

Infection Prevention & Control



Annual Report 2010 - 2011

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Key Issues/Executive Summary

1. The Trust has achieved a year on year reduction in Meticillin Resistant *Staphylococcus aureus* (MRSA) bacteraemias since reduction targets were set in 2004-5. During 2010-2011 only five MRSA bacteraemias were identified and attributed to the Trust against our most stringent target to date of no more than three cases. This reflects a 68% reduction on the previous year and a 94% reduction since 2005-6 when MRSA bacteraemias identified were at their peak.
2. Cases of *Clostridium difficile* identified and attributed to the Trust are at their lowest level since 2006-2007 (574 cases) the year prior to reduction targets set by the Department of Health. This reflects a reduction of 97% since the year 2006-2007 and a reduction of 33% on last year (56 cases).
3. Maintenance in low levels of central venous catheter (CVC) related blood stream infection rates have continued through out the Matching Michigan project with zero cases in augmented care.
4. Hand hygiene improvement programme has focused on improvement amongst medical staff who have historically performed less well than other groups. 2010 saw an improvement by doctors of 1% across the Lister and QEII hospitals with compliance at 68%. Standards compare favourably with national data which varies from 50-85%. Work will continue in 2011-2012 to make further improvements. It is important that senior medical staff, as the constant medical workforce, provide positive role models to the trainees who are a predominantly transient workforce.
5. The clinical benefits associated with pre-admission screening of elective patients were analysed as recommended by the Department of Health. Screening data for a 12 month period showed that local carriage rates are extremely low at 0.8%. Furthermore, 30% of these patients were already known to be MRSA carriers prior to screening. With such a low carriage rate in the local population, screening such a wide range of elective patients was not associated with the clinical benefits predicted by the DH impact assessment. Therefore, based upon this data and with the knowledge of our commissioners, we have been able to focus MRSA screening on sub sets of elective patients where there may be a clinical benefit to screening in terms of reducing the risk of serious infection for that individual.
6. Procedures for screening of emergency admissions for MRSA were introduced by 31st December 2010 in accordance with national guidance from the Department of Health. The impact and clinical benefit of this screening programme will be analysed on completion of the first year of screening.
7. The rate of surgical site infection for hip and knee replacement and fracture neck of femur (identified prior to discharge and on re-admission) for the last quarter of the reported year was higher than the national average.
8. A comprehensive programme of education and training has been provided to all relevant disciplines of staff on general Infection Prevention and Control, antimicrobial prescribing and intravenous cannulation.
9. Outbreaks of Norovirus infection place a considerable burden on the organisation each year. Transmission in hospital is exacerbated by high bed occupancy and movement of patients and staff within the hospital setting. Considerable effort was made in 2010-2011 to limit movement within the medical directorate and reduce inter-ward moves. Whilst the introduction of Norovirus from the community resulted in outbreaks affecting two or three wards concurrently compared to other trusts across the region, East & North

Hertfordshire were not severely affected. However the outbreaks highlighted the continued potential for unrecognised transmission within admission wards with onward transmission to subsequent wards following the transfer of patients who are asymptomatic but incubating infection.

1. INTRODUCTION

The purpose of this report is to inform the patients, public, staff and Trust Board of the Infection Prevention work undertaken in 2010-2011, the management arrangements, the state of Infection Prevention and Control within the East & Hertfordshire NHS Trust and progress against performance targets.

Healthcare associated infection remains a top priority for the public, patients and staff. Avoidable infections are not only potentially devastating for patients and healthcare staff, but consume valuable healthcare resources. Investment in Infection Prevention and Control is therefore both necessary and cost effective. The resources committed by East and North Hertfordshire Trust to Infection Prevention and Control can be appreciated in the contents of this report.

The author would like to acknowledge the contribution of colleagues to this report.

2. INFECTION PREVENTION AND CONTROL ARRANGMENTS

2.1 Infection Prevention and Control Team (ICT)

The Infection Prevention and Control team employed by East & North Hertfordshire NHS Trust also provide services to Hertfordshire Partnership Trust (HPT) for East & North Hertfordshire area, Isobel Hospice in Welwyn Garden City, the Peace Hospice in Watford and three Special schools within the area.

2.1.1 A Nurse Consultant (1.0 WTE) who is also the Assistant Director of Infection Prevention is responsible for leading the Infection Control nursing service, managing the associated service level agreements and supporting the Director of Infection Prevention. For each of the four hospital sites, renal satellite units (St. Albans City Hospital & Luton & Dunstable Foundation Trust), hospices and HPT, there are Infection Control nurses functioning as a combined service all capable of working across organisations. With regular rotation amongst the specialists they develop, recognise and able to respond to differing levels of risk and needs which they can apply their clinical knowledge and skills.

From June 2010 the Nurse Consultant became the Lead for the Trust Deep Clean programme formally sitting with Facilities Department. From June 2010 Surgical Site Surveillance was transferred to the responsibility of Infection Prevention from the Division of Surgery.

2.1.2 In 2010-2011 the team consisted of:

1.0 WTE	Band 8b *	Lead Nurse
3.0 WTE	Band 7	Clinical Nurse Specialists Infection Control
2.0 WTE	Band 6	Infection Control Nurses
1.0 WTE	Band 6	Surgical Site Surveillance Nurse
1.07 WTE	Band 4	Admin Support

*This post holder stepped down in December 2010 into a vacant Infection Control Nurse post which became available on a band 7. The Lead Nurse post was not filled during the remainder of the year.

2.1.3 The Nurse Consultant /ADIPC post is funded via Nursing Management - 1.0 WTE Band 8C

All three Consultant Microbiologists play an active role in infection prevention which includes the management of a service level agreement with the Primary Care Trust. However, one medical microbiologist fulfils the role of the Trust Infection Control Doctor (ICD) with 6 sessions of clinical time allocated for this purpose. There is out of hours cover for clinical microbiology and infection prevention provided by a Consultant Microbiologist.

2.2 Budget allocation

2.2.1 Staff

Budget allocation for staffing is in accordance with the grades of staff indicated in Section 1.

2.2.2 Support (IT etc.)

The cost of licences for infection control surveillance software, ICNet, was met from within the Infection Control budget.

2.2.3 Training

The Infection Prevention and Control team has a small budget for training. They receive no charitable funds.

2.3 Director of Infection Prevention and Control (DIPC)

The Director of Infection Prevention & Control, supported by the Assistant DIPC who is also the Nurse Consultant in Infection Prevention & Control, report directly to the Chief Executive.

2.4 Infection Control Committee

The Committee is chaired by the Chief Executive Officer. The terms of reference and membership were reviewed in 2008 and will be revisited this year.

2.5 Reporting line to Trust Board

The DIPC reports to the Board through the Trust Infection Control Committee (TICC) The Infection Control Committee reports via the Risk and Quality Committee. The Assurance Framework for Infection Prevention and Control can be viewed on the Trust website.

2.6 Links to the Antimicrobial Subcommittee

The purpose of the Antimicrobial Subcommittee (TAF), a Subcommittee of the Drugs and Therapeutics Committee, is to ensure that antimicrobial drugs are used prudently and responsibly within the Trust. The TAF is chaired by a Consultant Microbiologist who is a member of the Drug and Therapeutic Committee. The TAF reports to the Governance Committee through the Drug and Therapeutics

Committee and also provides regular reports to the Infection Control Committee and also liaises with the Joint Formulary Committee.

2.7 Links to Clinical Governance/Risk Management/Patient Safety

The DIPC and Assistant DIPC (ADIPC) are members of the Governance Committee, Patient Safety and the Health and Safety Committee

2.8 Links to Decontamination Committee

The ADIPC and ICD are members of the Trust Decontamination Committee. This Committee reports quarterly to the Trust Infection Control Committee.

3. DIPC REPORTS TO THE BOARD

Reporting arrangements are outlined in Appendix B.

3.1 Number and frequency

The Trust Infection Control Committee (TICC) meets monthly. The Committee reports to the Trust Board through the Risk and Quality Committee (RAQC) monthly. A risk report is prepared after each TICC meeting. This ensures that the most important items from the TICC are formally noted by the RAQC and thus brought to the attention of the Board.

The DIPC, the ADIPC and the ICD hold a weekly minuted meeting. Relevant senior nurses, antimicrobial pharmacists and the Non-Executive Director with responsibility for Infection Prevention attend on an ad hoc basis as requested.

The DIPC meets with the Executive Directors weekly. In addition, information regarding outbreaks, significant incidents and performance against HCAI targets are communicated daily to the Chief Executive Officer and the Director of Operations.

3.2 Annual Programme

An annual programme is prepared by the Infection Prevention Team and agreed at TICC prior to approval by the Board. The programme of work is mapped to the duties of the code of Practice. Progress against the Annual Programme is monitored by the TICC and reported to the RAQC quarterly. The programme for 2010-2011 and progress made can be found on the Trust website.

4. MANDATORY SURVEILLANCE OF HEALTHCARE ASSOCIATED INFECTION

Mandatory reports are made to the Health Protection Agency (HPA). Some reports are made online weekly and others quarterly.

4.1 *Staphylococcus aureus* bacteraemia

Staphylococcus aureus is a bacterium commonly found colonising humans. Although most people carry this organism harmlessly, it is capable of causing a wide range of infection from minor boils to serious wound infections and from food poisoning to toxic shock syndrome. In hospitals it can cause surgical wound infections and bloodstream infections. When *Staphylococcus aureus* is found in the bloodstream it is referred to as a *Staphylococcus aureus* bacteraemia.

- 4.1.1 *Staphylococcus aureus* bacteraemias have been reported since April 2001. Data has been submitted monthly since October 2005.
- 4.1.2 Reports from this Trust consist of all *Staph. aureus* isolated from blood cultures processed by the Trust Microbiology Department. These are expressed by the HPA as total episodes of *Staphylococcus aureus* bacteraemia and meticillin resistant *Staphylococcus aureus* (MRSA) bacteraemia.
- 4.1.3 These include all isolates, whether true infections or contaminated blood cultures; hospital acquired or community acquired infections.
- 4.1.4 Although most blood cultures originate from the community via General Practitioners or Community Hospitals, a number have originated from patients admitted to East & North Hertfordshire Trust.
- 4.1.5 In October 2005 an enhanced data set was introduced which allows the distinction to be made between MRSA bacteraemia occurring before admission or within 48 hours of admission and those that occur more than 48 hours after admission.
- 4.1.6 National reduction targets and outcomes are described at section 14.
- 4.1.7 In January 2011, reporting of an enhanced data set for MSSA bacteraemia became mandatory. Unlike many Trusts, we were already doing this locally. National and local reduction targets have not been set as the intention is to establish a baseline through 2011-2012.

4.2 Glycopeptide Resistant Enterococcal (GRE) Bacteraemia

- 4.2.1 Enterococci are normally found in the gut and are part of the normal gut Flora.
- 4.2.2 Although one of the causes of urinary tract infections, enterococci can occasionally cause serious infections such as endocarditis. In immunosuppressed patients, for example, haemodialysis patients and haematology patients, especially those with intravascular lines, enterococci may cause bacteraemia.
- 4.2.3 Glycopeptide resistant enterococci are resistant to glycopeptides antibiotics such as teicoplanin and vancomycin. These have been reported to the HPA since 2003. The same criteria for selection and denominations as for *Staph. aureus* applies.
- 4.2.2 At East and North Hertfordshire NHS Trust the number of cases reported are very low (3 in 2010-11).

4.3 Clostridium difficile infections (CDI)

- 4.3.1 *Clostridium difficile* is a bacterium that can cause colitis (inflammation of the colon) and symptoms range from mild diarrhoea to life threatening disease. Infection is often associated with healthcare, particularly the use of antibiotics which can upset the bacterial balance in the bowel that normally protects against *C.difficile* (CDI). Infection may be acquired in the community or hospital but symptomatic patients in hospital may be a source of infection for others.

- 4.3.2 Mandatory surveillance for CDI in over 65 year olds has been undertaken since 2004. Since 2007 episodes of CDI in patients between 2 years and 65 have also been reported
- 4.3.3 Control of CDI is taken extremely seriously in East & North Hertfordshire. A designated isolation ward is provided for patients with CDI on level 10 at the Lister Hospital. These patients are managed by a rotating team of elderly care physicians who have developed the expertise in management of CDI.
- 4.3.4 Strain typing is a specialised service provided by a network of reference laboratories. This is an indispensable service which helps us to manage and minimise CDI. In 2010-2011a number of selected strains were typed where possible clusters of CDI were noted. There were no clusters throughout the year. A number of ribotypes were identified (001, 002 and 015). No infection with the 027 strain which has been associated with severe outbreaks was seen. There were no outbreaks of CDI in the Trust during 2010-2011.
- 4.3.5 As for MRSA bacteraemias, national targets are set and our performance against these targets is shown in Section 14.

4.4 Orthopaedic Surgical Site Infection

- 4.4.1 It is a mandatory requirement to conduct surveillance of orthopaedic surgical site infections using the Surgical Site Infection Surveillance Service of the HPA. The data set collected is forwarded to the HPA for analysis and reporting. The system is controlled and validated to allow comparison between hospitals.
- 4.4.2 The requirement is for a 3 month module of surveillance of *one* of the Orthopaedic options, namely;
- Open reduction of long bone fracture
 - Total Hip Replacement (THR)
 - Total Knee Replacement (TKR)
 - Repair Neck of Femur Fracture (RNoF)
- 4.4.3 In 2010 the Infection Prevention team took on responsibility for this surveillance from the surgical division and commenced the first reportable module in quarter 4 (January – March 2011).
- 4.4.4 The rate of surgical site infection for period January –March 2011 for THR was 1.8% for QEII and 5.7% for Lister (National average 1.1.5). In the RNoF category, the rates were 6.3% at QEII and 4.5% at Lister, (National average 1.9%).
- 4.4.5 This data should be reviewed as a snapshot as no data is available for the previous three quarters.
- 4.4.6 Moving forward, from quarter 4 (January to March 2011) continuous surveillance will take place and include post discharge follow-up.

4.5 MRSA Screening of Elective Admissions

- 4.5.1 The rationale for screening of non emergency patients is to identify MRSA carriers enabling application of the decolonisation or suppression treatment, either immediately prior to admission or on admission, and the use of appropriate systemic antimicrobial prophylaxis at the time of procedure if this is appropriate.

4.5.2 In 2009 the guidance from the DH identified that all elective admissions should be routinely screened with the exception of:

- Day case ophthalmology
- Day case dental
- Day case endoscopy
- Minor dermatological procedures
- Children
- Maternity/obstetrics except for elective caesareans
- Termination of pregnancy

Due to the low percentages of patients found to be colonised through this mechanism, and the lack of evidence linking elective admissions to MRSA bacteraemias (through root cause analysis), the DH issued further guidance allowing a more flexible approach with local risk assessment. Subsets of day case patients where the risk of MRSA infection was negligible, flexibility with local policy was permitted.

In addition to the original subsets of patients excluded by the DH guidance, the following subsets of elective patients are also excluded from pre-admission MRSA screening:

- All day cases in general medicine, elderly medicine, anaesthetics, clinical immunology and neurology
- All cardiology day cases with the exception of cardiology pacemaker insertion

Thus we continue to screen the following subsets:

- All surgical in-patients
- Orthopaedic day cases
- Patients undergoing cardiac pacemaker insertion or similar procedure
- Patients undergoing AV fistula formation or graft for dialysis

4.5.3 Local screening has identified our carriage rate for all pre-admission 0.8%, well below the original projected rate of 7% in the DH Benefit Analysis Report. Furthermore, 30% of these patients were already known to have a history of MRSA carriage.

4.6 MRSA Screening of Emergency Admissions

4.6.1 All NHS Trusts were required to implement procedures to screen emergency admissions by 31st December 2010.

4.6.2 At East and North Hertfordshire NHS Trust, this was commenced much earlier starting February 2010.

4.6.3 During this first year of mandatory screening, 23,509 screens were undertaken of which 2.5% screens were positive.

5 VOLUNTARY SURVEILLANCE OF HEALTHCARE ASSOCIATED INFECTION

In addition to mandatory surveillance, the Infection Prevention and Control team conducts voluntary surveillance to monitor hospital infection in several areas. Some of the

surveillance is ward based, such as surgical site infection, some is laboratory based. These include the following:

5.1 Bacteraemia surveillance

Hospital acquired bacteraemia for MRSA, vancomycin resistant enterococci and glycopeptides enterococci are routinely undertaken.

Although there have been considerable improvements, invasive devices, mainly peripheral cannulae, remain a common risk factor associated with hospital acquired bacteraemia and continue to be focus for prevention activities.

5.1.1 Initiatives to reduce the number of bacteraemias included:

- Focus on Peripheral Intravenous Catheter (PVC) Care Bundle.
- Aseptic Non Touch Technique (ANTT) for blood culture taking.
- Participation in NPSA “Matching Michigan” project to reduce all Central Venous Catheter line infections.

5.2 *Clostridium difficile*

5.2.1 In addition to mandatory reporting and trust wide monitoring of *Clostridium difficile* infection which is reported to the Trust Infection Control Committee and the Risk and Quality Committee monthly, ward specific cases are monitored and feedback provided to Executive Directors weekly. All Matrons are informed at the time of any new cases.

5.2.2 Initiatives to reduce the number of CDI cases included:

- Focus on differentiating between patients with diarrhoea of unknown cause and patients with specific indicators for CDI
- Algorithm for specimen collection
- Case discussion with Consultant Microbiologists
- Focus on antimicrobial prescribing
- Enhanced cleaning with chlorine releasing agents

5.2.3 A joint review of inpatients with CDI is performed by the medical and Infection Prevention team three times a week.

5.3 Caesarean Section – Surgical Site Surveillance

5.3.1 C-section surveillance was performed by the Infection Prevention team for a six month period for the first time. The HPA methodology and criteria for surgical sites infection was used to identify cases of wound infections

5.3.2 The wound infection rate for this period was 5.5% compared to the national average of 4.1%,

5.3.3 The results were reported and discussed with the Division of Women’s and Children and a number of actions are currently being put in to place.

5.4 Colorectal & Vascular Surgery – Surgical Site Surveillance

5.4.1 Colorectal surveillance was performed by the Infection Prevention team for a five month period for the first time. The HPA methodology and criteria for surgical site infection was used to identify cases of wound infections.

5.4.2 The wound infection rate for this period was 8.7% compared to the national average of 8.5%.

5.4.3 The results were reported and discussed with the Division of General Surgery and a number of actions are currently being discussed. These include:

- Preadmission bathing with antiseptic solution (4% chlorhexidine gluconate)
- Change of surgical skin prep to 2% chlorhexidine in 70% isopropyl alcohol
- Focus on normothermia and review of current equipment

6. Outbreak & Incident Reports

Outbreaks occur when there are two or more linked infections which may or not be preventable. These events are recognised through surveillance, reporting or routine IPCT activities and are by definition unpredictable.

Outbreaks are recorded in many different ways. Many are recorded in the minutes of monthly Infection Prevention and Control team meetings, Divisional Infection Prevention & Control meetings, Trust Infection Control Committee and Risk and Quality Committee meetings. All important Infection Prevention incidents and outbreaks are disseminated through Governance system and Ward to board communication and awareness is maintained.

6.1 Noteworthy Incidents and Outbreaks

Some noteworthy outbreaks are summarised below:

6.1.1 Norovirus

- Norovirus causes outbreaks of diarrhoea and vomiting. It is extremely infectious and spreads easily in any semi closed setting such as hospitals, schools, hotels and cruise ships.
- Norovirus not only affects patients but also staff and visitors.
- Despite thorough planning in preparation for the winter period, a multi-ward outbreak of Norovirus occurred in January and February 2011. Indications are that the index cases were admitted through A&E infecting other patients in the immediate admission wards who, whilst still in the incubation phase, were transferred to other wards where they subsequently became symptomatic infecting more people.
- In line with the national picture reported by our local HPU, the Trust experienced an increase in Norovirus outbreaks on the previous year reflecting activity in our local community.
- At East & North Hertfordshire NHS Trust we managed six outbreaks in 2010-2011 compared with three the previous year affecting a total of 67 patients and 7 members of staff.
- Prior to the winter additional education for link practitioners regarding the importance of admission assessment, isolation and handwashing, Patient Access and the Matrons were briefed on the necessity to prevent multiple patient moves. Robust reporting to the IPC team of any suspected cases of diarrhoea and/or vomiting and follow up. Prompt review of any clinical area by the IPC team of suspected gastrointestinal outbreaks and closure of clinical areas as necessary.

6.1.2 Influenza

- Influenza is a highly infectious viral respiratory disease spread by contact and airborne droplets. Typically 'flu circulates in the winter months but with an intensity that varies unpredictably from year to year. There are two types of 'flu, 'flu A and 'flu B. Both are capable of causing serious infection especially in vulnerable groups.
- Flu viruses undergo changes from year to year and in 2008 a new strain of 'flu A was recognised (influenza H1N1 (2009) "swine flu") which caused a pandemic.
- In the winter of 2010-2011 the UK experienced an epidemic of 'flu caused by both 'flu A (including "swine flu") and 'flu B. The attack rate was greatest in the under 5's and the 15-44 year age groups. At East & North Hertfordshire NHS Trust 32 patients (23 with 'flu A "swine flu", 1 'flu A "other strains" and 8 'flu B) were admitted of which 20 required intensive care and respiratory support. There were unfortunately 3 fatalities. The largest number of cases occurred in December 2010 (24 cases).

6.1.3 *C.difficile*

As indicated in 5.2.1, surveillance of *C.difficile* does on occasion reveal clusters of cases which could be due to an outbreak of related infection or chance. It is also an indication of other factors predisposing to *C.difficile* infection such as excessive, inappropriate use of antibiotics.

- Investigation includes typing of isolates of *C.difficile* cases. This is undertaken by a reference laboratory in Cambridge. Other factors that are examined include ward hygiene, staff handwashing compliance and antibiotic use.
- Investigations were undertaken on Bayford Ward in February 2011. They revealed a lapse in infection prevention precautions. Education and awareness exercises were undertaken including attention to commode cleaning which can be a potential source of cross infection.

7. Hand Hygiene

- 7.1 The Trust remains engaged with the NPSA 'cleanyourhands' campaign which involves four components:
- Point of care alcohol hand rub.
 - Awareness posters and role models.
 - Patient and visitor involvement (display of public involvement at the AGM 2010).
 - Audit of practice by IPCT using an adapted Lewisham audit tool with feedback to wards and wards undertaking their own audits bi-weekly with compliance scores displayed on public boards to inform patients and visitors.
- 7.2 The annual audit by the IPC team has demonstrated an improvement upon the previous year.
- 7.3 Although compliance remains lower amongst doctors than other disciplines, they have improved upon the previous year. It is important that senior medical staff, as

the constant medical workforce, provide positive role models to the trainees who are a predominantly transient workforce.

8. Decontamination

8.1 Arrangements

8.1.1 The Decontamination Committee is responsible for monitoring the Decontamination arrangements and compliance overall and reports directly to the Trust Infection Control Committee on a quarterly basis.

8.1.2 The Trust Decontamination Lead is the Director of Operations who devolves chairing the Committee to the General Manager for Surgery. The Committee is attended by the Assistant DIPC.

8.2 Audit of Decontamination

8.2.1 The Hospital Sterilisation Services Department, which reprocesses all surgical and other invasive reusable instruments, conduct internal audits to ensure their compliance with ISO9001:2008, ISO13485:2003 and the Directive MDD 93/42/EEC (annex 5) as amended by directive 2007/47/EC and are externally audited twice a year by a notified body.

8.2.2 Decontamination of lower risk patient equipment (i.e. non invasive equipment such as commodes, monitors, infusion pumps) is audited in two ways: it is included in the annual decontamination audit by the IPC Team and programme of audit by the Decontamination Committee.

8.3 Incidents relating to Decontamination

8.3.1 Endoscopy disinfection

The Endoscopy Unit at the Lister Hospital was identified in 2008 by the Healthcare Commission as an area requiring improvement due to lack of space to enable a work flow of dirty to clean, and lacked patient privacy

8.3.2 Whilst this was noted by the Healthcare Commission no improvement notice was delivered as the Trust were very aware of the issues and had taken all measures possible to put into place safe working practices to mitigate the risk to patients.

8.3.3 Strict protocols are in place. No additional work has been taken on in the department and no agency or bank staff are employed in the unit.

8.3.4 The current unit is part of the phase 4 of 'Our Changing Hospital' programme and will be completely upgraded. Infection Prevention will form part of the project team to ensure adequate space and facilities are in place.

9. Cleaning Services

9.1 Arrangements

All cleaning services are managed by an external contractor - G4S for Lister, QEII and Hertford County Hospitals. Sodexho manage services at Mount Vernon Cancer Services Hospital.

- 9.1.1 There is provision for terminal cleaning 24 hours a day 7 days a week .to ensure turnaround times of side room, bed spaces or even bays that have been vacated by infected patients. The number of 'out of hours' terminal cleans requested throughout the year was 219. There is no comparable data available for the previous year.
- 9.1.2 The Trust continues with the Annual Deep Clean Programme commenced in 2008. This programme was managed by the Facilities Manager until July 2010 when it was taken over by the IPC Team managed by the Assistant DIPC and aims to cover all in patient wards. We continue to use steam cleaners and chlorine releasing disinfectants. The use of hydrogen peroxide vapour had ceased at the beginning of the year however the IPC team will be considering

9.2 Monitoring arrangements

- 9.2.1 Monitoring is undertaken in accordance with the National Specification for cleanliness in the NHS, 2007.
- 9.2.2 A team of dedicated monitoring officers (2.0 WTE) undertake and record technical monitoring on a weekly basis as required by the National Specification. The monitoring of waste streams is also included in their daily audits.
- 9.2.3 Ad hoc focussed monitoring also takes place in liaison with the IPC team.
- 9.2.4 Monitoring officers audit with a Supervisor from the contractors and any failures are logged and remedial action is required. High risk areas require remedial actions to be taken immediately. Significant Risk areas require remedial action to be taken within 3 hours and Low Risk areas require a remedial action within 48 hours. A second audit is completed within 3-24 hours following the first logged failure and failure in second audit results in remedial action being required and a financial penalty.
- 9.2.5 All ward sisters/charge nurses, matrons and divisional nurses are aware of the bi-weekly cleaning audit in their clinical areas. Failure to achieve 95% results in a written action plan which is followed up by the Assistant DIPC and discussed at monthly Divisional IPC meetings.
- 9.2.6 The Trust Facilities Manager and Assistant DIPC meet monthly with the Contract Manager for G4S and G4S Head of Operations to discuss monitoring results, financial penalties in addition to impact of the 'Our changing hospital' programme and Deep Clean programme.

9.3 Patient Equipment Cleaning

- 9.3.1 All equipment used in the care of patients requires cleaning and/or disinfection between patients. All clinical areas have individualised cleaning schedules for rooms where equipment is used and stored.
- 9.3.2 The schedules set out who is responsible for the cleaning, method of cleaning and frequency.
- 9.3.4 The use and completion of schedules are monitored at ward and department level and reported bi-weekly as part of the area environmental audits. Any area scoring less than 95% are required to formulate and complete an action plan, details the issues and how they have been amended. The Ward Sister/Dept. Manager and Matron are responsible for standards of cleanliness.

9.4 Training

- 9.4.1 G4S & Sodehxo contractors provided training for all staff. Content is reviewed by the Trust IPC Team.

10. Audit

10.1 Clinical Audit

Audits are undertaken to identify areas for improvement in practice. The clinical audit programme is contained within the Annual Programme available on the Trust website. During the year 2010-2011 not all audits were completed due to vacancy factors within the team. However; any audit not achieving 90% action plans were formulated, implemented and followed for closure by the divisions.

Audits of hand hygiene are of particular importance and a summary is provided in 10.2

10.2 Hand hygiene Audit

- 10.2.1 Bi-weekly observational audit of hand hygiene practice has continued using the adapted Lewisham Observational Audit Tool. Unlike previous years' observation of hand hygiene practice in the out patient department has ceased in the same way. Staff found it very difficult to observe hand hygiene when patients are managed behind closed doors.
- 10.2.2 An observational competency assessment tool was introduced in the outpatient departments at the Lister and QEII hospitals. All staff are reassessed annually and records kept. It is intended that this tool will be introduced at the Mount Vernon Cancer Centre next year.
- 10.2.3 Whilst improvement has been made across the Trust, focus continues on the medical staff and professions allied to nursing (or others).
- 10.2.4 Where there are particularly low rates, considerable input is being provided by the IPCT in the form of practice facilitation and observation with immediate feedback to individuals.

10.3 Environmental Audit

- 10.3.1 As reported in section 9.3.

10.4 Isolation Audit

This is an annual observational audit undertaken on all wards to measure compliance with Infection Prevention and Control policies and guidelines that impact on isolation and risk assessment.

- 10.4.1 Fourteen percent of beds within the Trust can be used as potential isolation rooms. There are currently 111 single occupancy rooms available for in-patient use. This is inclusive of the Mount Vernon Cancer Centre. This excludes the Isolation Ward which has two single rooms and three bays of 4 beds. However, en-suite facilities were available in 37% of the single occupancy rooms. These figures are slightly variable as two wards flex as decant wards as part of the deep programme and are not always open.

- 10.4.2 The isolation ward was intended to remove patients infected and colonised with *Clostridium difficile* only to reduce the opportunity of cross transmission on the general wards. As the number of cases dramatically reduced the decision was made to accept patients colonised or infected with MRSA on this ward in 2010.
- 10.4.3 The bed occupancy for the isolation ward increased in 2020-11 from 63% in 2009-10 to 81% occupancy in 2010-11.
- 10.4.4 There are two negative pressure rooms available in the Trust both at the Lister Hospital for patients who require strict respiratory isolation

10.5 Antimicrobial prescribing

- 10.5.1 Audit and surveillance of antibiotic use and prescribing is undertaken locally by the divisions who report finding to their divisional 'rolling half day' meetings and to the Trust Infection Prevention & Control Committee when they report quarterly.
- 10.5.2 The Trust Antimicrobial Pharmacists also undertake annual point prevalence studies on the volume of antibiotics used on any one day, a monthly drug usage report and undertake weekly antimicrobial ward rounds.
- 10.5.3 Of those drugs known to have a high propensity to cause *C. diff.*, the use of quinolones and cephalosporins remain low. The Trust Antimicrobial Guidelines were changed in 2010 in order to further restrict the use of co-amoxiclav. In response to this, the consumption of this drug which is also thought to have a high propensity to cause *C. diff.* has fallen. Intravenous Co-amoxiclav use was reduced by 72% from a peak of 132 defined daily doses (DDD) per 1000 bed days in August 2010 to 38 DDD per 1000 bed days in March 2011. Oral use of co-amoxiclav was reduced by 78% from a peak of 532 DDD per 1000 bed days in June 2010 to 115 DDD per 1000 bed days in March 2011.
- 10.5.4 Through the Antimicrobial Awareness Day (November 2010) grand round presentations and a new e-learning package, clinical staff have been exposed to a number of resources which highlight the importance of good antimicrobial stewardship. Ad-hoc training and support is also offered by 3 weekly (Monday, Wednesday and Friday) antimicrobial rounds.

11. TRAINING ACTIVITIES

11.1 Induction and Annual update Training for Trust Staff

- 11.1.1 The IPCT provide 4 sessions each month of mandatory training and 5/6 (on average) sessions of induction training per month for Trust staff.
- 11.1.2 Monthly training is given on intravenous cannulation and the principles of intravenous drug administration.
- 11.1.3 Monthly educational sessions are held on three in-patient sites for Link Practitioners to educate and support in clinical practice.

11.2 Information for Contractors

- 12.2.1 Information for contractors is available in the Estates Department prior to accessing clinical areas.

- 12.2.2 All contractors are expected to sign stating that they have received the information leaflet.

11.3 For Infection Prevention & Control Specialists

- 11.3.1 50% of the Infection Prevention and Control nursing team are members of the Infection Prevention Society (IPS) and attend either the East of England Branch or North London branch meetings which provide the opportunity for update and networking. All receive specialist journals as a benefit of membership which aids development.
- 11.3.2 Two members of the team attended the IPS Annual Conference in Bournemouth, one was funded by the IPS as she is involved as a member of a committee and the East of England branch Education Lead.
- 11.3.3 One nurse is studying for a degree in Infection Prevention and two studying at Masters level. Another nurse graduated in May 2010 with a BSc Infection Prevention & Control.
- 11.3.4 The Infection Control Doctor is a Fellow of the Royal College of Pathologists (FRCPath) and is a member of the European Society of Clinical Microbiology and Infectious Diseases (ESCMID). He is also an editorial reviewer for the Journal of Hospital Infections (London) and the Journal of Emerging Infectious Diseases (Atlanta, USA).
- 11.3.5 The ADIPC holds a qualification in Infection Prevention and sits on the Education Professional Development Committee of the Infection Prevention Society (IPS) and is the East of England Educational Lead for the IPS.

12 POLICIES AND GUIDLEINES

A schedule for polices and guidelines revision/development is included in the annual programme. All policies are available on the Trust website and the intranet.

13 TARGETS AND OUTCOMES

13.1 MRSA bacteraemia

- 13.1.2 In 2010-2011 the Trust target was set, based on the low numbers at the beginning of the previous year. A 75% reduction of cases was required to achieve a target of only 3 cases for the year 2010-2011.
- 13.1.3 The Trust reported 5 cases of MRSA bacteraemia (post 48 hours of admission) for the year.
- 13.1.3 Root cause analysis was performed of each case of bacteraemia which helped to identify learning and focus improvement actions within specific departments and education.
- 13.1.4 A focus on blood culture taking technique, competency assessment of staff, a review of blood culture taking guidelines and decision making process to undertake a blood culture are all currently being reviewed.

13.2 *C.difficile* infection

13.2.1 Improvement targets have continued to be set for all NHS Trusts. The targets for acute trusts are based on the number of toxin positive cases identified more than 72 hours after admission to exclude those that are community acquired.

13.2.2 The Trust target was no more than 63 cases. This was accompanied with the risk of financial penalty for non-achieving trusts.

13.2.3 The Trust achieved a reduction of 33 cases on the previous year reporting 56 cases to come within the target.

13.2.4 Swift isolation of patients with symptoms, management of confined cases on the isolation ward, prudent antimicrobial stewardship, hand washing and high standards of routine environmental cleaning are all important prevention and control strategies. The annual deep clean programme is also invaluable in reducing the burden of spores in the environment.

14. CONCLUSION

Healthcare associated infection remains a top priority for the public, patients and staff. In response a robust annual programme of work has been implemented and enabled some notable successes on which to build on.

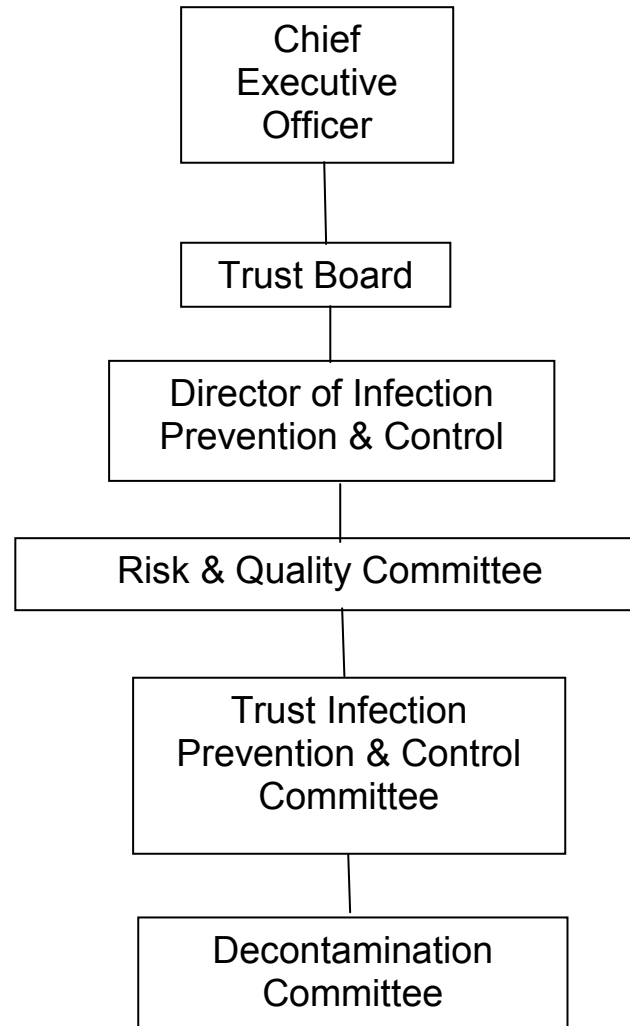
- Surpassing the target for *Clostridium difficile* once again.
- Reduction of MRSA bacteraemias by 50%.
- Zero central venous catheter related bacteraemias in critical care.
- Overall improvement of 12% across the Trust in hand hygiene practice.
- Trust-wide reduction in the use of antibiotics by 72% for intravenous and 78% oral that are known to precipitate *Clostridium difficile*.

Challenges remain, in particular efforts to further improve hand hygiene compliance, the use of aseptic non-touch technique when taking blood cultures and further planning to reduce the spread of Norovirus between clinical areas will continue.

Infection Prevention and Control is the responsibility of all Trust staff and the Infection Prevention and Control Team do not work in isolation. The successes of the past year have only been possible due to the commitment for infection prevention and control demonstrated at all levels within the organisation. Such commitment will be crucial to maintain high standards and be amongst the best in the future.

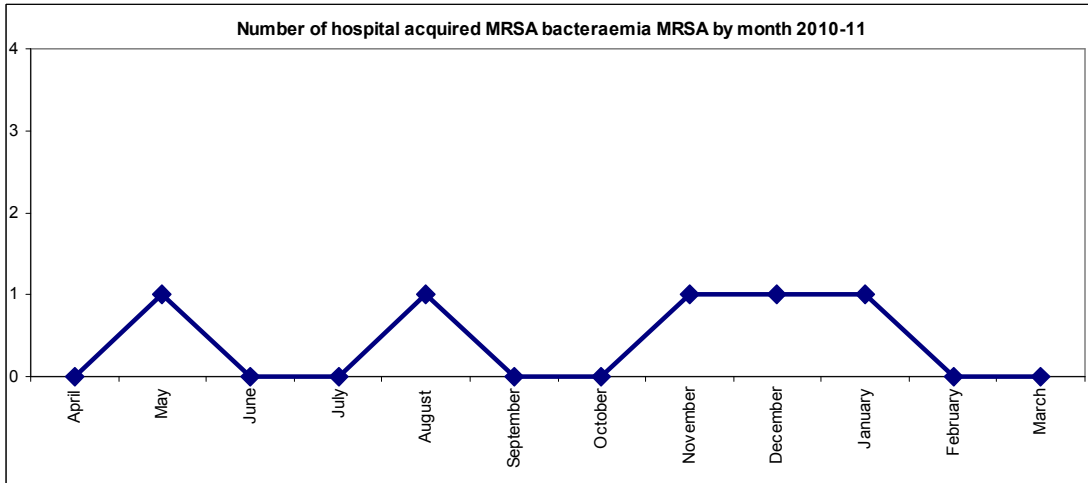
APPENDIX A

ACCOUNTIBILTY AND RISK MANAGEMENT STRUCTURE

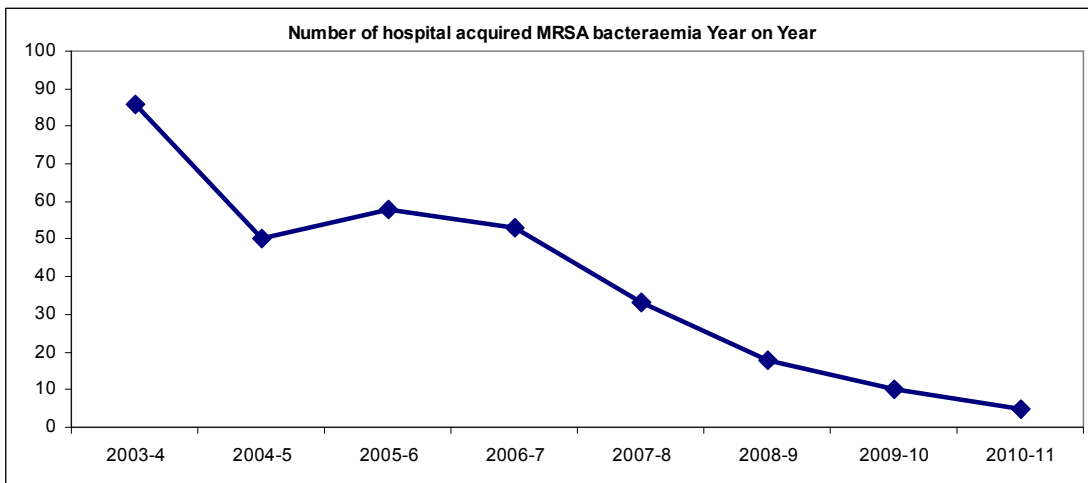


APPENDIX B

ALL NEW CASES OF MRSA IDENTIFIED MORE THAN 2 DAYS AFTER ADMISSION

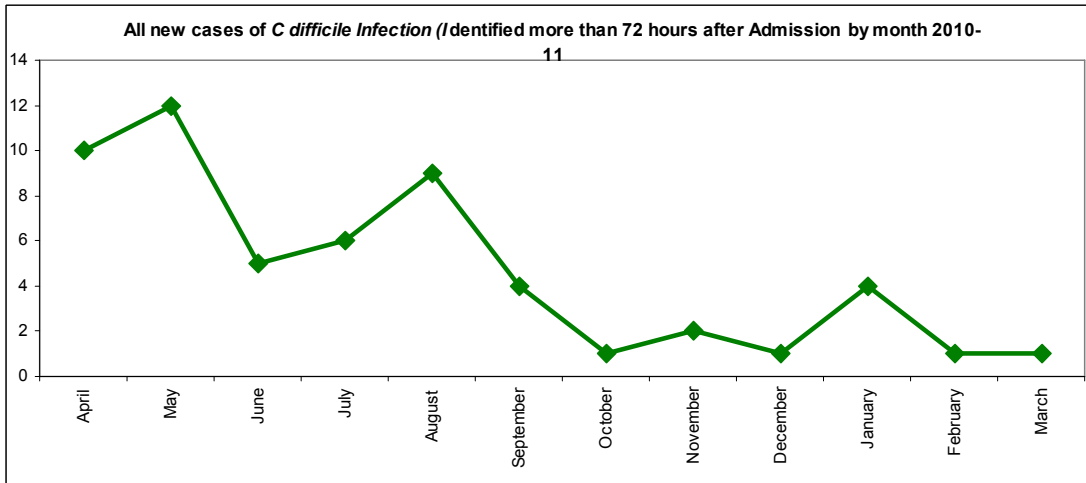


NUMBER OF MRSA BACTERAEMIA AND TRAJECTORY

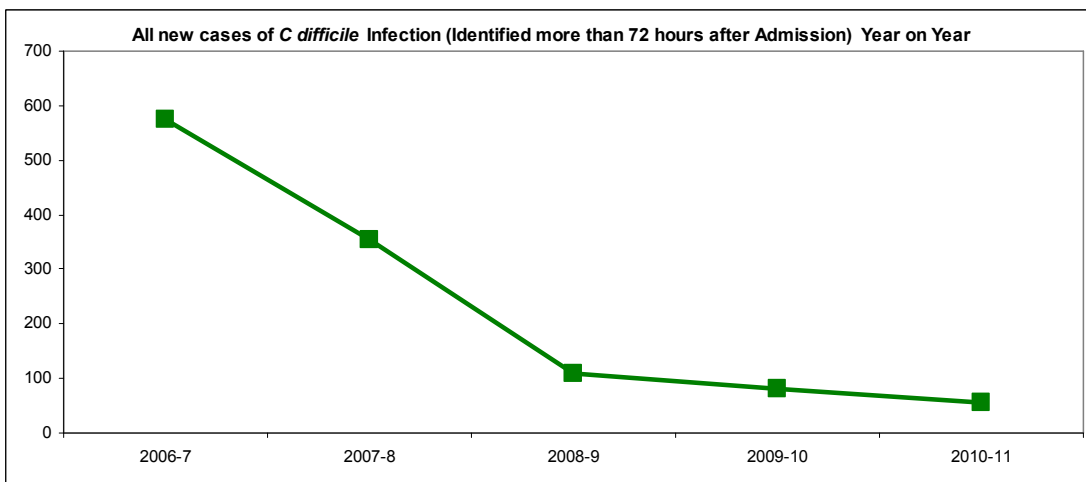


APPENDIX C

ALL NEW CASES OF *CLOSTRIDIUM DIFFICILE* INFECTION MORE THAN 72 HOURS AFTER ADMISSION



NUMBER OF *CLOSTRIDIUM DIFFICILE* INFECTIONS AND TRAJECTORY



APPENDIX D

OVERALL TRUST HAND HYGIENE COMPLIANCE

