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Christine Perry, National Health Service
A Webber Training Teleclass

Learning from Maidstone, Tunbridge Wells

Christine Perry
Associate Director of Nursing (Infection Control)
NHS South West

Maidstone and Tunbridge Wells NHS Trust

- Merger of two Trusts in 2000
  - 500 000 population
  - Employs 5 000 staff
  - 857 - 900 beds
  - Three Hospital Sites:
    - Pembury Hospital (136)
    - Kent and Sussex (284)
    - Maidstone Hospital (437)

Why an Investigation?

- Request of Strategic Health Authority
  - Little or no recognition of rise in cases Oct-Dec 05
  - Inconsistent data re cases and mortality
  - Historically high background rates of CDI
  - Publicly raised concerns about cleanliness, control of infection and standards of nursing care

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M&TW Terms of Reference

- Examination of :
  - Arrangements to identify and notify cases and outbreaks of CDI
  - Factors contributing to rates of CDI and outbreaks
  - Arrangements at ward level for patient safety and quality of care
  - Governance arrangements
  - Priority give to IC by Trust, PCT and SHA
  - Role of the HPA

M&TW Investigation Team

- Dr Heather Wood
- HCC staff – Eight (Analysts – Legal Advisers)
- Chief Executive Officer
- Professor of Nursing
- Infection Control Nurse Consultant
- Microbiologist/Infection Control Doctor
- Epidemiologist

Methodology

- October 2006 – April 2007
  - 200+ interviews
  - 1 000+documents
  - 50 notes reviewed
  - Scheduled and unannounced site visits
- Report published November 2007

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Surveillance - National

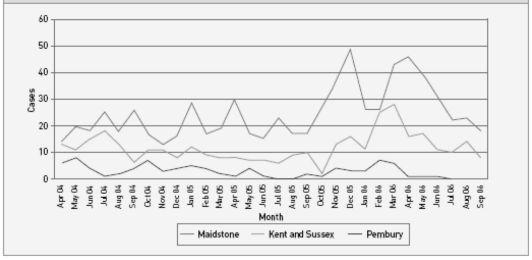
- Jan – Sept 2006 12th highest rate of CDI in over 65 years
- Apr 2006 – Mar 2007 41st highest MRSA bacteraemia rate per 1 000 bed days
- Typing
  - 7/10 March 2006 – 027
  - 6/8 April 2006 - 027

Surveillance - Local

- Local CDI database 2000
  - Incomplete data
  - Reliant on paper records
  - Reliant on lead ICN
- Electronic surveillance package 2005
  - Use started August 2006
- Reported to ICC quarterly
  - 3-4 months out of date

Cases of CDI at MTW

Figure 1: Total number of new cases of *Clostridium difficile* at Maidstone and Tunbridge Wells NHS Trust by hospital



Source – Health Care Commission report page 22

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Information on Deaths

- Initial review by Medical Director and Consultant Microbiologist
- Further review by Consultant Intensivists
- Inconsistent information on number of deaths
- Trust attributed outbreak to patients admitted with infection

Quality of Care

- Clinical Review of Case Notes 50/274
- Areas of scrutiny:
  - Antibiotic prescribing
  - Recognising severe disease and deteriorating patients
  - Fluid management
  - Nutrition management
  - Management and treatment of CDI
- Cause/contribution to death

General Management

- Documentation
  - Diagnosis of CDI
  - Evidence of regular review
  - Stool charts
- Involvement of Microbiologist/ICT

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Timeliness

- Timeliness of obtaining samples
  - 17 tested 3 or more days after symptoms
- Timeliness of antibiotic treatment
  - 5 not started for 3 or more days after positive result
- 12 cases delay of over one week from symptoms to treatment

Antibiotic Management

- Cause for concern in 42%
  - Use of broad spectrum antibiotics
  - Excessive use – often in additive manner
  - Used with little evidence of infection
  - Used for excessive time periods
  - Continued use in patients with ongoing symptoms
- Antibiotics for CDI

Clinical Management

- Fluid management- 36%
  - Completion of fluid charts
  - Blood tests and acting on outcomes
- Nutritional management – 34%
  - Assessment
  - Acting on declining nutritional status
  - Dietician referral
- Severe disease
  - Monitoring
  - Acting on deterioration

Cause of Death

Cause of death

Table 2: Healthcare Commission's assessment of the contribution by *C. difficile* infection to the death of patients in the sample of 50 cases between April 2004 and June 2006

	Contributed to death (including main cause of death)	Main cause of death only
Definitely	21 cases (42%)	3 cases (6%)
Probably	18 (36%)	10 (20%)
Possibly	9 (18%)	
Unlikely	2 (4%)	
No	0	

Source – Health Care Commission report page 36

Families' Experience

- Difficulty in seeing Senior Medical Staff
- Inadequate explanations
- CDI not taken seriously
- Nursing care
  - Response to call bells
  - Skin care and bed sores
  - Infection control precautions
  - Privacy and dignity

Contributing Factors

- Antibiotics
  - Original policy broad spectrum
  - Lack of review in 2005
  - Intervention of the Health Protection Unit
  - Inappropriate prescribing

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The Environment

- Lack of side rooms
- Sluice space and storage
- Bed spacing

Cleanliness and Hygiene

- Cleaning hours
- General standards of cleanliness

Photo 3: Dirty shower on ward 14a, Kent and Sussex Hospital (13 December 2006)

Cleanliness and Hygiene

- Cleaning hours
- General standards of cleanliness
- Commodes

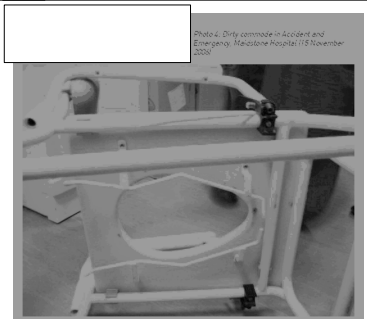

Photo 4. Dirty commode in Accident and Emergency, Maidstone hospital (15 November 2006)

Cleanliness and Hygiene

- Cleaning hours
- General standards of cleanliness
- Commodes
- Use of treatment/clinical rooms

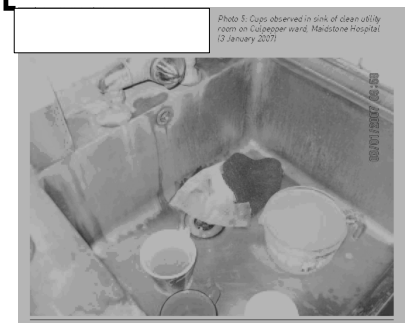
Photo 5: Cups observed in sink of clean utility room on Culpepper ward, Maidstone Hospital 13 January 2007)

Cleanliness and Hygiene

- Cleaning hours
- General standards of cleanliness
- Commodes
- Use of treatment/clinical rooms
- Linen storage


Photo 6. Clean linen stored on open shelves on Mercer ward, Maidstone Hospital 15 November 2006)

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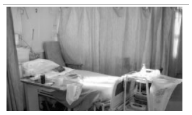
Infection Control Team

- Accountability not clear
- Microbiologist time and activity
- ICN staffing during sickness and vacancies
- Infection Control Committee poorly attended
- Audit loop not closed
- Infection Control Team not working together
- Link nurse scheme not well established

Policy and Practice

- Policies
  - Past review date
  - Fitness for purpose
  - Accessibility
  - Contradictory and lacking detail
- Training
  - Induction and update training

Patient Isolation



Photos 7 and 8: Variation in style of isolation signs and notices on display at Kent and Sussex hospital (Photo 7 used ILA. Photo 8 Hargraves outlet 13 April 2007)

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Nurse staffing

- 90% of medical and surgical wards below national average staffing for ward type and size
- National patient survey 2006 M&TW was rated in the worst 20% of Trusts for low nursing levels
- 485 incident forms between June 04 and Sept 06 related to staffing shortages
- Ombudsman report 2005 recommended Trust needed to consider risk of low staffing levels and skill mix

Director of Infection Prevention and Control

- Appointment unclear
- Full portfolio
- Working relationship with Microbiologists
- Annual reports
- Effectiveness of systems

Strategic Level

- Board Involvement
- Reporting Mechanisms
- Assurance Framework/Risk Register
- Standards for Better Health
- Incidents

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Lessons for the NHS

- Antibiotic prescribing
  - Indicated, targeted and reviewed
  - Junior Doctor training
- Management of patients
  - Diagnosis in own right
  - Monitoring
  - Care
- Cleanliness and hygiene

Similarities to Stoke Mandeville

- Difficult mergers
- Financial difficulties
- Reconfiguration of services
- Private Finance Initiative
- Poor environment
- Lack of single rooms

Questions for Providers

- Role of the DIPC
- Surveillance function and reporting
- Board involvement and monitoring
- Monitoring and reporting deaths due to HCAI
- Root cause analysis
- Isolation policies and practice
- Escalation policies
- Cleanliness monitoring
- CDI management and review
- Antibiotic prescribing and monitoring

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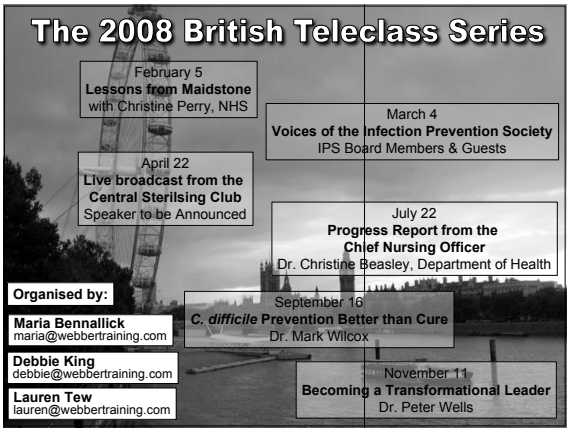
Questions for Commissioners

- Surveillance reports from Providers
- Quality monitoring process and outcomes
- Reporting of outbreaks
- Infection prevention and control standards in commissioning agreements
- Agreements with Health Protection Agency



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