

Trust Board Meeting in Public: Wednesday 12 September 2018

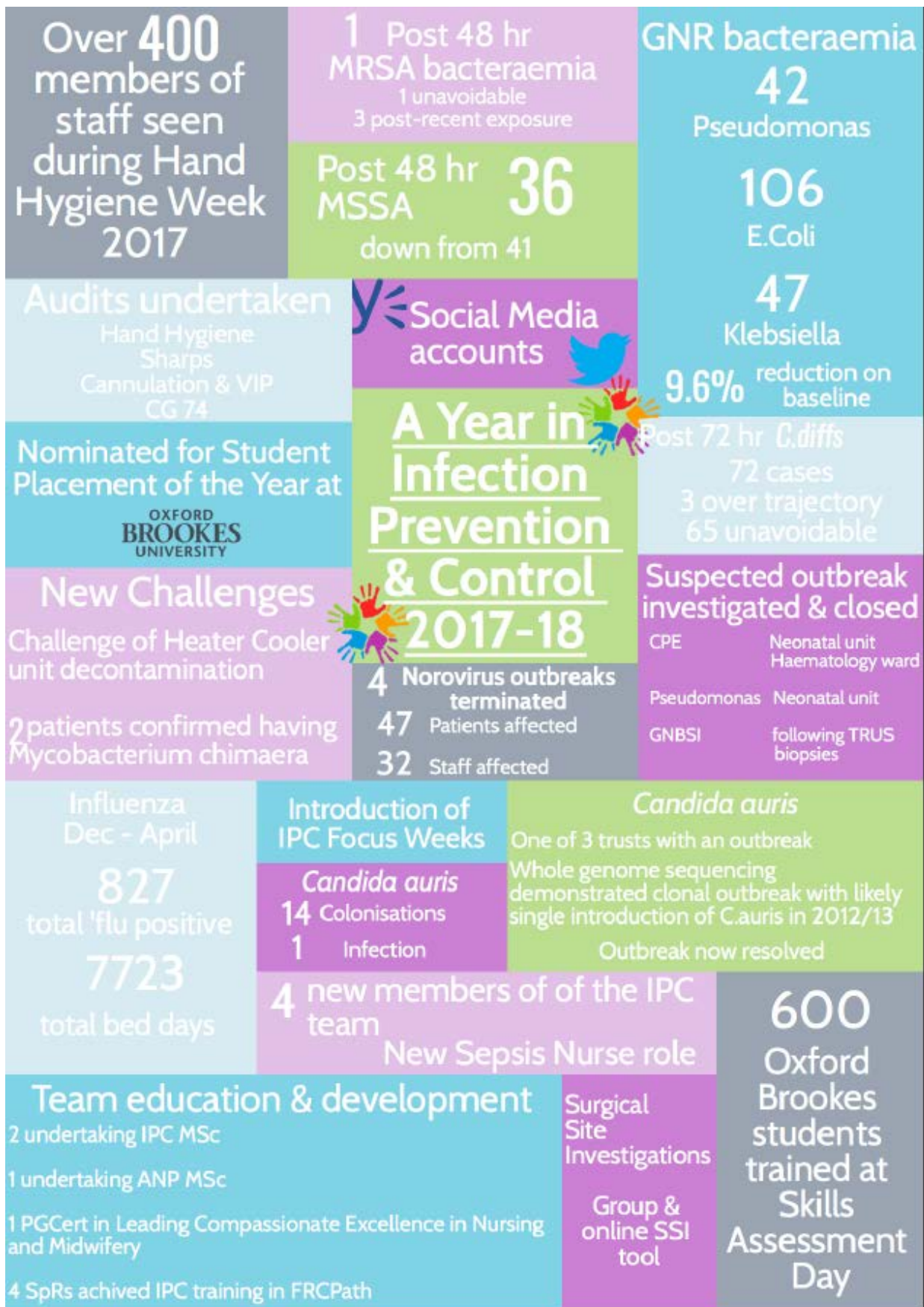
TB2018.84

Title	Director of Infection Prevention and Control (DIPC) Annual Report 2017/18
--------------	---

Status	For information
History	Previously presented at Hospital Infection Prevention and Control Committee (HIPCC)

Board Lead(s)	Dr Tony Berendt			
Key purpose	Strategy	Assurance	Policy	Performance

Figure 1: A graphical summary of key events in infection control activity in 2017-18



Executive Summary

1. The annual report of the Director of Infection Prevention and Control (DIPC) is a mandated report to the Board that describes the structure and key activities of the infection prevention and control (IPC) team. These activities include surveillance, outbreak investigation and management, audit, and teaching and training.
2. Methicillin-resistant Staphylococcus aureus (MRSA) Bacteraemia Zero avoidable MRSA bacteraemias are permitted by national mandate. There was one unavoidable post-48 hour bacteraemia in 2017/18, and no avoidable bacteraemias. There were 3 pre-48 hour cases of MRSA bacteraemia, considered to represent the development of infection prior to hospitalisation.
3. Clostridium difficile There were 72 OUH apportioned cases identified after three days of admission for 2017/2018 against an upper set limit of 69.
4. Methicillin-sensitive Staphylococcus aureus (MSSA) Bacteraemia There were a total of 36 incidents of post-48 hour MSSA bacteraemia, a lower figure than the 41 cases last year.
5. Gram negative blood stream Infections (GNBSI) April 2017 saw the introduction of additional nationally mandated GNBSI surveillance. Trusts are now required to report cases of bloodstream infections due to Klebsiella spp. and Pseudomonas aeruginosa in addition to existing reporting on E.coli bacteraemia. There is a new government initiative to reduce healthcare associated GNBSI by 50% by financial year 2020/21, focussing initially on E. coli.
6. Mycobacterium chimaera colonisation of heater cooler units and risk to patients As a result of the notification exercise in 2017 (see DIPC Annual Report 2017), two patients have presented this year with features consistent with M chimaera infection. Both have received treatment.
7. Candida auris in Neuro Intensive Care Unit Whole genome sequencing demonstrated a clonal outbreak, with a likely single introduction of C. auris, a pathogenic yeast, into the Oxford Neuro-Intensive care unit in 2012/13. The outbreak was first detected in 2016-17 but management continued through 2017-18. Following removal of reusable temperature probes in April 2017 the number of new acquisitions of C. auris decreased considerably. The last case in the Trust was in November 2017 and the outbreak was declared terminated in April 2018.
8. Investigations Undertaken These are detailed in the body of the report.
9. Influenza A total of 827 influenza cases were diagnosed across the Trust, 527 Influenza A, 308 Influenza B, between 2/10/17 (start of week 40) – 29/4/18 (end of week 17).

10. Audits	<p>The IPC team undertook audits throughout the year of compliance with hand hygiene, sharps safety practices, and NICE Clinical Guideline 74 (surgical site infection prevention).</p>
11. Surgical Site Infection Surveillance (SSI)	<p>The EPR surgical site infection surveillance (SSI) tool went live in November 2017 and was piloted in cardiac surgery, neurosurgery and hepatobiliary surgery.</p>
12. Wider Infection Prevention and Control Service	<p>Continence Service and Catheter Associated Urinary Tract Infection- the continence team continue to work alongside the Quality Improvement Team to reduce the incidence of CAUTI.</p> <p>An Intravenous (IV) Therapy Steering Group was set up, with the first meeting held in November 2017, to align Trust wide IV related work streams, provide an overview and awareness of strategic issues relating to IV related practice, standardisation of IV related products, monitor rates of Central Line Associated Blood Stream Infections (CLABSI) in line with Magnet accreditation and associated IV related cost reduction strategies</p>
13. Antimicrobial Stewardship (AMS)	<p>During 2017-18 the AMS team supported the implementation of activities related to Antimicrobial CQUINs. The CQUIN had two parts, the first aimed at reducing total antibiotic consumption and certain broad-spectrum antibiotics and the second focussed on antimicrobial stewardship and ensuring antibiotic review within 72 hours.</p>
14. Estate Issues	<p>Isolation of Highly Infectious Patients- The infectious diseases unit moved from the John Warin Ward at the Churchill site to the JR site in the summer of 2017. During the time frame of this report, four isolation rooms were not handed over to the clinical users because of ongoing issues with the air handling units. At the time of writing of the report, these rooms have been approved for use.</p> <p>Emergency Department- The new ED resuscitation space planned for construction in 2019 will improve isolation facilities in ED.</p> <p>Legionella</p> <p>The Cancer Hospital at the Churchill site has since opening had an ongoing issue with Legionella positive water samples. These data are presented on a monthly basis to the Hospital Infection Prevention and Control Committee by the Soft Facilities Manager for the Client Contract Team. Long term solutions are being discussed with the Trust, Ochre and G4S.</p>
15. Recommendation	<p>The Trust Board is asked to note this report</p>

Director of Infection Prevention and Control (DIPC Annual) Report

1. The Director of Infection Prevention and Control (DIPC) Annual Report describes infection prevention and control activities within the Oxford University Hospitals (OUH) NHS Foundation Trust between April 2017 and March 2018. The report covers Infection Prevention and Control for the four sites; John Radcliffe Hospital, Churchill Hospital, Nuffield Orthopaedic Centre and Horton General Hospital.
2. The Hospital Infection Prevention and Control Committee (HIPCC) meets monthly, and reports to the Clinical Governance Committee which reports monthly to Trust Board and quarterly to the Quality Committee. The Decontamination Committee reports to HIPCC as does the Cleaning Partnership Group and the Trust wide Surgical Site Infection Group. There is a newly formed IV Steering Forum to ensure collaborative working on intravenous access related issues which also reports to HIPCC.

Description of Infection Prevention Activities

3. The team is multidisciplinary and consists of a Director of Infection Prevention and Control (DIPC); Deputy DIPC and Infection Control Doctor; Infection Prevention and Control Nurse Manager; Infection Prevention and Control nursing team; Infection Prevention and Control Administrator; the Continence team; Antimicrobial Pharmacists; Antimicrobial Audit Assistant; Infection Prevention and Control Administrator; and Antimicrobial Stewardship leads in Adult and Paediatric Medicine. As necessary, members of the wider microbiology/infectious diseases team are co-opted on to the team. This year also saw an Antimicrobial Data Analyst, and a Band 7 Sepsis and Acute Kidney Injury (AKI) nurse appointed on fixed term contracts to help deliver the CQUIN target.
4. Dr Tony Berendt (Medical Director) is the DIPC and reports directly to the Chief Executive and Trust Board. The Infection Control Doctor/Deputy DIPC and Infection Prevention and Control Manager report to the DIPC. There are weekly meetings with the Infection Prevention and Control team (IPCT).
5. The role of Decontamination Lead was taken on formally by the Infection Prevention and Control Manager in January of 2018.
6. The Infection Prevention and Control nursing team, microbiology/infectious diseases medical staff and staff from pharmacy all contribute to delivering the infection prevention and control service at the OUH Trust. In order to deliver a safe service, there is a close working relationship with the microbiology laboratory, Estates and Facilities, clinical and managerial staff within the trust and across the PFI structure.

Staffing within the Infection Prevention and Control team

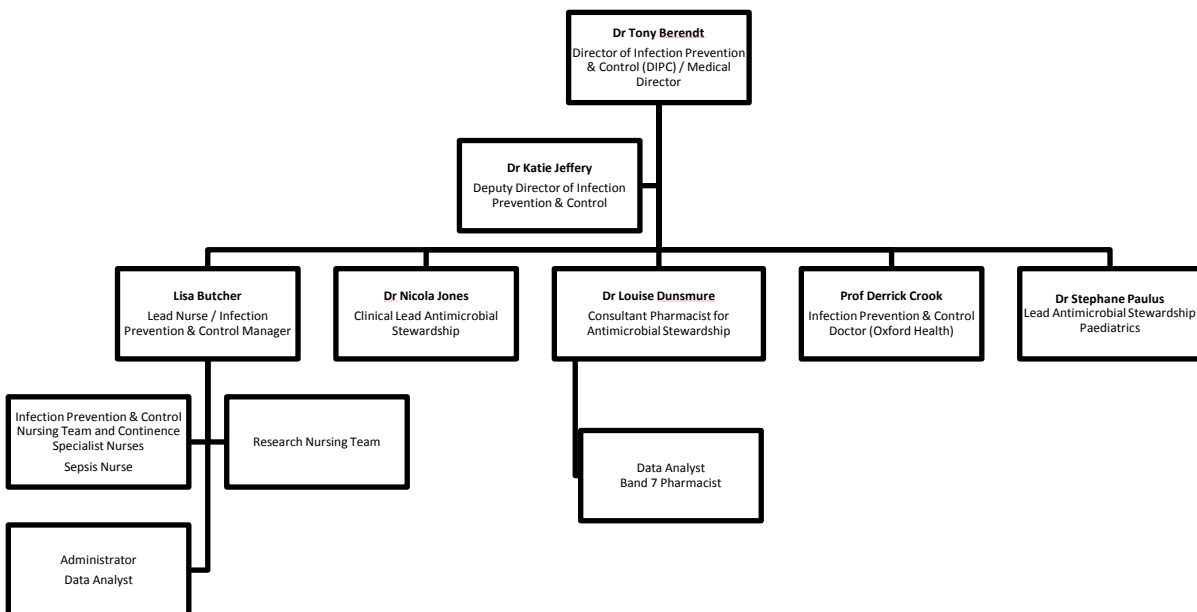
7. The staffing at the end of March 2018 within the Infection Prevention and Control Team is as follows:

- Infection Control Doctor (OUH) /Deputy DIPC
- Infection Control Doctor (Oxford Health)
- Infection Prevention and Control Manager (band 8C)1.0 WTE
- Antimicrobial Stewardship Medical Lead
- Antimicrobial Stewardship Medical Lead Paediatrics

- Infection Prevention and Control Senior Nurse (band 8A) 0.8 WTE
- Infection Prevention and Control Nursing staff (band 7) 3.4 WTE
- Infection Prevention and Control Nursing staff (band 6) 2.0 WTE
- Infection Prevention and Control Nursing staff (band 5) 2.0 WTE
- Infection Prevention and Control Administrator 1.0 WTE
- Data Analyst 1.0 WTE
- Antimicrobial Pharmacists 1.4 WTE (0.9 x band 8b and 0.5 x band 7)
- Sepsis and AKI Specialist Nurse (band 7 1.0 WTE)

Figure 1

The flow diagram below illustrates the line management for the Infection Prevention and Control team.



Professional Development

- 1 B7 and 1 B6 commenced Master of Science in Infection Prevention and Control
- 1 B7 commenced Masters in Advanced Nursing Practice
- B8C attended Decontamination Lead Course
- B8A completed the Compassionate Excellence Leadership course
- 1 B6 attended a Responsible Person for Water course
- Dr Louise Dunsmure achieved Consultant Pharmacist status
- A number of conferences, training days and seminars were attended

The team submitted a poster to the national Infection Prevention Society's annual conference 2017 and were selected for a poster talk.

Talks and posters were delivered by the Infection Control doctor at the Federation of Infection Societies 2017 and PHE Scientific Conference 2018.

Organisms subject to mandatory reporting

8. Methicillin-resistant *Staphylococcus aureus* (MRSA Bacteraemia)

Post 48 hour MRSA Bacteraemia

8.1. Zero avoidable MRSA bacteraemia are permitted. There was one MRSA bacteraemia (taken >48 hrs after admission) assigned to the OUHFT during 2017 /2018 but was deemed to be unavoidable. There were no avoidable MRSA bacteraemias.

8.2. All OUH apportioned MRSA bacteraemias undergo a Post Infection Review (PIR) with OCCG and PHE.

Pre-48 hour MRSA Bacteraemias

8.3. There were 3 pre-48 hour cases of MRSA bacteraemia. As all three cases had recent exposure to the OUH, they have been analysed and discussed with the CCG and with the clinical team responsible for the previous admission, for learning and action.

MRSA Protocol Compliance with Skin Decontamination

8.4. The Annual Report 2016/17 reported that an electronic care plan for MRSA management has been developed and would prompt nursing staff to consider the need for skin decontamination. This care plan was not adopted during 2017/18 but will be during 2018/19.

MRSA screening

8.4. The automated MRSA screening request went 'live' in the EPR at the end of May 2017. Audit of the performance of the screening tool have suggested further work is needed to create reliable data. Resolution of this to allow reliable reporting on screening compliance is a priority for 2018/19.

9. *Clostridium difficile*

9.1. For 2017/2018, NHS England set the Trust an upper limit of 69 cases of *Clostridium difficile* identified after three days of admission.

- 9.2. The OUH had a total of 72 cases apportioned cases for 2017 / 2018. It is worth noting that 6 patients had a recurrent episode and are counted twice in the final numbers.
- 9.3. In May 2017 the treatment for *C.diff* was changed to be brought in line with current national guidance. The Microguide and *C.diff* guidelines have been amended to reflect this change.
- 9.4. All cases of *Clostridium difficile* identified in the microbiology department of the OUH Trust are investigated using Root Cause Analysis (RCA) and discussed at a monthly meeting where there are representatives from PHE, OCCG, Oxford Health Foundation Trust and the OUH Infection Prevention and Control service.
- 9.5 Agreement is then reached as to whether each case is avoidable (7 cases) or unavoidable (65 cases). Actions are agreed and lessons learnt for the Health Economy.
- 9.6 Thirty *C.diff* samples (including community) from 1st August -14th September 2017 were sent for ribotyping. The Complex Medical Unit C (formerly ward 7C) had two patients with *C.diff* of the same ribotype, separated by several weeks.
- 9.7 The majority of ribotypes identified were sporadic community associated types, rather than healthcare-associated, with no clear evidence of ward based transmission, and no emergence of a new strain to explain the increase in cases.
- 9.8 In particular January 2018 and February 2018 had a large number of cases. 12 cases were apportioned to OUH in February, having been under trajectory for the rest of the year. One hypothesis is that at that time, the number of frail older people being cared for in the Trust and receiving antibiotics was unusually high. Whole genome sequencing of eight geographically associated isolates has shown evidence of nosocomial transmission in only one case.
- 9.9 Despite mostly being deemed unavoidable there were lapses in care (instances of non-compliance with the *C.diff* protocol that were not causative in the development of the *C.diff* infection) identified in around half the total number of post-72 hour cases of *C.difficile*. Some cases had more than one aspect of lapse in care identified.
- 9.10 Following review at the Health Economy the completed RCAs and outcome are fed back to the clinical team for discussion at directorate clinical governance level.

Table 1 Main Themes of Lapses in Care for *C. difficile* cases

Lapse in Care	Number of Cases with this Theme 2017/18	Number of Cases with this Theme 2016/17
Inappropriate antibiotic prescribing	13	4
Incomplete fluid balance/stool chart documentation	10	3

Delay in treatment	8	9
Failure to isolate promptly	8	5
Guideline not followed for sampling criteria	6	14
Poor MDT communication	5	5

9.11. Benchmarking of rates of *C.difficile* indicate that the Trust rates are in line with the benchmark, having been above it until 2013-14.

10. Methicillin-sensitive *Staphylococcus aureus* (MSSA) Bacteraemia

- 10.1 Root cause analysis is conducted on all cases of MSSA bacteraemia to establish the source, whether it is a healthcare associated infection and to identify any learning.
- 10.2 There were a total of 36 post-48 hour MSSA bacteraemias which is down from 41 cases last year.
- 10.3 In a third of the cases (n=13) a source could not be attributed for the bacteraemia. However, 9 cases were thought to be attributable to an intravascular device; this is again an improvement on the figure from last year.
- 10.4 Four cases of MSSA in Haematology were investigated by whole genome sequencing, and the data showed no link between the isolates - therefore there was no suggestion of a transmission event. It was established these cases were unavoidable, with no practice issues identified for two of the cases. A third case identified a delay in peripherally inserted central catheter (PICC) line dressing change in line with Trust guidance, although this was not considered contributory to development of the bacteraemia.
- 10.4 Benchmarking of rates of MSSA bacteraemia against other acute Trusts demonstrates that Trust rates are within the benchmark.

11. Gram negative blood stream infection (GNBSI)

- 11.1 April 2017 saw the introduction of additional GNBSI surveillance. Trusts are now required to report cases of bloodstream infections due to *Klebsiella* spp. and *Pseudomonas aeruginosa*. There is a new government initiative to reduce healthcare associated GNBSI by 50% by financial year 2020/21, focussing initially on *E. coli*.
- 11.2 This objective will prove challenging for the Trust as approximately three-quarters of *E.coli* BSIs occur prior to hospital admission and year on year since 2011 there has been an increase in *E. coli* BSIs. A whole health economy approach is required.
- 11.3 CCGs are leading on achieving the Quality Premium, aiming to reduce all *E.coli* BSIs by 10% this year. National data typically shows a summer peak in the

incidence of pre-48 hour (community associated) *E. coli* bacteraemia. One theory is that this is due to poor hydration in the elderly.

- 11.4 The OUH has developed a local action plan focusing on the main sources of Gram negative BSI in the Trust, which are urosepsis, hepatobiliary sepsis, gastrointestinal causes and respiratory tract.
- 11.5 Following discussion with the Emergency and Hepatobiliary surgeons on strategies for GNBSI the pathway for patients presenting with acute cholecystitis, intractable biliary colic, obstructive jaundice and gallstone pancreatitis has been modified. Since March 2017 patients are now undergoing laparoscopic cholecystectomy on their index admission which should reduce the risk of readmission with a GNBSI.
- 11.6 The Annual Plan for 2018/19 will focus on how the Trust can reduce incidence of GNBSI in these particular patient cohorts. The continence team have an important role in the plan for reduction of Gram negative BSI through their work to reduce urinary catheter associated infection (CAUTI).
- 11.7 Oxfordshire were set an *E. coli* bloodstream infection Clinical Commissioning Group Quality Premium target for the financial year of 2017-18 of 415 cases. This has not been achieved across the Health Economy. Encouragingly the number of OUH apportioned cases has not increased in 2017/18.

Table 2 : E.coli bacteraemia numbers 2011- 2018

	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
All Trust cases	308	371	410	394	456	515	541
OUH Apportioned	73	92	90	64	94	114	106

Infection Prevention and Control

New challenges

12. *Mycobacterium chimaera*

12.1. *Mycobacterium chimaera* is a non-tuberculous mycobacterium. This type of mycobacterium is widespread in the environment, including tap water, and is usually associated clinically with respiratory or disseminated disease in immunocompromised patients.

12.2. It is now recognised that *M. chimaera* has caused severe infections in a small proportion of patients who have had cardiac surgery. UK and international investigations have implicated heater cooler units used for cardiopulmonary bypass, transmitting infection from their water tanks via generation of a contaminated aerosol with particles reaching the operative field.

- 12.3 In February 2017 NHS England tasked Trusts with notifying individuals at highest risk of possibility of subsequent infection and to alert health care workers so that appropriate investigations are undertaken. Almost 1500 OUH patients were involved in the notification exercise.
- 12.4 As a result of the notification exercise, two patients have presented this year with features consistent with *M chimaera* infection.
- 12.5 Both patients had blood cultures positive for *M. chimaera* which has been confirmed by the reference lab using whole genome sequencing. Both patients have received treatment.
- 12.6 Water sampling from the cardio-thoracic heater cooler units for legionella and *M chimaera* commenced in May 2017 (once the PHE testing programme was established). All four of the OUH heater cooler machines were removed from use as all had water samples positive for Mycobacterium sp. The machines were all deep cleaned and retrofitted with valves and pumps to reduce the risk of aerosolisation. In the interim the department had loan machines from Livanova and from Maquet.
- 12.7 The perfusion department continue to follow all the manufacturers cleaning and disinfection protocols together with all appropriate documentation as stipulated in the PHE guidance from February 2017. There are still significant challenges in working with existing facilities to ensure appropriate cleaning and decontamination of the Heater /cooler units. Decontamination of all the units is being undertaken in the trauma sluice and all machines undergo rigorous decontamination each week. Clinical perfusion staff continue to require health monitoring as required by Occupational Health to manage exposure to the prescribed cleaning agents.
- 12.8 Water testing for environmental Mycobacterium was positive in the March 2018 sample of a 3T machine. The unit has been removed for decontamination and returned to LivaNova. This illustrates that despite meticulous adherence to the manufactures guidance (Instructions for Use) Mycobacterium contamination is pernicious and difficult to exclude.
- 12.9 The PHE recommends siting the heater coolers outside theatre; this is not easily achieved in the existing theatres. . This has been discussed at the Cardiac Clinical Governance meeting where a risk assessment for both siting heater-coolers outside theatres and keeping them in theatres was requested.. All risk assessments have been complete for some time but there has been no progress in the modification of physical infrastructure.

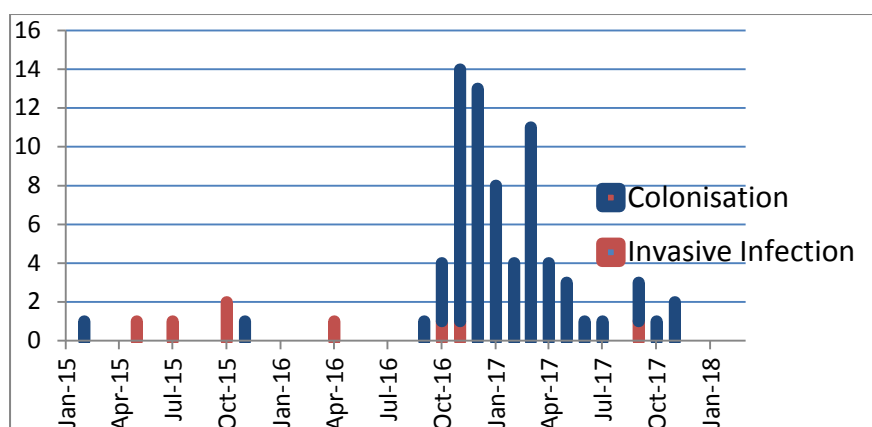
13. ***Candida auris***

- 13.1 Public Health England (PHE) issued an alert for *Candida auris* (*C.auris*) in July 2016. This is an emerging pathogen associated with nosocomial outbreaks on five continents, mainly in high-dependency settings. It is commonly resistant to the first-line antifungal, fluconazole and can develop resistance to other classes of antifungal agents. It appears to be unlike other pathogenic yeast species in its propensity for transmission between hospital patients. *C.auris* can cause asymptomatic colonisation or clinical infections, e.g. surgical site, blood stream and device related infections. *C.auris* is thought to be transmitted by direct contact with

someone who has an active infection, someone who is colonised with *C.auris*, or via contaminated objects/the environment.

- 13.2 A look-back exercise in the OUH identified four *C. auris* colonised patients and five with invasive infection between Feb 2015 and Oct 2016. 8/9 had been on the neurological intensive care unit (NICU). An outbreak of *C. auris* in the NICU was declared in October 2016. A package of infection prevention and control measures was put in place to minimize transmission, including patient screening, patient isolation or cohort nursing, enhanced cleaning, anti-fungal prophylaxis, production of an ‘At A Glance’ guidance document, good staff communication and advice on patient transfer.
- 13.3 In collaboration with PHE and the Oxford University based Modernising Medical Microbiology group, an intensive programme of environmental sampling, whole genome sequencing of *C. auris* isolates, and a case control study were undertaken from October 2016 to November 2017.
- 13.4 The case control study confirmed a working hypothesis that the use of multi-use axillary temperature probes was an independent predictor of *C. auris* acquisition (Odds ratio 6.8 (3.0-15.7, P<0.001). There was no evidence that *C. auris* acquisition was associated with increased mortality (hazard ratio 1.21, 95%CI 0.64-2.29, p=0.55).
- 13.5 Whole genome sequencing demonstrated a clonal outbreak, with a likely single introduction of *C. auris* into Oxford in 2012/13. Isolates obtained from the axillary temperature probes were found through-out the phylogenetic tree of isolates obtained from the patients
- 13.6 Following removal of the temperature probes in April 2017 the number of new acquisitions of *C. auris* decreased considerably. High level IPC precautions were maintained as a small number of cases continued to occur, likely to be due to persistent environmental contamination. The last case in the Trust was in November 2017. As a precautionary measure, high-level IPC precautions (see 16.2) remained in place until the end of April 2018.
- 13.7 The Infection Control Doctor attended the national PHE debrief session in April 2018 to discuss lessons learned.

Table 3: *Candida auris* cases identified January 2015-March 2018



14. Investigation of other sporadic infection prevention and control incidents and outbreaks

14.1 The IPC team undertook epidemiological investigations and interventions into a number of suspected or proven outbreaks

Table xx Other outbreak investigation activity (excludes C.auris and Influenza)

Date and Location	Suspected outbreak organisms	Investigation outcome	Key actions
March 2017- April 2017; Haematology ward, Churchill	Carbapenemase-producing Enterbacteriaceae (CPE) bacteraemia, 3 patients	Evidence of transmission between patients. No evidence of CPE on screened patients being admitted. Environmental cleaning audit performed. Handwashing sinks being used for disposal of drinks and liquid feed. Only one of 59 sinks screened showed CPE.	Screening of CPE for haematology inpatients, subsequently reverted to Trust guidelines. Continue to be exemplary with general infection control measures, underpinned by good hand hygiene. Continue to not pour waste fluids (including food- and drink-related fluids) into the ward basins
June 2016- July 2017; Urology outpatients, Churchill	Gram negative bacteraemia, 7 cases in patients after TRUS (transrectal ultrasound guided) prostate biopsy	Overall rate of bacteraemia <1% but practice improvement opportunities identified and implemented	Continue current bowel preparation practice prior to biopsy (rectal povidone-iodine); implement single use biopsy guns in line with best practice; explore options to implement 'high level disinfection' cleaning of the ultrasound probe in line with best practice; review local antibiotic resistance patterns; review of local antibiotic prophylaxis guidance
July 2017; Neonatal Unit, JR1	Pseudomonas, 3 cases	Not an outbreak, multiple sporadic cases. No environmental source but association with expressed breast milk feeding and quality of sterilisation of breast pumps	Introduction of enhanced sterilisation procedures for breast pumps
December	Patient nursed on	No staff were found to be	No action required in

2017; Respiratory ward	open ward diagnosed post-mortem with TB (tuberculosis)	significant contacts. Two patients were considered to be significant contacts	respect of staff. Patients followed up according to the OUH TB policy
September 2017-March 2018; CMU 7A; Trauma 7F; CMU 7C (all JR2) Robins ward (CHOX)	Norovirus outbreaks In total, involved 47 patients and 32 staff	No specific investigation indicated	Cohorting, enhanced infection control and cleaning measures, standard for norovirus outbreak
October 2017; Ophthalmology	Suspected outbreak of post-surgical endophthalmitis	Not an outbreak. Different cases in different locations with different surgeons	No further action required.
January 2018; Neonatal Unit, JR1	Baby transferred to another hospital found on screening to be colonised with CPE	No evidence of CPE colonisation on any contacts with the index case	No further actions required

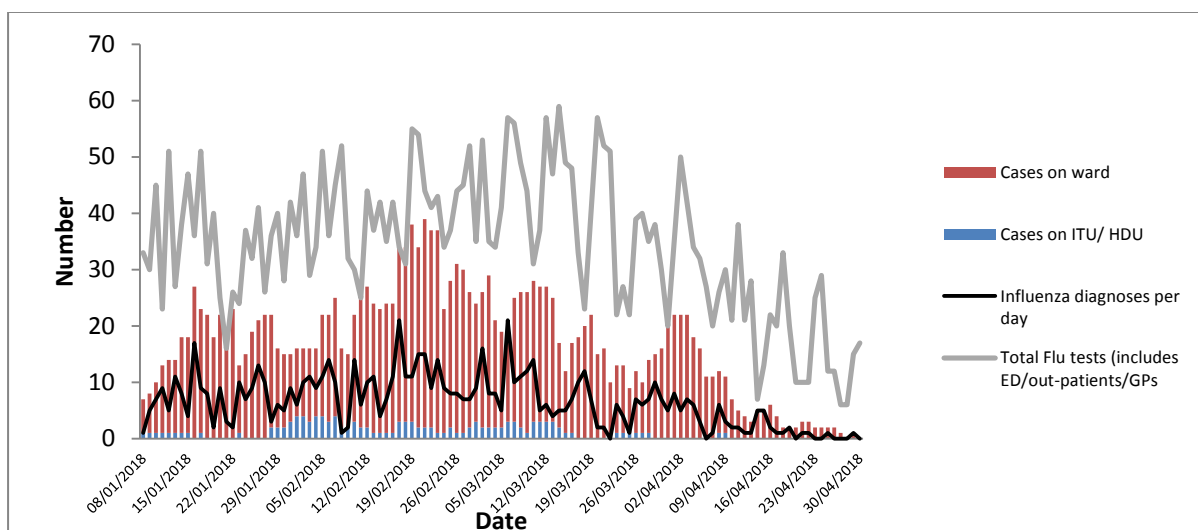
Influenza

18.8.1 In the 2017 to 2018 season, moderate to high levels of influenza activity were observed in the UK with co-circulation of influenza B and influenza A(H3). Nationally a very high impact was observed, in terms of laboratory confirmed influenza hospital and ICU/HDU admissions, particularly amongst older adults.

18.8.2 Within Thames Valley, Oxfordshire had the highest rate of influenza-like illness rates per 100,000 population

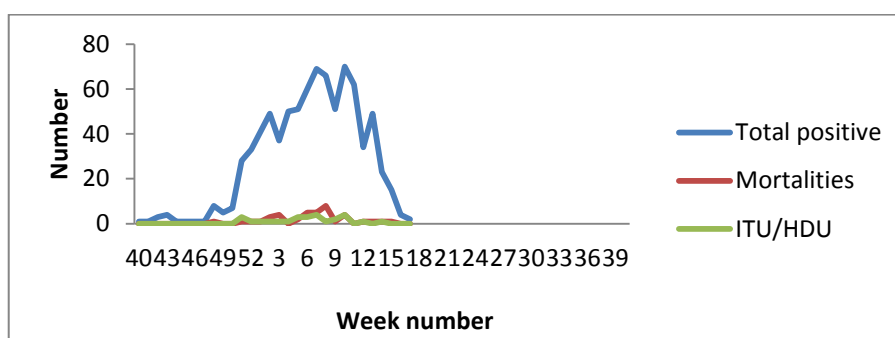
18.8.3 Within closed settings in Oxfordshire (schools and care homes) the number of outbreaks was increased compared with previous seasons, with 19 influenza-like illness (ILI) outbreaks in care homes (5 confirmed Flu A, 4 Flu B, 2 Flu A and B, 1 Flu unspecified and 3 negative out of 15 tested).

A total of 835 proven influenza cases (527 Influenza A, 308 Influenza B) were diagnosed across the Trust from 2/10/17 (start of week 40) to 29/4/18 (end of week 17). Patients with a diagnosis of influenza occupied 7723 bed days. The season saw 5% all-cause mortality in patients in the OUH with confirmed influenza, and 3% (27 patients) required ITU admission.



Deaths and ITU/HDU stays per week

18.8.4 There were a total of 40 deaths in patients diagnosed with influenza (see table in section 3.3.1), with an all-cause mortality of 5%. A notes review to establish attributable mortality is underway.



18.8.5 Potential nosocomial acquisition

Potential nosocomial acquisition is defined for the purpose of this report as an influenza case diagnosed after more than 5 days in hospital, suggesting nosocomial transmission from patients, relatives or staff. An alternative explanation is a late diagnosis of influenza, i.e. not tested on admission. The influenza test will remain positive for several days following acute infection.

18.8.6 120 cases potentially acquired nosocomially were seen this year. Eight were aged 15-44, 13 were aged 45-64, and 99 aged 65+.

18.8.8 The number of potential nosocomial cases diagnosed after 5 days of admission increased from 1% in December to 7% in January to 16% in February.

18.8.9 As consequence, the management of influenza patients changed during the course of the season to include

- The testing for influenza in patients with respiratory symptoms at the point of triage in ED/EAU for the purposes of infection control
- An increase in capacity for flu testing in microbiology with prioritisation of tests from EAU/ED or on request from ops managers (4 tests/hour rather than the current 2 tests)
- The review of patients in contact with symptomatic influenza positive patients to see if they qualify for prophylaxis
- The review of patients with possible nosocomial acquisition
- The review of cause of death in those patients who have died with a positive influenza diagnosis
- The PHE were informed.
- Updating of the 'Flu- At a Glance'

Reference:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/704665/PHE_influenza_surveillance_graphs_2017_2018_week_18_2018.pdf

18.8.10 70% of front line staff were immunised in 2017/18. This was a continued improvement on previous years.

Audit and Compliance to Policy

19. Hand Hygiene

- 19.1 Compliance with hand hygiene remains a priority for the infection prevention and control service and is one of the most important measures in preventing the spread of infection in hospital. There is good evidence to demonstrate that improved hand hygiene can reduce healthcare associated infections including MRSA (Pittet 2000).
- 19.2 All clinical areas in the OUH report Hand Hygiene Compliance with the World Health Organisation (WHO) 5 moments of Hand Hygiene (2009) and as directed by OUH Hand Hygiene Policy. Each area has responsibility for conducting their own hand hygiene audits and for reporting them through their own directorate clinical governance structure.
- 19.3 As the IPC team is now fully staffed it has been able to conduct a greater number of hand hygiene audits across the Trust, to validate those already carried out by the clinical Divisions. A number of audits were below the expected standard. As a consequence Divisions have been asked to produce their own improvement plans and the IPC team have supplemented this (**Appendix 3 & 4**).
- 19.4 The Annual Plan for 2018/19 will continue to focus on the improvement of hand hygiene scores including a promotional Hand Hygiene Awareness Week leading up to Global Hand Hygiene Day.

Annual Sharps Audit

20. Daniels Healthcare provides an annual audit of sharp safety across the Trust for the purpose of raising sharps awareness, assessing practice and discussing problems.
- 20.1 Daniels conducted their annual audit in the autumn. The results were made available to Divisions who are asked to produce their own action plans where relevant. A paper was presented at the January 2018 HIPCC (**Appendix 1**).
- 20.2 In brief the audit looked at 1565 sharps containers and found 16 sharps containers (1.02%) with protruding sharps (these were not necessarily overfilled but had long objects protruding from them), 145 (9.2%) that were not properly assembled, and 10 that were more than three quarters full, and 534 sharps containers did not have the temporary closure in place when the container was left unattended or during movement.

Cannula Audit

21. The Infection Prevention and Control team conducted a trust wide point prevalence audit of peripheral cannulas in response to anecdotal observations that use of the antecubital fossa (ACF) location was ubiquitous.
- 21.1 A third of cannulas were sited in the ACF. This audit did not examine the rationale for the use of the ACF.
- 21.2 The results have been shared with the clinical areas. Further auditing is embedded in the 2018/19 annual plan

Table 18 Peripheral Cannula Audit

Number of Peripheral Cannulas Audited	Percentage of Peripheral Cannulas recorded on EPR	Percentage of Peripheral Cannulas with Visual Inspection Phlebitis Scores	Percentage of Peripheral Cannulas located ACF
256	58% (n=149)	37% (n=94)	34% (n=86)

Clinical Guide 74 Audit

22. The CG 74 guideline covers preventing and treating surgical site infections (SSI) in adults, young people and children who are having a surgical procedure involving a cut through the skin. It recommends effective methods to use before, during and after surgery to minimise the risk of infection. This guideline has a number of sections and therefore one area (antimicrobial prescribing) was selected to be audited following consultation with the CCG.
- 22.1 Key findings from the audit were as below.
- 54 records were reviewed for compliance against peri-operative prophylactic antibiotic compliance; all received peri-operative antibiotic prophylaxis
 - In 15 of the records reviewed the local antibiotic formulary used for antibiotic choice was not followed

- There is no standardised choice of skin prep across the Trust. Of the specialities checked all used chlorhexidine 2% but the preparation varied.
- The records of 32 patients being treated for a suspected or confirmed SSI were reviewed against the standard that the antibiotic given, covers the likely causative organisms. In 30 cases this was true. However, the choice was often a broad spectrum antibiotic
- This exercise highlighted other issues regarding antibiotic prescribing which has been discussed with the Antimicrobial Stewardship Team
- The standard of discharge summaries varied greatly but number of them do not report the condition of the surgical wound and indeed if there is a SSI

Infection Prevention Awareness Weeks

23.1 With the appointment of two new Band 5 IPC nurses, the IPC Awareness Weeks were launched. These weeks the Band 5 nurses base themselves in the clinical area, shadowing staff to understand some of the root causes for adherence or failure to adhere to IPC standards. Outside speakers are invited in to talk about topics such as decontamination, management of lines, and hand hygiene. A report is produced at the end of the week for the ward manager and matron. The weeks have been positively received and events are now booked up until the mid-summer.

Social Media and Promotion of IPC

24. This year the IPC team have worked hard on promoting and branding OUH IPC, building IPC Link Practitioners and followers. The team now have a Yammer account and are Tweeting daily. Currently there are x Yammer followers and y Twitter followers.

Surgical Site Infection Surveillance

25 A Trust wide SSI Group was established in March 2017 and reports through Hospital Infection Prevention and Control Committee (HIPCC).

25.1 The Group has two aims. Firstly to ensure that all surgical specialities commence SSI surveillance and secondly to reduce rates of SSI.

25.2 The EPR surgical site surveillance infection (SSI) tool went live in November 2017 and is being piloted in cardiac surgery, neurosurgery and hepatobiliary surgery. The challenge at present is for nursing staff to make the switch from completing wound assessments on paper to on EPR. The SSI tool depends on the electronic wound assessment being completed. Ongoing education and training in this is being delivered by the IPC and Tissue Viability teams.

25.3 Currently only two surgical specialities, cardiac surgery and trauma/ orthopaedics submit their SSI rates to Public Health England (PHE). Trauma now submits their SSI rates to PHE on a continual basis rather than just the mandatory quarter.

Cardiac Surgical Site Infection Surveillance

26. The cardiac surgery directorate have a robust prospective process for conducting surveillance and reporting to Public Health England (PHE), supported by a Clinical Nurse Specialist.

- 26.2 In January 2018 the directorate received a letter from Public Health England advising that we are a **low** outlier for risk of SSI for patients undergoing non-CABG surgery which reached borderline significance p-value = 0.050009 with the national benchmark p-value = 0.2 risk.
- 26.3 The service continues to have a “drop-in” wound clinic, allowing patients to have their wound reviewed by the Specialist nurse and/or a surgical registrar. The wound clinic is also used to follow up patients requiring ongoing treatments and reviews of their wound post-discharge.
- 26.4 Multidisciplinary case reviews are now performed for the majority of patients with a SSI. These case reviews are to establish the category of the infection and what can be learnt from the patient’s pathway and if improvements can be made.

Table 19 CABG Surgical Site Wound Infections (Benchmark 4.1%)

CABG Sternal Surgical Site Wound Infections (Benchmark 4.1%)					
Period	Superficial wound infections	Deep incisional wound infections	Organ / Space infections	Total	Submitted to PHE
Quarter 1 Apr-Jun 2017	(3/127)= 2.4%	(1/127)=0.8%	(0/127)=0%	(4/127)= 3.2%	Yes
Quarter 2 Jul-Sep 2017	(3/125)= 2.4%	(2/125)= 1.6%	(0/125)= 0%	(5/125)= 4%	Yes
Quarter 3 Oct-Dec 2017	(4/135) = 3%	(3/135) = 2.2%	(0/135) = 0%	(7/135) = 5.2%	Yes
Quarter 4 Jan-Mar 2018	(4/109) = 3.7% TBC	(0/109) = 0%	(0/109) = 0%	(4/109) = 3.7% TBC	No

Trauma Surgical Site Infection Surveillance**Table 21**

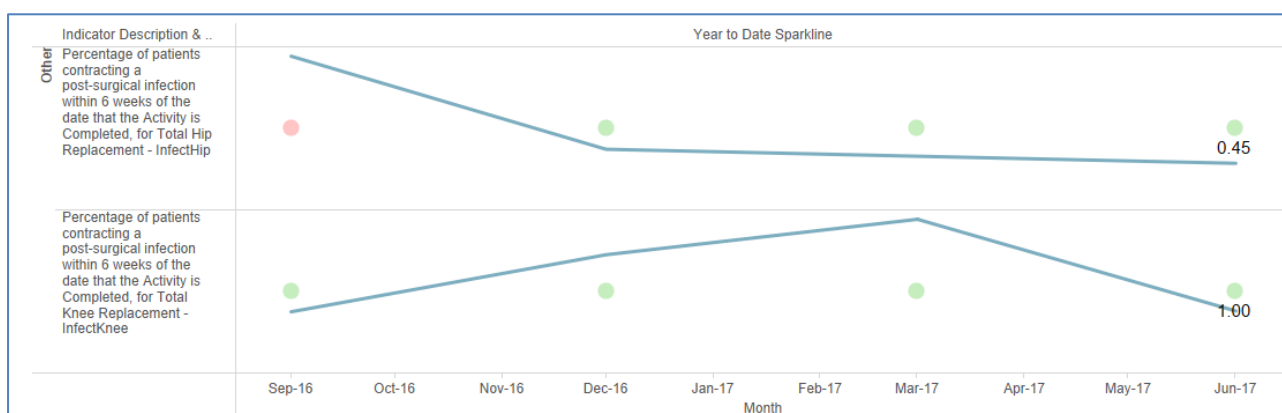
Quarter	Hospital	All #NOF Operations	SSI cases	SSI rate
Jan-Mar 2017	JRH	129	2	1.6%
	All SSI	95,620	1297	1.4%
Apr-Jun 2017	JRH	110	2	1.8%
	All SSI	95,376	1272	1.3%
Jul-Sept 2017	JRH	83	1	1.2%
	All SSI	95,417	1244	1.3%

Oct-Dec 2017	JRH	129	3	2.3%
	All SSI	95902	1218	1.3%

27. At present, provisional figures for Q4 (Jan-Mar 2018) of the 2017/18 financial year are as follows; one SSI from 92 #NOF operations. Data for Q4 of 2017/18 has not yet been validated. The deadline for Q4 reporting is June 30th 2018, so any infections may yet declare themselves. The time lag is because of the length of time it may take for a deep infection to declare itself.

Table 22 Orthopaedic Surgical Site Infection Surveillance

Indicator Description & ID	Hierarchy Level 1	Targets	2017-18			
			Q1 June	Q2 September	Q3 December	Q4 March
Other Percentage of patients contracting a post-surgical infection within 6 weeks of the date that the Activity is Completed, for Total Hip Replacement.	Trust	1%	0.45%	0.50%	0.22%	0.00%
Percentage of patients contracting a post-surgical infection within 6 weeks of the date that the Activity is Completed, for Total Knee Replaceme..	Trust	2.5%	1.00%	1.19%	0.35%	0.00%



Wider Infection Prevention and Control Service

Contenance Service

28. The Contenance service has two main work streams. Firstly it provides training on catheterisation and catheter care and continence promotion through teaching sessions for Foundation Nurses, non-UK trained Nurses, Nursing Assistants and Assistant Practitioners, Nursing Students at Brookes University and Medical Students and also provides Male Catheterisation training as part of the qualified nurses extended role which includes the completion of competencies. Secondly, continues working with the Quality Improvement (QI) team and Oxford Academic Hospital Science Network to reduce Catheter Associated Urinary Tract Infection (CAUTI). The team works closely with the Community Allied Health Service Network CAUTI group which has produced a joint Catheter Passport which has now been distributed across

the health economy. They have also developed an eLearning tool for recognising and avoiding CAUTI and Continence Promotion.

- 28.1 The Continence service and the QI work stream have proposed a strategic approach to the provision of education and assessment is agreed by the CAUTI Steering Group for implementation across the Trust. This approach to include 3 phases: Competence, E-learning and communication; Early removal of catheter; Using intermittent catheterisation not indwelling catheters.
- 28.2 The team continue to work with the Information Analysts and support services to find the best way to extract the data to measure CAUTI incidence in the Trust.

Intravenous Steering Group

29. An Intravenous (IV) Steering Group was set up, with the first meeting held in November 2017, to align Trust wide IV access related work streams, provide an overview and awareness of strategic issues relating to IV related practice, standardisation of IV related products, monitor rates of Central Line Associated blood stream infections (CLABSI) in line with Magnet accreditation and associated IV related cost reduction strategies. Meetings are held on a quarterly basis and reports to the Hospital Infection Prevention and Control Committee, with attendance from IPC, Vascular Access, Practice Educator for Learning and Development, ANP for Medicines Management and Safety and more recently attendance from Procurement.

Antimicrobial Stewardship

30. The Antimicrobial Stewardship Management Team (AMST) is responsible for the operational side of antimicrobial management, e.g. ensuring the introduction of procedures to promote prudent antimicrobial usage, the monitoring of antimicrobial usage, the dissemination of information and the updating of health care professionals. Also supports development of guidelines and assessment of new agents.
- 30.1 The AMST is responsible for antimicrobial stewardship through MDT meetings with Infection Prevention and Control nurses, pharmacists and Microbiology/Infectious Diseases doctors. Activities include challenging clinicians to justify prescribing of antimicrobials
- 30.2 The AMST meets monthly. The AMST has a core membership of
- Consultant Lead (Antimicrobials)
 - Paediatric Stewardship Lead
 - Infection Control Doctor
 - Lead Pharmacist for Antimicrobial Stewardship
 - Specialist Pharmacist - Antimicrobials
 - Lead Nurse and Manager for Infection Prevention and Control
 - Antimicrobial Audit Assistant

- Infectious Disease (ID)/ Microbiology consultant
- Paediatric ID consultant (or deputy)
- Other members of Antimicrobial Steering Group (ASG) are co-opted into meetings as appropriate.

30.3 AMST members are also members of the Antimicrobial Stewardship Group (ASG). ASG is a subgroup of the Medicines Management and Therapeutics Committee (MMTC) that meets every two months, including representatives from CCG and Oxford Health. ASG advises MMTC regarding antimicrobial formulary applications and checks antimicrobial guidelines.

30.4 AMST is represented at meetings of MMTC and HIPCC.

30.5 During 2017/18 the AMST have supported the implementation of activities related to reducing the impact of series infections CQUIN. The CQUIN has four parts, three specifically consider the management of sepsis patients and the fourth aims to reduce total antibiotic consumption as well as the use of certain broad-spectrum antibiotics.

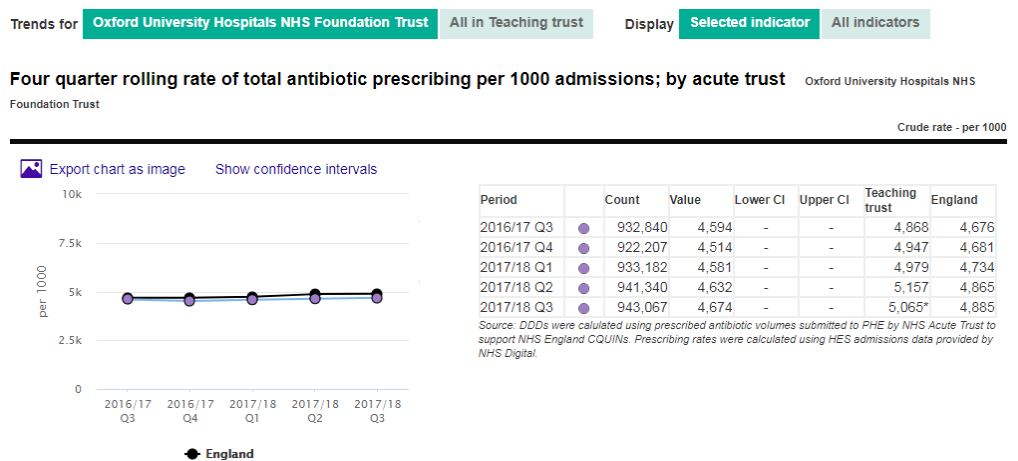
30.6 There are three parts to the reduction in antibiotic consumption indicator:

- Total antibiotic consumption per 1,000 admissions
- Total consumption of carbapenems per 1,000 admissions
- Total consumption of piperacillin-tazobactam per 1,000 admissions

30.7 These are expressed as Defined daily dose (DDD) per 1,000 patient admissions.

30.8 The data suggests that the Trust achieved the target 1% reduction in piperacillin-tazobactam. Final data are awaited but it appears that the Trust has not achieved the 2% reduction in total antibiotic consumption or 1% reduction in carbapenems.

30.9 Data from Public Health England shows OUHFT practice compared to average practice in England:

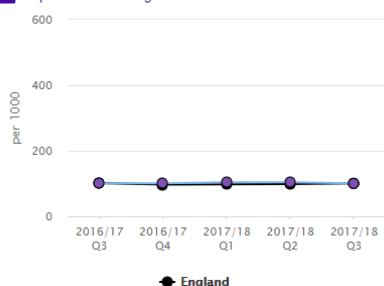


Trends for **Oxford University Hospitals NHS Foundation Trust** All in Teaching trust Display **Selected indicator** All indicators

Four quarter rolling rate of carbapenem prescribing per 1000 admissions; by acute trust and quarter Oxford University Hospitals NHS Foundation Trust

Crude rate - per 1000

Export chart as image Show confidence intervals



Period	Count	Value	Lower CI	Upper CI	Teaching trust	England
2016/17 Q3	20,418	100.6	-	-	117.7	101.3
2016/17 Q4	20,523	100.5	-	-	114.5	96.7
2017/18 Q1	21,186	104.0	-	-	117.2	97.6
2017/18 Q2	21,102	103.8	-	-	125.1	98.7
2017/18 Q3	20,283	100.5	-	-	129.9*	100.5

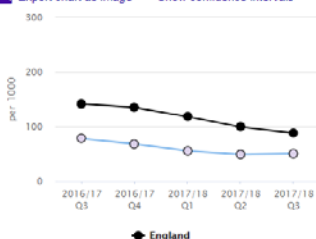
Source: DDDs were calculated using prescribed antibiotic volumes submitted to PHE by NHS Acute Trust to support NHS England CQUINs. Prescribing rates were calculated using HES admissions data provided by NHS Digital.

Trends for **Oxford University Hospitals NHS Foundation Trust** All in Teaching trust Display **Selected indicator** All indicators

Four quarter rolling rate of piperacillin-tazobactam prescribing per 1000 admissions; by acute trust Oxford University Hospitals NHS Foundation Trust

Crude rate - per 1000

Export chart as image Show confidence intervals



Period	Count	Value	Lower CI	Upper CI	Teaching trust	England
2016/17 Q3	15,790	77.8	-	-	136.1	142.1
2016/17 Q4	13,927	68.2	-	-	125.1	135.1
2017/18 Q1	11,311	55.5	-	-	109.0	117.9
2017/18 Q2	9,927	48.8	-	-	95.6	99.4
2017/18 Q3	10,188	50.5	-	-	86.6*	88.0

Source: DDDs were calculated using prescribed antibiotic volumes submitted to PHE by NHS Acute Trust to support NHS England CQUINs. Prescribing rates were calculated using HES admissions data provided by NHS Digital.

30.10 This work will continue during 18/19.

Percentage of antibiotic prescriptions reviewed within 72 hours: Q4 target was >90% which was achieved.

30.11 This work will continue during 18/19 with the introduction of the Reducing the Impact of serious infections (Antimicrobial resistance and sepsis) CQUIN.

Environmental and Estates Issues

Isolation Facilities in the Emergency Department

31. The Emergency Department (ED) does not currently have a suitable isolation facility for the assessment of patients with potential viral haemorrhagic fever (e.g. Ebola) and other highly transmissible pathogens.
 - 31.1 Throughout the year a number of patients seen in the Emergency Department for assessment of MERS-CoV infection. This is a highly transmissible respiratory virus with a high mortality. None were confirmed to be positive.
 - 31.2 Current plans for the expansion of the Resus Area will include the provision of a suitable isolation facility, with an external and internal entrance, bathroom facilities and a positive pressure antechamber.

John Warin Ward (JWW)

32. JWW moved from the Churchill to the JR site in the summer of 2017. Unfortunately the four isolation rooms have not yet been handed over to the clinical users because of ongoing issues with the air handling units.
- 32.1 We are therefore unable to safely admit and manage patients with drug resistant or high virulent respiratory pathogens such as multi-drug resistant TB. Arrangements have been made for our local patients to be managed in other Trusts, incurring reputational risk, as well as inconvenience to our local population and referring hospitals.

Water Safety**Churchill Cancer Centre**

33. The Cancer Hospital at the Churchill site has since opening had an ongoing issue with Legionella positive water samples. This data is presented on a monthly basis to the Hospital Infection Prevention and Control Committee by the Soft Facilities Manager for the Client Contract Team. Long term solution discussions are being held with the Trust, Ochre and G4S regarding escalating concerns associated with water quality at Churchill.
- 33.2 G4S has also confirmed that they have appointed an external advisor to undertake the overdue 2017 water risk assessment.
- 33.3 One of the key tasks for IPC to become involved in is to work with the clinical areas to identify the removal of all low use or unused water outlets from the system.

Horton Site

34. All water hygiene sampling and testing at the Horton was completed in accordance with Health Technical Memorandums (HTM's), Trust Policy and Planned Preventive Maintenance (PPM) for the year.
- 34.1 Following a major reconfiguration of the hot and cold water supplies in the Horton Children's Ward, all clinical areas have maintained clear results for the past eight months. There is however, a remaining low level (below 20 colony forming units (cfu)) positive result on the wash hand basin (WHB) within the Milk Kitchen.
- 34.2 Site wide water testing has identified low level cfu counts within some bathroom outlets in the Medical Block. Investigations identified that the bathrooms are being used to store patient hoists and commodes. Ward managers agreed to ensure regular flushing is being undertaken and recorded. Water cfu counts have improved but remain at low level positive (below 20cfu).
- 34.3 Pseudomonas testing within augmented care areas has been completed and all outlets have remained clear for two years.
- 34.4 The Horton team continues to work through making improvements to the water supply system, and have completed the majority of priority 1 & 2 actions recommended within the Legionella Risk Assessment. A working plan has been developed for the removal of all TMV's from water outlets within clinical areas. This involves improving pipework routes and installing Trust approved thermostatic taps. The taps are already on-site and installations will be carried out over the next rolling 12 months.

- 34.5 Horton Operational Estates have completed the upgrade of Air Handling Units (AHU's) for Theatres 1-3. This work included the replacement of all Heater/Chiller sections and batteries, droplet eliminators, new fan units and removable drip trays to aid thorough cleaning. This has eliminated the priority 1 risk identified in our legionella risk assessment. AHU 4 will be upgraded 2018/19. Each Theatre ventilation system has undergone verification testing and has been rebalanced following upgrade with air changes measured. All provided the recommended number of air changes.

Nuffield Orthopaedic Centre (NOC)

35. In June 2017, the Facilities Management (FM) Provider was informed of 19 presumptive counts of legionella in several locations within Phase 2 of the PFI Building. The FM Provider followed their management plan including disinfection of outlets and increased flushing. The cause was found to be the failure of a stratification pump on a hot water buffer vessel. The pump was changed the next day and the system pasteurised to eliminate the bacteria. Subsequent testing of all outlets has not shown any further presumptive counts
- 35.1 Over 2017/18 there were a number of minor presumptive legionella counts attributable to a lack of flushing. Appropriate management was undertaken.

Retained Estates

36. The number of Pseudomonas positive samples has stayed at 11. The retained estates now have accurate reading in-house testing for Pseudomonas within 24-28 hours which enables proactive and rapid response.
- 36.1 There is a steady improvement in Legionella results within the main hospital which is attributable to the copper silver ionisation system.
- 36.2 The cooling towers were removed over the winter period and there are now adiabatic coolers in place. This is a significant change as with the adiabatic cooling towers there is a reduction in the risk of Legionella. With the new coolers spray cooling is only used when the air temperature is too high to use cooled air, as with the previous towers there was constant water flowing through to maintain a cooling effect. This means as well as reducing the risk of Legionella, we will also reduce water consumption. The new coolers do not need chemicals to run; this reduces the hazardous chemicals that are on site and is also less expensive.

Ice Machines

37. The Water Safety Group (WSG) has made the difficult decision to remove ice machines which produce ice for consumption from all areas of the Trust. A recent paper presented by the WSG to the Hospital Infection Prevention and Control Committee (HIPCC) "Ice Machines Report, HIPCC September 2017" outlined the issues and potential problems of using ice machines. The recommendation of the WSG for the removal of ice machines was supported by HIPCC. A communication was sent out from the WSG to clinical areas advising them of this action.

Decontamination Committee

38. The Decontamination Committee meets quarterly and covers decontamination in Sterile Services, endoscopy, decontamination of medical devices and patient

equipment and environmental cleaning. This committee reports to the Hospital Infection Prevention and Control Committee.

- 38.1 The Infection Prevention and Control Manager has now formally taken on the role of the Decontamination Lead.
- 38.2 Endoscopy is carried out on the John Radcliffe site, Horton General Hospital and Churchill hospital.
- 38.3 A weekly final rinse water Total Viable Count (TVC) test is undertaken on all AERs to provide assurance that the rinse water used after the disinfection cycle is free from microbial contamination and therefore would not pose an infection risk during subsequent patient use.
- 38.4 To ensure that the water used for final rinsing is of sufficient quality, the OUH Endoscopy departments either use a two stage filtration or Reverse Osmosis (R.O) system; with the aim of providing a TVC count of 0 colony forming units (cfu).
- 38.5 For all areas that use the manual wipe system a Tracking system is in place to enable patient look-backs for assurance and tracing purposes.

West Wing ENT

39. Flexible Nasendoscopes are currently decontaminated using the Tristel wipe system in the ENT OPD in the West Wing. The Getinge cleaning machine installed during early 2016 is fit for use but has never been used. The department is addressing concerns regarding the 'scope room' (infection control, manual handling) before the machine is used. The high turnover of scopes will necessitate on-going use of the Tristel wipe system. This has been discussed at length with the users and the Client Contract team to try and find a solution.

Horton ENT

40. Flexible nasendoscopes are currently decontaminated using the Tristel wipe system; scopes are stored for 1 week using an approved system and cleaned prior to re-use using Tristel wipe system.

Blenheim Head and Neck, Churchill Hospital

41. Due to operational issues with the AERClens machines within this department, the Tristel wipe system is used to decontaminate Nasendoscopes, rather than using an automated process.

John Radcliffe Main Endoscopy & West Wing Endoscopy

42. The JR provides an inpatient and outpatient service to approximately 18,000 patients per year undergoing Gastrointestinal Endoscopy. There are 4 Automatic Endoscope re-processors (AER's) situated within the unit and it manages a further 2 AER's on level 3 of the West Wing.
- 42.1 The AERs in the West Wing are now in need of replacement due to being at the end of their life span. A schedule 10 is under way to address this.

- 42.2 The refurbishment of the main JR endoscopy department is planned for this financial year. This will require a mobile decontamination unit to be brought onto site while the refurbishment is undertaken.
- 42.3 The RO unit for JR endoscopy has currently been replaced with a temporary RO due to repeated failures.

Churchill Theatres

43. The Churchill Hospital uses 3 AER's (each with 2 "slots") to decontaminate endoscopes used by clinical teams within Churchill Theatres, the Churchill site and units external to the Churchill, such as NOC theatres and a Urology Clinic held in Bicester. This system differs from other AER's used within the OUH in that the scopes are reprocessed and stored within a "cassette" which can then be transported to where the scope is needed, rather than being reprocessed through an AER and then being placed in to a drying cabinet at point of use.
- 43.1 The annual report from last year highlighted that the lower loop continued to provide ongoing issues with high counts requiring regular remedial work. This issue has continued through 2017/18. A new RO is on site but not yet in use as the schedule 10 process is not yet complete.
- 43.2 Following the annual water tests carried out in February the IPCT were alerted to the confirmation of a positive Mycobacteria result for the Endoscopy Washer disinfectors. Appropriate management of this was undertaken.
- 43.3 The strain identification of the Mycobacterium identified it as *Mycobacterium fortuitum* and *Mycobacterium chelonae*, both of which are environmental Mycobacteria commonly found in tap-water.

Horton General Hospital

44. The Horton hospital Endoscopy Unit has 3 Wassenburg AERs which each reprocess 2 scopes at a time available. There were no reported issues during 2017/18.

Performance and Quality Team cleaning validation audits

45. Compliance criterion 2 of the Hygiene Code (2010) states that Trusts must provide and maintain a clean and appropriate environment in managed premises that facilitate
- 45.1 The domestic service providers on all sites have a contractual obligation to technically audit their own service standards according to the national cleaning standards each month. In very high risk areas i.e. ICU's, Theatres and High risk specialities such as Haematology and Transplant every room is audited each week. In high risk areas i.e. wards all rooms are audited each month and in significant risk areas i.e. outpatient departments all rooms are audited every quarter.
- 45.2 The Strategic Cleaning Policy was approved in November 2017 which confirmed that the Trust standards would rise to the national standard thresholds of very high risk areas 98%, high risk 95% and significant risk 85%. All cleaning contracts are set to achieve 100% cleaning standards, they still work to the 2003 national

cleaning standard definitions which require every surface to be actually cleaned daily, not just visually clean as the subsequent standards required and therefore the Strategic Cleaning Policy clarifies the Trust standards and removes any previous misunderstanding.

- 45.3 In addition the cleaning partnership group agreed a standard cleaning protocol for every item and clear demarcation of responsibilities between domestic staff and nursing staff which is now adhered to.
- 45.4 The Trusts Synbiotix auditing tool is programmed to score the audit to PAS 5748 2014 which is the latest specification for the measurement and review of cleaning standards in hospitals.
- 45.5 During the year the tool was rolled out to all sites to provide a standard platform so that all audits are comparable. All sites have been fully trained and the iPad's are all in place but it has recently come to light that a technical issue has prevented the Churchill and NOC sites from using the platform fully which is being addressed. Additionally the Horton site appears to be reluctant to transfer to the electronic system which also needs managing.
- 45.6 The annual Patient-Led Assessments of the Care Environment ("PLACE") assessments provide a snapshot of how the organisation is performing against a range of non-clinical activities which impact on the patient experience of care including cleanliness; site scores demonstrated good patient's assessment across this category. Following each assessment, any shortfalls that were observed were recorded on the assessment forms and reported to the appropriate helpdesk, and were immediately rectified. Results in 2016/17 the John Radcliffe 96.62%, Churchill 96.32%, NOC 98.61% and Horton 97.38% against a national average of 98.3%.
- 45.7 The Performance Team undertake monthly validation audits of randomly selected rooms carefully checking every item in the room. All deficiencies are logged onto the respective helpdesk for rectification within the hour. The rectification cleaning is required to be checked and signed off by the ward based nursing staff to confirm they are satisfied that the remedial actions have been satisfactorily undertaken.
- 45.8 The audit scores do vary and concerns have been raised during the year about the audit scores, however the services will continually change dependant on when the audits are undertaken, the level of activity, the domestic staff, the quality of supervision and currently because there are two differing audit tools being used rather than the same baseline platform, therefore the data are not fully comparable.
- 45.9 The audit reports are submitted monthly to HIPCC where they are fully discussed and through the monthly IPC paper to Clinical Governance Committee.

Conclusion

46. The report describes a large body of work carried out through a year of increased demand and pressure on the NHS and the Trust. The impact of influenza is particularly noteworthy, as are the metrics related to mandatory organism surveillance, and the successful termination of a number of different infection outbreaks. The identification of the important role for reusable temperature probes

in the maintenance of the Candida auris outbreak was particularly notable practice that the team is publishing to share learning.

Recommendation

47. The Trust Board is asked to note the contents of this annual report.

Dr T Berendt

Medical Director / Director of Infection Prevention & Control

Report prepared by:

Lisa Butcher, Lead Nurse and Manager for Infection Prevention and Control

Katie Jeffery, Deputy DIPC and Infection Control Doctor

Lydia Rylance-Knight, Senior Nurse Infection Prevention and Control

May 2018 v1

June 2018 v2

September 2018 v3

Appendix 5 IPC Annual Plan 2018-2019

	Topic	Lead	Metric of Assurance
	<p>1 Surgical Site Infection (1) to ensure all surgical specialities are undertaking surgical site surveillance (2)For all specialities to report rates of SSI to HIPCC and through own Clinical Governance structure (3) To work with specialities that have higher rates than national benchmarks to reduce their rates (4)To investigate and consider the use of adjuncts (eg antimicrobial coated sutures)</p>	<p>Lisa Butcher/Giles Bond-Smith/Stephane Paulus/Ruth Moroney, data support Tiph Clarke</p>	<p>(1)Audit of EPR to assess compliance with SSIS tool (2)Rates presented to HIPCC and CG, and benchmark OUH SSI rates against national rates (3) To introduce appropriate bundles</p>
	<p>2 Lines, Tubes & Device Related Infection (1) To establish rates of CAUTI (2) Delivery of CAUTI and continence education programme, validation of safety thermometer data (3)To have a robust mechanism in place for the monitoring of incidence and rate of CLABSI in all OUH intensive care settings using the Magnet definition.</p>	<p>CAUTI- Debbie Pond & Caroline Monzon, data support Tiph Clarke</p> <p>CLABSI Lydia Rylance-Knight, Stephane Paulus, Claudia Salvagno & Katie Jeffery, data support Tiph Clarke</p>	<p>(1)EPR data- to focus on obtaining accurate meaningful data and establishing a baseline (2) Reduction in CAUTI and number of unnecessary catheterisations</p> <p>(2)EPR data, Carevue data, ICNARC and other ICU surveillance tools as appropriate. Rates presented to HIPCC and CG, and benchmark OUH CLABSI rates against national rates</p>

<p>3 Hand Hygiene (1) Development of Matron's assurance app (2) Development of escalation tool when compliance scores are below 80% (3) Development of Dermatitis Action Group by Occupational Health (4) Glove Use-Campaign to focus on inappropriate glove use</p>	<p>Sarah Wright/Gabi D'Amato/Claudia Salvagno</p>	<p>(1) IPC hand hygiene validation audit results (2) Clinical areas scores reported through dashboard/clinical governance papers (3) Minutes from this group (led by OH) (4) Audits to monitor appropriate glove use</p>
<p>4 Gram Negative Bloodstream Infections (GNBSIs) mandate to reduce the number of healthcare associated GNBSI by 50%, by financial year 2020 to 2021 (1) Continue to review the cohort of patients to understand issues within patient pathway (2) Devise RCA tool for all post 48 hour cases (3) Work with general surgeons and GPs for HPB management (4) Work with Urology to ensure pre-operative UTIs are managed appropriately including choice of antibiotic for TRUS biopsy infections (5) Continue to work with Health Economy for joint approach (6) Review number of post-48 GNBSIs (7) CAUTI see action 2</p>	<p>Katie Jeffery/Lisa Butcher, data support Tiph Clarke</p>	<p>(1) HCAI database review (2) RCA tool in use (3) Evidence of meetings between HPB surgeons and Primary care impacting on patient pathways (4) Implementation of new guidance on pre-op urine testing in Urology (5) Evidence of discussion and joint working with Health Economy. Number of GNBSIs. (6) Number of post 48 hours positive GNBSI per month reported through clinical governance and HIPCC</p>
<p>5 Information & Education To develop and improve IPC Information & Education available for staff, patients and visitors</p>	<p>Staff Education- Claire Sutton, Merline Tabirao</p>	<p>(1) New IPC eLearning package in use</p>
	<p>Intranet & Internet Site- Gemma Pill, Claudia Salvagno, Jayne Barefield</p>	<p>(1) Create a more user friendly intranet site for staff and internet for external use.</p>
	<p>Patient/Visitor Education -Ruth Moroney/Jayne Barefield</p>	<p>(1) Information board in main JR corridor for visitor and patients</p>

6	Screening- to ensure all areas that are required to undertake screening are compliant. (1) MRSA- ensure that MRSA screening tool is triggering correctly (2) CPE- EPR trigger system required	Ruth Moroney/Gemma Pill/Lydia Rylance-Knight, data support Tiph Clarke	(1) & (2) EPR compliance rates
7	Preparedness for New and Emerging Pathogens and Winter pressures (Influenza) (1) Staff preparedness John Warin Ward, ED & ITU(adult and children's services) (2) Facilities are fit for purpose (3) Work with laboratories to ensure appropriate provision of laboratory testing to support IPC	Andrew Brent/Sarah Wright/Claudia Salvagno	(1) Staff demonstrate fully preparedness for any highly infectious pathogen incident (2) Policies and guidelines are up to date. Isolation facilities are in use on John Warin Ward. (3) Rapid access to results to enable correct clinical and IPC management
8	Cleaning - cleaning standards to be compliant with Trust policy and National guidance	Wendy Robinson/Lisa Butcher	Audit data from (1) Contract Performance team (2) Providers (3) Matron's assurance audits (4) IPC ad-hoc audits - all to report through Trust governance structure (HIPCC, CGC)
9	Decontamination (1) To work towards best practice by introducing automated process for decontamination of semi-critical probes (2) Work towards establishing a validated cleaning process for dynamic mattresses	Lisa Butcher/Lydia Rylance-Knight & Decontamination Committee	(1) Automated process in place (2) Off site decontamination in place
10	Sepsis and antimicrobial stewardship targets to be covered by CQUIN targets	Andrew Brent/Katie Jeffery/Nicola Jones/Louise Dunsmure/Stephane Paulus/Claire Hird	(1) Achievement of CQUIN target