HPA REGIONAL MICROBIOLOGY NETWORK

A good practice guide to control *Clostridium difficile*

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These "good practice" recommendations, if followed and sustained, will result in a significant reduction in the burden of *Clostridium difficile* (CD) within NHS Trusts and enhance patient safety.

No single measure will be sufficient to avert an outbreak and ALL 5 MEASURES (Steps 1-5) need to be implemented 100% of the time to achieve control of this preventable infection, maintain patient confidence and protect the hospital reputation.

THESE ARE PATIENT SAFETY ISSUES

- Rapid detection – active surveillance – early action on any rise in numbers
- Establish diagnostic criteria and identify wards with high rates
- Isolate infected patients or initiate cohort nursing/isolation ward
- Enhance environmental cleaning/ward decluttering
- Strengthen and implement antibiotic prescribing policy
- Health care workers (HCW) education and training including domestic staff

Groups at Risk

- Older patients
- Severity of underlying disease
- Non surgical gastrointestinal procedures
- Presence of nasogastric tube
- Anti-ulcer medications
- Stay on Intensive Care Unit
- Duration of hospital stay
- Duration of antibiotic course
- Administration of multiple antibiotics or multiple courses

Clinical symptoms

- asymptomatic
- watery diarrhoea
- fever
- loss of appetite
- nausea
- abdominal pain/ tenderness
- stool smell/green appearance

Complications

- relapse diarrhoea
- pseudomembranous colitis
- toxic megacolon
- perforations of the colon
- sepsis
- death

Patient monitoring and Treatments

- *Early diagnosis and treatment will prevent complications and save lives*
- HCW must have heightened awareness – could this be *Clostridium difficile* associated diarrhoea (CDAD)?
- HCW must quickly identify deterioration in the patient's clinical condition
- Stop all unnecessary antibiotics
- If CD diagnosed treat with Metronidazole or Vancomycin
- Monitor fluid balance: Correct dehydration due to diarrhoea
- Monitor diarrhoea: Stool chart
- Monitor signs of deterioration: rising CRP, falling albumin levels, rising WBC, pyrexia
- Ensure kidney function maintained, prevent renal failure
- Assessment for colectomy: Involve specialists (Gastroenterologist and Surgeon) early

(A patient care pathway may help)

Specimens/Diagnosis

- *Early diagnosis prevents complications and saves lives*
- Stool samples should be taken and tested within 18 hours of onset of symptoms or admission of a symptomatic patient
- Toxin detection by Enzyme Immuno Assay (EIA)
- Colonic appearance
- Biopsy – histological appearance
- Radiological appearance

Surveillance

- *Early detection and control saves lives*
- Active surveillance is required for rapid detection and intervention – Target specialities with high rates
- CDAD is preventable and there is not an acceptable level, however the following approach should maintain patient confidence and the hospital's reputation
- Take action at: >3 cases a month or 0.5/1000 bed days
- Implement full action plan at: 5-10 cases a month or >0.5/1000 bed days
- Outbreaks must be reported as a Serious Untoward Incident (SUI)
- Deaths associated with CDAD must be categorised as attributable or contributory and adequately recorded on the death certificate

(A statistical process chart may help monitoring)

Transmission

- *Early isolation prevents spread*
- Patient to patient spread
- Spread by healthcare workers
- Spread in the environment

Opportunities and Costs

- *Early action - more savings*
- Increased length of stay – 21 days
- Cost £4000 per case
- Patient experience – satisfaction - outcome
- Enhanced patient confidence and hospital reputation

THE CARE BUNDLE

- Prudent antibiotic prescribing
- Isolation of infected patients
- Enhanced environmental cleaning
- Hand hygiene
- Personal protective equipment
- Staff education and training

Step 1

- Good antibiotic prescribing
- Use minimum duration
- Avoid using broad spectrum antibiotics unless there is a good clinical need (especially extended spectrum cephalosporins and fluoroquinolones)
- Restrict prescription of IV antibiotics
- Use stop dates & one dose prophylaxis
- Ensure an antibiotic pharmacist is employed
- Monitor antibiotic usage per speciality

Step 2

- Early isolation of infected patient
- All infected patients must be nursed in a side room
- Serious consideration must be given to cohort nursing or opening an isolation ward if cases exceed side room isolation capacity

(In these circumstances a discharge policy will help - and a dedicated consultant for the ward ensures best delivery of care)

Step 3

- Enhanced environmental cleaning
- Additional cleaning using chlorine based disinfectant
- Ensuring patient equipment adequately cleaned and stored eg commodes

Step 4

- Reinforce hand washing/hygiene

(alcohol gel does not kill spores)

Step 5

- Encourage personal protective equipment use

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