

Director of Infection Prevention and Control Annual Report 2015-16

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Section 1

Executive Summary

The Health and Social Care Act 2008 (2015): *Code of practice for the prevention and control of healthcare associated infections (Hygiene Code)* details 10 compliance criteria to which the Trust must adhere to in relation to preventing and controlling the risk of healthcare associated infections (HCAIs). This Annual DIPC report serves to summarise the work undertaken by the Infection Prevention team in 2015-16. The work undertaken by the Infection prevention team is aligned with the 10 Hygiene code compliance criteria. The report details the workstreams that are monitored through the Trust Infection Prevention Committee; Audit & surveillance, Estates& facilities, Occupational Health and Anti-microbial stewardship.

During 2015-16 the Infection Prevention team were subject to a period of consultation and a resulting restructure. A number of staff subsequently left the team. As part of the restructure, an Associate Chief Nurse/Deputy DIPC post was created and Sharon Egdell was appointed into the post in October 2015. The new team structure came into effect at beginning of October 2015. Michelle Rhodes was appointed as interim Chief Nurse/DIPC in December 2015.

Delivery of an effective Infection Prevention service is based upon an annual programme, which identifies projects and initiatives which the team aspire to achieve; with the ultimate aim of continuously improving patient outcomes. Monitoring of progress is undertaken by the Trust Infection Prevention Committee, chaired by the DIPC. It has been acknowledged by the interim DIPC that progress against some of the actions in the 2015-16 annual programme (appendix 1), fell short of expected outcomes, mainly due to the changes within the team during restructure. The annual programme for 2016-17 (appendix 2) will expand and build upon the aims from the previous financial year, in addition to capturing actions and learning from incidents, outbreaks and root cause analysis investigations. Additionally, the 2016-17 programme will capture the innovative ideas that new team members have brought to the team around the models of delivering education and training.

The Trust has annual trajectory objectives set by NHS England for Clostridium Difficile and MRSA bacteraemias. The objective for incidence of CDI in 2015-16 was achieved, with a total number of cases attributable to the Trust being 57 cases (trajectory was 59 cases). Unfortunately the zero

objective for MRSA bacteraemia was not achieved and the Trust reported 1 case.

A full post infection review was undertaken and a Serious Incident report was submitted, in accordance with NHS England requirements and the outcome is documented within this report.

The Trust has experienced a number of outbreaks in 2015-16, the most significant and challenging being the major Norovirus outbreak on Lincoln site, which started in December 2015. Norovirus circulates within the community throughout the year and people can incubate the virus without showing any symptoms. The challenge for the Trust was once the infection was introduced into the environment by someone incubating the infection on admission, it was very easily spread to others. The major outbreak at Lincoln lasted 6 weeks and involved many ward areas. There was a significant impact on the Operational capacity of the Hospital as many wards were affected. High level environmental disinfection using a Hydrogen Peroxide Vapour (HPV) fogging technology was used for the first time at the Trust to ensure affected wards were adequately decontaminated, to help prevent further cases. The multi disciplinary outbreak response team worked extremely hard and effectively to bring the outbreak to a satisfactory conclusion, in which all patients affected recovered fully from their gastro-enteritis symptoms.

During the past twelve months the Trust Estates team has made considerable improvements in delivering its water hygiene programme, essentially operating robust schemes across a number of key compliance requirements. However, there remain a series of challenges which are to be addressed in 2016-17. A housekeeping review was undertaken in quarter 4, by an external company, Litmus Consulting. Recommendations have been acknowledged and considered and will be taken forward in 2016-17.

The year 2015-16 has been a year of great change and progress at ULHT on the antimicrobial stewardship front. From the development of a locally agreed CQUIN with heavy financial implications, to gaps in availability of Antimicrobial Pharmacists, and investing in recruitment of a new team, there have been significant disruptions to work undertaken. The report for this year is based on understanding of events by the Consultant Antimicrobial Pharmacist, who officially commenced in post in October 2015.

The Trust achieved an excellent flu vaccination take up of 64% front line staff in ULHT for 2015/16 and the flu plan for 2016-17 will continue to build upon the immunisation successes of this year.

Overall 2015-16 has been a year of improvements within the Infection Prevention service. It is the intention to build upon this work in 2016-17, with the ultimate aim of protecting the patients who access healthcare at ULHT from avoidable healthcare associated infections where possible.

Section 2

Infection Prevention service

We are one of the biggest acute hospital trusts in England covering four main hospitals in the rural county of Lincolnshire.

1. Introduction

The Trust Board recognises and agrees their collective responsibility for minimising the risks of infection and has agreed the general means by which it prevents and controls these risks. The Infection Prevention Annual Report, together with the monthly and quarterly Infection Prevention Reports, the Annual Infection Prevention Programme are the means by which the Trust Board assures itself that prevention, and control of infection risks are being managed effectively and that the Trust remains registered with the Care Quality Commission (CQC) without conditions.

The importance of maintaining high standards of infection prevention as well as cleanliness is a matter of national concern. The Health and Social Care Act 2008 (2015) clearly identifies that organisations must ensure they have satisfactory and robust arrangements to manage all areas concerning infection prevention, and control.

The Health and Social Care Act 2008 (2015): *Code of practice for the prevention and control of healthcare associated infections (Hygiene Code)*

details 10 compliance criteria to which the Trust must adhere to in relation to preventing and controlling the risk of avoidable healthcare associated infections (HCAIs).

United Lincolnshire Hospitals NHS Trust (Trust) is committed to reducing and managing risk, ensuring effective and safe practice. The Trust recognises that it has a duty of care to protect patients, staff, contractors and visitors from avoidable infection and support the need for effective systematic arrangements for surveillance, prevention and control. It is therefore committed to reducing the incidence of avoidable HCAIs and more importantly, maintaining that reduction.

All Trusts have to register with the Care Quality Commission (CQC); this body has the right to inspect the Trust compliance with the 'Health and Social Care Act, Code of Practice', which is a requirement for NHS Provider Compliance Assessment Outcome 8 (Regulation 12) (Cleanliness and Infection Control).

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

- So far as reasonably practicable, patients, staff and other persons are protected against risks of acquiring HCAI through the provision of appropriate care, in suitable facilities, consistent with good clinical practice
- Patients presenting with an infection or who acquire an infection during treatment are identified promptly and managed according to good clinical practice for the purpose of treatment and to reduce the risk of transmission

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

- Management arrangements to include access to accredited microbiology services
- Clinical leadership
- Application of evidence based protocols and practices for both patients and staff
- The design and maintenance of the environment and medical devices
- Education, information and communication

All NHS organisations must be able to demonstrate that they are compliant with the Code.

Table 1: Compliance criteria for the Code of Practice

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

The Trust are unable to declare compliance against Criterion 2 of the code due to failure to

achieve the required national specification standard for environmental cleaning scores.

During Quarter 3, in November 2015, the NHS Trust Development Authority (TDA), now known as NHS Improvement inspected the Trust against compliance with Hygiene code criteria. Concerns were raised around environmental cleanliness, staff compliance with some policy and procedures, board assurance and ownership of Infection Prevention at a local level. A comprehensive action plan was developed following this visit, progress against which was monitored through the Trust Infection Prevention Committee. The TDA acknowledged that a new team structure had recently been put in place in October 2015, which included the appointment of Sharon Egdell, Deputy DIPC/Associate Chief Nurse. The TDA continued to provide the Trust with support during Quarter 4.

The assurance framework for infection prevention and control has been further strengthened across the Trust since the TDA visit and the following arrangements are well established:

- Monthly Trust wide Infection Prevention Committee meetings- Chaired by DIPC or Deputy DIPC
- Monthly Infection Prevention team Operational meetings- Chaired by Deputy DIPC

- Monthly Site Infection Prevention meetings- Chaired by Site IPC lead (Head of Nursing)
- Weekly Infection Prevention team meetings- Chaired by Lead Infection Prevention Nurse
- Monthly upward reports to Quality Governance Committee

2. Description of Infection Prevention and Control arrangements

The Chief Executive has overall responsibility for the control of infection within the Trust. Michelle Rhodes the Chief Nurse, is the Trust designated interim Director of Infection Prevention and Control (DIPC). Sharon Egdell is the Trust designated Deputy Director of Infection Prevention and Control (DDIPC)/Associate Chief Nurse. The Infection Prevention team are managed directly by the Deputy DIPC/Associate Chief Nurse

2.1 Infection Prevention and Control Team

During 2015-16 the Infection Prevention team (IPT) were subject to a period of consultation and a resulting restructure. A number of staff subsequently left the team. As part of the restructure, an associate Chief Nurse/Deputy DIPC post was created and Sharon Egdell was appointed into the post in October 2015. The new structure came into effect at beginning of October 2015 as follows:

- X1 WTE Deputy DIPC/Associate Chief Nurse
- X1 WTE Lead Infection Prevention Nurse
- X4 WTE Infection Prevention Nurses
- X3 WTE Infection Prevention Assistants

At the end of this 2015-16 reporting year, X1 WTE Infection Prevention assistant post remained vacant and X1 WTE Infection Prevention Nurse was also vacant, due to failure to recruit suitable applicants.

In December 2015 Michelle Rhodes was appointed as interim Chief Nurse/DIPC.

The operational delivery of the Infection Prevention service is carried out by the Trust wide Infection Prevention team. The Annual work programme identifies the initiatives and projects that the team aspire to achieve within the financial year, aligned with the 10 compliance criteria of the Hygiene code. The Annual programme 2015-16 also included the core operational business which the team deliver on a daily basis, listed as follows:

- Providing advice on all aspects of infection prevention, and control for clinical and supportive staff
- Providing advice and support on decontamination of medical and nursing equipment
- Providing advice and support to Directorate of Estates and his team in relation to the decontamination of the environment, maintenance of the

building and in development of structural and innovation protects

- Liaising with staff involved in purchasing and planning to ensure infection prevention, and control issues are given a high priority in their activities
- Actively involved in managing the risk of infection to both patients and staff
- Identifying risks of infection and advising of interventions likely to minimise or eliminate those risks
- Actively involved in managing the risk of infection both to patients and staff
- Identifying risks of infection and advising of interventions likely to minimise or eliminate those risks
- Supporting the Estates team with advice relating to capital schemes
- Management of outbreaks
- Conducting a programme of audit
- Reviewing and developing policies, guidelines, procedures and protocols to ensure care is evidence based and high quality
- Interpreting and implementing national guidance at local level
- Involvement with refurbishment, new building and equipment projects
- Delivery of Trust wide induction training and mandatory core learning
- Advice and information to patients and carers

It has been acknowledged by Michelle Rhodes interim DIPC, that progress against some of the

actions in the 2015-16 annual programme (appendix 1), fell short of expected outcomes, mainly due to the changes within the team during restructure. The annual programme for 2016-17 (appendix 2) will expand and build upon the aims from the previous financial year, in addition to capturing actions and learning from incidents, outbreaks and root cause analysis investigations. Additionally, the 2016-17 programme will capture the innovative ideas that new team members have brought to the team around the models of delivering education and training.

2.2 Infection Professional Link practitioners:

Infection Professional Link's (IPL's) are practising nurses or multi-disciplinary team (MDT) members who have an interest in infection prevention and are prepared to work as a link between the infection prevention specialist service and their clinical area of work. They are nominated by each clinical area. Many areas have chosen to have more than one staff member sharing the role. The IPL's come from a range of different clinical disciplines, and are fundamental to successfully implementing and embedding ownership at ward or department level. They play a key role in informing, educating and supporting their colleagues in the clinical area. They also undertake frequent audits of key aspects of clinical practice.

During 2015-16 IPL's study days were held on a quarterly basis in each hospital site across the Trust. These days serve both an educational purpose, networking with colleagues and as a

means to keep the IPL's updated with relevant issues internally, local and nationally. They also provide a forum for exchanging ideas, sharing best practice and for discussion around key issues.

Role/responsibilities of the IPL's:

- Act as a role model and resource in relation to IP and promote best practice
- Attend quarterly meetings and feedback to clinical area/team
- Being visible in workplace, wearing a badge to identify themselves as the link professional
- Being accessible to all staff, MDT members, patients, staff and visitors
- Challenge poor practices and support staff in reviewing and changing these behaviour patterns
- Compile and keep an up to date resource file
- Assist with undertaking of audits, education and training, outbreaks, RCA's and keep information board up to date
- Undertake, as a minimum, one hand-hygiene session for their area with the aid of the glow box each year
- Seek advice and guidance from the IP team when presented with new or complex situations
- Promote the use of appropriate documentation
- Assist and ensure that patients are isolated appropriately

2.3 Infection Prevention Committee

The Infection Prevention Committee (IPC) meet every month and has corporate responsibility for all infection prevention issues and monitoring the progress of the annual infection prevention program.

The Committee has the following sub-committees, which each provide regular reports to the committee meetings:

- Trust Decontamination Committee
- Trust Water Safety Group
- Antimicrobial stewardship strategy group
- Individual site Infection Prevention meeting
- IP Operational meeting

The IPC receives surveillance reports on HCAI's, HCAI associated deaths, relevant RCA and PIR investigations, antimicrobial pharmacist reports, results of the antibiotics audits, reports from the site IP meeting chairs.

2.4 Reports to the Trust Board

At Trust Board the DIPC provides a performance report which includes the most recent infection prevention and control performance data, trends and exception reports of issues or risks that the board need to be aware of.

Monthly upward reports are provided to Quality Governance Committee also.

2.5 Budget allocation to infection prevention team

The IPT provides an infection prevention service across the Trust and in 2015-16 had an annual pay budget of £361,900 and annual non-pay budget of £3,900k, which covers travelling expenses, printing and stationery. A Service Level Agreement (SLA) with St Barnabas Hospice which provides an annual income of £3,100 for the provision of an Infection Prevention Service provided by ULHT.

Section 3

Audit and Surveillance

Audit and Surveillance is fundamental to an effective infection prevention service.

Audit programme

Healthcare workers compliance with infection prevention practices and principles is vital in preventing the spread of infection. One tool to assess infection prevention practice in clinical areas is audits.

Audit is paramount to clinical improvement within infection prevention and the reduction of HCAs. The Hygiene code requires the Trust to have in place a programme of audit to ensure that key policies and practices are being implemented appropriately. The IPL's/Ward/Department Leaders ensure that infection prevention audits are undertaken within their clinical area as per the IPT program of work. These programs are not an exhaustive list of the audits undertaken, and many additional audits will be conducted as part of an event or Trust activities.

1. Saving Lives – High Impact Interventions

The Department of Health (DH 2006/2009) published regarding High Impact Interventions (HII), which are evidence based and related to key clinical procedures or care processes where it is possible to

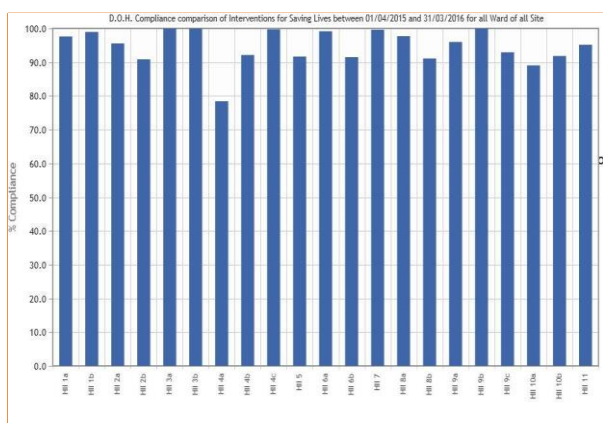
reduce the risk of infection if these interventions are performed appropriately. They are used as a tool for improvement to help address particular practice or care process issues.

Clinical areas are inputting their observations into the North 51 digital Infection Prevention Audit System, where applicable. There are several criteria within the tool which are not applicable i.e. renal unit, central venous catheter (CVC) for clinical areas that do not provide care for patients with a CVC insitu.

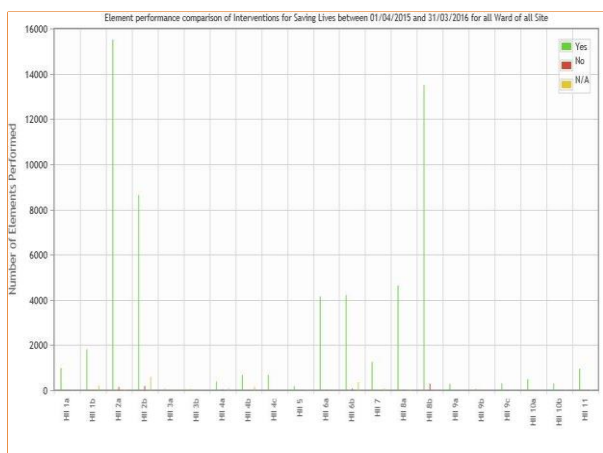
It is important that the Trust monitors their compliance with the Saving Lives, if it is not possible to correct the technical issue within the software that is in use. The Trust should consider developing their own internal system with support from Information Computer Technology (ICT).

It is possible to review the data with the present system and transfer the data manually to formulate the graphs below for this report, however this is time consuming and is not recommended for the monthly trend analysis.

Graph 1 DH compliance comparison of interventions for Saving Lives between April 2015 and March 2016 for all clinical areas from all Hospital sites. This graph should be read with caution, as not all clinical areas have submitted data.



Graph 2: Element performance comparison of interventions for saving lives between April 2015 and March 2016 for all clinical areas for all Hospital sites.



2. Compliance with safe management of sharps

Although rare, injuries from sharps contaminated with an infected patient’s blood can transmit more than 20 diseases including Hepatitis B,

Hepatitis C and Human Immunodeficiency virus. As with many infection prevention policies, the assessment and management of the risks associated with the use of sharps is paramount and safe systems of work and engineering controls are in place to minimise any identified risks. When the use of sharps is essential, particular care is required in the handling and disposal of the sharps. Wherever it is practical to do so safer sharps devices must be used. Two external sharp management audits were undertaken by Pete Williamson from Daniels Healthcare during 2015-16, to ensure that the Trust was managing their sharps in accordance with HSE guidance for sharp management (HSE 2012). In each clinical area, the Nurse in Charge on the day of the audit was provided with immediate feedback of the audit findings. If this was not possible, a follow up call or email was done. Where possible during the audit the auditor endeavoured to:

- a) Raise sharps awareness
- b) Assess practice
- c) Discuss problems
- d) Advise on compliance to current legislation

Nine elements were reviewed during the audit, including the use of the temporary closure mechanisms, that sharp containers were not over filled, sharps were disposed of at the point of care.

July 2015: Seventy one (71) clinical areas across the Trust were audited with a total of seven hundred and seventy one (771) sharp containers inspected.

There were two (2) sharp containers with protruding sharps (these were not necessarily overfilled but had protruding sharps from them) thirteen (13) that were not properly assembled (these were immediately assembled properly and staff were informed that sharps containers that were not assembled properly could lead to the lids coming off if dropped or during transportation) and one (1) that was more than three quarters full (staff were only advised to fill to the fill line).

Three (3) sharps containers had the wrong lid on the wrong base. Staff were advised to check the colour of the lid and label.

Some areas required wall or trolley brackets and this was discussed with the staff.

Most staff understood that the label on the sharps bin was to be completed at assembly and closure and this was adhered to.

Fifteen (15) sharps containers had significant inappropriate non sharp contents. Staff were advised not to put packaging or non sharp items into sharps containers.

Forty five (45) sharps containers did not have the temporary closure mechanism in place when the container was left unattended or during movement.

Most areas had small sharps containers and trays available to take to the bedside.

Recommendations:

- Training in the assembly of sharps containers
- Train staff not to overfill sharps containers
- Train staff to match lid and label correctly
- Train staff to fill in label following assembly
- Train staff not to put non sharps in sharps containers
- Train staff to put the temporary closure in place when unattended or when moved

These audits are now conducted by Daniels 6 monthly and also audited on the ward visits.

3. Environmental and Clinical Audits

Environmental and Clinical audit is an important part of monitoring and evaluating compliance with good infection prevention practices. They are paramount to environmental and clinical improvement within infection prevention and the reduction of HCAI's. These audits are a cyclical process involving impromptu observation audits with rapid feedback and appropriate action in response to the results.

In January 2015 the IPT at Lincoln County Hospital and Grantham District Hospital tried a different approach which involved a much shorter review of the clinical area with a member of staff from the

ward, based on the IPS tool, with a short summary report issued within three days of the review. Any deficits were reviewed on a follow up clinical visit. This enabled the IPT to visit more clinical areas in a week, highlight several issues that were common across several clinical areas, as well as other issues that would not have been identified using the previous approach, until their next annual audit. Feedback was very positive from clinical staff therefore this approach was implemented across the Trust as from April 2015.

Table 1: Shows the results following these audits for Lincoln County Hospital.

Ward	Number of visits
Burton Ward	2
Clinic 8	1
Clayton Ward	3
Carlton Coleby	2
ICU	1
Stroke Ward	2
Dixon Ward	1
Greetwell Ward	2
Hatton Ward	1
Lancaster Ward	1
Surgical Admission Lounge	1
SEAU	1
Shuttleworth Ward	3
Waddington unit	1

Table 2: Shows the results following these audits for Grantham and District Hospital.

Ward	Number of visits
A&E	1
Day Ward	1
Ward 1	4
Ward 6	2

Table 3: Shows the results following these audits for Pilgrim Hospital Boston.

Ward	Number of visits
The Bostonian	1
Intensive Care	1
Coronary Care	1
Admission Unit	1
Ambulatory Care	1
Ward 7B	1

Table 4; Shows the results following these audits for Louth.

Ward	Number of visits
Theatre	1
Outpatients	1
Fotherby ward	1
Xray	1
OT	1
Physio	1
Urology dept	1
Endoscopy	1

The infection prevention and control audit programme for 2015–16 is outlined in the annual programme of work. It is recommended that the IPT undertake quarterly clinical practice audits across the Trust, and that an annual point-prevalence audit/survey of HCAI, in which all adult

inpatient areas will be surveyed to help ascertain the prevalence and type of HCAI within the Trust.

Table 5: Provides a résumé of the common themes identified on the environmental and clinical audits.

Facilities	Damage to walls, door frames and floors	
	Floors stained	
	Work surfaces damaged	
	Waste storage rooms not locked	
	Waste segregation not compliant with general waste segregation	
	Housekeepers cupboard small for the amount of equipment stored	
	Hand wash sink/taps require descaling	
	Caps on taps missing	
	Macerators broken	
	No storage space on wards	
Clinical	IV lines not dated	
	Using disposable B/P cuffs routinely	
	No reason specified why a urinary catheter remains insitu and tubing touching the floor	
	Vital observation equipment dirty	
	IV drip stand dirty	
	Inappropriate use of PPE	
	Cannulae taped over so insertion site not visible	
	VIP scores not recorded twice daily	
	General and environmental	Isolation room doors left open
		Alcohol hand rub not available at every patient bed space
High and low levels of dust		
Linen skips overflowing		
Dirty raised toilet seats		
Sharps bins – no temporary closure mechanism in place when not in use		
Inappropriate use of green is clean stickers		
Linen trolleys left open		
Dusty computer screens/PACS machines		
Missed opportunities for hand washing		
Inappropriate use of PPE		
Equipment labelled as clean, but still dirty/in use		
Alcohol hand rub containers dirty at entrance to wards		
Cluttered work tops		
Dirty commodes, but labelled as clean		

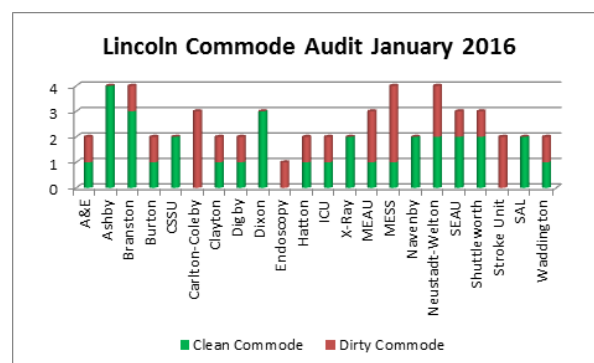
4. Commode audit

Commodes are in use constantly and their surfaces are constantly being handled, which provides an opportunity for many pathogens present to be transferred to not only other surfaces but also more importantly to our patients. It is important that all parts including underneath is visibly clean with no blood and body substances, dust, dirt, debris or spillage, and that there is no damage.

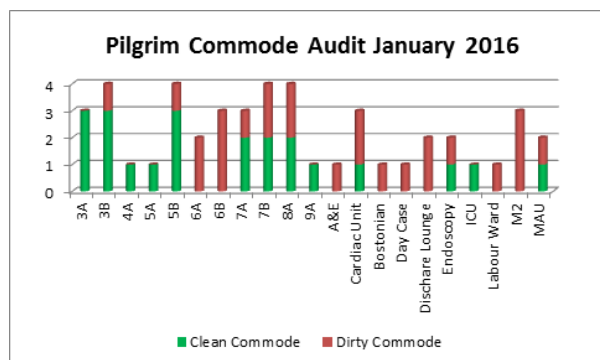
An external audit was conducted across the Trust by Clinell® during January 2016. In each clinical area, the Nurse in Charge on the day of the audit was provided with immediate feedback of the audit findings. If this was not possible a follow up call or email was done. Where possible during the audit the auditor endeavoured to:

- Raise commode cleaning awareness
- Discuss cleaning methods
- Discuss cleaning products

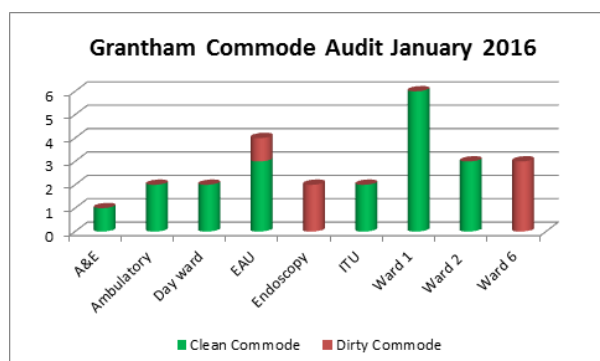
Graph 3: A total of fifty six (56) commodes were reviewed at Lincoln County Hospital, twenty-three (23) of these were soiled, in particular the frame and seat.



Graph 4: A total of forty-seven (47) commodes were reviewed at Pilgrim Hospital Boston, twenty five (25) of these were soiled, in particular the frame, bed-pan holder.



Graph 5: A total of twenty-five (25) commodes were reviewed at Grantham and District Hospital, six (6) of these were soiled, in particular the frame, hard seat and the foot plate.



The auditors established that there are a variety of commodes used by the Trust including Clinell®, Vernacare® and Design Bugs Out (DBO).

It demonstrated that commodes that were considered clean by clinical staff were not always cleaned to a high standard. It is recommended that the Trust continues to standardise replacement commodes to the model agreed, to improve staff knowledge through education, to

standardise cleaning procedures and thereby ultimately improve patient safety.

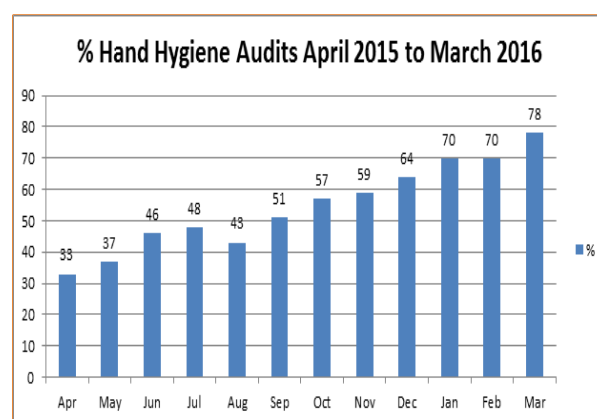
6. Hand hygiene audits

It is important that staff take precautions to prevent transmission of microorganisms. For this reason all wards and departments undertake an audit each month, observing 10 staff members in their clinical area.

Questions asked are as follows:

- Hand hygiene performed before patient contact?
- Hand hygiene performed after patient contact?
- Bare below the elbow (wedding band only)?
- Are finger nails short and neatly manicured without nail varnish/false nails?

Graph 6: Shows the average % compliance each month for the trust for the year.



Surveillance

The IPT is responsible for conducting both mandatory and local surveillance. Surveillance has been curtailed to just mandatory healthcare infection surveillance and outbreak surveillance. The aim of surveillance is to produce timely information on infection rates and trends, detect outbreaks, inform evaluations and changes to clinical practice and aid effective targeting of preventative efforts.

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

Mandatory 'Target organisms' surveillance is conducted, and the data entered into the Public Health England (PHE) Healthcare Data Capture System (HDCS). The Trust complies fully with the mandatory surveillance system for HCAI's including staphylococcal (including MSSA and MRSA bacteraemia, *E. coli* bacteraemia, *Clostridium difficile* infection. The mandatory

orthopaedic surgical site infections for total hip and total knee replacements is undertaken by the orthopaedic teams across the Trust, this was conducted between January and March 2016, the results from this surveillance has not been published yet by PHE.

All 'serious incidents' associated with infections are reported to the Clinical Commissioning Group (CCG) and NHS England as per the definition under 'Serious Incident Management System' (STEIS), and Public Health England.

Monthly surveillance reports are circulated to all members of the IPT and the Trust Board. The reports include 'Target organisms' surveillance as well as outbreak data, audit results, compliance with policy. As well as these reports being incorporated into the Trust Board performance management process, they are reviewed by the CCG. In addition the IPT provides monthly reports, which includes surveillance data on new cases of MRSA (infection and/or colonisation), all hospital acquired bacteraemia, *Clostridium difficile* infection, gentamicin and quinolone resistant gram negative infections, Glycopeptide resistant enterococci (GREs) and Extended Spectrum Beta Lactamase (ESBL) producing coliforms and outbreaks.

1. Mandatory Healthcare Associated Infection Surveillance

Each year objective trajectories for the reduction of healthcare associated infections are set by NHS England.

For 2015-16 the objective trajectories were set as:

- MRSA bacteraemia: zero cases
- *Clostridium difficile* infections: 59 cases

The IPT uses the Trust bacteraemia rates to monitor improvements within the Trust, rather than comparison between Trusts. This is because there are several variables, for instance clinical practice of when to take blood cultures, which makes the interpretation of any comparison between Trusts difficult. Patients with a bacteraemia were identified by daily review of all positive blood cultures by the Consultant Microbiologist. The IPT runs a daily Cognos report (software used in the laboratory), this informs the IPT of all positive results. An IP alert is activated on Medway and the clinical areas are notified and support and guidance provided.

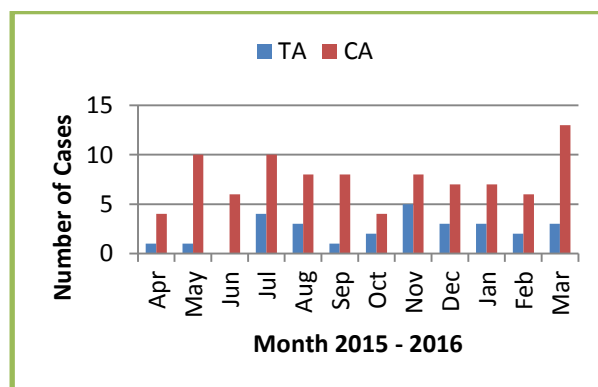
Meticillin Sensitive *Staphylococcus aureus* Bacteraemia (MSSA)

Staphylococcus aureus is a common bacterium that commonly colonises the human skin. Like Meticillin Resistant *Staphylococcus aureus* (MRSA) it is a bacterium that causes a range of infections when the bacteria enter the body. The infections range from very minor (superficial skin infections) to life threatening infections of the heart valves, joint infections and blood stream infections. Between April 2015 and March 2016 the Trust reported 28 cases of Trust apportioned MSSA bacteraemia, and 91 cases of Non-Trust apportioned MSSA bacteraemia.

There is no reduction trajectory for MSSA set nationally, the work which the Trust has undertaken to underpin the significant reduction in MRSA bacteraemia supports prevention of MSSA, although patients are not routinely screened in the same way. However, in order to further reduce MSSA bacteraemia (both line and non-line related) the following strategies are planned:

- There will be continued effort to reduce the number of infections associated with medical devices, including intravascular and urinary catheters

Graph 7: Demonstrates the monthly counts of MSSA bacteraemia split by Trust apportioned (TA) and Non-Trust apportioned (CA) cases; April 2015 – March 2016



Graph 8: MSSA mandatory surveillance commenced in January 2011, this graph demonstrates the annual counts of MSSA bacteraemia since then. The Trust saw a slight decrease in the number of Trust apportioned MSSA bacteraemia during 2015-16. The number of cases has been consistent over the past three years, the impressive reduction in MRSA

bacteraemia has not been mirrored with MSSA bacteraemia.

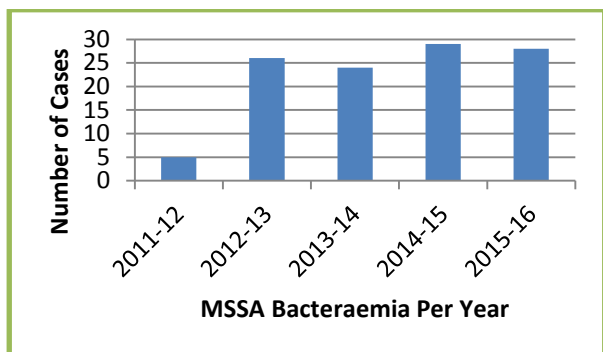


Table 6: Demonstrates the total number of MSSA bacteraemia patients receiving care within the Trust during 2015-16 and their attribution (either Trust acquired or Non-Trust acquired).

Month	Trust acquired	Non-Trust acquired
Apr	1	4
May	1	10
Jun	0	6
Jul	4	10
Aug	3	8
Sep	1	8
Oct	2	4
Nov	5	8
Dec	3	7
Jan	3	7
Feb	2	6
Mar	3	13

Table 7 Total number of MRSA bacteraemia processed by the Trust per month from April 2012 to March 2015 (Trust and Non-Trust apportioned).

	2012/13	2013/14	2014/15	2015/16
Apr	1	1		1
May			1	
Jun		1		2
Jul			1	
Aug	2	2	1	
Sep	1			1
Oct	1	2		
Nov		3	1	
Dec	1		1	
Jan			2	
Feb	1			
Mar	1			2
Total	8	9	7	6

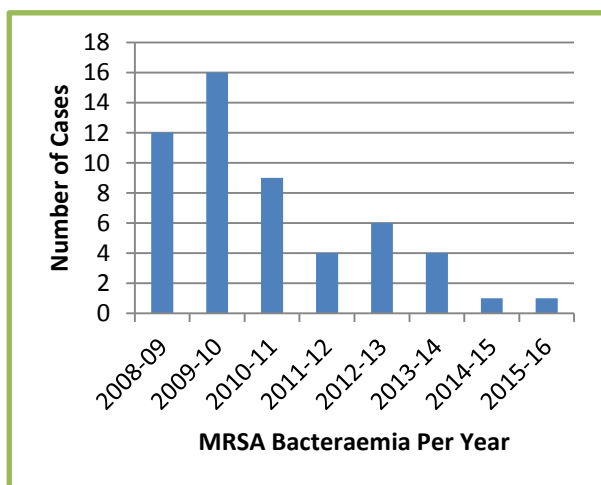
Meticillin Resistant Staphylococcus aureus Bacteraemia

This year the Trust was very disappointed to report that the objective for incidents of Meticillin Resistant *Staphylococcus aureus* (MRSA) bacteraemia was breached. Between April 2015 and March 2016 the Trust reported one case of Trust apportioned MRSA bacteraemia and five cases of Non-Trust apportioned MRSA bacteraemia. A Post Infection Review (PIR) and a rigorous Serious Incident (SI) investigation was conducted by a multi-disciplinary team with support from the IPT for each case. The results and recommendations were reported to the IPC. Implementation of the actions arising from PIR and SI was led by the Head of Nursing, and the actions were monitored by IPC.

The national trajectory for the Trust for 2015-16 is zero cases of Trust apportioned MRSA bacteraemia. The work which the Trust has undertaken to reduce MRSA bacteraemia continues. In order to further reduce MRSA bacteraemia the following strategies are planned:

- Continued effort to reduce the number of infections associated with medical devices, including intravascular and urinary catheters.
- PIR and SI will be performed on all MRSA bacteraemia, with the results of these investigations and their recommendations being monitored at the IPC

Graph 9: MRSA mandatory surveillance commenced in April 2010. The Trust has been monitoring MRSA bacteraemia since April 2008. This graph demonstrates the annual counts of MRSA bacteraemia since then. The Trust has made a steady decrease in the number of cases reported.



Escherichia coli bacteraemia

Escherichia coli (E. coli) is the most common cause of bacteraemia, with the highest rates being seen in those aged 64 years and older. The second most common group are those aged less than 1 year, with a higher incidence in males than females. Between April 2015 and March 2016 the Trust recorded 407 cases of E. coli bacteraemia. Using the same criteria as for MRSA bacteraemia, 58 of these cases were Trust acquired and 349 Non-Trust acquired. There is no reduction target set nationally. The Trust has remained static in the number of Trust acquired E. coli bacteraemia with a significant increase of Non-Trust acquired cases.

Graph 10: Trust acquired E.coli bacteraemia cases for 2015-16

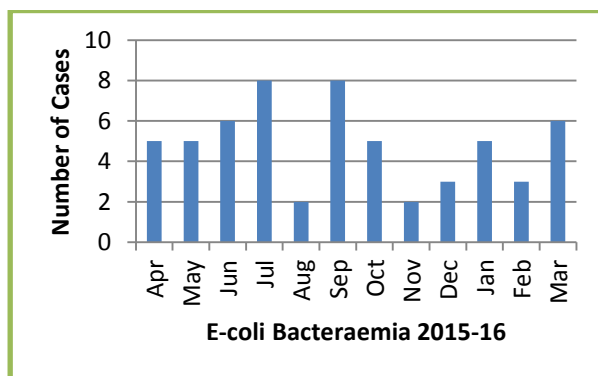


Table 8: The number of E. coli bacteraemia per month, including both Trust and Non-Trust apportioned cases from April 2015 to March 2016.

Month	Trust acquired	Non-Trust acquired
Apr	5	31
May	5	33
Jun	6	36
Jul	8	33
Aug	2	29
Sep	8	33
Oct	5	26
Nov	2	27
Dec	3	25
Jan	5	29
Feb	3	27
Mar	6	20
Total	58	349

Clostridium difficile infection

Clostridium difficile infections (CDI) are reported for all patients over the age of two for the year 2015-16. Similarly to MRSA bacteraemia, cases of CDI that were attributable are those which occurred three days after admission. This year the Trust was very pleased to report that the objective for incidents of CDI was achieved, with a total number of cases attributable to the Trust being 57 cases (trajectory was 59 cases). Nine positive cases identified in December 2015 coincide with the norovirus outbreak, and were patients on a ward that was closed due to the norovirus outbreak at Lincoln County Hospital. The rate of CDI remains challenging, with a

trajectory of 59 cases for 2016-17. It is clear that the Trust has to focus efforts on further reducing cases of CDI in the forthcoming year. Patients admitted to elderly care are considered to be more at risk of acquiring CDI. This is in line with epidemiology of the infection whereby it is acknowledged that elderly debilitated patients are at increased risk of the disease. It is important to note, that although the target is based on the DH definitions of attribution of infections, this does not take into account recent discharges from hospital, and patients that have developed symptoms within 4 weeks of their discharge, or cases that have occurred within 72 hours of admission.

Graph 11: Demonstrates the number of cases of C. difficile infection reported against the trajectory for the Trust during 2015-16.

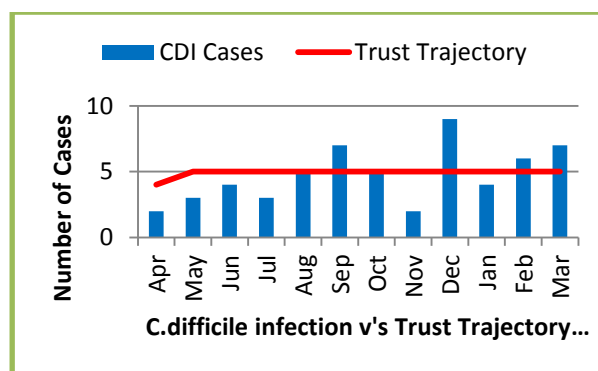


Table 9: Demonstrates the monthly acquisition against the monthly trajectory for 2015-16.

RAG Status	Monthly trajectory	Number	Total
Apr	4	2	2
May	5	3	5
Jun	5	4	9
Jul	5	3	12
Aug	5	5	17
Sep	5	7	24
Oct	5	5	29
Nov	5	2	31
Dec	5	9	40
Jan	5	4	44
Feb	5	6	50
Mar	5	7	57
Total	59	57	

Table 10: Total number of hospital acquired *C. difficile* cases against the trajectory for each year from April 2009 to March 2015

RAG Status	Year	Trajectory	Cases
	2015-16	59	57
	2014-15	62	65
	2013-14	52	61
	2012-13	61	76
	2011-12	92	74
	2010-11	144	94
	2009-10	211	159
	2008/09		211

Table 11: Demonstrates the total number of CDI patients receiving care within the Trust during 2015-16 and their attribution (either Trust acquired or Non-Trust acquired).

	Trust acquired	Non-Trust acquired
Apr	2	1
May	3	5
Jun	4	4
Jul	3	4
Aug	5	4
Sep	7	4
Oct	5	2
Nov	2	3
Dec	9	5
Jan	4	3
Feb	6	1
Mar	7	1
Total	57	37

Table 12: Quarterly laboratory returns for *Clostridium difficile* testing for the Trust from April 2015 to March 2016

	Q1	Q2	Q3	Q4	Total
Total No stools	1589	1477	1477	1609	6152
<i>C diff</i> toxin test	1155	1047	797	1136	4135
% samples tested for <i>C diff</i> toxin	72	70	53	70	265
<i>C diff</i> toxin +ve cases > 65yrs	18	23	29	20	90
<i>C diff</i> toxin +ve cases 2-64 yrs	1	4	3	4	12
<i>C diff</i> toxin cases +ve 2+ yrs	0	0	0	0	0
% +ve cases out of <i>C diff</i> toxin test done	1.6	2.57	4.01	2.11	2.57

Table 13: Demonstrates the number of C. difficile infection cases monthly for the past 5 years, as well as demonstrates the infection rate over the time period. There had been a steady reduction in this for five years.

	2010/ 11	2011/ 12	2012/ 13	2013/ 14	2014/ 15	2015/ 16
Apr	7	5	1	6	7	2
May	17	12	2	4	8	3
Jun	6	3	7	8	7	4
Jul	10	10	9	3	6	3
Aug	8	7	11	8	5	5
Sep	11	3	6	7	10	7
Oct	8	7	8	3	5	5
Nov	6	4	7	8	5	2
Dec	2	4	6	6	2	9
Jan	10	8	2	3	3	4
Feb	4	8	6	2	6	6
Mar	4	8	6	2	6	7
Mean Rated	7.75	6.58	5.92	5	5.83	4.75

Orthopaedic surgical site infection surveillance

The Public Health England surgical site infection (SSI) surveillance service assesses speciality specific surgical site infections, on a quarterly basis. The Trust participates in this surveillance using the standard case definitions and surveillance methodology, which are provided to enable comparable rates to be produced. The reporting of orthopaedic SSI became compulsory in 2006, other components of the scheme remains voluntary. Although the Trust conforms to the requirements of the PHE SSI surveillance by undertaking at least one major orthopaedic procedure for at least 3 months every year, and submitted data for quarter 4 (January 2016 – March 2016), This data is being analysed by the PHE and has not been published at the time of writing this annual infection prevention report.

1.1 Non-mandatory surveillance

Glutamate Dehydrogenases

All C. difficile strains appear to produce the cell wall associated enzyme glutamate dehydrogenases (GDH) antigen. Rapid testing methods for C. difficile infection continues to be conducted on all samples that conform to the testing criteria received in the microbiology laboratory from inpatients over the age of 2 years. As from April 2012, the Trust process continues to implement the national guidance for C. difficile testing, which consists of conducting glutamate dehydrogenase (GDH) test first; if this is positive the sample is then processed for C. difficile toxin testing. It has been proven that approximately 20% of patients who are positive for the GDH antigen of C. difficile carry a non-toxigenic strain of C. difficile (Willis et al 1992, Altaie et al 1994 and Barbut et al 2000).

Graph 12: Demonstrates the number of positive GDH positive per toxin negative cases across the health economy. In total there were 330 positive GDH positive per toxin negative across the health economy, with 184 cases being identified as Trusts acquired and 146 cases as Non-Trust acquired.

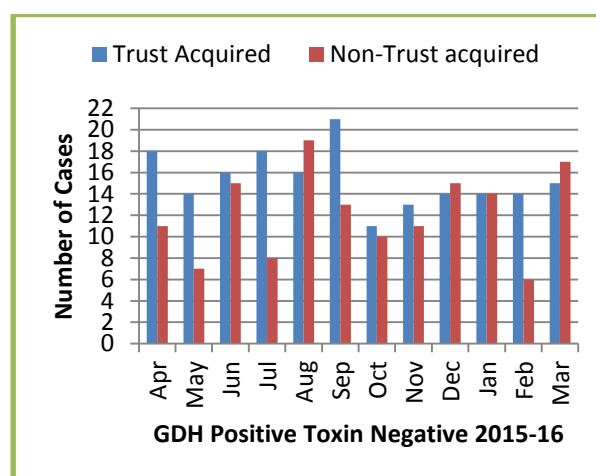
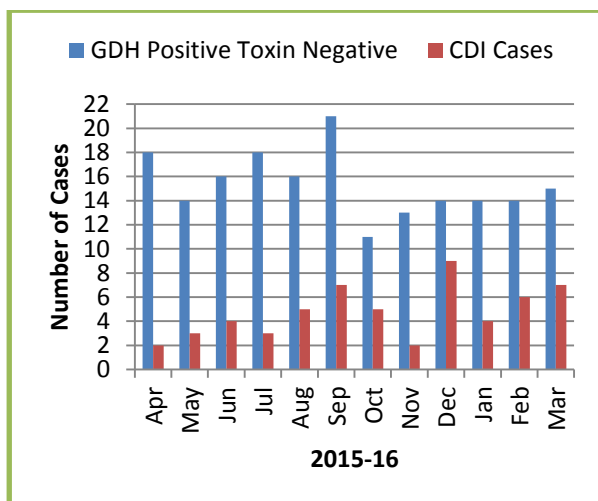


Table 14: Demonstrates the increase in year-end cases of C difficile positive/toxin negative (GDH) for 2015-16 in comparison to 2014-15 for Trust acquired cases, and an increase in Non-Trust acquired cases.

2013/14		2014/15		2015/16	
Trust acquired	Non-Trust acquired	Trust acquired	Non-Trust acquired	Trust acquired	Non-Trust acquired
5	2	6	6	18	11
7	3	5	2	14	7
4	6	7	5	16	15
13	4	2	4	18	8
7	7	3	3	16	19
3	2	6	3	21	13
7	4	5	8	11	10
4	3	9	5	13	11
5	5	2	3	14	15
7	3	3	3	14	14
8	2	6	0	14	6
1	3	5	3	15	17
71	44	59	45	184	146

Graph 13: Demonstrates C. difficile cases both toxin positive (CDI) and toxin negative (GDH) cases that meet the criteria for Trust acquired during 2015-16.



There are five key measures that the Trust needs to put into place and rigorously maintain in order to minimise the risk posed by C. diff:

- Rapid isolation of a patient with diarrhoea, to prevent the spread of infection to other patients and reduce environmental contamination
- Enhanced environmental cleanliness, reducing the level of spores contaminating the environment and the likelihood of further transmission to other patients
- Prudent antimicrobial prescribing. To reduce the risk of destroying the normal protective bowel flora and minimise the risk of C. difficile infection
- Compliant hand hygiene practice: to prevent person to person transmission of spores
- Personal protective equipment: for good infection prevention practices and protection of staff and patients

New clinical cases of MRSA colonisation

In line with the 'Code of Practice', the Trust has in place a 'systematic approach' to MRSA screening of patients either on their admission or prior to their admission i.e. pre-assessment clinics. It is important to monitor Trust acquisition for MRSA as this can often be an early warning sign of cross infection in any given clinical area. The national criteria for stating Trust or Community acquisition is applied i.e. Trust acquired is when the patient has been an in-patient greater than

48 hours when the sample was taken. This surveillance is then sub-divided into ‘infection’ (MRSA isolated from clinical specimens) and colonisation (MRSA isolated from MRSA screening). Due to the complex pathways the patients are referred to in the Trust, capturing the relevant information can be challenging, but this work is vital as it enables the IPT to continue to monitor all new cases of MRSA colonisation and/or infections (MRSA bacteraemia is not included in this surveillance).

Table 15: Number of new MRSA acquisitions compared to the previous years.

	Pre 48 hours	Post 48 hours	Total
2010-11	341	67	408
2011-12	353	49	402
2012-13	370	54	424
2013-14	389	49	438
2014-15	318	33	351
2015-16	448	37	485

During 2015-16 in-patient MRSA screening was taken and processed by the microbiology laboratory, which identified a total of 485 new MRSA isolates, 448 were pre 48 hrs (community acquired) and 37 were post 48 hrs (hospital acquired). These results were isolated from clinical and screening samples. The number for 2015-16 is slightly higher when compared with previous year periods. All MRSA positive patients, whether new cases or cases that the IPT are aware of will have a ‘Target Organisms’ alert flag on the Patient Admission System (Medway), and their health records will also have an alert

notice attached. All newly identified inpatient cases are visited by the IPT who instigate appropriate infection prevention and control measures.

National studies have shown that the risk of colonisation with MRSA increases with the length of stay in hospital, with the most commonly colonised sites being wounds or indwelling devices. Therefore all in-patients, who have no previous history of MRSA and have tested negative on their admission screen, will have a routine screened completed for MRSA, including screens from any wounds, indwelling device, urine sample if they have a urinary catheter insitu taken at ‘21 day post admission’. If these results are negative, the patient will be screened weekly for the duration of their admission; if positive they will commence the Trust suppression therapy.

Table 16: Shows the number of MRSA screens undertaken in the Trust during 2015-16, as percentage of the total elective and non-elective admissions per month.

Month	% of screens
Apr	131.95
May	136.94
Jun	147.63
Jul	137.08
Aug	126.92
Sep	127.20
Oct	127.98
Nov	130.74
Dec	147.06
Jan	131.46
Feb	128.42
Mar	126.38

Carbapenemase-producing Enterobacteriaceae

Carbapenemase-producing Enterobacteriaceae (CPE) are a group of bacteria that are highly resistant to many antimicrobials including carbapenems (meropenem, imipenem). Some isolates are resistant to all currently available antibiotics. Many of these bacteria usually live harmlessly as part of the gut flora and play an important role in the digestion of food. Currently London, Manchester, Liverpool, Hull, Leeds and Sheffield are affected, these bacteria represent a major threat to public health. We have seen sporadic cases within the Trust during 2015-16. It is important that the Trust has good infection prevention, and control practices in place consistently to prevent the spread of these bacteria.

During 2015-16, forty- eight patients to ULHT fulfilled the criteria for CPE screening, 1 case was positive.

Tuberculosis

Tuberculosis (TB) is a bacterial infection spread through inhaling tiny droplets from the coughs or sneezes of an infected person. It is a serious condition, although it mainly affects the lungs, it can affect any part of the body. It can be cured with proper treatment. Tackling TB is one of the key priorities for Public Health England. During 2015-16 the Trust has seen a slight increase in the number of suspected and/or confirmed cases of TB.

Table 17: Demonstrates the number of suspected or confirmed cases, which have received treatment either for their TB or other medical conditions as an in-patient within the Trust.

	Site	Suspected	Confirmed
Apr	PBH		Mycobacterium TB positive
May	PBH	S	
	PBH	S	
Jun	PBH	S	
	PBH		Mycobacterium & Quantiferon TB Gold positive
Jul			
Aug	LCH	S	
Sep			
Oct	PBH		Mycobacterium TB positive
Nov			
Dec	PBH	S	
	LCH		Mycobacterium TB positive
Jan	PBH	S	
	PBH		Mycobacterium TB positive
	PBH		Mycobacterium TB positive
	PBH		Mycobacterium TB positive
Feb			
Mar	LCH	S	
Total		7	7

1.2. Outbreaks

During 2015-16 the Infection Prevention team managed a number of outbreaks within the Trust. All were managed to a satisfactory conclusion and all patients recovered fully. The most challenging outbreak in this financial year was the major Norovirus outbreak on the Lincoln site in December/January 2015-16.

Norovirus

Outbreaks of norovirus are essentially difficult to predict, and have a significant impact on the operational services of the Trust; it impacts upon elective activity and the correct placement of patients on wards. Due to the sudden onset of symptoms there is frequently no prodromal period prior to the onset of vomiting/diarrhoea. Norovirus circulates within the community throughout the year and people can incubate the virus without showing any symptoms. The challenge for healthcare providers is once the infection is introduced into the environment by someone who is incubating the infection on admission, it is very easily spread to others.

Table 18 : Norovirus outbreaks Trust wide:Key:

- C : Laboratory Confirmed case,
- S : Clinically Suspected case,
- Pt : Number of patients affected

	Ward	Pt	Norovirus C/S
Apr	Nil		
May	Nil		
Jun	Nil		
Jul	Nil		
Aug	Nil		
Sep	Nil		
Oct	Nil		
Nov	Nil		
Dec	16 Wards Lincoln County	199	C
Jan	3A Pilgrim	11	C
Feb	3B Pilgrim	9	C
Feb	5A Pilgrim	5	C
Feb	7A Pilgrim	6	C
Mar	Burton Lincoln	11	
Mar	6A Pilgrim	12	C
Mar	5B Pilgrim	15	C

Lincoln County Hospital

Although the Trust saw several outbreaks during Q3, The most significant one was the outbreak reported from Lincoln County Hospital, which started on the 9th December 2015 and a major outbreak was declared on 17th December 2015.

Outbreak control measures were implemented immediately and an outbreak response group convened, which met daily and sometimes twice daily to monitor the situation and review control measures. Although it is not possible to say with certainty how the virus was brought into the Trust or moved from one clinical area to another, it was established during the investigation that some relatives visited while symptomatic, and were symptomatic during their visit.

A total of sixteen wards were involved in the outbreak, 11 wards were closed and 4 wards were closed and re-opened on more than one occasion. Norovirus genotype 2 was identified during by laboratory testing, as the causative agent.

Transmission was seen in the early stages of the outbreak, but as the situation evolved cases were either admitted with symptoms or incubating symptoms (became unwell within 24 hours after admission).

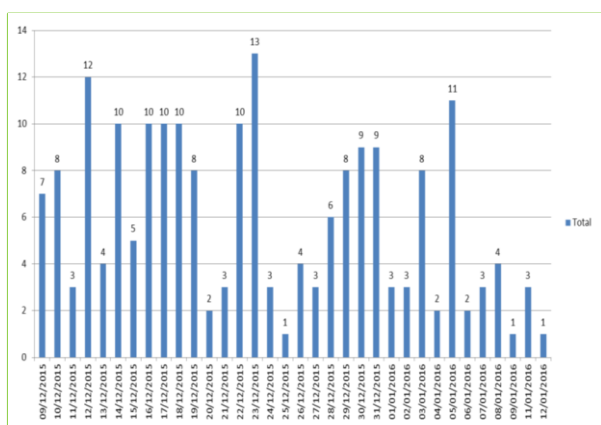
All symptoms self-limiting and patients recovered from viral gastro-enteriits.

There was a significant impact on the site and IP team business as usual. MEAU was affected

throughout the outbreak with admissions of symptomatic patients. Lack of single room capacity on the unit compromised isolation. The unit is divided into 2 areas A & B side- A was closed for 5 days in total and B side closed for 3 days in total.

Outbreak was declared over on 15th January 2016, following a 72 hour period of no new reported cases. A constructive debrief and lessons learned meeting was held on 12th February 2016.

Graph 13 below demonstrates the epidemic curve of new cases daily over the outbreak period:



Burton ward

A further outbreak affected Burton ward, which was closed from 7th March to 18th March 2016 which affected 11 patients.

Pilgrim Hospital, Boston

This outbreak started on 18th February 2106 and ended on 1st April 2016. A total of 9 wards were affected, which included 71 symptomatic patients and 33 staff members.

Table 19 shows number of patients and staff affected at Pilgrim Hospital, Boston.

Ward	Dates	Closed?	No. of patients	Total number of staff	Identified agent
3B	18/02/16-22/02/16	No contained	9	5	Norovirus
3A	18/02/16-25/02/16	No contained	11	6	Norovirus
CCU	20/02/16-21/02/16	no	2	0	D&V
7A	21/02/16-04/03/16	No contained	6	2	Norovirus
5A	26/02/16-04/03/16	No contained	5	10	Norovirus
7B	02/03/16-03/03/16	No contained	6	5	D&V
AMU	02/03/16-03/03/16	No	5	0	D&V
6A	04/03/16-16/03/16	Closed	12	1	Norovirus
5B	20/03/16-01/04/16	Closed	15	4	Norovirus

Serious Incidents, Periods of Increased Incident and outbreaks

The Trust reports any incident which meets the definition of a serious incident as requested by NHS England. These include incidents where there has been an impact on the running of the organisation i.e. ward closure, or where there has been a severe impact on patient outcome.

The reports are submitted via STEIS within 24-48 hours of the IPT becoming aware of the event, which would include the following:

- All MRSA bacteraemia
- Clostridium difficile, classified as 1a or 1b on the death certificate where clostridium difficile has made a significant contribution to the cause of death
- Outbreaks
- Infected healthcare worker or patient incidents necessitating consideration of look back investigation
- Significant breakdown of infection control procedures with an actual, or potential for, cross infection

The Trust is required to report to the CCG those incidents that fulfil the Serious Incident (SI) criteria; the following summarise these requirements:

- There was one (1) MRSA bacteraemia reported
- There were no C. difficile cases classified as 1a on the death certificate where C difficile had a significant contribution to the cause of death
- SI's were completed for ward closures due to norovirus outbreaks

MRSA bacteraemia Shuttleworth ward, Lincoln, April 2015

Post infection review (PIR) was carried out and reported as per guidelines. Action plan was compiled and actioned at the time.

Contributory factors:

- Lack of knowledge on MRSA guidelines
- Lack of compliance with hand hygiene
- Decolonisation with octenisan not used appropriately and bottles not single patient use
- Reduced environmental scores
- Staffing levels below template
- Scrub technique in theatre not audited/monitored
- Patient had multiple cannulations and gaps in VIP scoring
- Patient had cognitive impairment

1.3 Other infection related outbreaks

There were other infection related incidents which were dealt with by the IPT between April 2015 and March 2016. These were either suspected or confirmed Periods of Increased Incident (PII) and an outbreak of influenza A. These incidents were reported internally via Datix, and as required to the PHE, CCG as part of the internal mandatory surveillance of HCAI i.e. PII related to C difficile. Reports on these incidents are available from the IPT. A summary of the reports is available below

Table 20 below: Highlights period of increased incidents/outbreaks caused by other pathogenic microorganisms.

	Ward	Type of incident	Microorganisms identified
April 2015	Hatton-	PII (Ribotyping different)	Clostridium difficile
Oct 2015	6B- Boston (6/10-	PII (On further testing one	Clostridium difficile

	27/10/15)	sample did not identify c. diff)	
Oct	6A- Boston (14/10-4/11/15)	PII (ribotypes different-002 & 015	Clostridium difficile
Dec	6B- Boston (03/12-31/12/15)	PII (Ribotypes different)	Clostridium difficile
Dec	Burton-Lincoln	PII (Same Ribotype-002)	Clostridium difficile
Feb 2016 (08/02 - 22/02/16)	6A- Boston	PII (Subtyping different)	Clostridium difficile
Feb 08/02-22/02/16)	5A- Boston	PII (Ribotypes different)	Clostridium difficile
Feb	Waddington-Lincoln	Outbreak	Influenza A- (6 patients and 2 staff)
March 09/03-26/03/16)	6A- Boston	PII (Same ribotype and sub type)	Clostridium difficile

* PII – Period of Increased Incident, two (2) or more cases occurring >48hrs post admission (not relapses) in a 28 days period on one clinical area.

It is reasonable to assume following the ribotyping (genetic fingerprinting) and MLVA typing (a more discriminative typing system)

results that, currently, person-to-person spread through patients or staff represents the most likely route of transmission. The importance of prompt isolation, use of personal protective equipment and hand hygiene in the prevention of further cases of C difficile infection cannot be over emphasised.

When a ward has a PII, the following actions are implemented by the IPT:

- Isolating appropriately according to the Trust Isolation Policy
- Implement control measures i.e. correct use of PPE, cleaning of the environment and equipment, in the case of C. difficile the removal of the alcohol based hand rub from the point of care
- Complete DATIX
- Communication email is circulated to Clinical Staff, Senior Management Team, DIPC, IPT, Consultant Microbiologist, Operational Team & Bed Managers
- Patients, and where necessary carers/relatives, are informed and kept up to date with the situation
- Sample is forwarded to the Reference Laboratory for ribotyping
- RCA investigation is commenced
- Hot spot/CDI audits are undertaken by the IPT
- Communication with external stakeholders i.e. CCG, PHE

Waddington ward-Lincoln County Hospital

Influenza A outbreak

In February 2016, an outbreak of influenza A (H1N1) closed the ward for 2 weeks. There were 6 patients affected and 2 staff members. The IPT worked alongside PHE- all patients were swabbed and received prophylaxis treatment.

1.4 Blood culture contamination

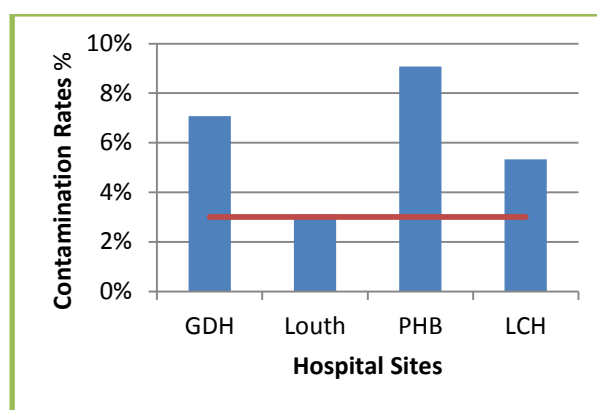
Patients who develop a fever or evidence of sepsis will have blood taken and forwarded to the microbiology laboratory for testing, referred to as blood cultures. Once the laboratory have received them the bottles are agitated and incubated at body temperature. Basic sets of cultures are incubated for 5 days. If growth is detected the bottles are sub-cultured and a Gram stain performed. From this the relevant antibiotic sensitivities are performed. The Consultant Microbiologist then reviews the results and provides advice accordingly.

The criterion for a bacteraemia to be recorded as hospital acquired is that the blood sample was taken more than two days after admission. Between April 2015 and March 2016, blood culture sets were taken at the Trust, with a contamination rate of 7.37%.

Table 21: Demonstrates the number of blood cultures taken per hospital site between April 2015 and March 2016. The Department of Health aspiration rate is <3%.

Hospital site	No of blood cultures	% rate of contamination
GDH	2280	7.07%
Louth	206	3.11%
PHB	7430	9.08%
LCH	8670	5.33%

Graph 15: Highlights the individual hospital site blood culture contamination rate for 2015-16 against the DH recommendation of <3% contamination rate



Section 4

Education

Our vision is to provide consistently excellent and safe patient-centred care, through staff having the required knowledge to reduce the risk of infections.

The Trust has a statutory obligation to ensure that all staff receive appropriate education and training in infection prevention and control. The 'Code of Practice' also requires that induction and training programmes for new staff and on-going education for existing staff should incorporate the principles and practice of prevention and control of infection.

All healthcare workers, whether or not they are involved in direct patient care, must acknowledge that compliance with the principles of infection prevention practice with all patients at all times helps to minimise the transmission of infection between patients, staff and visitors.

Many patients are vulnerable to infections, this can delay their recovery or can even be fatal. Infections also considerably increase the costs to the Trust.

Although there is a wealth of infection prevention information and evidence available, this is often inaccessible to those working at ward or department level. Education is recognised as

having an important role in preventing and containing infections. Training and education is essential to promoting safe practice, and is integral to the overall delivery of an effective infection prevention and control service. The purpose of infection prevention training is to enhance and develop staff knowledge with regard to the standard infection prevention principles, to target microorganisms, and target conditions in order to facilitate safe, effective infection prevention practice, and thus prevent the spread of infection and improve our patient outcomes.

Training and education remains pivotal to the Trust's approach to reducing infection rates and can occur in many forms, both formal and informal. During 2015-16 the IPT has continued to be proactive in the delivery of education and has utilised a number of methods including meetings, face to face training session, practical training sessions, hand hygiene practice and ad-hoc sessions to optimise ward based healthcare by providing education that emphasises infection

prevention. All training packages were reviewed in March 2015 for the 2015-16 training program, which reflected basic infection prevention principles as well as highlighting local issues i.e. local surveillance. Although all the packages covered hand hygiene, the practical assessment is conducted on Core Module (mandatory) update and induction training sessions.

An annual education programme is produced which outlines the Trust training programme, which includes an assessment of the training needs of different staff groups and is designed to meet local and national educational needs and requirements. Infection prevention training continues to be embedded in many of the Trust’s training and education programmes.

All new staff to the Trust receive basic infection prevention training from the IPT as part of their induction to the Trust. New staff who do not attend, are chased up by the Education and Training Department, to ensure they attend at a later date.

The Core Module (mandatory) update included a 15 min face to face presentation for non-clinical staff followed by a 30 min face to face presentation for clinical staff. The sessions focus on providing information related to the basic principles of infection prevention practices.

The IPT also provided bespoke general infection prevention training, including hand hygiene utilising the ‘glow box’ for wards on all Hospital sites.

The IPT continues to provide education in different ways to meet the needs of the Trust, it is becoming increasingly difficult for staff to be released from their duties and to this end the IPT are increasingly delivering training at ward/department level, in addition ad-hoc training for individual wards/departments is provided if that area has specific requirements.

1. Core Module and Induction Training

During 2015-16 the IPT provided sessions of Core 1 module, and 30 sessions of the General Induction CL.

Table 21: Numbers of attendance at the Core Module and Induction Training per staff group for 2015-16.

Course	Staff group	Completed
Core module 1	Add Prof Scientific and technic	54
	Additional clinical services	553
	Administrative and clerical	330
	Allied health professionals	126
	Estates and ancillary	171
	Healthcare Scientists	43
	Medical and Dental	108
	Others	13
	Nursing and Midwifery	1033
Total		2431

Course	Staff group	Completed
General Induction CL	Add Prof Scientific and Technic	20
	Additional Clinical Services	233
	Administrative and Clerical	153
	Allied Health Professionals	43
	Estates and Ancillary	94
	Healthcare Scientists	3
	Medical and Dental	68
	Others	83
	Nursing and Midwifery	213
	Total	910
Grand Total	3341	

At the end of the financial year, 79% of nurses and Allied Health Professionals attended core learning.

2. Training sessions provided by the Infection Prevention Team

Infection prevention is an integral part of induction and Core Module (mandatory) update training, as well as several bespoke training session

Table 22: Demonstrates infection prevention and control training undertaken in 2015-2016

Month	Audience	Topic
Lincoln County Hospital		
May	All grades	Hand hygiene awareness stand
	Midwives	Hand hygiene, sharps, decontamination of equipment

	Trained nurses	Injectable medicines
	Junior doctors	Blood culture training
Jul	Sixth form students	Hand hygiene, sharps and isolation x 2 sessions during July
	HCSW induction	Hand hygiene, isolation, alert organisms, decontamination
Aug	Junior doctors F1	Blood culture training
	Junior doctors F2	Blood culture training
Sep	All grades	Drop in sessions on norovirus - samples, testing, isolation, documentation, restriction and closure of wards
	All grades	Drop in sessions on norovirus - samples, testing, isolation, documentation, restriction and closure of wards
	Junior doctors	All infection prevention principles, target organisms and other related topics
	HCSW	Hand hygiene, C. difficile, sharps and decontamination, personal protective equipment, isolation (colour code)
	Junior doctors	Blood culture training
Oct	HCSW induction	Hand hygiene, isolation, alert organisms, decontamination
Nov	Shuttleworth ward	Hand hygiene training
Jan	HCSW induction	Hand hygiene, isolation, alert organisms, decontamination
Feb	Junior doctors A&E	All infection prevention principles, target organisms and other related topics

Month	Audience	Topic
Grantham and District Hospital		
May	All grades	Hand hygiene awareness stand
June		
Jul		
Aug		
Sep	All grades	Drop in sessions on norovirus - samples, testing, isolation, documentation, restriction and closure of wards
	All grades	Drop in sessions on norovirus - samples, testing, isolation, documentation, restriction and closure of wards
Oct		
Nov		
Dec		
Jan		
Feb		
Mar		

Month	Audience	Topic
Pilgrim Hospital Boston		
Apr	Trained nurses	Injectable medicines
May	HCSW induction	Hand hygiene, isolation, alert organisms, decontamination
Jun	Acutely ill course	General IP precautions
Jul	Trained nurses	Injectable medicines
Aug		
Sep	All grades	Drop in sessions on norovirus - samples, testing, isolation, documentation, restriction and closure of wards
	All grades	Drop in sessions on norovirus - samples, testing, isolation, documentation, restriction and closure of wards
	Physio's	Respiratory update
	Acutely ill course	General IP precautions
Oct	Trained nurses	Injectable medicines
Nov	Acutely ill course	General IP precautions
	HCSW induction	Hand hygiene, isolation, alert organisms, decontamination
Dec		
Jan	Trained nurses	Injectable medicines
Feb		
Mar	Acutely ill course	General IP precautions

Section 5

Occupational Health

Our staff health is important to us. Occupational Health works closely with the Infection Prevention Team to ensure that staff are protected against infection.

Seasonal Flu Vaccination

The Trust achieved a flu vaccination take up of 64% front line staff in ULHT for 2015/16. The Trust flu plan for 2016/17 is now in place and in the process of been implemented following approval at the Trust infection Prevention committee and by NHS England.

NHS England have confirmed that the final date for reporting flu immunisations for frontline health care workers will be the end of December 2016. This is a month earlier than usual as the final date in previous years has been the first week in February.

NHS England have attached CQUIN to this year's flu campaign, the payment schedule is the full value of the CQUIN for 75% and over and 50% of the CQUIN for 65% and over.

The Trust have agreed to aim for the 75% and over target.

Immunisations and Vaccinations

In accordance with the current policy and Department of Health guidelines the Occupational Health Service has undertaken 471 blood screenings and 379 vaccinations (MMR, chicken pox, Hep B and BCG). Hepatitis B vaccinations are given to all staff whose work involves exposure to body fluid both at pre-employment and during employment.

There were issues of non-compliance with staff not being immunised this results from staff failing to attend their appointments. Occupational Health contacts all managers for follow up action and re-referral but is aware that not all staff re-book.

This issue was addressed through the IPC and with the support of the Director of Nursing and Medical Director the non-attendance rate has reduced.

Sharps Injury Prevention

Needlestick injuries and other sharps injuries are among the most common and serious risks to healthcare workers. Sharps injuries are primarily associated with occupational transmission of hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV).

The regulations for the management of safer sharps came into force on 11 May 2013, called the Health and Safety (Sharps Instruments in Healthcare) Regulations 2013. Compliance is monitored through the Health and Safety Committee and the Infection Prevention Committee.

The Trust has established a multidisciplinary Safer Sharps Group and the key priorities for ensuring compliance with Health and Safety (Sharps Instruments in Healthcare) Regulations 2013 Priorities and Actions being taken for Sharps injury Prevention are:

Risk Assessments

Ensure local sharps risk assessments are undertaken and recorded on Datix and we identify and implement further controls where required.

Implementation of further safer sharps devices

The product reviews of safer sharp devices are carried out and any safer device is trialled first by

clinical areas and a business are to support any changes are completed.

Education, training information and awareness-raising:

Ensure existing and new staff working in clinical areas, are trained in use of any medical sharps including those with safety mechanisms. Ensure all employees are aware of the risk of sharps injury and post injury action. This is delivered at induction and core training.

Reporting Injuries

Ensure all sharps injuries are reported to occupational health and Datix. Regular review of injury data and trends are reported to the IPC and H&S committee.

The total numbers of sharps injuries reported to date for 2016 are 117 inoculation injuries none of which were high risk injuries. This was slightly less than last year.

Since May 2015 a number of safer sharps have been introduced and the awareness has been raised across the trust which may account for of increased the number of Sharps incidents reported.

The changes of note in the reporting are the decrease in the number of scalpel and suture related incidents in both theatre and maternity.

The highest increase in reporting is the inappropriate disposal of sharps after they have been used, this is at 17 injuries for this period and is across the trust. These are mainly when a sharps has been used and the user fails to dispose of the sharp correctly and leaves it for someone else to discover and dispose of.

This is when the highest sharps injuries are now taking place. These injuries are significant as it often difficult to identify the source patient and this increases the impact on the injured member of staff and their management.

This is being addressed by a stronger emphasis on disposal of used sharps during training and a trail on different sharps bins.

Section 6

Estates and Facilities

Continuous measurement and management of performance of Estates and Facility Services is fundamental in the control of hospital acquired infection.

1. Cleanliness

Cleanliness remains high on the Trust agenda and regular meetings continue to be held at all levels of the organisation. The monitoring of clinical areas is undertaken by the Facilities Department on a weekly and monthly basis following the National Standards of Cleanliness guidelines (2007) using “Servicetrac” (now replaced by MiC4C), which is a cleanliness monitoring software product. The results are fed back to Ward and Department Leaders, Matrons, Heads of Nursing and the Infection Prevention Team (IPT). The scores and any actions needed are discussed at the various site IP meetings as well as the Trust IP Committee meeting.

Facilities are involved with the management of outbreaks with the IPT, from whom the lead on an appropriate response is taken, clinical staff and other Trust staff enable areas to be brought back in to service in a timely fashion.

Some wards have implemented disposable bed curtaining for clinical areas across the Trust. These are either changed in accordance with DIPC Annual Report 2015-2016

curtain changing regime or if they are contaminated with blood fluids, or following isolation care.

Housekeeping Review

A Housekeeping Review was carried out by Litmus Partnership. This focused on staff levels, supervision and management of ward based Housekeepers.

Nursing and Facilities have jointly produced an Executive Team report identifying the additional resources outlined in the litmus report. We have also agreed to trial four wards transferring the direct management of Ward Housekeepers from Nursing to Facilities.

Norovirus Outbreak

Lincoln County experienced a significant Norovirus outbreak over the Christmas and New Year period. IPT and Facilities planned post outbreak cleans as wards/bed bays became available. Owing to the cleaning requirements of this outbreak, two contract cleaning companies

supplied additional staff and the Deep Clean Team from Pilgrim also assisted.

Hydrogen Peroxide Vapour “Fogging” of MEAU was also undertaken, this was the first time ULHT had utilised this method of decontamination. Facilities and IPT are investigating how to utilise this system in the future.

Deep Clean Programme

The most efficient way to carry out a Deep Clean is to fully decant the ward. This is currently not an option on any site, so the Deep Clean system is planned to clean a ward bay by bay, room by room. Facilities Deep Clean teams can clean one bay a day providing the patients are relocated in advance. This Facilities Deep Clean Teams on the Pilgrim and Grantham sites started the year following a Deep Clean programme. At Pilgrim this has not been maintained as MiC4C scores indicated that additional support was required on some wards. The Pilgrim Deep Clean Team is currently acting as a “response team” targeting areas with low scores.

Lincoln have yet to agree a Deep Clean programme, discussions with the Site Management Team are ongoing. The Deep Clean Team is acting as a “response team” targeting areas with low MiC4C scores.

4. Waste management

Waste Pre Acceptance Audit

The Trust is required to complete a Pre Acceptance Audit for all sites annually to ensure the Trust is compliant with regard to Waste Segregation.

The Audits are completed in May each year and are forwarded to SRCL, the Clinical Waste Contractor. The information is checked by the companies Compliance Department, which is a mandatory requirement for the Environmental Agency. If the audits are not undertaken, waste would not be collected by the Contractor.

Initially, the Trust was required to undertake a full audit across all areas on each site. However, over the last 2 years the mandatory requirement has been to undertake audits on a third of each site.

5. PLACE

PLACE assessments were introduced in April 2013 to replace the former Patient Environment Action Team (PEAT) assessments undertaken from 2000-2012. These are the third results from the revised process.

Background

The aim of PLACE assessments is to provide a ‘moment in time’ snapshot of performance against a range of non-clinical activities. Notice of the assessment is given by HSCIS with a 6 week period in which to undertake the assessment.

For this year's assessment we put together a Trust wide team of Staff and Patient Assessors to try to standardise the scoring across the Trust. This process worked very well and will be adopted again next year.

ULHT areas at Louth were included for the first time this year.

Results

The results were released on 10th August and are available to the public on the NHS Digital website.

The results for ULHT against last year are:

Criteria	Grantham		Lincoln		Pilgrim		Louth	National Average
	2016	2015	2016	2015	2016	2015	2016	2016
Cleanliness	92.36% ↑	87.56%	93.13% ↑	90.86%	93.84% ↓	94.69%	96.27%	98.06%
Food & Hydration	91.34% ↑	80.24%	83.01% ↑	73.35%	78.85% ↓	95.24%	94.61%	88.24%
<i>Organisation Food</i>	90.18% ↓	94.34%	90.18% ↑	86.92%	90.18% ↑	88.43%	90.18%	87.01%
<i>Ward Food</i>	91.75% ↑	75.40%	81.48% ↑	68.48%	75.81% ↓	96.86%	99.15%	88.96%
Privacy, Dignity & Wellbeing	71.88% ↓	82.79%	79.20% ↓	85.67%	85.19% ↓	87.57%	65.15%	84.16%
Condition, maintenance & appearance	85.19% ↑	80.87%	83.29% ↑	81.87%	90.30% ↓	91.13%	70.79%	93.37%
Dementia	55.08% ↑	54.89%	59.12% ↓	69.18%	66.98% ↓	70.59%	73.48%	75.28%
Disability**	65.54%		64.44%		75.94%		72.46%	78.84%

** New for 2016

Observations

Cleanliness

The standard of cleanliness was generally perceived to be good, with issues only seen on a small number of the wards audited.

Food Service

The hard work put into improving the ward level food service at Grantham was evident with the score improving by 16% on last year. Lincoln's score also improved however there is still room for improvement on some wards. Pilgrim score dropped from the excellent standard witnessed last year, some wards still showed they are providing the same excellent standards however the score was reflective on standards provided on other wards.

The main themes were patients not being prepared for the food service, e.g. sat up in bed/out of bed, offered the chance to wash their hands or having tables cleared ready to receive the meal. Protected meal times were also not being consistently observed.

Privacy, Dignity and Well Being, Condition, Maintenance and Appearance, Dementia and Disability

The main issues were regarding the built environment and its condition rather than observations made of the caring practice of patients. Examples of criteria measured are given in Appendix 1.

Considerations and Learning - Preparation for 2017

Retaining involvement of experienced Patient Assessors and broadening this resource is

essential. A de-brief event for the 2016 Assessors – Patient and Staff has been organised for October.

6. Water Safety Group

During the past twelve months the Trust has made considerable improvements in delivering its water hygiene programme, essentially operating robust schemes across a number of key compliance requirements. However, there remain a series of challenges, which if not resolved with urgency have the potential to degrade the good work completed over the past twelve months. The key areas for consideration are:-

Data handling, record keeping and the interface between PPM and the ACOP L8 logbook system requires further improvement, and a common approach across all sites. The MiC4C system needs to be expanded and greater resource provided to turn it into a valuable Estates management tool. Currently, records are stored in both hard copy 'S' drive and on MiC4C. A more structured approach consistent across all three sites needs to be developed. The AE (Water) has provided a template for an electronic logbook.

The Facilities Compliance Team are reviewing the information currently held in different formats and locations. They will then migrate all relevant information onto the new logbook structure which will be held on the MiC4C system.

There are ACOP L8 Risk Assessments in place for all 3 sites. However, these are required to be reviewed due to the revised ACOP L8 (4th Edition) 2013 HSG 274 (parts 2&3) and the revised HTM 04-01 (March 2016), Parts A, B and C and recent infrastructure changes on all 3 sites.

Accurate and up to date records and schematic drawings remain an issue for all sites. The production of schematic drawings is being addressed as a project in 2016/17. This project is being monitored by a Sub-group of the Water Safety Group.

During 2015/16, a programme of training commenced for Estates personnel, Nursing, Housekeeping and Directorate Managers in Water Hygiene awareness. The water safety group have trained and appointed responsible persons for water safety across each site and also has a Trust wide responsible person who chairs the water safety group.

As required by the revised HTM 04-01 (March 2016), Parts A, B and C additional training for Estates personnel will be required to be facilitated.

Whilst the basis of a *Pseudomonas* Risk Assessment is in place this needs to be rolled out to each augmented care discipline with the necessary risk factors being noted and acted upon. This is under review by the Water Safety group, with specialist advice from Trusts Water Authorised Engineer (AE).

The Chlorine Dioxide regimes operating on all sites provides an essential secondary control measure on the cold water systems. There have been issues at Lincoln County Hospital, which the service provider has now addressed and all three sites can demonstrate robust treatment levels within HSG 274 Part 2 guidelines. This is constantly reviewed by the AE water. Given the susceptibility of the cold water systems to temperature gain across all sites there are periods where this secondary measure is indeed primary and therefore the on-going performance is a crucial element within the Water Hygiene Programme

The Legionella & Pseudomonas surveillance programme on all 3 sites was widened. To optimise Patient sinks the use of 'point of use' filters has been expanded. This must be viewed as a 'short-term' measure and kept under constant review. The failure to complete a range of Planned Maintenance tasks, due to lack of manpower and access issues and the presence of Asbestos, remains a servicing concern. It is essential that Planned Maintenance tasks are carried out as planned, as if not, it has the potential to seriously impact on water quality. Other typical factors which are influencing the water distribution system are:-

- Aging infrastructure and assets
- water chemistry causing scaling of outlets and pipework
- mixture of materials utilised throughout the water distribution

system (plastic/copper) which restrict the ability to provide effective disinfection.

A key factor in the control of waterborne pathogens is the identification and management of “little Used Outlets” and the implementation of a “robust and effective” flushing programme. Where this has been successfully implemented, the results have improved considerably.

A further issue is the presence of outlets that are no longer used/required. A survey to identify outlets that are no longer required should be carried out on all 3 sites. This process needs to be supported by the Nursing Teams, as they will be aware of the changes of water outlet requirements.

The water sampling (microbiology) programme has played a key role throughout this year in the identification of water hygiene issues that when acted upon have the resultant effect of improving water quality across the Trust. This programme provides key supportive evidence of the Trust’s effectiveness in managing water quality. This programme continues to identify issues and risk factors, it is therefore an essential tool in ensuring ‘safe water systems’.

Routine testing has been for *Legionella*; TVC at 22°C; TVC at 37°C; testing for this has now been ceased on the advice of the consultant microbiologist. *Pseudomonas aeruginosa*. Specific testing was completed at Pilgrim

Hospital Boston in respect of *Stenotrophomonas maltophilia* within Intensive Care Unit following an identified patient issue. The on-going investigation did not track this back to be the water system, however, it provided evidence to assist Estates Team in improving water hygiene within this unit by modifying tap design. The changes are still being implemented and nearing completion. The trigger for *Stenotrophomonas* sampling is through the IPT.

There are concerns regarding water quality (*Legionella*) in the old maternity building – leading to blanket installation of point of use (POU) and inline filters for 3 months or until opening of new units.

Upon commissioning of new maternity units the old maternity block floors 1 to 4 will be closed and decommissioned.

The completion of the Trust Water Quality Policy and Water Safety Plan, combined with an active “Action Plan” recording mechanism, continues to place the Trust on a sound footing. It must be stressed that changes for both Water Safety Policy and Water Safety Plan are an on-going process to keep pace with changes on each site and improvements in legislation and/or guidance. The completion of the key points raised within this summary, combined with adherence to best practice, will ensure a water hygiene programme that will be effective, demonstrating compliance and governance. The Trusts AE regularly reviews all the various updates and is compiling the updated Water Safety Plan for issue shortly.

During the past twelve months the Trust has made considerable improvements in delivering its water hygiene programme, essentially operating robust schemes across a number of key compliance requirements. However, there remain a series of challenges, which if not resolved with urgency have the potential to degrade the good work completed over the past twelve months. The key areas for consideration are:-

Data handling, record keeping and the interface between PPM and the ACOP L8 logbook system requires further improvement, and a common approach across all sites. The MiC4C system needs to be expanded and greater resource provided to turn it into a valuable Estates management tool. Whilst heavily used at Pilgrim Hospital Boston there is a reluctance to embrace at Lincoln County Hospital. Pilgrim Hospital Boston has developed a simple model derived from a system of control implemented by Water Solutions within other Trust that has withstood serious compliance audit by external bodies. This uses a combination of S drive and MiC4C and a simple structure so that information can be readily retrieved. The Water Safety Group proposal is to utilise this same model across the remaining sites within the Trust, and request the Pilgrim Estates Team to assist in the roll out.

Across the Trust there are ACOP L8 Risk Assessments in place for each site, those of

Pilgrim Hospital Boston and Lincoln County Hospital require re-writing to provide the depth of scope demanded by the new L8 and HSG 274(parts 2 & 3). A programme of work to update has commenced and should be completed 2016 providing a greater depth of information at both Pilgrim Hospital Boston and Lincoln County Hospital. Grantham District Hospital Risk Assessment completed during 2014/2015, however, with the changes taking place on-site with the water infrastructure a refresh of the Risk Assessments will need to be completed. Lincoln County Risk Assessment has required more work and involvement, by the Risk Assessor (Airtech) which has now been completed. Pilgrim Hospital Boston risk assessment is now completed. All risk assessments will require further review and updating in line with new guidance. Accurate and up-to-date drawings remain an issue for all sites, but especially for Pilgrim Hospital Boston, although this needs to be addressed by the Water Safety Group during 2016-17. Work to develop this programme has commenced and will form part of the estates and facilities directorates governance and compliance programmes directed by the Water Safety Group.

A structured training programme to promote the greater understanding of water hygiene is an essential element and needs to be addressed at all levels and all disciplines with the Trust. Estates personnel need the necessary training to bring them into line with

the new ACOP L8 (fourth edition 2013) and HSG 274 – Parts 2 and 3. Training has commenced for Estates Staff. Training will be provided by Water Solution during 2016-17 for all staff but especially for Senior Nursing, Housekeeping and Directorate Managers, this will be provided by Water Solution at no additional cost to the Trust.

Whilst the basis of a *Pseudomonas* Risk Assessment is in place this needs to be rolled out to each augmented care discipline with the necessary risk factors being noted and acted upon. This is under review by the Water safety group with specialist advice from Tim Wafer (Water Authorised Engineer).

Legionella and other pathogens identified which present potential risks to patients and the Trust are reviewed and (POU) filters applied to provide immediate control measures and protect patients. This is reviewed regularly by the Consultant Microbiologist (Water) and the Water Safety Group. POU filters must be viewed as a short term measure and the route cause identified and resolved.

The Trust operates primary and secondary control measures in terms of temperature for hot water and temperature/Chlorine Dioxide for cold mains water (please note that softened water is not treated). It is essential that PPM tasks are completed on time and with the thoroughness required as these will

have a direct impact on the water infrastructure.

A key factor within the control of *Legionella* is “identification and management of “little used outlets” and a “robust and effective flushing programme”. Where this has been successfully implemented the results have improved considerably. A less time consuming and paper biased regime for recording flushing of outlets needs to be established as a priority. Little used outlets and indeed no use outlets, are a serious threat to the Trust and patients. Legionella can move through the water systems, so to not use it is no protection, it heightens the potential risk, therefore removal of unwanted outlets is essential, flushing is a primary control measure. Lincoln County Hospital completed a scheme to remove unwanted outlets 18 months ago, this needs to be an on-going programme supported by nursing teams as they will see the changes in outlet requirements.

The Water Safety risk assessment from Grantham has been completed by Airtech ECS, we are awaiting a hard copy of the assessment.

We still do not have the water schematics in MiC4C, a survey is required to provide all the relevant information to produce CAD drawings.

Staff training still outstanding – suggest annual awareness training for all staff

Currently the only augmented care area identified for Grantham is the CCU. We need to reassess this in line with the new HTM.

Chlorine dioxide plant – the system appears to be running smoothly at Grantham, but we do need to upgrade the monitor the tower block. It is now obsolete and no longer available.

TVM PPM need to be rewritten in line with the new HTM etc. We have been successful in employing a new mechanical Craftsperson here in Grantham, this will enable us to complete more statutory PPMs and provided compliance with the HTM and L8 requirements.

Asbestos still remains in the tower block causing access problems to the water services.

Old pipework and all its associated problems still remain, leaking pipes, biofilm deposits etc.

7. Design, construction, renovation and refurbishment programme

The IPT continues to contribute to the design, construction and renovation projects across the Trust as requested by Estates and the P21 development group.

The initial design, acceptance of specification and on-going discussions will assist in creating greater facility resilience.

A dedicated loop has been planned and will be installed on Stow Ward. Any issues are reported to Water Safety Group regularly with IPC representation at the meeting.

4 x Large Main Water tanks at Lincoln County have been identified for urgent water safety improvements. Funding has been approved on the Trusts Backlog Capital prioritisation programme and agreed by the WSG.

Clinic 9 Dental – Refurbishment of procedure rooms to modern ventilation standards including new bespoke cabinetry and clean surfaces. The design and tender/procurement of this work was undertaken in 2015/16 and the scheme is anticipated to be complete by winter 2016.

Plans are in place to refurbish 2 side rooms on MEAU to create improved patient accommodation and support the Trust to manage IPC issues. This work is scheduled for completion by Autum 2016.

8. Theatre ventilation

The Trust, through its Facilities Management Estates Team is required to undertake validation/PPM of all operating theatres across the Trust. This is to ensure that all theatres are validated under the HTM 03-01 regulations (where applicable). During 2015-16 the operating theatres across the Trust have been maintained, tested and validated to the relevant standards (Health Technical Memorandum and Design Notes). During the validation several issues were raised i.e. damaged theatre doors, which have been addressed. The programme for the validation of all critical ventilation systems continues to be undertaken throughout the year and all reports are formally shared with the Trust

Infection Control Doctor and Nurse Consultant Infection Prevention. It has been recommended that the reports are also shared with the Consultant Microbiologist at each hospital site, and to be tabled at the IP Committee.

Theatre access – theatre access is extremely limited, the only time we can get regular access is on a theatre audit day for approx. 4 hours (1 hour per theatre). Given the resources at our disposal this gives us little or no time to maintain the theatres. Only rudimentary checks of the AHUs are carried out and small remedial works undertaken within the theatre complex.

There is a reference to repairs being carried out to theatre doors, these are still ongoing at Grantham. We also need to address the damage to the walls etc. and consider the redecoration of theatres. The 4 theatre ventilation systems have received their annual validation inspection at Grantham. It should be noted that the ducts have not been cleaned in a number of years and consideration should be given to cleaning the supply and extract grilles.

Section 7

Antimicrobial stewardship

A coordinated approach to using antimicrobials in a responsible manner is vital in delivering safe and effective patient care. Antimicrobial Stewardship promotes selection of optimal drug regimens to treat or prevent infections and reduce emergence of resistance. A multifaceted strategy underlines the work plan for the year.

The year 2015/6 has been a year of great change and progress at ULHT on the antimicrobial stewardship front. From the development of a locally agreed CQUIN with heavy financial implications, to gaps in availability of Antimicrobial Pharmacists, and investing in recruitment of a new team, there have been significant disruptions to work undertaken. The report for this year is based on understanding of events by the Consultant Antimicrobial Pharmacist, who officially commenced in post in October 2015.

Antimicrobial Stewardship CQUIN

This locally agreed CQUIN has been the main driving force for changes over the year. It entails a 3 way approach to improving antimicrobial stewardship across ULHT. Commitment to this initiative by commissioners and the Trust highlights the mutual agreement on:

- a) Importance given to preserving ability to use these agents to deliver safe and effective care in Lincolnshire, with a

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particular need to embed better prescribing standards into routine practice across the Trust.

- b) Recognition that the existing resources (0.4wte antimicrobial pharmacist) could not support the needs of the Trust, in providing the assurances needed as per recent changes to legislation and national standards. Investment was needed to significantly increase the provision of this expertise and authority.

Recruitment – the first part of the CQUIN was dedicated to development of a Consultant Antimicrobial Pharmacist post, with supportive fixed term Senior Pharmacist and Technician roles to enable key objectives of the agreed milestones to be met and principles of antimicrobial stewardship to be embedded into routine practice. Based on understanding of the issues within the Trust, along with the need to ensure visible and accessible support on all sites spread over a large geographical area, the decision was made during recruitment drive to

make the senior pharmacist post a permanent one. This has served well in securing a quality post holder with the required attributes.

Resources – the second arm of the CQUIN looked at supporting resources to enable antimicrobial stewardship to develop in the Trust. The most significant element of this was procurement of a smartphone app, on which the local antimicrobial guidelines can be uploaded. This will allow better access to the guidance and information contained within the large document. Work on populating and publishing content on this app has been deferred to the second year of the CQUIN (2016/7) as no further milestones were assigned to this element.

Quality Improvement Project – the third arm of the CQUIN, developed and designed to improve antimicrobial prescribing standards. The phased rollout commenced (as agreed) in October 2015, targeting areas perceived to be high risk in terms of antimicrobial use. Key performance indicators are clearly defined, with a standard of 85% to be met for each. Success of the project is based on

demonstrating sustainable good performance or improvement from baseline performance (determined at the start of rollout to each phase). Initial project design involved medical staff taking ownership of prescribing issues and self-auditing performance, with Antimicrobial Pharmacy Team support in identifying areas for improvement. However, initial data sets highlighted significant variation in interpretation of prescribing standards. Project methodology was reconsidered and standardised to data collection by the Antimicrobial Pharmacy Team. Key features of the initial design were retained, such as recruiting clinical engagement leads in each area to share performance results with other prescribers in the speciality. Interim results of the project (at end of 2015/6) show this approach to be working well. Support from Information Systems department has been pivotal in enabling timely dissemination of reports with good visual impact, encouraging healthy competition and ownership on each site. This methodology was taken forward for the second year of the CQUIN.

Table 23 Interim Quality Improvement audit results from Medical Admissions wards at all 3 sites.

Month	Number of pts	% of pts where indication for use clear on Rx	% of pts where antibiotic prescribed according to guidelines / clinically appropriate	% of pts where review/stop date is clearly annotated on Rx	% Documented Review Within 24hrs in Notes	% of pts on >day 3 of Tx with a 'Day 3 Prescribing Decision' clearly documented in the notes
OCTOBER	52	88.5%	59.6%	50.0%	59.6%	33.3%
NOVEMBER	60	75.0%	58.3%	70.0%	91.7%	72.7%
DECEMBER	60	76.7%	60.0%	66.7%	96.7%	100.0%
Oct-Dec 2015	172	79.7%	59.3%	62.8%	83.7%	70.8%
JANUARY	60	68.3%	63.3%	61.7%	98.3%	91.7%
FEBRUARY	60	88.3%	71.7%	66.7%	75.0%	100.0%
MARCH	60	85.0%	78.3%	66.7%	96.7%	75.0%
Jan-Mar 2016	180	80.6%	71.1%	65.0%	90.0%	88.9%

All milestones for the first year of this initiative were met, and secured full financial incentives as agreed.

Antimicrobial Strategy

Organisational strategy this year has been shaped by the publication of NICE Guideline NG15 (on Antimicrobial Stewardship) and the Public Health England Patient Safety Alert on Antimicrobial Resistance (NHS/PSA/Re/2015/007).

Baseline assessment of Antimicrobial Stewardship against the recommendations of NG15 revealed that ULHT has implemented 55% of recommendations. Gaps in stewardship have been identified and plans to address these within resources available are incorporated into the Antimicrobial Strategy for 2016/7.

Actions taken in response to the PHE Patient Safety Alert included embedding understanding of issues around resistance into work going forward. Again, key points have been incorporated into the Antimicrobial Strategy for 2016/7.

This strategy will form the basis of the work plan for 2016/7, with regular reporting on progress, and emphasis on collaborating with various stakeholders across the Trust as well as partner organisations for optimal effect and efficiencies.

Table 24 Snapshot of Antimicrobial Progress Indicator, reported monthly. This was developed in January 2016.

Antimicrobial Stewardship Strategy Workplan		United Lincolnshire Hospitals NHS Trust												
Workstream	Substreams	2016												
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Audit	Antimicrobial COQUIN		Y1Q4 (Phases 1-2)		Y2Q1 (Phases 1-3)		Y2Q2 (Phases 1-4)		Y2Q3 (Phases 1-5)					
	Culture and sensitivities				Annual Audit								Annual Audit	
	EMAP benchmarking		data analysis	data comparison									data collection	
	Gent/Vanc				Scope			audit				review processes		
	IV-PO switch				Annual Audit							Annual Audit		
	Prolonged courses				Annual Audit							Annual Audit		
	Restricted antimicrobials				link in box	snapshot			snapshot			snapshot		
	Sepsis COQUIN				Annual Audit							Annual Audit		
	Surgical Prophylaxis													
	Antimicrobial Technician				Scope				Develop			Submit		
Business Cases	New Systems		Refine database											
	New Technology													
	Outpatient Parenteral Antimicrobial Therapy (OPAT)		review previous work		reinstated a working group			develop				submit		
Clinical Decision Tools	Antimicrobial Choices				UTIs			Sepsis				Chest Infections		
	Diagnosis of infection and management tools				UTIs			Sepsis				Chest Infections		
	Ignaz Antimicrobial App		Abx staff training		populating the app			pilot use of the app				evaluate effect		
Communications	Prescribing decisions		refresh website		IV - PO switch			Day 3 Prescribing Decision				Antibiotic allergy		
	Antibiotic awareness campaigns				7 day review			Antibacterials and HCAI				WAAW		
	Message of the month (pharmacy)		Abx training	H1N1	7 day review	allergy	NCA input					WAAW		
Education and Training	Patient safety/resistance issues		micafungin											
	Website		refresh website		update	update	update	update	update	update	update	update	update	
	Abx Pharmacist 1		PHE CPE	UKCPA										
	Abx Pharmacist 2													
	Academia													
	Consultants LCH			8th (LCH)					8th (LCH)				11week (LCH)	
	Consultants PHB													
	Consultants GDH				16th (GDH)									
	IPC links													
	Junior Doctors		7th (JDC)	18th (GDH)	25th (JDC)		4th (JDC)	21st (GDH)				Jnr doctors induction		
Guidelines	Nurses		14th PHB	11th LCH	22nd GDH	14th PHB	18th LCH	23rd GDH	5th PHB		13th LCH	4th GDH	1st PHB	
	Other staff groups					scope					WAAW build up		WAAW	
	Patients					scope					WAAW build up		WAAW	
	Pharmacy			Pharmacology of antimicrobials		Classes of Bacteria		Antimicrobial resistance			WAAW build up		WAAW	
	Public					scope							WAAW	
	Antimicrobial Formulary and Prescribing Advice (Adults)		Release		Release				Work through sections				Review	Release
	Antimicrobial Formulary and Prescribing Advice (Paediatrics)				agree on rolling plan									
	Drug specific guidance													
	Guidance across the interface				Management of UTIs									
	Guidance prevention and control				Medication review in RCAs				Managing CPE					
Policies	Renal dosing guidance							review						
	SEPSIS guidelines							review						
	Speciality Guidelines							antifungal review						
	NICE consultations, NPSA alerts, HPE toolkit			work on National PSA		NICE baseline assessment		CPE toolkit						
	Antimicrobial Prescribing Policy			review		ASSG	CESC							
	Gentamicin chart				reminders					review				
	Main ULHT chart				reminders					review				
	Vancomycin chart				reminders					review				
	ASSG				18th	24th								
	DTC													
Representation	IPaC													
	MOGS													
	Attitudes and Beliefs													
	Decision making													
	Infection Prevention and Control													
	Reducing Antimicrobial Resistance				Authorisation codes								clindamycin dosing	
	Antimicrobial ward rounds					Initiate at PHB			Initiate at LCH				Initiate at GDH	
	Microbiologist led ward rounds				Joining PHB		Joining LCH		Joining GDH				once weekly participation (Pan Trust) by an antibiotic	
	New antimicrobials				tedicolid		anidulafungin		isavuconazole				Zerbaxa	
	New Systems				scope		directorate reports		governance streams				review	
Whole Health Economy						management of UTIs								
Surveillance reports	Ad hoc reports				strategy		Audit plan 2016/7							
	Health Economy - antimicrobials				scope		mirror GEM CSU reports	ongoing	ongoing	ongoing	ongoing	ongoing	ongoing	
	Medication errors - abx datix reports				request data		feed into relevant forums/workstreams						address and review patterns or trends	
	Speciality reports				request systems		reporting template		incorporate at all levels				ongoing	
	Trust benchmarking				Requesting systems (Pan Trust)		standard report template		regional comparators				ongoing	
	Annual Trust Reports				prepare		submit						ASAT	
													audit plan	
													strategy	

Developing a Trustwide approach is crucial for ULHT as the distance between sites is significant. Observations during 2015/6 noted pockets of antimicrobial activity at each site functioning independently, rather than in unison. Initiatives to share good practice included restructuring of the Antimicrobial Stewardship Strategy Group, with VC facilities, to encourage standardisation of approach and representation from all sites.

Self-assessment of against Criterion 3 of the Infection Prevention and Control Code of Practice, from the revised Health and Social Care Act 2008, was undertaken in February 2016. Whilst it revealed that ULHT is compliant with the key principles as summarised in the self-assessment tool, efforts need to be made to improve Trust assurances around responsible handling of high risk antimicrobials (as highlighted in the detail of this publication). These antimicrobials are mostly reserved for use on microbiology approval only, but there are no provisions in place at present to allow checks on this restriction being applied. A new initiative was proposed to provide such assurances, in the form of authorisation codes issued to confirm microbiologist approval had been gained, and allow identification of specific persons to contact if any contra-indications or other concerns. This initiative has been taken forward to the following year, with comments being sought from relevant parties and key forums before launch.

Communications

Communication of progress with stewardship has been high on the agenda, especially over the latter half of the year. Monthly Antimicrobial Stewardship Trustwide Reports (ASTRs) were developed as a way of summarising the progress on a regular basis, for disseminations at key forums, with understanding that the content could be shared with other forums within the Trust as felt appropriate. The aim is to inform all relevant parties within United Lincolnshire Hospitals NHS Trust of Antimicrobial Stewardship progress within the organisation. The format of this report follows the work plan which is based around the ULHT Antimicrobial Stewardship strategy. It gives an overview of key issues or work streams, with more detailed report attached as appendices where appropriate.

Feedback on the reports has helped shape the development of this initiative, and positive comments have been taken from commissioners as well as clinicians. Having one main progress report each month, has removed the need for quarterly summary reports. The forums which receive this communication directly include:

- ASSG (Antimicrobial Stewardship Strategy Group)
- IPaC (Infection Prevention and Control)
- MOpS (Medicines Optimisation and Safety)

Introduction of antimicrobial representation at the Whole Health Economy Infection Prevention and Control (WHE IPaC) forum has been welcomed warmly.

Monthly communications to Pharmacy were initiated towards the end of the year, aiming to deliver key messages to the wider team, in order to utilise the skills and resource available in managing antimicrobials.

Education and Training

Content of regular educational sessions for nurses on IV antibiotics was revised. The feedback from delivery of sessions revealed untapped potential to bring non specialist nurses on board with antimicrobial stewardship. The aim of well-structured educational sessions is to make this a truly multi-professional approach. Nursing traditionally has emphasis on Infection Prevention and Control practices, with a need to increase awareness of antimicrobial therapy. Likewise, development of educational sessions for medical and pharmacy staff have been reviewed to highlight the principles of infection

control in partnership with prudent use of antimicrobials.

A rolling programme of pharmacy educational sessions at each site has been planned at ULHT, with delivery commencing in early 2016. This is in response to findings of the annual snapshot audit, with benchmarking across East Midlands. Results were comparable across the region, but of particular concern, was that around a third of antimicrobial prescriptions were inappropriate despite being clinically screened by pharmacy. It was understood from the findings that Pharmacy level of knowledge to support antimicrobial stewardship needs to be improved and sustained. Pharmacy engagement with stewardship is essential in successful rollout across the Trust. Repeat audit planned in 2016/7 to determine whether this has improved.

Table 25 Results of Annual Antimicrobial Snapshot Audit undertaken Dec 2015.

Snapshot Audit Quality Indicators	ULHT Average
% of Antimicrobial Prescriptions Clinically Reasonable (looking at choice only – not length of course) <ul style="list-style-type: none"> Indicated / consistent with guidelines C&S results Microbiologist advice Reasonable / rational explanation for choice documented in notes. 	80%
% of Antimicrobial Prescriptions with an Indication Documented on the Prescription Chart	92%
% Antimicrobial Prescriptions with a Stop / RV date / Duration on prescription (where appropriate)	56%
% of patients on active systemic Antimicrobial therapy that has been clinically screened by a Pharmacist since being commenced. <ul style="list-style-type: none"> % of patients on antimicrobial therapy that is considered NOT clinically reasonable that have been clinically screened by a Pharmacist 	74% 27% of screened prescriptions were not appropriate
% of patients on Antimicrobial therapy that had received Consultant review since being commenced.	95%

Provision of advice and guidance

Antimicrobial Formulary & Prescribing Advice (Adults) – Pathlinks review took place in November 2015, but publication was delayed until April 2016.

Microbiologist ward rounds provision is not standardised across sites, but efforts were made to join rounds where possible. A plan was devised for developing a joint Microbiology and Antimicrobial Pharmacy approach on these rounds.

Links with Drug and Therapeutics Committee were recognised for importance in ensuring Antimicrobial Stewardship is considered in development of any guidance or Trust document which makes reference to treatment of infections. Development of communication streams with ASSG was encouraged by all relevant stakeholders.

The Consultant Antimicrobial Pharmacist provided input for medication reviews in C.difficile Root Cause Analysis (RCA), including presence on the RCA review panel to support this process.

Surveillance

This has changed dramatically over 2015/6. Dedicated data analysis support was available until mid-year, producing detailed graphs for dissemination to ward based teams, as well as summaries for higher organisational levels. This support was pulled back at some point around

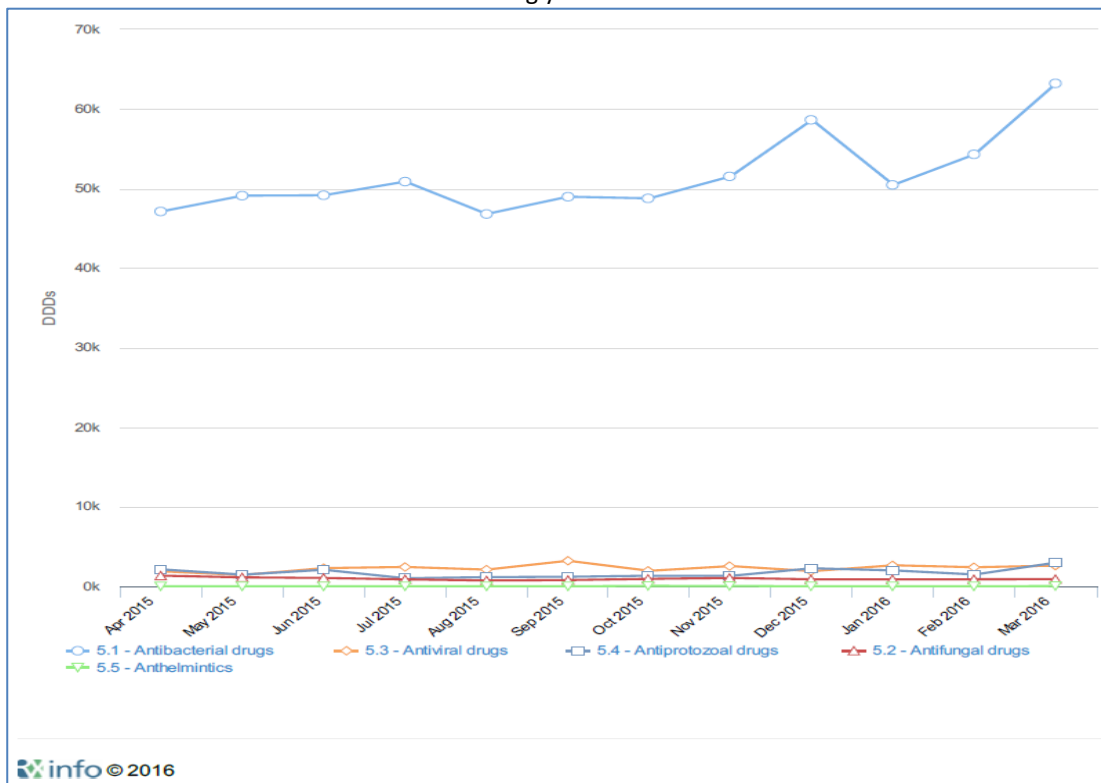
the time that the previous Antimicrobial Pharmacist left ULHT.

Enquiries by the Antimicrobial Pharmacy Team on appointment later in the year established that this support was no longer available. Appraisal of options identified that whilst this was high quality data, the information was not being used as effectively as intended and was therefore not effective use of time. Data provision was also not flexible in adapting to the needs of the Trust, without significant notice and regular investment of time. Alternative ways of producing antimicrobial surveillance reports in a timely manner were considered, with best option taken to be subscription to a database available via subscription. Case for funding was submitted via pharmacy management steams and approved for 2016/7. Once mapping is complete, this system (Refine) will be able to generate various surveillance reports on antimicrobial consumption and expenditure as required. The resulting reports will help make benchmarking within the Trust, Health Economy, and region, more meaningful. Once mapped, the system can also be used to guide consumption trends for the 2016/7 Antimicrobial CQUIN.

Overviews of antimicrobial use have been taken from the Refine database as below. The level of insight from information gathered is limited this year, but will improve significantly on successful completion of mapping.

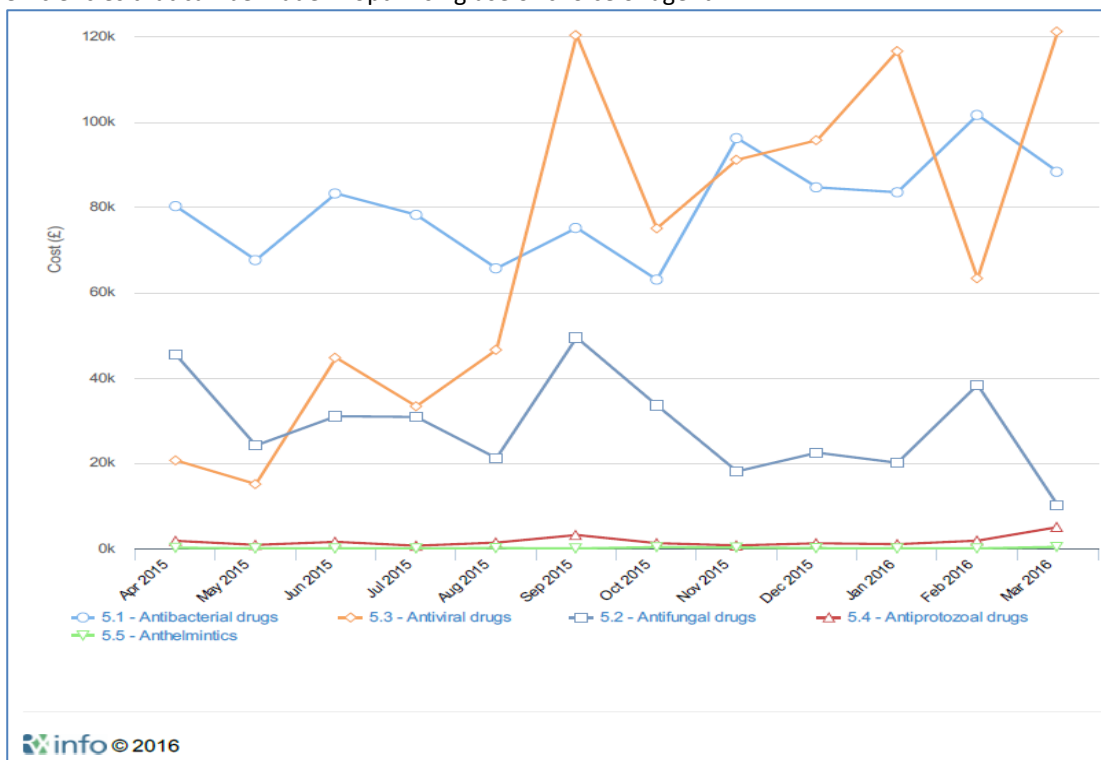
Graph 14 Trends in antimicrobial use at ULHT over 2015/6

Antibacterial consumption accounts for the majority of use, as expected. Increase in consumption at end of financial year could potentially be due to increased Trust activity over this period. Successful mapping of the database will allow relevant conclusions to be drawn in coming years.



Graph 15 Trends in antimicrobial expenditure at ULHT over 2015/6

Antiviral and antifungal use is more costly, as expected. Plans for following year will include identification of cost efficiencies that can be made in optimising use or choice of agent.



Section 8

Conclusion

Avoidable healthcare associated infection is deemed as avoidable harm and as such all staff have a responsibility to comply with infection, prevention and control policies and procedures to protect patients. Considerable progress has been made within the Infection Prevention service during 2015-16, particularly during Q3 and Q4. The year has presented a number of significant challenges with a major outbreak of Norovirus on the Lincoln site in Q3 and an influenza outbreak on the Haematology/Oncology ward in Q4. Despite these challenges the trust were able to report below trajectory for cases of Clostridium difficile infection. The number of cases reported were 57 against a trajectory of 59 cases.

Improvements have also been achieved within the Estates directorate in relation to water safety and capital projects. Acknowledgment is made that there is still a great deal more work to do to overcome water safety challenges associated with old buildings. Environmental cleanliness scores have continued to be a challenge in 2015-16, with the trust unable to achieve the required national standard score. As a result the Trust are unable to declare compliance with Criterion 2 of the Hygiene Code (Health & DIPC Annual Report 2015-2016

Social Care Act 2015). This issue was taken forward with the engagement of an external review in Q3 and the findings of the review will be progressed in 2016-17.

The appointment of a Consultant antimicrobial pharmacist in Q3 has resulted in development of a trust wide antimicrobial strategy and the strengthening of audit, surveillance and assurance reporting to the Trust IPC committee, relating to antimicrobial stewardship. The role has also enabled development of the training and education of staff in relation to prescribing and a source of expert advice for staff to access.

Flu vaccination uptake rates were recorded as 64% for front line staff. 2016-17 flu uptake will attract a CQUIN if 75% uptake is achieved, so the Occupational Health team will be planning to build on the excellent work from this year to achieve the 75%.

Underpinned by a SMART Annual programme for 2016-17 the Infection Prevention team will continue to build upon the progress made this year, to ensure that patients who access the services at ULHT are protected from avoidable infection where possible.

Appendix 1:

United Lincolnshire Hospitals **NHS**
NHS Trust

Annual programme 2015-16



Suzanne Morris
Consultant Nurse
Infection Prevention

Purpose:

Infection prevention does not rest solely within the domains of the Infection Prevention Team (IPT), everyone has infection prevention responsibilities. This document aims to detail the United Lincolnshire Hospitals NHS Trust (hereafter referred to as the Trust), Trust wide programme for infection prevention (IP). It incorporates the requirements for the revised Health and Social care Act 2008 (revised 2015) – Code of practice for health and adult social care on the prevention and control of infectious and related guidance (hereafter referred to as The Health Act 2008). This programme exists to co-ordinate and monitors all the detailed work of the Infection Prevention Committee (IPC) and the IPT in preventing and controlling infection through effective communication, education, audit, surveillance, risk assessment, quality improvement and development of policies and procedures. The programme addresses the national and local priorities for infection prevention and extends throughout healthcare, health protection and health promotion.

Since April 2009, all NHS providers are required to register with the Care Quality Commissions (CQC). This registration is a legal requirement and requires the Trust to protect its patients, staff and others from the risks of acquiring an infection and to be compliant with the Code of Practice as far as is reasonably practicable. The CQC enforcement powers including imposing, varying or removing the conditions of registration, including the power to impose financial sanctions on non-compliant trusts.

This infection prevention programme will identify the infection prevention activities that the Trust and the IPT will focus on for the forthcoming year (2015-16), to deliver and continuously improve infection prevention, and control practices across the Trust. All areas are expected to follow existing infection prevention activities, policies, procedures and guidelines and to be aware of updates and revisions as they occur. The proposed infection prevention programme will be altered to reflect new Government statutory regulations or any other infection prevention issues deemed to be a priority by the IPT or the IPC that may occur within the Trust in 2015-16. It also reflects the provision of the 'Code of Practice' and learning points shared nationally. It is important to be aware that this programme may be altered if significant new risks are identified, or resources do not allow the activity to be undertaken, until then the main focus will be:

- Monitoring the rate and trend of infections both for national and local reporting requirements
- Monitoring practice and processes through audit
- Involving staff, volunteers, patients, carers and visitors in the infection prevention and control process
- Engaging management teams in the infection prevention and control agenda
- Ensuring staff are knowledgeable in the principles of infection prevention and control standard precautions
- Ensuring staff are knowledgeable in the management of the disposal of sharps and sharp injury
- Promoting the importance of hand hygiene and contact dermatitis

Summary:

The Director of Infection Prevention and Control (DIPC) and the Consultant Nurse Infection Prevention (CNIP) will produce a written report, which will be submitted to the IPC and Trust Board quarterly to monitor progression of the infection prevention programme 2015-16, and therefore the Trust's adherence to the Health Act 2008. The report will cover infectious incidents within the Trust, actions taken and outcomes if known, to provide reassurance that the Trust is taking the appropriate actions in relation to infection prevention. The design of this programme is to ensure the Trust Board has clarity on the requirements and the progress of the programme throughout the year. It is intended to use a three-colour rating to illustrate the progress:

 Red: behind/incomplete  Amber: on track/underway  Green: completed  Grey: not started

Code of Practice Criteria:

The Code of Practice incorporates 10 criterions.

Criterion 1: systems to manage and monitor the prevention and control of infection. These systems use risk assessments and consider how susceptible service users are and any risks that their environment and other users may pose to them

Criterion 2: provide and maintain a clean and appropriate environment in managed premises that facilitate the prevention and control of infection

Criterion 3: ensure appropriate antibiotic use to optimise patient outcomes and to reduce the risk of adverse events and antimicrobial resistance

Criterion 4: provide suitable accurate information on infections to service users, their visitors and any person concerned with providing further support or nursing/medical care in a timely fashion

Criterion 5: ensure prompt identification of people who have or are at risk of developing an infection so that they receive timely and appropriate treatment to reduce the risk of transmitting infection to other people

Criterion 6: systems to ensure that all care workers (including contractors and volunteers) are aware of and discharge their responsibilities in the process of preventing and controlling infection

Criterion 7: provide or secure adequate isolation facilities

Criterion 8: secure adequate access to laboratory support as appropriate

Criterion 9: have and adhere to policies, designed for the individual's care and provider organisations, that will help to prevent and control infections

Criterion 10: providers have a system in place to manage the occupational health needs of staff in relation to infection

This infection prevention programme must be read in conjunction with the 'Code of Practice'

	Goal	Action	Lead	Commence date	Quarterly progress
Director of Infection Prevention and Control Annual Report (2015-16)	Annual infection prevention report and program of work	Provided an annual infection prevention report, and program of work, to be agreed by the IPC and the Trust Board	Pauleen Pratt DIPC	March 2016	Present to Trust Board September 2016
IPCT annual program of work (2016-17)			Claire Kent Deputy DIPC Dr Bethan Stoddart Infection Prevention Doctor New Consultant Nurse	March 2016	Presented to IPC committee August 2016
Annual report 2014-15 to be sign off by IPC at July 2015 IPC meeting	Annual infection prevention programme including audit, surveillance and education and annual report	Write and provide the annual infection prevention report, and update of previous year programme, to be agreed and signed off by the IPC and the Trust Board	Pauleen Pratt DIP	July 2015	
Interim IP program implemented in November 2014 to be sign off by IPC			Dr Bethan Stoddart Infection Prevention Doctor Suzanne Morris Consultant Nurse	June 2015	Green
<i>Clostridium difficile</i> strategy for 2015-16	Develop a Trust CDI strategy	Provide a strategy that is up to date and reflects the issues facing the Trust	Dr Bethan Stoddart Infection Prevention Doctor Suzanne Morris Consultant Nurse New Consultant Nurse	April 2015	Amber Carried over to Annual programme 2016-17 as part of the review of C.diff management
Infection Prevention strategy for 2015-2020	Develop a Trust Infection Prevention strategy	Provide a strategy that is up to date and reflects the issues facing the Trust	Dr Bethan Stoddart Infection Prevention Doctor Suzanne Morris	Sept 2015	Not achieved

	Goal	Action	Lead	Commence date	Quarterly progress
			Consultant Nurse New Consultant Nurse		
Monthly infection prevention reports	Formulate template to enable report to be standardise for CCG, TDA, Trust Board etc	Provide monthly assurance to the stakeholders of the Trust of the Trust infection prevention position and actions taken	Suzanne Morris Consultant Nurse New Consultant Nurse	April 2015	Green
Infection Prevention and Committee (IPC)		Review IPC terms of reference, including frequency and membership	Pauleen Pratt DIPC Claire Kent Deputy DIPC Dr Bethan Stoddart Infection Prevention Doctor New Consultant Nurse	April 2015	Green
		Trust Board reports June, September, December and March	Pauleen Pratt DIPC	Quarterly	Q1: Green Q2: Q3: Q4:
The Health Act (2008)	Programme for regularly monitoring compliance with all criteria	Complete a gap analysis and produce, implement action plan to address any deficits (issued April 2015)	Dr Bethan Stoddart Infection Prevention Doctor New Consultant Nurse	May 2015	Not achieved within prescribed milestone- However Hygeine Code self-assessment completed in Q1 2016-17 and is included within the monthly IPC report to IPC committee
		Review the IP program against the code	Dr Bethan Stoddart Infection Prevention Doctor	Quarterly	Q1: Green Q2: Q3:

	Goal	Action	Lead	Commence date	Quarterly progress
			New Consultant Nurse		Q4:
			Pauleen Pratt DIPC		Q1: Green
					Q2:
			Claire Kent Deputy DIPC	Quarterly	Q3:
		Report compliance, deficits in compliance to the IPC and Trust Board	Dr Bethan Stoddart Infection Prevention Doctor		Q4:
			New Consultant Nurse		
Hand Hygiene		Monitor and review peer hand hygiene audits for in and out patient areas (implemented February 2014)	New Consultant Nurse Sam Marsh Infection Prevention Nurse Mandy Hill Infection Prevention Nurse	May 2015	Green
		Hand hygiene compliance monitored at Trust IPC	Site IP Chair to report to the IPCC	April 2015	Green
	To promote the correct use of hand hygiene to all staff groups, patients and visitors utilising different resources	Participate in the WHO hand hygiene awareness day (May 2015)	New Consultant Nurse Sam Marsh Infection Prevention Nurse Mandy Hill Infection Prevention Nurse	May 2015	Green
		Develop pictorial 'bare below the elbow' poster	New Consultant Nurse Sam Marsh Infection Prevention Nurse Mandy Hill Infection Prevention Nurse	June 2015	Not achieved Carried over to 2016-17 and Completed in Q2 of 2016-17
		Development of a patient/visitors hand	New Consultant Nurse	Sept 2015	Not achieved Carried over to

	Goal	Action	Lead	Commence date	Quarterly progress
		hygiene information leaflet	Sam Marsh Infection Prevention Nurse Mandy Hill Infection Prevention Nurse		Annual programme for 2016-17
		Where there are problems identified with providing hand hygiene facilities a risk assessment will be completed and where appropriate inclusion to the risk register	IPT, Ward Leaders, Estate personal	As required	Green
		Develop e-learning hand hygiene package	New Consultant Nurse Sam Marsh Infection Prevention Nurse Mandy Hill Infection Prevention Nurse	July 2015	Not achieved and will not be taken forward following review of Hand Hygiene training and new initiatives implemented
		Hand hygiene Trust wide audit	Infection Prevention Team (IPT)	To be conducted quarterly	Q1: Q2: Q3: Q4:
		Hand hygiene awareness during IP awareness week	New Consultant Nurse Sam Marsh Infection Prevention Nurse Mandy Hill Infection Prevention Nurse	October 2015	Green
		To advise the Trust regarding purchasing of and positioning of	IPT	As required	Green

	Goal	Action	Lead	Commence date	Quarterly progress
		products for hand hygiene purposes			
Audits	To carry out audit review, to provide a cost effective Trust wide service that ensures the safety of staff, patients and visitors that measures compliance against agreed standards based on national guidance and best practice.	Develop annual rolling programme of infection prevention audits with timely feedback to clinical teams and formal reports to the IPC	New Consultant Nurse IPT	April 2015	Q1: Green Q2: Q3: Q4: Carried over to 2016-17 and work is in progress to complete this objective
		Annual PLACE audit for 2015	Sandra Smirthwaite Infection Prevention Nurse	Date issue by DH	LCH: Green GDH: Green PBH: Green Louth: Green
		Undertake specific audits in the event of PII's	IPT	As required	Green
		Monthly IPS audits – develop matrix for audits for 2015/16	IPC Links Sandra Smirthwaite Infection Prevention Nurse	April 2014 (monthly till March 2014)	Q1: Green Q2: Q3: Q4:
	Clinical audits to be carried out quarterly by the IPT	Audits to be conducted as per program, feedback directly at time of audits to Ward Leaders, report to be submitted IPC, HON's Matrons and Ward Leaders Monthly MRSA screening	Isolation	April 2014 – March 2015	Q1: Green Q2: Q3: Q4:
					Q1: Green Q2: Q3: Q4:
					Q1: Green Q2: Q3: Q4:
					Q1: Green Q2: Q3:
			PVC – continuing care (QSD)		Q1: Green Q2: Q3: Q4:
					Q1: Green Q2: Q3:
					Q1: Green Q2: Q3:
					Q1: Green Q2: Q3:
	Urinary Catheters – continuing care (QSD)		Q1: Green Q2: Q3:		
			Q1: Green Q2: Q3:		

	Goal	Action	Lead	Commence date	Quarterly progress
		Hand hygiene (WHC):			Q4:
					Q1: Green
					Q2:
					Q3:
		CVC – continuing care (QSD)			Q4:
					Q1: Green
					Q2
					Q3
		MRSA Monthly screening			Q4
					Q1: Green
					Q2:
					Q3:
		21 day MRSA screening			Q4:
					Q1: Green
					Q2:
					Q3:
	CDI documentation			Q4:	
				Q1: Green	
				Q2:	
				Q3:	
Annual audits	Sharp management	External (Daniels)	November 2015	Q4:	
				Green – undertaken in June	
Annual audits	Commode	External (Clinell)	September 2015	Q4:	
				Green-undertaken on all sites February 2016	
Review of new build designs, and estates	Predicting specific infection prevention and control issues	To work with Estates team in relation to all aspects of the Facilities Service Provision that require infection prevention advice	New Consultant Nurse Paul Boocock Director for Estates	April 2015	Green
		IPC advice to be given to Capital Planning and	New Consultant Nurse	April 2015	Green

	Goal	Action	Lead	Commence date	Quarterly progress
		Facilities with reference to the following: <ul style="list-style-type: none"> - When preparing service specifications for engineering and building services - When preparing tender processes for building and commissioning - Testing of drinking water in newly commissioned building 	Paul Boocock Director for Estates		
		The IPT will continue to be involved in all stages of the contracting process for facilities and other services that have implications for infection prevention such as laundry services, food handling and clinical waste disposal	New Consultant Nurse Paul Boocock Director for Estates	As required	Green
Infection Prevention and Control Team (IPT) communication	Improve communication and ensure that appropriate NHS guidance is received by the IPT in a timely manner, is acted on as required and reported via the IPC to the Trust Board	Update the IPC intranet site as required (internal site)	New Consultant Nurse	As required	Green
		Update the IPC internet site as required (external site)	New Consultant Nurse	As required	Green
		Providing patient, carers and visitors information of the Trust infection rate	New Consultant Nurse	As required	Green

	Goal	Action	Lead	Commence date	Quarterly progress	
		To work with Directors and service Managers, to ensure IPC issues are addressed	New Consultant Nurse	As required	Green	
		To provide opportunity for patients and carers input in developing IPC service	New Consultant Nurse	As required	Green	
General and specific information aimed directly at patients and their carers about infection risks and specific organisms is readily available	Update information leaflets according to schedule and changes in legislation Develop relevant information leaflets for patients and their relatives about infections they are likely to be exposed to in an acute healthcare setting	ESBL	New Consultant Nurse IPT	April 2015	Not achieved Carried over to Annual programme 2016-17	
		Why am I in isolation?		IPT		April 2015
		Why is my ward closed?				
		Norovirus				
		Norovirus on discharge				
		CRE				
		Chickenpox/shingles				
		Hand hygiene				
		Scabies				
		TB				
Advise for visitors	IPT	July 2015				
Advise for parents and carers						
Advise for the patient						
Requirements	Compliant with any notification and action issued by: - Government - Medicines and Healthcare products Regulatory Agency (MHRA) - Health and Safety Executive (HSE)	To respond to these notifications and actions as required	Central Alerting System Manager	April 2015 then on-going	Green	
	Report actions to appropriate committees	Green				
	New Consultant Nurse to be a core member of the committees	Green				
Partnership working with external agency	To work with the Public Health England, Clinical	Report appropriate adverse incidents	New Consultant Nurse	April 2015	Green	

	Goal	Action	Lead	Commence date	Quarterly progress
	Commissioning Group (CCG), and others				
		Put into place any recommendations that promote, protect and improve health of patients and staff	New Consultant Nurse	April 2015	Green
Education	To provide infection prevention training in accordance with the Trust training matrix and to meet NHSLA standards and comply with the Health Act 2008 and Epic 3	Continue to support the Trust programme at induction and mandatory update sessions for all staff groups	IPT	April 2015	Green
		Review training packages for 2015/16 mandatory/induction	Suzanne Morris New Consultant Nurse	April 2015	Green
		Develop and provided bespoke training packages for target organisms/conditions	New Consultant Nurse IPT	As required	Green
		Develop and delivery IP aspect of IV medication training	New Consultant Nurse IPT	As required	Green
		Discuss with Education Lead – training/refresher training program for urinary catheterisation	New Consultant Nurse IPT	May 2015	Amber
		Development and delivery IP aspect of urinary catheterisation training		As required	
		Discuss with Education Lead – training/refresher training program for taking blood cultures	New Consultant Nurse IPT	May 2015	Amber
				As required	Amber

	Goal	Action	Lead	Commence date	Quarterly progress
		Development and delivery IP aspect of blood culture process			
		Discuss with Education Lead – training/refresher training program for ANTT		May 2015	Amber
		To provide additional infection prevention and control training as required in response to potential issues		As required	Green
		Develop e-learning for <i>C.difficile</i> as part of mandatory training for nursing staff		June 2015	Amber
	Infection Prevention Nurses	Continue professional development through clinical supervision, education programme, to ensure that information and advice they provide remains both valid and credible	New Consultant Nurse IPT	As identified per individual appraisal	Green
		Individual IPN's to ensure their portfolio is kept up to date (NMC requirement), which will be reviewed during appraisal process	New Nurse Consultant	As identified per individual appraisal	Green
Routine tasks	Maintain a proactive and reactive infection prevention service to the Trust	Provided support to ward staff with IP issues	New Consultant Nurse IPT	April 2015	Green

	Goal	Action	Lead	Commence date	Quarterly progress
		Consultant Nurse and/or IPN's to take part in the ITU ward rounds	New Nurse Consultant IPT Consultant Microbiologist	April 2015	Discussed at December IPC operational meeting. Consultants do not require IPNs on ITU ward rounds
		Action positive results and advise on in-patient treatment	New Consultant Nurse IPT	April 2015	Green
		Alert positive patients on Medway	IPT	April 2015	Green
	Provide expert advice to all staff, patients and members of the public where relevant and appropriate	Generation of the alert for positive patients health records	IPT	April 2015	Green
		Insertion of the alert label to the patients' health records	IPT	April 2015	Green
		Give patient advice leaflets and visit newly positive patients on wards	IPT	April 2015	Green
		Outbreak management of unusually causative agents	IPT New Consultant Nurse Consultant Microbiologist	April 2015	Green
		Outbreak management of norovirus	IPT New Consultant Nurse Consultant Microbiologist	April 2015	Green

	Goal	Action	Lead	Commence date	Quarterly progress
		Meeting attendance as required	IPT New Consultant Nurse Consultant Microbiologist	April 2015	Green
		IPC Links need to be fully trained and regularly updated	New Nurse Consultant Sandra Smirthwaite Infection Prevention Nurse	April 2015	Green Full day quarterly meetings/study day – one per site introduced Agenda agreed
IPC Links	IPC Links are required in all clinical areas. Links to have the necessary skills, competences, knowledge to enable them implement this role.	Identify gaps, and engage with Ward Leaders to identify IPC Links	New Consultant Nurse Sandra Smirthwaite Infection Prevention Nurse	July 2015	Green
		Develop IP Links resource pack	New Consultant Nurse Sandra Smirthwaite Infection Prevention Nurse	Oct 2015	IP link programme being reviewed and revised in 2016-17
		Develop IP competencies	New Consultant Nurse Sandra Smirthwaite Infection Prevention Nurse	Oct 2015	Will not be taken forward as IP link practitioner programme will be reviewed in 2016-17
		Dates and venues to be arranged for full day – quarterly per hospital site. Day to include meeting and study day	New Consultant Nurse Sandra Smirthwaite Infection Prevention Nurse	April 2015	Dates and venue have been arranged for the year

	Goal	Action	Lead	Commence date	Quarterly progress
		Review the potential for CPD accreditation (2016/17)	New Consultant Nurse Sandra Smirthwaite Infection Prevention Nurse	January 2016	Not achieved and not a consideration for 2016-17 programme
Mandatory surveillance	To comply with mandatory surveillance requirements, to monitor the prevalence and report as required	Identify Trust lead for PIR management	To discuss with DIPC, until new Nurse Consultant in post	April 2015	
		Input Data onto PHE capture system, prior to lock down	IPT	April 2015, then monthly till March 2016	Green
		Email and data lockdown spreadsheet, to be sent to Pauleen Pratt informing her that the PHE capture system is ready for lock down by the 5 th of the month (8 th at the latest)	IPT	April 2015, then monthly till March 2016	Green
		Lock down the PHE capture system by the 15 th of each month	Pauleen Pratt DIPC	April 2015, then monthly till March 2016	Green
		Enter data on the new PHE capture system (once released, due April 2015)	IPT	April 2015	Green
		Arrange training from the new PHE for capture system once live (due April 2015)	New Nurse Consultant IPT	April 2015	New system now in place and staff have passwords
		<i>E. coli</i> bacteraemia	IPT	April 2015, then monthly till March 2016	
		MRSA bacteraemia			Green

	Goal	Action	Lead	Commence date	Quarterly progress
		MSSA bacteraemia			Green
		<i>C. difficile</i> infection			Green
		SSI for THR	Orthopaedic Team	April 2015, then monthly till March 2016	Green
		SSI for TKR			Green
		Redesign mandatory demographic spread sheet for 2015/16	New Nurse Consultant	April 2015	Green – completed by Jo Bradshaw
		Produce monthly surveillance report for circulation (across the Trust) and to be table at the Trust IPC meeting	New Consultant Nurse	April 2015	Green
		Target surveillance programme of alert organisms will be included in IPC reports and fed back to relevant staff, IPC, and Trust Board	New Nurse Consultant Dr Bethan Stoddart Infection Prevention Doctor IPT	April 2015	Green
Targeted surveillance	To further develop robust methods of surveillance to identify presence of infections/organisms and monitor trends appearing	Produce monthly surveillance report for IPT monthly meeting	New Consultant Nurse	April 2015	Green
		Produce monthly surveillance report for circulation (across the Trust) to be table at the IPC meeting	New Consultant Nurse Dr Bethan Stoddart Infection Prevention Doctor	April 2015	Green
	Monthly query for cases and investigation into preventable causes with	Inform external agencies as required i.e. CCG, PHE	New Consultant Nurse Dr Bethan Stoddart	April 2015, then as required	Green

	Goal	Action	Lead	Commence date	Quarterly progress
	view to reduce occurrence		Infection Prevention Doctor		
<i>Clostridium difficile</i> surveillance	Surveillance programme for <i>C. difficile</i> to monitor that the Trust is compliant with meeting its annual trajectory of less than 59 hospital acquired cases.	Quarterly reports of hospital acquired cases to the IPC	New Nurse Consultant	April 2015	Q1: Green
					Q2:
					Q3:
					Q4:
		Allocate trajectory to calendar months	Trajectory: 59 New Nurse Consultant Pauleen Pratt DIPC	April 2015	Green
		Review Excel demographic data base, continue to collect relevant data	IPT	April 2015, then as require till March 2016	Green
		Redesign Excel surveillance database	New Consultant Nurse	April 2015	Green
		Monitor Hospital acquired/ community/GP onset	IPT	April 2015, then as require till March 2016	Green
		Monitor all GDH/Toxin negative/positive from over the age of 2 years	IPT	April 2015, then as require till March 2016	Green
		Monitor promote early isolation, any delays to complete Datix	New Nurse Consultant IPT	April 2015, then as require till March 2016	Green
Monitor antimicrobial prescribing and administration	Antimicrobial Pharmacist	April 2015, then as require till March 2016	Green		
Email to be sent to Ward Leader and HON –	IPT	April 2015, then as require	Green		

	Goal	Action	Lead	Commence date	Quarterly progress
		informing them a RCA is required via risk management	Risk Management	till March 2016	
		RCA to be conducted for all GDH/Toxin positive results	IPT Matron Clinical Consultant	April 2015, then as required	Green
		CCG representative to be invited to the investigation meetings	IPT Matron	April 2015, then as required	Green
		Implementation of a 2 weekly RCA review group Completed RCA to be tabled and signed off by the group Group to monitor actions plans from the completed RCA's Findings to be summarised at site IP meeting, and Divisional Clinical Governance meetings	Wendy Creasey Infection Prevention Nurse	April 2015, then as required	Green
Ensure the Trust Norovirus planning has identified strategies to respond to potential outbreak,	Norovirus Trust awareness day	Communication of the date to be circulated monthly from June 2014	IPT	June 2015	Green
		Design PowerPoint presentation	IPT	June 2015	
		Organise awareness day	Mandy Hill/Sandra Smirthwaite Infection Prevention Nurse	June 2015	Took place in September 2015

	Goal	Action	Lead	Commence date	Quarterly progress
		Facilitate awareness day	IPT	June 2015	
Root cause analysis (RCA)	RCA to be continued for all Trust acquired MRSA/MSSA, Urinary Catheter Associated and VRE/GRE bacteraemia, CRE and <i>Clostridium difficile</i>	Provide expert advice at all RCA investigation meetings	Consultant Microbiologist New Consultant Nurse IPT	April 2015, than as required	Green
		Trend analysis for CDI from findings within the RCA's	New Consultant Nurse	April 2015	Q2: Green Q3: Q4:
		Development Joint RCA review group – Health Economy	New Consultant Nurse Kevin Shaw CCG IP Lead	April 2015	First meeting being held on 25 th November 2015
		Outbreaks: norovirus	New Nurse Consultant	April 2015	As required Green
Investigations	Investigate infection control related problems using RCA approach, produce reports/practice alerts when required	Outbreaks: others	New Consultant Nurse IPT	April 2015	As required Green
		Periods of Increased Incident	New Consultant Nurse IPT	April 2015	As required Green
		Unusual events	New Consultant Nurse IPT	April 2015	As required Green
		Provide advice on any policy/care pathways that requires specific infection prevention input	New Consultant Nurse IPT	April 2015	As required Green
Policy and care pathways	To review policies bi-annually to ensure compliance with current legislation and published	Provide advice on any policy/care pathways that requires specific infection prevention input	Suzanne Morris Consultant Nurse New Consultant Nurse	April 2015	Policy review standing agenda item on IPC op group meetings

	Goal	Action	Lead	Commence date	Quarterly progress
	professional guidance. Update policies according to schedule (and changes in legislation)				which commenced Oct 2015
		Implement a policy review matrix and review policies accordingly	Suzanne Morris Consultant Nurse	April 2015	Completed. Refer to the matrix for policy review status
ChlorPrep	To replace PDI wipes with ChlorPrep for the skin preparation prior to the insertion of venous access	Write business case	Claire Kent Deputy DIPC Suzanne Morris Consultant Nurse Dr Bethan Stoddart Infection Prevention Doctor	May 2015	Chlorhexidine 2% already in use within the organisation- which is the required product in accordance with DH/ NICE guidance- but not in Chloraprep form. Before this business case can be progressed need a robust Surgical Site infection surveillance programme to determine the infection rates . This will require significant funding and resource to implement the surveillance programme.
		Present business case to relevant parties		May 2015	
		Secure appropriate funding		May 2015	
		Implementation across the Trust, training		July 2015	
		Provide on-going training		September 2015	
		Training for the deep clean team		September 2014	

	Goal	Action	Lead	Commence date	Quarterly progress
Blood culture pack	Implement a blood culture pack	Write business cases	Claire Kent Deputy DIPC Suzanne Morris Consultant Nurse Dr Bethan Stoddart Infection Prevention Doctor	May 2015	Blood culture protocol, competency assessment framework and tool, planned trial of packs completed in Q1 of 2016-17. Outcome of trial will determine the business case
		Present business case to relevant parties		May 2015	
		Secure appropriate funding		May 2015	
		Implementation across the Trust, training		July 2015	
		Provide on-going training		September 2015	
		Monitor blood culture contamination rate		July 2015	Reported at Trust IPCC monthly

Appendix 2

Infection Prevention (IP) Annual Programme 2016/17

Introduction

In 2015 the IP team was restructured, which resulted in a number of existing staff leaving the team. New appointments were made in Quarter 3 of the financial year, with a new Lead Nurse (Band 7) and also an Associate Chief Nurse/ Deputy DIPC coming into post. The impact of the restructure has been acknowledged, in that progress against some of the actions in the 2015-16 annual programme, fell short of expected outcomes.

The annual programme for 2016-17 will expand and build upon the aims from the previous financial year, in addition to capturing actions and learning from incidents, outbreaks and root cause analysis investigations. Additionally, the programme captures the innovative ideas that new team members have brought to the team around the models of delivering education and training.

This programme is based upon SMART principles and has 5 domains, all of which have the relevant Health & Social Care Act Hygiene Code criteria assigned. The 5 domains are as follows: 1) Education & Development 2) Audit & Surveillance 3) Clostridium Difficile 4) Winter preparedness 5) Information.

The scope of the programme does not include the core IP service delivery functions of Alert organism management, Outbreak management, Audit & Surveillance, Education & training, Capital planning advice, Estates and Facilities advice/support, Policy redevelopment and review.

These IP core service delivery functions will be prioritised to ensure delivery of a safe and effective IP service for ULHT patients and fulfilment of IP service regulatory requirements. As such the programme may need to be adjusted throughout the year to accommodate the competing demands of the service, particularly during winter pressures and Norovirus season.

The overarching aim of the Infection Prevention (IP) Annual Programme for 2016-17 is to support front line clinical staff to continuously develop their Infection Prevention knowledge and skills. The programme details ways in which the IP team will provide innovative and accessible sources of information, point of care decision making tools and educational material. Front line ownership enables staff to shape Infection Prevention practice in their individual areas and tailor to suit the needs of their department and patients, whilst still following key IP principles. Throughout 2015-16 learning from outbreaks and clostridium difficile root cause analysis has been captured and shared with clinical teams. The annual programme will build upon this feedback and learning as detailed in domain 3.

Collaborative working with both internal and external stakeholders is key to the success of effective IP service delivery. In April 2016 the 90 day NHSI collaborative improvement programme at ULHT will commence, focusing on the management of GDH +ve patients (Clostridium difficile carriers). Patients who carry Clostridium difficile in their gut do not have infection, but can be more susceptible to developing infection if exposed to certain types of antibiotics and gastric suppressant medications. The aim of the collaborative project is to strengthen the care pathway for this group of patients to reduce the risk of them going on to develop Clostridium difficile infection.

Enabling staff to access information and educational material at any time of the day or night, using the technology available to us, will be another area of focus for the IP team. IP Twitter and facebook accounts were activated in Q4 of 2015-16 and will continue to be used as part of the IP communication strategy to share key messages. The IP intranet site will be re-energised and continue to evolve as a "one stop shop" for useful information.

The IP team will be responsible for delivery of the aims within the agreed timescale as outlined in the programme. Progress against the aims of this programme will be monitored quarterly at Trust IPC Committee meetings.

1.0 Education & Development

Domain	Reference	Aim	Relevant Hygiene Code Criterion	Ongoing Task Lead	Milestone Actions	Action By	Completion Due	Complete Y/N	RAG	Embedded Evidence Y/N N/A
	1.1.0									
Hand Hygiene	1.1.1	Maintain awareness of the importance of Hand Hygiene (HH) Compliance Trust wide	4.6	Sandra Smirthwaite	Annual Plan for Monthly HH training Drop in Sessions trust Wide to be published on intranet	Saffron Gee	Q2			
	1.1.2				Deliver HH awareness week (May 2016)	Saffron Gee & Les Jones	Q1			
	1.1.3				Deliver HH awareness week (Sept 2016)	Saffron Gee & Les Jones	Q3			
	1.1.4				Publish HH information on intranet	Saffron Gee	Q1			
	1.1.5				Set up IPC twitter account to communicate key messages	Saffron Gee	Q1			
	1.1.6				Film & Upload ULHT HH Training video on Intranet	Saffron Gee & Les Jones	Q3			
	1.1.7				Recruit Patient Representatives to undertake Hand Hygiene audits	Sandra Smirthwaite	Q2			
	1.1.8				Plan & Commence hand hygiene roadshows trust wide August 2016	Saffron Gee & Les Jones	Q2			
	1.2.0									
Link Practitioner	1.2.1	Provide IPC link practitioners with the required evidence based knowledge and skills to fulfil the Link role	4.6	Wendy Creasey	Publish annual link practitioner study day dates on IPC intranet pages	Saffron Gee	Q1			
	1.2.2				Publish IPC link practitioner programme on IPC intranet	Saffron Gee	Q1			
	1.2.3				Circulate event flyer and booking information for WHEG IPC conference to be held on Sept 15th 2016	Saffron Gee	Q1			

	1.3.0									
Collaborative Initiatives	1.3.1	Raise profile of ULHT IPC team by participating in external Collaborative education initiatives	4, 6 & 9	Sharon Egdell	Attend Quarterly WHEG meetings	Sharon Egdell	Q4			
	1.3.2				Facilitate Workshop at WHEG IPC conference Sept 15th	Sharon Egdell	Q2			
	1.3.3				Complete NHSI 90 day collaborative IPC improvement programme	Sandra Smirthwaite	Q2			
	1.3.4				Participate in WHE table top winter planning exercise	Sharon Egdell	Q3			
	1.4.0									
Policies & Procedures	1.4.1	Maintain awareness of current IPC policies and procedures	2, 4, 5, 6, 7, & 9	Sandra Smirthwaite	Review and update mandatory training slides	Wendy Creasey	Q2			
	1.4.2				Review and update Trust Induction training slides	Wendy Creasey	Q2			
	1.4.3				Publish Monthly IPC newsletter WEF Q2	Yvonne Potter	Q2			
	1.4.4				Film and upload Hand Hygiene video	Saffron Gee	Q2			
	1.4.5				Film and upload PPE video	Saffron Gee	Q2			
	1.4.6				IPC awareness event at LCH March 2017	Saffron Gee & Les Jones	Q4			
	1.4.7				Develop process to communicate to all staff when a policy/procedure has been updated	Sandra Smirthwaite	Q1			
	1.5.0									
Cleaning Specifications and Definitions	1.5.1	Provide accessible information to all clinical staff on Trust wide environmental cleaning specifications and definitions	2 & 5	Sharon Egdell	Upload cleaning definitions and specifications to Trust IPC intranet pages	Saffron Gee	Q1			
	1.5.2				Upload pictorial guide to Chlorclean use/dilution on IPC intranet pages	Saffron Gee	Q1			

2.0 Audit & Surveillance

Domain	Reference	Aim	Relevant Hygiene Code Criterion	Lead	Actions	Action By	Completion Due	Complete Y/N	RAG	Embedded Evidence Y/N N/A
	2.1.0									
Saving Lives Audit	2.1.1	All clinical areas to electronically submit monthly Saving Lives Audit data	1	Sandra Smirthwaite	Provide passwords for clinical staff to access system	Jo Bradshaw	Q1			
	2.1.2				Provide training on how to access IT system	Jo Bradshaw	Q1			
	2.1.3				Relaunch of Saving Lives with a Trust Wide roadshow w/c 22.8.16	Jo Bradshaw	Q2			
	2.1.4				Monthly Saving lives audit reports to Trust IPC Committee	Jo Bradshaw	Q1			
	2.1.5				Standing agenda item at monthly IPC site meeting	Sandra Smirthwaite	Q1			
	2.1.6				Audit data to be included on Matrons IPC dashborad	Jo Bradshaw	Q2			
	2.2.0									
External Audits	2.2.1	Annual External audits will be completed and reports received by IPC team	1	Sandra Smirthwaite	Annual commode audit to be completed by Clinell	Wendy Creasey	Q4			
	2.2.2				Annual Sharps audit to be completed by Daniels	Wendy Creasey	Q4			
	2.3.0									
Blood Culture Contamination Rates	2.3.1	Reduction of Blood Culture contamination rates to DH recommendation of 3% or below Trust Wide	1 & 5	Sharon Egdell	Process in place for cascade of monthly contamination rates to all Clinical Directors	Les Jones	Q1			
	2.3.2				Trial & evalaute Blood Culture packs in A&E Pilgrim	Wendy Creasey	Q2			
	2.3.3				Process in place to report monthly contamination rates at Trust IPC Committee	Sharon Egdell	Q1			
	2.3.4				Arrange removal of non sterile collection equipment	Sharon Egdell	Q1			
	2.3.5				Develop competency assessment framework & tool	Sharon Egdell	Q1			

	2.4.0									
Ward compliance assessment Visits	2.4.1	IPC nurses/assistants to undertake Ward compliance assessment visits to measure compliance with IPC policies & procedures. The aim being to support IPC assurance process for ward leaders/Matrons and Heads of Nursing	1, 2, 4, 5 & 9	Sharon Egdell	Develop IPC Compliance assessment tool	Sandra Smirthwaite	Q1			
	2.4.2				Develop programme of planned IP nurse ward visits	Sandra Smirthwaite	Q1			
	2.4.3				Develop template email wording for feedback to ward leaders and Matrons	Sandra Smirthwaite	Q1			
	2.4.4				Thematic summary report to be presented at monthly Trust IPC committee wef Q1	Sandra Smirthwaite	Q1			

3.0 Clostridium Difficile

Domain	Reference	Aim	Relevant Hygiene Code Criterion	Lead	Actions	Action By	Completion Due	Complete Y/N	RAG	Embedded Evidence Y/N N/A
	3.1.0									
Lapse in Care	3.1.1	Support clinical staff to reduce the lapses in care that can lead to the development of C.diff infection	3, 4 & 5	Sharon Egdell	Lapses in care to be a standing agenda item for discussion at Site IPC meetings	Sandra Smirthwaite	Q2			
	3.1.2				Monthly lapses in care summary report to be presented at Trust IPC committee meetings/ standing agenda item	Les Jones	Q2			
	3.1.3				Shared learning from RCA's to be included in the monthly IPC newsletter wef Q2	Yvonne Potter	Q2			
	3.1.4				Management of C.diff patients to be included on junior Doctors induction programme wef Aug 2016	Sharon Egdell	Q2			
	3.1.5				Implement twice weekly review of patients	Sandra Smirthwaite	Q2			
	3.2.0									
RCA Process	3.2.1	Strengthen and streamline RCA documentation and scrutiny process	3, 4 & 5	Sharon Egdell	Review RCA documentation	Sharon Egdell	Q3			
	3.2.2				Review RCA scrutiny meeting process	Sharon Egdell	Q3			
	3.2.3				RCA review of case and sharing of lessons learned to be a standing agenda item at monthly site IPC meetings	Sandra Smirthwaite	Q1			
	3.2.4				Thematic summary of RCA's to be included in the monthly IPC surveillance report to trust IPC Committee wef Q1	Sandra Smirthwaite	Q1			
	3.2.5				Complete NHSI 90 day IPC collaborative programme	Sandra Smirthwaite	Q3			
	3.2.6				NHSI Summit presentation of GDH collaborative project work	Sandra Smirthwaite	Q3			

					September 2016					
	3.3.0									
Commode Cleaning	3.3.1	To provide accessible information and educational material to support the cleaning of commodes at ward level	2, 4 & 5	Sandra Smirthwaite	Upload pictoral guide on how to use Sporicidal wipes onto IPC intranet pages	Saffron Gee	Q1			
	3.3.2				Film and upload commode cleaning video	Saffron Gee	Q2			
	3.4.0									
Management of GDH +ve Patients	3.4.1	To improve awareness and knowledge of GDH and strengthen processes to improve the management of GDH patients	3, 4 & 5	Sandra Smirthwaite	Develop care pathway	Sandra Smirthwaite	Q1			
	3.4.2				Implement care pathway	Sandra Smirthwaite	Q1			
	3.4.3				Hold GDH awarenes week April 2016	Sandra Smirthwaite	Q1			
	3.4.4				Produce patient information leaflet	Sandra Smirthwaite	Q1			
	3.4.5				Produce patient alert card	Sandra Smirthwaite	Q1			
	3.4.6				Produce GP letter	Sandra Smirthwaite	Q1			
	3.4.7				Review Trust stool chart	Sharon Egdell	Q3			
	3.4.8				Include Management of GDH +ve patients on Junior Doctors induction	Sharon Egdell	Q2			
	3.4.9				Publish "DIRT" in peer review journal	Sharon Egdell & Sandra Smirthwaite	Q4			
	3.4.10				Launch "DIRT" trustwide	Sandra Smirthwaite	Q2			
	3.4.11				Implement weekly ward rounds to review patients with Consultant Abx Pharmacist and Micro	Sandra Smirthwaite	Q2			

4.0 Winter Preparedness

Domain	Reference	Aim	Relevant Hygiene Code Criterion	Lead	Actions	Action By	Completion Due	Complete Y/N	RAG	Embedded Evidence Y/N N/A
	4.1.0									
Norovirus	4.1.1	IP preparation for Norovirus season is in place by end of October 2016	5	Sandra Smirthwaite	Comms lead (Anna Richards) to develop Communication escalation plan	Sharon Egdell	Q2			
	4.1.2				Norovirus awareness week October 2016	Wendy Creasey	Q2			
	4.1.3				Upload Vomiting Larry you tube video to IPC intranet	Saffron Gee	Q1			
	4.1.4				Participate in WHEG Norovirus table top exercise	Sharon Egdell	Q2			
	4.2.0									
Influenza	4.2.1	IP preparation for seaasonal influenza in place by end of October 2016	5 & 6	Sandra Smirthwaite	Annual FFP3 mask Fit testing using train the trainer model, for all staff who are required to undertake aerosol generating procedures	Saffron Gee & Les Jones	Q3			
	4.2.2				Post Occupational Health Flu vaccination information on IP intranet pages	Saffron Gee & Les Jones	Q3			

5.0 Information

Domain	Reference	Aim	Relevant Hygiene Code Criterion	Lead	Actions	Action By	Completion Due	Complete Y/N	RAG	Embedded Evidence Y/N N/A
	5.1.0									
Patient Information	5.1.1	Provide suitable information on infections for patients and their family/carers	4	Sandra Smirthwaite	Develop ULHT Information leaflet for patients who are Isolated for IP reasons	Yvonne Potter	Q2			
	5.1.2				Develop ULHT Information leaflet for patients who have MRSA	Yvonne Potter	Q2			
	5.1.3				Develop ULHT Information leaflet for patients who have Clostridium difficile	Yvonne Potter	Q2			

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