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The key achievements for the year April 2014-March 2015 were as follows:

- Zero Trust-apportioned MRSA bacteraemias
- New cases of MRSA – only 15 cases (55% reduction from previous year)
- *Clostridium difficile* - only 5 ‘avoidable’ hospital-apportioned cases against an objective of fewer than 30 cases
- Norovirus – only two ward closure with a mean ward-closure time of 7.0 days
- Hand Hygiene compliance – compliance of 95%
- Excellent compliance with Saving Lives High Impact Interventions
- Full compliance with the Code of Practice and the Care Quality Commission (CQC) NHS Provider Compliance Assessment Outcome 8 (Cleanliness and Infection Control).

Executive summary

Over recent years, the Infection Prevention and Control Team (IPCT) at Plymouth Hospitals NHS Trust (PHNT) has significantly modernised the service it provides in order to meet the challenging agenda being set at both local and national levels. This has led to improvements in clinical practice, with concomitant reductions in healthcare-associated infections. The period 2014-15 was the first year that the Trust has been able to report zero hospital-apportioned Meticillin-Resistant *Staphylococcus aureus* (MRSA) bacteraemias. In addition, there was a 55% fall in the number of all new cases of MRSA compared to the previous 12-month period. The Trust has consistently had one of the lowest *Clostridium difficile* rates in the country and last year reported only 5 ‘avoidable’ hospital-apportioned cases against an objective of fewer than 30 cases. The management of outbreaks of vomiting and diarrhoea in clinical areas continues to be of a very high standard and despite considerable norovirus activity in the community and neighbouring hospitals, there were only two ward closure with a ward-closure time of 7.0 days. The ‘Five Moments’ hand hygiene awareness campaign continued across the Trust and hand hygiene compliance was 95%. Considerable work has gone into meeting compliance with national guidelines and standards, including the Code of Practice for the Prevention and Control of Healthcare Associated Infections, the CQC NHS Provider Compliance Assessment Outcome 8 (Cleanliness and Infection Control) and Clinical Negligence Scheme for Trusts (CNST). The Trust can be justifiably proud of its achievements in reducing infection rates and improving clinical practice. Considerable Trust-wide effort is required to sustain these improvements and maintain a zero tolerance approach to preventable healthcare-associated infections.
Progress towards achieving Key Targets, April 2014 – March 2015

The Key Objectives for the IPCT for April 2014 – March 2015 are:

- To reduce MRSA bacteraemias in line with agreed local and national targets. Between April 2014 and March 2015, there were 0 MRSA bacteraemias (Target: no cases for the year).

- To reduce *Clostridium difficile* in line with agreed local and national targets. Between April 2014 and March 2015, 35 cases of hospital-apportioned *Clostridium difficile* were recorded, of which 5 were considered avoidable and 30 non-avoidable (the designation of preventable and non-preventable is subject to agreement by the CCG).

- To achieve a 10% reduction in all cases of MRSA. Between April 2014 and March 2015, there were 15 new cases of MRSA compared to 33 in the same period last year (a reduction of 55%).

- Comply with current and new national mandatory surveillance requirements. Compliant.

- Support and assist in the implementation of screening high-risk patients for meticillin-resistant and susceptible *S. aureus* (MRSA and MSSA). Compliant.

- To reduce other infections according to national and local priorities. Complete.

- To continue to perform surgical site surveillance, including post-discharge surveillance, on all major procedures. Complete.

- To maintain the mean ward closure time due to epidemic gastroenteritis below 7 days. Between April 2014 and March 2015, there were two ward closures due to norovirus with a mean ward closure time of 7 days.

- For all wards to perform at least a monthly Hand Hygiene audit with compliance of at least 95%. Between April 2014 and March 2015, the overall Trust hand hygiene compliance was 95%.

- For all wards to perform at least monthly Saving Lives High Impact Intervention audits for in use medical devices and score 100%. Data available on Balanced Scorecard.

- For all wards to achieve compliance with Infection Prevention and Control (IPC) audits. Complete.

- For the availability of alcohol hand gel in clinical areas to be maintained as close to 100% as possible. Between April 2014 and March 2015, the availability of alcohol hand gel in clinical areas was 98%.
• To continue to develop and update the IPC website. **Completed.**

• To comply with national legislation and guidance including the Health and Social Care Act (Code of Practice for the NHS on the prevention and control of healthcare associated infections and related guidance), NHS Provider Compliance Assessment Outcome 8 (Cleanliness and Infection Control), NHS Litigation Authority, Winning Ways and national guidance on the management of MRSA and *C. difficile*. **Compliance reviewed and evidence folders updated.**
Introduction

This Annual Report details the activities undertaken by the Infection Prevention and Control Team (IPCT) during the period 1st April 2014 to 31st March 2015 and should be read in conjunction with the Infection Control Annual Programme of Work and quarterly reviews for the same period. The report has been compiled according to guidelines issued by the Department of Health (http://www.dh.gov.uk/assetRoot/04/10/25/52/04102552.pdf) and will be presented to the Trust Board in May 2015.

The aim of the IPCT, through the compilation and achievement of a robust Annual Programme of Work, is to devise, implement and evaluate strategies to reduce hospital-associated infection by working in collaboration with each Directorate. The IPCT performs a number of activities that minimise the risk of infection to patients, staff and visitors, including:

1. Providing advice on all aspects of infection control
2. Managing outbreaks of infection
3. Conducting programmes of education
4. Undertaking audit and targeted surveillance
5. Formulating policies and procedures
6. Interpreting and implementing national guidance at local level
7. Involvement with refurbishment, new building and equipment projects.

The IPCT now has a far more proactive approach, with a greater emphasis on clinical work and the direct management of patients with hospital-associated infections. The enhanced presence of the IPCT in the clinical environment has greatly increased their accessibility for guidance and advice and has improved the management of hospital-associated infection across the Trust.

Reporting line to the Trust Board

The IPCT meets on a daily basis to discuss current infection control issues and formulate the day-to-day working programme for the Team. A formal weekly meeting allows review of these issues and monitors progress of control processes, as well as progress against objectives. The Infection Control Committee (ICC) meets quarterly, is chaired by the DIPC, and reports via the Safety and Quality Board to the Trust Board. There is representation on the ICC from members of each clinical Service Lines and senior management, as well as external groups such as the Public Health England, community organisations, as well as patient and public involvement groups. External links are well maintained with the Consultants for Communicable Disease Control for Devon and Cornwall, who are also members of the ICC. The IPCT collaborates extensively with other Trusts across the South-West Peninsula and participate in the activities of local and national groups (e.g. Healthcare Infection Society and Infection Prevention Society). The lead Consultant Medical Microbiologist for antimicrobial stewardship is a member of the Drugs and Therapeutics Committee.
Significant infection control issues are also dealt with at the monthly Infection Prevention Subcommittee, which is chaired by the Chief Executive and reports via the Safety and Quality Board to the Trust Board. All MRSA bacteraemias, cases of *C. difficile* and other serious Healthcare-Associated Infection (HCAI), as well as recent audit results are reviewed at this meeting. The results of Root Cause Analyses (RCAs) and Post-Infection Reviews (PIRs) are reported to the Subcommittee and appropriate recommendations made. Action Plans arising from RCAs are reviewed at subsequent meetings. Matrons report on infection control to the Infection Prevention Subcommittee on a quarterly basis.

The Board member with responsibility for infection control is the Director of Nursing, Greg Dix, and the non-executive member is Mike Williams. The Department of Health document ‘Winning Ways’ states that the DIPC will ‘report directly to the Chief Executive and the Board and not through any officer’. The DIPC meets regularly with the Chief Executive and reports directly to the Trust Board as required.

Trust-wide reporting of HCAIs is through a balanced scorecard of reporting that is produced and circulated to all clinical areas, Service Lines and the Trust Board. This includes surveillance and outbreak data, audit results, compliance with policy, and uptake of Infection Prevention and Control training. The scorecard is produced on a monthly basis for Service Lines and quarterly for Departments, and is incorporated into the Trust Board and Service Line performance management process.

The IPCT is represented on the following committees:

a) *Clostridium difficile* Vigilance Meeting  
b) Water Action Group  
c) Ventilation Systems Group  
d) Decontamination Action Group  
e) Patient-led Assessment of the Care Environment Team  
f) Cleanliness Assurance Group  
g) Serco/Facilities Operational Group  
h) Nursing and Midwifery Board.

### Infection control arrangements

#### 1. Budget and staffing

The IPCT provides an infection control service for PHNT (~1000 beds) and last year had annual pay and non-pay budgets of £494,197 and £33,144 respectively. Income of £54,028 was generated through service level agreements with other local healthcare providers (approximately 500 community beds).

#### 2. Team development

The team of Registered Nurse, Health Care Assistants and Administration & Clerical staff are managed by Claire Haill, Nurse Consultant for Infection Prevention and Control for the Trust under the direction of Dr Peter Jenks, Director of Infection Prevention and Control.
The team has seen a significant change in staff during the past year; the recruitment has been challenging and continues with a vacancy for a senior sister position. The staff who have left during the last year are: Daniel Greep, Surveillance Administrator left the trust to pursue a post with in higher education at Cheltenham; Junior Sister Sandra Marshall retired from her full time post and now works part time with Plymouth Community Trust; Vascular Nurse Specialist Susan Frost left to pursue an education post within PHNT Learning and Development team; Senior Sister, Deborah Alford took an educational post closer to her home. Newly recruited staff include Junior Sister Sharon Warne, Health Care Assistants Alicia Walton and Elaine Thursby, and Stephen Bennett as the newly developed Data Analyst role. The Data Analyst role was developed to facilitate the increased demand to use the surveillance data more timely and creatively to support the necessary reporting process, feedback to clinical teams and improve clinical practice. Natasha Tait temporarily assisted the administration team while during the recruitment process for the Data Analyst position.

The training requirements and personal development of individual team members remains a key priority. Training includes regular clinical supervision sessions to reflect and discuss the management and approach to recent clinical issues for post-registration healthcare professionals and local supervision and bespoke training has been provided for the HCA’s. All members of the Team received Individual Performance and Development Reviews last year. Over the next 12 months, personal objectives will be integrated into the Annual Programme of Work to develop ownership of Trust objectives and facilitate achievement of key outcomes.

Members of the Team are actively involved with the Infection Prevention Society (IPS) and Deborah Alford represented the team in Glasgow at the annual Infection Prevention Society conference. Jan Cox attended a study day on surgical site. Claire Haill attended the first review of the implementation of the Tool Kit for Carbapenemase–Producing Enterobacteriaceae chaired by Public Health England. The team is represented at the monthly Chief Executive briefing and have taken advantage of the Schwartz Rounds, Senior Sisters Cathy Ford and Jan Cox have been integral to the ongoing recruitment of the team and have attended Human resource training. Jan Cox provides supervision, guidance and training for the HCA’s, and Cathy Ford has taken the lead on Education for the Registered nurses. The Registered Nurses and HCA’s have their hand hygiene technique assessed and undertake a mask fit test update. The registered nurses have also been assess on the donning and doffing of the personal protective equipment and the role of the buddy during this procedure for Ebola Viral disease. This ensures the clinical team are competent in the skills they are teaching, assessing and providing instruction on.

During the year, Dr Peter Jenks was awarded a three-year Fellowship from the National Institute for Health and Care Excellence (NICE). He was a member of the Quality Standards Advisory Committee that published Quality Standard 61 on Infection Prevention and Control in April 2014. He has also been a member of a number of a HIS Working Party on the Management of Resistant Gram-negative infections which will publish guidelines in 2015.
The IPCT continued to receive requests from several other teams across the country to visit and observe our strategy, working practices and share from our experiences or share our work through networking. Teams from Western Sussex Hospitals NHS Trust, Gloucestershire Hospital NHS Foundation Trust, and St Georges Healthcare NHS Trust visited with a specific interest in our approach to the national surgical site surveillance scheme, and during the visits used the opportunity to discuss our approach to outbreak management in view of the low numbers of ward closures and the duration that the wards are closed, and also how we have achieved sustainably low rates of *C. difficile* infection.

**Surveillance**

**1. Background**

Surveillance of healthcare-associated infection can be defined as the systematic recording of infections using agreed definitions, with analysis, interpretation and dissemination of the results so that appropriate action can be taken. Surveillance is necessary to monitor trends in infection rates over time, detect outbreaks, provide information for the planning of services and allocation of resources, and to evaluate the impact of any interventions aimed at reducing infection risks. By targeting appropriate interventions, surveillance contributes significantly to reducing rates of infection and is recognised as an important contributor to good infection control practice.

In October 2000, the Department of Health announced that some aspects of surveillance would be compulsory. In April 2001, a mandatory scheme for reporting Staphylococcal bacteraemias (including MRSA) commenced and the results of that surveillance are published regularly. In an attempt to account for variations in hospital activity, absolute numbers of MRSA bacteraemias are converted into a rate using the bed availability and occupancy (KH03) annual return. From 1st September 2003, Acute Trusts have also had to report bacteraemias due to glycopeptide resistant enterococci (GRE) and since January 2004, alert organism surveillance was extended to *C. difficile*. Reporting of bacteraemias due to Meticillin-Sensitive *Staphylococcus aureus* (MSSA) was added to the scheme in January 2011 and bacteraemias due to *Escherichia coli* were reportable from 1st June 2011. The national surveillance scheme also includes orthopaedic surgical site infections and the reporting of ‘serious untoward incidents associated with infection’. The infection rates for PHNT are published in comparison with other Teaching Hospital Trusts.

**2. Mandatory surveillance reporting**

Plymouth Hospitals NHS Trust complies fully with the mandatory surveillance system for healthcare-associated infections including staphylococcal (including MRSA and MSSA), *E. coli* and GRE bacteraemias, *C. difficile* and orthopaedic surgical site infections. All ‘serious untoward incidents associated with infection’ are reported to commissioners and Public Health England. Monthly surveillance reports are circulated to all clinical areas, Service Lines and the Trust Board, and reports are also produced on a quarterly basis for Departments. The reports include surveillance and outbreak data, audit results and compliance with policy. As well as being
incorporated into the Trust Board and Service Line performance management process, they are also reviewed at the ICC and Infection Prevention Subcommittee. In addition, the IPCT also produces monthly reports that include surveillance data on new cases of MRSA, MRSA bacteraemias, all other hospital-acquired bacteraemias, *C. difficile*, gentamicin-, cefpodoxime and quinolone-resistant gram-negative infections, GRE, ESBL-producing coliforms and Carbapenemase-producing Enterobacteriaceae. From January 2012, these reports have also included cases of *Pseudomonas aeruginosa* from Augmented Care Areas.

### 3. New clinical cases of MRSA

As well as mandatory reporting of MRSA bacteraemias, all new cases (‘first isolates’) of MRSA are also recorded. These can be divided into ‘infections’, where MRSA is isolated from clinical specimens, and ‘colonisation’, where MRSA is isolated from screening swabs from patients who are harmlessly carrying the organism. Many hospitals use such data as a useful marker of the overall burden of MRSA.

Patients admitted to PHNT who are known to be colonised with MRSA are identified by an alert on their electronic record and in their clinical notes. These patients, as well as all newly identified inpatient cases, are visited by the IPCT who ensure appropriate infection control measures and that topical MRSA suppression therapy has been prescribed.

In line with the latest guidance from the Department of Health (Implementation of modified admission MRSA screening guidance for NHS (2014)), high-risk elective and emergency admissions to PHNT are screened for MRSA. A local risk assessment has been performed by the Infection Prevention and Control Team (IPCT) based on local prevalence data to identify those at high risk of poor outcome from MRSA infection and those most likely to be colonised (i.e. high prevalence groups). Targeted screening is performed on the following groups:

- **High- and medium-risk elective patients.** Patients admitted for the following procedures should be screened: cardiac surgery, thoracic surgery, upper GI surgery, vascular surgery, orthopaedics neurosurgery, including spinal surgery, colorectal surgery), hepato-biliary surgery, plastic surgery, breast surgery, general surgery, renal transplant surgery, cardiology, haemodialysis (quarterly) and pre-insertion of central line (ad hoc as required)
- **Admission to ward (if not screened pre-admission or during current admission).** Patients admitted to the following wards who have not been screened pre-admission or during current admission should be screened: Bickleigh, Bracken, Braunton, Brent, Clearbrook, Crownhill, Hound, Lynher, Mayflower, Moorgate, Sharp, Shaugh, Stannon, Stonehouse, Torcross, Torrington CICU/CHDU and Wolf
- **Admission to ward (regardless of previous screens)** Patients admitted to the following wards should be screened regardless of previous screens: Penrose, Pencarrow and Stannon
- **High prevalence (Elective and Emergency).** Patients in the following groups should be screened on admission to any ward: patients previously colonised with MRSA, nursing/residential home residents, transfers from another
hospital, healthcare worker, patients with a wound, ulcer or indwelling device that was present before admission to hospital.

Additional screens may be requested by the IPCT on a case-by-case basis, for example as part of the management of individual or clusters of infection.

Plymouth Hospitals NHS Trust reported a total of 15 new ‘infections’ due to MRSA between April 2014 and March 2015, compared to 33 the year before, a reduction of 55%.

**New cases of MRSA, April 2003 – March 2015**

The total number of new MRSA isolates (i.e. those isolated from screening samples as well as clinical specimens) was 161, compared to 224 cases recorded during the previous year. Although this implies a reduction in the overall burden of MRSA in the Plymouth healthcare community, it may also be a result of reduced screening.
4. MRSA bacteraemias

The objective for PHNT for 2014-15 was to record zero Trust-apportioned MRSA bacteraemias (cases occurring 48 hours or more after admission to the Trust). The Trust is also expected to achieve year-on-year reductions in MRSA.

Plymouth Hospitals NHS Trust reported zero MRSA bacteraemias between April 2014 and March 2015.

MRSA bacteraemias attributable to Trust, April 2003 – March 2015
Post-Infection Reviews carried out on all MRSA bacteraemias at PHNT and is performed by the clinical team caring for the patient with support from the IPCT. The results of these RCAs are reported to the Infection Prevention Subcommittee and series of recommendations made. Monitoring of actions arising from RCAs is also monitored by the Infection Prevention Subcommittee.

To continue to minimise the risk of any infection due to MRSA at PHNT, the following strategies are planned:

1. Targeted MRSA screening of admissions will continue
2. Compliance with the decolonisation of MRSA will continue to be reported on the monthly balanced scorecard to improve the management of these patients
3. A Post-Infection Review will be performed on all MRSA bacteraemias, with the results of these investigations and their recommendations monitored by the Infection Prevention Subcommittee
4. The surveillance of post-operative wound infections, including post-discharge follow up, will continue for most surgical procedures performed at PHNT
5. There will be continued effort to reduce the number of infections associated with medical devices, including intravascular and urinary catheters.

5. Meticillin-Sensitive S. aureus (MSSA) bacteraemias

Between April 2014 and March 2015, PHNT recorded 113 total bacteraemias due to MSSA, compared to 116 the previous year. Reporting of MSSA bacteraemias became mandatory on 1st January 2011 and cases are now apportioned as hospital or community acquired. During 2014-2015, PHNT recorded 43 hospital-apportioned bacteraemias due to MSSA, compared to 39 the year before, an increase of 10%.

Hospital-apportioned MSSA bacteraemias, April 2010 – March 2015

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of cases</th>
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<td>2010-11</td>
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<td>2011-12</td>
<td>39</td>
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<td>2012-13</td>
<td>31</td>
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<td>2013-14</td>
<td>39</td>
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<td>2014-15</td>
<td>43</td>
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Trust-apportioned Meticillin-sensitive S. aureus bacteraemias, 2010-present
6. *Escherichia coli* bacteraemias

Reporting of *E. coli* bacteraemias became mandatory on 1st June 2011. Between April 2011 and March 2012, PHNT recorded 349 bacteraemias due to *E. coli*, compared to 283 the previous year. During the same period, there were 93 hospital-apportioned bacteraemias compared to 98 in the baseline year.

**Total cases of Escherichia coli bacteraemias, April 2010 – March 2015**

![Bar chart showing hospital-apportioned Escherichia coli bacteraemias, 2010-present](chart)

7. Carbapenemase-producing Enterobacteriaceae

Enterobacteriaceae are a large family of bacteria that usually live harmlessly in the gut of all humans and animals. However, these organisms are also some of the most common causes of opportunistic urinary tract infections, intra-abdominal and bloodstream infections. They include species such as *Escherichia coli*, *Klebsiella* spp. and *Enterobacter* spp. Carbapenems are a valuable family of antibiotics normally reserved for serious infections caused by drug-resistant Gram-negative bacteria (including Enterobacteriaceae). They include meropenem, ertapenem, imipenem and doripenem. Until recently, Gram-negative bacteria have been usually been susceptible to carbapenems and these have been the agents of choice for the treatment of multi-drug-resistant Gram-negative infections. Carbapenemases are enzymes that destroy carbapenem antibiotics, conferring resistance. They are made by a small but growing number of Enterobacteriaceae strains. There are different types of carbapenemases, of which KPC, OXA-48, NDM and VIM enzymes are currently the most common. Rapid spread of carbapenem-resistant bacteria has potential to pose an increasing threat at a local and national level.

Over the last five years, there has been a rapid increase in the incidence of infection and colonisation in patients in the UK by multi-drug resistant carbapenemase-
producing organisms. In addition, a number of clusters and outbreaks have been reported in England. The threat of the spread of CPEs has resulted in a Public Health England (PHE) Incident and Emergency Response Plan Level 3 (national implications) and NHS England issued a Patient Safety Alert on 6th March 2014. In December 2013, PHE produced an acute trust toolkit for the early detection, management and control of CPEs which recommended that acute trusts produce a CPE Management Plan. A local Plan was produced in April 2014. The majority of recommendations made in the PHE toolkit were already in place at PHNT, but some additional measures were implemented following publication of the Pan.

To date, 3 patients already colonised with CPE have been transferred into PHNT. There have been no cases of ‘home-grown’ CPE isolated at the Trust.

8. Hospital-Acquired Bacteraemias

Over the last 12 months, there has also been surveillance of all hospital-acquired bacteraemias. Patients with a bacteraemia were identified by daily review of all positive blood cultures, followed by clinical confirmation using standard definitions. The main criterion for a bacteraemia to be recorded as hospital-acquired is that it was taken more than two days after admission. Information from patients with bacteraemia was collected by the IPCT, reviewed by a Consultant Microbiologist and included demographic, infection and risk factor data.

Between April 2014 and March 2015, 18,339 blood culture sets were taken at PHNT. Once repeat isolates were removed, 305 patients were considered to have developed one or more episodes of hospital-acquired bacteraemia, compared to 280 the previous year. The majority of hospital-acquired bacteraemias occurred in the Critical Care, Haematology and Oncology, Gastroenterology, Medicine and Cardiothoracic Directorates. This is likely to reflect factors that influence risk of bacteraemia such as severity of illness, immunosuppression and invasive devices.

The underlying sources of hospital-acquired bacteraemias for the whole hospital are shown in below. Intra-abdominal infections were the commonest source.
Information on the micro-organisms causing hospital-acquired bacteraemias is given below. The commonest individual species was *Escherichia coli*, which accounted for 26% of cases. Other coliforms were responsible for a further 17% of cases. Staphylococci accounted for 33% of cases, with 12% due to MSSA.

**Micro-organisms causing hospital-acquired bacteraemia, April 2014-March 2015**
9. Cases of *Clostridium difficile*

Between April 2014 and March 2015, PHNT recorded 35 Trust-apportioned cases *C. difficile* (cases occurring 72 hours or more following admission), of which 5 were considered ‘avoidable’, against an objective of fewer than 30 avoidable hospital-apportioned cases with a rate of 11.0/100,000 bed days. This compares to 37 hospital-apportioned cases last year. This was the first year that cases were classified as avoidable or non-avoidable, and comparison with previous years is therefore not possible.

**Trust-apportioned cases of *Clostridium difficile* infection, 2008-15**

![Bar chart showing the number of trust-apportioned cases of *Clostridium difficile* infection from 2008 to 2015.](chart)

Total number all cases of *C. difficile* occurring at any time during admission to PHNT is also recorded and this allows comparison with a longer historical period. Between April 2014 and March 2015, there were 80 cases, compared to 65 cases the year before.
Further efforts to reduce *C. difficile* will be made through ongoing multidisciplinary review of all cases, fogging of single rooms vacated by *C. difficile*-colonised patients and continuing antibiotic and proton pump inhibitor stewardship.

### 10. Orthopaedic and other surgical site infections

The Surgical Site Infection Surveillance Service (SSISS) assesses speciality-specific surgical site infections on a quarterly basis. Plymouth Hospitals NHS Trust has participated with this scheme since its introduction in 1997. Standard case definitions and surveillance methodology are provided to enable comparable rates to be produced. Although the reporting of orthopaedic surgical site infections has recently become compulsory, other components of this scheme remain voluntary.

Over the last year surgical site surveillance has been performed on all major surgical procedures carried out at PHNT. Post-discharge surveillance is carried out for all procedures using a standard questionnaire that is returned 28 days after the procedure with telephone follow up of selected cases. Reports are produced and fed back to individual surgical teams on a quarterly basis. Feeding back infection data is a crucial component of a quality improvement programme and is known to reduce post-operative wound infection rates. Significant reductions in surgical site infections have been achieved at PHNT in those surgical procedures for which surveillance has been established for some time (notably in cardiac and vascular surgery). There were no MRSA bacteraemias associated with surgical site infections and there have been reductions in all hospital-acquired bacteraemias (i.e. not just due to MRSA) attributable to surgical site infections since the service commenced. The cumulative infection rates at PHNT for all surgical specialities are shown below.
Latest available surgical site infection rates during initial admission or on readmission (last 5 years to December 2014)

<table>
<thead>
<tr>
<th>Category Name</th>
<th>PHNT inpatient/readmission rate</th>
<th>National inpatient/readmission rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdominal hysterectomy</td>
<td>1.60%</td>
<td>1.30%</td>
</tr>
<tr>
<td>Bile duct, liver, pancreatic surgery</td>
<td>4.30%</td>
<td>5.90%</td>
</tr>
<tr>
<td>Breast surgery</td>
<td>1.20%</td>
<td>1.00%</td>
</tr>
<tr>
<td>Cardiac surgery (non-CABG)</td>
<td>1.10%</td>
<td>1.20%</td>
</tr>
<tr>
<td>Cholecystectomy</td>
<td>1.60%</td>
<td>4.80%</td>
</tr>
<tr>
<td>Coronary artery bypass graft</td>
<td>2.70%</td>
<td>4.20%</td>
</tr>
<tr>
<td>Cranial surgery</td>
<td>1.30%</td>
<td>1.30%</td>
</tr>
<tr>
<td>Gastric surgery</td>
<td>1.90%</td>
<td>1.90%</td>
</tr>
<tr>
<td>Hip replacement</td>
<td>0.90%</td>
<td>0.60%</td>
</tr>
<tr>
<td>Knee replacement</td>
<td>0.60%</td>
<td>0.50%</td>
</tr>
<tr>
<td>Large bowel surgery</td>
<td>6.80%</td>
<td>10.10%</td>
</tr>
<tr>
<td>Limb amputation</td>
<td>1.80%</td>
<td>3.10%</td>
</tr>
<tr>
<td>Reduction of long bone fracture</td>
<td>1.20%</td>
<td>1.20%</td>
</tr>
<tr>
<td>Repair of neck of femur</td>
<td>1.00%</td>
<td>1.40%</td>
</tr>
<tr>
<td>Small bowel surgery</td>
<td>3.20%</td>
<td>6.90%</td>
</tr>
<tr>
<td>Spinal surgery</td>
<td>0.70%</td>
<td>1.20%</td>
</tr>
<tr>
<td>Vascular surgery</td>
<td>2.20%</td>
<td>2.80%</td>
</tr>
</tbody>
</table>

The overall infection rate (including post-discharge infections) for breast surgery was 4.0% compared to 4.4%.

Untoward incidents including outbreaks

1. Outbreaks of Diarrhoea and Vomiting

Between April 2014 and March 2015, two wards were closed due to outbreaks of vomiting and diarrhoea at PHNT. The operational impact of this was well managed and in contrast to other hospitals in the South West there was relatively little disruption. A total of 38 patients and 24 healthcare workers were affected. Stool samples from the wards were positive for norovirus. The outbreaks accounted for 14 ward-closure days (defined as one ward closed for one day) with a mean period of ward closure of 7.0 days. A further 9 wards had a bay restricted or closed for periods that ranged from 1-6 days.

Outbreaks of diarrhoea and vomiting, April 2014 – March 2015

<table>
<thead>
<tr>
<th>Month</th>
<th>Wards</th>
<th>Patients</th>
<th>Staff</th>
<th>Norovirus positive</th>
<th>Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 2014</td>
<td>1</td>
<td>20</td>
<td>11</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>February 2015</td>
<td>1</td>
<td>18</td>
<td>13</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2</strong></td>
<td><strong>38</strong></td>
<td><strong>24</strong></td>
<td><strong>2</strong></td>
<td><strong>14</strong></td>
</tr>
</tbody>
</table>

A comparison with other years is given below.
Outbreaks of diarrhoea and vomiting, September 2004 – March 2015

<table>
<thead>
<tr>
<th>Year</th>
<th>Wards</th>
<th>Patients</th>
<th>Staff</th>
<th>Norovirus positive</th>
<th>Days</th>
<th>Mean days</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-05*</td>
<td>43</td>
<td>658</td>
<td>208</td>
<td>28</td>
<td>252</td>
<td>5.9</td>
</tr>
<tr>
<td>2005-06</td>
<td>60</td>
<td>878</td>
<td>168</td>
<td>35</td>
<td>320</td>
<td>5.3</td>
</tr>
<tr>
<td>2006-07</td>
<td>9</td>
<td>150</td>
<td>52</td>
<td>7</td>
<td>48</td>
<td>5.3</td>
</tr>
<tr>
<td>2007-08</td>
<td>14</td>
<td>204</td>
<td>36</td>
<td>12</td>
<td>69</td>
<td>4.9</td>
</tr>
<tr>
<td>2008-09</td>
<td>5</td>
<td>84</td>
<td>25</td>
<td>5</td>
<td>26</td>
<td>5.2</td>
</tr>
<tr>
<td>2009-10</td>
<td>24</td>
<td>410</td>
<td>123</td>
<td>24</td>
<td>124</td>
<td>5.2</td>
</tr>
<tr>
<td>2010-11</td>
<td>7</td>
<td>135</td>
<td>13</td>
<td>7</td>
<td>45</td>
<td>6.4</td>
</tr>
<tr>
<td>2011-12</td>
<td>10</td>
<td>176</td>
<td>44</td>
<td>10</td>
<td>55</td>
<td>5.5</td>
</tr>
<tr>
<td>2012-13</td>
<td>23</td>
<td>431</td>
<td>106</td>
<td>23</td>
<td>134</td>
<td>5.8</td>
</tr>
<tr>
<td>2013-14</td>
<td>1</td>
<td>11</td>
<td>7</td>
<td>1</td>
<td>6</td>
<td>6.0</td>
</tr>
<tr>
<td>2014-15</td>
<td>2</td>
<td>38</td>
<td>24</td>
<td>2</td>
<td>14</td>
<td>7.0</td>
</tr>
</tbody>
</table>

* Note this is a part year (September 2004 – March 2005)

The management of outbreaks by the IPCT has been greatly facilitated by the introduction of rapid diagnostic technology (Polymerase Chain Reaction, PCR). Whereas previously wards were closed as a precaution as soon as patients developed symptoms of diarrhoea and vomiting, it is now possible to determine on the same day whether norovirus is implicated or not. When the PCR test is positive, wards are normally closed and standard control measures put in place (see below). When the test is negative, it has been safe to leave wards open. Consequently, the number of unnecessary ward closures has been dramatically reduced, with substantially less disruption to the operational running of the hospital.
The outbreaks were controlled by containment, enhanced infection control procedures, and environmental cleaning and decontamination. The following control measures were taken:

1. Outbreak meetings were convened and were generally attended by ‘key players’, including representatives from the cleaning contractor, affected wards, the operational team as well as the IPCT. The IPCT regularly attends the daily operational meetings.
2. Information was disseminated throughout the Trust via daily ‘Ward Closure’ and ‘Outbreak Update’ emails.
3. Symptomatic patients were isolated or cohorted.
4. Staff movements were restricted.
5. Enhanced infection control measures were implemented.
6. Symptomatic staff remained off work until 48 hours after their last symptoms.
7. Enhanced environmental cleaning and decontamination was implemented in affected areas. Wards were deep-cleaned 48 hours after the last symptoms were reported.

The epidemiology of the outbreaks is highly suggestive of multi-focal outbreaks with the virus being brought into the hospital on numerous different occasions. Similar outbreaks were observed over the same period in other Trusts in the region and also in the community.

During the year, there continued to be effective collaboration between the Operational and IPCT which led to prompt and successful containment. All wards that were closed or restricted remained closed to discharges and/or admissions as recommended by the IPCT. All ward closures and other Serious Untoward Incidents are reported to the PHE and CCG.

2. Influenza

Between January and February 2015, there was a significant increase in the number of patients admitted to, or treated in clinical departments including Plymouth dialysis unit, Birch day case, Children’s Assessment Unit and Emergency Department with a confirmed diagnosed Influenza A. This resulted in two ward closures: Mayflower and Honeyford wards were closed to new admissions for 8 and 5 days respectively. In addition 25 bays were closed with a further 29 bays restricted. All symptomatic patients were prescribed anti–viral treatment and contacts of the positive patients were assess and offered prophylaxis as clinically indicated. The clinical areas received increase environmental cleaning and staff and visitors provided with Personal Protective Equipment when entering the areas under increased infection control monitoring. The IPCT nurses had an increased presence in the hospital during this time to provide clinical advice and monitor compliance in the controls implemented, and the Microbiology labs responded by increasing the frequency of viral testing to twice a day seven days during the height of the outbreak. In addition, Occupational Health and Wellbeing continued to offer non-immunised staff the seasonal influenza vaccine.
3. Other infection-related incidents

There were 38 other infection-related incidents dealt with by the IPCT between April 2014 and March 2015 and these are outlined below. All ward closures and other Serious Untoward Incidents are reported to the Health Protection Agency and Strategic Health Authority as part of the mandatory surveillance of Healthcare Associated Infection. Reports on these incidents are available from the IPCT.

### Infection-related incidents, April 2014 – March 2015

<table>
<thead>
<tr>
<th>Month</th>
<th>Incident</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 2014</td>
<td>MRSA on Meavy ward</td>
</tr>
<tr>
<td>March-April 2014</td>
<td><em>C. difficile</em> on Honeyford ward</td>
</tr>
<tr>
<td>March-April 2014</td>
<td><em>C. difficile</em> on Monkswell ward</td>
</tr>
<tr>
<td>April 2014</td>
<td>Group A streptococcal disease in Maternity</td>
</tr>
<tr>
<td>April 2014</td>
<td><em>C. difficile</em> on Hound ward</td>
</tr>
<tr>
<td>April-May 2014</td>
<td><em>C. difficile</em> on Argyll ward</td>
</tr>
<tr>
<td>March-May 2014</td>
<td><em>C. difficile</em> on Brent ward</td>
</tr>
<tr>
<td>April 2014</td>
<td>Potentially infectious TB on Hound ward</td>
</tr>
<tr>
<td>June 2014</td>
<td><em>C. difficile</em> on Hembury ward</td>
</tr>
<tr>
<td>June 2014</td>
<td><em>C. difficile</em> on Stonehouse ward</td>
</tr>
<tr>
<td>June 2014</td>
<td><em>C. difficile</em> on Bracken/Birch Day Case ward</td>
</tr>
<tr>
<td>June 2014</td>
<td><em>C. difficile</em> on Hartor ward</td>
</tr>
<tr>
<td>April 2014</td>
<td>Potentially infectious TB on Mayflower ward</td>
</tr>
<tr>
<td>June</td>
<td><em>C. difficile</em> on Meldon ward</td>
</tr>
<tr>
<td>April 2014</td>
<td>MRSA on the Maternity Unit</td>
</tr>
<tr>
<td>June-July 2014</td>
<td>Potentially infectious TB,Plym Unit and Honeyford</td>
</tr>
<tr>
<td>June-July 2014</td>
<td><em>C. difficile</em> on Mayflower ward</td>
</tr>
<tr>
<td>July 2014</td>
<td>MRSA on the Woodcock ward</td>
</tr>
<tr>
<td>June-August 2014</td>
<td><em>C. difficile</em> on Hound ward</td>
</tr>
<tr>
<td>July 2014</td>
<td><em>C. difficile</em> on Marlborough ward</td>
</tr>
<tr>
<td>July-August 2014</td>
<td><em>C. difficile</em> on Shaugh ward</td>
</tr>
<tr>
<td>August-September 2014</td>
<td><em>C. difficile</em> on Brent ward</td>
</tr>
<tr>
<td>August-September 2014</td>
<td><em>C. difficile</em> on Bracken ward</td>
</tr>
<tr>
<td>June-September 2014</td>
<td><em>C. difficile</em> on Wolf ward</td>
</tr>
<tr>
<td>October 2014</td>
<td><em>C. difficile</em> on Hound ward</td>
</tr>
<tr>
<td>October 2014</td>
<td><em>C. difficile</em> on Crownhill ward</td>
</tr>
<tr>
<td>November 2014</td>
<td><em>C. difficile</em> on Penrose ward</td>
</tr>
<tr>
<td>November 2014</td>
<td><em>C. difficile</em> on Hexworthy ward</td>
</tr>
<tr>
<td>October-November 2014</td>
<td><em>C. difficile</em> on Hartor ward</td>
</tr>
<tr>
<td>November-December 2014</td>
<td><em>C. difficile</em> on Wolf ward</td>
</tr>
<tr>
<td>November-December 2014</td>
<td><em>C. difficile</em> on Norfolk ward</td>
</tr>
<tr>
<td>December 2014</td>
<td><em>C. difficile</em> on Hexworthy ward</td>
</tr>
<tr>
<td>November 2014-February 15</td>
<td><em>C. difficile</em> on Honeyford ward</td>
</tr>
<tr>
<td>December 2014-February 15</td>
<td><em>C. difficile</em> on Lynher ward</td>
</tr>
<tr>
<td>December 2014</td>
<td>MRSA on the Maternity Unit</td>
</tr>
<tr>
<td>February 2015</td>
<td>MRSA on Burrator ward</td>
</tr>
<tr>
<td>January 2015</td>
<td>MRSA on Mayflower ward</td>
</tr>
</tbody>
</table>
Hand hygiene and aseptic protocols

1. Audit of compliance with hand hygiene

During the year, all clinical areas were audited on a monthly basis. The wards, Critical Care Units, Theatres and Clinical Department Infection Prevention and Control Link Practitioners (ICLPs) perform the audits. Each audit involves observation of the frequency and quality of hand hygiene in clinical areas. The pass mark for hand hygiene audits was 95% and clinical areas failing to achieve this are expected to perform weekly audits until they consistently achieve this standard. Between April 2014 and March 2015, monthly results ranged between 88–100% achieving an overall Trust compliance of 95%. The Trust’s overall mean Hand Hygiene compliance for the year compared to previous years is shown below. This sustained improvement in hand hygiene compliance reflects the high priority given to hand hygiene by the IPCT as well as the impact of the ongoing commitment under the direction of the World Health Organisation and the adoption of the my ‘Five Moments’ campaign.

Annual hand hygiene compliance, 2004-15

Each clinical area also received a qualitative audit that examines hand-washing technique using the GloBox. This activity concentrates not so much as the ‘when’ to decontaminate hands, but on the ‘how’. It demonstrates how effective an individual applies hand gel and how effective their hand washing technique is. It promotes the Alyffe technique, a seven-step guide to decontaminating hands and incorporates promoting the importance of drying hands thoroughly. These training and assessment sessions are provided by the IPCT HCA’s have also been used to raise staff awareness.
of contact dermatitis. All audit results have been reported back to medical, nursing and clinical professional staff working in the areas in order to improve practice and are also included on the balanced scorecard for reporting and on the IPCT display cabinet in the main foyer. Immediate verbal feedback is given at the time of the audit and areas also receive a written report. The clinical areas are encouraged to display the results of hand hygiene and other audits at their entrance or on a dedicated infection control notice board. The GloBox has played an active part in many successful Infection Prevention and Control Awareness activities including in the main hospital foyer and used by IPCT staff and other hospital staff to community activities there by promoting hand hygiene as a public health message in schools and groups.

2. My ‘Five Moments’ for hand hygiene

The World Health Organisation’s (WHO) campaign ‘Five Moments’ was developed to reduce unnecessary hand hygiene, to stress the importance of the correct location and time for hand hygiene, and to ensure the chain of transmission is broken by hand hygiene and thus prevent the transmission of infection. ‘Five Moments’ linked with the clean your hands campaign in the following ways:

- The WHO guidelines on hand hygiene in healthcare formed the central clinical source for the campaign
- Within the campaign, the ‘Five Moments’ approach to hand hygiene formed the framework for informing staff when and why hand hygiene should be performed
- This will ensure other information, about how to perform hand hygiene for example, will have an impact on practice

The IPCT continue to promote the ethos set out in this. The hand hygiene policy reflects the requirement for all staff entering clinical areas are ‘bare below the elbow’. Compliance is monitored during audits, undertaken by matrons, external auditing bodies and is integral to the annual Patient Led Assessment of the Clinical Environment with evidence of good compliance. The Team have also taken responsibility for developing other strategies around promotion of effective hand hygiene practice and will continue to deliver the message of the ‘Five Moments’.

3. Clinical hand-wash Basins should be used for hand washing only

Previously, the Trust has successfully implemented of the Department of Health recommendations that clinical hand wash basins in augmented care areas should be for hand washing only. In 2013, the Water Assurance Group recommended this to be adopted Trust wide. A distinct yellow label was made available for the clinical areas to identify clinical hand wash basins and limit the use to hand washing. This year compliance with that recommendation of how clinical wash hand basins are used is monitored jointly with representation from IPCT, Estates and Clinical areas. The joint approach serves to monitor the condition, cleanliness, access and how the Clinical hand-wash basins are being used, along with providing an opportunity to provide teaching on safe water management.
4. Provision of alcohol-based hand rub

The IPC continue to deliver the message of the ‘Five Moments’ and ‘At the Point of Care’. This included the availability of alcohol hand rub sited appropriately at the point of care. Alcohol hand rub is also available at the ward entrances and has been included as part of the project to install the ‘self-check in’ systems used by patients when they arrive in the clinical departments for pre booked appointments.

5. Talking poster frames

To further raise awareness of the importance of hand hygiene, talking poster frames are installed at the main entrance and outside all wards in the hospital. The frames contain a hand-washing poster and are triggered by a motion sensor that immediately plays an audio track, reminding staff and visitors to decontaminate their hands. They are designed to grab the attention of the passer by, making sure they take notice of the poster and also use the hand sanitiser which is also available at the ward entrances. Signs have been installed in the hospital reception, outside wards and in other key locations across the Trust reminding staff, patients and visitors of the importance of hand hygiene and asking them to use the alcohol sanitiser outside the ward areas. The signs are activate intermittently to maximise the effect of their impact.

6. Management of medical devices and Saving Lives (Report by Claire Haill on behalf of Samantha Rafferty, Head of Nursing)

A key strategy to reduce hospital-associated infection is to reduce the infection risk associated with the use of catheters, tubes, cannulae, instruments and other medical devices. ‘Saving Lives: a delivery programme to reduce Healthcare Associated Infection including MRSA’ was published by the Department of Health in July 2005. This document includes a self-assessment toolkit and a series of High Impact Interventions (HII) designed to focus staff on core clinical practices that impact on reducing Healthcare Associated Infections. A pilot scheme to implement the HII was performed in June 2006 and a Trust-wide roll-out began in January 2007. As from April 2008, all clinical areas completed monthly audits, with close monitoring by the Matrons. Audits returned from wards with patients with peripheral and central lines and urinary catheters are reported Trust-wide in monthly balanced scorecard.

Since January 2014 the Bio-Medical device management has been incorporated into the Matrons meeting. One meeting each month was dedicated to a specific device under the direction of the Heads of Nursing, and the responsibility to provide assurance will be held with the Matron of each Service Line. The following actions were agreed:

- Bio-Medical device management will be incorporated into the Matrons meeting one meeting per month will be dedicated to these devices and chaired by Heads of Nursing from January 2014
- The responsibility for correct Bio-medical device management will be held by the Matrons and Ward Sisters
Bio-Medical device related infections will be presented by the clinical area and actions monitored.

Trust wide Bio Medical Device related infections will be presented and monitored for a reduction and reported to the Infection Prevention Subcommittee each month.

Each Bio-medical device has an agreed annual programme of work there was an ambition to reduce the bacteraemias associated with the most frequently used Bio-medical devices Urinary Catheters, Peripheral Venous Cannula and Central Venous Catheters.

Following on from the work that started in 2013 the teaching and refresher resources prepared by the Matrons are available, monitoring of clinical practice continued using the saving lives high impact intervention monitoring tools which reflects PHNT policy thus providing a consistent approach and following the ‘roll out’ of the Aseptic Non-Touch Technique (ANTT) provided a good position to achieve the ambition to reduce all avoidable Bio-Medical Device associated bacteraemias.

Each bacteraemia is assessed and if there is a possibility this is associated with one of the three bio-medical devices the Matron and ward manager was informed and the Vascular Access Nurse Specialist would work with the ward manager to investigate and implement remedial actions. After delivery of the trust-wide training on ANTT in March 2014, the Clinical Guidelines for ANTT were designed and implemented by Vascular Access Nurse Specialist in conjunction with medical photography team. The set of nine guidelines were delivered to each ward and are available on Staffnet for reference and teaching resources.

Despite this programme of work there has not been a sustained reduction in the number of infections associated with these devices. In December 2014, a review of the cases revealed most infections were associated with Peripherally Placed Intravascular Catheters for administration of Total Parenteral Nutrition in different clinical areas. The majority of infections were due to skin bacteria, which are the microorganisms that colonise the access hubs and skin adjacent to the insertion site are the source of most central line-associated infections. As an outcome of the investigation, there is a clear line of communication between the Vascular Access Nurse Specialist, Nutritional Nurse Specialist and the IPCT Nurse Consultant, and these teams are working to provide increased level of guidance at ward level.

The Vascular Access Nurse for the Acute Care Team (ACT) has instigated a process where every patient who leaves theatre with a Central Venous Catheter (CVC) has the line assessed within 24 hours generally by the ACT HCA’s. These patients are then followed by the ACT providing support in managing patients with CVC. Vascular Access Nurse Specialist post is currently vacant and a proposal for a more senior replacement to provide focussed leadership of this agenda is currently under consideration.

### 6.1 Urinary catheters

Closer working relationships have been forged between the Learning and Development Team (who lead on staff training for managing a patient with urinary catheter), the continence specialist nurses, representatives from the catheter related
product suppliers and continence products, the IPCT and ward-based staff. The aim is to reduce the number of short term urinary catheters used. The wards collect data for the Safety Thermometer every month this information is be incorporated into the Bio-medical device report. The Urinary Catheter Monitoring & Audit Form (UCAM) is available to order and was updated during the year reflecting feedback from ward staff and observations during investigations of infections.

6.2 Peripheral vascular cannulae

Teaching and competency assessment for staff is provided by the Learning and Development team, and staff are assessed in practice by a mentor. The documentation of all Peripheral Venous Cannula insertions, monitoring and removal is on the prescription chart. A Safety Thermometer tool was implemented replicating the national urinary catheter approach. The wards collect data for the Safety Thermometer every month this information is incorporated into the Bio-medical device report. The information collected on the safety thermometer and saving lives is analysed and are comparable, although not showing a downward trend in terms of number of cannula in-situ, or a significant change for removal when the cannula is no longer required. The cases are reviewed each month and learning disseminated.

6.3 Central Venous Catheters

The Vascular Access Clinical Nurse Specialist, as part of the Acute Care Team (ACT), is to support the Trust in its mission to reduce the incidence of Central Line Associated Bacteraemia (CLABSI) and other CVAD-related complications. Education and training is offered to enable healthcare professionals to care for patients with a CVAD safely and effectively, and support and advice is to increase patient satisfaction and confidence with their care. The Vascular Access Nurse in Infection Prevention and Control has strengthened the focus and will enhance the delivery of the process and management of vascular devices. There has been work to improve communications between specialist teams such as the Nutritional, Cystic Fibrosis and Renal Access specialist nurses and their associated teams. The wider team have worked to produce a training package and competency for staff who manage patients with Totally Implantable Vascular Devices (TIVAD). There is an increase in the use of this device and the staff across the trust are required to receive training and assessed as competent to safely provide patient care.

All health care professionals involved in caring for a patient with a CVAD must undergo theoretical and practical training and be assessed as competent in using, and consistently adhering to current guidelines. Once fully assessed, the individuals name should be entered on the Workforce Development Oracle Learning Management (OLM) system and added to their personnel records.

Assessor training to Ward based assessors in small groups and one-to-one sessions. There are now six expert assessors, and assessors and staff assessed as competent will be registered on the (Oracle Learning Management) OLM system and reports can be generated for wards to monitor skill mix requirements.
6.4 Coordination of line insertion

The daily nurse-delivered ultrasound guided Peripherally Inserted Central Catheter (PICC) and Midline insertion service introduced in May 2009 continues. Complication rates are low, and successful cannulation rates are high compared to other techniques. This service is now available daily, supported by an ACT support worker.

The main aims of this aspect of the service are:

- To replace short-term central venous catheters with PICC or midline catheters, which are associated with a reduced risk of infection, are more acceptable to the patient, and can facilitate early discharge or prompt transfer to onward care and avoid missed doses

- To reduce the numbers of tunnelled lines (e.g. Hickman lines) placed for medium term intravenous therapy. PICC lines have a number of advantages over Hickman lines, including fewer resources required for insertion (staff and theatre time), involve a less invasive insertion technique, and with fewer potential complications. Also, unlike a tunnelled line, there no requirement for minor surgery to remove the line when treatment completed.

6.5 Education, training and assessment

Quarterly CVAD half day update sessions have been run, free to attendees throughout the year. An e-training package, based on the areas of concern generated from RCA reviews of CLABSI is now uploaded and available for use. Matrons, Ward Managers and Department Leads will be requested to identify all staff involved in the management of central vascular access devices. Following initial training and assessment, these staff should complete an annual CVAD update, either on line or an attended session. This should be recorded on OLM.

6.6 Advise and support

This support includes providing advice and support to enable healthcare professionals to care for patients with a CVAD safely and effectively, with the aim to minimise any infectious or other complication associated with these high risk devices, and to increase patient satisfaction and confidence with their care. The service includes provision of a line insertion service, and advice on catheter selection as well as specialist line placement. A daily specialist nurse led clinic provides Midline and PICC line placement, while a regular weekly Clinical Nurse Specialist and Consultant led clinic list offers a Tunnelled and short-term CVAD insertion service.

The ACT HC’s are now placing Midline catheters in patients where multiple cannulations would previously have been required. Benefits include provision of reliable access (reduced missed doses of medication), improved vessel health due to less frequent cannulation, and increased patient satisfaction. The ACT HCA’s are also now trained in CVAD dressing changes and blood sampling (in line with Trust policy) to reduce manipulation by untrained staff.
Audit

1. Audit of clinical areas (report by Cathy Ford)

In order to demonstrate compliance with the Health and Social Care Act: Hygiene Code (2008), the Infection Prevention and Control Team (IPCT) undertake a programme of audit every year. The audit programme is designed to demonstrate that IPCT policies and guidelines facilitate the promotion of patient safety at all levels within the trust: i.e. board to ward.

The trust-wide Prevalence Survey of Healthcare Associated Infections had been undertaken in March 2014 and the results from this audit were presented to the Trust Board and were used this to inform relevant work streams. This year data already captured by multiple audits was reconciled to provide a better understanding of issues that impact on clinical practice and relate to infection prevention and control. Data sourced from the Safety Thermometer, environmental cleanliness audits, Matrons checks; observations against the saving lives high impact interventions during ward based activities as well as information acquired during post infection reviews and cleanliness ATP results was analysed and integrated, and used to formulate action plans to improve practice. Examples include programmes of work to improve the cleaning of clinical equipment and prescription of MRSA suppression therapy. Monthly progress was detailed in reports presented to Infection Prevention Sub-committee.

Key audits that were undertaken by during 2014-15 were:

1. Compliance with MRSA suppression therapy for emergency and elective surgical patients. This resulted in the issuing of pre-printed prescription stickers, refresher training and increased nurse prescribers under the Patient Group Directive for the emergency admission wards. This change in practice will facilitate correct decolonisation in terms of the correct agent, dosage, duration and follow up screening.
2. Care of the patient with a Central Venous Catheter and Peripheral Venous cannulae.
3. Isolation practice and use of side-rooms. This result in the design and issuing of new colour-coded isolation care plans
4. Cleaning of clinical equipment
5. Use of Actichlor plus

In addition, the IPCT collaborated with supply companies to perform audits on behalf of the trust. In 2014-15 the IPCT were supported in performing the following audits.

1. Correct use of sharps containers – Daniels Healthcare
2. Commode chair audit – Vernicare
3. Observational audit on how Actichlor plus was being diluted – Ecolab
4. Provision and location of Vascular access products –CareFusion and Aquilant Medical
Prior to each audit the Infection Prevention and Control nurses met to review and agree the standard for, and content of, each audit. This helped to ensure consistent and standardised data collection across the auditors. Clinical areas affected by the audits were issued with pre-audit advice and post audit reports in which they received feedback on areas of (non)compliance.

The IPCT will endeavour to use the findings from these audits to inform the audit programme for 2015-16 and work with clinical areas to identify and facilitate continuous quality improvement strategies.

2. Compliance with policies and procedures

A number of audits have been performed by various disciplines within the trust to assess compliance with the comprehensive range of infection control policies and procedures, including:

- a) Compliance with the ‘My 5 Moments for Hand Hygiene’ and hand washing technique using the Glo box.
- b) Availability of alcohol hand gel in clinical areas
- c) Compliance with MRSA policy
- d) Compliance with Clostridium difficile policy
- e) Compliance with Resistant Gram-Negatives policy
- f) Compliance with Glycopeptide-Resistant Enterococci policy
- g) Management of intravascular catheters
- h) Management of urinary catheters
- i) Management of Diarrhoea and Vomiting in a Clinical Area/Outbreak Policy
- j) MRSA screening
- k) Antibiotic use
- l) Use of isolation facilities.

The results of the audits undertaken by the IPCT are available from the IPCT office. The programme of audit for the next 12 months is outlined in the Annual Programme of Work for April 2014 – March 2015.

Training and education

1. Education

Education is essential to promoting safe practice, and is integral to the overall delivery of an effective infection control service. Each year, an Annual Education Programme is produced to outline Trust-wide training programmes for medical and nursing, allied health professional, cleaning and estates, as well as administrative, clerical and managerial staff, and volunteer staff. The Plan includes an assessment of the training needs of different staff groups and is designed to meet local and national educational needs and requirements.

Infection control was included as an integral part of Induction Training, as well as Mandatory Update Training. Links with the Trust’s Learning and development
department continues with the inclusion of the subject of infection control in the Trust Preceptorship and HCA Level 1, 2, and 3. The IPCT also advised on the content of education sessions for Serco staff on infection prevention and control, with special reference to cleaning the environment and appropriate use of cleaning products. Infection Control assessments were undertaken on the 70 F1 Doctors as part of their induction to taking up their posts in the Trust.

The IPCT undertake the induction of Medical staff from third year medical students through to the individual induction of newly appointed consultants. Covering the objectives set for the trust, their role and responsibilities pertaining to infection prevention and control.

The IPCT has been recognised by the University of Plymouth healthcare faculty as a joint placement with Tissue Viability for student nurses in years 2 and 3. Six student nurses have had a four-week placement and a further 8 have spent a day based with the Infection Control Nurse linked with the ward they are on placement.

This year IPCT were able to re-provide the Principles and Practice of Infection Prevention HEAB236 and Management of Infection Prevention HEAC334 modules in academic partnership with University of Plymouth, Faculty of Health, Education and Society. Ten students enrolled and completed the module with 7 students submitting an assignment and course work, the final results available in June 2015.

The IPCT continues to provide education in different ways to meet the needs of a very busy organisation. It is often difficult to release staff from their duties and to this end the IPCT are increasingly delivering training at ward and department level. Every Service Line was supported to run Infection Prevention and Control events to increase awareness of infection control issues and practices.

Information for relatives and visitors is also provided on a notice board in the concourse and Level 7, and on the infection control website.

2. Infection Control Link Practitioners (ICLPs – report by Cathy Ford)

Infection prevention and control link practitioners (ICLP’s) are nominated by each clinical area to be the link between the IPCT and that clinical area. Many areas have chosen to have more than one staff member sharing the role. A range of different clinical disciplines is now represented as ICLP’s thus successfully reinforcing the message that infection control is everyone’s responsibility.

The link practitioners are a vital resource for the trust in the overall strategy to reduce infection. A requirement of the role is that protected time of at least 2 hours per week is allocated to them in order that they are able to carry out their infection control related duties.

The ICLP’s play a key role in informing, educating and supporting their colleagues in the clinical areas. They also undertake frequent audits of key aspects of clinical practice. Where audit scores are less than optimal the ICLP will instigate an action plan to address areas needing improvement.
The IPCT held a study day for the ICLPs with the theme ‘Strengthening the Role of the Link Practitioner in Infection Prevention and Control’. The day was based on the Royal College of Nursing Link Practitioner Framework. The sessions were presented on the four domains set out in the link practitioner competency. Andrew Kingsley, North, East & West Devon Health Care Associated Infection Control Lead provided the opening address and delivered an interactive and lively session on meeting expectations. The 76 delegates who attended reviewed the day as a great success.

The delegates’ comments about the day;
“Very good, study day informative to take back to practice- learnt a lot to disseminate, thanks.”
“Very good infection control day. Great speaker for the opening address.”
“This study day is consistently good”

A charity cake stall held on the day raised a fantastic total of £200 for Masanga Hospital, twinned with Derriford. Masanga is based in the Tonkolili district of Sierra Leone and serves a population of 400,000. Resources are limited, with no isolation facilities or running water and these conditions are particularly challenging as the team in Masanga is part of the task force currently assisting with the outbreaks of Ebola virus. Sally Fletcher, Junior Sister is leading IPCT’s contribution to support Masanga through education and fundraising.

The IPCT designate specific team members to link with individual clinical areas so that a consistent level of support can be provided to them. As well as this individual support, bi-monthly ICLP meetings are held. These serve both an educational purpose and as a means to keep the ICLP’s updated with relevant issues. This year sessions were delivered by subject matter experts from within the trust covering a broad subject base, including: Influenza; MRSA targeted screening guidelines and treatment; PPE When, Why and How?; Carbapenemase Producing Enterobacteriaceae - The next big thing; Practical demonstration for the Donning and Doffing of PPE for Ebola Viral Disease; Hepatitis-Are we Hepatitis Aware? HIV-where we are today? And Antimicrobial Stewardship. This forum also provides an opportunity for exchanging ideas and for discussion around key issues.

Last year saw the launch of the electronic resource on Staffnet. This project was led by Cathy Ford, Senior Sister with invaluable support and guidance from Christian Johns on behalf of the Communications team. This has been extremely well received and we have received comments from on call managers, Matrons, and Ward clerks who have used the resource and found it to be useful and easy to navigate. This resource continues to be populated and updated weekly.

The ICLP’s are provided with a professional portfolio, which they maintain as evidence of their commitment to the prevention and control of infection. This enables them to document and reflect on their activities in order to develop within the role.
Compliance with National Guidance and Standards

1. Code of Practice for the Prevention and Control of Healthcare Associated Infections and Related Guidance/CQC Outcome 8

The Health Act approved by Parliament in October 2006 contains a Code of Practice for the Prevention and Control of Health Care Associated Infections (HCAI). The Code places a statutory duty on Trusts to ‘ensure patients are cared for in a clean environment, where risk of HCAI is kept as low as possible’. A revised version of the Code of Practice on the Prevention and Control of Infections and Related Guidance was published in 2008 and was updated in December 2010. Compliance with the Code is assessed by the Care Quality Commission (CQC) and is a requirement for NHS Provider Compliance Assessment Outcome 8 (Cleanliness and Infection Control).

Under the Code of Practice, the Trust must ensure that:

1. so far as is reasonably practicable, patients, staff and other persons are protected against risks of acquiring HCAI, through the provision of appropriate care, in suitable facilities, consistent with good clinical practice

2. patients presenting with an infection or who acquire an infection during treatment are identified promptly and managed according to good clinical practice for the purposes of treatment and to reduce the risk of transmission.

The Trust is expected to have systems in place sufficient to apply evidence-based protocols and comply with the relevant provisions of the basic Code so as to minimise the risk of HCAI to patients, staff and visitors. The systems for the prevention and control of HCAI are expected to address:

- management arrangements to include access to accredited microbiology services
- clinical leadership
- application of evidence based protocols and practices for both patients and staff
- the design and maintenance of the environment and medical devices
- education, information and communication.

Currently, the Trust has full, unconditional registration with the CQC. The IPCT has collated documentary evidence for the assessment of compliance for the infection control elements of the Code of Practice/CQC Outcome 8 and these files are available for external assessment when required. Ongoing overall compliance is reviewed on a monthly basis by the DIPC and Lead Nurse for Infection Prevention and Control and this is reported to the Infection Prevention Subcommittee. In addition to the overall review, the DIPC and Lead Nurse for IPC will meet with individual leads as required to review in detail their evidence folder. A revised draft of the Code of Practice, which includes an expanded section on antimicrobial stewardship, was published for consultation in January 2015. Assessment of compliance will be performed once the final version has been published.
2. NICE guidelines for the Prevention and Control of HCAIs

The Quality Improvement Guide for the Prevention and Control of Healthcare-associated Infections (NICE public health guidance 36) was published by NICE in November 2011. The Guide offers advice on management or organisational actions to prevent and control HCAIs in secondary care settings. It is aimed at board members working in (or with) secondary care and may also be of use to senior managers, those working elsewhere in the NHS, as well as those working in local authorities and the wider public, private, voluntary and community sectors.

The Guide assumes that all secondary care settings are compliant with the current Code of Practice on the Prevention and Control of Infections and Related Guidance and aims to help build on advice given in the Code and elsewhere to improve the quality of care and practice in these areas over and above current standards. Taken together, the quality improvement statements contained in this Guide describe excellence in care and practice to prevent and control HCAIs. The 11 quality improvement statements provide clear markers of excellence in infection prevention and control at a management or organisational level. Each statement is supported by examples of the type of evidence that could be used to prove the organisation has achieved excellence, and examples of what this would mean in practice on a day-to-day basis.

The aim is to help Trust Boards:

- assess current practice in relation to the prevention of HCAIs;
- identify areas for quality improvement
- monitor progress
- provide leadership and support to infection prevention and control teams and other staff working to implement the guide.

It will also give patients and the public information about the quality of care they can expect, and how secondary care organisations can improve patient safety and outcomes by improving quality in key areas.

In April 2014, NICE also published Quality Standard 61 on Infection Prevention and Control. This quality standard is an overarching quality standard that provides topic-specific detail on aspects of infection prevention and control. The quality standard is expected to contribute to improvements in infection rates and avoidable deaths from healthcare-associated infections.

Compliance with the Quality Improvement Guide and Quality Standard 61 has been assessed by the DIPC and Lead Nurse for Infection Prevention and Control and these files are available for external assessment when required. The Trust is complaint with these guidelines. Ongoing overall compliance is reviewed on a monthly basis by the DIPC and Lead Nurse for Infection Prevention and Control and this is reported to the Infection Prevention Subcommittee.
3. Clinical Negligence Scheme for Trusts (CNST)

The documentary evidence for the assessment of compliance of infection control within the CNST standards (level 1) has previously achieved the required standard during an external review. The evidence files are held electronically with in the CQC Outcome 8 and will be updated as required for any future assessments.

4. Saving Lives

As part of the process of assessing compliance with the Code of Practice, the self assessment tool of Saving Lives has been completed. The IPCT has the required policies, procedures and processes in place to meet the required standards.

Decontamination (report from Nic Thomas, Andy Nevill, Peter Heard and Mark Lavery)

The Sterilisation and Disinfection Unit (SDU) is part of the Directorate of Health Care Science and Technology (HSCT). Consequently, ultimate responsibility for the SDU lies with Andy Nevill, HCST Director.

Nick Thomas is the Executive responsible for Decontamination. Nick is an Ex Officio member of the Decontamination Steering Group and provides a link to the Executive Team for decontamination related issues.

Mark Lavery was appointed as Trust Decontamination Lead during late 2014. The appointment was made as part of an inter trust collaborative agreement with the Royal Cornwall Hospitals NHS Trust where Mark has been Trust Decontamination Lead since 2009. The role will involve working in the same capacity across both Trusts.

The Decontamination Lead chairs the Decontamination Steering Group (DSG), which reports to the Infection Prevention Subcommittee. The DSG is the corporate clinical reference group for decontamination and oversees an improvement programme for the decontamination of medical devices within the Trust.

Peter Heard leads the SDU – a dedicated team which provides a certified centralised service for the decontamination of medical instruments both within the Trust and to other clients. The Unit supports all clinical pathways where reusable medical devices need to be reprocessed including the reprocessing of all flexible endoscopes within the Trust. Peter is to facilitate the introduction of the Q-Pulse electronic quality management system during 2015.

Whilst the vast majority of reprocessing across the Trust is carried out by the SDU, there are also a small number of service lines which are responsible for their own local reprocessing. Work is currently underway to identify all those medical devices that are reprocessed in non-centralised locations. A register of such devices is being compiled and this will include instructions for the compliant decontamination of these items.
The process of Decontamination Risk Assessments is being developed to include the
suitability for re-processing of medical devices that are being considered for purchase,
as well as evaluating the effectiveness and appropriateness of new and innovative
systems of decontamination prior to their possible introduction.

Some of the highlights of the past year include:

- Further development of a Decontamination Action Plan to include Corporate,
  Facility (SDU), Local Processing, Governance, and IPG196 related activities

- The SDU continues to be certified to ISO13485:2012 and the Medical Devices
  Directive 93/42. External audits of the unit in late 2014 and in early 2015
  were successful

- The Endoscope re-Processing facility within the SDU has been equipped with
  5 ISIS Endoscope Washer Disinfectors. These machines which are equipped
  with integral RO water systems have contributed to a fully compliant
  centralised Endoscope Decontamination Facility being established

- The scope of the SDU quality system has been extended to incorporate the
  decontamination re-usable endoscopes

- The floors in clean room of the SDU have been replaced

- A replacement porous Load Sterilizer has been commissioned in late 2014

- The SDU has commissioned an ultrasonic washer disinfector to process the
  newly acquired Da Vinci robotic surgical instrumentation system

- A new air handling unit has been installed in the SDU in order to maintain
  accreditation

- Modifications have been made to the Reverse Osmosis (RO) water system in
  SDU

- The bulk store has been modified to better control the storage of consumables
  used during the decontamination / manufacturing process and to eliminate the
  use of the store as a thoroughfare to and from the loading bay

- A register of local reprocessing has been launched which will provide the
  relevant service lines and the Trust with better assurance that local
  reprocessing is being carried out safely and in accordance with good practice

- The SDU is to introduce the Q-Pulse quality Management system during
  2015-16. The system will simplify document control, hold all Manufacturer’s
  instructions and work instructions in an accessible and transparent location,
  identify trends and allow for transparency of defect investigations and
  outcomes
There continues to be progress towards compliance with IPG 196 (Patient safety and reduction of risk of transmission of Creutzfeldt-Jakob disease (CJD) via interventional procedures), which is monitored and reviewed through a compliance action plan. Introduction of an integrated theatre management system will close the loop with respect to the tracking and tracing of instrumentation.

The SDU is involved through the Institute of Decontamination Sciences (IDSc), in benchmarking activities with other Sterile Services Departments in the South West and Wales.

The SDU is involved in the Supporting Care programme, with particular focus on instrument set rationalisation and quality driven initiatives.

Funding has been acquired for 8 staff to undertake training for the Diploma in Decontamination (BTEC). The programme, which will initially be facilitated by a trainer from RCH is to commence this summer. An introductory workshop day held in February was well attended, and there has been significant interest expressed by SDU staff. The selection process for the first wave of trainees is underway.

A new training facility has been commissioned in the SDU. The facility is equipped with a computerised smart screen display panel and a number of PC’s to facilitate distance learning.

There is to be greater collaboration with Theatres in on-going decontamination related projects including involvement in the 12 month plan, identifying local cleaning needs for medical equipment and formal training for staff in Decontamination processes.

Hotel Services (report by Stuart Windsor)

1. Governance chart

The governance chart below shows the various Groups and Committees that are involved in providing Assurance on Hotel Services. The reporting arrangements to IPSC are also shown.
Alongside the formal Groups and Committees, there are a range of other routes which bring together those involved in Cleanliness and Infection Control.

2. Standard of cleanliness

The Trust continues to exceed the National Specification for Cleanliness in the NHS target performance with a score of 98.8% compared to a target of 96.2%, which is a very slight (0.1%) increase from last year. The performance across the year is shown below.
During 2014-15 Serco carried out 1,941 cleanliness audits compared to the 1,904 last year. More than 90% of these were carried out jointly with members of the Trust. There continues to be greater consistency between the audits carried out by Serco, and the other forms of cleanliness check carried out by the Trust.

The Cleanliness Assurance Group, which comprises members from Matrons, Serco, Facilities and Infection Control, continues to meet monthly to discuss trends in cleanliness standards, and track actions plans that are in place. The group also discusses and actions any issues that have arisen in the month that have not been resolved either locally, or through the weekly Hotel Services Operations Reviews.

Alongside the Serco audits, Matrons there has been a decrease in the number of independent Meridian environment checks carried out, which cover aspects of cleanliness. Over the past year 960 of these checks have been carried out compared to 1482 last year). Although these audits are measured in a different way to the formal Serco audits, they also highlight emerging cleanliness issues. The triangulated results covering each element of the National Specification for Cleanliness elements is reported monthly to the Infection Prevention Subcommittee. Examples of typical trend charts, which are presented as statistical process charts, are shown below.
Over the course of the year, work has continued with Optimum to develop a single National Specification for Cleanliness audit tool, that combines the elements measured through the Serco audits, and those measured through the Matrons audits. Progress on this has been slow, but we have now launched the tool for Serco audits carried out on Wards. Work will continue this year to add Department audits into the software.

3. Environmental decontamination

Hydrogen Peroxide Vapour (HPV) treatment is now proven as effective against a wide range of pathogens including Clostridium Difficile spores and methicillin-resistant Staphylococcus aureus (MRSA). The technology has been used to help bring outbreaks under control and reduce the incidence of C. difficile infection for a number of years.

The Department of Health guidelines for the control of C. difficile in the UK includes the recommendation for Trusts to consider the use of Hydrogen Peroxide Decontamination. This recommendation followed a study commissioned in 2012 by the Department for Health, which was carried out by the NHS Technology Adoption Centre (NTAC). The resulting Briefing Pack demonstrated the effectiveness of HPV decontamination, and also presented the financial case for investment in this approach.

The most recent published evidence (2014) of the effectiveness of HPV decontamination on HCAIs has suggested a 37% to 39% reduction in C. difficile infection rates.

Within the Trust, HPV decontamination is now routinely carried out in any side room vacated by a patient who has tested positive for C. difficile. To ensure side rooms are available as quickly as possible after discharge, this service is delivered by Serco, with the service being 7 days a week, between 8 am until 10 pm. Over the past 12 months 454 room decontaminations have been carried out, which represents a significant increase on the previous year (359).
4. Adenosine tri-phosphate swabbing

During 2014-15, the Trust has continued to deliver a programme of Adenosine tri-phosphate (ATP) swabbing as an adjunct to traditional cleanliness auditing. ATP is present in all living matter, and therefore the presence of ATP on a surface is an indication of how clean is the surface. ATP swabbing is used extensively in the catering industry as an indicator of the cleanliness of food preparation surfaces. The extension into other markets is more recent, and Plymouth Hospitals is now one of a growing band of Trusts who are using the technique to assess environmental cleanliness.

Over the course of the year 6,087 swab tests were taken, compared to 4,123 last year. These were either as part of routine swab testing of side rooms being used to nurse patients with *C. difficile*, or as part of side wide testing to check for cleanliness of clinical equipment as well as the environment. This year, the ATP programme has been extended to include wards in outbreak status where enhanced cleaning is being carried out throughout the ward. An empirical target of less than 1,500 Relative Light Units is assessed to pass the swab test, and greater than 3,000 Relative Light Units to fail the swab test. A summary of the results over the course of the year are shown below.

*Overall ATP test results: (top) Overall pass rate; (bottom) Number of swab tests taken*
The ATP results are now analysed in the same way as other audit data, and Statistical Process Charts are tracked for the most commonly measured elements. Examples of the trends are shown below.

5. Deep Cleaning Programme

During 2014-15, the delivery of the Ward and Department Deep Clean programme has continued. All but three Departments have received an annual deep clean; whilst 12 Wards received a deep clean during the year (compared to 17 last year). The lower number of deep cleans completed reflects the severe operational pressure that the Trust has been under over the past 12 months, and the continued lack of an available decant Ward. The target for 2015/6 remains to carry out a deep clean of all Wards over the course of the year, however this will only be possible using a decant Ward.

Schematics showing the last full deep clean for wards and departments are shown overleaf.

In addition to the planned deep clean programme, a number of wards received a deep clean following closure for infection. Owing to the low incident of Norovirus during the winter, fewer wards received a deep clean following infection that for last year.
## Mar-15
### Ward Deep Clean Programme - 2014-5/4

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### Department Deep Clean Programme - 2014/5

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### 6. Linen and Laundry

Laundry services for the Trust continue to be delivered under contract by Royal Devon and Exeter (RD&E) Hospital. The RD&E laundry meets all of the Essential...
Quality Requirements associated with the new standards (CfPP-01/04) which have now been in place for over a year and continue to work towards Best Practice Guidelines. Assurance is provided through the quarterly Contract Review meetings and reports. Laundry X-Pert by Christeyns is the monitoring system used by EHLS to verify crucial washing process steps (CCPs). Textiles are monitored in real time, providing the trusts with assurance that they are decontaminated by the various operations taking place in the machines. This verification process is designed to guarantee specified performance parameters, targets and tolerances necessary for achieving disinfection in the wash process, for each batch prior to safe product release. Process validation is regularly challenged through RABC risk assessments, control point observations, process audits, microbiological test results and temperature validation loggers, providing historical data of evidence proving process assurance of a safe product.

Audits of compliance of linen services within the Trust are carried out on a monthly basis. 41 ward audits were carried out over the course of the year and this has identified several areas of non-compliance, such as ward linen rooms being used to store items other than those provided through the linen service, clean linen being uncovered on the ward and in some cases where clean linen is stored on trolleys, rather than in a dedicated room, soiled linen skips being left in close proximity to clean.

7. Food Hygiene and Safety

During 2014-15, 81 audits were carried out on Wards, Retail Units and the Central Production Unit to assure compliance with the Food Hygiene (England) Regulations (2006) and the Food Safety Act (1990). All minor non-compliances identified during these audits were addressed.

Externally, there has been one inspection visit carried out by the Local Authority Environmental EHO in February 2015. The inspection included a review of all HACCP (Hazard Analysis & Critical Control Points) controls including temperature records and controls. One minor issue was raised regarding a worn piece of small equipment which was disposed of directly.

The trust was awarded the maximum food hygiene rating of 5 following the inspection.

8. Internal Audit

Following a review of the format used by Internal Audit to assess cleanliness across the organisation, Internal Audit completed an audit and submitted a report in March 2015. The audit was carried out in 3 parts, individual ward inspections using the NCA audit tool, deep dive inspections of 4 key elements and more general CQC type observations and comments. The overall conclusions were as follows:

Section 1 – Individual ward inspections

The Trust’s cleanliness audit tool was used to complete three detailed ward inspections. The results of the inspection were generally satisfactory, with the main
areas of non-compliance being the cleanliness of bed frames, patient toilets and elements of the kitchens. It was acknowledged that the majority of the findings would not have been easily visible to patients and/or visitors.

Section 2 – Deep Dive inspections

The themed ‘deep dive’ inspections focused on the following:

- Cleaning equipment/cleaning trollies.
- Commodes.
- Beds.
- Internal glazing.

The results of these inspections were broadly similar to the individual ward audits, overall satisfactory with a small number of non-compliance areas highlighted.

A majority of cleaning trollies, owned and operated by Serco were not at an acceptable level of cleanliness with some of the equipment being used in a particularly bad condition. This issue was raised with Serco and an action plan was put into place to address the issue.

Section 3 – CQC type observations and comments

Internal Audit reported that the wards visited were busy but appeared calm and well organised with a friendly atmosphere. There was a good level of interaction observed between staff and patients who appeared generally happy and well cared for. Both patients and visitors were generous with their praise of ward staff, the overall cleanliness of the hospital and the level of care received. As a result Internal Audit reported they can provide a good level of assurance that the patient care delivered by Trust staff, as observed during the review, was considered safe, caring, responsive, effective and well-led. However, there were some inconsistencies found in the cleaning and tagging of medical equipment.

9. Patient-Led Assessment of the Care Environment (PLACE)

The Patient Environment Action Team (PEAT) self-assessment was replaced during 2012-13 with a new PLACE assessment in 2013-14. The Trust’s second PLACE Assessment was carried out in April 2014.

The PLACE assessment is designed to provide a non-technical view of building and non-clinical services based on a visual assessment. Assessors are asked to rate a range of environmental aspects against set criteria and must reflect only what is seen on the day. A degree of judgement by the assessors is required. A crucial component of the inspections is the high degree of patient involvement with patient assessors making up at least 50% of the inspection teams and leading the visits and the scoring.

During the assessment, 18 separate areas of the hospital were visited, including wards, departments, entrances, public toilets and car parks. Although all wards and
departments were made aware of the PLACE inspection dates, all of the inspections were unannounced.

The scores for the Trust were made available in early August with the national results released on 27 August 2014. The results showed a significant improvement on the results for 2013-14. The results for the four categories accessed compared to the national averages are shown below:

<table>
<thead>
<tr>
<th>Category</th>
<th>2013-14</th>
<th>2014-15</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Trust Score</td>
<td>National Average</td>
</tr>
<tr>
<td>Cleanliness</td>
<td>93.5%</td>
<td>95.7%</td>
</tr>
<tr>
<td>Condition, appearance and maintenance</td>
<td>83.7%</td>
<td>88.8%</td>
</tr>
<tr>
<td>Privacy, dignity and wellbeing</td>
<td>79.4%</td>
<td>88.9%</td>
</tr>
<tr>
<td>Food and hydration</td>
<td>77.8%</td>
<td>85.0%</td>
</tr>
</tbody>
</table>

Some of the headline influences within each category were as follows:

**Cleanliness:**
- Positive influences:
  - Cleaning programme for the removal of black staining in sinks and toilets;
  - Cleaning schedules available on wards;
  - Educating patient assessors that PLACE is a first impression visual assessment in terms of cleanliness.
- Negative influences:
  - Cleanliness of the external windows;
  - The worn condition of floors and ceilings in some areas;
  - Pull cords generally felt to be dirty across many wards;
  - Radiator panels/vent grills found to be dusty/dirty in some areas;
  - Cleanliness of the main concourse toilets unsatisfactory;
  - Insects and dirt in light casings in some wards and departments.

**Privacy, dignity and wellbeing:**
- Positive influences:
  - The removal of the confidentiality section from the assessment.
- Negatives influences:
  - Lack of dedicated rooms on wards for private discussions;
  - Lack of dedicated single sex toilets in some outpatient areas;
  - Lack of day rooms on wards;
  - Lack of TV/radio access on some wards;
  - Lack of privacy caused by 6 bedded bays;
  - Perceived lack of privacy in some departmental reception areas.

**Food and hydration:**
- Positive influences:
  - Food tasted on the ward directly after the last patient served and patient assessors encouraged to only try the foods they would normally choose;
Nursing engagement in the meal service on some wards;
- Lunch time meal now served in two courses.

**Negative influences:**
- Lack of separate areas for meals to be served;
- Patients not always getting the food they ordered;
- Patients not always readied for the meal service;
- Protected meal times not always adhered to;
- Fresh fruit not available 24 hours a day.

**Condition, appearance and maintenance:**

- **Positive influences:**
  - 3 areas assessed were recently upgraded

- **Negative influences:**
  - Dirty external windows;
  - Lack of high visibility nosing on internal stairs and external steps;
  - Sanitary ware in need of replacement on some wards;
  - Some furniture and seating in need of replacement;
  - Cosmetic damage/wear and tear of walls, floors and;
  - Lack of storage on some wards and departments;
  - Emergency exits not always clearly identified;
  - Secure storage of patient’s belonging inadequate in some areas.

**Overall:**

- Better engagement with patient assessors to help them understand the issues that the Trust faces;
- Five assessment groups with 16 patient assessors across the two days, mitigating any influences from single assessors;
- More groups allowed more time for scoring and lessened assessor fatigue.

A comprehensive PLAN Action Plan was created following the assessment, and a team have met monthly to progress key actions. This team has included patient representatives.

**Antimicrobial Stewardship (report by Dr Jim Greig)**

The Antibiotic Stewardship Team (AST) consists of Drs Jim Greig and Robert Tilley along with the Antimicrobial Pharmacist (Nicola Joyce). Individual members of the team work closely with one another, with each having specific areas of interest and responsibility. Herein is described the activities of the AST for the past year.

**1. Training and Education**

Training and Educational sessions led by the AST have continued to focus at reaching out to Directorates and Departments and offering talks on prudent and sensible antibiotic use. This has been combined with sessions directed at junior doctors (F1 and F2) as part of their programmed training and ad hoc training at ward level. The Directorate specific sessions have been successful in the last year with over 15 such sessions being delivered. The mandatory e-learning package for Medical and Nursing
staff has been updated and forms part of Trust statutory training. Each member of staff who does not feel competent in the area of antimicrobial use must complete the training package on a triennial basis. All clinical members of staff must also complete the package as part of their Induction training. In the year 2014-2015 630 members of staff have accessed the statutory training module, over one half completed the full module.

2. Prospective audit with intervention and feedback and monitoring Trust antibiotic use

The AST prospectively audits, with intervention and feedback, Service Line performance on a quarterly basis. The Medical Director and Trust Executive (via the Infection Prevention Committee) are informed of overall and specific service line performance on a quarterly basis. These reports include how compliant the service line is with Trust antibiotic use guidelines and highlights deficiencies in antibiotic use, teaching and any specific audits (e.g. surgical prophylaxis) that the Service Line should consider. In the year to June 2014 overall compliance was over 82%. The Trust participated in a pan-Peninsula point prevalence audit in February 2015. The results released (as of 5th May 2015) do not allow a comparison with other local Trusts though against the region as a whole, local performance was better than or comparable with the region on six out of seven parameters.

Monitoring of overall antibiotic consumption continues and this has demonstrated a 3% per annum rise in antibiotic consumption. Comparison consumption data is expected to be published in the near future and this will allow a more thorough benchmarking against comparable Trusts. The previously expressed wish that consumption data for all clinical areas will be produced will remain an aspiration until electronic prescribing is introduce.

3. Review of use of restricted antibiotics

The AST continues to be informed on a daily basis of new prescriptions of certain restricted antibiotics, which are reviewed on weekly ward rounds. Other problems with the use of antibiotics are highlighted by Ward Pharmacists and these patients are regularly reviewed. During 2014 nearly 1000 prescriptions were reviewed and on nearly three quarters of occasions an intervention, usually to stop the antibiotic or convert to the oral route, was performed. Fewer prescriptions were reviewed than in previous years due to reduction in overall available Medical resource. Quinolones and carbapenems were not used in accordance with local guidance on nearly one tenth of occasions. The compliance in the use of these restricted agents is an improvement on the calendar year 2013, whether such improvements are sustainable remains to be seen.

4. Guidelines

Treatment guidelines (full and abridged) are freely available on Staffnet. Annual update and review is the ideal where resource permits. All guidelines are updated at least biennially. Abridged versions of the guidelines are available as handy laminated
cards which are distributed at induction, at scheduled educational sessions and opportunistically on the wards.

In the last year a local Antimicrobial use App has been introduced and frequent updates are being employed. The Surgical prophylaxis guidelines have been incorporated into the App. For those without Smart Phones the App is available one click away on Trustnet. Focus for the coming year includes increasing the clinical range of the App, embedding electronic guidelines into ED and monitoring access and use of electronic guidelines to allow greater use of this important resource

5. Clostridium difficile

The ACT reviews all hospitalised patients with *C. difficile* and advises on the antibiotic management of this disease in particular advising on stopping or changing precipitating antibiotics and on which treatment antibiotics to use. The antibiotic pharmacist attends the daily *C difficile* management meetings.

6. Speciality specific antibiotic control leads

Most of the newly created Service Line have a nominated liaison Doctor for antibiotic control and many of the Service Lines report directly to the Infection Prevention Board. All are expected to participate actively in the local control of antibiotic use. An Antibiotic Steering Group has been set up meeting every two months. The AST liaise and assist Service Line Leads with an aim of taking stewardship out to the users, encouraging local ownership of problems and solutions.

7. Plans for the future

In the coming year the main thrusts of the ACT are:

- Liaison and collaboration with Service Lines and clinical teams
- Greater integration with the various admission units and ED in an attempt to abort potential admissions and antibiotic courses by optimising antibiotic use from initiation.
- Review staffing of the team and identify gaps and deficiencies
- Integrating the management of sepsis into all treatments and practices and a close liaison between the AST and the Sepsis Group.

Proton Pump Inhibitor (PPI) Stewardship (report by Nicola Joyce)

Due to the association of proton pump inhibitors (PPIs) and *C. difficile*-associated diarrhoea (CDAD), there has been continued focus on local use of PPIs this year.

A point prevalence (PP) audit conducted at PHNT prior to any interventions in June 2012 identified 46% of inpatients on a PPI (36% of patients admitted on a PPI, 9% commenced during that admission) and a primary care audit showed that nearly one half of all patients on a PPI did not have a documented indication. A follow-up PP audit in January 2014, after interventions, showed a reduction in PPI prescribing to
33.6% of inpatients (27.2% of patients admitted on a PPI and 6.4% commenced during admission). A further follow-up PP audit in February 2015 showed a further slight reduction to 32%, 26% and 5% respectively.

A new action plan for 2015 has been devised to ensure that focus on PPI prescribing is maintained. It ensures that measures put in place are outcome driven and progress is reported on a quarterly basis to the IPSC. Interventions to reduce inappropriate PPI prescribing have included communications to prescribers and pharmacists, which have been repeated, and the issuing of a guideline. There is also the use of ‘alert drug chart stickers’ by ward pharmacists (WPs) where there is no easily identifiable reason for a PPI. This should prompt a prescription review by the attending medical team either as an inpatient or on discharge in primary care.

The quarterly report to the IPSC also includes the regular reporting of information from the Pharmacy Department on PPI consumption. This has shown a declining trend in PPI use, which is now plateauing, possibly due to higher doses than the usual DDD being used as a norm. The reduction in prescribing seen in the point prevalence audit has been mirrored by ward based audits. The results of these audits are also included in the quarterly reports and form part of the revised action plan. Targets have been set for the number of wards audited and the number of patients who have their PPI reviewed whilst they are an inpatient by WPs, (≥85% is the set target). There is also continued collaboration of work with primary care and the sharing of information, with ePACT data for PPI prescribing in the western locality of NEW Devon CCG being reviewed on a quarterly basis and included reports, which are also sent to the CCG for their information.

Other activities

1. Policies and procedures

The IPCT recognises the importance of evidence-based policies and procedures in ensuring effective compliance with national infection control standards. All policies comply with the Trust Policy on Policies and are available on StaffNet (http://staffnet.plymouth.nhs.uk/DocumentLibrary/TrustDocuments.aspx). At renewal, all policies are examined to ensure compliance with the National Service Framework for Children and the Trust’s Equality and Diversity Policy.

The following policies have been updated in accordance with the continuous process of rolling policy review:

a) Management and control of MRSA
b) Patient MRSA screening protocols
c) Admission, transfer and discharge of the infected patient
d) Management and control of resistant Gram-negative bacteria
e) Environmental cleaning policy
f) Management of contamination injuries
g) Infection prevention and control framework
h) Hand hygiene guidelines
i) Infection control guidelines for patients with cystic fibrosis.
2. Communication with staff, patients and relatives (report by Claire Haill)

Communication with staff at PHNT is facilitated by a quarterly IPCT Newsletter, ‘Infectious’. IPCT Infectious message promoted though out last year was: ‘Protect Patients; Protect Ourselves; Protect Colleagues Every time with our actions’. Updates on ward closures due to outbreaks is provided through Trust-wide emails and on the main infection control notice board in its newly placed position on Level 7 on the approach to the restaurant. All infection control policies are now available on the Staffnet and the infection control website has been further developed over the last year. The display on the main infection control notice board is changed on a regular basis and includes education and surveillance data as well as reflecting national and world campaign days. There is a regular infection control contribution to the weekly electronic newsletter (Vital Signs) and the quarterly magazine (Cascade) that are distributed to all staff at PHNT.

National Infection Control Week in October was highlighted by a display in the main concourse promoting the practice patients should expect to receive and an opportunity for staff to ask questions about the products that should be being used and when.

The Infection Control Website has been populated with current information although there is more to do in this area, and we are currently working with the communications team for their expertise to improve communication with patients and relatives to optimise electronic technology. We have delivered updates to volunteer staff and patient groups as well as being available to discuss infections and controls with patients on a one-to-one basis.

In 2014 IPCT launched a ‘Patient Passport’ for patients with indwelling long term bio-medical devices or those who are or have been colonised with MRSA or Clostridium difficile. The aim was to improve communication between patient, hospital and community, thus improving patient safety. The patient will be encouraged to take the passport with then to hospital, GP and Outpatient appointments or show it to their district/palliative or specialist nurse. Patients, carers and Healthcare professionals will be encouraged to use and annotate the passport. Some patients have brought their Passport with them on return to the hospital. The concept has been embraced by staff in Braunton and Mayflower wards, chestnut unit, Oncology for patients with indwelling devices and Children’s service.

Encouragement of patient participation in infection prevention and control is endorsed by both the Hygiene Code (2008) and the latest NICE Quality Improvement Guidance published in 2011. The IPCT already publish patient information leaflets for Norovirus, MRSA, Clostridium difficile, and Extended Spectrum Beta-lactamase (ESBL)-producer. This year we have included patient information on Carbapenemase-producing Enterobacteriaceae (CPE) and have provided teaching sessions to staff on this emerging infection across 56 clinical areas and the information is posted on Staffnet. These are available on all wards and departments and are given to individual patients when a diagnosis is made and are available electronically on the website for patients or their relatives. The Patient Passport compliments the belief that reducing infections requires the efforts of all healthcare participants, staff and patients alike.
3. Design, construction and renovation (report by Claire Haill)

The IPCT continues to contribute to the design, construction and renovation projects across the Trust, particularly the significant environmental initiatives across the Estate such as the replacement of taps and clinical wash hand basins and the Lift Upgrade Project, Ward and department refurbishment project and advising on product approval and room specifications. For each project, method statements have included dust control measures as advised by IPCT and compliance has been monitored throughout the works. Surveys of the clinical environment have been undertaken prior to works commencing and have been most successful when performed together with clinical staff, the Estates Department and planning teams.

Three significant projects included; replacement plumbing of the water supply in Maternity, Cardiothoracic theatres storage solutions, reconfiguration of the level 4 theatre reception, Works in CT and X-Ray West, up-grading of the Meavy patient rooms including placement of clinical hand wash basins, supported the redesign of the sluice for Chestnut unit, and advised on the replacement of the floor in Central Delivery Unit. These works were designed to provide improved facilities and service to patients were completed without significant disruption to the day-to-day running of co-located clinical areas, reflecting the effective working relationship with the Project Team, which included contractors, the Estates Department, relevant Matron and staff from the Departments and Serco as well as the IPCT. Additionally advice has been provided on projects that have yet to be approved or progressed.

The Estates and IPCT have continued a programme of Water Walkabouts accompanied by Matron or clinical representative. This incorporates all aspects of Safe Water management across the PHNT. This year each ward has been visited and all clinical departments including theatre areas have been assessed. The water outlets in the theatres were included in the visual inspection during the annual closures. The schematic drawings have been up-dated, under used water outlets have been removed, remedial Estates works have been actioned, teaching with regards the correct method of use for the Optotherm taps has been given, as well as correct cleaning and maintenance programmes for water coolers, and promoting the Water management policy. The water Management work has also included the agreed programme of works for the re-plumbing of the maternity unit with the enabling works for this scheme recently commenced.

The IPCT continue to advise on Ventilation systems and are part of the annual re-commissioning process of the Theatres and performed microbiological testing for 17 theatres included advice regarding dust controls and cleaning during additional theatre maintenance such as the replacement of doors and operating lights.

The IPCT continues to advise and monitor dust controls during all building works across the Trust working closely with the design teams and work with Estates on their pre-planned maintenance programme.

The policy for Infection Control Input into Design, Construction and Renovation
Projects was reviewed in 2012 and now includes a more detailed risk assessment when works are scheduled in occupied clinical areas.

4. **Water Action Group (report by Julie Richards)**

The IPCT is actively involved in the work of the Water Assurance Group which oversees the provision of safe water at the Trust.

Over the past 12 months, this group has continued to work hard to strengthen Legionella and *Pseudomonas aeruginosa* controls at the Trust, resulting in significant improvements to water quality and a reduction in positive sampling results.

The Water Management Policy continues to be implemented alongside a scheme of control action plan, with key work areas including:

- Implementation of the Trust’s updated *Legionella* Risk Assessment
- Implementation of the Trust’s *Pseudomonas aeruginosa* Risk Assessment
- Delivery of actions arising from the *Pseudomonas* and *Legionella* action plan
- Testing of all outlets in augmented care areas for *P. aeruginosa* (and subsequent 6-monthly testing)
- Point of use filters installed in NICU, ICU, HDU and the incubator wash area
- Installation of a dedicated NICU domestic water system
- Continuing replacement tap and basin programme
- Programmed weekly water assurance walkabouts, performing condition checks on taps, sinks, showers, sanitary ware and outlets and to review risk assessments, flushing, testing and monitoring regimes for departments
- Continued implementation of safe water use on the Neonatal Intensive Care Unit
- Surveillance of patients in augmented care areas for *P. aeruginosa*.

Capital investment upgrades delivered in the last 12 months include the following works :-

- Installation of a dedicated NICU domestic water system
- Continuing replacement tap and basin programme.

5. **Ventilation Systems Action Groups (report by Julie Richards)**

The IPCT is involved with the work of the Ventilation Systems Assurance Group who monitor the ventilation systems used across the Trust to ensure provision of a safe and comfortable environment for patients and staff.

Specialist ventilation is provided in operating departments, critical care areas and isolation units. Increased health risks to patients will occur if ventilation systems do not achieve and maintain the required standards. The links between surgical site infection and theatre air quality are well established.
The Trust has a statutory duty to inspect, service and maintain theatre ventilation systems to ensure that they are performing effectively and achieving the required air-change rates. The Ventilation Systems Assurance Group oversees the annual Operating Theatre Maintenance Programme which manages this process, with IPCT performing the microbiological commissioning of theatres after work has been completed on their ventilation systems.

Over the past 12 months, this group has continued to report the successful delivery of essential ventilation system maintenance and the delivery of numerous ventilation system capital upgrades including the following:

- Histology ventilation plant upgrade
- Plym Day Case theatre 1 ventilation plant upgrade
- Emergency Department ventilation plant upgrade
- MRI East ventilation plant upgrade
- SDU clean room ventilation plant upgrade.

6. Infection Control ward round

Since November 2004, all new patients with MRSA, *C. difficile* and norovirus have been reviewed individually on the Infection Control Ward Round. The approval and implementation of a Patient Group Direction allows prescribing of MRSA eradication therapy by the Infection Control Nurses. Parallel to this, new documentation and care plans for the management of MRSA, norovirus and *C. difficile* diarrhoea have been introduced. All patients with MRSA are subsequently reviewed once a week and those with *C. difficile* every day. The ward round also reviews patients colonised with GRE, *Serratia* spp, *Acinetobacter* and ESBL-producing coliforms. This approach has improved the management of these patients as well as compliance with infection control policies and procedures. In addition, the enhanced presence of the IPCT in clinical areas greatly increased their availability for advice and guidance and improved communication with patients and relatives.

7. Infection Control Nurse Service Line working

The IPCT has worked hard to move towards providing a more clinically-orientated service, with each Service Line having a designated team of Infection Prevention and Control Nurses. This system facilitates communication between the IPCT and Service Lines and allows a ‘tailor-made’ service to be developed for each area. By working closely with the ward manager and ICLP to improve practice and feedback of surveillance data, it is hoped that individual area will develop ‘ownership’ of infection control. The programme has been extremely successful in improving practice and reducing rates of hospital-associated infection areas. Infection control is a standing item on the Agendas of most Service Line meetings which are now attended by the IPCT.
8. Research

The IPCT has been involved in a number of research projects and has also collaborated in various national studies. The following articles have been published by the IPCT:


Conclusions and priorities for 2015-16

The infection prevention and control service at PHNT has made significant progress towards modernising the service it offers and meeting the challenging new agenda being set at both local and national levels. The IPCT has dramatically changed the way it has worked in order to deliver a more clinically-orientated and relevant service. This approach has been effective in both improving clinical practice and reducing rates of hospital-associated infection. There have been significant improvements in hand hygiene compliance and clinical practice audit scores, such as the Saving Lives HII, have also improved. Infections due to MRSA and C. difficile have fallen, as have rates of surgical site infection. Considerable Trust-wide effort is required to maintain and
continue these improvements, particularly if the Trust is to continue to achieve the MRSA bacteraemia and *C. difficile* reduction targets.

Priorities for the following year include:

- Achieve the local and national targets as outlined in the Annual Programme of Work, April 2015-March 2016
- Comply with national mandatory surveillance requirements
- Continue to deliver a high-class Surgical Site Surveillance Programme
- Ensure continued compliance with Code of Practice/CQC Outcome 8, NICE Quality Improvement Guide for the Prevention and Control of Healthcare-Associated Infections
- Coordinate Post-Infection reviews on all serious HCAIs
- Sustain the use of the ‘Saving Lives’ HII across the Trust
- Contribute to the reduction of medical device-related infections across the Trust
- Continue to embed infection control at all levels across the Trust
- To continue to provide up-to-date information available on the Infection Control website.