-smelling and *C. difficile* spores are shed in the faeces. The spores can survive for long periods in the environment and if ingested (through poor hygiene) they can transmit infection to others. Therefore *C. difficile* is infectious and good hygiene practices must be implemented at all times.

### Which patients are most at risk of CDI?

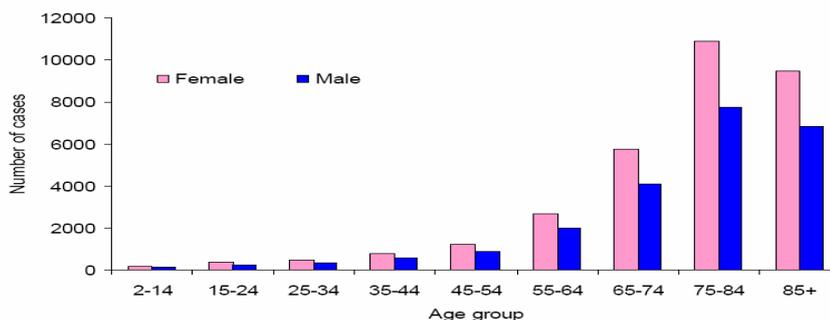
Patients are more at risk of CDI if they are:

- Elderly - over 80% of *C. difficile* infections reported are in people aged over 65 years
- Suffering from severe underlying diseases
- Immunocompromised
- In an environment where they are in close contact with one another (e.g. in a care home), particularly if hygiene is lacking.

Other factors that increase the risk of CDI are:

- Use of antimicrobials
- Recent gastrointestinal procedures
- Presence of a nasogastric tube
- The use of proton pump inhibitors (PPIs) might increase the risk of CDI. Only prescribe PPIs when clearly indicated.

Figure 18: Age and sex distribution of *C. difficile* reports, April 2007 to March 2008  
(mandatory surveillance)



Surveillance of Healthcare Associated Infections Report: HealthProtection Agency, July 2008

### Reducing the risk of CDI:

- ✓ **Prudent antimicrobial prescribing can reduce the risk of CDI infection.**
  - Broad-spectrum antimicrobials are strongly associated with CDI.
- ✓ **Isolating infected patients**
  - Isolating patients with CDI reduces the spread of infection in care homes and other places where people are in close contact with one another.
  - Isolation should be for 48hrs symptom-free and until a formed stool is passed.

✓ **Good hygiene**

- Everyone should wash their hands with soap and water before and after each contact with a CDI-infected patient, including at home.
- Alcohol gel is effective against MRSA but not against *C. difficile* spores.
- The National Patient Safety Agency's Clean Your Hands campaign has been rolled out to primary care - see [www.npsa.nhs.uk/cleanyourhands](http://www.npsa.nhs.uk/cleanyourhands).
- Carers of CDI-infected patients should wear gloves and aprons.

## C.Diff and the 4Cs

<b>C</b> ephalosporins	<b>C</b> lindamycin
<b>C</b> iprofloxacin and family	<b>C</b> o-amoxiclav

### **Antimicrobials to avoid where possible:**

The antimicrobials most strongly associated with *C.difficile* resistance are:

- Second and third generation **cephalosporins**: cefaclor, cefuroxime, cefixime and cefpodoxime are examples for oral use
- **Clindamycin**
- **Quinolones**: ciprofloxacin, levofloxacin, moxifloxacin, ofloxacin, norfloxacin.
- **Co-amoxiclav**
- Long courses of amoxicillin, ampicillin, or co-fluampicil.

## Antibiotic Prescribing and the 4Rs

### **Right diagnosis?** – Is it self-limiting? Consider a delayed prescription?

Only prescribe antimicrobials when indicated by the clinical condition of the patient or the results of microbiological investigation. Consider delayed prescriptions in case symptoms worsen or become prolonged.

### **Right antibiotic?** – Do you need to check for sensitivity?

Choose a narrow-spectrum agent where possible and prescribe a short course. Follow local guidelines. Broad-spectrum antimicrobials should be reserved for the treatment of serious infections when the pathogen is not known.

### **Right dose?** - Follow local guidelines [Infections - Telford & Wrekin CCG](#)

### **Right length of treatment?**

No more than 5-7 days' treatment is required in most cases. Three-day courses are appropriate in some cases. Follow local guidelines.