Kingston Hospital NHS
NHS Foundation Trust

Annual Report: Infection Prevention & Control

Trust Board Meeting	**Item: 15**
25th May 2016	**Enclosure: K**
Purpose of the Report: The Trust Board are provided with the Annual Report of Infection Prevention & Control 2015/16 in order to: • Provide assurance of the Trusts compliance with the Health and Social Care Act 2008 (DH, 2015) during 2015/16. • To keep the Trust Board informed of Infection Prevention & Control performance over the year. This is in addition to the key infection control performance measures which are reported through the Trust governance framework at each Trust Board meeting. • To highlight the aspects of good performance in the previous year, with regards to infection control and areas for further improvement. • To highlight the key areas of focus for 2016/17.	
FOR: Information ☐ Assurance ☐ Discussion and input ☐ Decision/approval ☒	
Sponsor (Executive Lead):	Duncan Burton Director of Nursing and Patient Experience Director of infection Prevention & Control (DIPC)
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Risk Implications – Link to Assurance Framework or Corporate Risk Register:	Assurance Framework
Legal / Regulatory / Reputation Implications:	Health & Social Care Act 2008 (DH, 2015)
Link to Relevant CQC Domain: **Safe ☐ Effective ☐ Caring ☐ Responsive ☐ Well Led ☒**	
Link to Relevant Corporate Objective:	1
Document Previously Considered By:	Infection Prevention & Control Group.
Recommendation& Action required by the Trust Board: Board members are requested to **note** the content of the report and priority areas for the coming year.	

Kingston Hospital NHS
NHS Foundation Trust

ANNUAL REPORT

INFECTION PREVENTION & CONTROL
2015 / 2016

Author Fran Brooke-Pearce, Infection Prevention & Control Nurse Specialist

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1.0 Executive Summary

The Trust has a statutory responsibility to be compliant with the Health and Social Care Act 2008 (DH, 2015). A requirement of this Act is for the Board of Directors to receive an annual report from the Director of Infection Prevention and Control (DIPC). This report details Infection Prevention and Control Team (IPCT) activity from April 2015 to March 2016, with an assessment of performance against national targets for the year.

Key Points:

- There were two Trust-apportioned MRSA bacteraemias reported against a ceiling target of zero.
- There were 19 Trust-apportioned *Clostridium difficile* toxin (CDT) positive cases this year, three of which are classed as 'lapses in care' out of the ceiling target of nine lapses in care.
- There were eight Trust-apportioned Meticillin-sensitive Staphylococcus aureus (MSSA) bacteraemias against no national target.
- The Trust reported 20 E.coli bacteraemia infections demonstrating a small decrease from last year. There is no national process to determine attribution of cases and no ceiling target.
- There were 25 patients in total with Vancomycin - resistant enterococci (VRE) in the Intensive Care Unit (ITU).
- The Trust had four separate outbreaks of diarrhoea and vomiting over the past year. The first three outbreaks occurred in June 2015 (Blyth ward), August 2015 (Keats ward) and October 2015 (Hardy ward) and each lasted about a week and resulted in four confirmed Norovirus cases in total. The fourth outbreak was prolonged lasting from February 2016 until April 2016, involving a number of medical wards and resulting in 61 positive Norovirus cases.
- The Trust is moving closer to becoming fully compliant with The Health and Social Care Act 2008 (DH, 2015). Nine out of ten criteria have been self-assessed as 'met' with the remaining one assessed as 'mostly met' and related to risk assessment of infectious status (staff checking CRS flagging and MRSA screening).
- Hand hygiene and bare below the elbow compliance was audited monthly by infection control link practitioners. The overall percentage of hand hygiene compliance for the year was 89.3% against our local target of 95%. One hand hygiene action plan has been completed and a further plan is currently being developed.
- The Trust participated in the mandatory three-month orthopaedic surgical site infection surveillance system (SSISS). Results demonstrated a 1.1% infection rate against a national benchmark of 1.6%.
- In January 2016 the Trust was visited by the CQC and the IPCT were interviewed. The report is currently pending.
- Responded to national guidance on emergency issues i.e. Zika Virus, Middle Eastern Respiratory Virus (MERS).

2.0 Infection Prevention & Control Arrangements

2.1 Infection Prevention & Control Team (IPCT)

Table 1 The IPCT

Shona Ross	Lead CNS Infection Prevention & Control (CNS IP&C)	1.0 WTE	Departed 17.02.16 New CNS (IP&C) commences 31.05.16
Fran Brooke-Pearce	Lead CNS Infection Prevention & Control (CNS IP&C)	0.9 WTE	
Vicky Wells	Infection Control Nurse	0.8 WTE	
Jorge Cepeda	Consultant Microbiologist/ Infection Control Doctor	3 PAs	Departed end November 2015
Elli Demertzi	Consultant Microbiologist/ Infection Control Doctor	3 PAs	Commenced beginning December 2015

2.2 Infection Prevention & Control Group (IPCG)

The IPCG is chaired by the DIPC. Each quarter, the IPCT produce a report.

Table 2 Attendance at the IPCG - Terms of Reference Requirements

Required	**14.04.15**	**13.07.15**	**13.10.15**	**21.01.16**
Director of Nursing (DON) / Deputy DON (chair)	DDON	DDON	DDON	DON
Consultant Microbiologist/ Infection Control Doctor	Present	Present	Apologies	Present
CNSs Infection Prevention & Control	Present	Present	Present	Present
Infection Control Nurse	Present	Present	Present	Present
Public Health England representative	Present	Present	Present	Present
Estates Manager	Present	Present	Apologies	Present
ISS Manager	Present	Present	Present	Present
Health & Safety Adviser	Present	Present	Apologies	Present
Clinical Audit Representative	Present	Present	Apologies	Apologies
Occupational Health representative	Present	Apologies	Present	Present
Facilities Manager	Present	Present	Present	Present
Matron (one to attend to represent matrons group)	Present	Present	present	Present
Antibiotic Pharmacist	Absent*	Absent*	Absent*	***
Decontamination Manager (see 2.7)	Apologies	Absent	Absent	Absent
South London CSU Infection Control Specialist Nurse	Absent**	Present	Present	Present

*****Maternity Leave with alternative pharmacy cover in place
** Not in post
***Consultant Microbiologist Antibiotic Lead in attendance

2.3 Reporting line to the Trust Board

The IPCT reports directly to the Director of Infection Prevention and Control (DIPC), who is the Trust Director of Nursing and Patient Experience. The DIPC meets regularly with the Chief Executive, chairs the IPCG meetings and is a member of the Clinical Quality Improvement Committee (CQIC), Quality Improvement Working Group and Serious Incident Group (SIG). The IPCT Lead CNS also attends SIG. The IPCT provides quarterly exception reports for the CQIC meetings and reports for Quality Improvement Working Group when required.

2.4 IPCT Liaison with Service Lines

Representatives from the divisions attend the IPCG meetings and report back at Service Line meetings.

2.5 Antibiotic Prescribing and Stewardship

The Antibiotic Management Group (established in February 2013) continues to promote excellence in antimicrobial prescribing.

2.6 Collaborative working with Community Services/ Service Level Agreements

The IPCT continue to work with the community in the following ways:

- The Consultant Microbiologists provide an Infection Control Doctor service for Your Healthcare (Kingston), Hounslow & Richmond Community Healthcare Alliance & Royal Hospital for Neuro-disability, Putney.
- The IPCT provide infection control advice and training for Princess Alice Hospice in Esher, and complete an annual infection control audit.
- The IPCT have a service level agreement in place with BMI Coombe wing (on site)
- The IPCT liaise with the community Infection Control Nurses when required.
- The IPCT liaise with Public Health England / South London Health Protection Team and NHS South East commissioning Support Unit when required.

2.7 Decontamination Group

The IPCT attend quarterly Decontamination Group meetings. The aim of the group is to ensure that equipment used for patient care is decontaminated safely, effectively and in accordance with published standards. An annual Decontamination Report, produced by the Decontamination Lead, is available upon request. The Decontamination Group is accountable to the Health and Safety Committee. An interim part time Decontamination Lead has been in place due to long term sick leave.

3.0 Targets and outcomes

3.1 The Health and Social Care Act 2008 (DH 2015)

The Health and Social Care Act 2008 (DH 2015) provides Trusts with a code of practice for the prevention and control of healthcare associated infections (HCAI's) and makes clear their statutory responsibilities. Each Trust is expected to have sufficient systems in place to apply evidence-based protocols and to comply with the relevant provisions of the Act so as to minimise risk of infection to patients, staff and visitors.

3.2 Health Assure

Health Assure – Monitoring compliance with The Health and Social Care Act 2008 (DH 2015)

The IPCT (and other persons nominated responsible) added evidence to Health Assure to allow self-assessment and compliance monitoring with The Health and Social Care Act 2008 (DH 2015). One criterion out of 10 is currently scored amber as 'mostly met' and this area is related to risk assessment of infection (including CRS flagging and MRSA screening). Equipment cleaning has now been scored green following equipment audits carried out in Quarter 3. Equipment audits will now be carried out on a quarterly basis to ensure continued compliance.

4.0 Mandatory Reporting of Healthcare Associated Infections (HCAI) Statistics

Over the past year the Trust Business Intelligence Team (BIT), following sign off by the DIPC, reported the following HCAI statistics to Public Health England:

- Meticillin-resistant *Staphylococcus aureus* (MRSA) bacteraemia rates.
- Meticillin-sensitive *Staphylococcus aureus* (MSSA) bacteraemia rates
- *Clostridium difficile* infection rates.
- *E coli* bacteraemia rates.
- Serious Incidents (SI) related to Infection Control.

Mandatory HCAI surveillance results have been reported via the quarterly report to IPCG and CQIC, and to the Trust Board by the DIPC.

The Trust is currently installing an infection control software package called ACME in order to provide a more robust system of infection control surveillance.

5.0 Reportable Healthcare Associated Infections

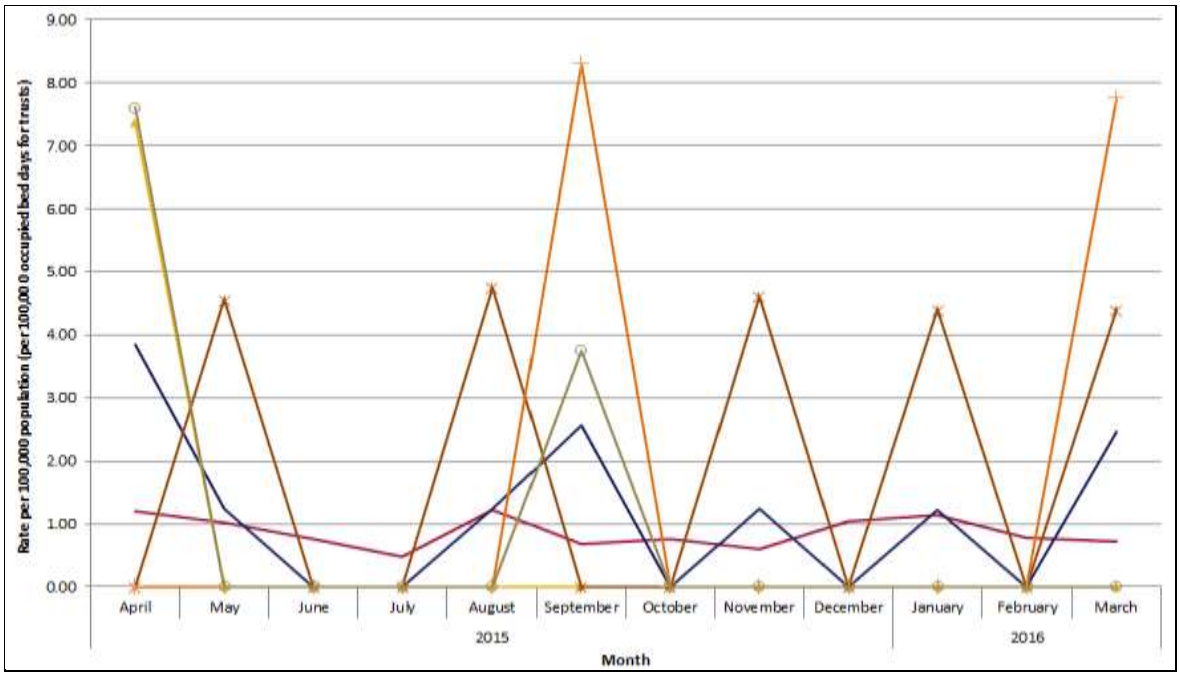
5.1 Meticillin-resistant *Staphylococcus aureus* (MRSA) bacteraemia

The total number of Trust-apportioned MRSA bacteraemia (blood stream infection) cases for the year was two against a ceiling target of zero. Cases are deemed Trust-apportioned if the blood cultures are taken on or after the third day of admission. The Trust has ensured that learning from each Post Infection Review (PIR) has taken place.

The first case was possibly due to a line insertion. The patient was very unwell and in the intensive care unit (ITU), was a known carrier of MRSA despite de-colonisation treatment and had required many interventions. Intravenous (IV) line care has since been investigated in ITU with specific actions put in place. Please see section 9.2 for work regarding IV insertion and care.

The second case was a known MRSA case admitted into the Trust, however decolonisation was omitted. MRSA guidelines have been reviewed with all members of staff in A&E, AAU and Kennet ward.

Graph 1 National and regional MRSA bacteraemia rates including Kingston Hospital NHS Foundation Trust (Public Health England, 2015)



Key

Kingston Hospital NHS Foundation Trust
South West London (acute trust rate)
England (acute trust rate)
Other South West London Trusts

5.1.1 MRSA Screening

During quarter three the IPCT developed and shared updated guidelines for a new MRSA screening programme in response to Department of Health (2014) guidance, which advocates a more focused, cost-effective approach to screening, specifically identifying and managing high risk patients. The Business Intelligence Team (BIT) are currently working on methods of monitoring the new MRSA screening format.

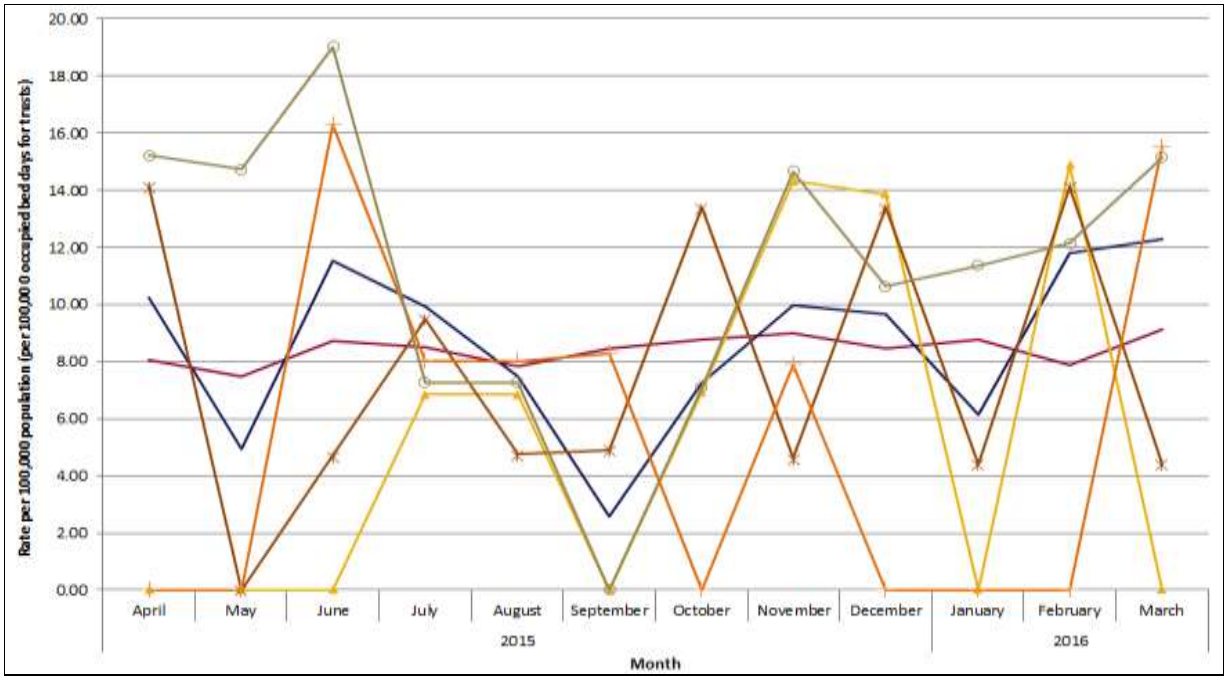
5.2 Meticillin-sensitive *Staphylococcus aureus* (MSSA) bacteraemia

There were eight Trust-apportioned Meticillin-sensitive *Staphylococcus aureus* (MSSA) bacteraemias this year, compared to seven last year. There is no national benchmark or annual threshold set for MSSA bacteraemia rates, however the Trust aims to have less than one per month. The Trust carries out PIR on these cases where required in order to aid learning.

PIR's demonstrated one case was either a contaminant or possibly originally to have been an infection established in the community; two cases were possibly from cannula sites although both cases had been Visual Infusion Phlebitis (VIP) scored appropriately; one case may have been due to antibiotics not prescribed for long enough; one case had no focus of infection and complete recovery; one was unavoidable and likely to be due to pressure ulcers; one was due to late blood culture taking; and one due to a central line infection.

All cases generated action plans which were discussed at Service Line Review and Serious Incident Group, in order to ensure learning.

Graph 2 National and regional MSSA bacteraemia rates including Kingston Hospital NHS Foundation Trust (Public Health England, 2015)



Key

Kingston Hospital NHS Foundation Trust
South West London (acute trust rate)
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Other South West London Trusts

5.3 *Clostridium difficile* Toxin (CDT)

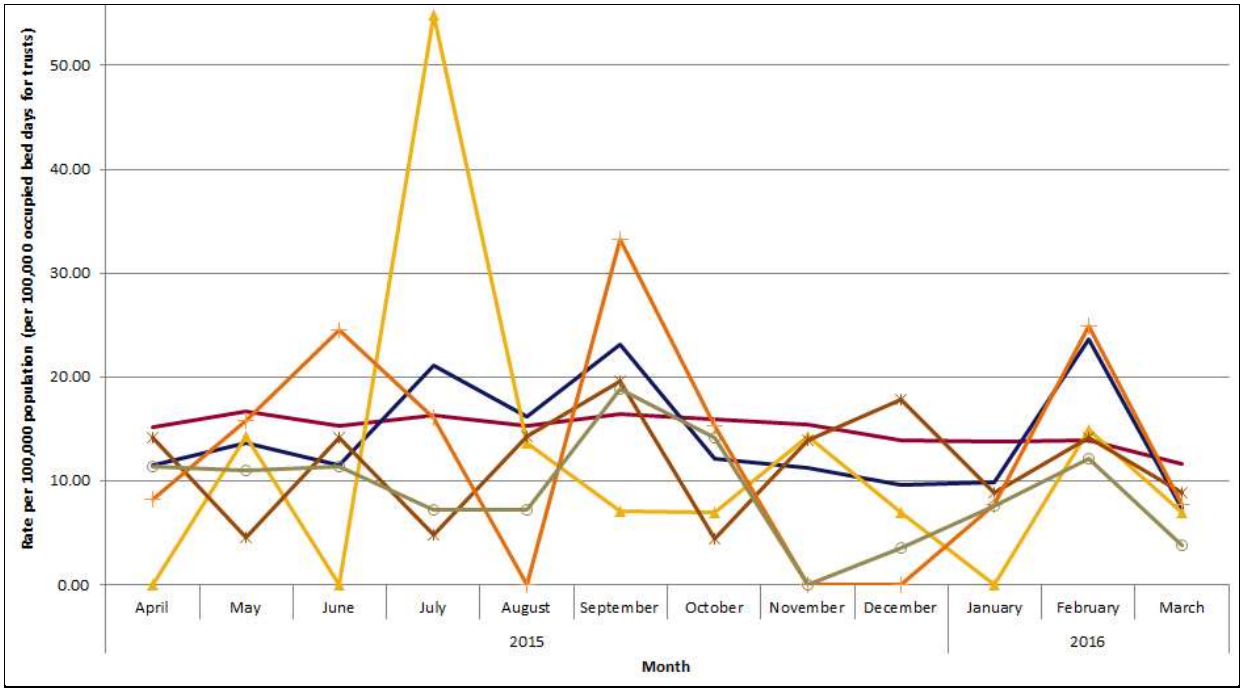
There were 19 Trust-apportioned CDT positive cases in total this year, compared to 17 last year. Cases are deemed Trust-apportioned if the infection is diagnosed from a sample taken on or after the fourth day of admission. However, cases are only counted if a lapse in care is identified, and the Trust was allowed nine lapses in care this year. This year there were three lapses in care in total as assessed by the South East London Commissioning Support Unit Infection Control Nurse Specialist. Last year there was one lapse in care.

Post Infection Review (PIR) was completed for each case and two cases were related to antibiotic prescribing and one case was related to a stool sample not being tested specifically for *Clostridium*

difficile, resulting in delayed treatment. Cases have been presented to Service Line Review meetings and Serious Incident Group in order to facilitate learning.

The trajectory for next year remains at nine lapses in care.

Graph 3 *Clostridium difficile* infection rates, London, England and Kingston Hospital NHS Foundation Trust (Public Health England, 2016)



Key

Kingston Hospital NHS Foundation Trust
South West London (acute trust rate)
England (acute trust rate)
Other South West London Trusts

5.4 *Escherichia coli* (*E.coli*) bacteraemia

During 2015-2016 there were 20 Trust apportioned *E.coli* bacteraemia infections, a small decrease over the last year. There is no national benchmark or annual threshold for *E.coli* bacteraemia or a standard for attribution of acquisition. The Trust use an internal definition and cases are deemed Trust-apportioned if the infection is diagnosed from a specimen taken on or after the fourth day of admission. The Trust has set a local target of two per month.

6.0 Outbreaks and Incidents

6.1 Vancomycin-resistant enterococci (VRE)

During 2015 – 2016 there were a total of 23 cases of VRE infection in the Intensive Care Unit (ITU). In quarter two there were seven cases of VRE infection in ITU which prompted a meeting to be set up in September 2015 where the following was discussed:

- Judicious use of the antibiotic meropenem.
- The agreement of a local baseline - two clinical cases of VRE per month (not screens).
- Staffing - the unit has a full complement of staff, with agency support as required.
- IV line care and documentation - consistently good and reflective of good practice.
- The April 2015 action plan – a re-visit to ensure full implementation and adherence.
- No requirement for VRE screening in ITU at present.

- Saving Lives hand hygiene audit scores (100% in June, July and August, including peer review).
- Weekly environmental cleaning audit (Maximiser) scores (100% throughout June, July and August, bar one of 98% with 100% rectification score).
- Isolation cleaning carried out in individual areas as required throughout building works.

The meeting notes were shared with PHE for information. The incident was closed after the final teleconference with Public Health England (PHE) on 21st October 2015. However, during quarter 3 there were six further clinical cases and in quarter 4 there were ten clinical cases. Cases are being continually monitored and additional measures have since been put into place:

- The final completion of the original April 2015 ITU VRE action plan.
- Investigation by the ITU Matron into IV insertion techniques carried out by doctors, which identified that all protocols are being correctly followed.
- The introduction of the Chlorhexidine impregnated 'Biopatch' for all arterial; central and vas-cath lines, with specific training. The Biopatch disc has been clinically proven to reduce catheter related blood stream infections by up to 69%.
- Weekly dressing changes for IV devices as recommended in epic 3 (2014) guidelines, instead of daily.
- The creation and dissemination of specific ANTT guidelines for insertion of central lines.
- Ordering Chlorhexidine wipes for patient bed bathing, to be commenced imminently.
- A further meeting has been set up in ITU for 28th April 2016, in response to the number of cases, for further action planning.

Typing has been carried out on a number of cases in ITU and results are demonstrated in the following table. During the last quarter, six cases had the same typing.

Table 3 ITU VRE typing results where currently available

Typing	Number of cases
KINGB8EC-22	3
KINGB8EC-23	8
SGEO07EC-12	1
SGEO07EC-13	4
Unique	3

6.2 Norovirus

The Trust had four separate outbreaks of diarrhoea and vomiting over the past year:

Outbreak 1

During May 2015 there was an outbreak of diarrhoea on Blyth ward lasting nine days. This involved five patients (four patients with diarrhoea only and one with diarrhoea and vomiting). There were no confirmed cases of Norovirus and one patient tested positive for Rotavirus.

Outbreak 2

During August 2015 Keats ward had six patients, three relatives and two members of staff with symptoms of diarrhoea and / or vomiting, which started in a patient transferred from another hospital. The episode lasted two weeks overall and resulted in the whole ward being closed to admissions, transfers and discharges for three days. Two patients were confirmed to have Norovirus.

Outbreak 3

During October 2015 Hardy ward had eight patients with symptoms of diarrhoea and / or vomiting. The episode lasted a week overall and resulted in two bays being closed to admissions, transfers and discharges. Two patients were confirmed to have Norovirus.

Outbreak 4

From the end of January 2016 and into April 2016 the Trust has experienced a prolonged outbreak of diarrhoea and/ or vomiting. Numbers of confirmed patient cases and dates up until March 31.03.16 are outlined in Table 1 below.

Table 4 Confirmed Norovirus Cases form the Outbreak in 2016

Ward	Date commenced	Date of last positive Norovirus case	Confirmed Norovirus positive patient cases
Hamble	30.01.16	21.03.16	21
Keats	10.02.16	31.03.16	19
Hardy	10.02.16	18.03.16	5
Blyth	14.02.16	02.03.16	3
Derwent	21.03.16	29.03.16	5
Bronte	23.02.16	16.03.16	2
A&E	01.02.16	22.02.16	2
Kennet	11.02.16	31.03.16	3
Isabella	26.02.16	26.02.16	1
TOTAL			**61**

All cases in this final outbreak were Genogroup II, apart from the case on Isabella who was Genogroup I (the patient had just travelled back from Australia). During this outbreak it was found that very few patients suffered from vomiting with many being affected by diarrhoea only. It was also noted that patients were staying positive for long periods of time, with a number recovering and relapsing again.

Daily communications were maintained via email to key staff within the Trust, Public Health England and the South East Commissioning Support Unit. The IPCT attended bed meetings where possible. Local outbreak meetings were convened when necessary and chaired by the Director of Nursing and Patient Experience.

A number of procedures were put into place:

- Extra environmental cleaning by ISS in all medical and orthopaedic wards, and further enhanced cleaning in all affected areas / Equipment cleaning & disinfection by staff.
- Hand hygiene using soap and water only reminders to staff / hand sanitiser removal from affected areas.
- De-clutter of wards and no storage of open foodstuffs.
- SW London Pathology Unit were requested to automatically test all stool specimens for Norovirus from all medical wards during the outbreak.
- Urgent laxative review advised for all patients with diarrhoea.
- Restricted numbers of visitors (two per patient) in closed wards and advice not to bring children into affected areas.
- Hand hygiene & PPE for visitors and advice regarding tea trolley use.
- Non –essential staff requested not to enter closed areas / essential visiting staff to enter affected areas last.
- Staff in affected areas to remain in the same area and not to move around the Trust unless absolutely necessary. Agency staff to avoid working in closed bays.
- Patients requiring urgent scans or other procedures/treatment – staff advised to contact the IPCT for advice. Patients to be last on the list and not to spend any time in communal waiting areas, and isolation cleaning to take place after the patients departure.
- Extra signage displayed regarding D&V, including floor mounted posters. Automatic answerphone message regarding diarrhoea and vomiting to everyone phoning the Trust and a message on the internet.
- Global emails keeping staff up to date and advising of appropriate measures.

At the end of the financial year, all wards and bays were opened, with no further cases. PHE commented that the outbreak was managed very well.

6.3 Carbapenemase-producing enterobacteriaceae (CPE)

- In April 2015 a patient flagged as having CPE was not isolated on admission to the Acute Assessment Unit (AAU). This patient was moved to a side room immediately and the five contact patients in the bay were screened and found to be negative.
- In June 2015 a patient was admitted to a bay on AAU despite being flagged as being CPE colonised. Five contacts were screened and had negative results.
- In August 2015 an Infection Control Nurse Specialist from another Trust informed the IPCT that a patient of ours had been diagnosed with CPE whilst at the Royal Marsden Hospital, prior to admission to us. The business intelligence team provided names of all patients in ITU and Bronte ward at the same time as the patient, which amounted to 24 patients in total. Weekly screens were carried out on all patients remaining in the Trust, for a period of four weeks and all were negative. All contact patients were flagged on CRS as CPE contacts. Other Trusts were informed when contact patients were transferred.
- In January 2016 a patient was found to be CPE positive. The patient had since been transferred to Tolworth Hospital. It was agreed to contact trace patients who had been exposed to the patient. Of 32 patients investigated, four had no direct contact, 28 were no longer in the Trust. Those discharged had their notes flagged on CRS as CPE contacts and for screen on re-admission. Healthcare facilities of transferred patients (three in total) were informed and advised to screen. The same patient was found to be being nursed in a bay on Kennet ward mid-March 2016. The patient was immediately moved to a side room and all other patients in the bay were screened for CPE. Patients remaining in the Trust are being swabbed on a weekly basis for a total of four weeks. All swabs so far have been negative. The contact cases were flagged on CRS as CPE contacts and other Trusts were informed when contact patients were transferred.

As stated before the IPCT have continued to alert staff to check for patient ‘flags’ on CRS for infection risks prior to bed allocation, including the Advanced Site Practitioners, and have provided training to A&E and AAU staff on patient ‘flags’ and the management of CPE.

6.4 Invasive Group A Strep (iGAS)

In response to a positive case of iGAS in maternity during April 2015, and a consequent request to provide information to PHE, the IPCT reported no previous cases in the past six months; no staff members identified as having skin or throat infections in the last six months; and no cases of iGAS following six weeks of surveillance looking at 38 re-admissions. PHE were content with the findings.

6.5 Pertussis

A baby was confirmed to have Pertussis following discharge from Sunshine ward in May. The probable source of infection was thought to be the baby’s mother. Potential contacts of both mother and baby were identified, including staff, and were advised accordingly. Twelve maternity patient contacts and their GP’s were informed advising them of potential exposure and advice on any actions to be taken.

6.6 Tuberculosis (TB) Bronchoscopy

One patient and four members of staff were exposed to multi-drug resistant TB in May 2015 in the level six bronchoscopy suite. Issues with communication of patients’ infectious status and staff adherence to infection control guidance were identified. In collaboration with PHE it was agreed that those exposed would receive letters to inform them of their exposure. Infection control guidance was revised in consultation with the respiratory team and a laminated copy was displayed in the suite. The team

agreed to improve communications and have implemented the World Health Organisation (WHO) checklist.

6.7 E coli 0157

In November and December 2015 there were two completely isolated cases of E coli O157, one in AAU and one in Astor ward. In both cases the index patient was moved to a side room and contact patients remaining in the hospital were isolated for 10 days. All contact patients were flagged on CRS, including those discharged, advising isolation if re-admitted within 10 days of the initial contact.

6.8 Endophthalmitis

In the Royal Eye Unit (REU) two cases were found to have Endophthalmitis within a few days of each other. However, upon investigation it was found that the two cases were completely unrelated.

6.9 Measles

In March there was a teenager with measles in the waiting bay for a couple of hours in Sunshine ward before being admitted to a side room. There were two other patients in the same room for a short period of time and both had been discharged. The GP's of the two discharged patients were immediately informed.

7.0 Surgical Site Infection Surveillance Service (SSISS)

The IPCT participated in the mandatory three month orthopaedic SSISS from July to September 2015. Results demonstrated a 1.1% infection rate against a national benchmark of 1.6%.

8.0 Hand Hygiene Compliance

8.1 Hand Hygiene Audits

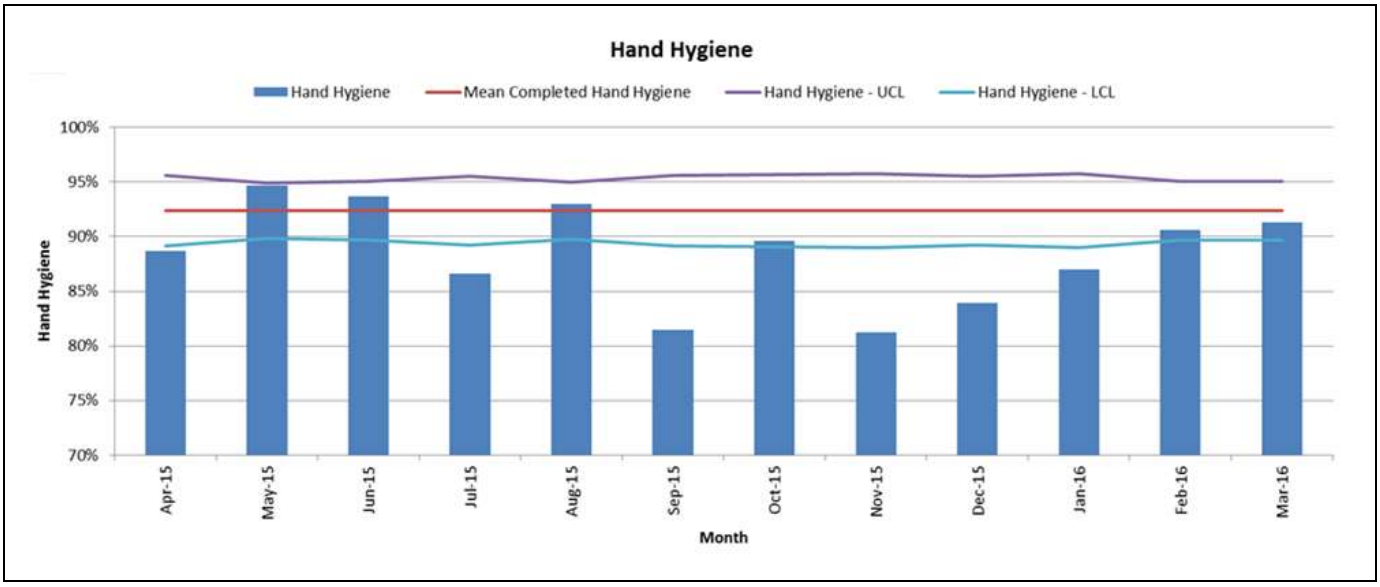
Hand hygiene audits have been carried out by the infection control link practitioners on a monthly basis with scores published on the Nursing and Midwifery Quality Scorecard and the Trust Clinical Quality Report. The hand hygiene compliance target remains at 95%. The overall score for the year was 89.3%.

In September 2015 it was agreed that every month should be peer review audit month, in order to try and get a truer reflection of hand hygiene practices. Following implementation the monthly scores were consistently lower. At the same time there were a number of new Link Practitioners who required training on correct methods of auditing. BIT data demonstrated that there was not one particular group of staff demonstrating lower performance.

A Hand Hygiene Action Plan was implemented and completed (Appendix 2). However, it is recognised that further actions are required, and a second action plan is imminent.

The graph below is a type of Statistical Process Control (SPC) chart, which helps to monitor performance of a particular process over time. The chart includes month-by-month performance, as well as the arithmetic mean and upper and lower control limits. The mean is calculated from the period April 2013 – March 2016, and shows our overall performance for this period. The upper and lower control limits represent variation in performance, and are calculated to be ± 3 standard deviations from the mean. Any performance which is either above the upper control limit or below the lower control limit is said to be "out of control", in that something statistically significant has occurred, and that performance has not changed due to random variation. This helps to identify significant changes in processes which should be assessed to identify potential causes.

Graph 4- Hand Hygiene Compliance Audits 2015-16



8.2 Bare below the elbow (BBE)

The Trust continues to monitor compliance with the Department of Health (DH) initiative 'Bare below the elbow' with all staff working in clinical areas. Compliance is monitored during hand hygiene audits, with results displayed on the Nursing and Midwifery Quality Scorecard and discussed at Service Line Review meetings. Staff are advised to escalate poor compliance to the DIPC, Clinical Director and/ or the Medical Director where BBE continues to be a challenge. Poor practice is challenged when observed.

9.0 Asepsis and Intravenous Line Care

9.1 Asepsis

The IPCT have continued to carry out asepsis training on the Trust clinical skills day, which is provided to all new Trust employees. Parts of the process of asepsis are monitored via the DH Saving Lives initiative (see below).

9.2 Intravenous (IV) Line Care

As outlined previously in section 6.1 a number of initiatives have been set up in ITU recently with regards to the prevention of IV line infection. In addition, the Trust is currently introducing the Chlorhexidine 'Biopatch' to all medical, surgical and orthopaedic wards. This initiative includes specific ward based training on IV line insertion and care, and VIP scoring.

9.3 Reducing Catheter Associated Urinary Tract Infections (CAUTI)

The Trust has signed up to participate in the South London Health Innovation Network programme for reducing catheter associated urinary tract infections this year. The Trust carried out a one day point prevalence survey of CAUTI rates in September 2015 and found that on that day the Trust had a 9% rate of CAUTI (slightly over the estimated 6.7% catheter related UTI infection rate for England). The IPCT have been developing updated Trust Urinary Catheter Guidelines and are currently working with the urology nurses in trialling catheter care equipment (including fixation devices) in order to streamline equipment with other Trusts and the community. Ongoing work for the CAUTI project also includes: an A&E urinary catheter audit for assessing the types of catheter problems and admission rates; finalisation of the new updated Trust guidance; and the development of a patient catheter passport, in line with other Trusts and the community.

10.0 Saving Lives Initiative

The Infection Control Link Practitioners continue to carry out monthly audits from the DH 'Saving Lives' programme. This includes auditing hand hygiene, peripheral line insertion and care, urinary catheter insertion and care and isolation practices. Aspects of the Saving Lives audit scores can be viewed on Nursing and Midwifery Quality Scorecard and are disseminated to the divisions via the Infection Control Quarterly Report.

11.0 Care of the Environment

11.1 Trust Cleaning Services

ISS Mediclean continue to use a microfibre cleaning system, supplemented with Chlorclean (a chlorine-based detergent) for isolation rooms and in outbreak situations. Cleaning scores are routinely recorded as a quality indicator. Six monthly curtain changes are in place, with curtains dated when changed. The schedule for the rolling programme is available in each ward area as are the dates of any ad-hoc curtain changes requested by staff. Infection Control training is given to all ISS Mediclean staff on induction by an external company. ISS Mediclean have provided extra cleaning as requested during the outbreak of Norovirus this year.

11.2 Equipment Cleaning

The IPCT have carried out equipment cleaning checks in many clinical areas over the past year. Scores have improved significantly and re-audit will commence in April 2016 on a quarterly basis.

11.3 Assessments of the Care Environment (ACE)

The IPCT participate in ACE with the matrons as well as representatives from the works department, ISS, health and safety and waste departments on a planned fortnightly basis, monitoring cleanliness and the fabric of the building on a rolling programme.

11.4 PLACE Inspections

The annual Patient Led Assessment of the Environment (PLACE) inspection of the hospital site on 07.05.15 achieved a score of 95% for cleanliness and hand hygiene. In addition, two mini PLACE assessments on 26.08.15 achieved the following scores for cleanliness and hand hygiene:

- Hardy ward 81%
- Isabella ward 84%

Action plans were put into place where necessary and monitored via the PLACE Steering Group, chaired by the Deputy Director of Nursing.

12.0 Infection Control Staff Training

Corporate induction and annual infection control update training is now delivered by on line booklets. The IPCT has requested a review of this to ensure face to face training in light of hand hygiene compliance results and other issues highlighted this year. Asepsis has continued to be covered by the IPCT on clinical skills training days. Infection Control classroom based training is delivered to new band 2 and band 5 nurses. It has been recognised that evidence of infection control training for longer standing volunteers is not available for all. New compliance monitoring mechanisms are in place to ensure 100% adherence, and actions to ensure compliance for longer standing volunteers prior to that date are currently being devised.

13.0 Policy Review

There are 70 Infection Control policies/ procedures/ guidelines available on the Trust intranet. All have been updated this year as required and ratified through the Infection Control Group. Compliance is monitored against some via the DH Saving lives initiative and audit project work.

14.0 Further Infection Prevention & Control Initiatives

14.1 Link Practitioners

The Trust currently has Infection Control Link Practitioners in each clinical area. This person is allocated one day every two months specifically for infection control responsibilities including carrying out the Saving Lives audits. Quarterly study days, in which the Link Practitioner business meeting is incorporated, have continued this year.

14.2 Infection Prevention & Control Information for Patients, Relatives and Visitors

Infection Prevention & Control is included on the Trust website for patients, relatives and visitors. Included on the website are leaflets on MRSA, Norovirus and *Clostridium difficile* as well as information sheets on reducing the risk of infection whilst in hospital, respiratory syncytial virus (RSV) and diarrhoea and vomiting. Bedside leaflets have been developed by the Head of Nursing for Emergency Services and Medicine and these include information on infection control and patient hand hygiene. Patient amenity packs (including patient hand wipes, ear plugs, eye masks and slipper socks) have also been developed and trialled on Hardy ward, with a view to ensuring that all patients are presented with a pack on admission into the Trust.

15.0 Conclusion

Over the past year the Trust has:

- Had two cases of MRSA bacteraemia against the zero trajectory.
- Had 19 cases of *Clostridium difficile* toxin with only three lapses of care out of the allowed nine.
- Continued to report MSSA bacteraemia rates and achieved the Trust aim to have less than one per month.
- Continued to report *E. coli* bacteraemia cases, and noted a small decrease compared to the last two years figures.
- Reported and managed 61 confirmed cases of Norovirus in one prolonged outbreak from the end of January until April 2016.
- Managed a number of infection control outbreaks / incidents such as CPE, Group A Streptococci, measles, E coli 0157, pertussis.
- Continued to work towards ensuring compliance with the Health and Social Care Act 2008 (2015), as is evidenced in Health Assure.
- Worked towards improved intravenous line care and insertion initiatives.
- Completed the hand hygiene action plan and continued to monitor and train staff in hand hygiene performance. Recognised that this work requires further input.
- Continued to embed optimal antibiotic practice into the Trust.
- Participated in the South London programme - Reducing Catheter Associated Urinary Tract Infections (CAUTIs).

16.0 Priorities for 2016/2017

- To meet targets set by the DH by remaining below the *Clostridium difficile* threshold of nine cases (related to lapses in care) and aim for zero cases of MRSA bacteraemia cases.
- Initiate a new hand hygiene action plan with fresh ideas for ensuring that hand hygiene compliance rates rise above the Trust's target of 95%.
- Continue to work towards monitoring and achieving MRSA screening requirements, working with the BIT to create robust screening reporting methods.
- Maintain Health Assure and therefore monitor Trust compliance with the Health and Social Care Act 2008 (2015), ensuring that non-compliance is addressed accordingly and fully meet all ten requirements.
- Improve current corporate induction and mandatory update training methods, and ensure volunteer training compliance.
- Aim to reduce the numbers of VRE cases in ITU.
- Continue to ensure optimal infection control practices are in place, and to manage infection incidents and outbreaks promptly in order to keep our patients as safe as possible.

- Continue with ongoing work to ensure optimal care of intravenous lines in order to prevent infections.
- Continue to participate in the CAUTI project.
- Demonstrate enhanced equipment cleaning score audits.
- Continue to survey surgical site infection as part of the Surgical Site Infection Surveillance Service.
- Change the VIP score threshold for removing a device from score 2 to score 1, in light of PIR findings, and to ensure best practice for the Trust.
- Implement the ACME infection control software system.

17.0 References, sources and further reading

Department of Health (2014) *Implementation of modified admission MRSA screening guidance for NHS* [Online] [Accessed 31.03.15] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/345144/Implementation_of_modified_admission_MRSA_screening_guidance_for_NHS.pdf

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Public Health England (2016) Healthcare Associated Infection Data Tool South West London Health Protection Team Version 2.2 [Accessed 18.04.16].

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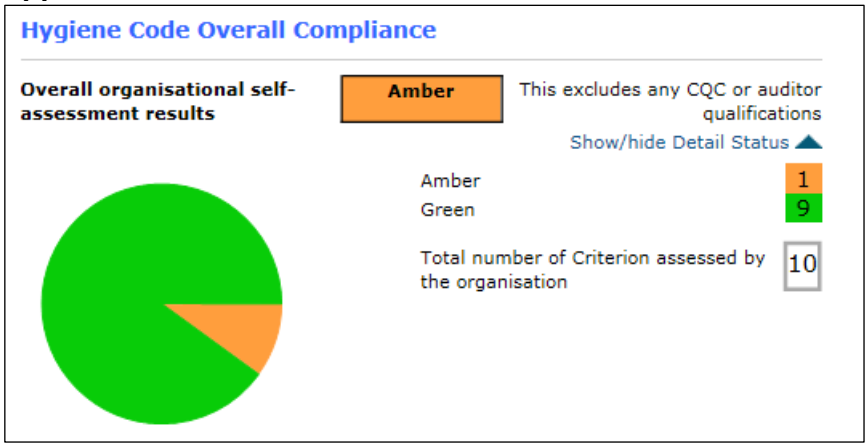
Appendix 1 Health Assure Chart



CQC Hygiene Code (HCAI) Criteria	
Mostly met	**Criterion 1**: Systems to manage and monitor the prevention and control of infection. These systems use risk assessments and consider how susceptible service users are and any risks that their environment and other users may pose to them.
Met	**Criterion 2**: Provide and maintain a clean and appropriate environment in managed premises that facilitates the prevention and control of infections.
Met	**Criterion 3**: Provide suitable accurate information on infections to service users and their visitors.
Met	**Criterion 4**: Provide suitable accurate information on infections to any person concerned with providing further support or nursing/medical care in a timely fashion.
Met	**Criterion 5**: Ensure that people who have or develop an infection are identified promptly and receive the appropriate treatment and care to reduce the risk of passing on the infection to other people.
Met	**Criterion 6**: Ensure that all staff and those employed to provide care in all settings are fully involved in the process of preventing and controlling infection.
Met	**Criterion 7**: Provide or secure adequate isolation facilities.
Met	**Criterion 8**: Secure adequate access to laboratory support as appropriate.
Met	**Criterion 9**: Have and adhere to policies, designed for the individual's care and provider organisations that will help to prevent and control infections.
Met	**Criterion 10**: Ensure, so far as is reasonably practicable, that care workers are free of and are protected from exposure to infections that can be caught at work and that all staff are suitably educated in the prevention and control of infection associated with the provision of health and social care.

Criterion	Reason	Person responsible	Action
01	New DH guidelines advocating modified MRSA screening was implemented this year. MRSA screening rates to be monitored and reported.	BIT	Set up a new system to monitor new screening programme.
	CRS flagging of infectious status by ward staff needs improvement	DDON / Matrons /IPCT	Reminders for staff at training sessions, meetings, ward hand overs, global emails etc.

Appendix 2 Trust wide Hand Hygiene Action Plan 2016

Trust wide Hand Hygiene Action Plan 2016 V5.0

THEME	ACTION	LEAD	TIMESCALE	PROGRESS UPDATE	STATUS
Availability of hand hygiene supplies	Ensure that the Trust has a plentiful supply of 'tottles' – foam and 47ml gel bottles of sanitiser with clips – purchasing to be contacted	IPCT	Completed		
	Ensure that staff carry the 47ml bottles of sanitiser on their clothing at all times whilst working in clinical areas	Sister / Charge Nurse / Nurse in charge	Completed	IPCT have been out small bottles to staff while checking posters on the wards.	
	Nominate a member of staff to check sanitiser bottles on the end of the beds / on top of lockers every shift to ensure availability	Sister / Charge Nurse / Nurse in charge	Completed		
	Continue to remind staff to call the ISS helpdesk if soap / hand towels are in short supply	Sister / IPCT	Commenced		
	Deb Rep to audit all areas to ensure enough dispensers available.	IPCT	Completed		
Improved Saving Lives Audits	Link Practitioners to carry out peer review audits every month instead of quarterly	IPCT	Commenced		
	Link nurses to actively challenge poor compliance during audit, and speak directly to the nurse in charge upon completion, getting a signature to demonstrate that a discussion has taken place	Link Practitioners	Commenced		
	Repeating offenders to be warned that they will be notified to the Divisional Director	Link Practitio	Commenced		

		ners			
Poor audit results immediately action	Weekly / twice weekly audits by a senior member of staff with feedback at the RAG board / handover	Sister / Charge Nurse	Commenced		
	Hand hygiene discussion at every ward hand over	Sister / Charge Nurse	Commenced		
Hand hygiene signage	Review of current hand hygiene signage in clinical areas	IPCT	Completed		
Training	To organise training sessions by the Company Rep from Deb (soap and sanitiser suppliers)	IPCT	Completed	Training day organised 10.12.15	
Hand Hygiene Champions	Remind medical staff about the importance of hand hygiene	Medical Director	Completed	Medical Director emailed all medical staff	

Key:

Completed
On target
Some slippage
Significant slippage

IPCT February 2016

Appendix 3 Glossary of terms

Asepsis - the prevention of microbial contamination of living tissue/fluid or sterile materials by excluding, removing or killing micro-organisms.

Aseptic non-touch technique (ANTT) - a specific nationally recognised (used by 60% of NHS organisations) method used to prevent contamination of susceptible sites.

Bacteraemia – the presence of micro-organisms in the bloodstream.

Blood cultures - a laboratory test to check for bacteria or other microorganisms in a blood sample.

Blood stream infection - the presence of microbes in the blood with significant clinical consequences (e.g. fever, chills, and hypotension)

Carbapenemase-producing Enterobacteriaceae - Enterobacteriaceae are a large family of bacteria that live harmlessly in the gut of all humans and animals however, they can cause opportunistic infections. Carbapenem antibiotics are a powerful group of antibiotics. Rapid spread of carbapenem-resistant bacteria has the potential to pose an increasing threat to public health.

***Clostridium difficile* -** is an organism that lives in the gut that sometimes produces a toxin which causes colitis.

Decolonisation protocol – topical treatments given to patients with MRSA skin carriage, consisting of cream in the nose and a skin wash.

E.coli – (Escherichia coli) form part of the normal intestinal microflora in humans and warm-blooded animals with some strains having the ability to cause disease in humans. These diseases include food poisoning, e.g. E. coli O157, or infections outside the intestinal tract such as urinary tract infections (UTIs), and bacteraemia. E. coli are also becoming an important reservoir of extended-spectrum beta-lactamases (ESBLs).

Group A Streptococcus - (GAS; Streptococcus pyogenes) is a bacterium which can colonise the throat, skin and anogenital tract. It causes a diverse range of skin, soft tissue and respiratory tract infections. GAS can occasionally cause infections that are extremely severe, such as necrotising fasciitis.

Healthcare associated infection (HCAI) - any infection that develops as a result of receiving healthcare treatment.

Influenza- a respiratory illness associated with infection by influenza virus. Symptoms frequently include headache, fever, cough, sore throat, aching muscles and joints.

Intravenous cannula- a device inserted into the vein for giving medications or fluids.

Meticillin sensitive *Staphylococcus aureus* (MSSA) - *Staphylococcus aureus* is a bacterium that commonly colonises human skin and mucosa e.g. inside the nose, without causing any problems. However, the bacterium is capable of causing infections, i.e. in a wound or the blood stream.

Meticillin resistant *Staphylococcus aureus* (MRSA) - strains of *Staphylococcus aureus* that are resistant to many of the antibiotics commonly used to treat infections. Some strains are more likely to cause an infection than others i.e. they are more virulent.

Norovirus - the most common cause of infectious gastroenteritis (diarrhoea and vomiting) in England and Wales. The Illness is generally mild and people usually recover fully within 2-3 days.

Outbreak - two or more epidemiologically linked cases of infection caused by the same micro-organism in place and / or time.

Surveillance – the systematic observation of the occurrence of disease in a population with analysis and dissemination of the results.

Vancomycin resistant enterococci (VRE) Enterococci are Gram-positive bacteria that are naturally present in the intestinal tract of all people. Vancomycin is an antibiotic to which some strains of enterococci have become resistant. The resistant strains are referred to as VRE.

Visual Infusion Phlebitis score - a standardised approach to monitoring intravenous catheter sites. Phlebitis is inflammation of the wall of a vein which can be caused by a number of things, including intravenous devices.

Zika Virus – Zika is a mosquito-borne infection caused by Zika virus which does not occur naturally in the UK. Serious complications and deaths from Zika are not common. However, recent increases in congenital anomalies (particularly microcephaly), Guillain-Barré syndrome, and other neurological and autoimmune syndromes are being reported in areas where Zika outbreaks have occurred.