# Infection Prevention & Control Annual Report – 2017-18

## 1. Executive Summary and Headlines

The purpose of this report is to inform and provide assurance to the Trust Board, East and North Hertfordshire Clinical Commissioning Group, patients, public and staff. It provides an overview of the key work at East and North Hertfordshire NHS Trust with regard to infection prevention and control for the reporting period 1 April 2017 to 31 March 2018, and measures Trust performance against national targets and compliance with the Health and Social Care Act 2008 (Reviewed 2010): *Code of Practice for the NHS on the prevention and control of infections and related guidance*, otherwise known as the *"Hygiene Code".*

The Trust has increased the focus on Infection Prevention and Control to ensure compliance with the Hygiene Code and continues to be registered with the CQC, without conditions, across all sites.

The Trust continues to regard patient safety in relation to the prevention of Health Care Associated Infections (HCAI) as a key priority for the organisation.

| | **Headlines and Key Achievements** | **Further information** |
|---|---|---|
| 1. | **MRSA bacteraemia**<br>One case of trust allocated MRSA bacteraemia was identified. Following a review this was identified as an unavoidable contaminant. | Page 6 |
| 2. | ***Clostridium difficile***<br>28 cases of trust allocated C. difficile cases were identified. These cases were reviewed to identify any learning which can be applied to prevent future cases. Following an outbreak of C. difficile (see below) further actions were identified in partnership with NHS Improvement which are being implemented across the Trust during 2018-19. | Page 6 |
| 3. | **Outbreaks**<br>Seasonal outbreaks of Norovirus and Influenza were identified and controlled at early stages, thus limiting the necessity to close beds to patients requiring admissions.<br><br>An outbreak of C. difficile was identified on an elderly care ward in the Spring of 2018, necessitating its closure. The Trust is working with its partners in the CCG and NHS Improvement to ensure the lessons identified from this incident are being applied across the trust to prevent infections. | Page 7 |
| 4. | **Gram negative bacteraemia**<br>The Trust has increased monitoring of gram negative bacteraemia to provide an enhanced surveillance of these organisms, namely Klebsiella sp, Pseudomonas auruginosa and E. coli as part of the national initiative to reduce the numbers of these infections across the whole health economy. | |

| | | |
|---|---|---|
| | • Learning from incidents and infections is identified and implemented across the Trust<br>• Emerging risks contributing to infections are identified promptly, enabling appropriate actions and resources to be effectively targeted.<br>• Standardised systems and processes to provide assurance<br><br>These are detailed in a trust wide improvement plan, overseen by an Infection Prevention & Control Improvement Group. this will be taken forward for the year 2018 -19.<br><br>**Reducing C. difficile infections**<br>The 2018-19 ceilings have been reduced by one case for each trust. Therefore ENHT ceiling is 10 cases for the coming year. This represents one of the lowest rates as measured by number of bed days in the country.<br><br>**Gram negative bacteria**<br>The increasing threat posed by gram negative bacteria across the whole health economy is a national challenge that the Trust, in partnership with local partners, will meet by continuing to develop and implement effective actions. A detailed plan will be developed in the coming year in response to the findings of the enhanced surveillance of these infections. | |

## 2. Compliance with the Health and Social Care Act 2010

The Care Quality Commission (CQC) has used the Code of Practice as a key feature of registration. Failure to observe the Code may either result in an improvement notice being issued to the Trust by the CQC following an inspection, or in it being reported for significant failings and placed on “special measures”. All NHS organisations must be able to demonstrate that they are complying with the Code. The Trust’s Risk and Quality Committee and Board have continued to receive monthly reports on Infection Control performance and compliance during the reporting year.

## 3. Compliance with Criterion 1: a- Systems to manage and monitor the prevention and control of infection

Infection prevention and control (IPC) is the responsibility of everyone in the organisation. Key roles and arrangements are detailed below:

### 3.1 Infection Prevention and Control Structure

The Chief Executive Officer has overall responsibility for the control of infection within East and North Hertfordshire NHS Trust.

### 3.1.1 Non-Executive Director

Bob Niven, Non-Executive Director, is an active member of the Trust Infection Prevention & Control Committee who has supported and contributed to the work of the Committee and the Infection Prevention and Control agenda.

### 3.2 Senior IPC Management Team

The senior IPC management team, comprising the Director of Infection Prevention and Control (DIPC), the Infection Control Doctor (ICD), the Assistant DIPC (ADIPC) and the Antimicrobial Pharmacist, meet monthly to discuss activity and issues.

#### 3.2.1 The Director of Infection Prevention and Control

The DIPC role is held by the Director of Nursing and is the Executive Lead for the IPC service, reporting directly to the Chief Executive. The role includes:

- Overseeing implementation of the IPC plan as Chair of the Trust Infection Prevention and Control Committee (TIPCC)
- Approving the Annual IPC report for public release.
- Authority to challenge inappropriate practice

#### 3.2.2 The Infection Control Doctor (ICD)

The ICD is the Clinical Lead for the IPC service, reporting to the DIPC on IPC matters. The role includes:

- Advising and supporting the DIPC
- Overseeing local IPC policies and their implementation by ensuring that adequate laboratory support is in place
- A member of the Water Safety Group
- Supervising IPC education for doctors and delivering mandatory training lectures
- Providing expert clinical advice on infection management
- Managing an infection control doctor service level agreement with the Hertfordshire Community NHS Trust
- Producing, together with the assistant DIPC, the annual IPC report
- Authority to challenge inappropriate practice including inappropriate antibiotic prescribing decisions.

#### 3.2.3 The Assistant DIPC

The ADIPC / IPC Lead Nurse reports directly to the DIPC and works with the ICD. The role includes:

- Advising and supporting the DIPC and the ICD
- Chairing the TIPCC Meetings in the absence of the DIPC
- Deputising for the DIPC in her absence
- Report to the TIPCC
- Attends the Divisional boards
- Leading the Trust Decontamination service
- Responsible for the delivery of IPC training for all Trust staff with the exception of the doctors
- Ensuring that all policies and guidelines related to infection prevention are valid and available.
- Managing the infection control nurses' service level agreement with one external hospice
- Producing together with the DIPC and the ICD, the IPC Strategy, Annual Plan, and Annual IPC Report.
- Line managing the IPC Nursing Team

### 3.3 The Infection Prevention and Control Nursing Team

In 2017-18 the team consisted of:

1.0 WTE Assistant DIPC (Band 8c) (See above)
1.23 WTE Clinical Nurse Specialists Infection Control (Band 7)
2.0 WTE Infection Control Nurse (Band 6)
1.0 WTE Infection Control Clinical Support Worker (Band 4)
1.0 WTE IPC team and data coordinator (Band 5)
1.0 WTE Surgical Site Surveillance Nurse (Band 6)

### 3.4 The Consultant Microbiologists

In addition to the Infection Control Doctor, the Trust employs two more consultant medical microbiologists (CMMs) who play an active role in IPC. There is cover 24 hours a day, 7 days a week provided by a CMM for clinical microbiology/Infection control.

### 3.5 The Antimicrobial Pharmacist

The Trust employs an Antimicrobial Pharmacist who works closely with the ICD and other members of the IPC team. There is robust management of antimicrobial stewardship throughout the Trust. The Antimicrobial Pharmacist is secretary of the Trust Antimicrobial Forum (TAF), a sub-committee of the New Drugs and Formulary Committee.
The role of the Antimicrobial Pharmacist also includes:

- Attending and contributing to the Trust Infection Prevention and Control Committee meetings and the Joint Infection Prevention and Control Committee meetings (with the infection control team)
- Supporting antimicrobial stewardship initiatives by working closely with the ICD and the CMMs
- Joining and contributing to Antimicrobial Ward Rounds with the CMMs
- Carrying out audits in line with national guidance
- Providing training regarding antimicrobial stewardship to clinical staff within the Trust

### 3.6 The Trust Infection Prevention and Control Committee (TIPCC)

The TIPCC meets 11 times a year (not August) and reports to the Trust Board via the Risk and Quality Committee. The Committee is chaired by the DIPC. Membership includes Medical Consultant IPC leads from all specialities, the local Consultant for Communicable Disease Control (or representative), the Infection Prevention and Control Nurse from the CCG, a Health at Work representative, the Clinical Governance officer, Head of Estates and Facilities, education leads, Heads of Nursing and the antimicrobial pharmacist. The terms of reference and membership were reviewed in 2015.

#### 3.6.1 Medical Consultant Infection Prevention and Control Leads

Each speciality has a designated Consultant lead who forms the link between the division and the Trust Infection Prevention and Control Committee. Their role includes reporting on local infection prevention issues, taking back information to their divisions and working with the divisional Heads of Nursing on maintaining and improving practices supported by the ADIPC.

## 4. Compliance with Criterion 1: b- Monitoring the prevention and control of infection

### 4.1 Mandatory Surveillance

Mandatory surveillance is carried out for MRSA and MSSA and cases of C. difficile toxin positive. During the course of the year, gram negative bacteraemia surveillance was extended from *Escherichia coli* (*E.coli*) bacteraemia cases to cases of Klebsiella sp. and Pseudomonas aeruginosa bacteraemia and also includes key risk factors. Additionally there is a mandatory requirement to provide surveillance of surgical site infections (SSI) in a category of orthopaedic surgery. The trust exceeded this requirement by carrying out surveillance in three categories of orthopaedic surgery, namely Total Knee Replacements (TKR), Total hip Replacements (THR) and Fractured Neck of Femur (FNOF).

In addition to the above mandatory requirements the Critical care Unit joined a voluntary scheme run by Public Health England to provide bacteraemia surveillance. This was commenced in August and will provide benchmarking data in subsequent years against other units and enable trends or spikes of infection to be identified.

### 4.1.1 MRSA blood stream infections (BSI)

Isolates of MRSA (Meticillin Resistant *Staphylococcus Aureus*) from blood cultures have been reported since 2002; enhanced reporting using the Public Health England (PHE) MRSA Data Capture System began in 2006. National and local MRSA bacteraemia figures may be seen at:
https://www.gov.uk/government/collections/staphylococcus-aureus-guidance-data-and-analysis

The table below shows the performance of the Trust since the introduction of Mandatory Surveillance targets in 2005. Red font indicates MRSA blood stream infections (BSI) numbers exceeding yearly targets.

| Year | 2006-2007 | 2007-2008 | 2008-2009 | 2009-2010 | 2010-2011 | 2011-2012 | 2012-2013 | 2013-2014 | 2014-2015 | 2015-2016 | 2016-2017 | 2017-2018 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | **53** | **33** | **18** | **10** | **5** | **3** | **2** | **2** | **5** | **0** | **2** | **1** |
| **Target** | **31** | **22** | **21** | **15** | **3** | **3** | **3** | **0** | **0** | **0** | **0** | **0** |

### 4.1.2 *Clostridium difficile*-associated disease (CDAD)

*Clostridium difficile* is a type of bacterium found in the gut that can cause diarrhoea in certain circumstances. It can cause a spectrum of symptoms from mild disease to severe colitis.
The incidence of *C.difficile* infection has reduced nationally year on year for the past ten years. National and local results can be seen at:
https://www.gov.uk/government/collections/clostridium-difficile-guidance-data-and-analysis

The table below shows the performance of the Trust since 2005. Red font indicates CDAD numbers exceeding yearly targets.

| Year | 2005-2006 | 2006-2007 | 2007-2008 | 2008-2009 | 2009-2010 | 2010-2011 | 2011-2012 | 2012-2013 | 2013-2014 | 2015-2015 | 2015-2016 | 2016-2017 | 2017-2018 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | **487** | **594** | **457** | **108** | **81** | **56** | **12** | **13** | **14** | **12** | **15** | **22(11)*** | **28 (16)*** |
| **Target** | **n/a** | **n/a** | **414** | **183** | **90** | **63** | **65** | **14** | **14** | **15** | **11** | **11** | **11** |

**Figures in brackets exclude cases successfully appealed against financial sanctions.*

#### 4.1.2.1 Actions being taken to reduce *C.difficile* infections

Following every case of Trust-associated *C.difficile* infection, a review is completed to identify any actions to reduce the likelihood of further cases. The following actions have been identified and are being implemented:

- Improve, maintain and monitor standards of cleaning
- Programme to improve hand hygiene & use of Personal Protective Equipment eg gloves & aprons
- Reviewing and identifying all equipment that requires replacement
- Improving antibiotic stewardship
- Improving surveillance of infection by implementing an automated surveillance system

In addition to these actions, a thematic review has been conducted of all Trust-associated cases of *C. difficile* identified during the year. Findings included:

- 24 out of 25 patients had antibiotics before developing C difficile infection.
- 12 of the 25 patients (48%) required antibiotics for a suspected or confirmed HCAI
- Extended length of stay is linked to the acquisition of C. difficile disease.
    - 15 of the cases were in hospital for >14 days prior to acquisition of infection
    - 6 of the cases were in hospital for > 30 days prior to acquisition of infection
- Of the patients with stays of less than 14 days the majority had a recent history of admission.

These findings will inform additional actions which will be included in the programme for 2018-19.

### 4.2 Incidents related to infections (including outbreaks)

#### 4.2.1 C. difficile Outbreak

An outbreak on one of our elderly care was identified as having commenced in February 2017. A total of 8 patients were identified with an indistinguishable strain of C. difficile (ribotype 027), a particularly virulent strain. This outbreak triggered a review of the trust systems and processes with the support of NHS Improvement and the CCG. The resulting actions are being overseen by an Infection Prevention & Control steering Group which is monitored via the Trust Infection Prevention & Control Committee (TIPCC) and the Risk and Quality Committee (RACQ). A Serious Incident has been called in response to this outbreak and the investigation is in progress.

See item 4.1.2.1 above for a summary of actions being implemented.

#### 4.2.2 Carbapenemase producing organisms (CPO)

Fifteen cases of these highly resistant microorganisms were identified in Trust patients during the past year. A significant proportion of these cases were transferred from other healthcare establishments. Two separate incidences of transmission in the Trust were identified. Public Health England were invited to review Trust practices and processes to control transmission of these microorganisms. Recommendations were made as a result

of the PHE visit, which included identifying and replacing damaged equipment, introducing single use products for patients carrying this organism. These recommendations are being implemented.

### 4.2.3 Norovirus/ Influenza Outbreaks

Seasonal outbreaks of Norovirus and Influenza were identified and controlled at early stages, thus limiting the necessity to close beds to patients requiring admissions. To support and coordinate the response to reports of symptomatic patients, the IP&C Team attended all daily site management team meetings. In addition, the IP&C Team provided daily reports to the CCG and the Department of Health for monitoring purposes.

The Trust policy is based on national guidance produced by PHE: Infection Control precautions to minimise transmission of acute respiratory tract infections in healthcare settings.

### 4.2.4 MRSA increased incidence

Four babies who were in the Lister Maternity Unit were identified with MRSA colonisation. None of these babies were infected with the organism, but as a result of this outbreak, actions to improve hand hygiene and cleaning of shared equipment were introduced.

## 4.3 Antimicrobial stewardship

The 2017-18 Antimicrobial Resistance (AMR) CQUIN had the follow targets:

| Criteria | Target reduction (%) | Trust reduction (%) |
|---|---|---|
| Total antibiotic consumption | 2 | 10 |
| Piperacillin and tazobactam | 2 | 47.5 * |
| Carbapenems | 2 | 40.6 |
| Review of antibiotics for sepsis patients at 72 hrs | 90 | 95 |

*These results were achieved in the context of shortages of some antibiotics including piperacillin and tazobactam.

All of the targets set by PHE were achieved due to the joint effort of clinicians, microbiology, infection prevention and control and pharmacy teams – see below for results:

- The total consumption of antibiotics (with special attention to Carbapenems and piperacillin-tazobactam) was monitored monthly and outcomes fed back to the Trust
- Teams with highest use of broad spectrum antibiotics received extra support in terms of Antimicrobial Stewardship (AMS) ward rounds to facilitate timely review of antibiotics
- The number of AMS wards rounds was increased to 10 a week (three on the Intensive Therapy Unit (ITU), two meropenem focused, one on gastro wards, one for acute medicine, ambulatory care, infection prevention and control and orthopaedic)
- Microbiology presence in multi-disciplinary teams with input on antimicrobial

prescribing
- Introduction of procalcitonin testing to ITU helped to reduce total consumption of antibiotics including broad spectrum.

To achieve the 72 hour empiric review, the following measures were carried out:

- Wards pharmacists prompted doctors/ microbiologists for a timely review of antibiotics
- Audit results were shared with junior doctors, matrons and pharmacists
- Results were analysed by ward and division to identify key areas for intervention
- Teaching sessions were organised for doctors and pharmacists

### 4.4 Surgical site infection

It is a mandatory requirement to conduct surveillance of orthopaedic surgical site infections using the Surgical Site Infection Surveillance Service of Public Health England. The minimum requirement is for a three month module of surveillance of *one* of the following Orthopaedic options:

- Open reduction of long bone fracture
- Total Hip Replacement (THR)
- Total Knee Replacement (TKR)
- Repair Neck of Femur Fracture (RNoF)

The Trust opted to undertake surveillance for three of these categories, namely THR, TKR and RNoF for the full twelve months for 2017/18. See table below.

**Surgical site infection rates**

| Category of surgery | National benchmark | ENHT Year up to 31st December 2017 |
|---|---|---|
| Total Knee Replacements | 0.5% | 0.6% |
| Total Hip Replacements | 0.7% | 0.7% |
| Repair Neck of Femur Fracture (RNoF) | 1.2% | 0.6% |

These results demonstrate a reduction in infection rates from previous years and the Trust is no longer an outlier in any of these three categories. However, to sustain this improvement and drive infections below the national benchmark, an action plan is being implemented and overseen by a Surgical Site Infection Group run by the Surgical Division.

## 5. Criterion 2: Clean and appropriate environment

### 5.1 Cleaning Services

East and North Hertfordshire NHS Trust has a responsibility to provide and maintain a clean and appropriate environment for healthcare. With a higher profile on improving cleanliness in hospitals this is now a key element of how each hospitals performance is

judged and it is assessed in a number of ways which feature in the Care Quality Commission's (CQC) Essential Standards of Quality and Safety.

The majority of services are managed by external companies. G4S provides services for Lister and Hertford County Hospital. The outcomes are aligned to the National Specifications for Cleanliness in the NHS (2007). The contract with G4S is currently in the third year and is managed and monitored by the Facilities Department at Lister Hospital. The current contract is working within the National Specification for Cleanliness in the NHS (2007) and certain areas have been reviewed under PAS 5748:2014.

Cleaning services at the New QEII are provided by Accuro. Mount Vernon Cancer Centre services are provided in-house by the Hillingdon Hospitals NHS Foundation Trust. Services in the satellite renal dialysis units at Harlow, St Albans and Luton & Dunstable are managed through service level agreements with the respective Trusts that they are located in. Cleaning services for the Bedford Unit are managed by an external company, Cleaning Matters.

Following an outbreak of C. difficile on an elderly care ward and a subsequent review by NHS Improvement key recommendations were made to ensure:

- Standards of cleaning are improved across all areas
- Monitoring of cleaning standards is improved
- Engagement and ownership is established for maintaining and monitoring cleaning
- Clarifying roles and responsibilities for cleaning

This work is being followed through for the year 2018 -19.

### 5.1.2 Monitoring arrangements

The Domestic Contractor is required to carry out technical monitoring of cleaning standards. The frequencies set out in the National Specification for Cleanliness (2007) (NSC) must be met as a minimum, as detailed below:

| Risk | Minimum Frequency | Minimum Score |
|---|---|---|
| Very High Risk | Over a period of a week all areas to have been audited at least once. | 98% |
| High Risk | Over a period of a month all areas to have been audited at least once. | 95% |
| Significant Risk | Over a period of quarter of a year all areas to have been audited at least once. | 85% |
| Low Risk | Over a period of a year all areas to have been audited at least twice. | 75% |

The Trust employs a team of dedicated Contract Monitoring Officers who undertake random cleanliness inspections of functional areas, normally on a 13 week cycle but they are not restricted to any number of audits. These audits may also be undertaken in response to contractor technical audit results and/or complaints/nursing requests. Wherever possible these audits are conducted on a joint basis with the contractor, Matron and Ward management.

These audits are recorded utilising a mixture of the technical and managerial audit tools outlined in the NSC and a percentage score is produced for each. This is then shared with the department and consolidated into a monthly performance percentage defined by site and published on the Trust's intranet system and in public areas of the Trust on the Facilities Information Notice Boards.

G4S and Clinical Trust staff jointly check all areas within the hospital at a frequency set out in NSC as a minimum. The reason for joint auditing is to ensure that high standards of cleanliness are maintained and that any slippage is recognised and corrected through working to national targets that measure performance over a range of factors. It is good practice to establish a management system that supports continuous improvement and empowers Matrons and Ward Sisters to be involved in maintaining and monitoring cleanliness standards. The Facilities Contract Monitoring team oversea the processes in place to ensure continuity of service delivery.

Each week cleaning audit results are reported to the Director of Nursing and each month all cleaning audit reports are presented to the Divisional Infection Prevention and Control meeting by the Facilities team where scoring will be examined by the Nursing and Infection Prevention and Control Teams. Cleaning action plans are produced for any improvements that may be required following audits. Audit meetings also examine the levels of joint monitoring achieved.

Ward Sisters/Charge Nurses, Matrons and Divisional Nurses undertake the bi-weekly cleaning/environmental audit in their clinical areas. Failure to achieve 95% compliance with the cleaning audit triggers actions to bring cleaning up to the required standard. Cleaning is discussed at the Divisional Infection Prevention and Control meetings and is monitored at monthly contract meetings.

## 5.2 Environmental Monitoring

### 5.2.1 Water Safety

East and North Hertfordshire NHS Trust accept its responsibility under the Health and Safety at Work etc. Act 1974 and the Control of Substances Hazardous to Health Regulation 2002 (as amended), to take all reasonable precautions to prevent or control the harmful effects of contaminated water to residents, patients, visitors, staff and other persons working at or using its premises.

During March 2013 the Department of Health issued an Addendum to the current HTM 04-01 – Pseudomonas aeruginosa – advice for augmented care units. Following this advice the Legionella Steering Group Committee and the *Pseudomonas* Risk Assessment and Management (PRAM) Group were amalgamated to create a Water Safety Group.

The Water Safety Group meets quarterly and membership consists of the following personnel:

- The Director of Infection Prevention and Control (DIPC) or nominated representative
- Infection Prevention and Control Nursing Team
- Consultant Microbiologist
- Divisional Manager/Nursing Services Manager
- Head of Estates or nominated representative
- Head of Capital Planning states or nominated representative
- Head of Hotel Services or nominated representative

- Head of Medical Engineering/Physics or nominated representative
- External Consultants
- Trust Risk Manager/Trust Health and Safety Advisor (as and when required)
- Trust Quality Control Principal Pharmacist

The above terms of reference and core membership is under review with the purpose of improving clinical staff and department head engagement.

The purpose of the Committee is:

- To accept ownership of Risk Management for, and to monitor and advise on, Water Safety across the Trust, in line with the Trust's Water Safety Plan

- To ensure compliance with relevant DH Water systems HTM 04-01, statutory and mandatory guidance documentations

During the year, water sampling was carried out in accordance with respective mandatory requirements for Legionella and Pseudomonas. Where positive samples were identified, action was taken and recorded in each instance to ensure that the safety of the water supply was maintained.

Estates carry out quarterly Total Viable Count (TVC) sampling on all water tanks, hot water calorifiers. Records are kept with the Estates offices and remedial actions are completed if samples fall outside of control parameters. There is a TVC water sampling strategy covering the entire hospital site over a twelve month period which consists of 120 locations with 30 x TVC samples taken per week.

There have been no reported incidents associated with water supply systems over the last year.

## 6. Criterion 3 & 4: Information on infections to service users and their visitors and information on infections to other providers

The Trust continues to use the switchboard as a mechanism for informing the public of infection outbreaks, during the Winter period. A pre-recorded message is used.

Pop up banners are used to inform the public of increased incidence of Norovirus and Influenza.

Infection Prevention and Control (IPC) information leaflets are available on the Trust website for patients and members of the public to access. Printed copies are available for patients identified with infections at ward level.

There is an IPC section on the Trust website which provides information to patients on a number of IPC issues including the numbers of Clostridium *difficile* and MRSA BSI.

## 7. Criterion 5: Identification and prompt management of infection

The ICD and the consultant microbiologists provide advice on the prompt diagnosis and treatment of infections, including appropriate use of antibiotics. Close working relationships are also in place to facilitate the reporting of infections of public health significance to the local Public Health England (PHE) Unit. In addition, the ICD works closely with PHE in the management of infection-related serious incidents in the

hospital. The IPCNs also liaise with their Public Health nursing colleagues in respect of infection control incidents.

Following the transfer of pathology services to Cambridge University Hospitals NHS Foundation Trust in 2015, the identification of relevant pathology results has relied on a manual system which is resource intensive and delays identification of results required by the Infection Prevention and Control Team. During the course of the past year, a feasible IT solution has been identified. Following the outbreak of C. difficile on an elderly care ward and subsequent review by NHS Improvement a key recommendation was that the Trust consider acquiring an IT solution which has subsequently been agreed.

## 8. Criterion 6: Involvement of all staff

The IPCT works closely with all Trust staff to implement good practice and reduce HCAIs. The IPCT is an integral part of Trust induction for all new staff (with presentations on both Infection Prevention and Antimicrobial Stewardship) and mandatory updates on key and emerging issues.

In addition, a number of educational activities have been developed:

- The Link Practitioners Study Day was held November 2017 with 35 areas represented with subjects ranging from hand hygiene, sharps safety, decontamination and cleaning.
- The Medical and pharmacy teams have presented sessions on CPE/CRE, antimicrobial stewardship for the Grand Round. In additional antimicrobial stewardship has been presented to the junior doctors.
- The IPC team has provided information via the monthly IPC newsletter “Quick Pics” which is disseminated to Heads of Nursing, matrons, ward managers and Link practitioners and reflects themes identified from current incidents or seasonal infections. Articles have also been provided for the Trust Daily News.

## 9. Criterion 7: Isolation facilities

The Trust has around 125 single-occupancy side rooms available across the Trust. Many of these side rooms do not have ensuite facilities which presents a challenge for meeting isolation requirements. In the maternity unit the delivery rooms are all single rooms with ensuite facilities.

Demand for side rooms sometimes exceeds availability. Therefore, patients with infections are risk assessed to enable those with the highest priority requirement to be identified and isolated as required. This has been reflected in the revised Isolation Policy.

## 10. Criterion 8: Laboratory support

The Microbiology laboratory was re-located to the PHE Microbiology Laboratory at Addenbrooke’s Hospital in Cambridge in 2015. This is part of the Pathology partnership (tPP) process that saw the consolidation of the Pathology Departments of six Trusts in the East of England into two hub laboratories. The Trust has worked together with tPP and PHE and concerted efforts continue towards the advancement of the laboratory services. Turnaround times have been the focus of improvement work.

## 11. Criterion 9: Policies

All policies required for compliance with the Health Code are in place. Most IPC policies are written by IPC team members with support from other Trust staff with expertise in the relevant areas. Some policies are written by other teams in the Trust with the relevant experience with the support of the IPC team. These policies are accessible to all staff on the Trust's intranet system.

Key policy changes implemented over the last year include:

- C. difficile testing to ensure samples are sent when infection is suspected, thus aligning with national guidance
- Isolation precautions follow national guidance, by aligning the precautions with the route of transmission.

## 12. Criterion 10: Health care workers: Infection Status, protection from infection and education in infection prevention & control

In 2017/18 the Health at Work Service (H@W) has continued to work closely with the IPC team. The service has been fully involved in IPC related incidents that affect staff health, such as Norovirus outbreaks, sharps and splash injuries and staff exposure to illness in patients such as chicken pox.

### 12.1 Sharps/splash incidents

H@W assists the Trust in managing potential exposure to blood borne viruses. Within working hours, H@W risk assess, advise and follow up reported potential blood borne virus exposures. A monthly report is compiled of sharps injuries reported to H@W and/or recorded on the Trust's incident reporting system (Datix), devices involved in sharps injury, staff groups injured and the likely cause of injuries.

| Sharps/splash incidents 2017-18 | Q1 | Q2 | Q3 | Q4 | Total |
|---|---|---|---|---|---|
| Staff seen by H@W following a sharps/splash injury | 30 | 40 | 46 | 33 | 149 |
| Staff referred to sexual health services | 1 | 0 | 0 | 0 | 1 |
| Staff commencing PEP | 2 | 2 | 1 | 0 | 5 |
| Staff needing to complete PEP | 0 | 0 | 0 | 0 | 0 |
| Sharps/splash injuries with known positive HIV patients | 0 | 0 | 0 | 0 | 0 |
| Sharps/splash injuries with known positive Hep B patients | 0 | 1 | 0 | 0 | 1 |
| Sharps/splash injuries with known positive Hep C patients | 1 | 1 | 0 | 0 | 0 |

### 12.2 Immunisations and blood tests

Health at Work (H@W) screens all new employees to identify specific required workplace immunisations and ensure compliance with Criterion 10 of the Health and Social Care Act 2010. The service continues to work to ensure that existing staff are

compliant with immunisations appropriate to their role, in line with Department of Health guidelines.

H@W requests immunisation records from all new employees before they commence work and an assessment of immunisation requirements is made in accordance with Public Health England guidelines. H@W electronically records immunisations in accordance with the Data Protection Act. H@W advises all new employees who require further evidence of immunity to book an immunisation update appointment. Additional blood tests are required for staff undertaking Exposure Prone Procedures (EPP) before these duties are commenced.

H@W recalls staff who require vaccine boosters, reviews immunisation records of existing staff and provides advice to employees on immunisation updates needed, as required.

If employees refuse vaccines or blood tests, fail to attend an appointment or to provide the required evidence of immunity, their manager is informed. Where necessary for patient and employee safety, advice may be given on adjustments to the employee's work.

In addition to routine immunisation programmes, H@W facilitated the annual frontline staff Flu Immunisation Programme. In the 2017-18 staff influenza vaccine campaign over 70% of frontline staff were vaccinated thus achieving this year's national target.

### 12.3 Introduction of Trust wide standardised processes and masks to ensure fit testing for FFP3 masks

In November 2017 the IPC Team supported a Trust wide introduction of standard FFP3 mask with standard training and fit testing processes. All departments were provided with training for identified "fit testers". Key areas including the Critical Care Units and the Emergency Department were provided with extra equipment for staff who require rapid access to FFP3 standards of protection where fit testing cannot be completed.

## 13. Clinical Commissioning Group (CCG) visits

The CCG IPC nursing lead has made regular visits to the Trust throughout the year, working collaboratively with the Trust IPC Team. Following the identification of an outbreak of C. difficile on an elderly care ward the Trust has worked closely with the CCG to identify and action improved standards of cleaning and Infection prevention & control standards.

The Trust participates in a Hertfordshire Infection Prevention and Control Group to coordinate actions, share best practice and devise joint strategies. The CCG IPC Lead is also a member of the Trust Infection Prevention and Control Committee.

## 14. Conclusion

Over the year 2017-18 the Trust has introduced the following measures to drive improvements:

- Revision of the isolation and C difficile policies to ensure alignment with national guidance

- Implementing Trust wide standards, processes and products to ensure “fit testing” is implemented effectively across the Trust
- Implementing an improved cleaning wipe to provide a higher level of decontamination.
- Limiting the impact, scale and number of outbreaks of seasonal infections, namely influenza and norovirus.

However, reviews of infection incidents and outbreaks have identified that additional actions are needed to ensure improved standards of cleaning and infection prevention and control practices. To support and embed these actions, the Trust reporting and accountability structures are being revised.

**Key challenges for 2018-19**

Key challenges include the requirement to improve standards in Infection Prevention and Control and cleaning against a background of continuing financial constraints.

Specific challenges include the following:

- Maintaining and improving cleaning standards
- Embedding standard systems and processes to ensure sustained improvements in Infection Prevention & Control standards and practices
- Establishing a robust electronic IP&C surveillance, outbreak management, reporting and management system
- Further sustained reductions in orthopaedic surgical site infection rates
- Extending surgical site infection surveillance to additional categories of surgery
- Effective audit programme designed to facilitate practice improvements
- Embedding bacteraemia surveillance in the Critical Care Unit.
- Extending enhanced surveillance of *gram negative* bacteraemias and implementation of measures to contribute to reduction in such infections in partnership with local and national stakeholders.
- The increasing prevalence of multi drug resistant gram negative organisms
- Achievement of stringent Antimicrobial CQUIN targets