York Teaching Hospital NHS
NHS Foundation Trust

Director of Infection Prevention and Control

Annual Report

2013/14

Author: Vicki Parkin, Deputy Director Infection Prevention and Control
Owner: Dr A Turnbull, Director of Infection Prevention and Control

Governance: Presented to Board of Directors
Date of Report: October 2014

Contents

1. Introduction

This report covers the period from 1st April to 31 March 2014 and aims to provide assurance of effective infection prevention. York Teaching Hospital NHS Foundation Trust recognises that effective infection prevention practice, underpinned by the implementation and audit of evidence-based policies, guidelines and education are fundamental to the reduction of risk and patient harm from Healthcare Associated Infections (HCAI). Assurance of response by the Trust in relation to performance and compliance with key regulation and assurance standards (Appendix 1) is provided to the Board of Directors, our Commissioners, Monitor, Public Health England (PHE) and the Patient Safety Committee through quarterly and annual reports from the Director of Infection Prevention & Control (DIPC).

The Board of Directors, managers and staff must continue to develop and maintain the leadership and responsibility required for the provision of effective Infection Prevention, and ensure that it is incorporated and embedded into all organisational policies, clinical protocols and objectives in relation to patient safety and the regulatory requirements of the Health and Social Care Act 2008/Code of Practice of the Prevention and Control of HCAI guidance 2010 against which the CQC inspect compliance.

2. Executive Summary

2013/14 was a challenging year for the Trust in relation to Infection Prevention, not least due to challenging HCAI national reduction targets set by PHE, but also due to a 50% reduction in Infection Prevention Team capacity through long-term sickness. However, through re-prioritisation of objectives and cross site rotation, the Team has delivered its 2013/14 Annual Plan objectives and continued to maintain significant achievements in service delivery and improvement that have, with full Trust engagement, been successful in the containment of clusters and outbreaks of infection.

Early indications are of a reduction in Clostridium difficile infection (CDI) incidence during Q1 and Q2 of 2014/15 following output in excess of trajectory during 2013/14. However, we must maintain vigilance and continue to critically evaluate through the CDI Operational Group, Post Infection Review and the Antimicrobial Stewardship Group the value and impact of existing and revised reduction initiatives; use of Probiotics, monitoring of the use Proton Pump Inhibitor drugs and enhanced, high level environmental disinfection regimes.

Other HCAI incidence is reported in section 4 of this report

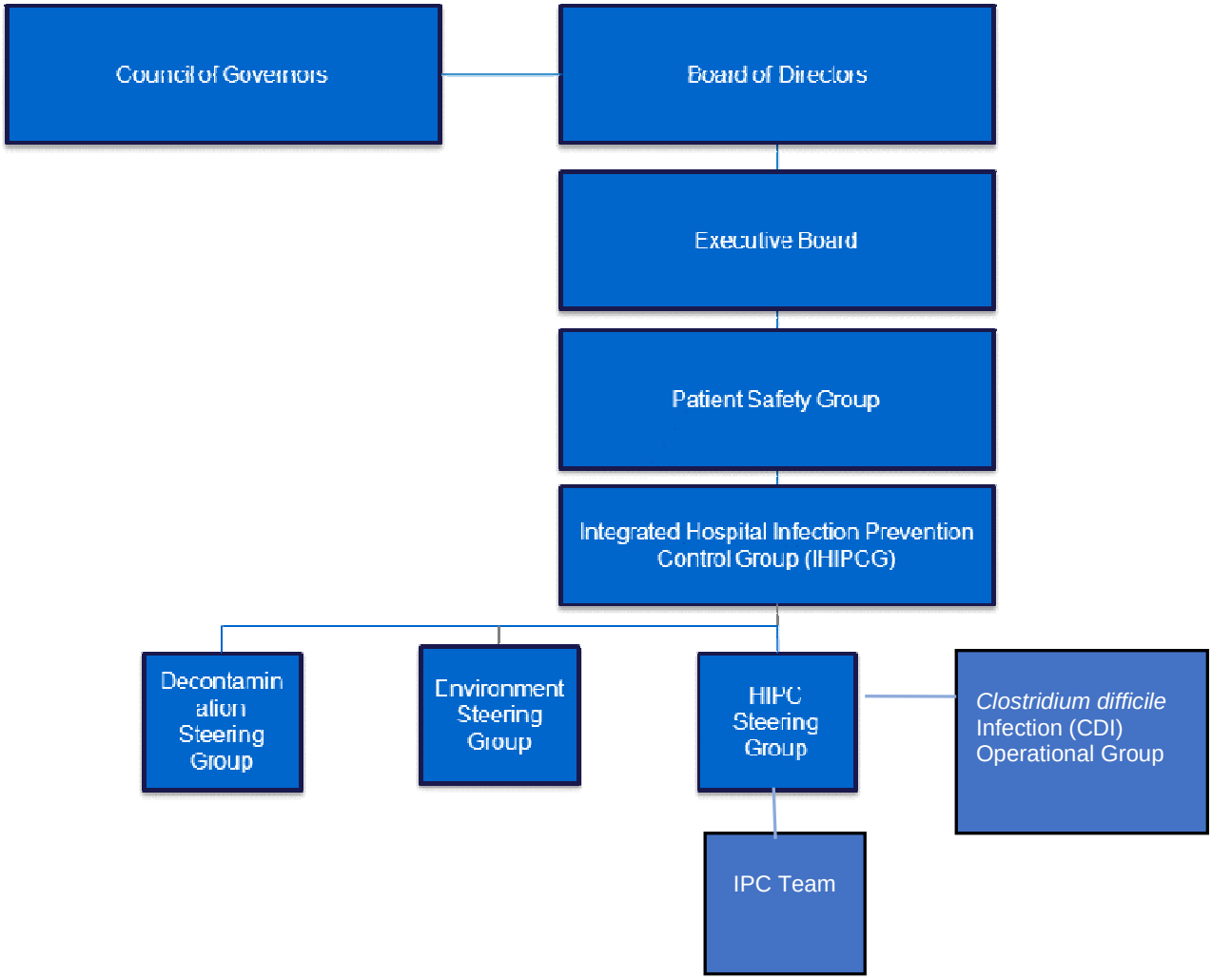
Audit and surveillance activity continues to monitor HCAI incidence and compliance with IP policy facilitating local ownership, benchmarking and a measure of compliance with local and national standards that drive service change and improvement.

Collaboration with external agencies with regard to hand hygiene has led to a re-modelling of the WHO Hand Hygiene Observational Audit Tool to ensure better understanding of and compliance with the key five key moments for effective hand hygiene.

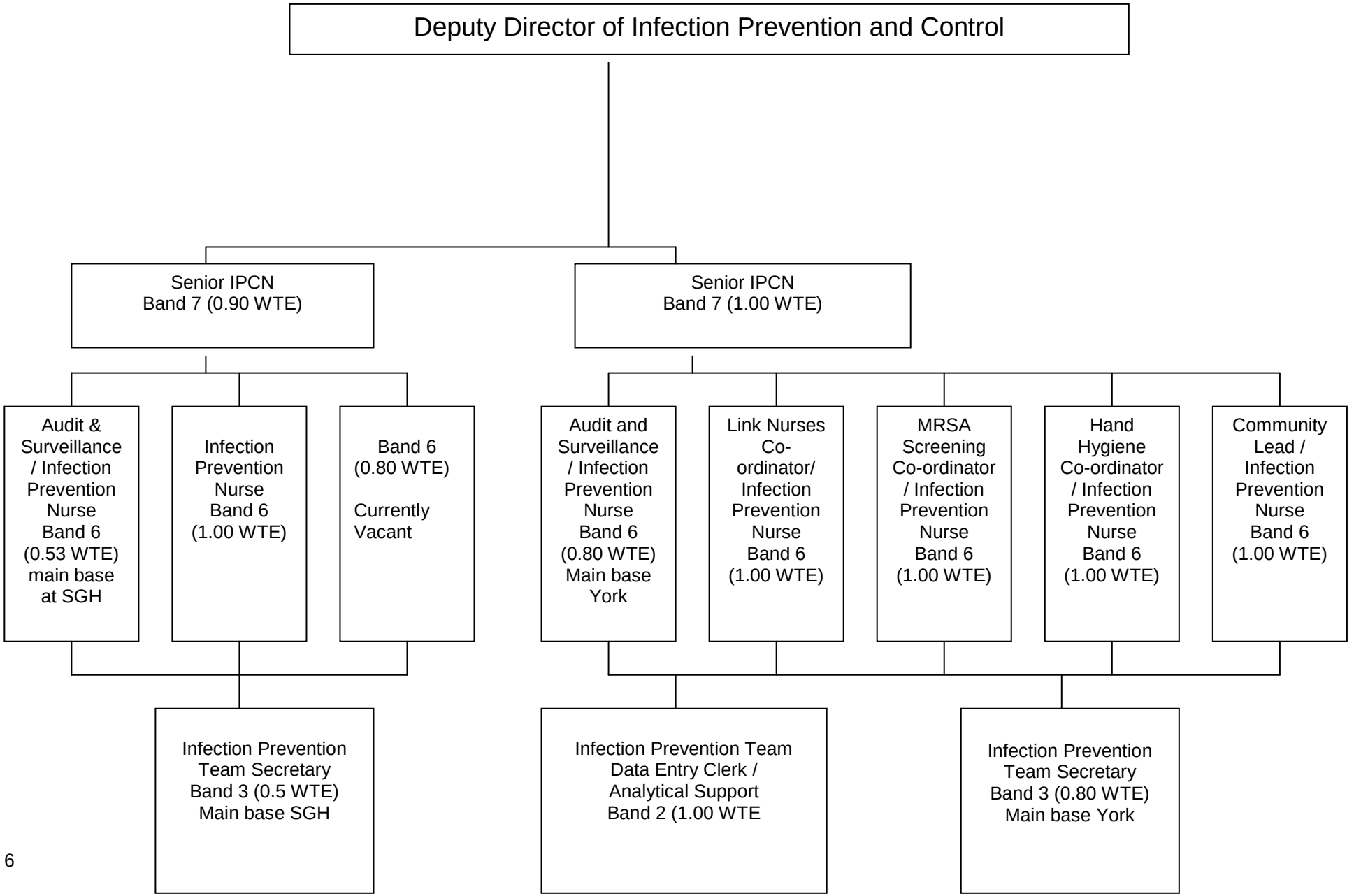
Working with the Trust Learning Hub through Corporate Learning and Development, the Infection Prevention Team have re-developed all statutory and mandatory educational resources into e-learning packages. Supported and enhanced by two Master Class events in relation to hand hygiene and Aseptic Non Touch Technique (ANTT), the Trust continues to support Infection Prevention in developing a knowledgeable and competent workforce.

The development of a pro-active, high level decontamination service using Hydrogen Peroxide Vapour (HPV) has been a key multidisciplinary initiative within the Trust CDI reduction strategy 2012/15. Endorsed by our partner organisations within the QUEST framework, early incidence trends post implementation demonstrates reduction in incidence.

3. Infection Prevention Governance Structure



Integrated Infection Prevention Team Structure 2013/14



4. HCAI Performance (App 2)

MRSA Bacteraemia – 2 cases occurred during the year, one on each acute site, against a national de minimus trajectory of 6. PIR was conducted.

MSSA Bacteraemia - 35 cases occurred against a local combined trajectory of 30. Post Infection Review identified invasive device use and mostly chronic, colonised wounds as contributory factors. Funding has been identified to appoint an invasive device specialist nurse to oversee the insertion and ongoing care of devices, standardise and make electronic documentation and the education of staff across the trust. The Trust has agreed to procure a nationally recognised Aseptic Non Touch Technique (ANTT) e-learning package which is a unique and internationally renowned best practice framework that supports health care workers to practice safely and efficiently when inserting and manipulating invasive devices. It aims to standardise and reduce variation in practice improving safety and reducing harm.

Clostridium difficile infection (CDI) – 67 cases occurred against a combined (York and Scarborough) national trajectory of 43; however this was without consideration of the impact of community hospital cases. PIR identified course length and indication as contributory factors. Introduction of monthly audit and feedback of compliance with Trust antimicrobial formulary has begun to foster Clinician engagement and ownership showing reduced incidence trends later in the year. The CDI Operational Group with the lead clinician for CDI continues to identify initiatives for improvement within the Trust CDI reduction strategy 2012/15 - available from the Infection Prevention Team (IPT).

Norovirus – At its peak from Dec to Feb 2013/14 Norovirus led to the closure of between 8-10 wards on each acute site compromising acute and elective activity. The locking of interlinking ward doors at York to prevent them being used as corridors, enhanced disinfection and media communication with the public and visitors sought to reduce incidence of this airborne infection with minimal impact. A detailed plan for reducing the impact on acute care in the future is being developed with key stakeholders within commissioning, intermediate and primary care.

Quarterly HCAI performance and assurance reports are submitted to the Board of Directors, Commissioners and the Quality and Safety Group.

5. Hand Hygiene

During February 2014 the Trust commissioned an external audit of hand hygiene compliance that showed inconsistency in local interpretation and application of the WHO 5 moments criteria for effective hand hygiene leading to the reporting of 100% compliance in all areas of the Trust without the expected variation for such a procedure. An improvement plan has been devised including:

- revision of the hand hygiene policy/ guidelines
- revision of the observation audit tool to ensure understanding and consistency.
- Trust wide staff education programme
- Public awareness stands at Trust open days
- Posters to promote easy access to hand wash facilities and inform visitors of the availability and location of hand wash facilities throughout the Trust

6. Audit and Surveillance

Audit and surveillance activity monitors performance against national and local IP standards and guidance enabling benchmarking and comparison. App4 outlines activity for the year.

The IP team commissioned the Internal Audit Dept to audit compliance on the Scarborough site with the newly integrated MRSA policy. Providing limited assurance, actions were developed and agreed to initiate improvements

7. Policies and Guidelines

All polices and guidelines are up to date and have been reviewed to reflect national/ local evidence and standards and are available to all staff via the IP intranet webpage and externally via the Trust internet site

8. Antimicrobial Stewardship

A detailed improvement plan has been put in place for antimicrobial prescribing in summary this includes the following improvement strategies

- Detailed audit and improvement work in poorer performing areas. This will involve multi-disciplinary team members.
- Inclusion of antimicrobial prescribing on induction programmes for medical staff.
- Initiating prescribing of VSL#3 probiotics in conjunction with antibiotics in high risk groups in order to reduce cases of antibiotic associated diarrhoea
- Escalation of audit results to directorate and corporate level within the Trust the Hospital Infection Prevention Control Group (HIPCG) and Medical Director. Poorly performing areas will be held to account.
- Smaller targeted audits are planned regarding ensuring antibiotics are stopped, de-escalated and reviewed in an effective manner.

The Trust is taking part in the European Antibiotic awareness day late 2014 in order to engage with staff and patients regarding safe and effective use of antibiotics. We hope to engage primary care and CCG colleagues in this important initiative.

9. Clean Safe Environment

Following the comprehensive cleaning review, an independent company (i-clean) carried out a full review of cleaning services and gave recommendations that were in line with the findings of the comprehensive cleaning review.
Work streams were identified to deliver the recommendations and to ensure services are delivered cost effectively whilst continuing to ensure that the Trust has effective and efficient cleaning arrangements in place throughout its property portfolio which give assurances to patients, Trust Board, commissioners and regulators that robust procedures are effectively established and remain a priority.

Facilities continue to work closely with Infection prevention and Matrons to ensure provision of a clean, safe environment is that of every individual and is embedded as routine best practice.

The Scarborough Environment Steering Group continues to be represented by a multidisciplinary team of nursing, infection prevention, estates, domestic, procurement and portering staff and has been key to initiating significant environmental improvements to enhancing patient and staff experience. A full report is available from the Assistant Head of Estates.

Patient Led Assessments of the Care Environment (PLACE) began on all in-patient sites from 26th February 2014 through to June. The National average for the cleanliness element of the assessment was 97.25%; the Trust average was 99.54%. This was an improvement on the 2012/13 Trust average of 97.46% demonstrating improved patient experience.

Following a CQC inspection that required action to be taken on the Scarborough Emergency Dept a business cases was submitted for additional cleaning hours. The unit now has a 24 hour cleaning service which enables the correct level of cleanliness to be maintained. Additional hours were also approved for the introduction of a disinfection (chlor clean) team at York which is in addition to the existing domestic team.

During December 2013 all domestic assistants received refresher training in relation to enhanced cleaning through a set of questions aimed at assessing knowledge and understanding of the cleaning and disinfection process when using chlor clean. This provdes assurance that training is effective and that correct procedures are being followed and will be repeated during 2014 to ensure competency and consistency.

A tender process was undertaken for an updated cleanliness monitoring system which gives real time cleanliness scores and has a fully integrated action planning process for ensuring effective actions and re-audit.
The trial of the new system on two wards at York Hospital is expected to commence in December 2014.

Refer to Appendix 5 for cleaning scores.

10. Decontamination

Daily chlorine disinfection of all wards in addition to Hydrogen Peroxide Vapour (HPV) disinfection of all areas where CDI occurred were implemented to reduce potential environmental reservoirs and the risk of further cases from this source. HPV decontamination was subsequently extended to all available areas regardless of infection. The IPT is represented on the Decontamination Steering Group that reports to the HIPCG.

11. Capital and Estates

The IPT have worked collaboratively throughout the year with Capital and Estates Departments to ensure infection prevention is designed into projects to create a safe and optimum environment:

- Theatre Upgrades Scarborough and Bridlington sites - Maternity, Ophthalmic, Orthopaedics.
- Endoscopy York site– upgrade and relocation.
- Radiology CT scanner upgrade York site.
- Surgical ward re build Scarborough site.

12. Patient Information

Patient information in relation to HCAI is available on the Trust internet and intranet sites. CDI information is distributed by IPN`s on diagnosis to all cases which is part of a North Yorkshire initiative aimed at informing GP`s of cases within their practice and improving antimicrobial prescribing through awareness of current or previous infection.

13. Education and Training

To increase uptake of training and improve access for all staff groups we have developed a set of e-learning packages. This comprises of a series of scenario based questions and rag rated answers. When a candidate responds, they are taken to a rationale of why their answer is correct (green) mostly correct (amber) or wrong (red) thus even for incorrect responses learning is taking place. We have recently been asked for permission by Corporate Learning and Development to share our particular training resource between other trusts in the region and also a hospital in Lancashire.

Link Workers:

Number of members
York- 65
Scarborough-50

2 monthly meetings have continued with average attendance of 15 people per meeting in York

The variation in attendance is due to the difficulty to release staff from clinical areas however clinical visits in particular on the Scarborough site have been undertaken as additional support to capture staff in their own areas

Topics covered

- Hand Hygiene (HH) compliance and HH facilities audit reports shared
- *C.difficile* case management using practical clinical scenarios
- Surgical site infections Saving Lives care bundles. Process of wound healing presented by Tissue Viability Nurse. Demonstration of Easywarm blanket
- Skin care and Hand Hygiene WHO 5moments framework presented Gojo (Trust supplier of HH products)
- Discussion of cannula audit results focussing on improving and changing practice
- Overview of MRSA policy and current changes
- Water safety discussed by Consultant Microbiologist
- Multi drug resistance awareness
- HCAI trajectory performance

Allied Health Professionals are to be invited to join the Link Worker network during 2014/15.

14. Conclusion and Recommendations

This report aims to provide assurance that the Trust is compliant with the Health and Social Care Act 2008 (Hygiene Code) regulatory requirement and standards as described in Appendix 1.

Over the period 2013/2014 we have had to adapt ever more to the changing nature of the organisation in terms of client base, activity and capacity. Our bed occupancy has increased, as have the numbers of complex procedures undertaken in the organisation. Our patients are more vulnerable requiring more medical intervention. Thus we have had to review acutely our protective measures and invest more in a proactive approach with reference to Infection Prevention to protect our patients. During this time we researched comprehensively the process of high level pro active environmental decontamination. We have reinforced good prescribing practice along with the proposal of introducing probiotics in conjunction with controlled antimicrobial use. We have changed our investigative process for HCAI to ensure that we can ascertain lessons learned and form action plans aimed at preventing/reducing harm and enhancing Patient Safety.

Our priorities for 2014/15 are outlined within the Annual Plan for that period available form IPT.

Appendix 1

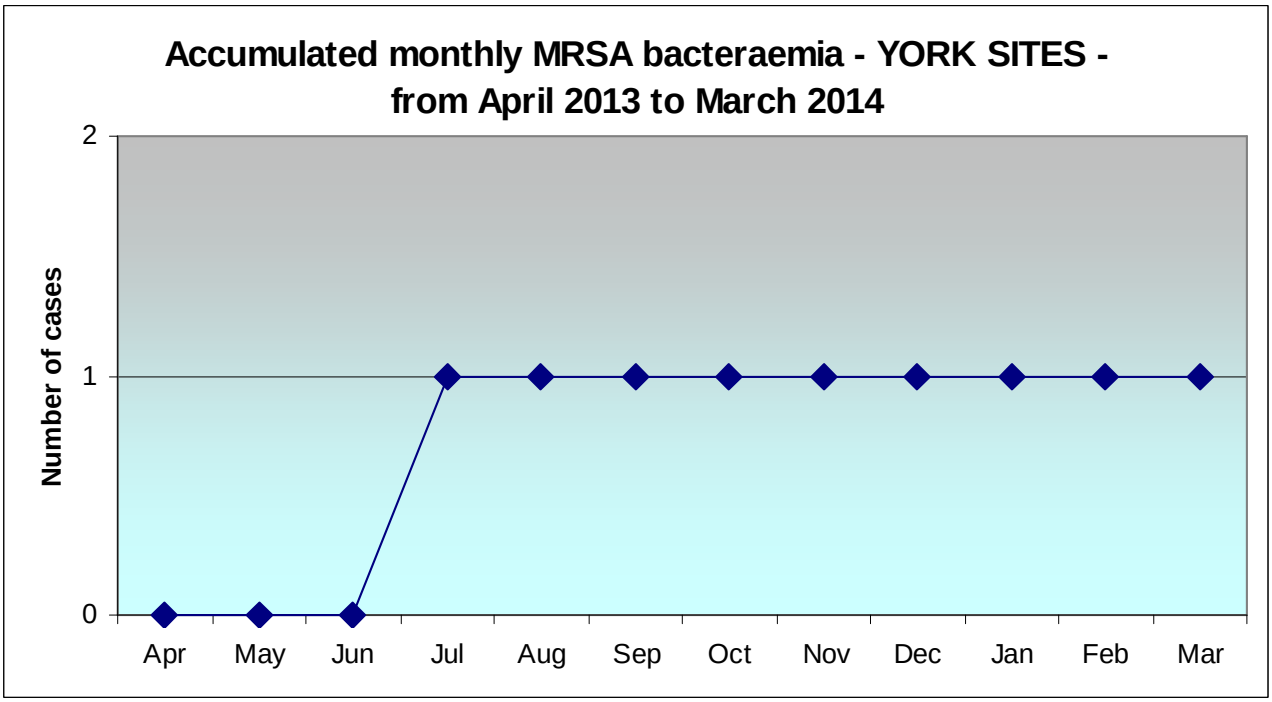
Key Regulation & Assurance Standards:

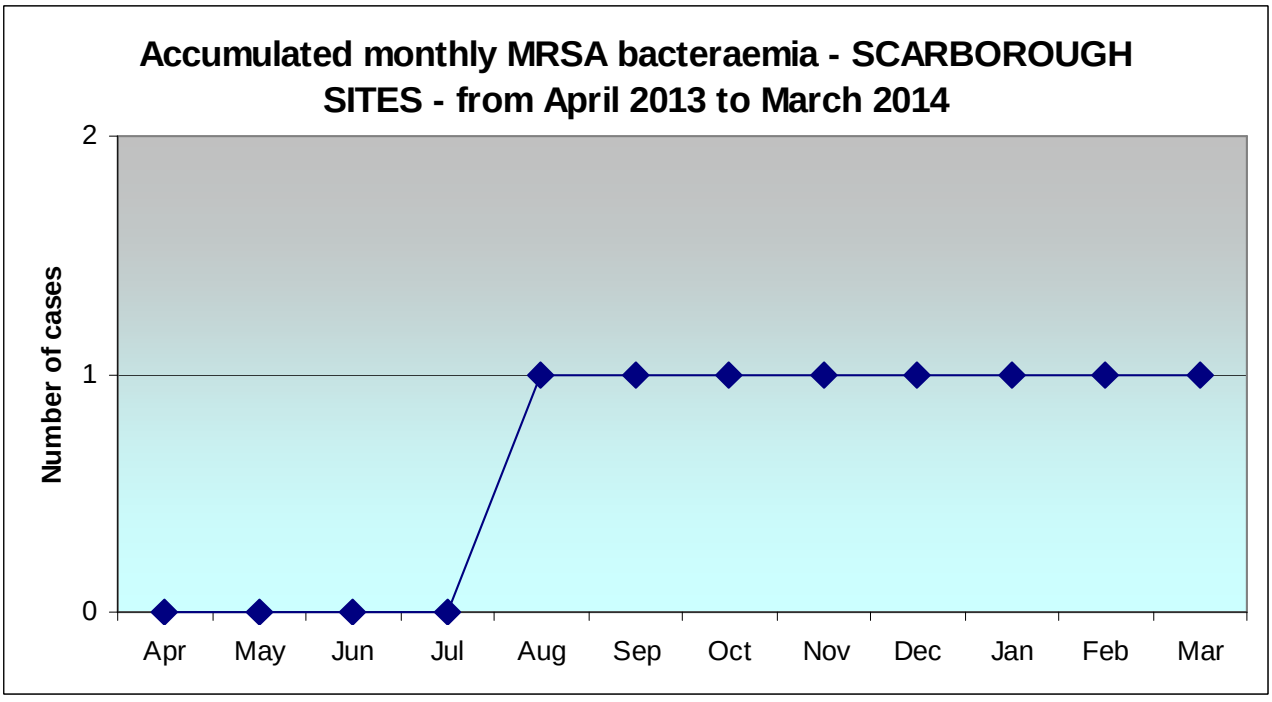
- The Health and Social Care Act 2009: Code of Practice for Health and Adult Social Care on the Prevention and Control of Infections and Related Guidance – Hygiene Code 2010 refer to Appendix 1.1 for compliance criteria
- NHS Outcomes Framework 2013/14. Domain 5
- NHSLA Risk Management Standards for Acute Trusts 2013/14. Standard 4 .6
- NICE Infection Prevention & Control Quality Standard 61. April 2014
- Monitor Requirements
- Care Quality Commission (CQC) – Essential Standards of Quality & Safety 2009, outcome 8
- National Evidence Based Guidelines for Preventing Healthcare Associated Infections in NHS Hospitals in England 2013 (EPIC 3)
- Advisory Committee on Antimicrobial Resistance and Healthcare Associated Infection (ARHAI) Surveillance Subgroup Report of HCAI Surveillance Priorities – Recommendations for HCAI
- Norovirus Guidance 2010 & Development Objective
- Trust Infection Prevention Risk Register
- Trust Infection Prevention Policies and Guidelines
- Directorate Assurance Framework Template

Appendix 2

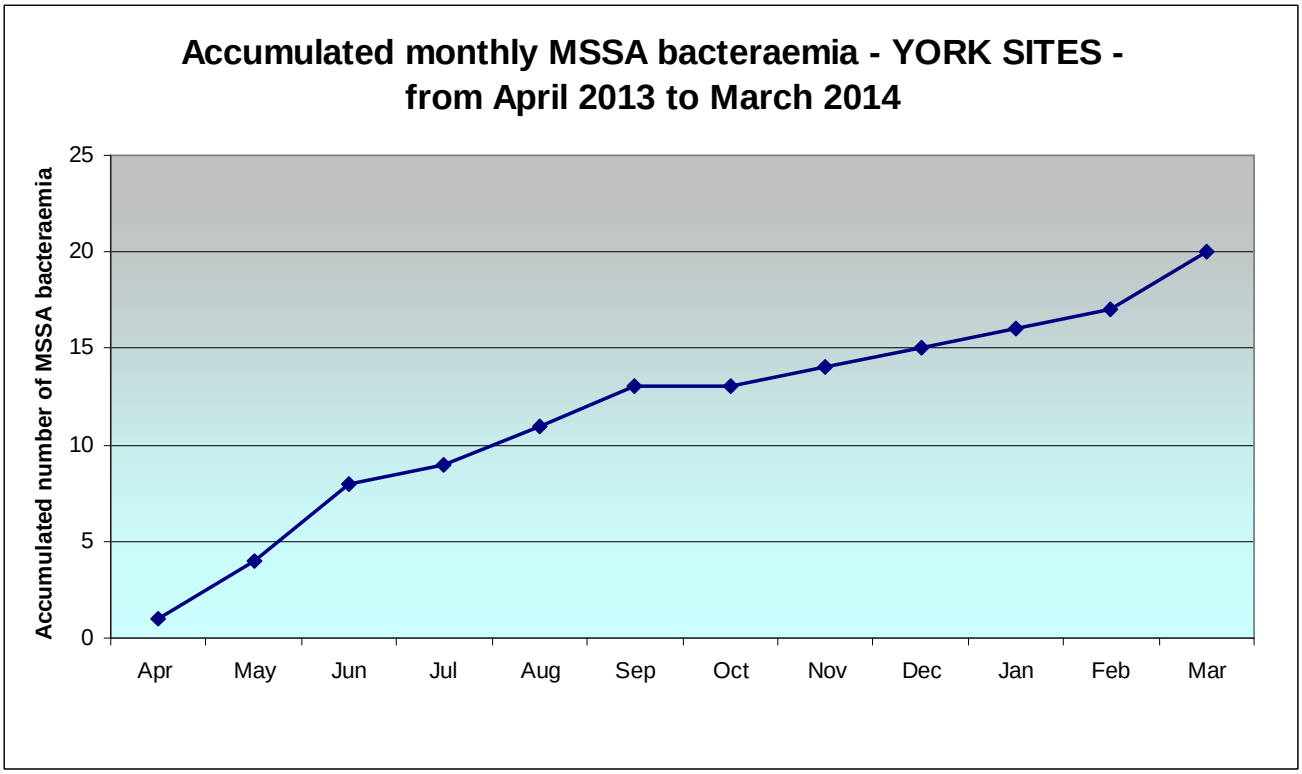
HCAI performance 2013 to 2014

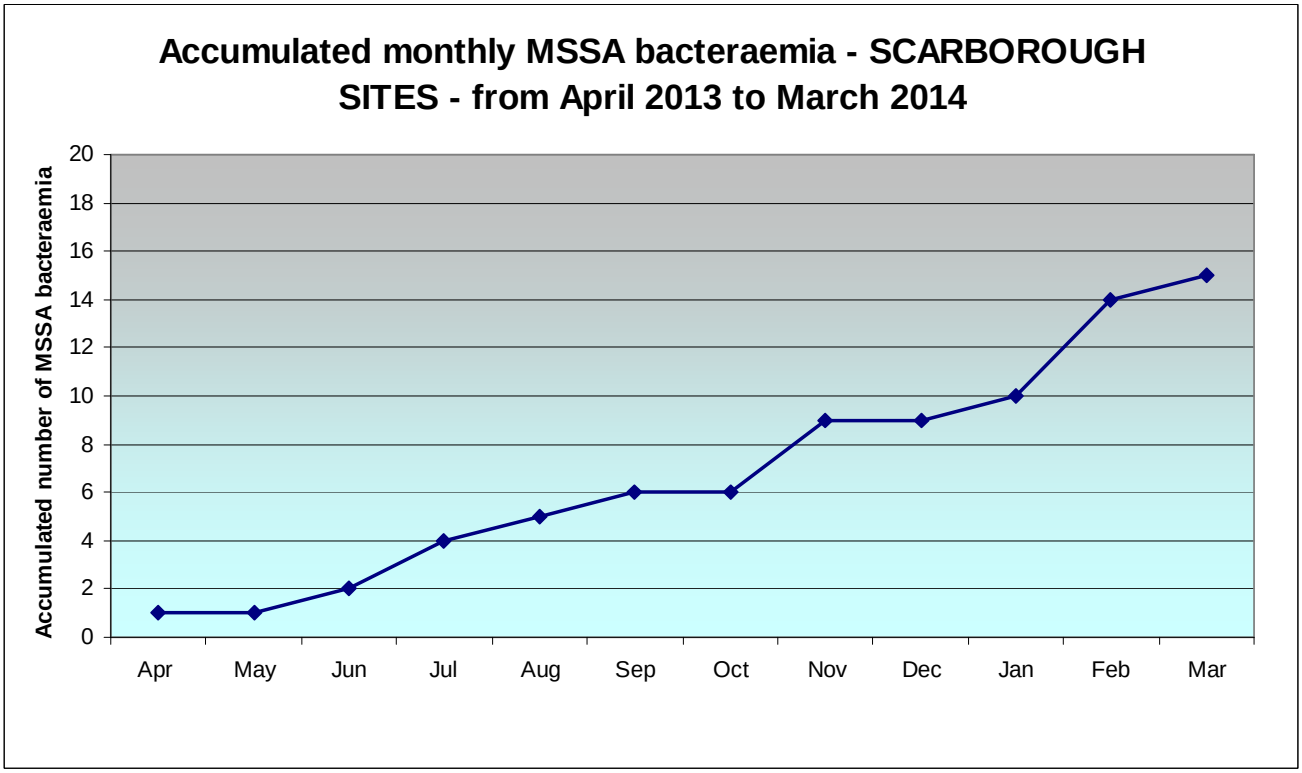
MRSA bacteraemia



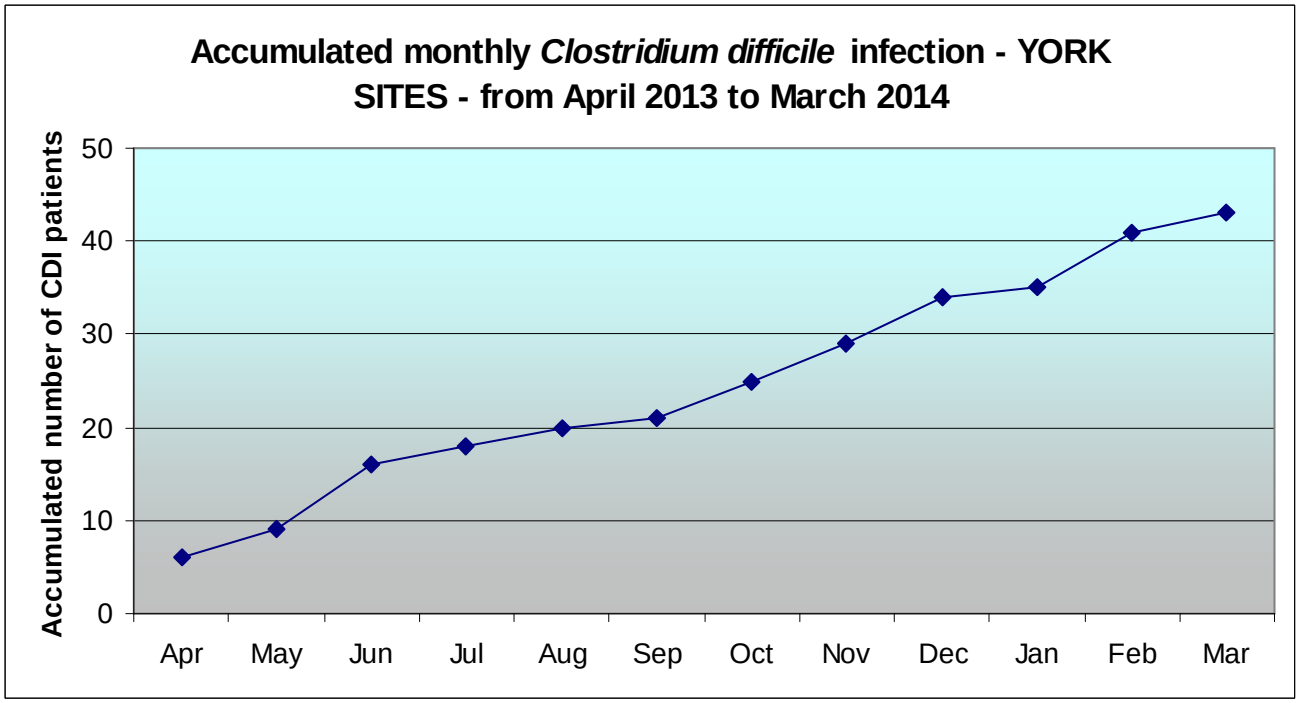


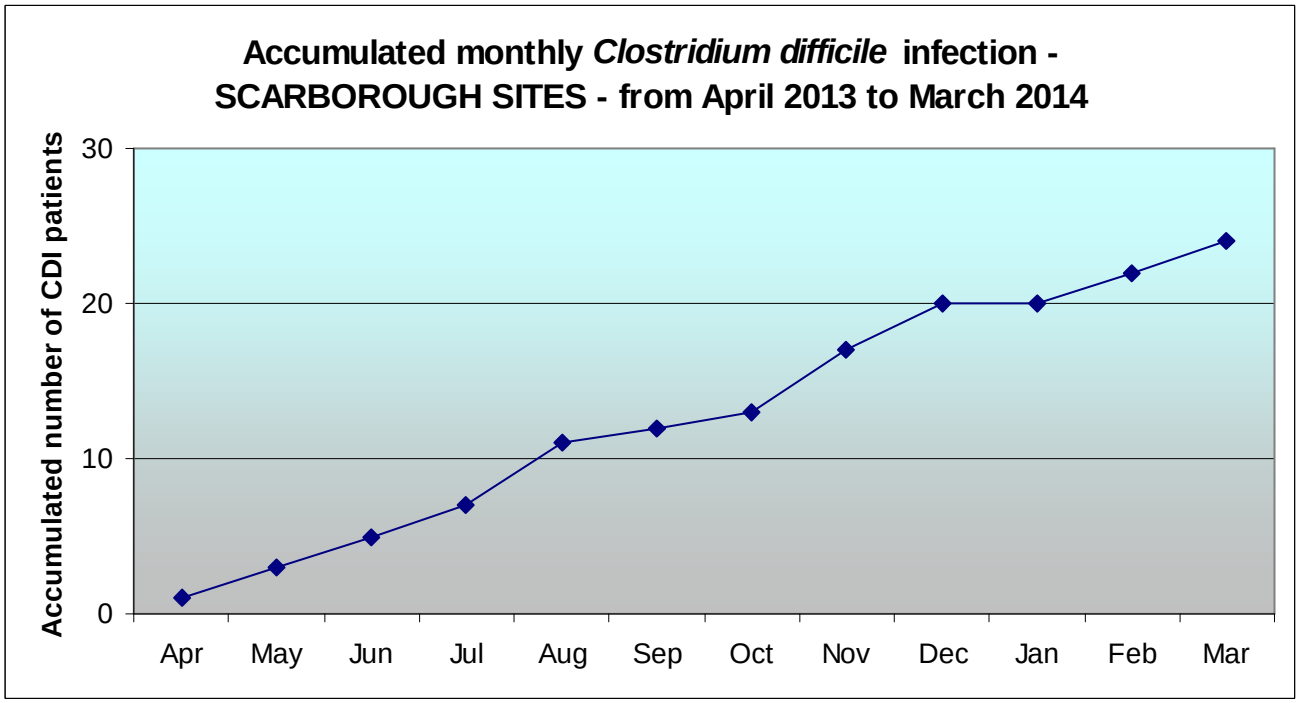
MSSA bacteraemia





Clostridium difficile toxin positive

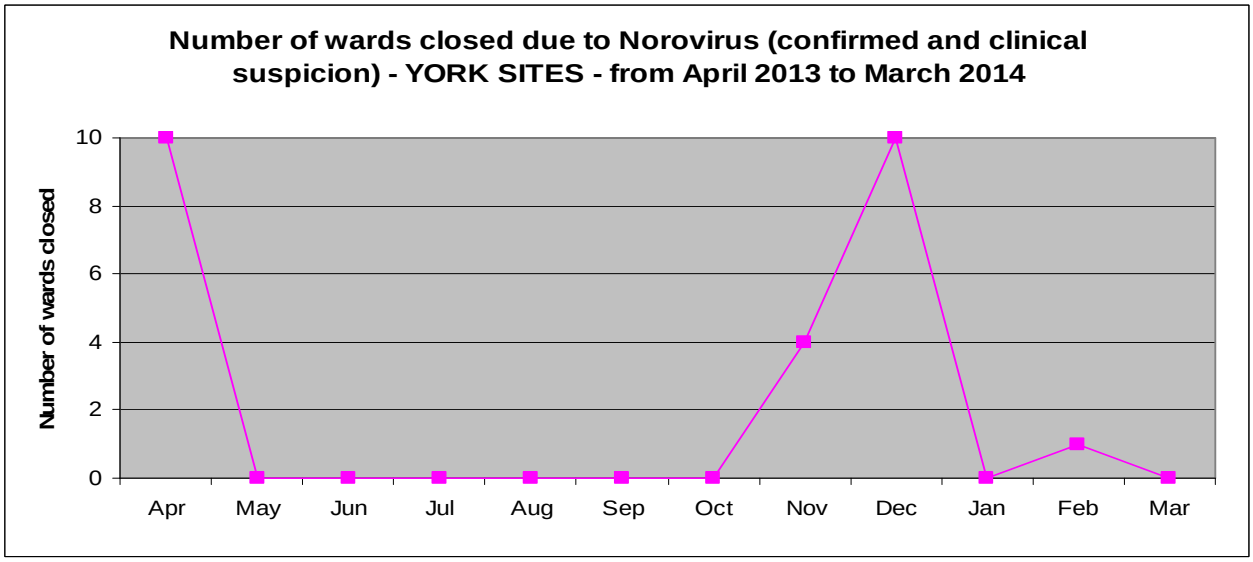


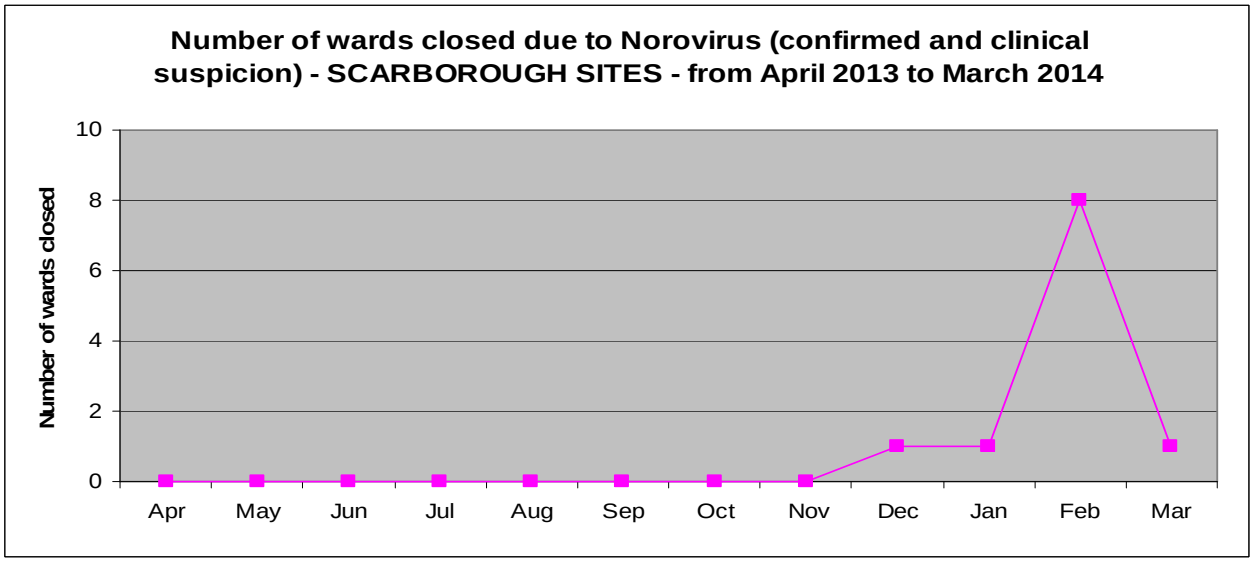


Appendix 3

Outbreaks and Clusters

Norovirus





Clostridium difficile 027 cluster Oak Ward - October to December 2013

- Six patients affected between first case on 15th October 2013 to last case 16th December 2013.
- Ward closed from 24th October 2013 until partial re-opening 08th November 2013 following high level disinfection of the whole ward and support to staff in the form education relating to effective case management

- Two further cases after partial re-opening led to re-closure to admissions and further disinfection of non clinical areas – corridor, sluice and nurses station. Ward fully opened 20th December 2013.

Vancomycin Resistant Enterococci (VRE)

Identified incidentally from wound cultures. As greater than 2 cases were identified on one ward a programme of whole ward screening was implemented for several weeks. The ward was closed between 7th March and 22nd March 2014 to facilitate high level of the whole unit. Guidelines are being revised.

Carbapenemase producing Enterobacteriaceae (CPE)

An imported case from Egypt not identified on admission. This pre empted the need for heightened awareness for CPE risk assessment and screening. One further case occurred that required whole ward screening until the index case was discharged. High level disinfection of the whole was deployed.

A robust risk assessment tool is now in place to identify patients with a history of a hospital stay outside the UK or within the UK in known high risk Trust. Guidelines have been produced.

Appendix 4 Surveillance and Audit plan – April 2013 to March 2014

Start date	SURVEILLANCE	Method	Comments and Outcome	Report date
On-going	Mandatory MRSA, MSSA and E Coli bacteraemia and *Clostridium difficile* reporting	Web-link case reporting as occurs	Reported by DH as one Trust from April 2013	On-going
On-going	Bacteraemia, MRSA, *Clostridium difficile* and ESBL incidence	Monthly reporting to Trust	Reported by ward, directorate and Trust on Trust shared drive. Aim to enhance assurance and awareness by improving access and reporting via Signal and Trust Performance, Q&S framework	On-going
April 2012	Deaths relating to *Clostridium difficile*	Ongoing data collection	To measure compliance among medical staff reporting presence of *Clostridium difficile* where there is a link to cause/ contributory factor of death, identifying areas of improvement through PIR process	On-going
April 2012	Readmissions relating to *Clostridium difficile*	Ongoing data collection	To report numbers of cases, monitor for increase and cause of relapse	On-going
2011	Clinical support visits	Work place IPN visit	IPN`s to work with ward staff to support and develop IP knowledge and compliance in clinical practice	On-going
November 2012 YORK ONLY	Readmissions with Surgical site infection	Ongoing data collection	To review methods available to allow regular data collection and reporting of patients readmitted within 30 days with surgical site infection identifying areas of improvement	September 2013
October 2012 SCARBOROUGH ONLY	Surgical site infection surveillance following Caesarean Section	HPA SSISS protocol	6 month data collection of all cases with 30 day follow up after surgery	October 2012

Start date	AUDIT	Method	Comments and Outcome	Completed
On-going	Clinical environment audits	Monthly audits by matron/ clinical lead	Rolled out all sites January 2013	On-going
On-going	Hand hygiene compliance audits	Trust wide monthly audits in each clinical area	To monitor compliance with the WHO 5 moments for hand hygiene standard	On-going
On-going	Saving Lives (SL) High Impact Interventions (now made obsolete by DH)	DH tools Trust wide monthly audits in each clinical area	July 2013 – replaced with more effective measures agreed with project Improvement Director maintaining SL methodology where appropriate	July 2013
Annual	Hand hygiene and sharps facilities audit	Annual audit of hand hygiene and sharps facilities in all clinical areas	Annual audit to establish policy compliance	May 2013
April 2013	Catheter related Urinary Tract Infection audit of documentation	Point prevalence	Annual review To link with Safety Thermometer data published on Signal	June 2013
April 2013	Central Venous Catheter audit of infection rates and documentation	Point prevalence	Annual review Matching Michigan in place in Scarborough critical care ICU staff monitor in York	June 2013
July 2013	TPN monitoring	Case review and follow up	To assist surgical teams with data gathering for TPN related line infections identifying risk and areas of improvement	Review December 2013
July 2013	Cannula documentation review	Random checks	To review paper copy cannula documentation prior to introduction of cannula e-records	September 2013

Appendix 5 Cleanliness Audit Results April 2013 to March 2014

York	Target	April		May		June		July		August		September		October		November		December		January		February		March		Annual %	
Very high	98	98	►	98	►	97	▼	97	►	97	►	97	►	98	▲	97	►	97	►	97	►	96	▼	97	▲	97	
High	95	93	▼	93	►	92	▼	92	►	92	►	94	▲	94	►	94	►	93	▼	92	▼	92	►	93	▲	92	
Significant	85	92	▲	92	►	92	►	87	▼	91	▲	89	▼	91	▲	83	▼	82	▼	90	▲	87	▼	86	▼	89	
Low	75	88	►	88	►	83	▼	96	▲	92	▼	80	▼	86	▲	76	▼	79	▲		▼	87	▲	94	▲	86	
Bathrooms & WC's	95	96	▲	96	►	95	▼	96	▲	96	►	96	►	96	►	96	►	96	►	95	▼	94	▼	97	▲		
Total audits carried out		149		169		165		163		161		160		156		139		123		146		142		146		1819	
Audits attended by nursing		12		12		6		13		11		13		12		12		11		18		10		10			

Scarborough	Target	April		May		June		July		August		September		October		November		December		January		February		March		Annual %	
Very high	98	98	►	99	▲	98	▼	97	▼	97	►	96	▼	97	▲	98	►	97	►	97	►	97	►	97	►	97	
High	95	91	▼	96	▲	96	►	96	►	94	▼	94	►	93	▼	95	►	95	►	95	►	92	▼	95	▲	94	
Significant	85	90	▲	88	▼	73	▼	92	▲	92	►	91	▼	93	▲	92	▼	91	▼	94	▲	92	▼	88	▼	90	
Low	75	83	►		▼	71	▲	81	▲	86	▲		▼	91	▲	78	▼		▼	74	▲		▼	77	▲	80	
Bathrooms & WC's	95	94	▲	98	▲	93	▼	95	▲	95	►	97	▲	96	▼	94	▼	96	▲	97	▲	94	▼	91	▼		
Total audits carried out		39		27		34		40		33		44		38		41		31		34		31		33		425	
Audits attended by nursing		7		12		4		7		5		13		3		3		1		2		3		1			

Bridlington	Target	April		May		June		July		August		September		October		November		December		January		February		March		Annual %	
Very high	98	97	▼	97	►	96	▼	97	▲	94	▼	96	▲	98	▲	96	▼	98	▲	98	►	97	▼	98	▲	97	
High	95	96	▼	96	►	96	►	94	▼	94	►	94	►	95	▲	96	▲	94	►	96	▲	95	▼	97	▲	95	
Significant	85	95	▼	98	▲	99	►	95	▼	96	►		►	95	►	83	▼		►	86	►	97	▲	92	▼	94	
Low	75		▲	87	▲	91	►	92	▲		►		►		►		►		►	96	►	82	▼	98	▲	91	
Bathrooms & WC's	95	96	▼	96	►	92	▼	94	▲	84	►	90	▲	92	▲	93	▲	96	▲	98	▲	94	▼	95	▲		
Total audits carried out		18		23		14		25		16		13		21		19		11		22		16		17		215	
Audits attended by nursing		0		5		2		0		1		0		0		4		2		0		0		2			

Malton	Target	April		May		June		July		August		September		October		November		December		January		February		March		Annual %
Very high	98		►		►		►		►		►		►		►		►		►		►		►		►	
High	95	97	▼	97	►	99	▲	98	▼	99	▲	98	▼	99	▲	99	►	95	▼	97	▲	95	▼	97	▲	98
Significant	85	97	▲	99	▲		▼	98	▲	99	▲		▼	97	▲	97	►		▼	98	▲	99	▲		▼	98
Low	75	73	►		▼		►		►		►	97	▲	60	▼		▼		►		►		►		►	77
Bathrooms & WC's	95		▲	99	▲	100	▲	99	▼	100	▲	99	▼	99	►	99	►	98	▼	99	▲	97	▼	100	▲	
Total audits carried out		12		8		4		8		10		6		8		8		4		9		8		4		89
Audits attended by nursing		0		0		0		0		0		0		0		0		0		1		0		0		

Whitby	Target	April		May		June		July		August		September		October		November		December		January		February		March		Annual %
Very high	98		▼		►		►		►		►		►		►		►		►		►		►		►	
High	95	97	▼	98	▲	97	▼	97	►	96	►	97	▲	98	▲	97	▼	97	►	97	►	97	►	97	►	97
Significant	85	96	▼		▼	96	►	97	▲	96	►	96	►	96	►	96	►	97	►	97	►	95	▼		▼	96
Low	75	94	▲	98	▲	98	►	99	▲	98	►		►	98	►	97	►	100	►	100	►	98	▼	100	▲	98
Bathrooms & WC's	95		▼	97	▲	97	►	98	▲	99	►	97	▼	98	▲	99	▲	98	▼	99	▲	99	►	99	►	
Total audits carried out		10		9		9		12		9		9		10		9		8		9		12		7		113
Audits attended by nursing		0		0		0		0		0		0		0		0		0		0		0		0		

SELBY	Target	April		May		June		July		August		September		October		November		December		January		February		March		Annual %
Very high	98	99	▼	99	►	98	▼	99	▲	99	►	99	►	99	►	99	►	100	▲	99	▼	99	►	99	►	99
High	95	99	▼	99	►	97	▼	98	▲	98	►	99	▲	100	▲	98	▼	99	▲	99	►	99	►	99	►	97
Significant	85	99	▼	99	►		▼		►		►	94	►		▼	98	▲	99	▼	99	►		▼	97	▲	92
Low	75		▲		►		►		►		►		►		►		►		►		►		►		►	
Bathrooms & WC's	95	99	▼	99	►	99	►	99	►	99	►	98	▼	100	▲	98	▼	100	▲	99	▼	99	►	99	►	
Total audits carried out		13		10		9		12		9		11		8		11		8		14		9		11		125
Audits attended by nursing																										
Audits attended by nursing		0		0		0		0		0		0		0		0		0		0		0		0		

No score in this risk