Royal Devon and Exeter NHS
NHS Foundation Trust

Infection Prevention and Control

Annual Report 2011- 2012

Respond, **D**eliver & **E**nable

CONTENTS

Key Issues/Executive Summary

1. The Trust participated in the voluntary European point prevalence survey for health care associated infections and antimicrobial use. The results for all participating hospitals in England have been published and show that the RD&E has an infection prevalence rate of 3.6% compared to a national rate of 6.4% and a regional rate of 6.6%. This excellent result reflects the on-going commitment to infection prevention and control at the RD&E.

2. National targets for achieving or maintaining a low number of MRSA bacteraemias continue to be set each year for acute Trusts. During 2011-12 only one MRSA bacteraemia was identified as attributable to the RD&E, against a reduction target of no more than 3. This reflects a 98% reduction since 2004-5.

3. The RD&E introduced a more sensitive tests for toxigenic *Clostridium.difficile* in October 2010. Clinically, sensitive testing is good practice because it ensures that patients with toxigenic *C.difficile* in their bowel are identified promptly, segregated from other patients to reduce spread, and treatment provided, if required. In the absence of clear national guidance on testing and reporting, the Trust has reported all patients identified with *C.difficile* by the more sensitive test, known as PCR, as well as those identified by the less sensitive toxin test as part of the mandatory national surveillance.

4. National targets for reducing *Clostridium difficile* infection have continued. The baseline year on which the target for *C.difficile* was calculated predated the introduction of the more sensitive PCR test and therefore, as anticipated, the total number of cases (85) identified in 2011-12 was greater than the reduction target of 74. However, if the cases identified by PCR had been excluded, the number of cases reported would have been 35 cases against the same target of 74.

5. Surgical site infection surveillance is undertaken using the Surgical Site Infection Surveillance Service of the Health Protection Agency. This allows the RD&E to make comparisons with other participating hospitals. Surveillance of surgical site infection of hip replacement surgery, spinal surgery and breast surgery shows that aggregated infection rates at the RD&E are lower than the aggregated rates for all participating hospitals.

6. There has been a slight increase to the infection rate for orthopaedic knee replacement surgery which means that the aggregated rate of 1% is above the aggregated rate for all participating hospitals. However, at 1% it must be noted that this rate reflects only 5 infections in 485 operations over 12 months.

7. In addition to mandatory surveillance of MRSA bacteraemias, voluntary surveillance of all types of bacteraemia associated with vascular access devices is undertaken. This has shown that we have maintained very low central venous catheter (CVC) related blood stream infection rates in high risk specialties, such a renal dialysis where the rates are amongst the lowest in the country.

8. In previous years, norovirus outbreaks have placed a considerable burden on the organisation. Investigation in previous years had highlighted areas for improvement, which included early recognition and containment of potential cases in admission areas. This year, the admissions unit staff, in conjunction with the Infection Prevention and Control Team, the Site Management Team and the virology laboratory, have worked tirelessly on this aspect of prevention and

the number of outbreaks has been much lower. The outbreaks that have occurred did not have a significant impact on bed capacity and patient flow.

9. Interventions to achieve the low rates of infection highlighted above are wide ranging and many are described within this report including environmental hygiene, prudent antimicrobial prescribing and aseptic techniques. Relevant to the reduction of most types of infection is good hand hygiene, often described as the single most important infection control measure. The on-going hand hygiene programme in this organisation continues to maintain high rates of hand hygiene compliance.

10. Good infection control practice must be underpinned by a comprehensive programme of education and training. Such a programme is provided for all relevant disciplines of staff on general infection prevention and control, antimicrobial prescribing and aseptic technique. An improvement to the percentage of staff receiving annual update training has been achieved during 2011-12.

1. INTRODUCTION

1.1 The purpose of this report is to inform patients, public, staff, the Trust Board of Directors and NHS Devon of the infection control work undertaken in 2011-12, the management arrangements, the state of infection prevention and control within the RD&E and progress against performance targets.

1.2 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 the RD&E to infection prevention and control can be appreciated in the contents of this report.

1.3 The authors would like to acknowledge the contribution of other colleagues to this report, in particular, the sections on environmental cleaning and antimicrobial prescribing.

2. INFECTION PREVENTION AND CONTROL ARRANGEMENTS

2.1 Infection Prevention and Control Team

2.1.1 The infection prevention and control team employed by the RD&E also provide a service to Devon Partnership Trust and the eastern area of North Devon Healthcare Trust (previously the eastern locality of NHS Devon Provider Services) which includes the following community hospitals:

Axminster
Crediton
Exeter (Whipton)
Exmouth
Honiton
Moretonhamstead
Okehampton
OtterySt. Mary
Seaton
Sidmouth
Tiverton and District

2.1.2 The lead nurse is responsible for leading the infection control nursing service and managing the associated service level agreements. There are considerable benefits associated with having one infection control team delivering a service to multiple care providers in the same geographical area not least because infections do not respect organisational barriers. Clearly, this provides continuity and consistency of approach for service users who also move between provider services through their care pathway. There is an additional benefit to team members because, with regular rotation, specialist practitioners gain varied experience, are able to recognise and respond to differing levels of risk, differing needs and can apply their clinical knowledge and skills in a variety of settings.

2.1.3 In addition to the lead nurse, the following nurses are employed within the service:

Senior Nurse Specialist – Band 8A	0.8 WTE
Advanced Nurse Specialists – Band 7	3.0 WTE
Specialist Nurses – Band 6	6.2 WTE

2.1.4 The service is supported by a healthcare assistant (1.0 WTE) and admin and clerical staff (1.6 WTE).

2.1.5 Four consultant medical microbiologists (3.6 WTE) play an active role in infection prevention and control activities. However, one microbiologist fulfils the role of Infection Control Doctor with 4 sessions of clinical time allocated for this purpose. The same microbiologist is also the infection control doctor under the service level agreements. A further 1.25 sessions of clinical time are allocated for this.

2.1.6 An on call nursing service ensures that infection control advice is available 24 hours a day, 7 days a week. All nurses providing this service have completed a specialist post graduate programme of study and are experienced infection

prevention and control specialists. There is also 24 hours a day, 7 days a week consultant medical microbiologist cover.

2.2 Directors of Infection Prevention and Control

The Infection Control Doctor and the Lead Nurse continue as Joint Directors of Infection Prevention and Control (DsIPC), reporting to the Chief Executive and working closely with the Executive Lead for HCAI, the Director of Nursing and Patient Care.

2.3 Infection Prevention and Control Group

The group is chaired by one of the Joint Directors of Infection Prevention and Control, currently the Lead Nurse. In response to new governance arrangements, the previous infection control committee was renamed as the Infection Prevention and Control Group and now reports to the Board through the Safety and Risk Committee. Frequency of meetings have been increased from quarterly to 6 weekly to meet the demands of an ever increasing work programme. The changes to the name, frequency of meetings and reporting line came into effect from August 2011 and 8 meetings have been held over the course of the year. The terms of reference and membership are attached at Appendix A (page 28).

Additional changes to the infection prevention and control assurance structure have been agreed to further strengthen governance arrangements and these arrangements will come into place from April 2012. This introduces an assurance group with more senior clinical representation. The reporting arrangements for this group will be reviewed during 2012-13.

2.4 Reporting line to Board of Directors

The Infection Prevention and Control Group reports to the Board of Directors through the Safety and Risk Committee.

2.5 Links to the Antimicrobial Stewardship Group

The purpose of this group is to ensure that antimicrobial drugs are used prudently and responsibly within the Trust. The group is chaired by a Medical Microbiologist who is also a member of the Medicines Management Committee (MMC) and the Infection Prevention and Control Group. The Antimicrobial Stewardship Group reports to the Governance Committee through the MMC, provides regular reports to the Infection Prevention and Control Group and also liaises with the Joint Formulary Committee.

2.6 Links to Clinical Governance/Risk Management/Patient Safety

The Directors of Infection Prevention and Control are members of the Safety and Risk Committee, Clinical Effectiveness Committee, Patient Safety Programme Group and the Health and Safety Committee thus ensuring that infection prevention and control is considered thoroughly by other committees and individuals.

3. DIPC REPORTS TO THE BOARD OF DIRECTORS

Reporting arrangements are outlined at Appendix B (page 31).

3.1 Number and Frequency

The Board of Directors approved the annual report for 2010-11 and annual programme for 2011-12 in July. Monthly reports about *Clostridium difficile* and MRSA bacteraemias are made through the integrated performance report and hand hygiene compliance through the ward to board reports.

A detailed report highlighting the activities and decisions made by the Infection Prevention and Control Group meeting is made to the Safety and Risk Committee three times a year.

The Joint Directors of Infection Prevention and Control have had the opportunity to meet with the Chief Executive and other members of the Executive Team, including the Medical Directors, Chief Operating Officer and the Director of Nursing and Patient Care on a regular basis. In addition, information regarding outbreaks, significant incidents and performance against HCAI targets have been communicated daily to all Executive Directors.

3.2 Annual Programme

An annual programme is prepared by the Infection Prevention and Control Team, agreed by the Infection Prevention and Control Group and approved by the Board of Directors. The annual programme runs from April to March. The programme of work is mapped to the duties of the Code of Practice. Progress against the annual programme is monitored by the Infection Prevention and Control Group. The programme for 2011-12 and progress made can be found at Appendix C (page 32).

4. MANDATORY SURVEILLANCE OF HEALTHCARE ASSOCIATED INFECTION

Mandatory reports are made to the Health Protection Agency. Some reports are made on line weekly and others are quarterly.

4.1 *Staphylococcus aureus* bacteraemia

4.1.1 *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 infections 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 *Staphylococcusaureus* is found in the bloodstream it is referred to as a *Staphylococcus aureus* bacteraemia.

4.1.2 *Staphylococcus aureus*bacteraemias have been reported since April 2001. Data has been submitted monthly since October 2005.

4.1.3 Reports from this Trust consist of all *Staphylococcus aureus* isolated from blood cultures processed by the Trust Microbiology Department. These are expressed by the Health Protection Agency as total episodes of

Staphylococcus aureus bacteraemia and meticillin resistant *Staphylococcus aureus* (MRSA) bacteraemia.

4.1.4 These include all isolates, whether true infections or contaminated blood cultures; hospital acquired or community acquired infections.

4.1.5 Although most blood cultures originate from patients admitted to the RD&E, specimens submitted from community hospitals and general practitioners are also included in the returns.

4.1.6 InOctober 2005 this surveillance was enhanced to collect patient-level data and submitted through the on line Data Capture System.
This scheme was been developed by the Health Protection Agency at the request of the Department of Health.The enhanced data set also allows the distinction to be made between bacteraemia occurring before admission or within 48 hours of admission and those that occur more than 48 hours after admission.

4.1.7 National reduction targets and outcomes for MRSA bacteraemia are described at section 14.

4.1.8 In January 2011, reporting of an enhanced data set for MSSA bacteraemia became mandatory. Unlike many Trusts, we were already doing this voluntarily. National and local reduction targets have not been set yet with objective for 2011-12 to establish a baseline only.

4.2 Glycopeptide Resistant Enterococcal Bacteraemia

4.2.1 Enterococci are normally found in the gut, and are part of the normal human gut flora.

4.2.2 Although commonly one of the causes of urinary tract infections, enterococci can occasionally cause serious infections such as endocarditis. In immunocompromised 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 glycopeptide antibiotics such as vancomycin and teicoplanin. These have been reported to the Health Protection Agency since July 2003. The same criteria for selection and denominators as *Staphylococcusaureus* applies.

4.2.4 The number of cases reported are low and sporadic.

4.3 *Escherichia coli* Bacteraemia

4.3.1 *Escherichia coli* (commonly referred to as *E. coli*) is also commonly found in gut and is part of the normal flora.

4.3.2 The commonest infection caused by *E. coli* is infection of the urinary tract. Overspill from the primary infection sites to the bloodstream may cause blood stream infection (*E. coli* bacteraemia).

4.3.3 Following a national year-on-year increase in Gram-negative bacteraemia (*E.coli* is a Gram negative bacterium), as reported by the Health Protection Agency via the voluntary surveillance system, the Department of Health commissioned the Agency to establish enhanced mandatory surveillance via the Data Capture Systemfrom all acute Trusts.

4.3.4 Antibiotic resistance has increased in recent years with some *E.coli*able to produce enzymes that confer resistance to several antibiotics.

4.3.5 The aim of the surveillance is to allow more accurate determination of possible interventions to prevent avoidable bacteraemias.

4.3.6 In June 2011 surveillance of *E. coli* became mandatory. National and local reduction targets were not set as the intention was to establish a baseline only through 2011-12.

4.4 *Clostridium difficile (C. difficile)*

4.4.1 *Clostridium difficile* is a bacterium that releases a toxin which causes colitis (inflammation of the colon), and symptoms range from mild diarrhoea to life threatening disease. Asymptomatic carriage also occurs. 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* infection. Infection may be acquired in the community or hospital, but symptomatic patients in hospital may be a source of infection for others.

4.4.2 Mandatory surveillance for *C. difficile* in over 65 year olds has been undertaken since 2004. Since 2007 episodes of *C. difficile* in patients between the ages of 2 and 65 have also been reported.

4.4.3 Episodes (or cases) are reported via the Health Protection Agency Data Capture System. An episode consists of one or more *C. difficile* toxin positive stools during a 28 day period. Cases that occur more than 72 hours after admission are attributed to the acute Trust with those identified within the first 72 hours likely to have been community acquired.

4.4.4 Diarrhoeal stools submitted to the microbiology laboratory are examined for presence of *C.difficile* toxin using an enzyme immunoassay (EIA) . In addition to the toxin test, the Trust introduced a more sensitive test for detecting toxigenic *C.difficile* in patients' faeces in October 2010. The toxin EIA used historically is known to produce some false negative results and the new test overcomes this problem. The new test, a test that identifies the gene that regulates toxin production, rather than the toxin itself, is now used in addition to the toxin test. Approximately 60% of the cases identified since October 2010 have been detected as a result of the new test known as a polymerase chain reaction (PCR) assay. This means that many patients are now identified early, receive prompt treatment and are managed by a specialist *C.difficile* team who may previously have been missed.

4.4.5 Unfortunately, lack of clear national guidance on reporting cases of toxigenic *C.difficile* means that it has become difficult to compare rates of *C.difficile* between hospitals. Some hospitals do not use the additional test, whilst other

hospitals do use it but choose only to report cases identified by the toxin EIA. At the RD&E we decided to report all cases identified by either method.

4.4.6 The additional test has helped us implement control measures more robustly and has been of clinical benefit therefore it will continue to be used for diagnosis at the RD&E .

4.4.7 Control of *C. difficile* is taken extremely seriously in the RD&E and designated isolation facilities are provided for patients with C.difficile infection on Torridge ward and these patients are managed by a team who have developed considerable expertise.

4.4.8 Each case identified in hospital is investigated and precipitating factors examined. If there appear to be linked cases in an area of the hospital strainsare sent to reference facilities for typing.

4.4.9 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 *C. difficile.* In 2011-12,selected strains were typed where possible clusters of *C. difficile* cases were noted. In fact, very few incidences of cross infection were shown. In addition, there were no predominant strains present in the trust. No cross infection with the 027 strain, which has been associated with severe outbreaks, was seen.

4.4.10 As for MRSA bacteraemias, national targets are set and our performance against these targets is shown at Section 14. When considering performance it must be noted that for the period October 2010 to March 2012, the RD&E has reported a greater number of cases because it has included those identified by the additional, and more sensitive test..

4.5 Orthopaedic Surgical Site Infection

4.5.1 It is a mandatory requirement to conduct surveillance of orthopaedic surgical site infections, using the Surgical Site Infection Surveillance Service of the Health Protection Agency. The data set collected is forwarded to the service for analysis and reporting. This system is controlled and validated to allow comparison between centres.

4.5.2 The mandatory requirement is for a 3 month module of surveillance of *one* of the orthopaedic options, namely

- Open reduction of long bone fracture
- Hip arthroplasty
- Knee arthroplasty

4.5.3 However, a more accurate rate can be ascertained by continuous surveillance and therefore, continuous surveillance of all knee and hip arthroplasty started in this Trust in July 2007.

4.5.4 The aggregated rate of infection (identified prior to discharge and on re-admission) for hip arthroplasty (hip replacement) at the RD&E is 0.2%. This is below the national aggregated rate of infection for the last 5 years of 0.7%.

4.5.5 The aggregated rate of infection (identified prior to discharge and on re-admission) for knee arthroplasty (knee replacement) at the RD&E is 1%. This

is an increase over the previous years aggregated rate at the RD&E and is higher than the national aggregated rate of 0.5%. This rate reflects only 5 infections in 485 operations over 12 months. However, in response to the increase, a range of practices have been reviewed and good practice emphasised. A reduction is anticipated.

4.6 MRSA Screening of Elective Admissions

4.6.1 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 time of procedure, if this is appropriate.

4.6.2 Our local experience demonstrated that universal screening of all elective admissions was not of benefit to many subsets of patients and proposed a reduction that was approved by the commissioners.

4.6.3 We have continued to screen elective patients in the following subsets:

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

4.6.4 Screening rates are monitored monthly and a significant improvement in the proportion screened has been achieved. At the start of the year only 66%of patients in these subsets were being screened. This rose to more than 80% by the end of year. This is comparable to the proportions screened in other hospitals that participated in a recent national survey, commissioned by the Department of Health, where it was identified 81% of elective admissions were screened.

4.6.5 Exclusion of all other patients from pre admission MRSA screening has made no difference in the number of cases of MRSA in the Trust. The number of cases remains low and stable (refer 5.2.4).

4.7 MRSA Screening of Emergency Admissions

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

4.7.2 Procedures for screening emergency admissions were implemented during 2010 to meet this deadline.

4.7.3 We are now screening 75% of patients admitted as emergency admissions. The national survey mentioned in 4.6.4 identified that only 61% of emergency admissions were screened in participating hospitals.

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 Vascular device associated bacteraemia surveillance

5.1.3 Feedback of vascular device associated bacteraemia rates to high risk specialties has enabled targeted work to be undertaken to reduce infection rates with sustained improvements seen over recent years (refer Appendix D page 45)

5.2 MRSA - Newly Identified

5.2.1 The numbers of patients diagnosed as MRSA positive in any body site for the first time are collected from laboratory data.

5.2.2 This includes people who are colonised (i.e. carrying the organism without any sign of infection) and those who have an MRSA infection of *any* type, not just blood stream infections.

5.2.3 The Infection Prevention and Control team advise on appropriate management of in-patients to reduce risk of transmission to others.

5.2.4 The number of new cases identified more than three days after admission remains low and stable following several years of reduction. (Refer Appendix E page 48). This reduction, together with the reduction in vascular device associated bacteraemia, underpins the reduction in MRSA bacteraemia rates.

5.3 Breast Surgery - Surgical Site Infection (SSI) Surveillance

5.3.1 The majority of breast surgery is classified as ‘clean’ surgery and therefore rates of infection should be very low.

5.3.2 As with mandatory monitoring for orthopaedic infections, the data set collected is forwarded to the Health Protection Agency for analysis and reporting. This system is controlled and validated to allow comparison between centres.

5.3.3 Two voluntary modules of surveillance were undertaken between July - September 2011 and January and March 2012.

5.3.4 In addition to surveillance of inpatients, data collection included post discharge surveillance using out-patient clinic feedback and patient feedback via patient questionnaire

5.3.5 The results identified an infection rate of 0.5% which compares favourably against an aggregated rate for all participating hospitals over the last 5 years of 1.0%.

5.4 Spinal surgery - Surgical Site Infection Surveillance

5.4.1 Since September 2009 spinal surgery has been under continuous surveillance and shows that the aggregated rate of infection for all hospitals participating over the last 5 years is 1% whilst the rate at the RD&E compares favourably with a rate of 0.5%.

5.5 European Prevalence Survey of Healthcare associated infectionand Antimicrobial Use

The RD&E participated in a European point prevalence survey of health care associated infection and antimicrobial use. Data was collected by a team of infection control specialists, microbiologists and an antimicrobial pharmacist using standardized protocols and definitions over a three week period in October 2011. The survey included all in-patients (adults, children and neonates) in hospital at 8 am on the day of the survey. The aims of the survey were to:

- Raise awareness of healthcare associated infection and antimicrobial usage and build epidemiological capacity within hospitals
- Identify priority areas locally and nationally for interventions & surveillance
- Measure the prevalence of devices at hospital & national level i.e.urinary catheter, peripheral vascular cannula, central vascular cannula, intubation
- Measure the prevalence of healthcare associated infection and the proportion of types,
- Measure the prevalence of antimicrobial prescribing, antimicrobial type & indications

The results for England have been published and the RD&E has performed very well with a healthcare associated infection prevalence rate of 3.6% whilst the national rate is 6.4% and the regional rate 6.6%. 31.7% of patients included in the survey received antimicrobials which is similar to the nationally prevalence.

The table below shows the break down of infection sites as a percentage of all health care associated and compares this with the national breakdown. This shows that the three most common sites of infection at the RD&E differ from those nationally, in the context of a lower prevalence of infection overall.

Healthcare associated infection	**% RD&E**	**% National**
Pneumonia/LRI	24.10%	22.8%
Urinary Tract infections	10.30%	17.2%
Surgical Site infections	6.90%	15.7%
Bloodstream infections	13.80%	7.3%
Gastrointestional Tract infections	24.10%	8.8%

6. OUTBREAK AND INCIDENT REPORTS

6.1 Background

An incident is a near miss, or a failure of infection prevention and control, usually without significant adverse consequence, but where lessons may be learnt with the potential to prevent future serious events. Outbreaks occur when there are two or more linked infections which may or may not be preventable. These events are by definition unpredictable. The Infection Prevention and Control Team may become aware of them through formal schemes, e.g. structured ward liaison or laboratory based surveillance, the Trust electronic incident reporting system and audit;or through informal routes, such as unusual patterns observed and reported by an individual in the Trust. Early ascertainment is key to detecting and acting on incidents and outbreaks to minimise adverse outcomes.

6.2 Response to Incidents and Outbreaks

Every year the Infection Prevention and Control Team recognize and respond to many incidents and potential outbreaks. Some are real but others turn out to be chance clusters not caused by cross infection. It is not unusual to see variation in surveillance data, and the Infection Prevention and Control Team has to be alert to all potential outbreaks, and investigate them accordingly.

6.3 Recording and Reporting Incidents and Outbreaks

Incidents and outbreaks may be recorded in several different ways. Many are recorded in the minutes of the weekly Infection Prevention &Control Team meeting and important occurrences are included in Infection Control Committee minutes. Where an outbreak is considered particularly significant because of its size or the lessons learnt in its management, an outbreak report is prepared. All important infection control incident and outbreak reports are disseminated through the governance system and “Ward to Board” communication and awareness is maintained.

6.4 Noteworthy Incidents

The Infection Prevention and Control Team’s weekly meetings contain information on incidents and potential incidents. Below are some noteworthy issues.

6.4.1 The neonatal unit cares for premature and sick newly born infants, a group very vulnerable to infection. A high level of vigilance is maintained for viruses such as Respiratory Synctial Virus, and bacteria such as *Pseudomonas aeruginosa*, *Staphylococcus aureus* and Group A streptococci which can cause outbreaks amongst such delicate babies.

6.4.2 In May a baby on the unit was found to be colonised with MRSA. The baby was isolated and other babies in the unit were screened as were family members. Screening revealed no other babies were colonised or infected, and no source was identified. No further cases of unexplained MRSA have subsequently occurred, indicating that further investigation was not necessary.

6.4.3 In November it was noted that *Staphylococcus aureus* was isolated from several babies. These strains were examined and found to be different, most

likely acquired naturally at birth or from contact with family. The rate of isolation fell and the peak seemed to be a chance occurrence.

6.4.4 An outbreak of measles occurred in a school in Ashburton, some pupils being admitted to hospital in Torquay. The school had a wide catchment, and some pupils came from areas served by the RD&E so admission areas in the Trust were advised to be vigilant for measles which is now an unusual infection as a result of childhood vaccination but highly contagious and a threat to those without immunity. No confirmed cases needed admission, but this illustrates how it is important for the Infection Prevention and Control Team to alert hospital staff to possible infectious threats in the surrounding community. Local and national surveillance alerts to other possible threats such as norovirus and influenza are monitored and staff informed of threats as they occur.

6.5 Norovirus Outbreaks

6.5.1 Norovirus causes outbreaks of diarrhoea and/or vomiting. It is extremely infectious and spreads easily in any semi closed settings such as hospitals, schools, hotels and cruise ships. Typically, norovirus outbreaks are associated with the winter months and norovirus infection has previously been called Winter Vomiting Disease for obvious reasons.

6.5.2 Norovirus infections not only affect patients but also staff and visitors. An increase in cases identified in the hospital is usually associated with increased norovirus activity in the community. However, this is not always reflected by official surveillance systems as the majority of community cases, being self-limiting, are unreported.

6.5.3 Although there were fewer hospital outbreaks in 2010 -11 than in 2009-10 (Refer Appendix F page 49), analysis of the outbreaks during 2010-11 suggested that once again admission assessment, failure to identify and contain cases in admission areas, followed by movement of patients, and therefore staff, between wards, remained the main reason for multi ward outbreaks. One of the particular challenges is that the symptoms of viral gastroenteritis can easily be attributed to other conditions and dismissed as non-infectious.

6.5.4 These issues were highlighted once again during 2011-12 when we unusually experienced two summer outbreaks. These outbreaks highlighted that vigilance must be maintained throughout the year, not just in the winter months.

6.5.5 Analysis of the summer outbreaks also showed that when an outbreak is identified in one bay on a ward that single bay closure almost always failed to prevent spread to the rest of the ward. Therefore, contrary to the less stringent national guidance, it was agreed that we would apply whole ward closure at the earliest stages of an outbreak, even in the absence of other cases in other parts of the ward.

6.5.6 Following the summer outbreaks, there was also a shift in emphasis to <u>always</u> erring on the side of caution with patients with diarrhoea and/or vomiting however unlikely an infectious cause may seem on admission. The Infection Prevention and Control Team have supported the risk assessment process in

the emergency department and acute medical unit to a much greater extent and frequently reassessed the need for patients placed in single rooms elsewhere in the hospital to ensure that single rooms can be made available when required. Single room availability (or the potential to create single room availability) is communicated to the Site Management Team by the Infection Prevention and Control Team in preparation for out of hours periods and the on-call service provided by the Infection Prevention and Control Team has been utilised with even greater frequency. Rapid testing in the laboratory is also critical to support this process.

6.5.7 These actions appear to have been beneficial. Despite ever increasing pressures on patient flow and bed capacity resulting in large numbers of medical outliers, the impact of norovirus has been much less over the winter months and the outbreaks that have occurred have not been associated with failure to identify symptomatic cases in admission areas (Refer Appendix F page 49).

6.5.8 Although multiple wards were effected these did not appear to be related i.e. there had not been inter ward spread rather outbreaks reflected multiple introductions to the hospital of patients in the incubation phase and no clear history of contact with Norovirus prior to admission. This risk cannot be minimised unless single room accommodation is available for all patients. However, even with a greater proportion of single room accommodation spread can still occur unless stringent isolation precautions are put in place which adequate staffing levels and staff who are trained and competent to apply the precautions consistently.

6.5.9 Maintaining isolation precautions is particularly challenging in wards where there are patients with cognitive impairment. Patients admitted with suspected norovirus infection are usually admitted to isolations on Torridge ward because it has the best source isolation facilities with negative pressure lobbied rooms and en suite toilets. However, patients with cognitive impairment are often unable to understand that they need to stay within the room and, unless closely observed, wander into the rest of the ward. Likewise, non-infectious patients with cognitive impairment may enter isolation rooms containing infectious patients. This is thought to have been the cause of two outbreaks on Torridge ward over the last year and has resulted in a review of staffing levels and skill mix in this particular area together with consideration of other methods of providing close observation of patients with cognitive impairment.

6.6 *Clostridium difficile (C.difficile)*

6.6.1 As explained in section 4.4, the RD&E microbiology service uses very sensitive methods to detect *C.difficile* in specimens from patients with diarrhoea. Not all positive patients necessarily have diarrhoea caused by *C. difficile.* It is possible to be colonised rather than being infected. In infected patients the *C. difficile* is causing symptoms and illness, while in colonised patients it has no disease causing effect. But both infected and colonised patients can be a source of infection for others and, for this reason, all such patients are isolated while symptomatic even when the symptoms may be due to another cause such as a side effect of an unrelated treatment.

6.6.2 All patients who test positive for *C. difficile* are reviewed to decide if they have a symptomatic infection which needs treatment, and also to see if there are avoidable factors that have led to infection, such as excessive use of antibiotics. In addition, the Infection Prevention and Control Team looks at all the cases of *C. difficile* to see if there is possible clustering of patients in a particular location. This may be evidence of an outbreak caused by cross infection. Specimens from potential clusters are referred to a reference laboratory where *C. difficile* strains are typed. If all the strains in a cluster are the same, cross infection is likely whereas if they are different then cross infection has not occurred and the association is most likely due to chance. If outbreaks, or avoidable causes are discovered, appropriate actions are undertaken.

6.6.3 In the year April 2011 to March 2012 nearly 23% of *C. difficile* strains were typed. This revealed that there were no serious outbreaks caused by a single strain. In the great majority of cases clusters were revealed to be unconnected. The most likely explanation was that patients with risk factors for *C. difficile,* typically elderly with multiple problems including a history of antibiotic use, tend to be looked after in specific wards. For this reason cases appear to cluster, but are in fact not linked.

6.6.4 There were occasional events where a pair of patients linked in place and time had the same strain, and although cross infection was likely this did not extend beyond the pair. In all these cases a review of the incident took place, and factors such as speed of ascertainment of infection, antibiotic use and hand and environmental hygiene were examined to reinforce good practice.

6.6.5 In the RD&E symptomatic cases of *C. difficile* infection are normally isolated on Torridge Ward, for containment and for care by the Torridge clinical team that take a specialist role in the management of *C. difficile* disease. In November 2011, patient A, who had been nursed on Torridge ward for a different reason than *C. difficile* (separately from the *C. difficile* patients) developed *C. difficile* infection after discharge, and was subsequently admitted to another hospital in the community. Soon afterwards a second case of *C. difficile* disease developed in another patient in the same community hospital, patient B. It was decided to type the strains of *C. difficile* isolated from patients A & B in the community hospital and all the patients who had been on Torridge ward with *C. difficile* at the same time as patient A. The results showed that patient A did not acquire *C. difficile* while in Torridge ward as all the strains identified from Torridge were different from patient A's. So he was likely to have been infected after discharge from the RD&E.

6.7 Monitoring safety of the water supply

6.7.1 The water supply to a hospital can be a source of infection for patients and staff. Legionella is recognised as a major risk, and much effort is directed to maintaining the water supply to minimise the risk from Legionella. However other organisms may be harboured in the water system which can be a threat to patients, for example *Pseudomonas aeruginosa* and *Stenotrophomonasmaltophilia.*

6.7.2 Following outbreaks of pseudomonas infection in various parts of the UK, notably neonatal units (NNU) in Wales in 2010 and Northern Ireland in 2011, the Department of Health issued preliminary guidelines on minimising the risk

of *Pseudomonas aeruginosa,* especially to vulnerable patients in neonatal and intensive care units. In response, the RD&E Legionella Committee was reconfigured as the Water Safety Group and its remit expanded to include all waterborne infective threats. More detailed guidance was issued at the end of March 2012 and national legionella guidance documents are to be updated to include other organisms in 2013.

6.7.3 *Legionella pneumophila*, which causes Legionnaires' disease, is a bacterium that lives in water, and can infect the water systems in buildings such as offices, hotels and hospitals. Human infection is caused by inhaling water droplets contaminated with the bacteria. Droplets are formed normally when devices such as taps and showers are operated.Typically those most at risk of infection are either immunocompromised or are people over 50 who smoke.

6.7.4 Hospital water supplies are monitored for legionella risk, and this is minimised by ensuring that hot and cold water systems are maintained at the correct temperatures, and that no stagnation occurs in the water distribution systems.

6.7.5 Routine monitoring has revealed areas in the RD&E both in Wonford and Heavitree where the temperature of cold water cannot reliably be maintained below 20^{o}C, the upper limit proscribed in Health Technical Memorandum (HTM 04). Additional control measures included, where possible, modifying the pipe work and mains supply, and the introduction of silver ionisation devices into the water supply. These have been successful, in that routine monitoring has shown that *Legionella pneumophila* has not been isolated in risk areas since additional controls were introduced. No hospital acquired cases in patients or staff have ever been detected.

6.7.6 *Pseudomonas aeruginosa* has not been routinely monitored in hospital water supplies. Methods to do this were issued at the end of March 2012 and a programme of testing is planned for 2012. However, initial guidance on risk reduction in augmented care units, e.g. neonatal and intensive care units was issued in February 2012.

6.7.7 Preliminary guidance on minimising risk was issued to the augmented care units, mainly on practices around the use of wash hand basins and other sinks. A preliminary risk assessment was carried out on the neonatal unit. Surveillance has not revealed any evidence of an endemic problem with *Pseudomonas aeruginosa* in any clinical areas. However, it should be stressed that *Pseudomonas aeruginosa* is commonly found in some patients, especially those with chronic chest disease. However, this is undoubtedly acquired outside hospital where *Pseudomonas aeruginosa* is a common environmental organism.

7. HAND HYGIENE

7.1. Previous annual reports have described our participation in the NPSA 'cleanyourhands' campaign which involved four main components. Although the national campaign no longer exists, this approach to hand hygiene is embedded and makes up a standard part of the local work programme:

- Point of care alcohol hand rub
- Awareness posters

- Patient involvement
- Audit of clinical staff compliance with the World Health Organisation's 5 moments for hand hygiene, with feedback on performance.

7.2 Observational audits are undertaken discretely, on a monthly basis, by staff who normally work in that clinical area. The audit is undertaken in this way to help gain the most accurate picture of compliance. The staff are trained to undertake the audits and any exceptionally high or low results are validated by a member of the infection prevention and control team.

7.3 If compliance is below 85% action is required to raise standards. Where an unacceptable standard relates to an individual practitioner, this is addressed with them directly. If a low score is reflective of practice amongst several members of staff improvement work will be undertaken to address this involving the clinical leaders in that area. The compliance graph (Appendix G page 50) shows that high standards have been achieved this year.

8. ASEPTIC CLINICAL PROTOCOLS

The principles of asepsis are included on the Trust induction programme for new staff. Clean and aseptic technique principles are also provided as part of nursing and medical staff education, with assessment of competency made in relation to intravascular drug administration, intravascular cannulation and venepuncture. Particular emphasis continues to be placed on aseptic procedures when inserting and managing the on-going care of central venous catheters.

8.1 Care of Peripherally Inserted Central Venous Catheters (PICCs)

8.1.1 PICCs are used for lengthy intravenous treatments, when otherwise patients would have multiple of peripheral vascular devices, reducing pain and discomfort.

8.1.2 PICC insertion is usually undertaken by a member of the Vascular Access Team, a team of specialist nurses highly skilled in the procedure, and is always undertaken to a high standard using an aseptic technique.

8.1.3 On-going care of the line is managed by the ward staff and the need for additional training was highlighted in 2008 to reduce risk of infection. Workshops and ward based training sessions were implemented in 2008-9 and have continued ever since with excellent results (refer Appendix D page 45).

8.2 Care of Central Venous Catheters for Administration of Parenteral Nutrition

8.2.1 Central venous catheters are used for the administration of nutrition directly into the blood stream for patients who are unable to absorb adequate nourishment in the normal manner within the gut. Parenteral nutrition is associated with a very high risk of infection. Improvement work (reported in previous annual reports) has meant that previous reductions in infection associated with parenteral nutrition have been maintained in 2011-12 (Refer Appendix D page 47)

8.2.2 Cohorting patients receiving PN on wards where the staff have received training, have been assessed as competent and are able to maintain competence is critical to maintaining these low levels of infection.

9. DECONTAMINATION

9.1 Arrangements

9.1.1 The Decontamination Group is responsible for monitoring decontamination arrangements and compliance overall and reports to the Safety and Risk Committee. It meets 4 times a year.

9.1.2 This is chaired by the Trust Decontamination Lead, who is one of the Joint Directors of Infection Prevention and Control.

9.2 Audit of Decontamination

9.2.1 The hospital sterilisation and decontamination unit, which reprocesses surgical and other invasive reusable instruments, conduct internal audits to ensure their compliance with ISO9001/2000, ISO13485 andthe Directive 93/42/EEC + 2007/47/EC and are externally audited twice a year by a notified body.

9.2.2 Decontamination of lower risk patient equipment (i.e. non invasive equipment such as commodes, monitors, infusion pumps) is audited in two ways: Firstly, it is included as part of the Nursing Quality Audit Tool and as part of the Credits for Cleaning audits (refer section 10).

9.3 Incidents relating to Decontamination

9.3.1 Hip packs

Bespoke sterile hip packs for use in Total and Revision Hip Replacement (THR) operations were manufactured by an external supplier. After using these packs for approximately 12 months the manufacturer was given a list of additional items to add to the pack. As a result a transparent plastic pouch containing an additional suture had been affixed to the *bottom* of the pack. Although the suture was sterile, the outside surfaces of the suture pack, within the pouch had not been sterilised. Although correctly labelled as such, there was confusion, and it was realised that in some cases the suture in its external unsterile packaging had been added to sterile equipment trays when the packs were opened in theatres.

As soon as the problem was identified the additional suture was removed from the outside of the packs. An incident team was formed and all cases operated on with the packs in question were reviewed, this affected 45 patients. It was thought that the risk of infection was low. In addition, measures such as additional prophylactic antibiotic treatment after the operation were not thought to be logical or appropriate. Fortunately, all hip replacement operations are the subject of detailed post-operative surveillance for infection, lasting for 12 months post operatively. This showed no evidence of an increase in the early infection rate, which is extremely low compared with other UK centres.

Patients and their GPs were informed, and patients were seen by a surgeon as they had post-operative physiotherapy sessions to assess and reassure patients.

To date no harm has been detected, but the patients will be separately reviewed as a specific group in the post-operative surveillance programme for a full year, as orthopaedic implant infections may present after many months.

9.3.2 Endoscopy disinfection

The washer disinfector unit in Tiverton hospital has been replaced with a new unit. The new unit complies with current standards, and provides assurance that the decontamination process is compliant.

Testing of the microbiological quality of endoscope rinse water in Axminster, Tiverton and Exeter has improved, showing that it is within required standards most of the time. When testing shows that it is not within the required standards, activity is stopped and cleansing procedures put in place. Relatively little capacity has been lost due to quality failures of rinse water.

Traceability of endoscopes currently relies on both paper and electronic systems. Business cases to expand the electronic systems are likely to be successful in 2012/3, but audits of the current systems show that endoscopes can be fully traced, to decontamination cycles and patients.

Some endoscopes are highly complex, for example trans oesophageal echocardiography probes). These cannot be decontaminated currently in automatic washer disinfectors after every use because of capacity problems, so disposable sheaths are used to protect scopes and they are manually disinfected after use. Improving the automation of disinfection of complex endoscopes and other devices, for example some ultrasound probes, is a target for the future.

10. CLEANING SERVICES

10.1 Management Arrangements

All cleaning services are managed in-house.

10.2 New Developments

10.2.1 Last year's report detailed that the Ward Cleaning and Hospitality Project was specifically exploring the feasibility of two separate roles for ward based food service requirements and all cleaning services. This was to ensure that moving forward, the Trust delivers a safe, quality driven and cost effective service, as there was a need to ensure that we can best meet the changing demands and challenges of all areas throughout the hospital in the future.

10.2.2 Following a successful 3-month trial on four pilot wards during the summer of 2011, a formal staff consultation period and dedicated training programme, the 'new-style' service at ward level commenced in earnest on Monday 26th March 2012. This now consists of a Ward Housekeeper (employed directly by the ward and line managed by the Matron), Catering Assistant and Domestic Assistant. The provision of non-clinical services at ward level has therefore been increased by 6 hours per day.

10.2.3 Although the Ward Housekeeper role is a Monday – Friday service, the hours of work are flexible as agreed with the Ward Matron and their primary role is

to supervise the delivery of all non-clinical services at ward level. This key responsibility includes patient nutrition & hydration and ensuring the ward environment and patient equipment is clean and audited appropriately.

10.3 Monitoring Arrangements

10.3.1 Monitoring is undertaken in accordance with the National Specification for Cleanliness in the NHS, 2007.Domestic Services use the NHS approved Credits for Cleaning (C4C) monitoring system which was successfully introduced during 2006.

10.3.2 Looking forward to 2012, a Publicly Available Specification (PAS 5748) sponsored by the Department of Health (DH) and the National Patient Safety Agency (NPSA) is to be introduced to provide a risk-based system for the planning, application and measurement of cleanliness. This has also been facilitated by the British Standards Institution (BSI) and would be utilised to provide the Trust with evidence that we comply with the CQC's registration requirements for cleanliness and infection control.

10.3.3 A team of dedicated monitoring officers (2.86 WTE) undertake & record technical monitoring on a weekly basis as required by the National Specification. The monitoring of waste streams is included in their daily audits. From April 2012, the Monitoring Team will be supported by individual Ward Housekeepers (27 WTE) at ward level, who will also undertake technical monitoring of the environment and patient equipment cleaning.

10.3.4 Areas of domestic cleaning failure are recorded on a rectification sheet which is given to the duty supervisor to action and follow up.

10.3.5 All ward sisters /charge nurses, matrons and senior matrons are sent a printed list of the cleaning results at the time of audit, this includes patient equipment cleaning failures. When rectified, the ward sisters / charge nurses e-mail a response back to the monitoring team so as to close the audit loop.

10.3.6 Collated results of monitoring are e-mailed to the Lead Nurses, Senior Matrons and Matrons on a monthly basis and show 3-month rolling results for wards and departments. Action plans are implemented for any wards or departments failing to reach the required standards as laid down by the NPSA.

10.3.7 A greater focus has been given to 'closing the loop' in terms of rectification of outstanding faults. Also a greater emphasis has been placed on root cause analysis of recurring faults and identifying robust actions required to resolve these issues.

10.3.8 A quarterly management audit is undertaken by a multi-disciplinary team, which includes a Monitoring Officer, a matron or nominated nursing representative, a member of the Estates Department and an infection prevention and control nurse specialist and the results of this are used to monitor the technical audits undertaken on a weekly basis.

10.3.9 An annual external audit of cleaning standards is undertaken by South Devon Healthcare NHS Foundation Trust.

10.4 Budget Allocation

10.4.1 It is a rolling budget. Any additional requirements or new areas are funded by the division to which they relate. Preparation of BC1 Forms and costings are supplied by the Domestic Services Manager or Facilities Service Manager.

10.4.2 The Credits for Cleaning (C4C) programme has now been successfully in use for several years and significant amounts of data relating to current resources and the recommended minimum frequency of clean requirements have been recorded.

10.4.3 The output data is used in the re-design of Domestic Services and their delivery in order to meet the ever changing needs of the Trust.

10.4.4 Call-off funding for a dedicated infection outbreak cleaning team continues to be allocated on an annual basis. The positive impact of this funding is well recorded e.g. improved response times for organising outbreak and specialist cleaning and the turnaround time for re-opening a closed ward.

10.4.5 The benefits of the Ward Cleaning and Hospitality Project also included the alignment of domestic staff break times, as for many years, the majority of domestic staff received a paid meal break whilst other staff groups within the Trust did not therefore breaks are now the same for all staff groups Trust wide.

10.4.6 Additional monies were also secured to increase the cleaning resources available for public area cleaning and specialist cleaning requirements through a 24-hour period. This continues to ensure that these facilities are maintained to a satisfactory standard of cleanliness throughout each day, thus significantly reducing the number of complaints (written and verbal) received from patients and visitors regarding the cleanliness of these facilities.

10.4.7 The specialist cleaning team continue to operate until 10pm, seven days per week, (until Domestic Services staff arrive for the night shift) and overnight on a Friday and Saturday night. The site practitioner team liaise with these staff on a Friday and Saturday night and this continues to be a positive example of collaborative working.

10.4.8 There continues to be a swift ‘turn-around’ times for the terminal cleaning of side rooms, bed spaces or even bays that have been vacated by infected patients. The number of cleans required has again increased in the last year with an average of 615 per month (the previous year’s average was 517 per month). These are reported to the Infection Prevenion and Control Group and Trust Executives on a quarterly basis.

10.4.9 Additional non-recurring money continues to be allocated each year and a fifth deep cleaning programme took place from June – September 2011. Deep cleaning took place overnight meaning that wards remained out of use for a shorter period of time. Domestic services staff also undertook the deep cleaning of all patient equipment, therefore releasing nursing staff time to care for patients. We continue to use steam cleaners, chlorine releasing disinfectants and hydrogen peroxide vapour to achieve a high level of disinfection. Further funding has been allocated for 2012/13 for the deep

cleaning programme to continue within all in-patient and some outpatient areas. The Infection Prevention and Control Team, Nursing Services, Site Management Team and Domestic Services have worked together to produce a programme of cleaning for the next deep clean, which will commence in June 2012, although the opportunity to deep clean two ward areas in advance was recently taken.

10.5 Clinical Responsibility

The Matrons and Senior Matrons have responsibility for ensuring that clinical care is provided in a clinically hygienic environment. They work closely with their Ward Housekeeper, the Domestic Services Supervisors, the Domestic Services Manager and the Facilities Service Manager to ensure that standards are maintained.

10.6 Clinical Access

10.6.1 Access to the clinical areas is made during the day time in in-patient areas and in the evening or at night in outpatient or day case departments - this minimises disruption to patients and clinical staff. In addition to the review of non-clinical services at ward level, the success of the Ward Cleaning and Hospitality Project also included a re-design of the times when these outpatient or day case departments are cleaned, so late afternoon / evening cleaning now consequently provides a more robust infrastructure to support ad-hoc specialist / outbreak cleaning requirements during late afternoon / evenings, particularly when we have outbreak situations, e.g. Norovirus.

10.6.2 Following patient consultation, restricted visiting hours were introduced and this continues to provide improved access for cleaning.

10.7 User Satisfaction Measures

10.7.1 The Monitoring Officers continue to audit the meal service both within the catering department and at ward level. In-patient satisfaction surveys for both food and cleaning services continue to be issued every month. These are returned to governance support unit for collation and results are reported to the board on a 6-monthly basis.

10.8 Patient Equipment Cleaning

10.8.1 Following work undertaken by one of the Divisional Lead Nurses a definitive list of Patient Equipment was established in order to identify responsibility, frequency and method of cleaning. There is a Patient Equipment Cleaning Policy.

10.8.2 The daily cleaning of patient equipment is now undertaken by the Domestic Assistant at ward level, in accordance with the Minimum Frequencies of Cleaning requirements for patient equipment.

10.9 Training

10.9.1 Following the withdrawal of funding for domestic staff to undertake their BICSc training national qualification – Certificate of Professional Competency in Healthcare Cleaning in 2011, alternative opportunities for staff to complete Level 2 NVQ's were successfully arranged through HIT (Hospitality Industry

Training) from June 2011. To date, 43 staff on the Wonford site & 12 staff on the Heavitree site have completed or are currently completing the NVQ. This is a rolling programme. As with the BICS training, there is good evidence of a methodical approach & greater attention to detail, particularly as ward based staff are now even more closely monitored on a daily basis by Ward Housekeepers.

10.9.2 The successful training of 28 Ward Housekeepers in 2011/2012 included a bespoke programme focusing on many aspects of hospitality within a clinical ward setting, including from a catering, cleaning and auditing perspective.

10.9.3 As part of the Ward Hospitality & Catering Project, all domestic staff at ward level have been trained in the cleaning of patient equipment, which is ensuring that valuable nursing time is now more focused on direct patient care.

10.9.4 A Cleaning Manual is been issued to all Domestic Services staff based on the national NHS Cleaning Manual. This incorporated a self-assessment training needs analysis tool which was then evaluated by Domestic Services Supervisors to identify initial and refresher training needs for staff. This links into core competencies for staff and KSF.

11. AUDIT

11.1 Clinical Audit

Audits are undertaken to identify areas for improvement in practice and to determine compliance with policy. The clinical audit programme is contained within the Annual Programme at Appendix C (page 42). . All audit findings and associated recommendations have been presented to the Infection Prevention and Control Group. Any action plans are implemented and monitored by Divisional Governance Groups or the Infection Prevention and Control Group, which ever is more appropriate.

11.2 Environmental Audit

As reported in Section 10, cleanliness standards audits are undertaken monthly by the Trust monitoring officers and are validated quarterly by a team which includes infection control nurses and matrons. The audit assesses both environmental and patient equipment hygiene and overall shows high standards of cleanliness. Where any problems are identified, these are highlighted immediately for rectification by either the housekeeping team, the ward matron or the estates department depending on the nature of the issue.

11.3 Antibiotic Prescribing

11.3.1 Audit and surveillance of antibiotic use and prescribing is undertaken and monitored through the Antimicrobial Subcommittee and co-ordinated by the Antimicrobial Pharmacist.

11.3.2 The annual report for the Antimicrobial Stewardship Group is at Appendix H (page 51) and highlights the audits undertaken in 2011-12.

12. TRAINING ACTIVITIES

12.1 Induction and Update Training for Trust Staff

12.1.1 A blended learning approach has been adopted with the provision of both face to face training and e-learning for clinical staff. New e-learning modules have been developed for ward clerks and laboratory staff.

12.1.2 Attendance rates have increased in 2011/12. Refer Appendix I (page 55).

12.1.3 WHO hand hygiene day was on 5th May. In recognition of this theInfection Prevention and ControlTeam undertook a variety of hand hygiene update events including an information stand in Oasis Restaurant. Staff who could not visit the Oasis were visited on the wards with similar information provided as mini teaching sessions.

12.2 For Infection Prevention & Control Specialists

12.2.1 All members of the Infection Prevention and Control Team are members of the Infection Prevention Society (IPS) and attend SW branch meetings which provide the opportunity for update and networking. All receive specialist journals as a benefit of membership which also aids development.

12.2.2 Representatives of the team attended the IPS Annual Conference in Bournemouth, which provides not only an excellent scientific programme but the opportunity to network with other specialists and share information. Both oral and poster presentations were made by members of the team.

12.2.3 Four nurses completed post graduate studies this year; two awarded a post graduate diploma from Inverness College and two a post graduate certificate from the Peninsula School of Medicine and Dentistry. It had been hoped that those studying with the PMS programme would have been able to progress to study a diploma but the University have not been able to make these developments to the course.

12.2.4 The Infection Control Doctor is a member of the IPS, Healthcare Infection society (HIS) and the Royal College of Pathologists and participates in the College's continuing professional development scheme. His annual continuing professional development (CPD) plan includes infection control.

12.3 For the Joint Directors of Infection Prevention and Control

12.3.1 The Directors both already hold specialist qualifications and have considerable experience within the field of infection prevention and control.

12.3.2 In addition to training undertaken as part of their personal development as Lead Nurse and Infection Control Doctor, the Directors have attended Strategic Health Authority eventsfor Directors of Infection Prevention and Control .

13. POLICIES AND GUIDELINES

A schedule for policies and guideline revision/development is included in the annual programme (Appendix C page 44). All policies are available on the Trust website and intranet.

14. TARGETS AND OUTCOMES

14.1 MRSA Bacteraemia

14.1.1 The MRSA bacteraemia target was to have no more than 3 cases. With a target this low, normal variation in infection rates could have resulted in a breach. However, there has only been one bacteraemia this year. An investigation into the case showed that it could not have been prevented but nevertheless some useful learning points were identified and acted on. (Refer Appendix J (page 56) for graphical expression of performance against trajectory

14.2 *Clostridium difficile*

14.2.1 The national target was to have no more than 74 cases. We identified and reported 85 cases but this included those identified by PCR. The number of 'toxin only' cases was well below the target at 35. Neither Monitor nor the Commissioners have imposed any penalties, understanding that the target was based on 'toxin only' figures. The Department of Health have issued further guidance on testing and reporting which comes into effect from April 2012 which clarifies that for mandatory surveillance only toxin positive cases should be reported. (Refer Appendix K (page 57) for graphical expression of performance against trajectory)

14.2 Cleaner Hospitals (PEAT scores)

14.3.1 PEAT (Patient Environment Action Team) inspections are undertaken annually by self assessment. The team undertaking the inspection includes two members of the public. High standards continue to be maintained with a score of 'Good' awarded once again for the environment in 2012.

14.4 The Health and Social Care Act 2008. Code of Practice for the Prevention and Control of Infection (Hygiene Code)

14.4.1 The Care Quality Commission have not undertaken an inspection at the RD&E since 2009-10 when we were deemed to be compliant. The achievements identified in the annual programme of work (Appendix C) continues to strengthen this position.

14.4.2 As part of the 2011/12 Annual Audit Plan, as approved by the Audit Committee, Internal Audit undertook a review of the system of controls in place with regards to infection control. The review was completed during the third quarter of the financial year. Due to the size and nature of the Code of Practice, internal audit did not review all aspects but included key elements of criterion 1 (management systems) and 2 (provision of an appropriate environment).

14.4.3 The auditors were able to provide positive assurance that the processes are appropriate for the management of the principal risks to the systems

14.5 Local Targets

14.5.1 Progress with the Infection Control Annual Programme has been monitored by the Infection Prevention and Control Group, in general, planned activities have been completed (Appendix C).

14.5.2 A minimum standard of 85% hand hygiene compliance was agreed at the start of 2011 and has been achieved.

15. CONCLUSION

Eliminating avoidable healthcare associated infection remains a top priority for the public, patients and staff. In response, a robust annual programme of work has, yet again, been implemented over the last year which has been led by an experienced and highly motivated Infection Prevention and Control Team. Particularly notable successes include:

- a health care associated infection point prevalence rate that is significantly lower than regional and national rates as identified through participation in the European point prevalence survey.
- achiving the reduction target for MRSA bacteraemias once again,
- maintaining low levels of surgical site infection in hip and spinal orthopaedic surgery,
- maintaining low levels of central line associated infection
- achieving high standards of environmental cleanliness including an annual deep clean of all in-patient wards
- reducing the number of outbreaks caused by norovirus infection.

Challenges remain and, in particular, efforts to further reduce *Clostridium difficile* infection 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 considerable successes over the last year have only been possible due to the commitment for infection prevention and control that is demonstrated at all levels within the organisation. Such commitment will be crucial to maintain high standards into the future.

INFECTION PREVENTION & CONTROL GROUP

Terms of Reference

These Terms of Reference are used as evidence for:	
Care Quality Commission Standard numbers:	8
NHSLA Risk Management Standards for Acute Trusts:	✓
NHSLA CNST Maternity Clinical Risk Management Standards:	✓
Other (*please specify)*:	Hygiene Code

1. Accountability

1.1 The Group reports to the Chief Executive and the Board through the Governance Committee/Safety and Risk Committee of which the Director of Infection Prevention and Control is a member.

2. Purpose

2.1 The Infection Prevention and Control Group is the forum for consultation between the Trust's Infection Prevention and Control Team and all other Directorates and Departments of the Trust.

2.2 The Group agrees and endorses the Infection Prevention and Control Annual Programme, which it also supports and monitors.

3. Membership

3.1
- Joint Directors of Infection Prevention and Control (Chair)
- Infection Prevention and Control Nurse Specialists
- Audit and Surveillance Nurse Specialist
- Decontamination Lead
- A Consultant Microbiologist representing the Medical Microbiologists
- Chief Executive or a representative with delegated authority
- Chief Operating Officer
- Medical Director
- Director of Nursing & Patient Care or representative
- Consultant in Communicable Disease Control
- Occupational Health Physician or Nurse
- Divisional Manager Facilities
- Directorate Infection Control Leads
    - Lead Nurse - Medicine
    - Lead Cancer Nurse
    - Lead Nurse - Surgery
    - Lead Nurse - Child Health
    - Head of Midwifery
    - Lead Nurse - Trauma & Orthopaedics/Critical Care

- Superintendent Physiotherapist - Professional Services
- Divisional/Directorate medical staff infection prevention and control champions
- Hotel Services Manager
- Deputy Director of Capital & Estates
- Antimicrobial Pharmacist

3.2 The Group will review the membership annually to ensure that it reflects the requirements of the Code of Practice on Prevention and Control of Infection.

3.3 The Chairman will serve for three years.

3.4 Individuals may be co-opted for specific projects.

4. A Quorum

4.1 A quorum will consist of not less than 5 members with at least the following members present:

- A Director of Infection Prevention and Control
- One of the following:
  - Chief Executive (or representative),
  - Medical Director or Director of Nursing & Patient Care

5. Procedures

5.1 The Infection Prevention and Control Group shall appoint a secretary to prepare and distribute agendas, keep minutes and deal with any other matters concerning the administration of the Group. The Secretary shall distribute unapproved minutes of the meetings to all members of the Group and the Governance Committee Manager within one month of a meeting.

5.2 Any member of staff may raise an issue with the Chairman, normally by written submission. The Chairman will decide whether or not the issue shall be included in the Group's business. The individual raising the matter may be invited to attend.

5.3 The Chairman will prepare a ***'decision briefings'*** report after each Group meeting to be sent to the Governance Manager within one month of a meeting for inclusion at the subsequent Governance Committee meeting.

5.4 The Joint Directors of Infection Prevention and Control shall provide an annual report to the Trust Board highlighting the work that the Infection Prevention and Control Group has undertaken and what risks the Infection Prevention and Control Group were managing through its activities. The Governance Committee will be informed when the annual report has been presented to and approved by the Trust Board.

6. Frequency of Meetings

6.1 Meetings will be held approximately every 6 weeks, with no fewer than 6 meetings per year

6.2 Extraordinary meetings may be called at the request of the Director of Infection Prevention & Control or the Chief Executive.

7. Duties and Responsibilities

7.1 Agree and monitor an annual programme of activity including surveillance, audit and education programmes.

7.2 Advise and support the Infection Control Team on the most effective use of available resources in delivering an annual programme to include audit surveillance and education.

7.3 Draw the attention of the Chief Executive and the Board to any serious problems or hazards relating to infection prevention and control.

7.4 Review reports on hospital acquired infection and infection prevention and control problems.

7.5 Commission, approve and review policies for all aspects of infection prevention and control and monitor their implementation

7.6 Draw up plans for management of outbreaks both in the hospital and the hospital's response to major outbreaks in the community.

7.7 Ensure that all relevant legislation, Health Service Guidelines etc is reviewed and that appropriate amendments/additions are made to local policies and procedures

7.8 Review the funding and resource implications of other infection control issues such as provision of adequate hospital facilities and accommodation and make appropriate recommendations to the Trust Board.

7.9 Receive the DIPC annual report

7.10 To conduct an annual review of the group's effectiveness and comment on this in the annual report

7.11 Receive reports according to the group's schedule of reports from the Directorates

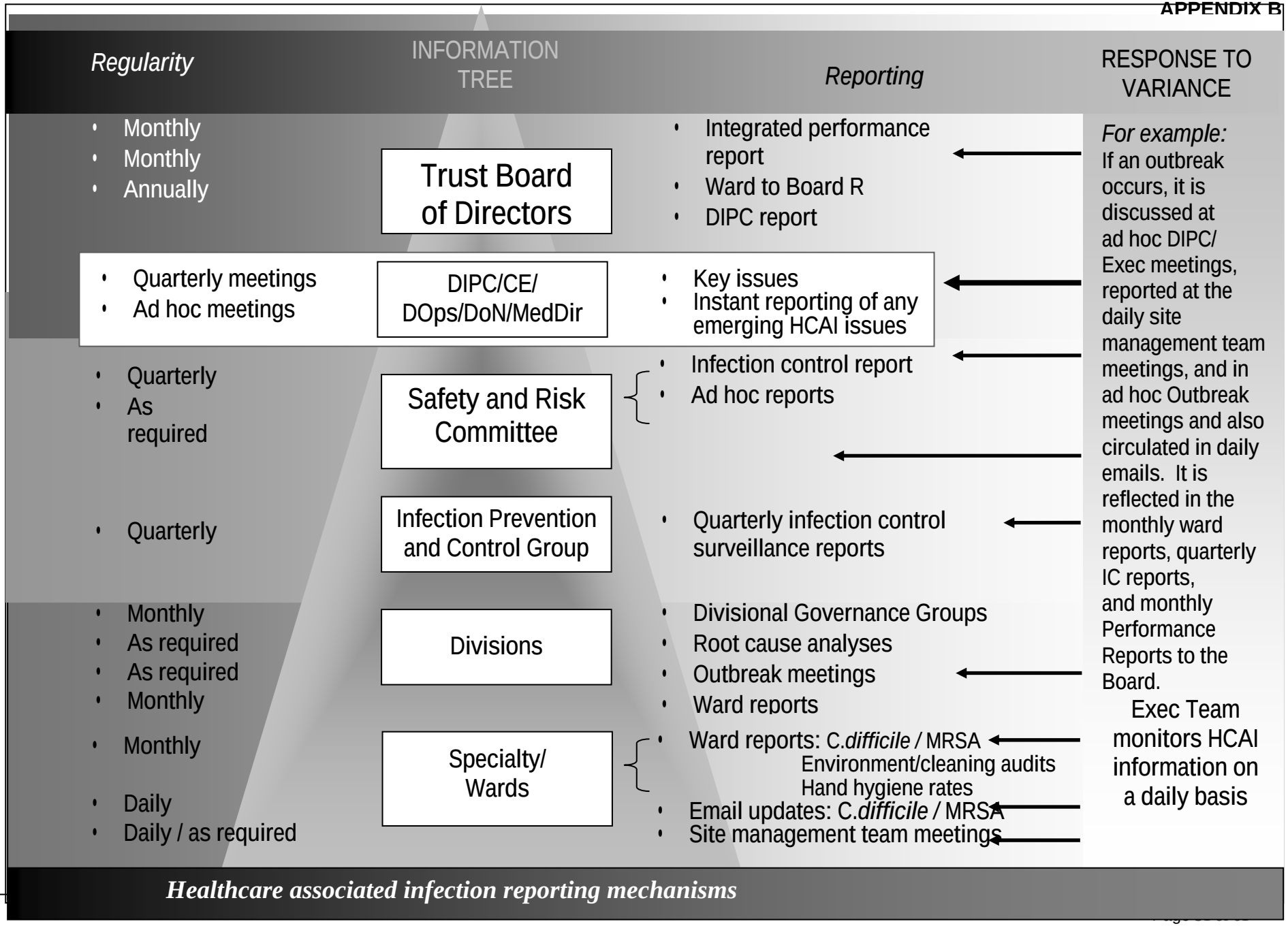
8. Monitoring the effectiveness of the committee/group/forum

8.1 The Infection Prevention and Control Group will review its Terms of Reference annually and make recommendations to the Governance Committee for any changes required to ensure that the Group remains fit for purpose.

9. Review

9.1 Minutes of the Infection Prevention and Control Group will be reviewed by the DIPC to determine whether the group is effective as defined by the duties and responsibilities in these terms of reference. The outcome of this review will be included in the published DIPC annual report which is presented to the Trust Board

9.2 Decisions made by the Infection Prevention and Control Group will be reported quarterly to the Trust Governance Committee in a decisions briefing paper.


Regularity
INFORMATION TREE
Reporting
RESPONSE TO VARIANCE
Monthly
Monthly
Annually
Trust Board of Directors
Integrated performance report
Ward to Board R
DIPC report
Quarterly meetings
Ad hoc meetings
DIPC/CE/ DOps/DoN/MedDir
Key issues
Instant reporting of any emerging HCAI issues
Quarterly
As required
Safety and Risk Committee
Infection control report
Ad hoc reports
Quarterly
Infection Prevention and Control Group
Quarterly infection control surveillance reports
Monthly
As required
As required
Monthly
Divisions
Divisional Governance Groups
Root cause analyses
Outbreak meetings
Ward reports
Monthly
Daily
Daily / as required
Specialty/ Wards
Ward reports: C.difficile / MRSA
Environment/cleaning audits
Hand hygiene rates
Email updates: C.difficile / MRSA
Site management team meetings
For example:
If an outbreak occurs, it is discussed at ad hoc DIPC/ Exec meetings, reported at the daily site management team meetings, and in ad hoc Outbreak meetings and also circulated in daily emails. It is reflected in the monthly ward reports, quarterly IC reports, and monthly Performance Reports to the Board.
Exec Team monitors HCAI information on a daily basis
Healthcare associated infection reporting mechanisms

Royal Devon and Exeter NHS Foundation Trust

Infection Prevention and Control (IPC) Annual Programme 2011-12

1. Introduction

Under the Health and Social Care Act 2008, the Code of Practice on the Prevention and Control of Infections sets out the ten criteria against which the Care Quality Commission (CQC) will judge a registered provider on how it complies with the cleanliness and infection control requirement. This year's programme of work which is mapped to these criteria, will:

- ensure that the Trust continues to maintain and strengthen its position of compliance with the Code of Practice
- identify priorities for action

NB Antibiotic regulation and control is an important part of infection prevention and control. However, as it is such a significant area the programme of work for this aspect of infection prevention and control is determined and monitored separately by the Antimicrobial Committee which is a sub committee of the Drug and Therapeutics Committee

.

Key to RAG rating:

	Completed or on track to be completed by due date
	Underway but completion delayed or minor problems identified
	Not completed by due date or major problems identified
	No requirement to have started this work yet.

2. Programme

Code of Practice Criteria	Programme of work 2011-12	By whom (lead)	By when	Progress/Outcome
1. Systems to manage and monitor the prevention and control of infection	Revise Infection Prevention and Control Committee (IPCC) structure, membership, meeting length, frequency and time to maximise professional group representation. Amend TORs accordingly	Directors of IPC (DsIPC)	June 2011	
	The ICC will receive quarterly Divisional IPC reports on behalf of the Board, which will identify progress with: o Progress on action plans following root cause analysis of healthcare associated infection o Actions to improve compliance with hand hygiene/bare below the elbow strategy o Compliance with Saving Lives audits o Outbreaks and Incidents	Divisional Leads	Quarterly	
	Present annual programme (2011-12) and the DsIPC annual report 20010-11 to the Trust Board.	DsIPC	June 2011	
	Make other presentations/reports to the Board as required and provide monthly data for monitoring progress against national targets for MRSA bacteraemia and *C.difficile* infection	DsIPC	As required	
	Regular attendance at, and provision of reports to the the Safety and Risk Committee	DsIPC	Quarterly	

Code of Practice Criteria	Programme of work 2011-12	By whom (lead)	By when	Progress/Outcome
Criteria 1 continued	Review the HCAI risks and identified risk reduction measures identified on the Trust risk register ensuring that any additional risks identified through surveillance and audit are added, if required.	Judy Potter (JP)	Quarterly	
	Complete the planned programme of surveillance at Appendix 1			Refer Appendix 1
	Complete the planned programme of audit listed at Appendix 2			Refer Appendix 2
	Undertake mini root cause analysis of: • All MRSA bacteraemias, • All deaths due to C.difficile infection (recorded on Part 1 of death certificates), • All CDIs identified more than 72 hours after admission • Staph aureusbacteraemias in renal patients.	IPCT/Divisional Leads		
	Ensure that action plans are achieved and reported back to Directorate Governance groups and IPCC.	Divisional Leads Report summary of key issues to ICC quarterly	August 2011 Oct 2011 Jan 2012 April 2012	
	Undertake weekly review of *C.difficile*cases in the RD&E, highlighting common themes with feedback to clinical teams	Ray Sheridan/Alaric Colville (AC)	Weekly Report summary to ICC	
	Implement care bundles and monitoring of same as listed at Appendix 3: In particular improve compliance with PVC bundle through the roll out of insertion/VIP scoring stickers as piloted last year	JP	Sept 2011	

Code of Practice Criteria	Programme of work 2011-12	By whom (lead)	By when	Progress/Outcome
2. Provide and maintain a clean and appropriate environment in managed premises which facilitates the prevention and control of infections.	Monthly meetings between Hotel Services and Infection Control Team to review cleaning issues	JP/Danny Marks	Monthly	
	Ensure that there is infection control input to environmental monitoring systems and implementation of new national standards for cleanliness a)Cleanliness Standards management audits b)PEAT assessments	IPCT	 Quarterly Annually	
	Provide specialist input to PEAG, Waste Management Committee, Deep cleaning programme meetings.	IPCT	According to frequency of meetings	
	Provide continued infection control input to implement and evaluate pilots of Modern Housekeeper role as part of Ward Cleaning and Hospitality Project	IPCT	August	
	Provide expert advice to all service developments to ensure infection risks are considered and good infection control facilities/practices built into the development. In particular, ensure that infection control is considered in the built environment through involvement of infection control expertise to capital projects from concept stages to commissioning.	IPCT	According to project plans	
	Provide infection control/microbiology input to review of Legionella control measures through attendance at Legionella Control Team meetings	JP/AC	Twice annually	
	Audit compliance with patient equipment cleaning policy, including commode cleaning.	Lead Nurses /Matrons	As part of NQAT programme	

Code of Practice Criteria	Programme of work 2011-12	By whom (lead)	By when	Progress/Outcome
Criteria 2 continued	Trust Decontamination lead, will ensure that the Decontamination Committee meets and works in accordance with its terms of reference and reports to the Infection Control Committee	AC	Quarterly reports to the ICC	
	Work with the Medical and Critical Care Directorates to ensure that endoscopy decontamination processes and facilities comply with essential quality requirements and a plan is in place for progression to best practice.	AC	Sept 2011	Interim improvement solution in place at Tiverton.
3. Provide suitable accurate information on infections to service users and visitors	Ensure that DIPC Annual Report is posted on RD&E website following presentation to the Board.	Janet Oatley (JO)	June 2011	
	Make new and revised policies available on the Trust website	JO	Within month of approval	
	Review visitor information on Trust website and update if necessary	JP	June 2011	
	Work with PALs, Complaints, Legal Dept, Comms Dept and FOI officer to provide timely, accurate and comprehensible information to press enquiries, FOI requests and patient concerns/complaints and report common themes to ICC.	JP	As required	

Code of Practice Criteria	Programme of work 2011-12	By whom (lead)	By when	Progress/Outcome
4. Provide suitable accurate information on infections to any person concerned with providing further support or nursing/medical care in a timely fashion	Implement infection control alert on D-doc It system for MRSA and C.difficile	JP	Ongoing	
	Ensure that all discharge summaries are revised to include field for infection control issues to be communicated	JP/Paul Bowden	May 2011	
	Roll out redesigned isolation room door signs across Trust including training	Service development team	September 2011	
5. Ensure that people who have or develop an infection are identified promptly and receive the appropriate treatment and care to reduce risk of passing on infection to other people	Develop and implement PGD for topical MRSA decolonisation	Hazel Parker	September 2011	To be carried forward to 2012-13
	Continue to work with IT to ensure that changes to infection control alert code on PAS do not result in failure to recognise the alert by staff who check this field.	JO	July 2011	Completed to satisfaction of IPCT
	Determine and then pilot alternative methods of screening surgical patients who do not require pre op assessment clinic attendance	Hayley Peters	Sept 2011	To be carried forward to 2012-13
	Continue to improve compliance with MRSA screening of emergency admissions aiming for 90% compliance (compliance rate of 90% allows for patients refusing, death following admission but prior to screening, end of life patients)	Matrons	July 2011	Compliance remains below 90% but is improving and is higher than national screening rates..
6. Ensure that all staff employed to provide care in all settings are fully involved in the process of preventing and controlling infections	Review draft Control of Contactors Policy to ensure that infection control considerations are explicit including the need for 'permission to work' in patient areas.	Tony Harrison	May 2011	

Code of Practice Criteria	Programme of work 2011-12	By whom (lead)	By when	Progress/Outcome
	Continue with Year 5 of '*Cleanyourhands*' campaign which includes: a) Observational audits of compliance b) Feedback to clinical areas on compliance	Link Nurses JP	Monthly Monthly via W2B reports	85% minimum standard being achieved in Trust average.
	c) Communicate expectations to senior nursing, medical and allied health professionals regarding management of poor compliance	Director of Nursing and Medical Director	November 2011	Letter sent from Medical and Nursing Directors.
	ReferCriteria 1 - review of Infection Control Committee TORs to enhance professional group representation and responsibility.			
7. Provide or secure adequate isolation facilities	Links to Criteria 2, regarding new build/service development,			
	Installation of an additional magnehelic gauge to monitor negative pressure ventilation in a second isolation room on Torridge.	AC	Sept 2011	Funding agreed. Work to be completed early 2012-13
8. Secure adequate access to laboratory support	Ensure that standard operating procedures are up to date.	JK	June 2011	
	Plan provision of extended opportunities for Norovirus testing over winter months, agree with IPCT and be ready to implement any time after 1st October	JK	Sept 2011	
8. Have and adhere to appropriate policies and protocols for the prevention and control of infection	Review and update where necessary the policies/guidance ;listed in policy review programme at Appendix 4.	ICT	Refer Appendix 4	Refer Appendix 4

Code of Practice Criteria	Programme of work 2011-12	By whom (lead)	By when	Progress/Outcome
10. Ensure, so far as is reasonably practicable, that care workers are free of and are protected from exposure to infections that can be caught at work and that all staff are suitably educated in the prevention and control of infection associated with health and social care.	Work with Occupational Health Advisors to plan an effective delivery programme for flu immunisation	Directorate Lead Nurses	Oct 2011	Peer immunisation system implemented.
	Deliver essential induction and update training as per training needs analysis	IPCT	Ongoing	New induction programme working well. E-learning programmes available via IaN.
	Produce hand hygiene DVD for corporate Induction Day 1	JP	April 2011	
	Develop Corporate induction Day 2 content to meet needs of clinical staff	BS/CK	April 2011	
	Deliver infection control and invasive procedures training for medical staff	AC	Each new intake of junior doctors	
	Deliver at least one link nurse training course	IPCT	Dec 2011	
	Provide quarterly link nurse updates	IPCT	Quarterly	
	Work with Vascular Access Team and Learning and Development Service to deliver workshops and updates on CVC management.	IPCT	As required	
	Provide other adhoc training as required/need identified.	IPCT	As required	All requests met.

Surveillance programme 2011-12

Type of Surveillance	Lead	When?	Progress/outcome
Continuous mandatory enhanced surveillance: o MRSA bacteraemia o MSSA bacteraemia	IPCT	Reported Monthly to HPA	1 Trust attributed bacteramia YTD.
Continuous mandatory surveillance for VRE bacteraemias	IPCT	Reported Monthly to HPA	Reports made - low numbers
Continuous mandatory enhanced surveillance for E.colibacteraemias	IPCT	Reported Monthly to HPA	Commenced in June and involves a significant amount of additional work for the IPCT.
Continuous mandatory enhanced surveillance of *C.difficile*in the over 2yr olds	IPCT	Reported Monthly to HPA	National target breached due to reporting algorithm adopted– new DH/HPA testing and reporting guidance for 2012-13 received and should result in RD&E reporting 60% fewer cases.
Continuous surveillance of spinal surgical site infection through participation in the national voluntary surveillance scheme.	Catharine Pym (CP)	Reported quarterly	SSI rates below the national benchmark.
Continuous surveillance of hip and knee replacement surgical site infection through participation in the national mandatory surveillance scheme	IPCT	Reported Quarterly	Knee team engaged in improvement work. Hip SSI rate continues to be below the national benchmark.
In house, continuous all organism bacteraemia surveillance identifying risk factors, sources and line associated bacteraemia rates.	IPCT	Reported Quarterly	
3 months surveillance of SSI following total abdominal hysterectomy as a follow up to previous surveillance and outcome measure following improvement programme	IPCT	April - June 2011	
3 month surveillance of C-section surgical site infection as a follow up to previous surveillance and outcome measure following improvement programme	IPCT and Liz Trevelyan	April- June 2011	
~~6~~ 3 months surveillance of SSI following breast surgery		July - ~~Dec~~ Sept 2011	Agreement received to reduce to one 3month module in light of European prevalence study participation. Plan to undertake a further module in Jan-March quarter has been achieved.
European wide point prevalence survey of HCAI and antimicrobial use	Catharine Pym and Hazel Parker	Sept/Oct 2011	Awaiting full report to be able to make comparisons with other organisations

Point prevalence survey of catheter associated urinary tract infection	IPCT	Dec 2011	Completed as part of the Euro point prevalence survey remains low (1 CAUTI identified as part of PPS)
Continuous alert organism surveillance with run chart feedback on MRSA and C.difficile to: - Wards and directorates	IPCT	Monthly as part of W2B reports	

Appendix 2

Audit Programme 2011-12

In addition to the environmental monitoring undertaken in conjunction with Housekeeping Services, the following clinical practice audits will be completed to measure compliance with relevant policies

Audit	Lead	When?	Progress/outcome
Hand hygiene	Matrons	Monthly	Overall Trust compliance at or above 85%
Central line care	Vicky Shawyer	~~June 2011~~ Sept 2011	
Phlebitis associated with peripheral cannula insertion	Vicky Shawyer	~~June 2011~~ Sept 2011	
Use of stool charts - re audit	CK	~~June 2011~~ Sept 2011	
Provision of information to patients with C.difficile - re audit	BS	~~Sept 2011~~ ~~Nov 2011~~	
PVC insertion in radiology - re-audit	CK	July 2011	
Sharps disposal	JP	~~Sept 2011~~ Dec 2011	
Use of isolation door signs	CK	Sept 2011	
Aseptic technique - reaudit	DM-P	Nov 2011	
Infection control aspects of uniform policy	CK	Sept 2011	
MRSA screening - emergency admissions	Richard Blackwell	Monthly	90% Trustwide compliance not achieved, although several individual areas have achieved this level of compliance
Patient Placement and Side room facilities	CP	Mar 2012	
MRSA decolonisation (following implementation of PGD)	CP	Mar 2012	PGD not yet developed - carried forward to 2012-13

Care bundle programme 2011-12

Care bundle/high impact intervention	Lead	When?	Progress/outcome
Peripheral cannula care	Judy Potter	Report monthly as part of Patient Safety programme and CQUIN scheme	
Dialysis CVCs	Louise Oakaby	Report quarterly to Directorate Governance Group	
Ventilator Associated Pneumonia	Fred Cock	Report monthly as part of Patient Safety programme	
Hickman lines in Cancer Patients	Tina Grose	Report quarterly to Directorate Governance Group	
Reducing surgical site infection	Marina Quantick	Monthly as part of Patient Safety programme	
Implement urinary catheterisation insertion care bundle across acute adult wards of Trust	JP	By September 2011	

Appendix 4

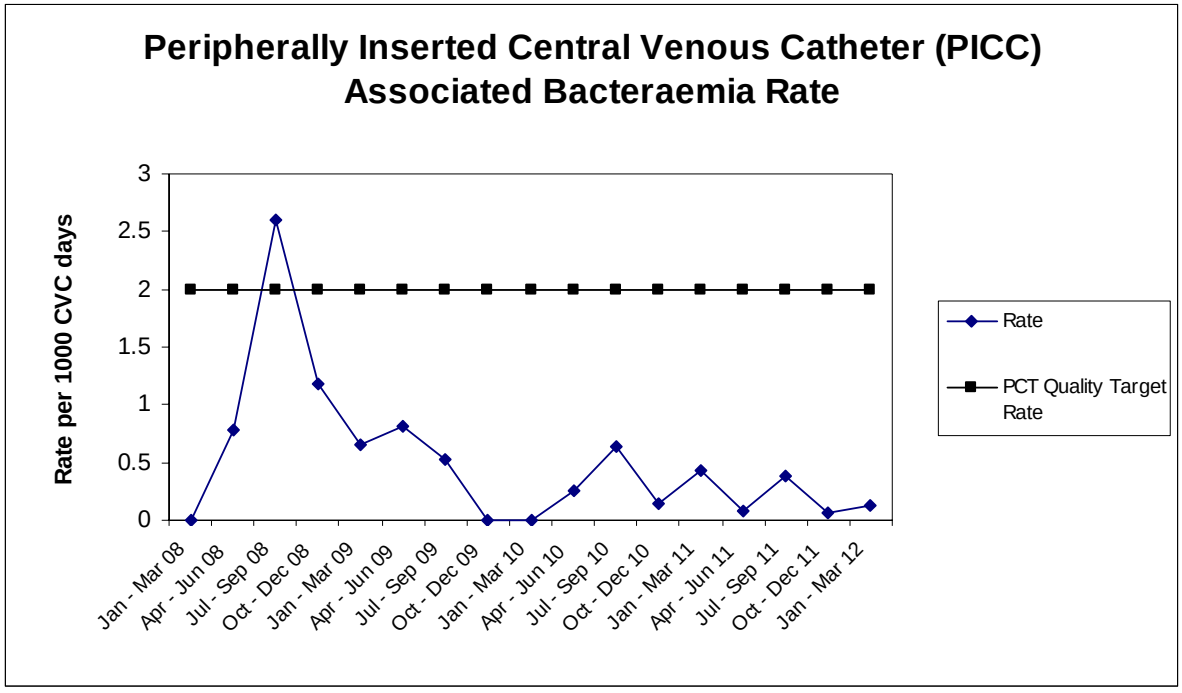
Policies for Review 2011-12

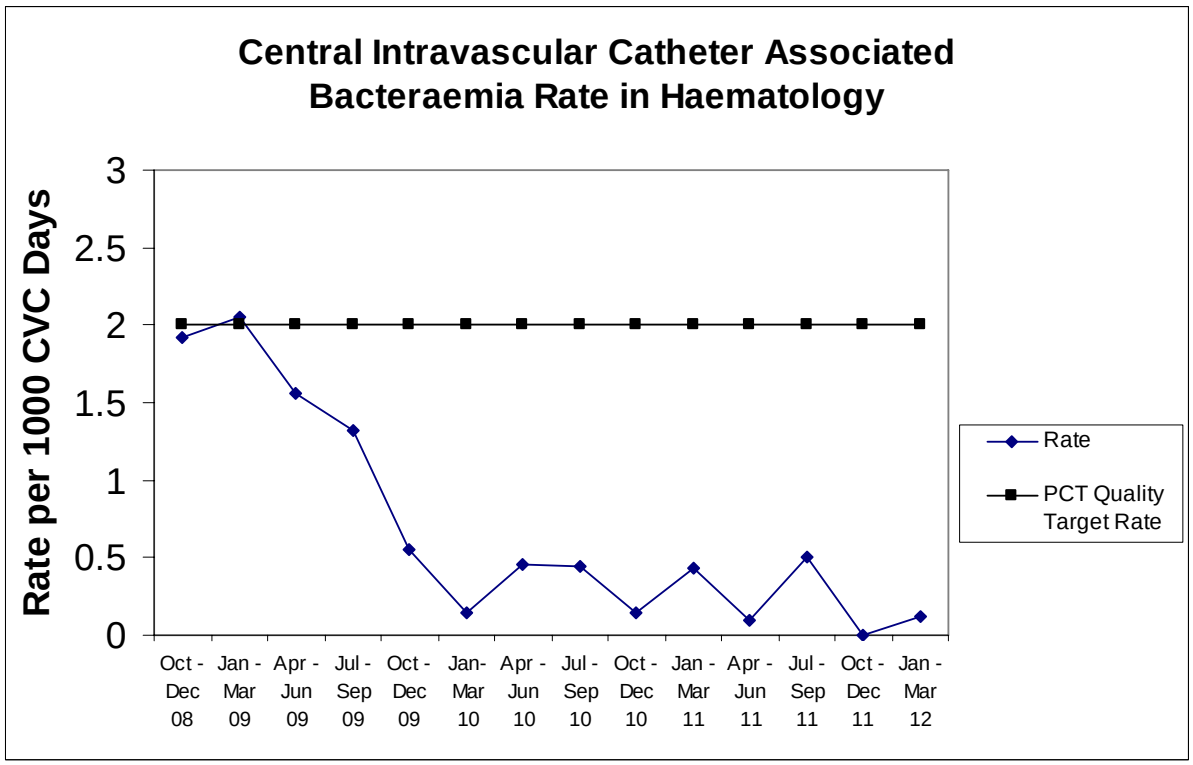
Policy/Guidance	By when	By Whom	Outcome
Guidance on Group A Streptococcal Infections	May 11	CA	
Standard Infection Control Precautions	Aug 11	JP	
Viral Gastroenteritis Guidance	Aug 11	JP	
Policy for Surveillance & Reporting of Infectious Disease, Healthcare Associated Infection & Antibiotic Resistant Organisms	Aug 11	JP	
Measles Information & Guidance	Aug 11	EP	
Protective Isolation Policy	Aug 11	JP	
Scabies Guidance	Aug 11	Suzy Cole	
Vancomycin/Glycopeptide Resistant Enterococci (VRE/GRE) Guidelines	Aug 11	AC	
Antimicrobial Policy	Sept 11	HP	
Clostridium difficile Infection Policy	Nov 11	JP	
Cystic Fibrosis - Infection control guidelines	Nov 11	CK	
Hand Hygiene Policy	Nov 11	JP	
Herpes Simplex Information & Guidance	Nov 11	Suzy Cole	
Source isolation Policy	Nov 11	JP	
Staff Health and Illness Relating to Infection Control	Nov 11	SC	
Terminal Cleaning Coordination	Nov 11	BS	
Varicella Zoster (VZ) Virus, Chickenpox & Shingles Guidance	Nov 11	MB	
Viral Haemorrhagic Fever (Lassa, Marburg, Ebola & Crimean/Congo Virus)	Nov 11	AC	
Ward Closure due to a suspected or confirmed outbreak of infection	Nov 11	JP	
Cleaning Policy	~~Jan 12~~ April 12	DM	
Extended Spectrum Beta-Lactamases & Resistant AMP C Type Beta Lactamases	Feb 12	Nicky Colborne	
Legionella Control Policy	Feb 12	AC	

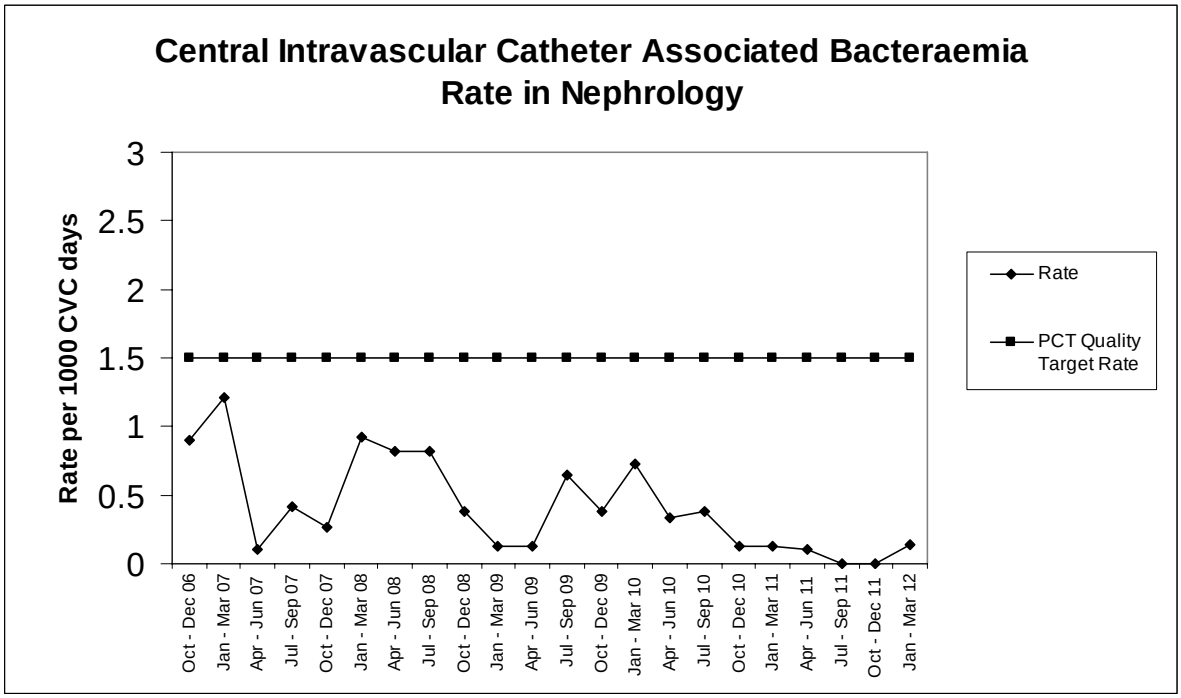
Reference

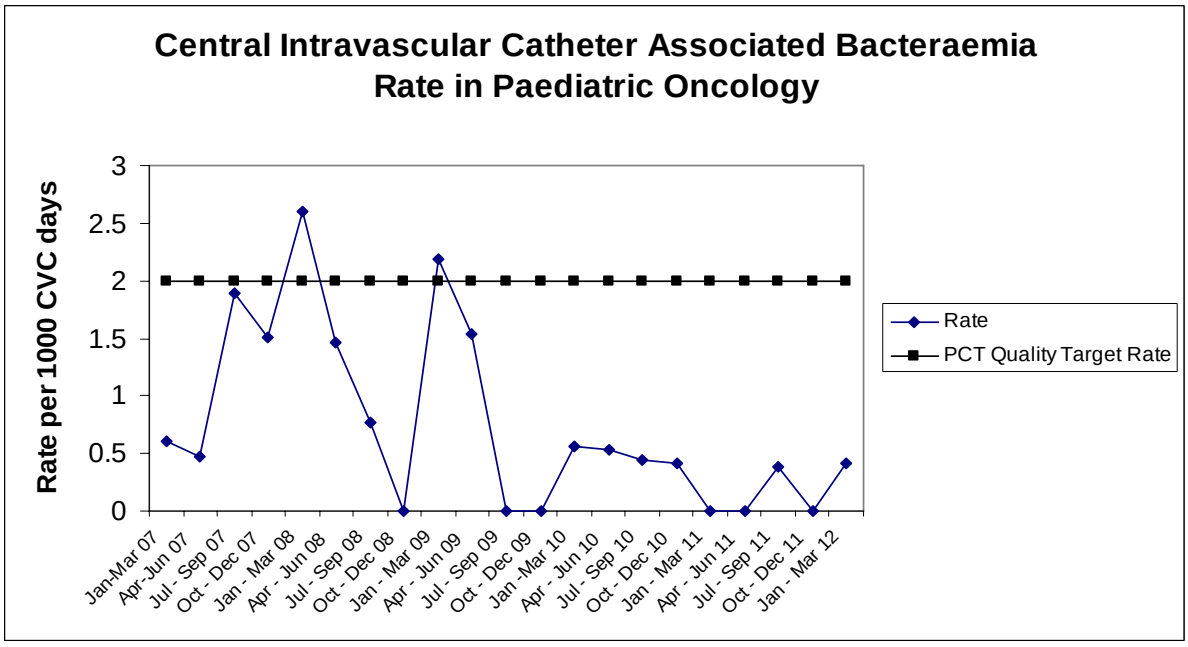
Department of Health (2010) *The Health and Social care Act 2008: Code of Practice on the prevention and control of infection and related guidance.* http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_123923.pdf

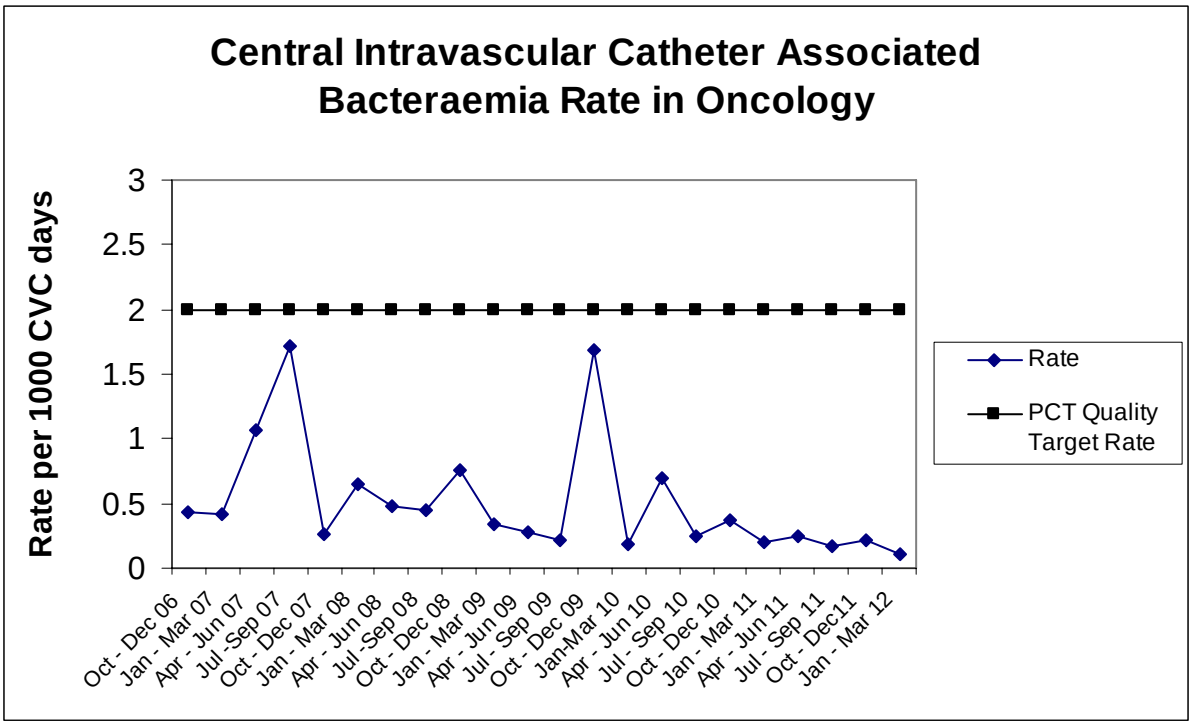
CENTRAL VASCULAR DEVICES ASSOCIATED BACTERAEMIAS

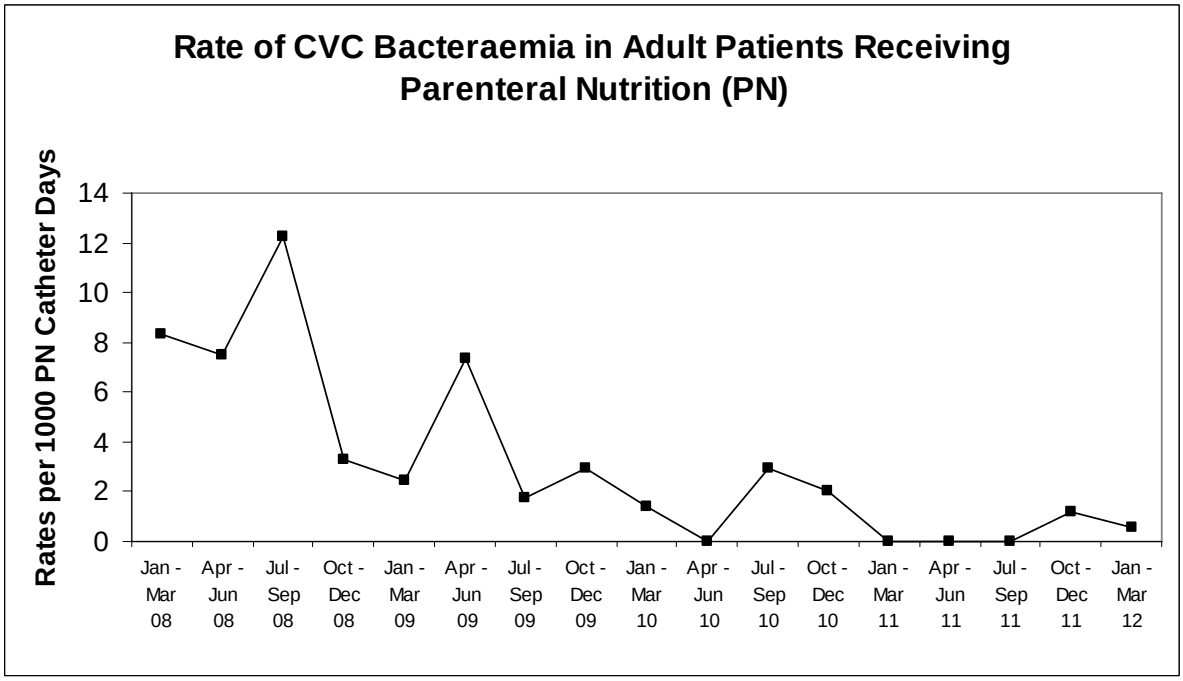





Central Intravascular Catheter Associated Bacteraemia Rate in Nephrology
Rate per 1000 CVC days
3
2.5
2
1.5
1
0.5
0
Oct - Dec 06
Jan - Mar 07
Apr - Jun 07
Jul - Sep 07
Oct - Dec 07
Jan - Mar 08
Apr - Jun 08
Jul - Sep 08
Oct - Dec 08
Jan - Mar 09
Apr - Jun 09
Jul - Sep 09
Oct - Dec 09
Jan - Mar 10
Apr - Jun 10
Jul - Sep 10
Oct - Dec 10
Jan - Mar 11
Apr - Jun 11
Jul - Sep 11
Oct - Dec 11
Jan - Mar 12
Rate
PCT Quality Target Rate

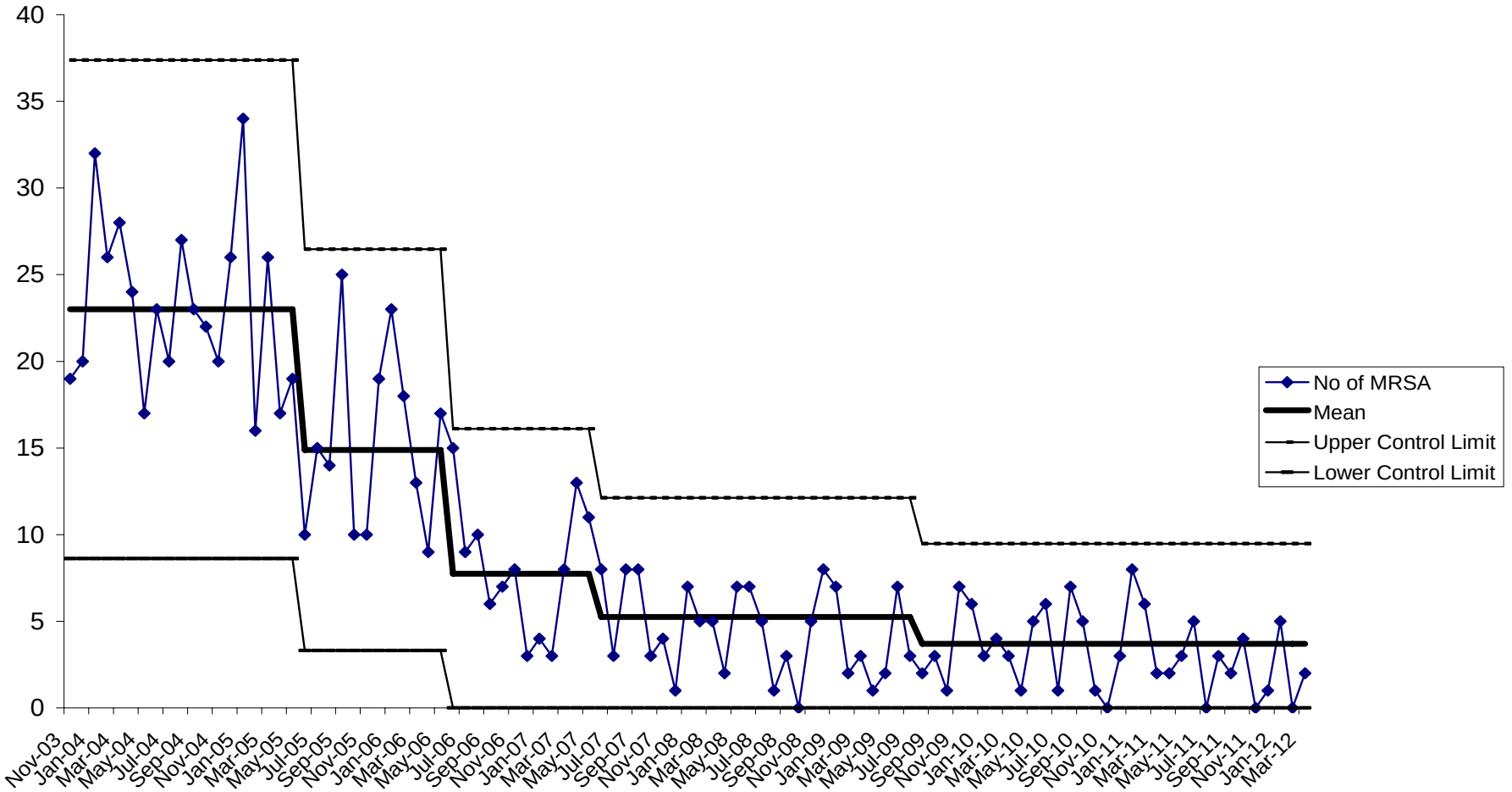

Central Intravascular Catheter Associated Bacteraemia Rate in Paediatric Oncology
Rate per 1000 CVC days
3
2.5
2
1.5
1
0.5
0
Jan-Mar 07
Apr-Jun 07
Jul - Sep 07
Oct - Dec 07
Jan - Mar 08
Apr - Jun 08
Jul - Sep 08
Oct - Dec 08
Jan - Mar 09
Apr - Jun 09
Jul - Sep 09
Oct - Dec 09
Jan -Mar 10
Apr - Jun 10
Jul - Sep 10
Oct - Dec 10
Jan - Mar 11
Apr - Jun 11
Jul - Sep 11
Oct - Dec 11
Jan - Mar 12
Rate
PCT Quality Target Rate


Central Intravascular Catheter Associated Bacteraemia Rate in Oncology
Rate per 1000 CVC days
3
2.5
2
1.5
1
0.5
0
Oct - Dec 06
Jan - Mar 07
Apr - Jun 07
Jul -Sep 07
Oct - Dec 07
Jan - Mar 08
Apr - Jun 08
Jul -Sep 08
Oct - Dec 08
Jan - Mar 09
Apr - Jun 09
Jul - Sep 09
Oct - Dec 09
Jan-Mar 10
Apr - Jun 10
Jul - Sep 10
Oct - Dec 10
Jan - Mar 11
Apr - Jun 11
Jul - Sep 11
Oct - Dec11
Jan - Mar 12
Rate
PCT Quality Target Rate


Rate of CVC Bacteraemia in Adult Patients Receiving Parenteral Nutrition (PN)
Rates per 1000 PN Catheter Days
14
12
10
8
6
4
2
0
Jan - Mar 08
Apr - Jun 08
Jul - Sep 08
Oct - Dec 08
Jan - Mar 09
Apr - Jun 09
Jul - Sep 09
Oct - Dec 09
Jan - Mar 10
Apr - Jun 10
Jul - Sep 10
Oct - Dec 10
Jan - Mar 11
Apr - Jun 11
Jul - Sep 11
Oct - Dec 11
Jan - Mar 12

ALL NEW CASES OF MRSA

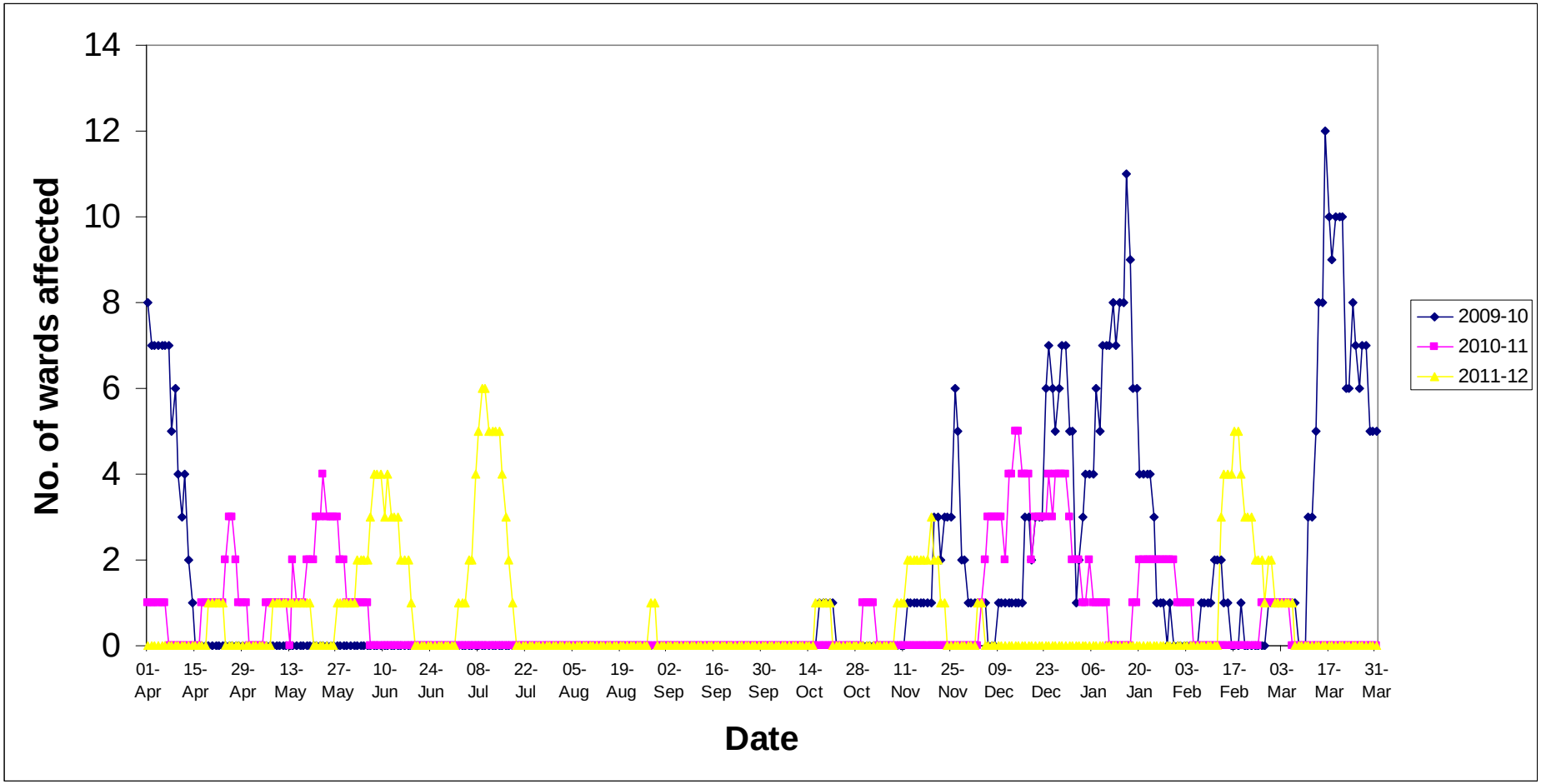
(IDENTIFIED MORE THAN 3 DAYS AFTER ADMISSION)



:

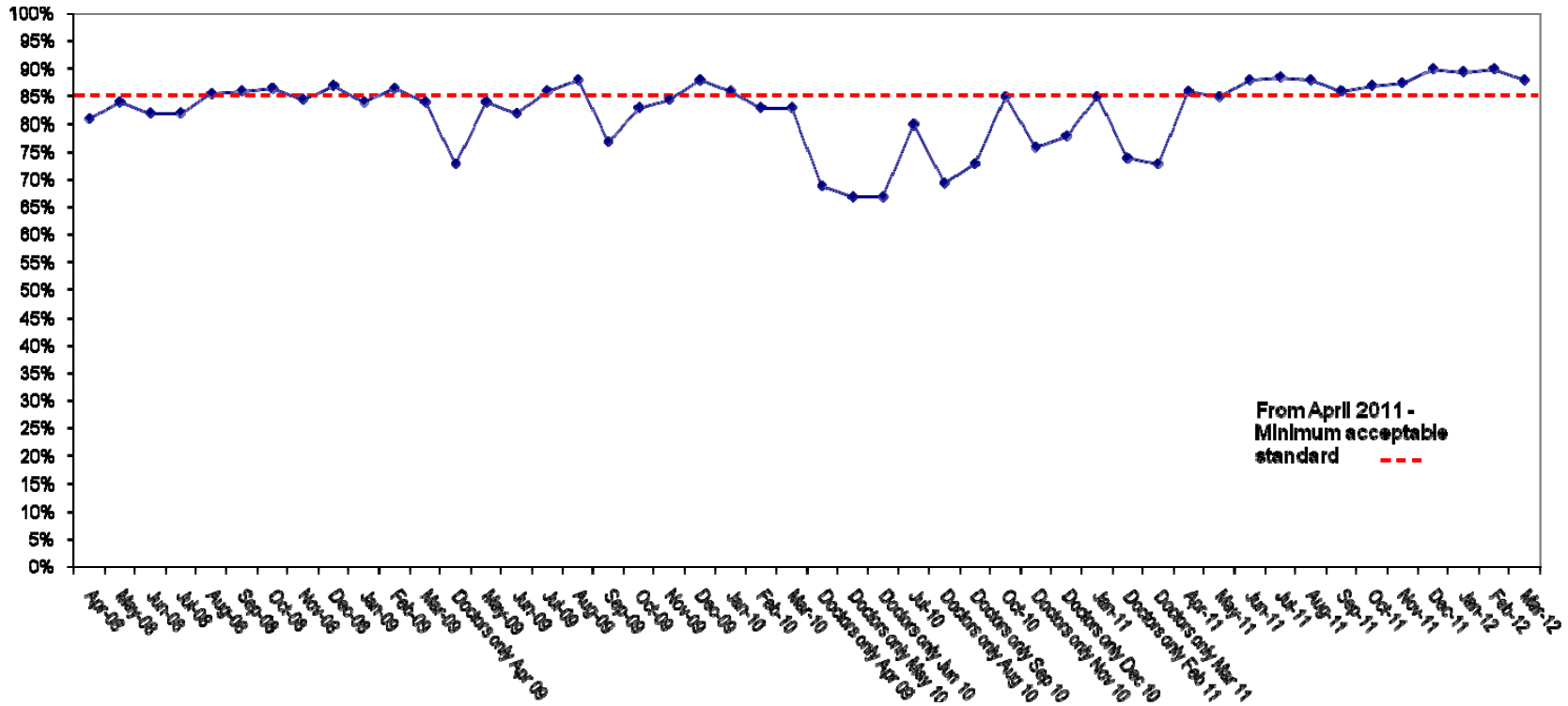
NUMBER OF WARDS CLOSED DUE TO NOROVIRUS OUTBREAKS

APRIL 2009- 2012



:

TRUST HAND HYGIENE COMPLIANCE



:

ANTIMICROBIAL STEWARDSHIP GROUP: ANNUAL REPORT
for Medicines Management Group & Infection Prevention and Control Assurance Group
(April11- March 12)

Achievements

1) **The Group continues to meet quarterly (March/June/September/December)**
2) Annual programme of work (2011-12) broadly achieved with outstanding work carried over to the coming year.
3) Programme of work for March 2012-13 agreed – format modified to mirror Department of Health guidance document "Start Smart then Focus".
4) Briefing paper *Antimicrobial strategy: current and planned antimicrobial stewardship activities incorporating a risk benefit analysis of moving to lower risk antimicrobials with regard to C. difficile infections* written in response to request from Em Wilkinson-Brice. In conjunction with this paper a gap analysis was performed to demonstrate the Trusts current level of compliance. A formal risk assessment was also undertaken.
5) Numerous policies/guidelines ratified by the Group as outlined below:
    - Adult quick antibiotic reference card updated and distributed (Aug 2011)
    - Paediatric antibiotic quick reference card updated and distributed (Aug 2011)
    - Out-of-hospital Cellulitis Pathway (new): agreed & implemented in MTU from April 2011
    - Intra-vesical Gentamicin (new)
    - Once daily intravenous (IV) gentamicin protocol for adults (significant update)
    - Antimicrobial formulary/restricted list (new)
    - Antimicrobial guidelines for open fractures of the lower limb (new)
    - Joint formulary antimicrobial chapter updated
    - Antimicrobial policy (updated)
    - Antimicrobial website (new). This holds all Trust antimicrobial guidelines ratified by the ASG and is hosted on the external part of the RD&E website (with a link from IaN).
    - Terms of Reference (updated)
6) Continuous audit and surveillance including:
    - Monthly quality of antimicrobial prescribing documentation audit (ongoing)
    - European-wide point prevalence survey of healthcare associated infections and antibiotic prescribing (Oct 2011)
    - Annual regional point prevalence study (Feb 2012)
    - Bi-weekly Antimicrobial Review Rounds (on going)
    - *C. difficile*infectionward rounds and RCAs (on going)
    - Antimicrobial de-escalation ward rounds piloted – clear benefits demonstrated
    - Three antimicrobial CQUINs indicators have been agreed for the coming year including the inclusion of a duration and an indication on drug chart when antimicrobials are

prescribed, and use of non-guideline/restricted antibiotics (all antimicrobial use must be appropriate and rationale documented in the medical notes).

7) Education:
   - Induction Training Tracker presentation on prudent prescribing for new doctors updated (Aug 11)
   - E-learning module on prudent antimicrobial prescribing has been developed for Doctors & Pharmacists – this will be added to ESR and will become part of the mandatory annual update training
   - The Antimicrobial Management Team has contributed to teaching for several professional groups (including prudent prescribing campaign on European Antibiotic Awareness Day – Nov 18th 2011)

Planned activity

- Continue with antimicrobial stewardship activities as outlined in the annual programme of work.
- Modifications to antimicrobial section of the current drug chart have been recommended to encourage compliance with Department of Health antibiotic prescribing recommendations (and CQUIN indicators).
- Quality of antimicrobial prescribing audit data to be reviewed at directorate governance and at quarterly reviews – where repeated non-compliance with guidelines is identified an exception report with be required.
- Work with Datix web team to achieve timely and relevant reports on antimicrobial incidents.
- On-going update & development of antimicrobial website.
- Role-outmandatory annual e-learning package on prudent antimicrobial prescribing for all prescribers and pharmacists within the Trust (recorded on ESR).
- Review existing antimicrobial guidelines as indicated and work with relevant specialities to develop new diagnostic and treatment guidelines as appropriate.
- Develop antimicrobial stewardship template for the directorates including diagnostic and treatment guideline development & audit – progress to be feedback to the Antimicrobial Stewardship Group.
- Audit recently introduced antimicrobial guidelines and other guidelines as necessary.
- Education for doctors, non-medical prescribers, pharmacists, nurses, & medical students.

ANTIMICROBIAL STEWARDSHIP GROUP: ANNUAL REPORT
for Medicines Management Group & Infection Prevention and Control Assurance Group
(April11- March 12)

Difficulties:

1) DH Advisory Committee on Antimicrobial Resistance and Healthcare Associated Infection Antimicrobial Stewardship (AS) produced released guidance on AS in acute Trusts: Antimicrobial Stewardship: "Start smart – then focus". The DH recommends that organisations use this guidance as part of their quality improvement strategy for patient safety, enhancing stewardship in antibiotic usage, and ensuring optimal patient care and safety by reducing inappropriate prescribing. Compliance with this guidance and auditing can be used as evidence of compliance with section 9 of the Code of Practice on the prevention and control of infections. It should be noted that achievement of compliance with the recommendations set out in the guidance is contingent upon additional resources being made available, as outlined below. If additional resources are not made available it is likely there will be significant difficulties in achieving compliance with many aspects of the recommendations.
2) Monthly quality of antimicrobial prescribing documentation audit is ongoing however there have been issues around data dissemination and lines of accountability. Senior nursing and clinician buy-in is pivotal in improving antimicrobial prescribing, but has not been forthcoming in all areas.
3) The role of the Antimicrobial champions is not clearly defined – as yet the role has not been formally recognised in job plans. Recognition may ensure engagement.
4) Ward Focused Antimicrobial Team is stretched and cannot support daily antimicrobial de-escalation ward rounds (desirable as clear benefits have been demonstrated).
5) Prudent antimicrobial prescribing e-learning package has only recently been migrated onto ESR & there is concern that compliance with training may be hampered by user difficulties accessing the module (as with other training on ESR).

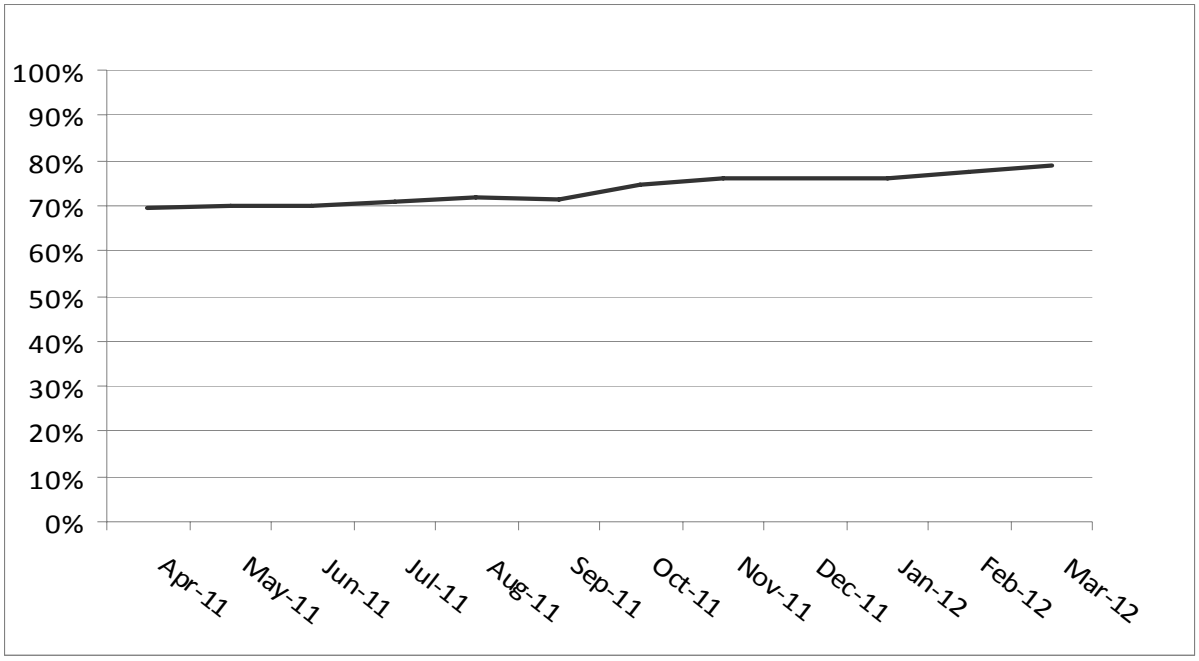
What we need help with:

1) Additional Medical Microbiologist (8PAs) to give the Microbiology Department the capacity to provide greatly enhance ward antimicrobial support including De-escalation and Surveillance Rounds and antimicrobial education in situ for medical staff – especially at the foundation and core trainee levels.
2) An additional pharmacist to support the Antimicrobial Pharmacist in Antimicrobial Surveillance Ward Rounds and Antimicrobial De-escalation Rounds.
3) Administrative support for the Antimicrobial Pharmacist to process data and produce reports for directorates and the Board on the progress of antimicrobial stewardship targets, including CQUIN targets and antimicrobial consumption data.

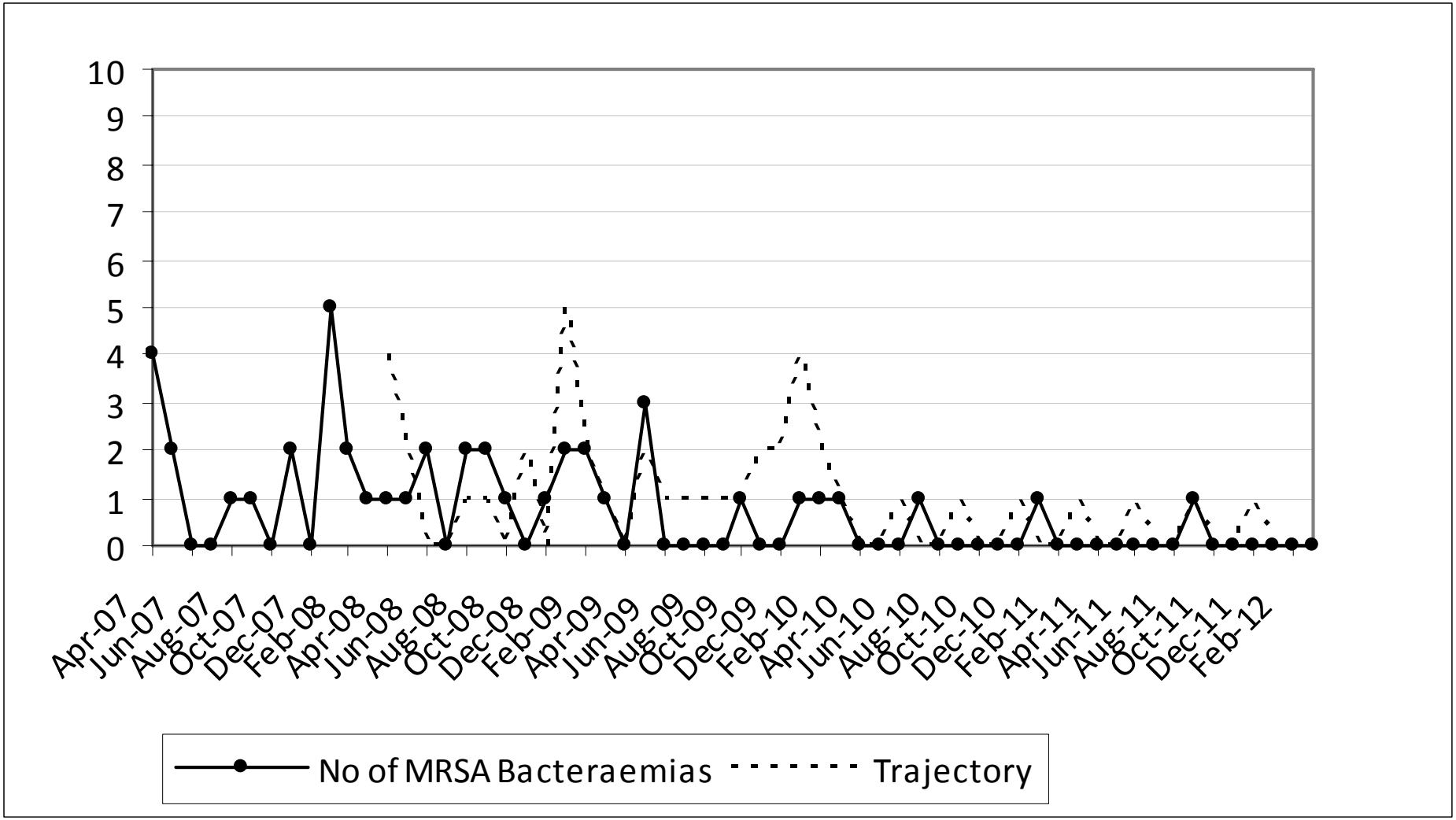
4) Funding for additional laboratory testing - extension of availability and range of microbiology diagnostic tests to allow targeted antibiotic therapy, usually narrow spectrum monotherapy, which may maximise clinical outcome and reduce risk of *Clostridium Difficile* Infection.
5) Administrative support for the laboratory to process antimicrobial resistance data and produce reports to inform empirical antimicrobial prescribing.
6) Expedite delivery of electronic prescribing in order to enhance antimicrobial stewardship on a number of levels (e.g. compulsory stop/review dates, compulsory indications, flag up patients on high risk broad spectrum antibiotics for review).
7) Designated antimicrobial stewardship budget for training and education, and dissemination of antimicrobial guidelines e.g. quick reference cards.
8) Formal recognition of the role of individual directorates in antimicrobial stewardship, including participation in an annual programme of activity, co-ordinated by directorate Antibiotic Champions (job plan recognition), to include overseeing CQUIN targets, audit of compliance with antimicrobial prescribing standards and to address development of clinical diagnostic guidelines.
9) Funding for the Lead Antimicrobial Pharmacist to complete the Infection Management for Pharmacists MSc at Imperial

APPENDIX I

TRUSTWIDE TRAINING COMPLIANCE RATES



NUMBER OF MRSA BACTERAEMIA AND TRAJECTORY



NUMBER OF CLOSTRIDIUM DIFFICILE INFECTIONS AND TRAJECTORY