EAST KENT HOSPITALS UNIVERSITY NHS FOUNDATION TRUST

REPORT TO:	**BOARD OF DIRECTORS – 29 AUGUST 2014**
SUBJECT:	**EKHUFT INFECTION CONTROL ANNUAL REPORT 2013-14**
REPORT FROM:	**DIRECTOR INFECTION PREVENTION AND CONTROL**
PURPOSE:	**Information**

CONTEXT / REVIEW HISTORY / STAKEHOLDER ENGAGEMENT

The Annual Report provides assurance in terms of compliance with the Code of Practice on the prevention and control of infections and related guidance (The Health and social Care Act 2008).

SUMMARY:

The Trust remains compliant with the Code of Practice on the prevention and control of infections and related guidance (The Health and Social Care Act 2008).

Dedicated IPC Software (VitalPAC IPC Manager) was implemented during the autumn of 2013, and has significantly increased the workload of the IPC Specialist Nurses in the clinical review of diarrhoea cases.

There were eight cases of MRSA bacteraemia assigned to the Trust; two of these were identified at Post Infection Review as “avoidable”. The NHS England philosophy of “no avoidable infections” continues.

The C.difficile target for 2013/14 (29) was breached by 20 cases (total 49). Although disappointing, the rate of 14.8 / 100,000 bed days is only marginally above the NHS average of 14.7 / 100,000 bed days.

There were no outbreaks of infection within EKHUFT during 2013/14. Norovirus only affected the QEQM and nationally, Norovirus activity was the lowest it has been for five years.

E.coli bacteraemia has increased by 13.5% compared to 2012/13, although the % of cases with onset occurring in the community remains at 83%.

Key areas of focus for 2014/15 will include:

- Root cause analysis (RCA) for all cases of E.coli bacteraemia occurring within 30 days of surgery
- RCA for all cases of Meticillin-sensitive Staphylococcus aureus (MSSA) occurring within 30 days of surgery or associated with a vascular access device
- Implementation of the “Policy for the Detection, Management and Control of Carbapenemase-Producing Organisms, including Carbapenemase-Producing Enterobacteriacea”
- Trust-wide implementation of the HOUDINI protocol for the insertion and removal of urinary catheters, including revision of the Urinary Catheter Guidelines, implementation of the Urinary Catheter Passport, and development and implementation of a bladder scanning protocol, and a “trail

without catheter" (TWOC") policy. This will involve collaborative working with the Kent Community Health NHS Trust IPCT.

- Implementation of hydrogen peroxide vapour (HPV) for the high-level disinfection of single rooms, bays/wards and other clinical areas as part of C.difficile, Norovirus and multi-drug resistant organism environmental control measures. A six month trail commenced at the end of July 2014. A full business case will be developed for the ongoing implementation of a hydrogen peroxide vapour system.
- Seek funding for additional IP&C Specialist Nurses (new post plus increase in part-time hours) via a business case.
- Complete review of the Infection Prevention and Control Manual

IMPACT ON TRUST'S STRATEGIC OBJECTIVES:
To provide assurance in terms of regulatory compliance.

FINANCIAL IMPLICATIONS:
Funding for additional IC specialist nursing resource

LEGAL IMPLICATIONS:

Compliance with the Health and Social Care Act 2008, *Code of Practice on the prevention of healthcare associated infections and related guidance*

PROFESSIONAL ADVICE TAKEN ON ANY NOVEL OR CONTENTIOUS ISSUES

N/A

BOARD ACTION REQUIRED:

(a) to note the report
(b) to discuss and determine actions as appropriate

CONSEQUENCES OF NOT TAKING ACTION:

N/A

East Kent Hospitals University NHS
NHS Foundation Trust

INFECTION PREVENTION AND CONTROL ANNUAL REPORT

APRIL 2013 – MARCH 2014

Lead and Author	Sue Roberts, DIPC (Interim); James Nash, Consultant Medical Microbiologist (previous DIPC); Debbie Weston, Deputy Lead Nurse / Operational Lead
Approving body	Trust Board
Date Approved	

Putting patients first

East Kent Hospitals University NHS
NHS Foundation Trust

INFECTION PREVENTION AND CONTROL ANNUAL REPORT

April 2013– March 2014

Executive Summary

Overview

- East Kent Hospitals University NHS Foundation Trust (EKHUFT) is compliant with the *Code of Practice on the prevention and control of infections and related guidance (The Health and Social Care Act 2008)*.
- The Trust was inspected by the Care Quality Commission (CQC) during March 2014. Each specialty inspected included an assessment of Infection Control which was largely compliant.
- Dedicated infection control software to support the Infection Prevention and Control Team (IPCT) was purchased in 2012 (IPC Manager - VitalPAC) and became operational in September/October 2013. This has significantly increased the workload of the IPC Specialist Nurses in undertaking clinical reviews of patients with diarrhoea and/or vomiting.

Surveillance

- There were 8 cases of MRSA bacteraemia assigned to EKHUFT in 2013/14, of which 2 were avoidable. There were also 2 contaminants.
- There were 49 cases of post-72 hour C. difficile infection in 2013/14. The target of 29 cases was not met.
- Blood stream infections caused by extended spectrum beta-lactamase (ESBL) resistant Klebsiellae increased slightly but remain below the epidemic level seen in 2008. E. coli bacteraemia numbers have increased during 2013-14. The majority of cases are community acquired infections in the elderly population.

Outbreaks/Incidents

- There were no hospital outbreaks in 2013/14. Details of incidents / contact tracing exercises for Mycobacterium tuberculosis and highly resistant organisms are provided within the Report.
- Seasonal Norovirus activity was significantly lower during the winter, with only the QEQM affected (no reported/confirmed cases as WHH or K&C). Overall national Norovirus activity for winter 2013/14, as monitored and reported by Public Health England (PHE), has been the lowest for five years. The implementation of VitalPAC IPC Manager, along with other new initiatives, may have also have positively affected the incidence and transmission of Norovirus within the Trust.

Audit

- Audits of Infection Control Environmental and Clinical Practice Standards were undertaken by the Infection Prevention and Control (IP&C) Clinical Nurse Specialists in 77 clinical areas (excluding re-audits) across the Trust. The full Audit Report and Audit Tool are available as a separate document (Appendix D).
- The complete audit programme is discussed in Section 5.

Key Areas for Focus 2014/15.

In addition to ongoing work around MRSA bacteraemia prevention, and attainment of the 2014/15 C.difficile limit of 47 cases, the following will be key areas of focus for the IP&CT:

- Root cause analysis (RCA) for all cases of E.coli bacteraemia occurring within 30 days of surgery
- RCA for all cases of Meticillin-sensitive Staphylococcus aureus (MSSA) occurring within 30 days of surgery or associated with a vascular access device
- Implementation of the "Policy for the Detection, Management and Control of Carbapenemase-Producing Organisms, including Carbapenemase-Producing Enterobacteriacea"
- Trust-wide implementation of the HOUDINI protocol for the insertion and removal of urinary catheters, including revision of the Urinary Catheter Guidelines, implementation of the Urinary Catheter Passport, and development and implementation of a bladder scanning protocol, and a "trail without catheter" (TWOC") protocol. This will involve collaborative working with the Kent Community Health NHS Trust IPCT.
- Implementation of hydrogen peroxide vapour (HPV) for the high-level disinfection of single rooms, bays/wards and other clinical areas as part of C.difficile, Norovirus and multi-drug resistant organism environmental control measures. A six month trail will commence at the end of July 2014, during which time the full business case will be worked up and approved.
- To seek funding for additional IP&C Specialist Nurses (new post plus increase in part-time hours) via a business case.
- Complete review of the Infection Prevention and Control Manual

Other:

- Dr James Nash retired from the post of Director Infection Prevention and Control (DIPC) at the end of March 2014 but will continue working as Consultant Medical Microbiologist during 2014/15. At the time of writing, Sue Roberts is the Interim DIPC.
- Debbie Weston (Deputy Lead Nurse Infection Prevention and Control) had the second (revised) edition of her text book (Fundamentals of Infection Prevention and Control: Theory and Practice) published by Wiley-Blackwell in August 2013. The first edition of her book (2008) was translated and published in Sweden in November 2013.
- Sue Roberts, Debbie Weston, Alison Burgess and Ellie Lister were awarded a publishing contract by Wiley-Blackwell in March 2014, to write an infection prevention and control text book for their established "At a Glance" series (to be published in 2015).
- Sue Roberts, Debbie Weston, Esther Taborn and Catherine Maskell submitted an abstract for the Infection Prevention Society (IPS) International Annual Conference in September 2013 on the mupirocin-resistant MRSA outbreak 2011/2012, which was presented at the Conference by Debbie and Catherine. The Abstract was one of only twelve which were chosen for oral presentation, and won the award for "Best Oral Presentation of an Abstract".

Contents

Appendices A – D are available as separate documents on request

East Kent Hospitals University NHS Foundation Trust

INFECTION PREVENTION AND CONTROL ANNUAL REPORT

April 2013 – March 2014

This Report has been produced by J Nash, Director, Infection Prevention and Control, S Roberts, Deputy Director Infection Prevention and Control and D Weston, Deputy Lead Nurse on behalf of the Infection Prevention and Control Team.

1. INTRODUCTION

The Director of Infection Prevention and Control (DIPC) is required to produce an Annual Report on the state of healthcare associated infection (HCAI) in the organisation for which s/he is responsible and release it publicly according to the *Code of Practice on the prevention and control of infections and related guidance* (The Health and Social Care Act 2008). The Annual Report is produced for the Chief Executive and Trust Board of Directors and describes the activity of the Infection Prevention and Control Team (IPCT) during the year, including progress made against the work plan and targets identified in the Infection Prevention and Control Annual Programme. It also includes Divisional performance against Infection Prevention and Control Key Performance Indicator Targets (KPIs). Divisional compliance with regard to mandatory training and hand hygiene/"bare below the elbows" and commode cleanliness is reported monthly (see Appendix 1). Compliance with hand hygiene / "bare below the elbows" and commode cleanliness has been reported via the Meridian System since March 2013.

1.1 Annual Programme and Achievement of Targets

The work programme (2013/14) was specifically designed to focus on achieving full compliance with the standards identified in the *Code of Practice,* and the achievement of National and local infection related targets:

1. MRSA bacteraemia target for 2013/14:

    - NHS target of no avoidable bacteraemias (outturn 8 cases; 2 avoidable plus 2 "contaminants")

2. C. difficile target target for 2013/14

    - NHS England target of 29 post 72 hour cases for 2012-13 (outturn 49 cases)

The Clostridium difficile target was breached by 20 cases. Details are given in the section of this report dealing with HCAI surveillance.

Divisional Infection Control Key Performance Indicator Targets were revised and approved at the Clinical Management Board in January 2014 to support the performance management agenda of the Divisions (see Appendix 2).

1.2 The Infection Prevention and Control Team (IPCT)

(links with other Trust committees and working groups are listed in Appendix 3)

The Infection Prevention and Control Team (IPCT) are the medical and nursing Infection Prevention and Control Specialists responsible for carrying out the work described in the Infection Control Annual Programme.

East Kent Hospitals University NHS Foundation Trust (EKHUFT) IPCT currently consists of 5.0 Consultant Microbiologists, and 7 Infection Prevention and Control (IP&C) Clinical Nurse

Specialists (one of whom, at the time of writing, is Director of Infection Prevention and Control (Interim) (DIPC)) and 2 trainees (1 of whom joined the Team in November 2013). The IPCT is supported by 3 wte Antimicrobial Pharmacists.

Infection Control Software to Support IPCT Activity (VitalPAC IPC Manager)

During 2011-12, EKHUFT purchased innovative new software (VitalPAC). The infection control component of VitalPAC (IPC Manager) was implemented in September/October 2013. This software assists the IPCT with the management of colonised and infected patients and also in the retrospective investigation of "outbreak" incidents.

A key feature of IPC Manager is the recording and tracking of all episodes of diarrhoea and/or vomiting on wards where the staff have entered symptomatic patients onto VitalPAC. This facilitates the early recognition and management of patients with Norovirus and C. difficile, with the IP&C Clinical Nurse Specialists reviewing all patients on the "D&V list" during working hours.

The introduction of IPC Manager has significantly changed the way in which the IP&C Clinical Nurse Specialists work, and has increased their daily work load. During winter 2013/14, there were up to 80 patients a day across the three sites on the "D&V" list who required an ICN review. This was in addition to managing the rest of the patient case load and undertaking other IC work.

1.3 Infection Control Committee

The EKHUFT Infection Control Committee (ICC) is a multidisciplinary Trust committee with outside representation from Public Health England. The ICC oversees the activity of the IPCT and supervises the implementation of the Infection Control Annual Programme. The ICC met bi-monthly during 2013/14. During 2014/15, membership will be extended to include Ward Managers and Matrons, and meetings will be held via video-conference.

1.4 The Care Quality Commission

EKHUFT are compliant with the essential Care Quality Commission (CQC) quality and safety standards as they apply to infection prevention and control.

2. NHS LITIGATION AUTHORITY (NHSLA) RISK MANAGEMENT STANDARDS LEVEL 3

The Trust has maintained level 3 accreditation following re-assessment in November 2012. The IPCT are responsible for the Hand Hygiene Training and Inoculation Injury standards which passed the assessment. Monitoring reports on these standards, as follows, are available on request as separate Appendices:

- Monitoring Report on Compliance with the Hand Hygiene Policy and Staff Training in Hand Hygiene for the Period November 2012 – December 2013, ratified by the ICC on 13th February 2014 (See Appendix A).

- Monitoring Report on Compliance with the Policies for the Management of Occupational and Community Exposures to Blood Borne Viruses (November 2012 – February 2014), ratified by the ICC on 12th June 2014 (See Appendix B).

3. EDUCATION AND TRAINING

Introduction

The *Code of Practice* requires that all staff undertake mandatory infection prevention and control training on a regular basis. The specific requirement is:

> 'that relevant staff, contractors and other persons whose normal duties are directly or indirectly concerned with patients care receive suitable and sufficient training, information and supervision on the measures required to prevent and control risks of infection'.

This need is met through provision of a mandatory e-learning package based on Department of Health evidence based infection control guidelines. In total, 3690 staff have completed this training during 2013/14.

Soft Facilities Management contract staff and Estates staff are also required to undertake induction and annual mandatory training including a competency assessment, which is provided by the IP&C Clinical Nurse Specialists on each main hospital site. During the latter part of 2014, this training will be delivered via DVD (currently in development).

Additional training sessions provided by the IPCT include:

- Induction training of 45 minutes for all clinical staff (separate sessions for junior hospital doctors).
- All junior doctors receive a short induction session provided by the IPCT. This includes a presentation and handout on infection prevention and control practices, including the insertion of peripheral cannulae and other invasive devices, as well as education on hand hygiene and blood culture collection (completion of blood culture collection e-learning and competency assessment), and the prevention/management of inoculation injuries.
- As part of induction, all Foundation Year 1 (F1) junior doctors also undergo mandatory training and assessment of competence on the insertion of peripheral venous cannulae and phlebotomy skills, including the taking of blood cultures (provided by the Vascular Access Team).
- Participation in the F1 Junior Doctor programme includes 'The Principles of Infection Control', antibiotic prescribing and emphasises the role of the microbiology laboratory in diagnosis of infection.
- IC Induction for medical students.
- Ad hoc sessions for Divisions/Departments as requested.
- Infection Control education for newly qualified nurses – attendance at the Preceptorship Conference run by the Practice Development Nurses; 1 hour work shop led by the Deputy Lead Nurse Infection Prevention and Control.
- IC Management of the Acutely Ill Patient (as part of the in-house training course).
- Education on the management of urinary catheters as part of the induction programme for Healthcare Assistants.
- Hand hygiene training for IC Link Practitioners, Trust wide (training is then undertaken by Link Practitioners for all clinical staff working in their area).
- Infection Control update (taught session) for all Domestic/Portering/Estates staff (annual mandatory training); involves a written competency assessment. The format of this will change during 2014/15 with development and implementation of the training DVD, and will be taken over by Serco.
- Site-based teaching for Band 4 Assistant Practitioners.

See Appendix 4 for the full Trust wide Infection Control Education and Training figures.

4. INFECTION CONTROL LINK PRACTITIONER SYSTEM

The Infection Control Link Practitioner (ICLP) Programme at Kent and Canterbury Hospital was reviewed and restructured during 2013. At each Meeting, one ICLP undertakes a five – ten minute presentation on an aspect of his/her role or shares the learning from a clinical practice incident (i.e. bacteraemia PIR, C. difficile RCA). This has been very successful, enhancing the ICLP "experience" and encouraging more engagement and accountability. The same approach is being facilitated at the William Harvey Hospital during 2014/15.

Infection Control Link Practitioners by site

QEQMH	WHH/BHD/RVHF	K&C
63	104	107

Attendance Figures

Site	Date	Attended
K&C	9th April 2013	18
K&C	18th June 2013	34
K&C	10th September 2013	21
K&C	10th December 2013	14
WHH	5th June 2013	23
WHH	22nd August 2013	16
WHH	3rd October 2013	12
WHH	12th December 2013	21
WHH	18th February 2014	22
QEQMH	4th June 2013	10
QEQMH	3rd September 2013	18
QEQMH	3rd December 2013	12
QEQMH	12th March 2014	14

5. AUDIT

The IP&C Clinical Nurse Specialists have undertaken the following audits (with appropriate support from ICLPs and external agencies):

Audit	Completed	Achievement
Management of sharps (annual)		A Trust wide audit of compliance with sharps practice was undertaken in February 2014 by Daniels Healthcare Ltd, whose sharps boxes are used predominantly in EKHUFT. 156 wards/departments were audited Trust wide. 98 wards/departments demonstrated compliance of >95%. 55 wards/departments demonstrated compliance of 85 - 94.9%. For the remaining 4 wards/departments the compliance was < 85%. The audit data presented according to Divisions is as follows: Clinical Support Services (34 wards/departments

		audited/197 sharps bins): 20 achieved compliance > 95%, 12 achieved compliance of 85-94.9%, 2 achieved < 85% compliance. UCLTC Division (41 wards/departments audited/280 sharps bins): 20 achieved compliance of >95%, 20 achieved compliance of 85-94.9%, 1 achieved < 85% compliance. Surgical Services Division (40 wards/departments audited/352 sharps bins): 28 achieved compliance of > 95%, 11 achieved compliance of 85-94.9%, 1 achieved < 85% compliance. Specialist Services (41 wards/departments audited/345 sharps bins): 29 achieved compliance of > 95%, 12 achieved compliance of 85-94.9%. The audit demonstrated that particular improvements were required in the labelling of sharps bins, inappropriate items placed in the sharps bins, and the correct assembly of the sharps bins. Protruding sharps and sharps bins over-filled were also noted but were a less common non-compliance. A complete Trust wide sharps audit will be undertaken again in June 2014 and managers will be asked to address non-compliances based on that report.
Antimicrobial prescribing	2013-14	Antimicrobial audit work has increased in volume during 2013-14 both as a result of regular audits undertaken by the antimicrobial pharmacy team and medical audit carried out within Divisions. Please see Appendix 5 for the Antimicrobial Stewardship Report.
Infection Control Audits of Environmental and Clinical Practice	Ongoing	Regular audits (every 12-18 months) of the clinical environments are undertaken by the IP&C Clinical Nurse Specialists in conjunction with the Ward/ Department Managers or ICLPs, Trust wide, utilising the Infection Control Environmental and Clinical Practice Standards Audit Tool. The completed audit report is sent to the Ward/Department Manager, who is responsible for both formulating and implementing an action plan within a designated time frame. < 5 non-compliances in either or both standards required the generation and implementation of an Action Plan; 5 or more non-compliances in both Standards means that the Ward/Department has failed the Audit overall. In this instance, the Ward/ Department is entered onto the Infection Control Audit Risk Register of clinical areas that are non-compliant with IC Standards. The formulation of the action plan and the re-auditing of clinical areas that fail to meet the required standards form part of Divisional KPI's. The results of these Audits are

		reported monthly in the Infection Prevention and Control Monthly Report. The Audit Report and a copy of the Audit Tools are available as a separate document (Appendix C).
Annual audit of commodes – Trust wide	February 2013	A Trust wide audit of commodes was undertaken Gamma Healthcare Ltd (Clinell) in February 2014 in order to assess cleanliness and the condition of commodes. Funding was secured for the replacement of 87 damaged commodes across the Trust. The Audit will be undertaken every 6 months by Gamma Healthcare Ltd and the site-based IP&C Specialist Nurses during 2014/15.
Mattress/zipped item check	Monthly	All foam mattresses are checked by ward staff according to the criteria on the EKHUFT mattress label on the first Friday of the month by individual wards/departments. Mattresses/covers are replaced accordingly. Other zipped items are also checked and replaced accordingly.
Environmental audits (assessment of compliance with the Code of Practice with regard to the ward environment)	Every 3 months	All bed holding matrons have been trained in the use of the ward/departmental environmental audit tool to enable them to subsequently complete these audits three monthly on each ward with a requirement to report to their relevant Divisional committees.
Audit of isolation rooms		Since May 2011, the site-based IP&C Clinical Nurse Specialists have been reviewing all patients in side rooms/cohort bays known or suspected to be colonised or infected, on a weekly basis. Ensuring compliance with the Isolation Policy, the use of isolation rooms, including cleanliness of the room, and the provision of Infection Control Patient Information Leaflets forms part of that patient review. Immediate feedback is provided to the ward manager/equivalent.
Audit of the Management of Trans-oesophageal Endoscopes	Completed 2014	Audits were carried out in all areas where this procedure is undertaken including the Cardiac Departments at WHH, QEQMH and K&C. These will be reported on in the audit of endoscope facilities and practice report in August 2014.
Biennial Audit of Endoscopy Facilities and Practice	June 2013 – May 2014	The biennial Audit of Endoscopy Facilities and Practice has been ongoing during 2013, and will be reported in August 2014.

Compliance with the Management of Invasive Devices

With the introduction of VitalPAC in 2013 there is now the facility to monitor compliance with the management of invasive devices, e.g. peripheral cannula, central vascular catheter and urinary catheter, insertion and continuing care. This system has replaced Synbiotix and provides the additional benefit of monitoring all devices that have been inserted and recorded on VitalPAC.

Please see Appendix 6 for latest VitalPAC Invasive Devices Monthly Report.

6. HAND HYGIENE

The focus on improving hand hygiene compliance has continued during 2013-14 with increased attention on improving compliance with the annual practical hand hygiene assessment of staff who have contact with patients as well as contract staff (Divisional KPI). Compliance with hand hygiene, including bare below the elbows, is audited and reported via the new Meridian system.

7. INFLUENZA 2013-14

Laboratory confirmed Influenza infections remained low during 2013-14, consistent with national and international data showing a mild influenza season with circulating viruses representing both the waning Influenza virus A H1N1 2009 Pandemic strain and also the H3N2 strain that has been present for many years.

However significant numbers of severe influenza were admitted to Intensive Care Units throughout the country, largely in young and immunosuppressed patients.

The onset of the influenza season in 2013-14 was unusually late with initial cases not seen until late December 2013 and the peak of the epidemic in week 9 of 2014.

No excess influenza mortality was detected by the UK surveillance systems.

Vaccine uptake by EKHUFT healthcare staff was 48% in the clinical workforce compared with 37% in the previous year. It will be important to improve this uptake if faced with a more virulent strain in the future.

Other Viral Threats:

Avian influenza strains (H5N1 and H7N7) continue to be prevalent in wet poultry markets in Asia and carry a high mortality. Middle East Respiratory Syndrome (MERS-CoV), a novel Coronavirus similar to SARS, is also a concern in travellers from Saudi Arabia. Two UK imported cases have been detected so far. This diagnosis should be considered in health care workers potentially exposed overseas.

8. HOSPITAL HYGIENE

The IPCT have continued to monitor standards of cleanliness within the Trust and promote good practice in conjunction with the Hospital and Facilities Managers through participation in the following activities:

- Patient-led Assessment of the Care Environment (PLACE).
- Advising contractors/contract management on cleaning and domestic issues.
- Day to day advice/intervention as appropriate with regard to cleaning issues.

9. OTHER WORK

The IPCT continue to be involved in the planning aspects of Trust wide building and development projects.

10. INITIATIVES

Infection Control "App" Development

- The IPCT are keen to capitalise on Trust initiatives such as the increased utilisation of "Apps" on the iPod/iPad platform to support decision making that is consistent with best practice and Trust policy.

Led and developed by Esther Taborn, Senior IP&C Clinical Nurse Specialist at the QEQM, the IP&C Clinical Nurse Specialists have begun work with Kent and Medway Health Informatics to scope the development of an Infection Prevention and Control app that is currently under the prototype title of "Bug Buster". It is envisaged that Bug Buster will operate a portable electronic "Infection Control Nurse" that can be questioned for standard responses. For example, the question "My patient has diarrhoea, what should I do?" would then initiate a series of questions to the user which would enable them to develop a plan for their patient.

The Team hope that a fully developed app will increase accessibility to IC Policies and best practice advice, and improve patient care.

Initiatives as part of the C. difficile and MRSA bacteraemia Recovery Plans

- The new Diarrhoea Assessment Tool (DAT) was launched in April 2013, with clear assessment criteria and 2 clearly defined pathways for staff to follow (Pathway A – non-infectious; Pathway B – infectious).

- To improve documentation regarding stool specimen collection, the IPCT devised a "Record of Stool Specimen Collection", which is completed by the healthcare worker obtaining the specimen and the label inserted in the patients notes. The label "asks" staff to confirm the reason for the specimen and encourages compliance with policy.

- A GDH antigen/C. difficile "Alert" label and an MRSA "Alert" label were devised by the IPCT for insertion in the patient's notes when a GDH antigen/toxin positive or MRSA positive result is confirmed. The labels alert medical staff to the risk of infection in these patients and emphasise the importance of seeking advice from the IPCT if the patient is readmitted, prudence regarding antimicrobial prescribing and for patients with a history of MRSA, special consideration as to whether or not the insertion of an invasive indwelling device is necessary.

11. LEGIONELLA MANAGEMENT

(Controlling the risk associated with water supply and air conditioning systems)

The EKHUFT Legionella control programme is based on the approved Code of Practice for Control of Legionella in water systems (L8) and HTM04-01. Legionella Risk assessments for all hospital sites have been updated and an active monitoring programme remains in place at the William Harvey site as advised by Public Health England. No hospital associated cases of Legionella have been diagnosed since August 2009.

Environmental sampling of water quality is supervised by the Water Quality & Safety committee which reports to the Infection Control Committee.

A programme of remediation is addressing engineering problems associated with potential Legionella risk on all sites.

12. INCIDENTS / OUTBREAKS OF HOSPITAL INFECTION

12.1 Norovirus Diarrhoea 2013-14

The number of patients affected with Norovirus during 2013/2014 was the lowest to date, with only the QEQMH experiencing bay and ward closures. Therefore, there is no formal Norovirus Report.

Table 1 shows the numbers of affected patients per site per year since 2007/08.

Table 1: Patients with Norovirus infection by year

Site	*2007/2008*	*2008/2009*	*2009/2010*	*2010/2011*	*2011/2012*	*2012/13*	*2013/14*
WHH	245	80	192	140	117	182	0
QEQMH	343	227	134	70	101	200	59
K&C	232	135	225	138	53	62	0
	820	**442**	**551**	**348**	**271**	**444**	**59**

Public Health England have reported that Norovirus activity nationally has been lower than the five year seasonal average from 2007/8 - 2011/12. No cases were confirmed at WHH or K&C. The introduction of IPC Manager, and the daily review by the IP&C Clinical Nurse Specialists of all patients with diarrhoea and/or vomiting and the early detection of potentially infectious patients is believed to contributed to the low burden of Norovirus within EKHUFT this financial year.

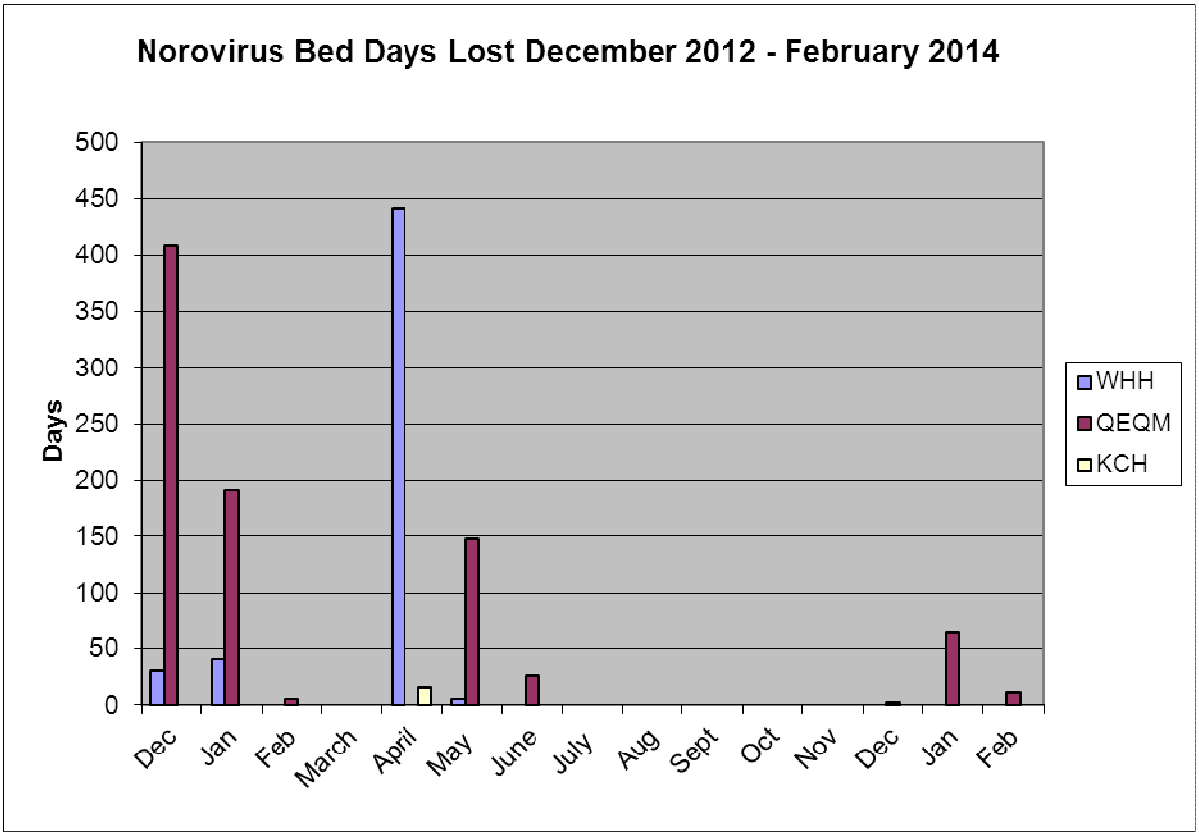
Norovirus QEQM 2013/2014

Preparation for the Norovirus risk period was planned for in three ways this year. Firstly decant and refurbishment work at the QEQM as well as financial support from UCLTC allowed for the placement of bay doors on Sandwich Bay, St Margaret's, Deal, and, towards the end of the period Fordwich wards. These doors facilitated a new approach to managing Norovirus on this site as recommended in 'Guidelines for the Management of Norovirus outbreaks in acute and community health and social care settings' (HPA 2012), recommending a compartmentalisation of the ward similar to the approach used to control fire. In practice this meant that bays could be opened and closed independently of one another therefore reducing the operational impact of Norovirus. To complement the introduction of the bay doors the site-based IP&C Clinical Nurse Specialists undertook planning work with UCLTC and Serco to facilitate improved working arrangements during an outbreak. Traditional day to day roles for domestic staff and nursing staff were reviewed so that during an outbreak the minimum number of staff had access to the bay affected. Again in practice this meant support workers assisting to given out meals and drinks to prevent the food handler entering the effected bay.

To support this new compartmentalisation approach the IP&C Clinical Nurse Specialists undertook workshop based teaching across the site in autumn 2013 so that all staff were trained and aware of the expectations consistent with their role.

The effect of these changes has led to significant reduction in the impact of Norovirus on patients and bed days lost, the table below shows this reduction. At the QEQM during the period December 2012 – February 2013, 605 bed days were lost to Norovirus outbreaks. During the same period between 2013 and 2014, only 77 bed days were lost on site. This equates to an 87% reduction despite similar numbers of wards affected.

Norovirus QEQM 2012/2014



The QEQM site will replicate the approach during Winter 2014/2015 and support staff to meet on-going challenges around maintaining compartmentalisation under 'winter pressures' and the appropriate use of Vital PAC to record bowel movements.

At WHH, bay doors will be installed on CJ, Cambridge M1 and Cambridge M2 in 2014.

12.2. Contact tracing / look-back exercises

- Two TB contact tracing look back exercises have been undertaken at WHH and the QEQM following confirmation of respiratory tuberculosis in patients after their death. There has been no evidence of onward transmission to patient or staff contacts. Both incidents were reported via DATIX.

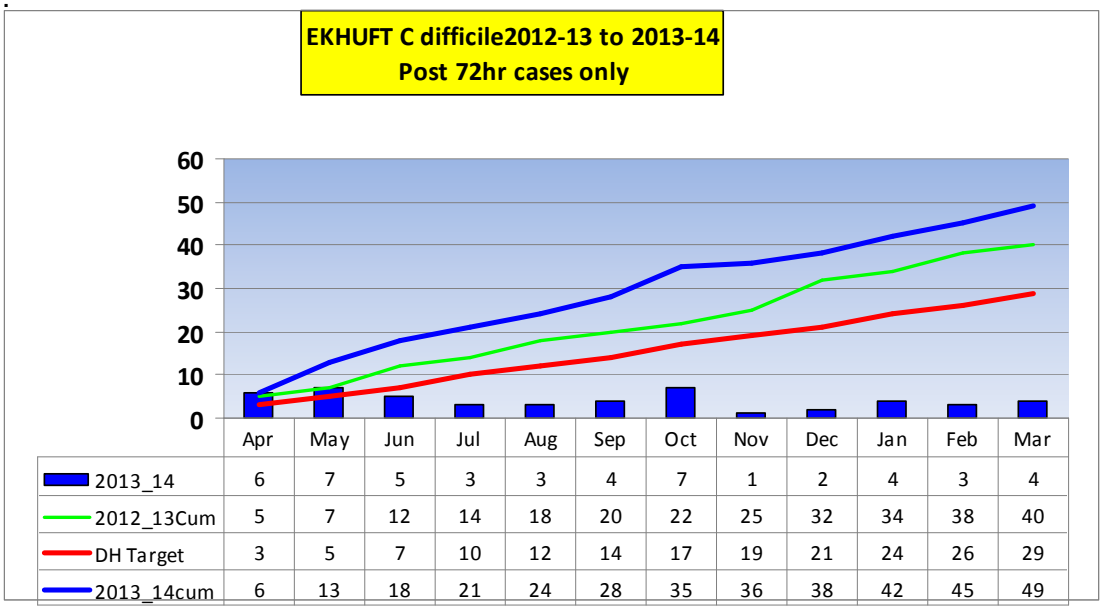
- An ex-employee of the Trust now living and working in India (medical-staff grade) was diagnosed with disseminated tuberculosis in March 2014. Following a review, it was determined that no contact tracing of staff contacts was necessary. The incident was reported via DATIX.

- In May 2013, a patient from a nursing home was admitted to the WHH for treatment. Following his discharge, a urine specimen requested by the GP identified a highly resistant Klebsiellae which was identified as a Carbapenemase Resistant Enterobacteriaceae (CRE). Contact tracing of the patients who were in the same bay as the index case was undertaken. Two patients required rectal screening and the results of both were negative. All the residents in the nursing home were also screened; one resident was found to have the same strain. There was no onward transmission within WH

13. CLOSTRIDIUM DIFFICILE

There were 49 cases of C. difficile infection during 2013/2014, exceeding the NHS England target of ≤29 cases.

The cumulative total of C. difficile cases compared with previous years is displayed in the chart below.



	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
2013_14	6	7	5	3	3	4	7	1	2	4	3	4
2012_13Cum	5	7	12	14	18	20	22	25	32	34	38	40
DH Target	3	5	7	10	12	14	17	19	21	24	26	29
2013_14cum	6	13	18	21	24	28	35	36	38	42	45	49

The number of cases attributed to each Division for the periods 2012/13 and 2013/14 and whether there were avoidable or unavoidable are shown in Table 2 below.

Table 2

Division	**2012/2013 Avoidable**	**2012/2013 Unavoidable**	**2013/2014 Avoidable**	**2013/2014 Unavoidable**
Surgical Services	6	2	4	8
UCLTC	2	15	2	31
Specialist Services	-	5	1	3
Total	**8**	**32**	**7**	**42**

The 2013-14 total of 49 Trust attributable cases, while 20 above the NHS England target, represented a rate of 14.8/100K bed-days compared to the NHS average of 14.7/100K bed days. Although this was disappointing, the increase of 9 cases compared with the 2 previous year (22.5%) did not represent a significantly above average rate of infection compared with the NHS as a whole (see Table 3).

Table 3

	2009-10	2010-11	2011-12	2012-13	2013-14
Post 72hr cases (potentially hospital acquired)	94	96	40	40	49
EKHUFT rate of C difficile infection/100K bed days	24.5	25	12.9	12.2	14.8
NHS average rate of C difficile/100K bed days	35.3	29.7	22.2	17.3	14.7

Following concern that the NHS England National Trust target setting formula was no longer fit for purpose, the process for 2014-15 has been refined and will not require improvement below the median NHS rate for the relevant category of NHS Trust. In the case of East Kent this translates to a target of 47 cases for 2014-15 and therefore a reduction of only 2 cases. The increase in cases during 2013-14 was almost entirely confined to Q1 (18 cases) when the Trust was under extreme bed pressure. The Trust also experienced a significant increase in patients admitted with community acquired blood stream infections during this period and consequently there was high usage of broad spectrum antibiotic therapy.

"Fingerprinting" of strains during 2013-14 demonstrated that a wide range of ribotypes were implicated with no evidence of any clusters of cross-infection. The hypervirulent 027 strain responsible for global outbreaks between 1985 - 2005 was absent. It is likely that the increased usage of antibiotics during this period led to an increased pool of susceptible patients and a consequent increase in C difficile infection. The return to a baseline rate of 10 cases per quarter for Q2 - Q4 suggests that control measures introduced by the IPCT were effective (see below).

In response to the Q1 increase in cases, EKHUFT invited Public Health England to conduct a review of control measures. This resulted in a visit by a PHE team led by Dr John Paul, Regional Microbiologist SE Region, on 8th January 2014. Informal feedback indicated that the PHE team had not identified any deficiencies or failings in infection control measures. See Appendix 7 for the formal Report.

The IPCT have implemented a number of initiatives during 2013-14 as part of the "C. difficile Recovery Plan". These are listed below:

	Recently Introduced Actions	Date Implemented	By Whom	Update April 2014
1	Ongoing RCAs for every C. difficile case, reported on Datix including prompt completion of actions and sharing Trust wide where appropriate	April 2013	IPCT	Ongoing; new RCA tool developed; focus for 2014/15 to include focus on identifying "lapses in the quality of care"
2	Root Cause Analysis to extend to Consultant PII (2 or more cases in 28 days including GDH antigen positive cases in Surgical Services)	April 2013	IPCT	Ongoing
3	C. difficile Policy review and sign off	January 2014	IPCT	Policy approved at the ICC 10th April 2014
4	100 new commodes on order	March 2013	IPCT	87 new commodes ordered in March 2014 following Trust wide re-audit. Audit to be undertaken every 6 months instead of every 12
5	Assurance of effectiveness of current systems to prevent C. difficile, i.e. toilet teams being	April 2013	Hospital Manager	Ongoing

	Recently Introduced Actions	Date Implemented	By Whom	Update April 2014
	managed correctly etc. Retraining of toilet teams by IPCT			
6	Business case for additional ward Pharmacists which will support the monitoring of antibiotic prescribing	Approved July 2013	Marion Clayton, Divisional Director for Clinical Support Services Division	Recruitment / appointment ongoing
7	Increasing awareness and challenge by nurses regarding antibiotic prescribing, i.e. stop dates, no indication etc	24th May 2013	Heads of Nursing	Ongoing
8	Communication and training for medical staff on antimicrobial prescribing – Grand Rounds, auditing of use by antimicrobial pharmacists, removal of certain antimicrobials from ward stock	Ongoing	DIPC	Ongoing
9	Reinforce communication of Trust Policy and new initiatives with ward nurse/support staff at site based meetings led by DDIPC and Deputy Lead Nurse – mandatory attendance by Ward Managers and Matrons	Completed April 2013 and November 2013	IPC Nurse Specialists/Deputy DIPC	Ongoing
10	Revised Diarrhoea Assessment Tool together with '10 Important Points for Achieving the C. difficile Target' signed off by all relevant nursing staff (10 Important Points were further revised September 2013 – attached)  10 key points C difficile target Sept 2(	April 2013	IPCT	Continued emphasis on the use of the Diarrhoea Assessment Tool
11	Developing stickers and a stamp for affected patients' notes to act as a prompt for ward staff	May/June 2013	IPC Nurse Specialists	In use by the IP&C Clinical Nurse Specialists
12	Ward disinfectant change to FUSE (Chlorine Dioxide), used routinely in wards commonly affected with C. difficile	Trust wide August 2013	Hospital Managers	In use by the IP&C Clinical Nurse Specialists
13	Mandatory use of hand wipes before meals	Ongoing	Nutrition Matron	Ongoing
14	Ongoing education on C. difficile prevention and management for link	Ongoing at quarterly meetings	IP&C Clinical Nurse Specialists	Ongoing

	Recently Introduced Actions	Date Implemented	By Whom	Update April 2014
	practitioners			
15	Extension of the use of Flexiseal (bowel management system) beyond ITU into the wards for the management of immobile patients with uncontrolled diarrhoea – to reduce environmental contamination for C. difficile cases	November 2013	IPCT	Ongoing
16	The development and implementation of the "Record of Stool Specimen Collection Sticker" to reduce any ambiguity as to whether stool specimens have been sent or not	October 2013	IPCT	Ongoing
17	Implementation of VitalPAC IPC Manager (electronic near patient monitoring system) which will alert the IPC Nurse Specialists to patients experiencing diarrhoea so that they can ensure appropriate management of cases	November 2013	IPCT	Ongoing
18	Revisit key actions for wards to implement regarding the prevention and management of C. difficile cases, with ward managers and matrons on each hospital site. This will be covered in an education session during October to further promote engagement at the point of care	November 2013	DDIPC/Deputy Chief Nurse & Deputy Director Of Quality	"7 Important Points for the Management of Diarrhoea/C. difficile" issued
19	Undertake a pilot of the use of hydrogen peroxide vapour systems utilising the products provided by the two market leaders	October 2013	DDIPC	Ongoing
20	Compliance data for the weekly commode audits will in future be collated using the Meridian system which will help improve compliance in undertaking this important audit	December 2013	DDIPC	Ongoing
21	Actions are been taken to ensure that the standard of ward cleaning is consistently high by: • Promoting the Trust wide involvement of Matrons and	October 2013	IPCT/Matrons/ Heads of Nursing	Ongoing

	Recently Introduced Actions	Date Implemented	By Whom	Update April 2014
	Ward Managers in the National Cleaning Standards audits undertaken by Serco • Reporting non-compliance via the help desk • Working with the Hospital Managers to ensure that robust contract cleaning remains a high priority			

	New Actions/Innovations (January 2014)	Date Implemented	By Whom	Update April 2014
1	An external review team led by Public Health England have been invited to undertake a review of systems in place to manage the reduction of Clostridium difficile	Held on 8th January 2014 - awaiting Report	DIPC	Awaiting draft Report
2	Development of an "EKHUFT Alternative Stool Chart" to: • Assist staff and patients with identifying "stool types" - to be used in conjunction with the Bristol Stool Chart	February 2014	IPCT	Outstanding but in progress
3	Option appraisal is being conducted to identify the most suitable version of Hydrogen Peroxide Vapour (HPV) system to implement during the coming year	April 2014	IPCT	Business Case to be developed (June 2014)

C.difficile mortality: 2004-2014

Table 4 below provides an analysis of 30 day mortality for pre and post 72 hour cases of C.difficile infection, demonstrating a downward trend.

Table 4: C difficile patients: crude "all cause" mortality for all hospitalised cases 2004-2014 (includes pre and post 72hr cases)

	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Total	565	721	379	207	158	145	144	88	70	92
30 day Mortality	31%	33%	28%	29%	30%	26%	23%	20%	14%	15%

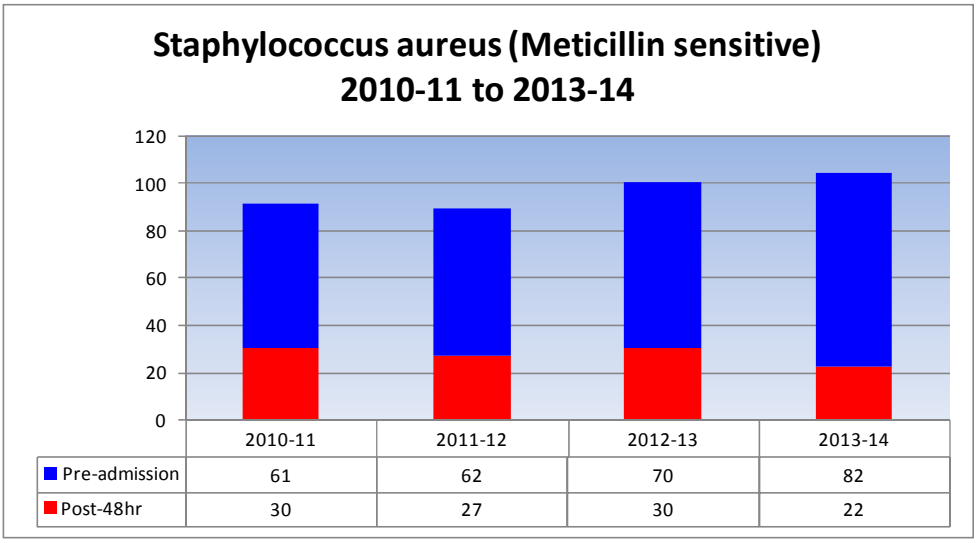
The majority of these deaths were due to the underlying medical condition and C difficile was not contributory. Presentation of the data as "crude mortality" provides reassurance that all deaths are accounted for and that adverse trends have not gone unnoticed.

Survival has improved significantly in recent years. This probably reflects a number of factors including: changes of case mix, improved management, disappearance of the hypervirulent O27 ribotype and also earlier diagnosis due to changes in testing protocols

14. STAPHYLOCOCCUS AUREUS INFECTIONS (MRSA AND MSSA)

Mandatory surveillance by the Department of Health now includes both Meticillin Sensitive Staphylococcus aureus (MSSA) blood stream infections as well as Meticillin Resistant Staphylococcus aureus (MRSA) infections. However targets are not set for MSSA infections, most of which originate in the community rather than in hospital.

Figure 1 – Meticillin Sensitive Staphylococcus aureus (MSSA) blood stream infections



The number or pre-admission (community acquired) Meticillin Sensitive Staphylococcus aureus blood stream infections has increased slightly from 70 to 82. However cases of potentially hospital acquired post 48hr infections have reduced from 30 to 22. During 2014-15 the IPCT will undertake Root Cause Analysis of cases that are associated with either a vascular access device or surgery.

These results indicate that MSSA infections are largely a community based phenomenon unrelated to healthcare and that the number of infections seen has not changed significantly during the past 5 years.

14.1 Meticillin Resistant Staphylococcus aureus (MRSA)

The method of assignment of MRSA cases to individual organisations changed in 2013-14 from an automatic allocation based on the timing of the positive blood culture to a more scientifically based allocation based on a Post Infection Review meeting.

There is no specific Trust NHS England target for MRSA bacteraemia other than observance of the principle of "zero avoidable cases".

The number of MRSA blood stream infections (Community and EKHUFT assigned cases) reported in East Kent increased during 2013-14 from a total of 14 in 2012-13 to 18 in 2013-14. Eight of the 18 cases were assigned to EKHUFT based on Post Infection Review (PIR) of each case.

Using the previous method of assignment (cases detected within 48hrs of admission assigned to the community, all later cases assigned to the Trust) would also have resulted in 8 cases being assigned to EKHUFT.

This represents an increase in Trust attributed MRSA cases from 4 to 8 compared with the two previous years. The distribution of these cases by month is illustrated in **Figure 2** below.

The overall rate of Trust assigned MRSA bacteraemia cases for 2013-14 was 2.1/100K bed days compared with the NHS average of 1.2.

Figure 2

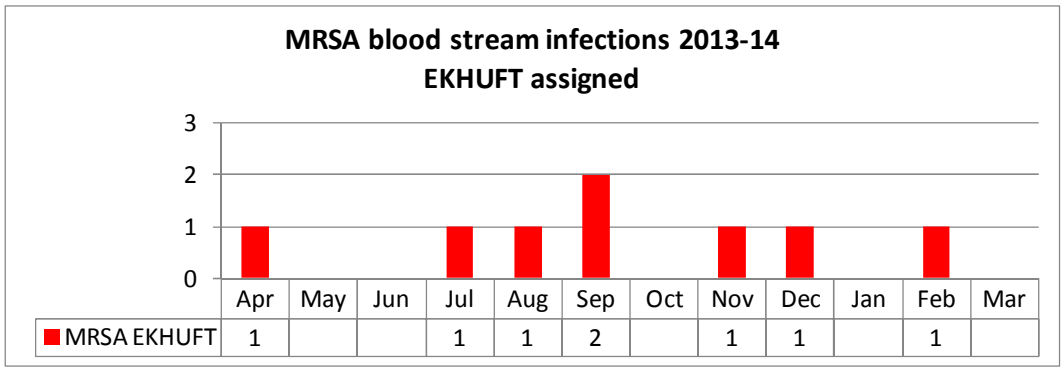


Table 2 below lists the numbers of bacteraemia cases that occurred during 2013/14 by ward and Division, whether they were avoidable or unavoidable, and the site of infection.

Table 2:

Site	Ward / Division	Avoidable/ Unavoidable	Source
K&C	Invicta / UCLTC	Avoidable	pneumonia
K&C	Harvey / UCLTC	Unavoidable	supra-pubic catheter site
QE	St Augustine's / UCLTC	Contaminant	Contaminant
K&C	Invicta / UCLTC	Unavoidable (t008 "Lyon-clone)	pneumonia/skin infection
K&C	Treble / UCLTC	Contaminant	Contaminant
WHH	Cambridge K /UCLTC	Avoidable	peripheral cannula
QE	Deal / UCLTC	Unavoidable	pneumonia
QE	Deal / UCLTC	Unavoidable t008 "Lyon-clone")	parotitis

It is likely that the explanation for the increase in MRSA infections is multifactorial. However the Post Infection Review process only categorised 2 of the infections as "avoidable".

Factors identified included lack of application of aseptic non-touch technique (ANTT) as per Trust policy, leading to contaminated blood cultures, and failure of staff to identify MRSA positive patients on admission via the MRSA "tag" on the Patient Administration System.

It is also notable that 2 of the 8 MRSA cases belonged to the t008 "Lyon clone" of MRSA which has become established in East Kent in recent years and may be responsible for an extra cohort of MRSA cases in addition to the widespread EMRSA-15/16 clones which are responsible for the majority of UK cases of MRSA bacteraemia. The Lyon Clone is common in French hospitals but rare in England outside East Kent. It is resistant to the topical agents used routinely to decolonise

MRSA carriers and this has been addressed by introduction of an alternative treatment regimen which is now in place.

Following the increase in MRSA cases, an MRSA recovery plan was implemented and has been refined during 2013-14 (see below).

14.2 Preventing MRSA Bacteraemia in 2013-14

In response to the new approach by NHS England of "no avoidable bacteraemias", the IPCT developed the MRSA Bacteraemia Recovery Plan, based on issues identified at Root Cause Analysis during 2011/12.

14.3 MRSA Bacteraemia Action Plan 2013/14

	Recently Introduced Actions	Date Implemented	By Whom
1.	**Post Infection Review (PIR) completed for each MRSA bacteraemia** (collaborative exercise between Ward Manager and Matron) • Matrons and Ward Managers attending ICC meetings to present cases • Involvement of Vascular Access Team when there are concerns about the management of IV devices • Action plans to be driven by Divisional Matrons/Ward Managers	Implemented August 2013	IPCT/Matrons and Ward Managers
2.	**Ward acquired MRSAs: Period of Increased Incidence (PII) meetings** PII meetings are held if > 2 cases of ward acquired MRSA cases occur on a ward • Completion of Datix • Matron, Ward Manager and IPC CNS meet and using a checklist to review compliance and develop an action plan • As part of the PII, MRSA screening, decolonisation and IV devices audit are undertaken by IPC CNSs • Environmental and clinical practice audit is carried out on each ward when an PII occurs **Wards placed on 'Special Measures'** if increase in numbers of ward acquired MRSA cases persists. This will involve weekly meetings attended by Divisional Senior Matron, Matron, Ward Manager, Infection Control Link Practitioner (ICLP) and IPC CNSs and action plans devised and updated weekly	Implemented April 2013	IPCT

	Recently Introduced Actions	Date Implemented	By Whom
3.	**Ongoing teaching and training via the following:** • Clinical Awareness, medical induction • Preceptorship • Infection Control Link Practitioners (ICLP) meetings • Face to face on the wards/departments • Weekly Divisional communications meetings	Implemented April 2013	IPCT
4.	**Hand hygiene:** Reinforcing effective hand hygiene at every opportunity as follows: • Formal practical hand hygiene training sessions by IPC CNSs for medical staff on induction • Hand hygiene stations – IPCT/ICLPs • Annual practical hand hygiene assessment • Weekly audit of hand hygiene in all clinical areas continued	Implemented January 2013	IPCT
5.	**MRSA screening** The policy for MRSA screening is being reinforced to ensure that the following is being implemented: • Weekly screens of all inpatients • Screening to be undertaken promptly on admission • Screening of clinical sites, e.g. CSU and wounds • Correct labelling of specimens • Checking MRSA tagging on admission	Implemented August 2013	IPCT
6.	**Screening audits** Until VitalPAC IPC Manager has been fully implemented and automated real time screening audits can be undertaken, the IPC CNSs are undertaking MRSA screening audits as follows: • Annually as part of Environmental/Clinical audit • As part of a Period of Increased Incidence (PII) i.e. > 2 cases of ward acquired MRSA on a ward within a month. Action plan completed by ward staff • In addition to the above, all inpatients are monitored on a daily basis for history of MRSA and appropriate management, by the IPC CNSs NB: VitalPAC will allow real time notification of MRSA status of patients on admission in future.	Implemented August 2013	IPCT

	Recently Introduced Actions	Date Implemented	By Whom
7.	**Communication on discharge for patients with wound MRSA colonisation** A discharge template letter has recently been implemented specifically for patients with MRSA in their wounds which is sent to their GP by the IPCT. At KCH, for vascular patients, a copy is also sent to the Community in Reach Nurses to ensure that the District Nursing Team are aware of the patients' status	Implemented July 2013	IPCT
8.	**All MRSA positive patients reviewed weekly by IPC CNSs including:** • Review of screening • Management of invasive devices/High Impact Interventions (HII) • VIP scores and antibiotics • Review of mouth care and skin integrity	Implemented January 2013	IPCT
9.	**Blood culture training:** Emphasis on completing e-learning and competency assessment on induction and annually thereafter. Recently introduced practical sessions on induction in collaboration with the Vascular Access Team	Implemented August 2013	IPCT
10.	**MRSA Stamp introduced** and used by the IPC CNSs • Prescription chart stamped for all MRSA cases past and present • Medical notes stamped for confirmed MRSA • MRSA alert stickers introduced and inserted into the front of the medical notes by the IPC CNSs	Implemented July 2013	IPCT
11.	**KCH Action Plan – MRSA prevention and management** At KCH where 4/5 MRSA bacteraemias have occurred an action plan for Urgent Care and Long Term Conditions Division on the management of MRSA according to the Trust Policy has been devised. This is to be expanded, in future, to include Surgical Services	Implemented October 2013	IPCT/UCLTC
12.	**10 Important Points for the Prevention of MRSA Bacteraemia:** Issued to all wards in April 2013, see attached.  10 key pts for the prevention of MRSA b	Implemented April 2013	IPCT

	Actions to be implemented	Date to be Implemented	By Whom
1.	**VitalPAC developments** A VitalPAC MRSA module will be introduced Trust wide by November 2013. The module prompts ward nurses to risk assess all patients for MRSA and subsequently requests screening. It facilitates real time communication of positive results to ward staff, prompting decolonisation as required as well as appropriate 7 day screening. Specific treatment plans based on EKHUFT policy and timely results have been built into the module to promote application of correct procedures. It is anticipated that the module will improve compliance with MRSA policy and therefore reduce the incidence of ward acquired MRSA and bacteraemia. Additionally IPC CNSs, Senior Nurses and ward leaders will be able to access via VitalPAC Clinical a dashboard per ward which will allow performance management of screening and decolonisation compliance in real time. IPC staff will promote the use of the dashboard to increase accountability for policy compliance and escalation of performance concerns	Deferred to Autumn 2014	VitalPAC Project Team/IPCT
2.	**A DVD** is currently being developed for the infection control training of contracted staff i.e. Serco	In progress	IPCT
3.	**Introduction of Octenisan nasal gel for standard treatment of MRSA decolonisation**	To be introduced during Spring 2014	IPCT
4.	**MRSA Management Plan (MRSA Pathway)** MRSA Management Plan currently being revised by the IPC CNSs in conjunction with ward staff. For introduction February 2014	In progress	IPCT

14.4 Staphylococcus aureus Admission Screening

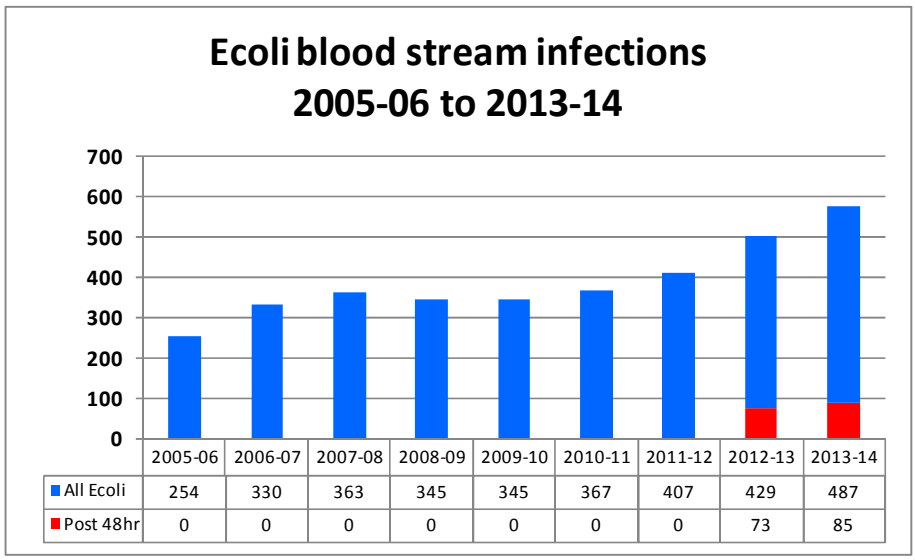
During 2013-14 MRSA screening of admissions and long stay patients has continued. Linkage studies of laboratory results to admission episodes has confirmed a high rate of compliance with screening policies for all patients with an overnight stay.

MRSA isolates that are considered to be hospital acquired continue to be reported on a monthly basis. Two or more ward-acquired cases on a ward within a calendar month are reported via Datix as a “period of increased incidence”, and investigated by the IP&C Clinical Nurse Specialists in order to identify any ward requiring additional support and/or intervention.

14.5 E. coli Blood Stream Infections Surveillance – 2013/14

Mandatory surveillance of E. coli blood stream infections has been a Department of Health requirement since June 2011. The decision to introduce this surveillance was based on the rising numbers of E. coli infections reported nationally and the lack of information about why this increase was occurring. Chart 1 below illustrates that the national increase in cases is also mirrored in East Kent local figures.

Chart 1: E. coli blood stream infections



The 2nd year of national surveillance (2013-14) has now been completed.

During this period EKHUFT reported 487 E. coli blood stream infections to the Public Health England surveillance database, an increase of 13.5% compared with the previous year and greater than the national increase of 6%. The percentage of cases with onset in the community has remained the same at 83% [post 48hr numbers are not available for 2005-2012].

The EKHUFT E. coli bacteraemia rate for 2013-14 was 147.2/100K bed days compared with the national average for NHS trusts of 99.9. This is the 3rd highest rate in Trusts reporting to the national database.

The majority of cases are linked to urinary tract infections, bile duct sepsis and other gastrointestinal sources. It is likely that the high rate locally is due to demographic factors, notably the higher proportion of population in the age group > 75 years who account for most E. coli infections. Analysis of the E. coli rate per head of population demonstrates that the local rate of E. coli infection is within the range of variation seen nationally.

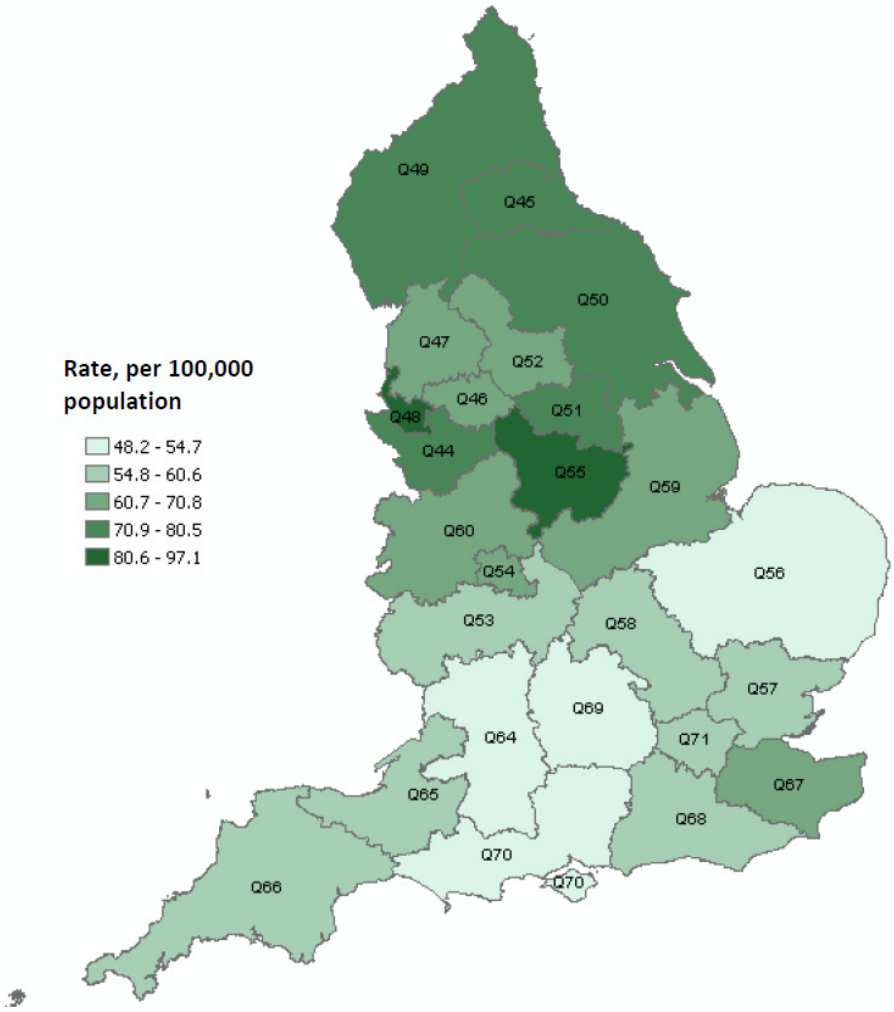
Table 3: E. coli bacteraemia rate/100,000 population by CCG

CCG	Population	2012-13	Rate/100,000 pop.	2013-14	Rate/100,000 pop.
Ashford	120,116	81	67.4	66	54.9
Canterbury & Coastal	200,329	129	64.4	141	70.4
South Kent Coast	202,986	134	66.0	151	74.4
Thanet	135,661	90	66.3	119	87.7
Swale	108,219	57	52.7	74	68.4
East Kent	**767,311**	**491**	**64.0**	**551**	**71.8**

The NHS average E. coli bacteraemia rate for 2013-14 was 64/100K population. It can be seen that with the exception of Ashford CCG, E. coli rates locally are above the national population rate.

Examination of geographical variation in E. coli rates reported by Public Health England (see below) reveals that the overall East Kent rate of 70.9/100K pop is high for the South of England but lower than the average population rates found in many parts of the North. The reason for this regional variation is not known.

Figure S13: *E. coli* rates per 100,000 population by NHS England Area Team*, 2013/14



More than 80% of E. coli infections develop in the community and are present at the time of admission. Collaborative work with CCG's is required to establish whether some of the variation in rates of infection is preventable.

During 2014/15 the IPCT, in conjunction with the Divisions, will undertake RCA for all cases of E. coli bacteraemia associated within surgery that occur within 30 days of surgery having taken place. The team will be implementing the HOUDINI protocol trust wide in order to improve the management of urinary catheters, and in particular, indications for insertion.

Table 4: ESBL (antibiotic resistant) E. coli blood stream infections

E. coli blood stream infections. 2013-14
(Percentage Extended Spectrum beta-lactamase producers)

Organism	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
All E. coli	254	330	363	345	345	367	407	429	487
ESBL	6	16	24	15	21	17	22	37	47
%ESBL	2%	5%	7%	4%	6%	5%	5%	9%	10%

The percentage of E. coli isolates producing extended spectrum beta-lactamase (ESBL) increased sharply from 5-9% in 2012-13 but stabilised at 10% in 2013-14. A relatively high number of these cases are patients with underlying urological problems and a proportion of these are recurrent infections which are difficult to manage due to antibiotic resistance and incurable pathology.

14.6 Extended Spectrum Beta Lactamase Producing Klebsiellae (ESBL's)

The IPCT have monitored antibiotic resistant Klebsiellae since an outbreak of extended spectrum beta lactamase producing Klebsiellae blood stream infections in 2007-08.

Table 5

	2007-08	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**
ESBL Klebsiellae pneumoniae	23	8	8	3	3	5	9
All Klebsiellae pneumoniae	**83**	**75**	**81**	**57**	**69**	**77**	**105**
%ESBL	28%	11%	10%	5%	4%	6%	9%

Klebsiellae pneumoniae blood stream infections increased sharply from 77 to 105 cases in 2013-14. These were largely community associated urinary tract infections. The proportion of these infections that were ESBL (antibiotic resistant) strains increased slightly from 6 to 9% but remains well below the peak seen in 2007-08 when 28% of cases were ESBL linked to an outbreak of infection.

15. TRAUMA AND ORTHOPAEDIC SURGERY

Surveillance of surgical site infection following orthopaedic surgery has been included in the mandatory healthcare-associated infection surveillance system in England since April 2004 although EKHUFT has been participating in this scheme since 1998. The National Surveillance Scheme enables hospitals in England to undertake surveillance of healthcare associated infection, compare their results and national aggregated data, and use the information to improve patient outcomes.

All NHS Trusts where orthopaedic surgical procedures are performed are expected to carry out a minimum of three months surveillance in at least one of the three orthopaedic categories:

- Total hip replacements
- Knee replacements
- Hip hemiarthroplasties

EKHUFT undertake continuous surveillance in all 3 categories (rather than limiting participation to the mandatory single quarter per year).

All deep infections reported are also reviewed internally by the Bone and Joint Infection Group, which is chaired by a lead Consultant Microbiologist (Dr Sri Reddy) and a lead Consultant Orthopaedic Surgeon (Mr Richard Slack). Due to the small numbers of patients involved, it is not possible to report on statistical trends; however, this work has highlighted a variation in clinical practices between clinicians and sites and the Bone and Joint Infection Group aim to work towards promoting standardisation to a single best practice approach.

Inpatient and outpatient management of orthopaedic infections has been strengthened by Dr Reddy, who co-ordinates weekly multidisciplinary (orthopaedic microbiology) meetings at the QEQMH and WHH.

16. ANTIBIOTIC STEWARDSHIP GROUP

See Appendix 5.

17. CONCLUSION

The Infection Control Annual Programme for 2013-14 has been successfully completed.

The NHS England National Trust MRSA bacteraemia target of “no avoidable cases” was not met, and the C. difficile target of 29 cases was breached by 20.

The IPCT are concerned that reductions in MRSA and C. difficile infection have reached a plateau during 2013-14, perhaps indicating that further significant decreases may be difficult to realise.

National and local surveillance in 2013-14 continues to show an increase in E. coli blood stream infections. The IPCT will examine this in more detail during 2013-14 via RCA for cases which are procedure related.

During early 2012 the Chief Medical Officer issued the 2nd part of her annual report for 2011 which highlighted her concern about the potentially “catastrophic threat” posed by new hyper-resistant Gram negative organisms. This threat was mentioned in our report for 2011-12 but the situation has deteriorated nationally with the arrival of new multi-resistant organisms in increasing numbers in the UK, and in December 2013, Public Health England produced the *Acute Trust Toolkit for the early detection, management and control of carbapenemase-producing Enterobacteriacea (CPE,* which are resistant to our most valuable class of antibiotics, the carbapenems. The IPCT will be launching a new Policy in the autumn of 2014 based on the PHE document, which will require all elective and emergency admissions to be risk-assessed on admission to EKHUFT and screened for CPE carriage. Patients found to be infected with, or carrying, CPE, will require isolation in a single room for the duration of their hospital admission (and on all subsequent readmissions), and may require 1:1 nursing.

APPENDIX 1: Mandatory Training Compliance and Hand Hygiene/BBE/Commode Cleanliness Reports for March 2014

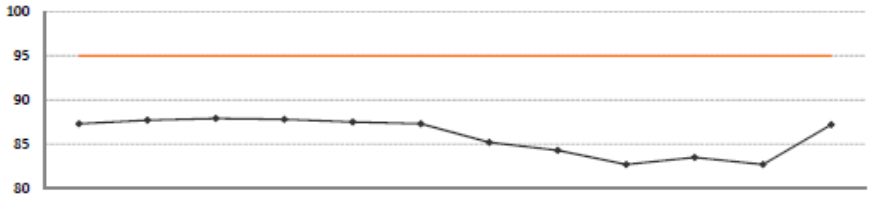
EKBI Business Intelligence | Beautiful Information

CLINICAL QUALITY & PATIENT SAFETY

PATIENT SAFETY: INFECTION PREVENTION & CONTROL

East Kent Hospitals University NHS
NHS Foundation Trust

Mandatory Training Compliance



	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14
Complinace (%)	87.3	87.7	87.9	87.8	87.5	87.3	85.2	84.3	82.7	83.5	82.7	87.2
Target	95	95	95	95	95	95	95	95	95	95	95	95

	Mar-14							
	Target	Trust	Clinical Support Services	Corporate	Specialist Services	Strat Dev & Capt Pln	Surgical Services	UCLTC
Mandatory Comparative Data for Biennial Training Compliance	95%	87.2%	83.4%	87.0%	79.1%	93.4%	83.0%	82.3%

Compliance Against Performance
Achieving or exceeding performance metric
0-10% underperformance against metric
10-20% underperformance against metric

Trust compliance increased from 82.7% in February to 87.2% in March. Increases have been seen in Clinical Support Services (from 83.0% to 83.4%); Corporate Services (from 83.4% to 87.0%), and Surgical Services (from 82.3% to 83.0%). However, there have been slight decreases in compliance within Specialist Services (down to 79.1% from 80.1%); Strategic Development and Capital Planning (down to 93.4% from 94.1%), and Urgent Care and Long Term Conditions (down to 82.3% from 82.7%). Special attention needs to be given to raising compliance within these be given to raising compliance within these Divisions.

14

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BARE BELOW THE ELBOW COMPLIANCE

Mar-14

	Clinical Support Services (%)	Specialist Services (%)	Surgical Services (%)	UCLTC (%)	Trust Total (%)
Nursing Staff	100.0	100.0	100.0	97.7	98.9
Medical Staff	100.0	96.9	97.9	87.7	94.2
Allied Health Professionals	100.0	100.0	100.0	100.0	100.0
Support Staff	100.0	83.3	98.7	98.2	97.9
Staff Total	100.0	98.4	99.2	95.4	97.6

HAND HYGIENE COMPLIANCE

Mar-14

	Clinical Support Services (%)	Specialist Services (%)	Surgical Services (%)	UCLTC (%)	Trust Total (%)
Nursing Staff	63.2	93.1	98.6	91.7	92.0
Medical Staff	71.0	97.5	86.4	67.4	78.9
Allied Health Professionals	68.2	100.0	98.5	86.4	90.2
Support Staff	100.0	88.9	98.9	91.7	95.7
Staff Total	69.7	94.2	95.2	85.8	88.8

COMMODE CLEANLINESS COMPLIANCE

Mar-14

Clinical Support Services (%)	Specialist Services (%)	Surgical Services (%)	UCLTC (%)	Trust Total (%)
100.0	100.0	91.8	83.9	88.6

DIVISIONAL AUDIT COMPLETION

Mar-14

Completed Audit	Clinical Support Services (%)	Specialist Services (%)	Surgical Services (%)	UCLTC (%)	Trust Total (%)
Bare Below the Elbow	61.5	44.0	51.6	55.6	52.4
Hand Hygiene	50.0	44.0	51.6	55.6	50.9
Commode Cleanliness	15.4	24.0	45.2	55.6	40.0

Compliance Against Performance	
	95 - 100%
	85 - 94%
	<85%
	No data

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APPENDIX 2

East Kent Hospitals University NHS
NHS Foundation Trust

East Kent Hospitals University NHS Foundation Trust

Divisional Infection Prevention and Control Key Performance Indicator Targets 2013-14

Version:	1
Ratified by:	Clinical Management Board
Date ratified:	15th January 2014
Name of originator/author:	Sue Roberts Deputy Director, Infection Prevention and Control
Director responsible for implementation:	Julie Pearce, Chief Nurse and Director of Quality and Operations
Date issued:	January 2014
Review date:	January 2015

Putting patients first

East Kent Hospitals University NHS
NHS Foundation Trust

INFECTION PREVENTION AND CONTROL PERFORMANCE MONITORING

Background

In 2011, the National Institute for Health and Clinical Excellence (NICE), in partnership with the Health Protection Agency (HPA), developed a quality improvement guide (http://www.nice.org.uk/media/842/61/HCAIQualityImprovementGuide.pdf). The guide is aimed at board members working in, or with, secondary care. The guide aims to build on advice given in the *Code of Practice on the prevention and control of infections and related guidance* (Health Act, 2008) and elsewhere to improve the quality of care and practice in secondary care over and above current standards. Taken together, the quality improvement statements contained within the guide describe excellence in care and practice to prevent and control Health Care Associated infections. Contained within the quality improvement guide are 11 statements. Statement 1: **Board level leadership to prevent HCAIs** includes the requirement for the board to agree a set of key performance indicators for infection prevention and control which includes compliance with antibiotic prescribing. Statement 1 also stipulates that there should be evidence that the agreed key performance indicators are used by the Board to monitor the Trust's infection prevention and control performance. The Infection Prevention and Control performance report based on the Infection Prevention and control Key Performance Indicators is submitted monthly to the Trust Board, meeting this requirement.

The Infection Prevention and Control Divisional Key Performance Indicator Targets have been revised for 2013-14 to reflect the requirements of both the quality improvement guide and the Health and Social Care Act 2008, together with actions to support the ongoing reduction of MRSA bacteraemia and C. difficile to achieve national/local objectives. The requirement for 2013-2014 is for acute Trusts to have no avoidable MRSA bacteraemias and the C. difficile objective is 29 cases of post 72hrs C. difficile cases.

Since April 2009 NHS Trusts have been legally required to register with the Care Quality Commission under the Health and Social Care Act 2008, and as a legal requirement of their registration, must protect patients, workers and others who may be at risk of a healthcare associated infection.

In relation to healthcare associated infection (HCAI), the Care Quality Commission will monitor compliance with the statutory requirements of registration and will judge whether the requirement is met with reference to the *Code of Practice on the prevention and control of infections and related guidance*. In cases of failure to comply with the registration requirements, the Care Quality Commission has a range of enforcement powers which it can use to respond to such breaches. It may:

- Draw the breach to the registered provider's attention and give the provider an opportunity to put it right within a reasonable period of time.
- In extreme cases the Care Quality Commission has the power to cancel registration.

The Code of Practice

The table below is the 'Code of Practice' on the prevention and control of infections under the Health and Social Care Act 2008. This sets out the 10 criteria against which a registered provider will be judged on how it complies with the registration requirement for cleanliness and infection control.

Compliance criterion	What the registered provider will need to demonstrate
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.
2	Provide and maintain a clean and appropriate environment in managed premises that facilitates the prevention and control of infections.
3	Provide suitable accurate information on infections to service users and their visitors.
4	Provide suitable accurate information on infections to any person concerned with providing further support or nursing/ medical care in a timely fashion.
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.
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.
7	Provide or secure adequate isolation facilities.
8	Secure adequate access to laboratory support as appropriate.
9	Have and adhere to policies, designed for the individual's care and provider organisations, that will help to prevent and control infections.
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.

A copy of "The Health and Social Care Act 2008: Code of Practice on the prevention and control of infections and related guidance" is available by clicking on the following link:

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_122604

Infection Prevention and Control Key Performance Indicator Targets for Divisions 2013 – 2014

	STANDARD	ACTION	TARGET COMPLIANCE	EXECUTIVE LEAD	OPERATIONAL LEAD	TIMESCALE	COMMENTS
1	**EDUCATION AND TRAINING**						
1.1	Mandatory infection prevention and control training must be undertaken every 2 years by all staff	All staff to complete mandatory infection prevention and control training and competency assessment on induction and thereafter, every 2 years. There are separate modules for clinical and non-clinical staff (both available as an e-learning package on the Trust NLMS system) Compliance with this aspect of mandatory training must be included in appraisals	≥ 95%	Chief Nurse and Director of Quality and Operations Medical Director Director of Strategic Development and Capital Planning	Divisional Directors/ Divisional Medical Directors and Divisional Head of Nursing	Ongoing throughout 2013/14	Performance metric ✓ Reported monthly to CMB/BOD
1.2	Soft FM Contract and facilities staff, as appropriate* must attend infection control and hand hygiene training on induction (induction training must be completed within 4 weeks of commencing work) and every two years thereafter	Complete Infection Control training on induction and every 2 years, thereafter as per GP 31 of the Soft FM General Specification (provided by the IP&C nurse specialists on the appropriate hospital site)	≥ 95%	Director of Strategic Development and Capital Planning	Deputy Director of Estates and Facilities	Ongoing	Soft FM contract performance report monitors completion of training on a monthly basis Report issued by Serco within 8 working days of the month end Report reviewed by the Soft FM Cleaning Management Group (monthly) Reports also reviewed by the Soft FM Management group (monthly) Report circulated to all IPCT leads via the Deputy Director of Infection Prevention and Control

	STANDARD	ACTION	TARGET COMPLIANCE	EXECUTIVE LEAD	OPERATIONAL LEAD	TIMESCALE	COMMENTS
1	**EDUCATION AND TRAINING CONTD**						
1.3	Blood culture collection must be performed according to Trust policy (protocols available in Section 1, Infection Control Manual 2011, Appendices 1 and 2)	Complete mandatory blood culture collection training and competency assessment. This should be completed on induction and annually thereafter by those performing the procedure, including doctors, registered nurses and phlebotomists. Compliance with this aspect of mandatory training must be included in appraisals (Available as an e-learning package on the Trust NLMS system)	95%	Chief Nurse and Director of Quality and Operations Medical Director Director of Strategic Development and Capital Planning	Divisional Directors/ Divisional Medical Directors and Divisional Head of Nursing	Ongoing throughout 2013/14	NB: All junior doctors including medical students, up to and including registrar level, must also attend the mandatory induction venepuncture and cannulation training provided by the Vascular Access Team Individual Divisions will be responsible for ensuring that training is completed and recorded Performance metric ✓ Reporting to commence in January 2014 Individuals must have completed the training in blood culture collection and passed the competency assessment before undertaking the procedure.
2	**CLEANING**						
2.1	Cleaning Standards (2007)	East Kent Hospitals University NHS Foundation Trust will achieve full compliance with the "National Specifications for Cleanliness in the NHS" (NPSA)	95%	Director of Strategic Development and Capital Planning	Deputy Director of Estates and Facilities	Ongoing	Key Performance Indicator set at 95% threshold for cleaning which is reported via the Soft FM monthly report. Report issued by Serco within 8 working days of the month end Reports reviewed by the Soft FM Management group (monthly) Additionally, cleaning performance revived via the Balance Scorecard for

							Strategic Development and Capital Planning Business unit Planned joint auditing/monitoring of all areas is determined via a risk rating (Very High, High, Significant and Low) ✓
	STANDARD	**ACTION**	**TARGET COMPLIANCE**	**EXECUTIVE LEAD**	**OPERATIONAL LEAD**	**TIMESCALE**	**COMMENTS**
2	**CLEANING CONTD**						
2.2	Monitoring of Soft FM cleaning performance	Ensure that the monitoring of Soft FM performance takes place as per the service level specifications based on risk ratings across all wards and departments.	100%	Director of Strategic Development and Capital Planning	Deputy Director of Estates and Facilities	Ongoing	Monitored via the Soft FM monthly report Report issued by Serco within 8 working days of the month end Report reviewed by the Soft FM Cleaning Management Group (monthly) Reports also reviewed by the Soft FM Management group (monthly) Reports circulated to all IPCT leads via the Deputy Director Infection Prevention and Control
2.3	Ward/Department level SLAs	Under the control of the relevant Hospital Manager, the Facilities Service Managers will agree at local level, the risk rating for all ward and department areas with requirements being recorded with Ward/ Department level SLAs	100%	Director of Strategic Development and Capital Planning	Deputy Director of Estates and Facilities and Ward Managers	Ongoing	Percentage of departments SLAs agreed, signed off and reviewed annually

	STANDARD	ACTION	TARGET COMPLIANCE	EXECUTIVE LEAD	OPERATIONAL LEAD	TIMESCALE	COMMENTS
3	**AUDIT**						
3.1	Hand hygiene compliance in clinical areas will achieve ≥ 95%	All wards/clinical departments will undertake weekly hand hygiene audits using the EKHUFT 5 Moments audit tool. Individual disciplines will be reported on separately (nurses and HCAs/ medical staff/ancillary staff/others), to identify staff groups requiring additional education and training support Constructive feedback must be provided at the end of the 20 minute observation period to individuals who have been observed to be non-compliant with the audit standards, if appropriate and for maximum impact this should be done immediately following the non-compliance. If a ward or department fails to achieve an overall audit target compliance of ≥ 95% then the area will undertake daily hand hygiene audits until they can report ≥95% compliance.	≥ 95%	Chief Nurse and Director of Quality and Operations Medical Director Director of Strategic Development and Capital Planning	Divisional Directors/ Divisional Medical Directors and Divisional Head of Nursing	Ongoing	Hand hygiene audit results should be entered onto the Meridian system It is recommended that Divisions promote cross ward/department auditing A minimum of 5 members of staff should be audited for a minimum time period of 20 minutes The audit should be representative of staff working in the area Performance metric ✓ Reported monthly to CMB/BOD, as part of the Infection Prevention and Control Performance Report

	STANDARD	ACTION	TARGET COMPLIANCE	EXECUTIVE LEAD	OPERATIONAL LEAD	TIMESCALE	COMMENTS
3	**AUDIT CONTD**						
3.2	Compliance with Infection prevention and control policies will be robustly audited to include the following: • MRSA screening • MRSA decolonisation • Commode cleaning/ labelling* • Hand hygiene audits* • Bare below the elbows audits*	This compliance data for MRSA screening and decolonisation will be collected automatically from VitalPAC. Due to commence in May 2014. Data for Hand hygiene, bare below the elbows and commode audits will be inputted into the Meridian System (commenced November 2013)	100%	Chief Nurse and Director of Quality and Operations Medical Director Director of Strategic Development and Capital Planning	Divisional Directors/ Divisional Medical Directors and Divisional Head of Nursing Deputy Director of Estates and Facilities	Ongoing	Performance metric ✓ Reported monthly to CMB/BOD as part of the IC Performance Report Compliance performance should be discussed: • locally at site based meetings with wards interrogating and being responsible for their own data • at Divisional governance meetings as a separate agenda item and actions initiated accordingly i.e. where compliance is below target

	STANDARD	ACTION	TARGET COMPLIANCE	EXECUTIVE LEAD	OPERATIONAL LEAD	TIMESCALE	COMMENTS
3	**AUDIT CONTD**						
3.3	Infection prevention and control policies will be robustly applied for the following: • Insertion and management of indwelling peripheral cannulae • Insertion and management of central vascular catheters including those used for haemodialysis • Insertion and management of urinary catheters	This compliance data will be collected automatically from VitalPAC	100%	Chief Nurse and Director of Quality and Operations Medical Director Director of Strategic Development and Capital Planning	Divisional Directors/ Divisional Medical Directors and Divisional Head of Nursing	Ongoing	Performance metric ✓ Reported monthly to CMB/BOD, to commence in the 4th quarter of 2013/14 Monthly compliance results should be discussed at Divisional governance meetings as a separate agenda item and actions initiated accordingly i.e. where compliance is below target

	STANDARD	ACTION	TARGET COMPLIANCE	EXECUTIVE LEAD	OPERATIONAL LEAD	TIMESCALE	COMMENTS
3	**AUDIT CONTD**						
3.4	Clinical environments will be fully compliant with infection control environmental and clinical practice standards described in the environmental and clinical practice infection control audits	Audits will be undertaken every 12 months on all clinical wards/departments by the IPC nurse specialists in conjunction with the link practitioners and ward/department managers Following the audit, action plans developed by ward/department manager and link practitioner will be actioned within one month with the exception of Estates issues which may take longer to complete	< 5 non-compliances in environmental and clinical practice standards	Chief Nurse and Director of Quality and Operations Director of Strategic Development and Capital Planning	Divisional Directors/ Divisional and Divisional Head of Nursing Deputy Director of Estates and Facilities	Ongoing	In order to pass the audits, wards/ departments are required to achieve < 5 non-compliances in both the environmental and clinical practice standards. For those not achieving 100% compliance an Action Plan will need to be devised, returned to the site based IC Nurse Specialists and implemented within one month of the audit taking place. Wards/departments that achieve > 5 non-compliances in either the environmental or clinical practice standards will be registered as non-compliant with those standards and entered onto the Infection Control Audit Risk Register. An Action Plan will be required to address the deficits, and the ward re-audited to ensure compliance/implementation. In the event of a ward/department achieving 5 or more non-compliances in both environmental and clinical practice standards, the wad/department will have failed the audit overall and will be entered on to the Infection Control Risk Register of areas that are non-compliant with both standards. The Ward/ Department Manager will be required to implement an Action Plan within 72 hours of the audit taking place; an unannounced re-audit will be undertaken by the site based IC Specialist Nurses within the next 5

							working days, and a formal letter will be sent to the Divisional Head of Nursing (cc's to the Divisional Matrons and the Deputy Chief Nurse) The Ward/Department will be audited again within 6 months Performance metric ✓ Any wards/departments failing to achieve 95% compliance will be referred to the Heads of Nursing/Lead Nurse for action A compliance report will be a standing agenda item at the ICC commencing February 2012
	STANDARD	**ACTION**	**TARGET COMPLIANCE**	**EXECUTIVE LEAD**	**OPERATIONAL LEAD**	**TIMESCALE**	**COMMENTS**
3	**AUDIT CONTD**						
3.5	SURGICAL DIVISIONS Antimicrobial prophylaxis will be prescribed according to Trust guidelines or on recommendation of Consultant Microbiologist	Antimicrobial pharmacists to: 1. Undertake antimicrobial stewardship key performance indicators audits every two months. Key performance indicators to be audited: • KPI 1: Clinical indication/diagnosis for commencing antimicrobial recorded on drug chart • KPI 2: Stop/review date recorded on drug chart • KPI 3: Antimicrobial prescribed as per microbiology/antimicrobial guidelines or as per sensitivities 2. Action outcomes as appropriate	> 90% of prescriptions compliant	Lead Antimicrobial Pharmacist	Antimicrobial Pharmacists at WHH, KCH and QEQM	Ongoing	KPI audit tool developed by the Lead Antimicrobial Pharmacist. Antimicrobial Stewardship group and ICC Meeting to receive reports on Divisional audits and take the necessary action depending on outcomes, as appropriate Performance metric ✓

	STANDARD	ACTION	TARGET COMPLIANCE	EXECUTIVE LEAD	OPERATIONAL LEAD	TIMESCALE	COMMENTS
3	**AUDIT CONTD**						
3.6	MEDICAL SPECIALITY DIVISIONS Acute infections will be treated according to Trust guidelines or on recommendation of Consultant Microbiologist	Antimicrobial pharmacists to: 1. Undertake antimicrobial stewardship key performance indicators audits every two months. Key performance indicators to be audited: • KPI 1: Clinical indication/diagnosis for commencing antimicrobial recorded on drug chart • KPI 2: Stop/review date recorded on drug chart • KPI 3: Antimicrobial prescribed as per microbiology/antimicrobial guidelines or as per sensitivities 2. Action outcomes as appropriate.	> 90% of prescriptions compliant	Lead Antimicrobial Pharmacist	Antimicrobial Pharmacists at WHH, KCH and QEQM	Ongoing	KPI audit tool developed by the Lead Antimicrobial Pharmacist. Antimicrobial Stewardship group and ICC Meeting to receive reports on Divisional audits and take the necessary action depending on outcomes, as appropriate Performance metric ✓
3.7	EKHUFT will provide and maintain a clean and appropriate environment in managed premises that facilitates the prevention and control of infections (The Health and Social Care Act 2008, *Code of Practice on the prevention and control of infections and related*	All Divisional Matrons will undertake 3 monthly audits of their wards using the Hygiene Code Environmental Audit tool and report compliance to the Nursing and Midwifery Leadership Group	100%	Chief Nurse and Director of Quality and Operations Director of Strategic Development and Capital Planning	Divisional Directors/ Divisional and Divisional Head of Nursing Deputy Director of Estates and Facilities	Ongoing	Matrons will need to organise support from the following multidisciplinary team (including IPCT/Matrons/Heads of Nursing/Soft FM site Leads and Estates) to undertake a more thorough audit on a 3 monthly basis depending on the issues that arise from the regular monthly audits. Cross auditing is encouraged between Divisions Performance metric ✓

	guidance)						
	STANDARD	**ACTION**	**TARGET COMPLIANCE**	**EXECUTIVE LEAD**	**OPERATIONAL LEAD**	**TIMESCALE**	**COMMENTS**
4	**HAND HYGIENE**						
4.1	Training and education on the correct handwashing technique/ indications and use of alcohol rub as well as the five moments for hand hygiene as applicable to his role. This will be undertaken by all staff having day-to-day contact with patients (doctors, nurses, AHPs). An assessment of competency will be completed annually	An assessment of competency will be completed (practical assessment) Hand hygiene training/ assessment will be completed by Infection Control Link Practitioners/leads in their area of work	≥ 80%	Chief Nurse and Director of Quality and Operations Medical Director Director of Strategic Development and Capital Planning	Divisional Directors/ Divisional Medical Directors and Divisional Heads of Nursing Deputy Director of Estates and Facilities	To commence as a performance metric in February 2012	Performance metric ✓ Reported monthly to CMB/BOD commencing in January 2014 Tear-off slips from certificates issued at the hand hygiene assessment session should be returned to Workforce Information Infection Control Link Practitioners are responsible for submitting results to Workforce Information and ensuring that all staff within their area receive training Monthly compliance results should be discussed at Divisional Governance meetings as a separate agenda item and actions initiated accordingly, i.e. where compliance is below target

	STANDARD	ACTION	TARGET COMPLIANCE	EXECUTIVE LEAD	OPERATIONAL LEAD	TIMESCALE	COMMENTS
5	**MRSA BACTERAEMIA OBJECTIVE**						
5.1	Individual Divisions will be responsible for promoting best practice to ensure that there are no avoidable MRSA bacteraemias and that the Trust objective for MRSA bacteraemia is met. Individual Divisions will achieve their objective for MRSA	Divisional staff will work collaboratively with the Infection Prevention and Control Team to ensure that the Trust Policy for the Management and Control of Meticillin Resistant *Staphylococcus aureus* (MRSA) is implemented and any actions arising from Root Cause Analysis are implemented	Trust objective – no avoidable MRSA bacteraemias	Chief Nurse and Director of Quality and Operations Medical Director	Divisional Directors/ Divisional Medical Directors and Divisional Head of Nursing	Ongoing	Ward acquired cases of MRSA colonisation will be monitored on an ongoing basis by the IPCT. Any wards having more than 2 cases per month will result in a meeting with the IPC nurse specialists providing support and guidance to develop and implement an action plan to reduce the incidence. A Datix will be completed. Performance metric ✓
6	**C. DIFFICILE OBJECTIVE**						
6.1	Individual Divisions will be responsible for achieving their allocated target for the number of post 72hr cases of C. difficile within their Division	Divisional staff will work collaboratively with the Infection Prevention and Control Team to ensure that the Trust Policy for the Prevention, Management and Control of Clostridium difficile infection is implemented and any actions arising from Root Cause Analysis or periods of increased (PII) incidence/ outbreaks are implemented	As per Divisional allocation	Chief Nurse and Director of Quality and Operations Medical Director	Divisional Directors/ Divisional Medical Directors and Divisional Head of Nursing	Ongoing	Ward acquired cases of GDH antigen positive carriage will be monitored on an ongoing basis by the IPCT. Any wards having more than 2 cases per month will result in a meeting with the IPC nurse specialists providing support and guidance to develop and implement an action plan to reduce the incidence. A Datix will be completed Performance metric ✓

	STANDARD	ACTION	TARGET COMPLIANCE	EXECUTIVE LEAD	OPERATIONAL LEAD	TIMESCALE	COMMENTS
7	**C. DIFFICILE RCA**						
7.1	An RCA will be completed for all new cases of C. difficile confirmed > 72 hours post admission An investigation will occur for a 'period of increased incidence' (PII) (2 or more linked cases of confirmed C. difficile within 28 days (DH recommendation)). PIIs will also be undertaken when there are 2 or more consultant related cases during a 12 month period. In Surgical Services a PII will also be held when there are 2 or more cases, including GDH antigen positive cases. The IPCT will instigate the investigation Ribotyping of strains is undertaken routinely	The IPC Nurses will arrange meetings as appropriate Any actions arising from the outbreak meeting must be implemented by the nominated person The IPCT will be responsible for ensuring that lessons learnt locally are shared Trust wide/health economy wide A log of actions must be maintained within the Division e.g. Divisional RCA Register From April 2012 an RCA will be completed for each post 72hr case. A decision will be taken at the meeting to determine whether the C. difficile was avoidable or non-avoidable. Divisional staff will ensure that all the appropriate members of the multi-disciplinary team, including a representative from the medical team responsible for the case, attend the root cause analysis or period of increased incidence meeting.	100%	Chief Nurse and Director of Quality and Operations Medical Director Director of Strategic Development and Capital Planning	Divisional Directors/ Divisional Medical Directors and Divisional Head of Nursing Deputy Director of Estates and Facilities	Ongoing	The Divisional Medical Site Lead will be responsible for ensuring that relevant staff attend the RCA/ outbreak meetings, e.g. Divisional Site Lead, Consultant responsible for the case, Ward Manager, Matron, Link Practitioner, Consultant Microbiologist, CNS Infection Control etc The Trusts C. difficile RCA tool should be used Periods of Increased Incidence will be included in the monthly C. difficile data reports issued Trust wide by the IPCT and reported to the ICC PIIs should be a standing agenda item in relevant Divisions Clinical Governance meetings. Minutes from recent PIIs should be reviewed and actions taken as appropriate

	An outbreak meeting will be convened if the cases are epidemiologically linked Outbreaks will be reported to the SHA using the SUI reporting mechanism						
	STANDARD	**ACTION**	**TARGET COMPLIANCE**	**EXECUTIVE LEAD**	**OPERATIONAL LEAD**	**TIMESCALE**	**COMMENTS**
8	**SURGICAL SITE SURVEILLANCE**						
8.1	Orthopaedic surveillance will be undertaken for all implant surgery on a continuing basis using the Surgical Site Infection Surveillance Scheme	Participation in the Surgical Site Infection Surveillance Scheme at QEQM and WHH Quarterly report to be presented at the ICC and the Bone and Joint Committee for discussion	100%	Chief Nurse and Director of Quality and Operations	Clinical Director Surgical Services Head of Nursing Surgical Services	Ongoing	Actions will be taken as appropriate. RCA will be completed for all deep wound infections (Joint prosthesis) – inpatients and those readmitted for treatment.

Infection Prevention and Control Key Divisional Performance Indicators – Summary of Reporting Arrangements

NO	KEY PERFORMANCE INDICATOR TARGET	PERFORMANCE METRIC	REPORTING SYSTEM	FREQUENCY OF REPORTING	ROUTE
1.1	Mandatory Infection Prevention and Control Training every 2 years (all staff)	✓	Clinical Management Board and Board of Directors	Monthly – IC performance report to the board	HR – Karen Oldfield
1.2	Annual mandatory Infection Control training (Soft FM/facilities staff)	✓	Clinical Management Board and Board of Directors	Monthly – IC performance report to the board	HR – Karen Oldfield
1.3	Annual blood culture collection training and competency assessment (e-learning) for those performing the procedure, i.e. doctors, registered nurses and phlebotomists	✓	Clinical Management Board and Board of Directors	Monthly – IC performance report to the board	HR – Sue Roberts
2.1	Compliance with NHS Kent and Medway KPIs for cleaning standards	✓	Infection Control Committee NHS Kent and Medway (Commissioners) Board of Directors	Bimonthly Monthly Quarterly	
2.2	Monitoring of Soft FM Cleaning Performance		Formal performance reports – compliance against performance management payment mechanism	Monthly	Associate Director of Facilities via meeting with Soft FM business managers
2.3	Agreement of local cleaning standards (Service Level Agreement)		Board of Directors	Annually	Associate Director of Facilities
3.1	Audit of hand hygiene compliance	✓	Clinical Management Board and Board of Directors	Weekly– IC performance report to the board	
3.2	Audit of compliance with specific aspects of Infection Prevention and Control policies	✓	Clinical Management Board and Board of Directors	Monthly– IC performance report to the board	
3.3	Insertion and management of: • indwelling peripheral cannulae • central vascular catheters including those used for haemodialysis • urinary catheters	✓	Clinical Management Board and Board of Directors	Monthly– IC performance report to the board	
3.4	Compliance with infection control environmental audit standards	✓	Infection Control Committee	Bi-monthly	ICC – Debbie Weston

3.5	Audit of compliance with Trust Antimicrobial Prophylaxis guidelines	✓	Antimicrobial Stewardship Group and Infection Control Committee	Six monthly	Bed holding Divisions – Antimicrobial Stewardship Group
3.6	Audit of compliance with Trust antimicrobial guidelines (Medicine)	✓	Antimicrobial Stewardship Group, Infection Control Committee and Clinical Management Board	Six monthly	Bed holding Divisions – Antimicrobial Stewardship Group
3.7	Completion of quarterly environmental audits by bed holding matrons	✓	Nursing and Midwifery Leadership Group	Quarterly	Ward/Department matrons report to Lisa Sheene/ Heads of Nursing quarterly basis.
4.1	Training and education on the correct handwashing technique/indication and use of alcohol rub	✓	Clinical Management Board and Board of Directors	Monthly	HR – Sue Roberts
5.1	MRSA bacteraemia objective	✓	Clinical Management Board and Board of Directors	Monthly	Dr James Nash
6.1	C. difficile objective	✓	Clinical Management Board and Board of Directors	Monthly	Dr James Nash
7.1	Completion of a Root Cause Analysis of cases related to a 'Period of Increased Incidence' (PII) and participation in outbreak meetings as appropriate		Included in the monthly C. difficile data report issued Trust wide. Agenda item – Infection Control Committee	Monthly	IPCT/ICC
8.1	Participation in mandatory Orthopaedic Surgical Site Surveillance – National Surgical Site Infection Surveillance Scheme, Trauma and Orthopaedic Department		Executive Performance Review and Infection Control Committee	Quarterly	Quarterly report submitted to the ICC and Bone & Joint Committee

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APPENDIX 3

The Infection Control Team Committee/Group Membership (IPCT members contributed to the following committees in 2013-14)

- Clinical Management Board
- Drugs and Therapeutics Committee
    - And Antibiotic Sub-Group

- Infection Control Committee
- Local transition team for the Kent decontamination project
- Consumables User Review Group (CURG)
- EKHUFT FM Re-tendering Steering Group
- Trust wide Matrons Forum
- Infection Prevention and Control Team Meetings
- Patient Safety Board
- Medical Devices Group
- Health and Safety Committee
- Standards Monitoring Group
- Clinical Support Services Board
- CSSD Divisional Risk and Governance Committee
- EKHUFT FM Specialist Group
- VitalPAC Steering Group
- Surgical Services Divisional Governance Board
- CSSD Top Team
- Soft FM Strategic Partnership Board
- LOS Task and Finish Group
- Endoscopy User Group
- Nurse Consultant meetings
- Heads of Nursing meetings
- Dover Project Steering Group

External

- Kent-wide Infection Control Committee
- Kent Director of Infection Prevention and Control Forum
- Eastern and Coastal Kent NHS Primary Care Trust Infection Prevention and Control Committee
- Eastern and Coastal Kent NHS Primary Care Trust Infection Prevention and Control Project Group
- NHS South East Coast Directors of Infection and Control Committee

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APPENDIX 4: Summary of Staff who received Infection Prevention and Control Training 2013-14

SUBJECT	JOB TITLE	FIGURE	OVERALL FIGURE
Infection Control Link Practitioner meetings QEQMH	Matron	-	59
	Sister	5	
	Ward Manager	3	
	Qualified Nurse	15	
	HCA	2	
	Serco	-	
	Consultant	-	
	Doctor	-	
	SHO	-	
	Physio/OT	-	
	Ward Clerk	-	
	Estates	-	
	Other	34	
Infection Control Link Practitioner meetings K&C	Matron	1	86
	Sister	18	
	Ward Manager	-	
	Qualified Nurse	18	
	HCA	13	
	Serco	-	
	Consultant	-	
	Doctor	2	
	SHO	-	
	Physio/OT	5	
	Ward Clerk	-	
	Estates	-	
	Other	29	
Infection Control Link Practitioner meetings WHH	Matron	-	94
	Sister	4	
	Ward Manager	-	
	Qualified Nurse	9	
	HCA	1	
	Serco	-	
	Consultant	-	
	Doctor	-	
	SHO	-	
	Physio/OT	1	
	Ward Clerk	-	
	Estates	-	
	Other	79	
HCA Care of patient with an SRC K&C	Other	10	10
Commode cleaning WHH	Other	10	10
RCA working for Renal Department K&C	Other	16	16
Care of acutely ill adult K&C	Other	23	23
Care of acutely ill adult WHH	Other	10	10
1:1 ICLP Meeting WHH	Other	34	34
1:1 ICLP Meeting BHD	Other	5	5
1:1 ICLP Meeting RVHF	Other	4	4

SUBJECT	JOB TITLE	FIGURE	OVERALL FIGURE
IPC Awareness Session QEQM	Matron Sister Ward Manager Qualified Nurse HCA Serco Consultant Doctor SHO Physio/OT Ward Clerk Estates Other	1 5 4 4 - 8 - - - 1 - - 3	26
IPC Awareness Session K&C	Matron Sister Ward Manager Qualified Nurse HCA Serco Consultant Doctor SHO Physio/OT Ward Clerk Estates Other	1 8 4 5 1 2 - - - - - - 3	24
IPC Awareness Session WHH	Matron Sister Ward Manager Qualified Nurse HCA Serco Consultant Doctor SHO Physio/OT Ward Clerk Estates Other	5 1 6 1 - 7 - - - 2 - - 2	24
MRSA bacteraemia RCA teaching WHH	Other	9	9
Serco training QEQM	Serco	76	76
Serco training K&C	Serco	167	167
Serco training WHH	Serco	161	161
MRSA/C. difficile Roadshow QEQM	Other	24	24
MRSA/C. difficile Roadshow K&C	Other	39	39
MRSA/C. difficile Roadshow WHH	Other	25	25
MRSA basics Kent ward K&C	Other	60	60

SUBJECT	JOB TITLE	FIGURE	OVERALL FIGURE
Hand Hygiene Sessions K&C	Matron Sister Ward Manager Qualified Nurse HCA Serco Consultant Doctor SHO Physio/OT Ward Clerk Estates Other	4 6 2 24 16 - 13 33 6 3 - 2 36	198
Hand Hygiene Sessions WHH	Matron Sister Ward Manager Qualified Nurse HCA Serco Consultant Doctor SHO Physio/OT Ward Clerk Estates Other	4 6 2 35 16 34 19 41 1 11 3 1 187	360
Clinical awareness K&C	Matron Sister Ward Manager Qualified Nurse HCA Serco Consultant Doctor SHO Physio/OT Ward Clerk Estates Other	1 6 1 133 79 - 19 5 3 27 2 - 128	404
Preceptorship conference for newly qualified staff K&C	Other	60	60
NHSP EU Nurses induction K&C	Nurses	13	13
Diarrhoea assessment tool WHH	Other	31	31
Medical Student induction/training QEQM	Medical Student	233	233
Medical Student induction/training K&C	Medical Student	176	176
Medical Student induction/training WHH	Medical Student	211	211

SUBJECT	JOB TITLE	FIGURE	OVERALL FIGURE
Catheter Care QEQM	Other	41	41
Catheter Care K&C	Other	20	20
Catheter Care WHH	Other	26	26
Renal master class K&C	Other	14	14
Blood culture training QEQM	Doctors	21	21
Blood culture training K&C	Doctors	22	22
Blood culture training WHH	Doctors	21	21
Basic IC and BBV WHH	Other	24	24
Norovirus workshop QEQM	Other	64	64
C. difficile workshop QEQM	Other	7	7
C. difficile workshop K&C	Other	5	5
C. difficile workshop WHH	Other	18	18
C. difficile Roadshow QEQM	Other	14	14
C. difficile Roadshow K&C	Other	37	37
C. difficile Roadshow WHH	Other	26	26
CDT/MRSA Updates and training WHH	Other	23	23
IP in A&E departments QEQM	Other	8	8
Microbiology and IC K&C	Other	8	8
Managing diarrhoea K&C	Other	7	7
Student Nurse Teaching session WHH	Student Nurse	13	13
Spanish Nurse induction QEQM	Nurse	9	9
Spanish Nurse induction K&C	Nurse	8	8
Spanish Nurse induction WHH	Nurse	9	9
Blood Culture Collection e-learning Trustnet Online Training			701
Infection Control e-learning Trustnet Online Training			3690

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APPENDIX 5

Annual Report of the Antibiotic Stewardship Group as Part of the Infection Control Annual Report 2013/14

The Trust Antimicrobial Stewardship Group was chaired by Dr Matthew Strutt, Consultant Microbiologist and Moira Talpaert, Pharmacy Team Leader, Antimicrobials. Moira Talpaert has since left the Trust.

Antimicrobial stewardship is a key component of a multifaceted approach to preventing emergence of healthcare-associated infections and antimicrobial resistance, as well as ensuring safe and cost-effective prescribing.

This report details the activities that have been carried out this year on antimicrobial usage.

The group worked on/approved the following:

Guidelines, Policies

- 5th edition of Pocket Policy Antimicrobial Guidelines was released in August 2013.

- Severe parotitis. Meropenem and vancomycin were replaced with flucloxacillin in the severe parotitis guideline.

- New surgical prophylaxis vascular guidelines were published in February 2013.

- New spontaneous bacterial peritonitis antimicrobial prophylaxis guidelines were published in October 2012.

- Neutropenic sepsis – updated in April in line with NICE guidelines (September 2012).

NICE recommendations:

1. Beta lactam monotherapy piperacillin with tazobactam. Do not offer an aminoglycoside, either as monotherapy or in dual therapy.

2. Do not offer empiric glycopeptide antibiotics to patients with suspected neutropenic sepsis who have central venous access devices, unless there are patient-specific or local microbiological indications.

Changes made: we removed gentamicin and only recommended to add vancomycin if history of MRSA.

- Gentamicin for endocarditis: as per BSAC 2011 guidelines.

Changes made:

1mg/kg TDS replaced with 1mg/kg BD
Trough level (pre dose) <2mg/L replaced with <1.0mg/L

- Endocarditis treatment page on Trust intranet still under “review” but we have created a link for 2011 BSAC guidelines.

Removal of antimicrobials from ward stock:

To reduce the risk of *Clostridium difficile* infections:

- Cefuroxime injection removed from surgical wards to avoid prolonged use of cefuroxime post-op.

- Cefalexin removed from medical and surgical wards. Cefalexin is highly restricted in the Trust and is only approved for urinary tract infections in pregnancy. All other indications need to be approved by Microbiology.

Audits

Antimicrobial Stewardship Key Performance Indicators Audits:

Antimicrobial stewardship key performance indicators audits have been introduced by the Antimicrobial Pharmacy Team at East Kent Hospitals University NHS Foundation Trust (EKHUFT).

The three key performance indicators audited are as follows:

*KPI 1: Clinical indication/diagnosis for commencing antimicrobial recorded on drug chart
Target: > 90% of prescriptions compliant

*KPI 2: Stop/review date recorded on drug chart
Target: > 90% of prescriptions compliant

*KPI 3: Antimicrobial prescribed as per Microbiology/antimicrobial guidelines or as per sensitivities
Target: > 90% of prescriptions compliant.

WHH results:

5 Medical wards (123 patients under the care of various consultants) were audited.

Wards audited: Cambridge J, K, L, M and Oxford:

- 41/123 patients (33%) were on antibiotics
- KPI 1 compliance (indication recorded) = 93%
- KPI 2 compliance (stop/review date recorded) = 59%
- KPI 3 compliance (as per guidelines/microbiology or sensitivities) = 95%

6 Surgical wards (119 patients under the care of various consultants) were audited.

Wards audited: Kings A2, B, C1, C2, D1 and D2:

- 35/119 patients (29.4%) were on antibiotics
- KPI 1 compliance (indication recorded) = 89%
- KPI 2 compliance (stop/review date recorded) = 51%
- KPI 3 compliance (as per guidelines/microbiology or sensitivities) = 91%

KCH results:

9 Medical wards (188 patients under the care of various consultants) were audited.

Wards audited: Mount McMaster, Harbledown, Invicta, Treble, Kingston, Harvey, Taylor, Marlowe and CDU:

- 76/188 patients (40%) were on antibiotics
- KPI 1 compliance (indication recorded) = 87%
- KPI 2 compliance (stop/review date recorded) = 30%
- KPI 3 compliance (as per guidelines/microbiology or sensitivities) = 93%

2 Surgical wards (51 patients under the care of various consultants) were audited.

Wards audited: Clarke, Kent:

- 19/51 patients (37%) were on antibiotics
- KPI 1 compliance (indication recorded) = 95%
- KPI 2 compliance (stop/review date recorded) = 32%
- KPI 3 compliance (as per guidelines/microbiology or sensitivities) = 84%

QEQM results:

5 Medical wards (109 patients under the care of various consultants) were audited.

Wards audited: Deal, St Margarets, Sandwich Bay, St Augustines, Minster:

- 51/109 patients (47%) were on antibiotics
- KPI 1 compliance (indication recorded) = 86%
- KPI 2 compliance (stop/review date recorded) = 29%
- KPI 3 compliance (as per guidelines/microbiology or sensitivities) = 92%

5 Surgical wards (84 patients under the care of various consultants) were audited.

Wards audited: Bishopstone, CSF, CSM, Sea Bathing and Quex:

- 32/84 patients (38.1%) were on antibiotics
- KPI 1 compliance (indication recorded) = 81% (target 90%)
- KPI 2 compliance (stop/review date recorded) = 15% (target 90%)
- KPI 3 compliance (as per guidelines/microbiology or sensitivities) = 78% (target 90%).

The results will be presented in June 2013 to all FY1 and FY2 and will be emailed to the Heads of Divisions shortly.

It is expected, that after the initial audit and feedback of results, the percentage of antimicrobials not prescribed as per Trust guidelines, not having an indication or a duration documented on drug chart should decrease.

These audits will be completed every 3 months (April/July/October/January).

Education and Training

Continued commitment to quality in education and training of all clinical staff groups.

A one hour teaching session for all FY1 and FY2 will be delivered on each site (WHH, K&C and QEQM) by the Antimicrobial Pharmacists and a Consultant Microbiologist in August 2013. Pocket antimicrobial guides will be included in the doctors' starter packs to promote safe and cost-effective prescribing.

Several antimicrobial teaching sessions were organised for Pharmacy staff.

Clostridium difficile and Defined Daily Doses

Monitoring of antimicrobial usage within the Trust through WHO standardised monitoring with DDD (Defined Daily Doses) per 100 occupied bed days.

Antimicrobial DDD reports are prepared and presented at the ASG meetings on a monthly basis covering General Surgery, General Medicine, and Trauma & Orthopaedics, HCOOP, Child Health, ITU, Haematology, Renal, Vascular, Urology and Womens Health. This method allows the ASG to pick up on trends in prescribing of individual antibiotics. For example following the removal of Cefalexin from the surgical wards across the Trust usage fell from an average DDD of 6.4 per 100 occupied bed days to 0.3. Usage of the restricted broad-spectrum antibiotics Meropenem and Piperacillin/Tazobactam has been closely monitored. The recent increasing trend in the use of these two antibiotics particularly in HCOOP and General medicine triggered audit work to assess the appropriateness of prescribing and the antimicrobial pharmacists now compile a daily report of patients on these antibiotics for discussion in the daily micro-teleconference and for review on the antimicrobial stewardship rounds. The place of Piperacillin/Tazobactam within the antimicrobial guidelines is to be reviewed in June.

Please contact the Pharmacy Team Leader if you would like a copy of the projects/audits mentioned above.

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APPENDIX 6: VitalPAC Invasive Devices Monthly Report

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Indwelling Devices

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CANNULAS

Insertion

Cannula inserted using aseptic technique

Comprises of the following criteria:

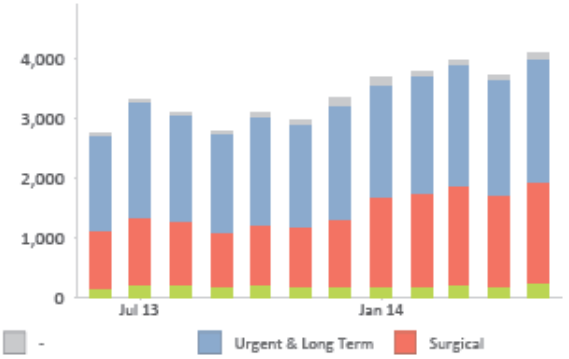
Forms one of the insertion criteria for adhering to Saving Lives.
Procedure is carried out using a recognised aseptic technique.
Needle free device used when available.
A new cannula is used for each attempt.
Cannula is flushed in line with local policy.

Continuing Care

Is the dressing clean, dry and intact?
Cannula in use?

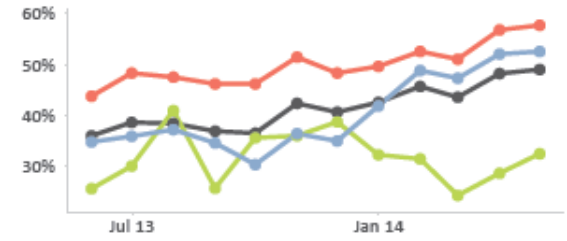
Confirms the continuing clinical indication for cannula remaining insitu.

Inserted Using Aseptic Technique



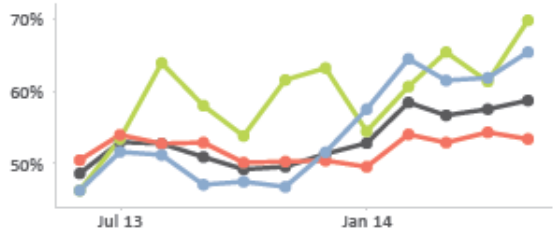
Date	Jun 13	Jul 13	Aug 13	Sep 13	Oct 13	Nov 13	Dec 13	Jan 14	Feb 14	Mar 14	Apr 14	May 14
Trust 40,013	2,762	3,317	3,100	2,776	3,074	2,965	3,323	3,698	3,790	3,949	3,716	4,074
Spec. 2,425	157	214	234	185	203	200	187	195	196	225	197	259
Surg. 14,872	961	1,134	1,039	912	1,013	973	1,137	1,482	1,565	1,634	1,522	1,683
ULTC 21,954	1,589	1,920	1,767	1,635	1,804	1,728	1,899	1,892	1,941	2,029	1,939	2,063

Patients Checked Daily



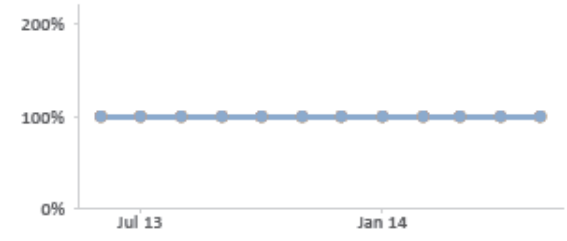
Date	Jun 13	Jul 13	Aug 13	Sep 13	Oct 13	Nov 13	Dec 13	Jan 14	Feb 14	Mar 14	Apr 14	May 14
Trust 41.6%	35.9%	38.5%	38.3%	36.8%	36.4%	42.2%	40.5%	42.4%	45.6%	43.5%	48.1%	49%
Spec. 31.3%	25.4%	29.9%	40.9%	25.5%	35.4%	35.9%	38.7%	32.2%	31.3%	24.1%	28.5%	32.3%
Surg. 40.4%	34.7%	35.8%	37.1%	34.5%	30.2%	36.3%	34.9%	41.8%	48.7%	47.3%	52%	52.5%
ULTC 49.8%	43.7%	48.2%	47.4%	46.1%	46.1%	51.4%	48.2%	49.6%	52.5%	51%	56.8%	57.7%

Inserted Using Aseptic Technique



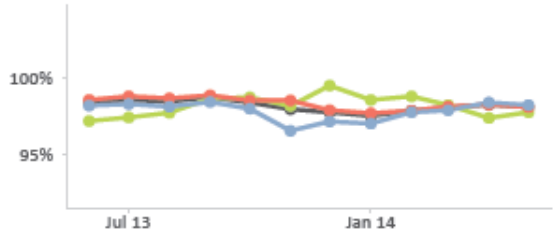
Date	Jun 13	Jul 13	Aug 13	Sep 13	Oct 13	Nov 13	Dec 13	Jan 14	Feb 14	Mar 14	Apr 14	May 14
Trust 53.5%	48.6%	52.9%	52.8%	50.9%	49.2%	49.5%	51.3%	52.8%	58.4%	56.7%	57.5%	58.7%
Spec. 59.3%	46.3%	53.4%	63.9%	58%	53.8%	61.5%	63.2%	54.5%	60.7%	65.4%	61.4%	69.8%
Surg. 55.1%	46.3%	51.6%	51.2%	47%	47.5%	46.8%	51.5%	57.5%	64.5%	61.5%	61.9%	65.4%
ULTC 52%	50.5%	54%	52.8%	52.9%	50.1%	50.3%	50.4%	49.6%	54.1%	52.9%	54.3%	53.4%

In Use when Checked



Date	Jun 13	Jul 13	Aug 13	Sep 13	Oct 13	Nov 13	Dec 13	Jan 14	Feb 14	Mar 14	Apr 14	May 14
Trust 100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Spec. 100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Surg. 100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
ULTC 100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Dressing Intact when Checked



Date	Jun 13	Jul 13	Aug 13	Sep 13	Oct 13	Nov 13	Dec 13	Jan 14	Feb 14	Mar 14	Apr 14	May 14
Trust 98.1%	98.4%	98.6%	98.5%	98.7%	98.4%	97.9%	97.8%	97.5%	97.9%	98%	98.3%	98.1%
Spec. 98.1%	97.2%	97.4%	97.7%	98.7%	98.7%	98.2%	99.5%	98.6%	98.8%	98.2%	97.4%	97.8%
Surg. 97.8%	98.2%	98.3%	98.1%	98.4%	98%	96.5%	97.1%	97%	97.8%	97.9%	98.4%	98.2%
ULTC 98.2%	98.6%	98.8%	98.7%	98.9%	98.5%	98.5%	97.9%	97.7%	97.9%	98.1%	98.3%	98.1%

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CATHETERS

Insertion

Compliance with Saving Lives Care Bundle on insertion

Comprises of the following criteria:

Before insertion, clean the urethral meatus with sterile normal saline.
Use a sterile lubricant.
Decontaminate hands before and after each patient contact.
If there is a risk of splashing with blood or body fluid, eye/face protection should be used.

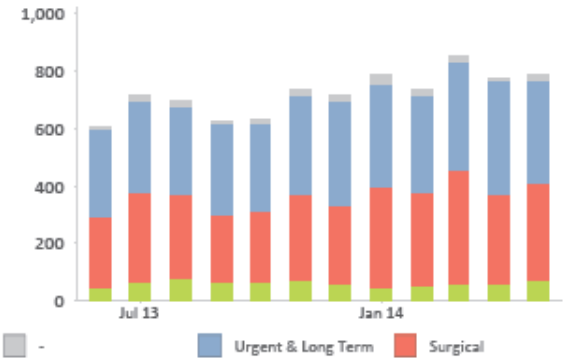
Continuing Care

Is the catheter still clinically required at time of checking?
Compliance with Saving Lives for ongoing care?

Adherance to the following:

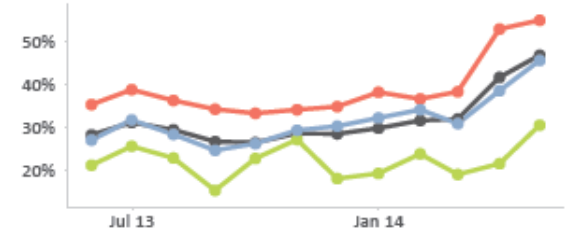
Decontaminate hands before and after each patient contact.
Clean catheter site regularly.
Perform sampling aseptically via the catheter port.
Drainage bag should be above the floor but below bladder level to prevent reflux or contamination.
Wear examination gloves to manipulate a catheter.

Compliance with SLCB on Insertion



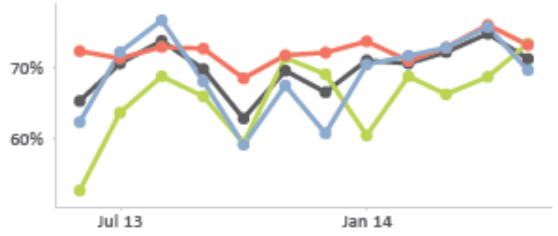
Date	Jun 13	Jul 13	Aug 13	Sep 13	Oct 13	Nov 13	Dec 13	Jan 14	Feb 14	Mar 14	Apr 14	May 14
Trust 7,662	608	717	698	626	630	734	718	787	733	850	776	788
Spec. 652	47	65	75	66	63	70	56	49	53	55	55	72
Surg. 3,223	246	312	296	233	247	299	276	346	322	398	316	340
ULTC 3,636	306	321	304	317	307	348	368	359	342	381	394	355

Patients Checked Daily



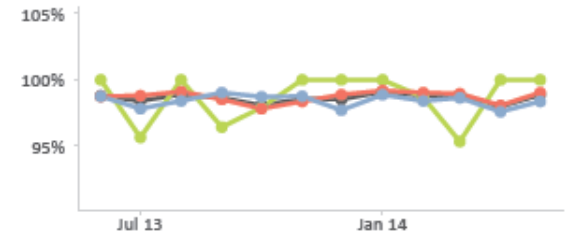
Date	Jun 13	Jul 13	Aug 13	Sep 13	Oct 13	Nov 13	Dec 13	Jan 14	Feb 14	Mar 14	Apr 14	May 14
Trust 31.4%	28%	31%	29.3%	26.5%	26.3%	28.4%	28.3%	29.6%	31.4%	31.8%	41.5%	46.6%
Spec. 22%	21%	25.5%	22.8%	15.2%	22.6%	27.1%	17.9%	19.2%	23.7%	18.9%	21.3%	30.3%
Surg. 31.1%	26.9%	31.5%	28.1%	24.5%	26%	29.1%	30.1%	32.1%	34%	30.7%	38.4%	45.5%
ULTC 38.4%	35.1%	38.6%	36.1%	34.1%	33.2%	33.9%	34.7%	38%	36.5%	38.1%	52.7%	54.8%

Compliance with SLCB on Insertion



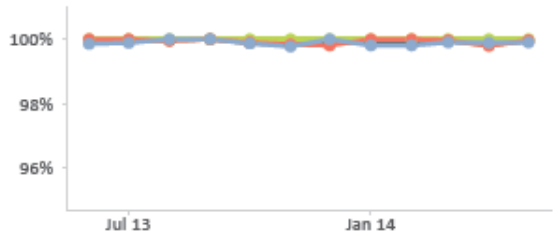
Date	Jun 13	Jul 13	Aug 13	Sep 13	Oct 13	Nov 13	Dec 13	Jan 14	Feb 14	Mar 14	Apr 14	May 14
Trust 69.6%	65.4%	70.6%	73.8%	69.9%	62.9%	69.6%	66.6%	71.1%	70.6%	72.2%	74.8%	71.3%
Spec. 65.1%	52.8%	63.7%	68.8%	66%	59.4%	71.4%	69.1%	60.5%	68.8%	66.3%	68.8%	73.5%
Surg. 68.8%	62.4%	72.2%	76.7%	68.1%	59.2%	67.5%	60.8%	70.5%	71.7%	72.9%	75.8%	69.7%
ULTC 71.9%	72.3%	71.3%	72.9%	72.7%	68.5%	71.8%	72.2%	73.7%	71%	72.8%	76.1%	73.2%

Compliance with SLCB when Checked



Date	Jun 13	Jul 13	Aug 13	Sep 13	Oct 13	Nov 13	Dec 13	Jan 14	Feb 14	Mar 14	Apr 14	May 14
Trust 98.6%	98.8%	98.4%	98.9%	98.6%	98.1%	98.6%	98.5%	99.1%	98.8%	98.8%	98%	98.9%
Spec. 98.7%	100%	95.7%	100%	96.4%	97.9%	100%	100%	100%	98.7%	95.3%	100%	100%
Surg. 98.3%	98.8%	97.8%	98.4%	99%	98.7%	98.8%	97.7%	98.9%	98.4%	98.6%	97.6%	98.4%
ULTC 98.7%	98.8%	98.8%	99.1%	98.5%	97.8%	98.4%	98.9%	99.2%	99%	99%	98.1%	99%

Clinically Required when Checked



Date	Jun 13	Jul 13	Aug 13	Sep 13	Oct 13	Nov 13	Dec 13	Jan 14	Feb 14	Mar 14	Apr 14	May 14
Trust 99.9%	100%	100%	100%	100%	99.9%	99.8%	99.9%	99.9%	99.9%	99.9%	99.8%	99.9%
Spec. 100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Surg. 99.9%	99.8%	99.9%	100%	100%	99.9%	99.8%	100%	99.8%	99.8%	99.9%	99.9%	99.9%
ULTC 99.9%	100%	100%	99.9%	100%	99.9%	99.8%	99.8%	100%	100%	100%	99.8%	100%

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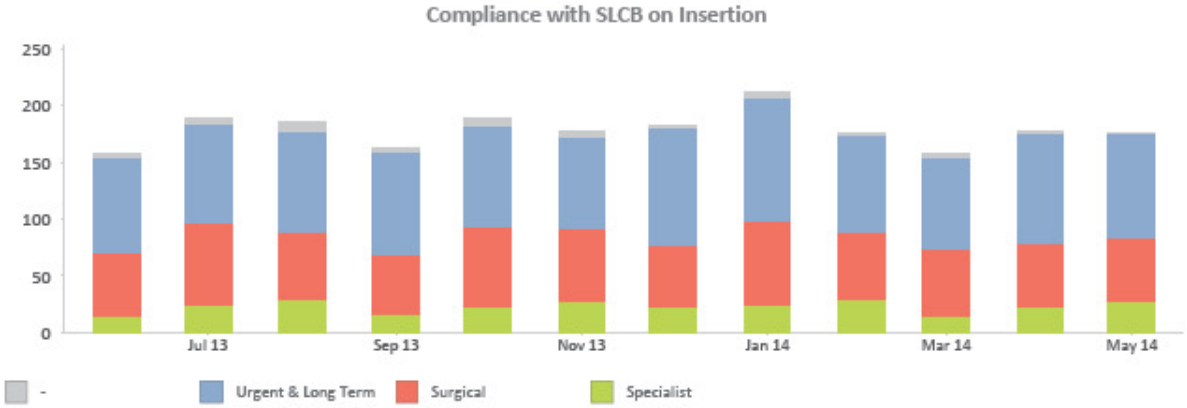
CENTRAL LINES

Insertion

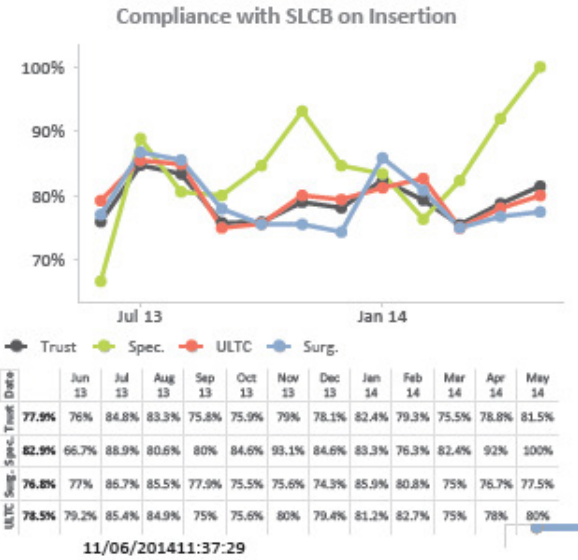
Compliance with Saving Lives when inserted?

Adherance to the following sets of criteria:

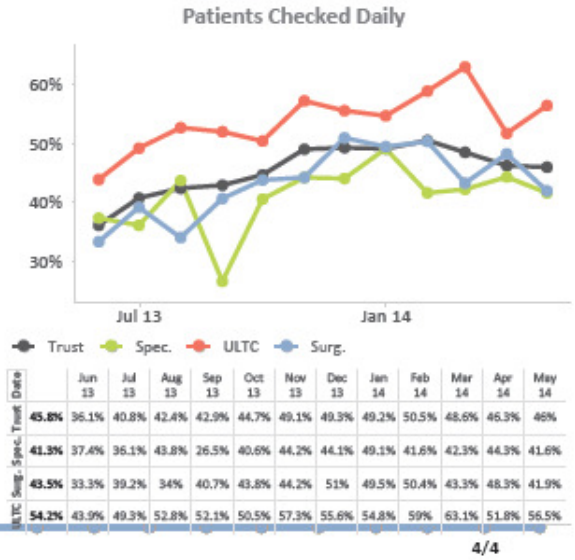
Decontaminate hands before and after each patient contact.
Clean catheter site regularly.
Perform sampling aseptically via the catheter port.
Decontaminate hands before and after each patient contact.
For insertion of invasive devices, gown, gloves and drapes as indicated should be used.
Skin preparation: Use 2% chlorehxifine gluconate in 70% isopropyl alcohol and allow to dry.
If patient has a sensitivity, use a single-patient use providone iodine.
Use a sterile, transparent, semi-permeable dressing to allow observation of insertion site.
Sharps containers should be available at point of use and should not be overfilled.
Do not disassemble needle and syringe.
Do not pass sharps from hand to hand.



Date		Jun 13	Jul 13	Aug 13	Sep 13	Oct 13	Nov 13	Dec 13	Jan 14	Feb 14	Mar 14	Apr 14	May 14
Trust	1,698	158	189	185	163	189	177	182	211	176	157	178	176
Spec.	243	14	24	29	16	22	27	22	25	29	14	23	28
Surg.	580	57	72	59	53	71	65	55	73	59	60	56	55
ULTC	845	84	88	90	90	90	80	104	108	86	81	96	92



Date		Jun 13	Jul 13	Aug 13	Sep 13	Oct 13	Nov 13	Dec 13	Jan 14	Feb 14	Mar 14	Apr 14	May 14
Trust	77.9%	76%	84.8%	83.3%	75.8%	75.9%	79%	78.1%	82.4%	79.3%	75.5%	78.8%	81.5%
Spec.	82.9%	66.7%	88.9%	80.6%	80%	84.6%	93.1%	84.6%	83.3%	76.3%	82.4%	92%	100%
Surg.	76.8%	77%	86.7%	85.5%	77.9%	75.5%	75.6%	74.3%	85.9%	80.8%	75%	76.7%	77.5%
ULTC	78.5%	79.2%	85.4%	84.9%	75%	75.6%	80%	79.4%	81.2%	82.7%	75%	78%	80%



Date		Jun 13	Jul 13	Aug 13	Sep 13	Oct 13	Nov 13	Dec 13	Jan 14	Feb 14	Mar 14	Apr 14	May 14
Trust	45.8%	36.1%	40.8%	42.4%	42.9%	44.7%	49.1%	49.3%	49.2%	50.5%	48.6%	46.3%	46%
Spec.	41.3%	37.4%	36.1%	43.8%	26.5%	40.6%	44.2%	44.1%	49.1%	41.6%	42.3%	44.3%	41.6%
Surg.	43.5%	33.3%	39.2%	34%	40.7%	43.8%	44.2%	51%	49.5%	50.4%	43.3%	48.3%	41.9%
ULTC	54.2%	43.9%	49.3%	52.8%	52.1%	50.5%	57.3%	55.6%	54.8%	59%	63.1%	51.8%	56.5%

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APPENDIX 7

Summary of visit to East Kent Hospitals University NHS Foundation Trust (EKHUFT) 8th January 2014: C.difficile.

Introduction

The visit followed a request from Dr James Nash, Trust Director of Infection Prevention and Control (DIPC), as the trust was not only breaching the *Clostridium difficile* (C. diff) target set for them for the year 2013/14 (target =29), they also had more cases of C. diff than they had had in the year 2102/13 and this was of great concern to the Trust Board, the DIPC and the Infection Control Team.

Attendees

Public Health England (PHE)
Dr John Paul – Lead Public Health Microbiologist, SE Region
Mrs Katie Allen – Health Protection Specialist Nurse – Kent Health Protection Team
Dr Addis Taye – Consultant in Communicable Disease Control - Kent Health Protection Team
EKHUFT
Dr James Nash - DIPC, Consultant Microbiologist
Mrs Sue Roberts – Deputy DIPC, Lead Nurse Infection Prevention and Control
Ms Debbie Weston – Deputy Lead Infection Prevention and Control Nurse

Discussion

The EKHUFT Infection Prevention and Control Team (ICT) highlighted all the measures that they had put in place to address the rising number of cases this year. They have ribotyped their cases and this identified a number being ribotype 15 but on further testing the VNTRs were different which indicates that this was not an outbreak or a cross – transmission problem.
The main issues or concerns discussed were that:
The ICT team have worked consistently on their antibiotic stewardship, however, it was identified by the Trust that they had a lack of antimicrobial pharmacists which has impacted on this work. They did identify through RCA's that they conducted on every case that patients were not being sampled early enough, and they are concerned about the level of cleaning that is being provided by the company employed.

Conclusion and recommendations

We felt that the trust infection prevention and control team (ICT) had implemented as many measures as they could to try to prevent cases of C diff. We have made the following recommendations below, which were items the ICT were aware of but items we believe need full Trust support to implement:

- The trust tries to secure more staff into the antimicrobial pharmacist role to support the medical staff on antimicrobial therapy.
- Staff on wards and departments follow the guidance on C diff and ensure that stool samples are taken in a more timely fashion.
- The Trust to the company providing the cleaning contract to maintain a high standard of cleanliness.