

INFECTION PREVENTION AND CONTROL

ANNUAL REPORT 2009/10



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Executive Summary

Infection prevention and control is a priority at Bedford Hospital NHS Trust and our aim is that **no avoidable infections** occur. This year was very successful for infection prevention and control at Bedford Hospital NHS Trust.

We achieved a **50% reduction** in MRSA bacteraemia compared to 2008/9, finishing the year below our set ceiling of six cases. Of the five cases we recorded, two were apportioned to the hospital and the remaining three were pre-48 hour cases (community cases). This made us one of the top performers for hospital-apportioned MRSA bacteraemia in England.

We also achieved a **20% reduction** in our *Clostridium difficile* cases compared to the previous year, finishing the year below our set ceiling. We recognise that we can still improve on this and reduce our incidence still lower.

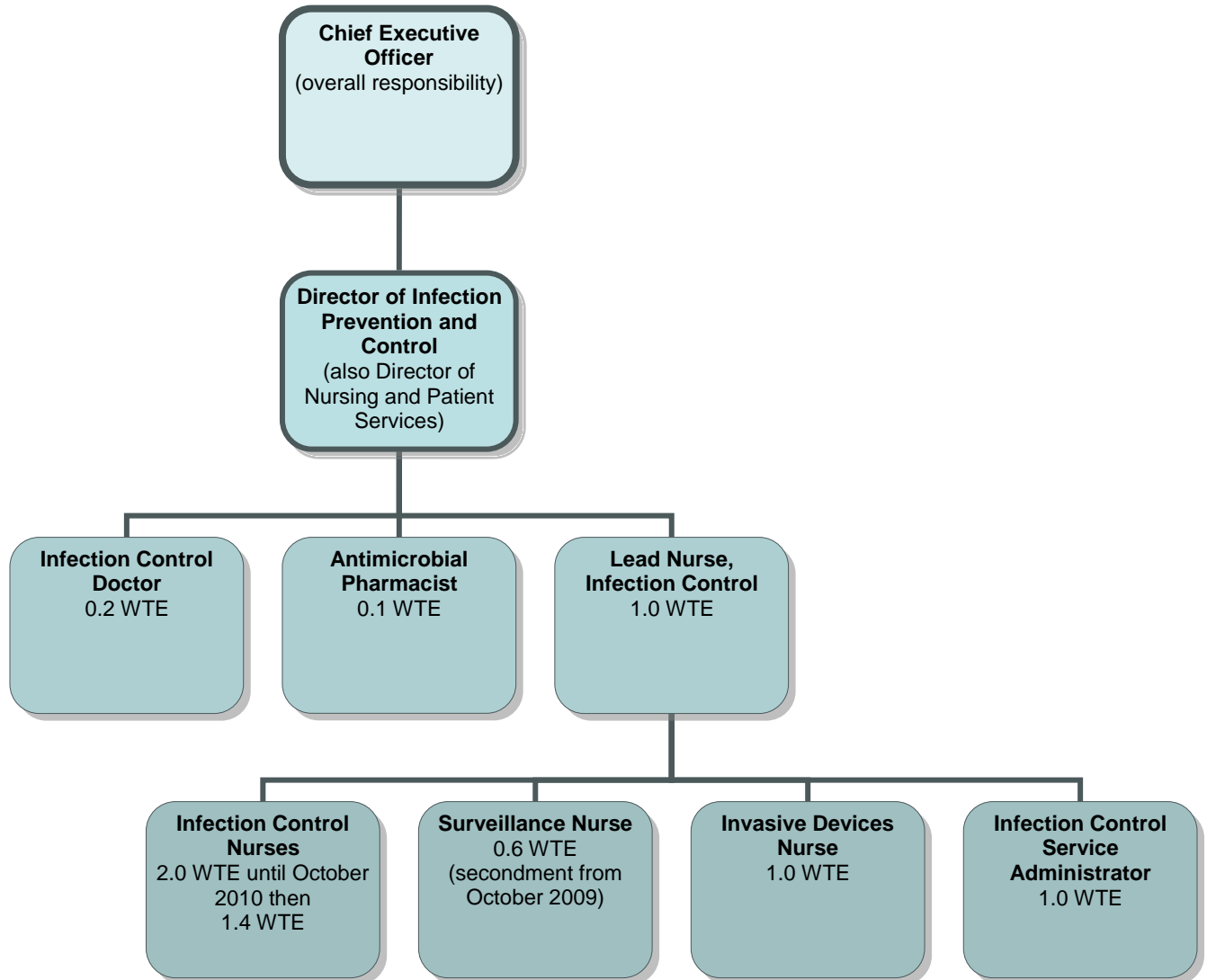
Our hand hygiene compliance rates continued to improve to an average of **97%**, with **3%** overall improvement during the year. We maintained our “zero tolerance to non-compliance” approach.

We continued to invest in improving the environment, with the installation of additional hand hygiene basins, further refurbishment of sluice rooms and a “Healing Hands” art project to enhance the public corridors. We installed additional Infection Control Information Stations in the outpatient waiting areas.

We commenced construction of a new sterile services department, which will provide state-of-the-art decontamination services for the hospital.

Infection Prevention and Control Arrangements and Budget Allocation

The Infection Prevention and Control Team are currently arranged as follows:



The budget allocation for 2009/10 covered the salaries of the nurses and administrator, as well as a small stationery budget.

Hospital Infection Prevention and Control Committee

The DIPC chairs the Hospital Infection Prevention and Control Committee and reports through the Executive Management Group to the Trust Board. The DIPC also submits a monthly report directly to the Board.

The HIPCC meets six times a year and has representation from across the Trust.

Cost and Savings of Healthcare Associated Infection

The financial burden imposed on the NHS by HCAI is complex to calculate and multi-factorial. This is not a unique situation; non-UK countries also report difficulty in estimating the cost of HCAI.

The Department of Health (DoH) published an “HCAI Productivity Tool” (Department of Health, 2006). This tool allows Trusts to estimate the current financial and operational costs directly attributable to MRSA bacteraemias and healthcare-associated infection more widely. It also estimates the number of additional bed days attributable to healthcare associated infection. This is a mathematical model that makes assumptions about the cost attributable to HCAI, based on various published sources. Actual MRSA bacteraemia numbers are shown for 2003/4 – 2009/10. It is important to note that this tool is for guidance only and is a general estimate.

	2004/05	2005/06	2006/07	2007/08	2008/9	2009/10
Number of MRSA Bacteraemias	9	32	27	16	10	5
Excess Cost- MRSA	£38,544	£137,045	£115,632	£68,523	£42,827	£21,413
Additional Bed Days- MRSA bacteraemia	102	362	305	181	113	57
All HCAIs	374	1,331	1,123	665	416	208
Excess Cost- All HCAI	£1,602,880	£5,699,130	£4,808,641	£2,849,565	£1,780,978	£890,489
Additional Bed Days- All HCAI	4,229	15,037	12,688	7,519	4,699	2,350

Some of the assumptions made are as follows:

- As the total number of HCAI in each Trust is unknown, the tool uses an estimate of 300,000 as the total number of HCAI in England annually, as estimated by the National Audit Office.
- It is assumed that the HCAI are distributed across Trusts in proportion to the Trust level distribution of MRSA bacteraemias. Therefore, if a Trust accounts for 1% of all MRSA bacteraemias in England, it is assumed that it will also account for 1% of total HCAI.
- The tool presents two scenarios. The first scenario looks only at MRSA bacteraemias and assesses the cost and bed days associated with these bacteraemias.
- In the second scenario, *all* HCAs are estimated on the basis that, if MRSA bacteraemias are reduced, all HCAI will be reduced in proportion. This is a fairly strong assumption, although it is logical to state that many policies that influence MRSA will also reduce other HCAI.
- Each HCAI is assumed to impose an additional hospital cost of £4,300.
- Each HCAI is assumed to increase length of stay by 11.3 days.

There is no comparison in this tool against the cost of a prevention programme, and indeed, there is little literature to help to explore this. One French case-control study in a medical ICU (Chaix *et al*, 1999) estimated that the mean attributable cost associated with MRSA infection was \$9275 (£5032) and the total cost of an MRSA control programme ranged between \$340 (£184) and \$1480 (£803) per patient. This, and similar studies, demonstrate that prevention is more cost-effective than treatment, although robust cost/benefit analyses are lacking.

Infection Prevention and Control Programme

The infection prevention and control programme for 2009/10 was delivered with ongoing items carried over to the programme for 2010/11. Issues for focus for next year's programme include:

- Review of surgical site infection surveillance programme
- Update of all public information
- Launch of Aseptic Non-Touch Technique
- Revision of a bed-management strategy

The programme for 2010/11 is shown in appendix one. The Trust Board approved this in May 2010.

Audit Activity

The following audits were undertaken:

- Ward/Department Environmental audits
- Patient equipment audits
- Antibiotic prescribing audits
- Sharps audit
- Commode audit
- Mattress audit
- Saving Lives High Impact interventional audits
- Hand hygiene observational audits
- Orthopaedic surgical site infection audit
- MRSA screening audits
- “Persistent Increased Incidence (PII)” audits for any ward with two or more *Clostridium difficile* cases within twenty-eight days

Surveillance of Alert Organisms and Conditions

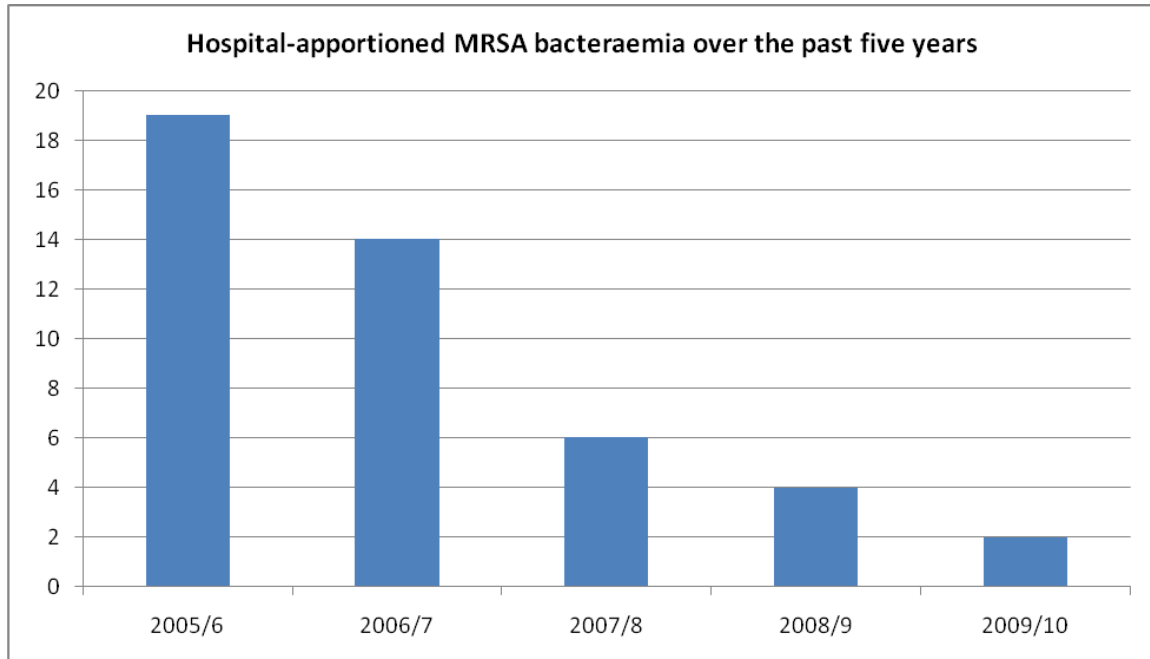
MRSA bacteraemia

MRSA bacteraemia has significant associated morbidity and mortality and is an important patient safety issue. A bacteraemia is defined as the presence of bacteria in the blood.

Bacteraemias may arise in the hospital or detected when the patient is admitted. Any MRSA positive bacteraemia processed in the hospital laboratory is reportable. Since its introduction in 2003/4, the reduction target is a health economy target although reported as Bedford Hospital NHS Trust. From April 1st 2010, the reduction targets for MRSA bacteraemia will be split between the hospital and community trusts, and therefore patients arriving at the hospital with MRSA bacteraemia will no longer be counted against our performance.

Performance on MRSA bacteraemia reduction was **one below the reduction target** (end of year = 5 bacteraemias against a ceiling of 6). Of the five cases, three specimens were taken on admission to hospital, that is, the onset was in the community.

The most revealing analysis of performance is comparing the trend of MRSA bacteraemias at our own hospital:



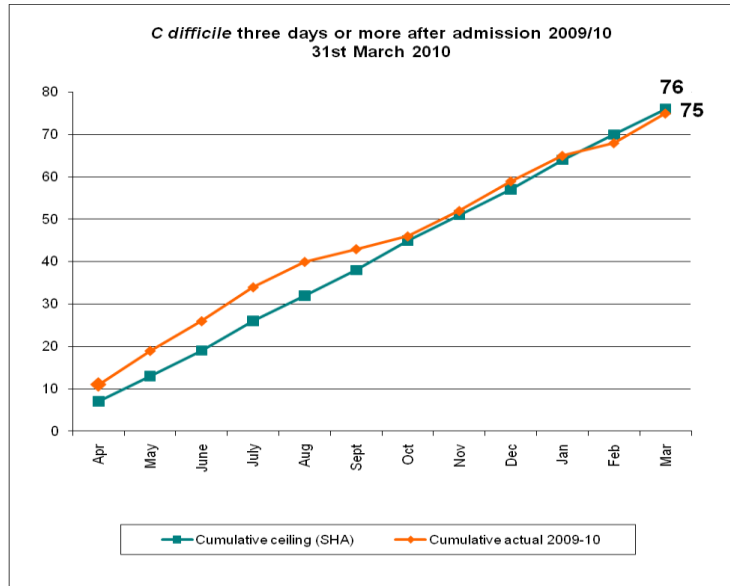
We have reduced our hospital-apportioned MRSA bacteraemia by 91% over five years.

Our work around invasive devices and hand hygiene has been key to this success, and we will continue to focus on these areas.

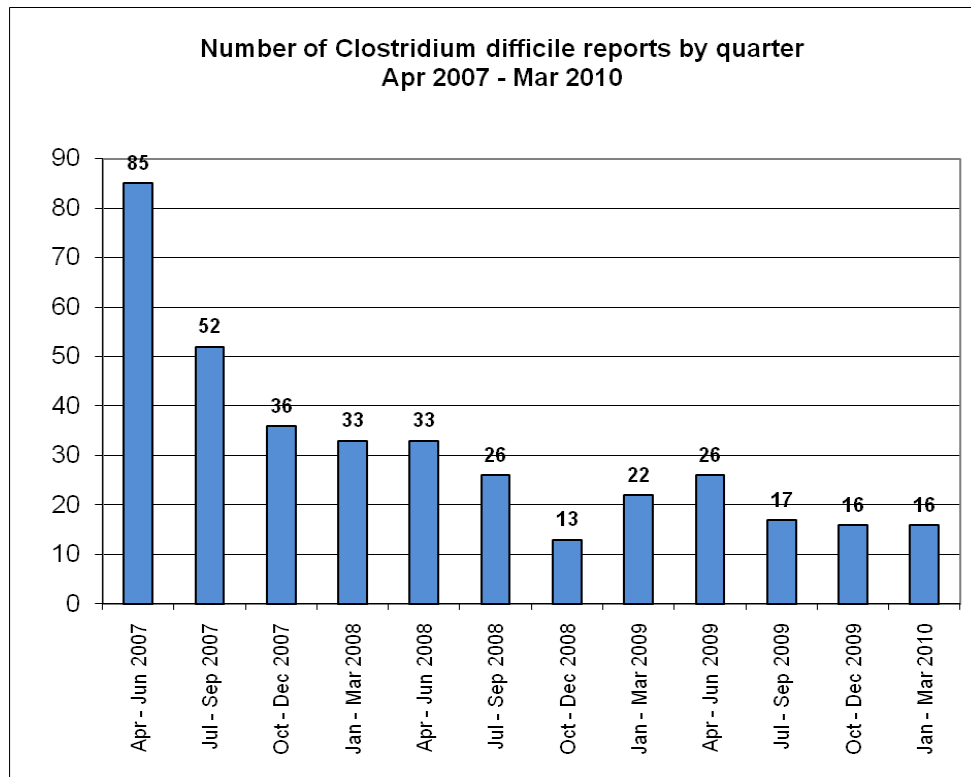
Clostridium difficile

Clostridium difficile is the most important cause of antibiotic-associated diarrhoea and can cause serious and sometimes life-threatening disease.

Our current performance on *Clostridium difficile* reduction is over-achievement of our reduction target (end of year = **75** against a ceiling of 76).



We have achieved a **20% reduction** in cases of *Clostridium difficile* attributed to the Trust in 2009/10 compared to the previous year. The following chart shows the *Clostridium difficile* attributable to the Trust by quarter from April 2007 – March 2010:



We are continuing to make progress in reducing the incidence of this unpleasant disease.

In order to improve further, we are continuing to focus on the prompt identification and isolation of possible cases, and antibiotic stewardship.

Reduction of *Clostridium difficile* disease remains a high priority for the hospital.

Antibiotic Resistant Organisms

There was **one** episode of GRE bacteraemia in the hospital during 2009/10.

GRE bacteraemias are generally concentrated in tertiary referral centres and this low number is as expected for a small acute Trust.

Outbreaks

Gastrointestinal illness

We reported three outbreaks of gastrointestinal illness in 2009/10 as follows:

April 2009 Medical division. Norovirus

October 2009. Surgical division. Norovirus

December 2009 – March 2010. Medical and Surgical divisions. Norovirus.

Noroviruses are the most common cause of viral gastroenteritis (stomach bugs) in England and Wales. Prompt isolation, strict hygiene measures, including disinfection of the area, are the most effective method for containing these outbreaks. Outbreaks of this illness are unpleasant for those affected and have a huge impact on the day-to-day running of the hospital. Education of hospital staff in recognition and management of the illness is part of the infection control education programme. A low threshold for reporting diarrhoea and vomiting symptoms is encouraged by the ICT, as early intervention to prevent transmission reduces the numbers affected and the length of time wards are closed to admissions.

An outbreak control group was convened in all cases and the viral gastroenteritis policy followed. There is often a severe operational impact from the outbreaks and their management, and hence we are reviewing our strategy for bed management and escalation during outbreaks.

ESBL producing *Escherichia coli*

We identified and dealt with an outbreak of this organism on Meadowbank ward, which is a twelve-bedded special care baby unit including one intensive care cot and two high dependency cots.

The ward accepts babies from both within the hospital and from neighbouring hospitals. There are regular transfers from tertiary referral hospitals.

Extended spectrum Beta lactamases (ESBL) are enzymes that can be produced by Gram-negative bacteria. Gram-negative bacteria (such as *Escherichia coli* and *Klebsiella* spp.) may colonise the bowel as normal flora. These organisms generally just colonise the bowel, but can cause infection either locally, such as urinary tract infection, or systemically, such as septicaemia. Outbreaks of ESBL producing organisms have been reported in the literature in neonatal units and it is recognised that these organisms present a risk to the vulnerable patient. The mode of transmission is faecal-oral and onward spread may occur by direct or indirect contact e.g. on hands or via contamination in the environment.

As a proactive risk management measure, all babies admitted to Bedford Hospital are screened for both meticillin-resistant *Staphylococcus aureus* (MRSA) and ESBL-producing organisms. Screens for both are then carried out weekly, or more frequently as advised by the infection control team.

Patients admitted and transferred into the ward may already be colonised with MRSA or ESBL-producing organisms and as such are nursed in isolation cubicles until proved otherwise or if colonised, until the child is discharged.

The outbreak was recognised in December 2009 through routine screening. At the time, there was a baby in a single room who had been transferred from a neighbouring hospital with colonisation with ESBL-producing *E coli*.

The results from the routine screen identified five further babies with an ESBL-producing organism.

Immediate actions:

- Clinical assessment of effect to colonised babies and risk to other babies
- Unit closed to external admissions
- Information for parents
- Enhanced environmental cleaning
- Standard isolation precautions
- Reported through governance stream
- Twice weekly screening for all babies on the ward
- Specimens sent for phage typing (to confirm an outbreak rather than a cluster)

The phage typing confirmed an outbreak of ESBL-producing *Escherichia coli*. Four of the six babies were colonised with the same strain of the organism; other strains were also identified. The strain was confirmed as the same strain that was implicated at the tertiary referral hospital that the index case was transferred.

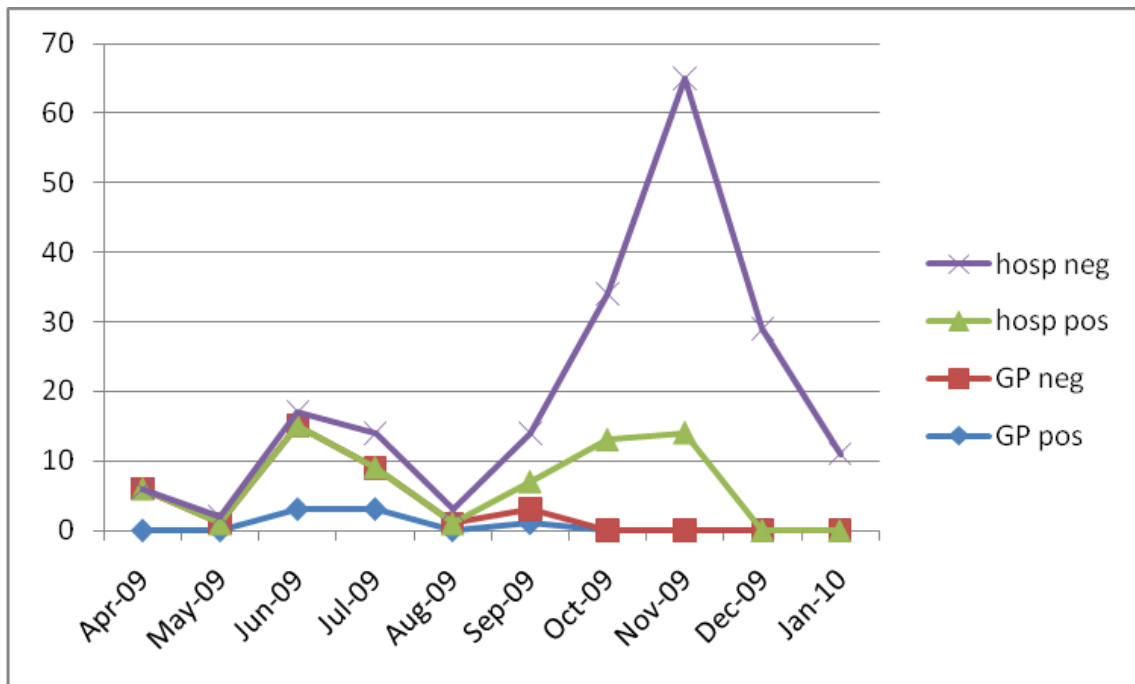
The actions taken were appropriate and halted onward transmission of the organism.

No babies suffered harm or required additional treatment.

Swine Flu

The World Health Organisation declared a global flu pandemic on 11th June 2009 after the virus was confirmed in at least two regions of the world.

We treated many patients with known or suspected swine flu. Operationally, the busiest departments because of this were the emergency department, critical care and the paediatric ward. The local outbreak, resulting in hospital admissions, peaked in June and then again in October/November. The chart below shows the trend from the swab results processed by our laboratory. There was no known onward transmission of the virus within the hospital; rather, we cared for the people most affected by it in the community.



Surgical Site Infection

Surgical site infections (SSIs) are infections related to a surgical procedure that affect the surgical wound or deeper tissues handled during the procedure. SSI cannot be reliably identified from laboratory data alone as the diagnosis depends on the presence of signs and symptoms of infection in the wound. The surveillance to detect SSI therefore requires active monitoring of patients from the time of their operation until they are discharged from hospital.

All NHS Trusts where orthopaedic surgical procedures are performed are required to carry out a minimum of three months' surveillance in at least one orthopaedic category.

We undertook our orthopaedic surveillance between September 2009 and March 2010. We have commenced continuous surveillance of elective hip and knee replacement, and reduction of lone bone fracture.

We also carry out continuous surveillance of large bowel surgery, and vascular surgery.

The results of our surveillance during 2009/10 are shown below. We plan to extend our surveillance to include the post-discharge period up to thirty days. This will improve our data quality and over time our clinical outcomes, as better feedback improves performance.

The following tables show our hip and knee (prostheses) replacement SSI performance during this time:

Hip Replacement

Our infection rate is below average for this category:

	No. operations	Pt. questionnaire (PQ)		Surgical Site Infection							
				Inpatients and readmissions		Post discharge confirmed		Patients reported		Total infections	
				No.	%	No.	%	No.	%	No.	%
Bedford Hospital	91	0	0	0	0	1	1.1	0	0	1	1.1
All hospitals (no PQ)	125518	No data	No data	1263	1.0	204	0.2	No data	No data	1477	1.2
All hospitals (PQ)	3040	3040	56.5	26	0.9	12	0.4	16	0.5	54	1.8
All hospitals (total)	128558	3040	56.5	1289	1.0	216	0.2	26	0	1531	1.2

Knee Replacement

Our knee replacement surgical site infection rate is average:

	No. operations	Pt. questionnaire (PQ)		Surgical Site Infection							
				Inpatients and readmissions		Post discharge confirmed		Patients reported		Total infections	
		No. given	No. complete	No.	%	No.	%	No.	%	No.	%
Bedford Hospital	102	0	0	1	1	0	0	0	0	1	1
All hospitals (no PQ)	126559	No data	No data	850	0.7	315	0.2	No data	No data	1184	0.9
All hospitals (PQ)	4081	4081	58	20	0.5	23	0.6	56	1.4	99	2.4
All hospitals (total)	130640	4081	0	870	0.7	338	0.3	75	0.1	1283	1.0

Reduction of long-bone fracture

This procedure has a higher risk of infection than elective hip or knee replacement. We have a lower than average infection rate:

	No. operations	Pt. questionnaire (PQ)		Surgical Site Infection							
				Inpatients and readmissions		Post discharge confirmed		Patients reported		Total infections	
		No. given	No. complete	No.	%	No.	%	No.	%	No.	%
Bedford Hospital	175	0	0	5	2.9	0	0	0	0	5	2.9
All hospitals (no PQ)	892	No data	No data	21	2.4	7	0.8	No data	No data	29	3.3
All hospitals (PQ)	8	8	25	0	0	0	0	0	0	0	0
All hospitals (total)	900	8	0	21	2.3	7	0.8	1	0.1	29	3.2

Large Bowel surgery

Our infection rate for large bowel surgery is average:

	No. operations	Pt. questionnaire (PQ)		Surgical Site Infection							
				Inpatients and readmissions		Post discharge confirmed		Patients reported		Total infections	
		No. given	No. complete	No.	%	No.	%	No.	%	No.	%
Bedford Hospital	177	0	0	19	10.7	0	0	0	0	19	10.7
All hospitals (no PQ)	9910	No data	No data	968	9.8	82	0.8	No data	No data	1051	10.6
All hospitals (PQ)	206	206	71.4	20	9.7	4	1.9	4	1.9	28	13.6
All hospitals (total)	10116	206	0	988	9.8	86	0.9	5	0	1079	10.7

Vascular

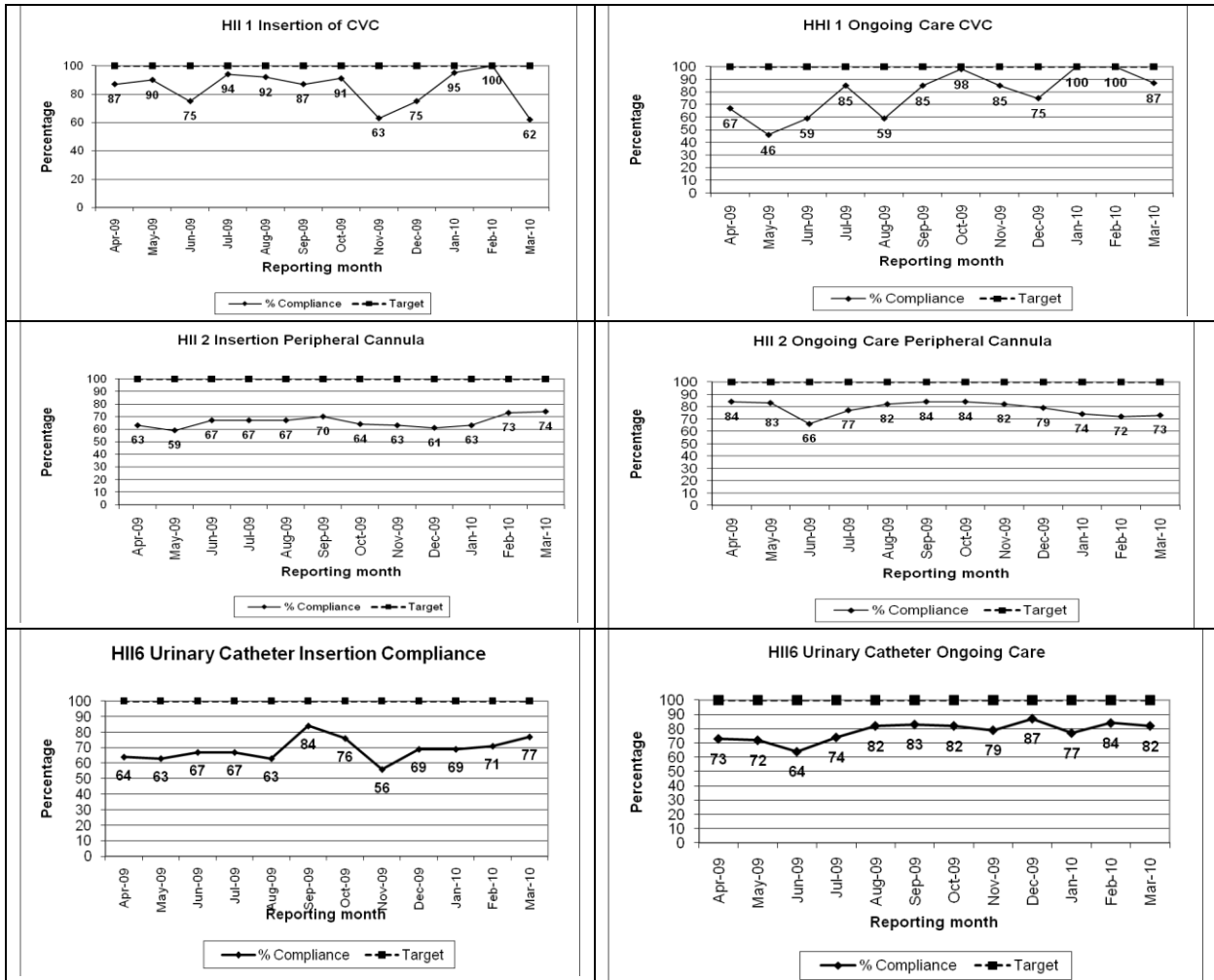
We have a lower than average infection rate for this category:

	No. operations	Pt. questionnaire (PQ)		Surgical Site Infection							
				Inpatients and readmissions		Post discharge confirmed		Patients reported		Total infections	
		No. given	No. complete	No.	%	No.	%	No.	%	No.	%
Bedford Hospital	237	0	0	9	3.8	0	0	0	0	9	3.8
All hospitals (no PQ)	6854	No data	No data	264	3.8	34	0.5	No data	No data	298	4.3
All hospitals (PQ)	107	107	65.4	1	0.9	4	3.7	4	3.7	9	8.4
All hospitals (total)	7061	107	0	265	3.8	38	0.5	4	0.1	307	4.3

High Impact Interventions

We made the post of invasive devices nurse substantive.

The documentation for peripheral cannulae, central venous catheters and urinary catheters was monitored monthly:



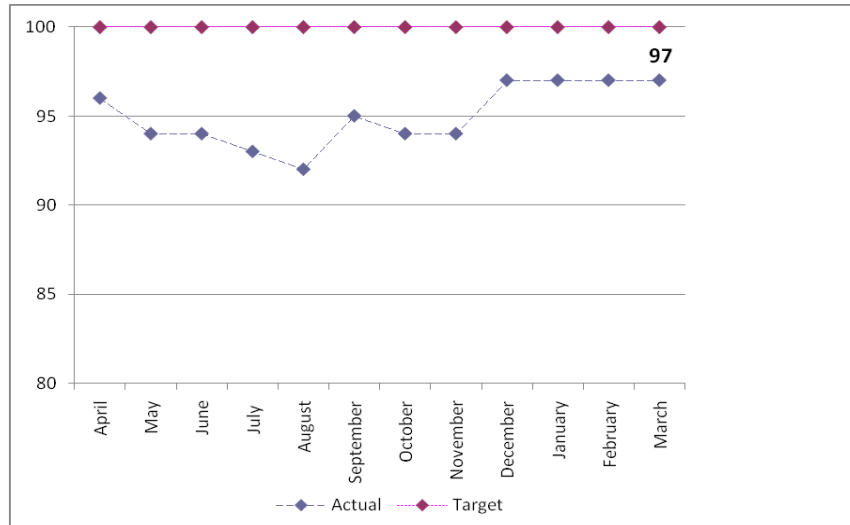
We launched Aseptic Non-Touch Technique (ANTT) throughout the trust. The Invasive Devices Group, which reports up to the HIPCC, monitors the work.

There is still considerable work and maintenance to do regarding invasive devices. We will continue our efforts to improve our outcomes.

Hand Hygiene

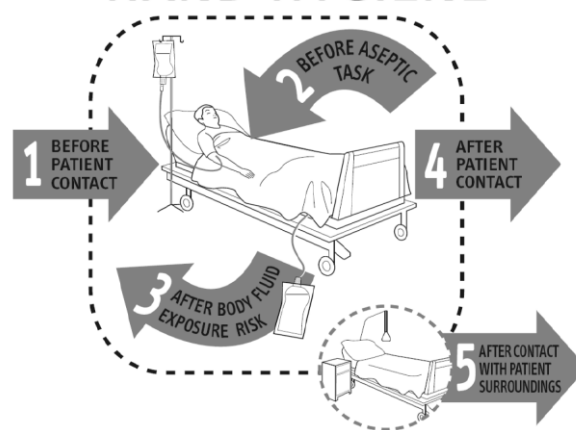
Effective hand hygiene is the cornerstone of good infection prevention and control practice. We monitored our hand hygiene in 2008/9 using weekly

observational audit of staff on all inpatient wards and the emergency department. We published the weekly results in the CEO bulletin for all staff, and published the monthly summaries on the entrance door of each participating ward or department. These collated results are shown below:



We achieved an **increase of 3% in hand hygiene compliance** over the year and an upward trend is evident. We also replaced all soap and disinfectant hand-rub dispensers with non-touch dispensers.

Your 5 moments for HAND HYGIENE



The challenge for the organisation is to ensure that hand hygiene

- Is innovative and intuitive to apply
- Appealing and ergonomic
- Associated with professionalism, security and efficiency
- Respected by all staff at all levels
- Valued and understood by patients and the public

The strategy for addressing this challenge includes

- Individual responsibility and accountability for practice through policy, feedback, training and performance review
- Hands and wrists clear for effective hand hygiene by uniform and dress policies, feedback, training and performance review
- Installation of “Clean Zones” at ward entrances that demarcate the clinical area from public areas
- Provision of disinfectant hand gel at the point of care
- Increasing the number of hand wash basins in clinical areas
- Installation of signage showing the five moments model and the correct hand hygiene technique
- Engagement with staff, patients and visitors through our communications strategy
- Annual Hand Hygiene Awareness Week

Hand Hygiene Awareness Week was held in September 2009. This is both a conference with educational sessions and “road shows” and a high profile awareness event.



Environmental Cleanliness

Management arrangements

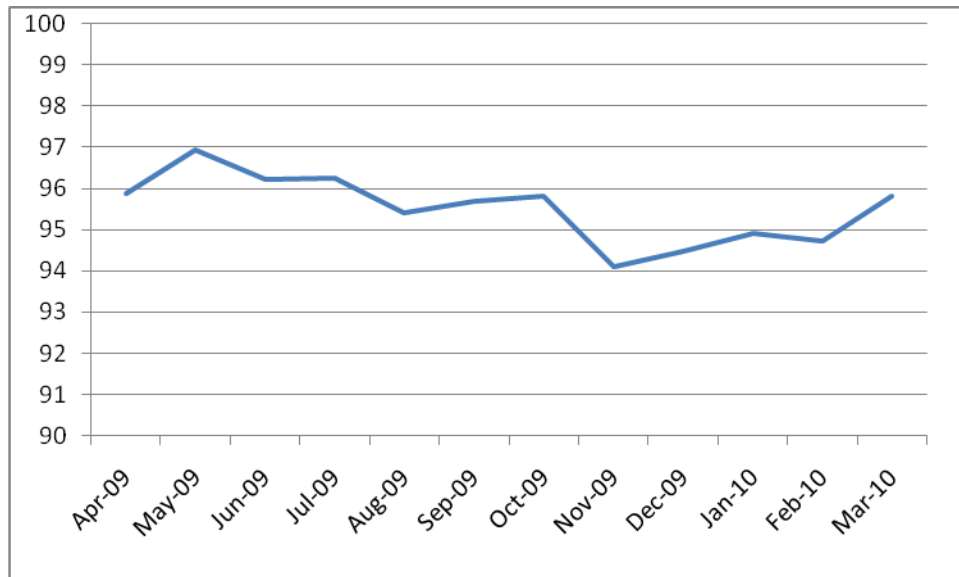
Cleaning services are 'in-house' and part of Operational Support Services. The standard and frequency of cleaning is in accordance with the NPSA '49 steps' as detailed in their National Specification for Cleanliness in the NHS (2007).

The department also provides several other services to improve environmental cleanliness as follows:

- Special Cleans team for terminal cleans of wards, bays, bed-spaces and side rooms after occupation by patients with known infections. This team also clean pressure mattresses and pumps thus facilitating a quicker turnaround of this equipment than if it had to be sent away for cleaning.
- Bed cleaning through use of a bed washing machine, which is also used for other items of ward equipment such as trolleys, and drip stands.
- A Deep Clean programme is worked in partnership with the Trust's Maintenance Department to provide a targeted, enhanced level of cleaning.

Monitoring arrangements

Cleaning standards are monitored by Domestic Services staff against the NPSA '49 steps'. The graph below shows our performance against these standards over the year:



Environmental Cleanliness Group

This group meets fortnightly, is chaired by the Director of Operational Support Services, and has representation from the Matrons, Maintenance, Estates,

Infection Control, Procurement, and Domestic Services. The group addresses topics such as monitoring scores, service changes, PEAT results, waste management, equipment storage, and new products. Upward reporting is to the HIPCC (Hospital Infection and Prevention Control Committee). The group has also introduced quarterly mini PEAT assessments to review compliance with the PEAT criteria.

Training

All domestic staff receive basic infection control training from the ICT. Staff are also issued with a pocket card illustrating essential infection control points such as the correct colour code for mops, buckets, and gloves for particular areas, which waste disposal bags to use and key hand washing circumstances.

PEAT 2010 (Patient Environment Action Team)

PEAT is an annual assessment of inpatient healthcare sites in England with more than ten beds.

PEAT is self-assessed and inspects standards across a range of services including food, cleanliness, infection control, and patient environment (including bathroom areas, décor, lighting, floors, and patient areas).

The assessment was established in 2000 (managed by the NPSA since 2006) and is a benchmarking tool to ensure improvements are made in the non-clinical aspects of a patient's healthcare experience. PEAT highlights areas for improvement and shares best practice across the NHS.

NHS organisations are each given scores from 1 (unacceptable) to 5 (excellent) for standards of privacy and dignity, environment, and food within their buildings. The NPSA publish these results every year to all NHS organisations, as well as stakeholders, the media and the public.

The annual PEAT (Patient Environment Action Team) assessment was carried out on 5th February. Team members included matrons, ward managers, the maintenance manager, the lead nurse for infection control, the catering manager, the voluntary services manager, the director of support services and the hotel services manager. Mr. Peter Metherall kindly attended as a patient representative.

Areas visited included Orchard, Shuttleworth, Howard, Riverbank and Russell wards plus Accident and Emergency, AAU, Critical Care, bereavement facilities, and public areas. Results from NPSA (National Patient Safety Agency) were received in March.

PEAT Assessment Scores Summary

Year	Environment
2010	Good
2009	Good
2008	Good
2007	Excellent
2006	Acceptable
2005	Excellent
2004	Good

The Environmental Cleanliness Group devised an action plan to deal with items noted during the course of the PEAT assessment and this is reviewed at ECG meetings.

Service improvements in 2009 – 2010

- The Domestic Services Department has a Clinical Equipment Cleaning Team, which was introduced in 2008 to help ward nursing staff by releasing their time for direct patient care. Items such as blood pressure monitors, scales, and drip stands are cleaned on a regular basis using a sporicidal cleaning solution. This service is expanding to the Cygnet Wing later in 2010. Nursing staff still have a responsibility to clean equipment which is attached to patients.
- Duty of Care visit to Sunlight's Leicester Laundry. In September 2009, the Lead Nurse for Infection Control and the Hotel Services Manager visited the laundry in Leicester to verify that the contractor was working in accordance with the requirements of HSG (95) 18. Confirmation was established and supporting documentation can be found in the electronic files for Standards for Better Health.

Issues to resolve in 2010 – 2011

- The Domestic Services Department continues to monitor the standard of cleaning against the NPSA '49 steps'. This includes all the items the domestic staff clean in clinical and public areas of the hospital. There are insufficient hours allocated to monitor and provide comprehensive reports so a key challenge for 2010-2011 will be to resolve this problem and improve the scope and data quality of the monitoring reports.
- In 2009-2010, the length and frequency of winter vomiting outbreaks put the Domestic Services Department under severe pressure to complete high cleans prior to patient admissions. The total cost of cleaning to the

- Trust during these outbreaks was £18,084. This does not include the cost of providing a service to both Russell and Arnold Whitchurch wards, which were used to take patients when other wards were closed.
- Ward housekeepers are part of the Catering Department and are on duty between 07.00-15.30 hrs. each weekday. Outside these attendance times, such as in the evening or weekends, domestic staff complete some of their work including washing up and keeping the ward kitchen clean. This is also the case when ward housekeepers are on holiday or sick so the result is less time for domestic staff to clean. In recognition of this problem plus negative feedback from recent national in-patient surveys, the catering manager identified the need for a 'float' ward housekeeper in the departmental cost pressures for 2010-2011. This request, with a revenue cost of £13,000, was rejected.
 - Pigeons. The number of birds on site is increasing and they have, on occasions, invaded the empty escalation wards through open windows. Quotes to deal with these equate to the Domestic Services Department's entire annual pest control budget of £6,000. The cost of controlling pigeons will be included as cost pressure in future budget setting.
 - Improve ward housekeeper cover during periods of annual leave or sickness so domestic staff can maintain their cleaning and not have to carry out work usually assigned to the housekeeper.
 - Replace the bed washer. The bed washer is now 10 years old and in constant use. Breakdowns disrupt cleaning and extend the time bed spaces can be made available for admissions because beds have to be washed *in situ*. If the bed washer breaks down in a future winter vomiting outbreak on the scale experienced by the Trust between January and March 2010, then the Domestic Services Department would not be able to cope with bed space turnaround requirements. The need to replace the bed washer is included in the departmental risk register.
 - Inclusive work with the estates department to ensure that the Domestic Services Department is consulted in the design and hotel service requirements for any areas that are new builds or refurbishments.

Estates

Decontamination

Decontamination is a process that removes or destroys contamination and thereby prevents microorganisms or other contaminants reaching a susceptible site in sufficient quantities to initiate an infection or any other harmful response (Medical Advisory Committee, 1999). Correct decontamination is essential to render reusable medical equipment safe for use. Three levels of decontamination are used; cleaning, disinfection and sterilisation. The level of decontamination used depends on the intended use of the instrument.

Arrangements for Decontamination

Decontamination is organised centrally, and the Decontamination Lead for the Trust is the Head of Estates. He chairs the Decontamination Committee and is a member of the HIPCC. The Infection Control Doctor and Lead Nurse represent the ICT on the Decontamination Committee.

The Hospital Sterile Services Department (HSSD) is responsible for the sterilisation of reusable medical devices. The Director of Support Services, who is a member of the HIPCC, manages the department. The ICT acts as a resource for the department and provides infection control training.

Improvements to Decontamination

Authorised at a cost of £5.3 million by the Trust Board in October 2009 the building of the new HSSD department commenced in December 2009 and is due for completion in November 2010.

Once complete, the new department will provide appropriate state of the art facilities for the provision of safe decontamination services to the hospital. The design of the department, selection of equipment and ergonomics of the workflow has been scrutinised so that the department achieves or surpasses the current range of national standards for decontamination and the required standards for Health Building Notes.

Considerable work has gone into this project, which includes a constantly reviewed formal structured project plan, regular user group meetings, staff briefings and commissioning meetings in order to achieve both the necessary quality standards for the new department and ensure that there is staff engagement with this project.

The Trust has enlisted the help of an outside advisor to ensure that the work to achieve accreditation includes all the formal measurable elements in accordance with the required standards to ensure that the new department is successfully accredited by March 2011.

Endoscopy

The Endoscopy Unit manager is a member of the Decontamination Committee. The ICT acts as a resource for Endoscopy and provide infection control training. Water quality results are also monitored by the ICT.

Decontamination Incidents/Failures

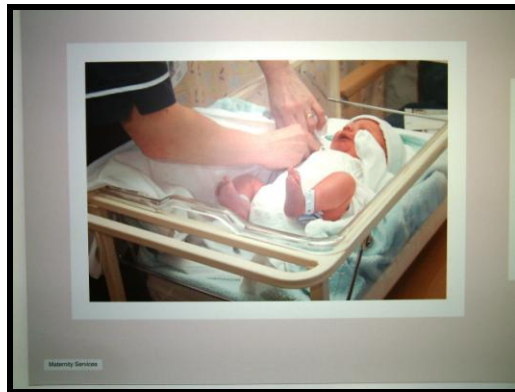
No significant decontamination failures were reported to the ICT for investigation during 2009/10.

Changes to the Estate

The Estate Management team continues to work with the ICT and other clinical leads to maintain the high quality of care that the trust strives to deliver. In the past year there has been investment made in key areas of both general areas of the Estate and also within clinical inpatient facilities. These have included the following:

Healing Hands Art Project

This campaign helped with funding from the Hospital Charity, and an award for infection control has enabled us to provide staff and public engagement in the many aspects of the healthcare pathway, and the role that hands and patient contact make to the delivery of healthcare within the whole systems approach. This can be seen from the range of activities displayed along two of the hospital corridors and the part in which our hands provide activities linked to healing. These range from patient records to the taking of blood samples within a clinical activity. We also used handprints from staff to create a collage.



Healing Hands Art Project

Environmental Enhancements

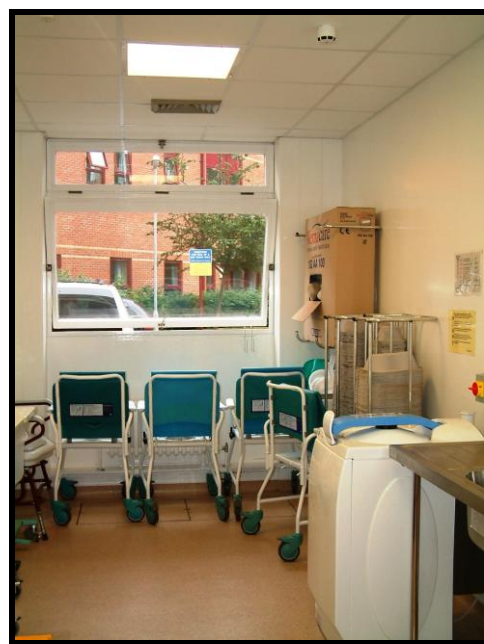
The Trust continues to invest in the improvements needed to improve the estate that enables the clinical team to deliver safe clinical care in a suitable environment. The partnership working between the key stakeholders including matrons, hotel services, estates management, and the ICT is key to this. These parties coordinate the trust environmental audits, PEAT inspections and other activity using a problem-solving, proactive and inclusive approach.

Using this approach, the estates management team has been able to provide the following enhancements, while minimizing disruption to patient care and the trust activity.

- Flooring Upgrades
- Upgrade to and additional clinical hand wash station
- Radiator Guards easy to open and clean
- Touch free lighting controls in clinical areas
- Further sluice room upgrades



Hand hygiene at ward entrance

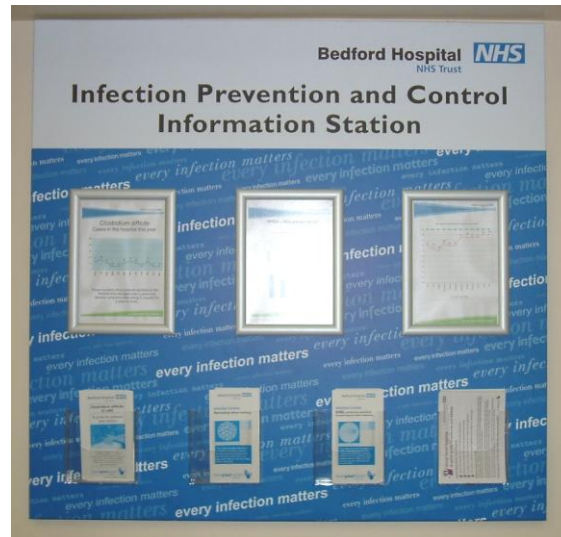


Upgraded sluice rooms

Infection Control Signage

In line with the signage strategy approved by the EMG in 2007 for infection control, the estates management team with the guidance of the ICT has continued the implementation of this strategy. This has included the installation of the further Infection Control Information Stations that provide key information for

patients, visitors and staff within the outpatient waiting areas throughout the Trust.



Wall-mounted for outpatient areas

Legionella Control

Legionnaires' Disease is a potentially fatal form of pneumonia which can affect anybody, but which principally affects those who are susceptible because of age, illness, immunosuppression, smoking etc.

It is caused by the bacterium *Legionella pneumophila* and related bacteria that can be found naturally in environmental water sources such as rivers, lakes and reservoirs, usually in low numbers. As they are commonly found in environmental sources they may also be found in purpose-built water systems such as cooling towers, evaporative condensers and whirlpool spas. Large buildings, with convoluted water supply systems can also contain Legionella spp.

If conditions are favourable the bacterium may grow creating conditions in which the risk from Legionnaires' disease is increased

The hospital has a comprehensive Legionella control programme that was extended to include proactive water outlet testing during 2009/10.

This was in response to updated recent guidance from the Department of Health and the Health and Safety Executive, and we commenced water outlet testing within the clinical areas of the hospital. This approach is seen as best practice so that the clinical risk to patients can be fully understood and controlled.

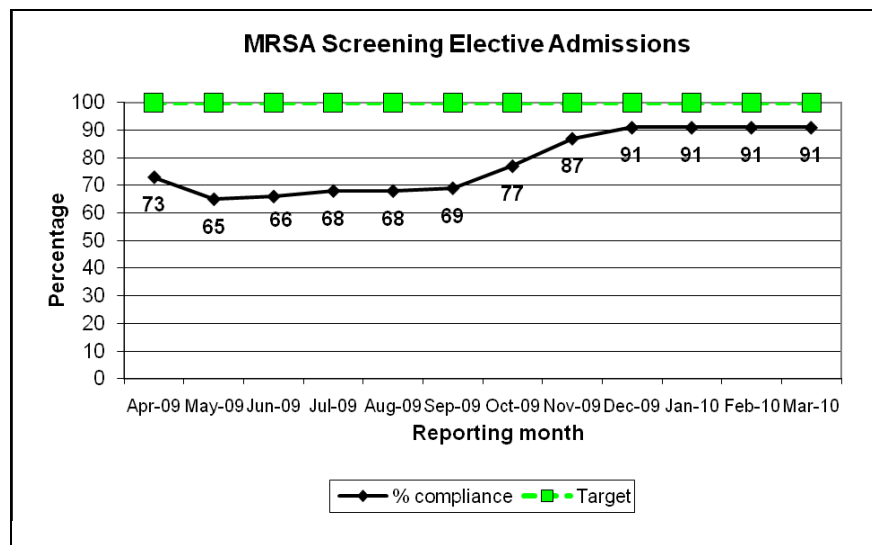
With the agreement of the Trust Water Quality Steering Group, we have implemented an water testing strategy that includes:

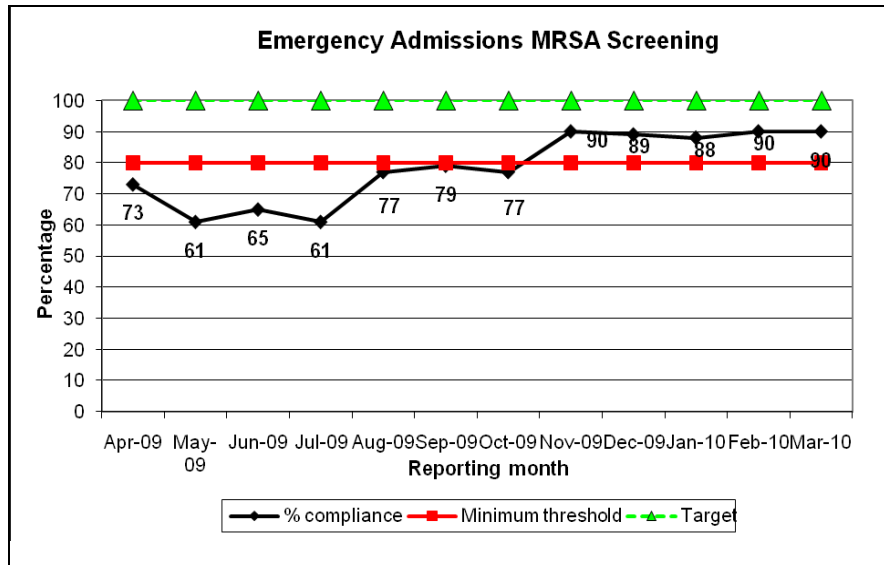
- Sampling of water in clinical areas
- The implementation of chlorine based water treatment system
- Water Usage evaluation scheme
- Planned preventative maintenance system for the water systems on site

This with the risk assessments undertaken and the following action plans have enabled the Trust to obtain good water test results to date in the areas tested within the main ward block complex. These results have been reported upwards to the Hospital Infection Prevention Control Committee to allow the actions and results obtained to be recorded.

MRSA Screening

The Department of Health introduced requirements to increase the scope of screening for MRSA colonisation to all patients that admitted as elective inpatients, with some defined exceptions (Department of Health, 2008a) by April 2010. The requirements were further extended for all patients admitted as emergency inpatients (Darzi, 2008) by December 31st 2010. We introduced “universal MRSA screening” last year, but struggled to achieve full compliance. We improved our performance considerably during 2009/10, but this remains a key target for the hospital.





Risk Management and Clinical Governance

Care Quality Commission Registration

This is a new requirement for all Trusts commencing April 2009. The Trust gained unconditional registration for infection control with the Care Quality Commission.

Care Quality Commission inspection

The Code of Practice for the Prevention and Control of Healthcare Associated Infection became law on 1st October 2006 and compliance was mandatory from 1st April 2007. This Code states that the systems within NHS organisations for the prevention and control of HCAI should address:

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

The Care Quality Commission monitored trusts' compliance with the code from April 2009. The hospital had an unannounced inspection on 18th November 2009. The Care Quality Commission found no failings and reported:

“Our overall judgement

On inspection, we found no evidence that the trust has breached the regulation to protect patients, workers and others from the risks of acquiring a healthcare-associated infection.

How we made our judgement

We had no concerns about the 16 measures we inspected. The following table provides further information.

For this inspection, we:

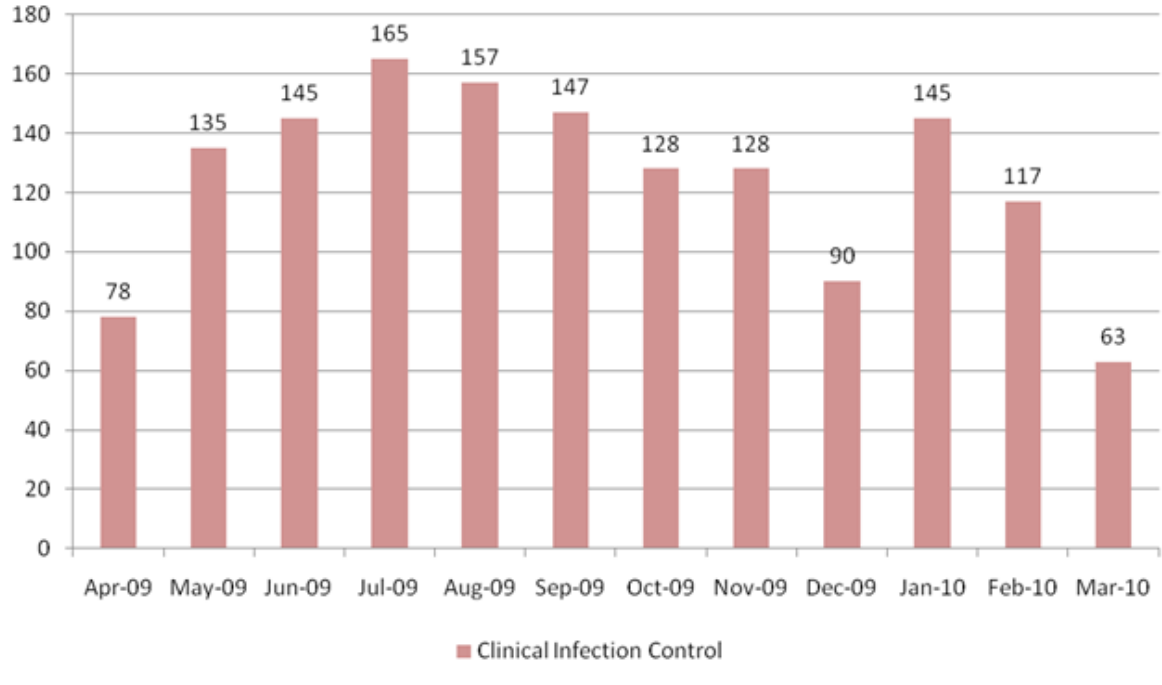
- Analysed information on how the trust manages infection prevention and control, such as the results of audits and training records.
- Examined policies and procedures.
- Visited the Acute Admissions Unit, Victoria Ward (stroke care) and Richard Wells Ward (respiratory care).
- Had discussions with: the chief executive, the director for infection prevention and control, domestic staff, staff nurses, ward managers, the matron for medicine, junior doctors and ward staff.”

Educational Activities

The infection control team continued to provide educational sessions for all staff at the hospital. In 2009/10 **1498** clinical staff members received formal training, supplemented by practical “road-shows” on the wards; for example hand hygiene technique using ultraviolet cream. We also provided training for allied health professionals, domestic staff, porters, catering staff, volunteers, and other staff with patient contact.

Clinical Staff Group	Percentage trained
Consultants	78
Specialist Registrars, Senior House Officers and House Officers	38
Foundation Year One and Two Doctors	100
Nurses	87
Clinical Support Workers	100

Clinical Infection Control - YTD March 2010



APPENDIX ONE
INFECTION PREVENTION AND CONTROL STRATEGIC ANNUAL PROGRAMME OF WORK 2010/11

Criterion One – 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

No	OUTCOME	ACTION	LEAD RESPONSIBILITY	EXECUTIVE LEAD	DEADLINE AND REPORTS	COST
1.1	Comprehensive assurance on the effectiveness of policies for the prevention and control of infection	Reporting and action on results of audits of policies for infection prevention and control	Lead Nurse Infection Prevention and Control	Director of Infection Prevention and Control	Three-year rolling programme to end of March 2013 Audit results reported through HIPCC	Nil
1.2	Improvements to our surgical site infection surveillance system to deliver comprehensive assurance	Surveillance for thirty days post-operatively for patients undergoing surgery in defined categories Develop business case to support surveillance programme	Lead Nurse Infection Prevention and Control Lead Nurse Infection Prevention and Control	Director of Infection Prevention and Control Director of Infection Prevention and Control	March 2011 Progress reports through HIPCC End November 2010 to EMG Progress reports through HIPCC	£5500 - £6800 for 2010/11, £16650 - £20450 PA thereafter (Band 2 WTE 1.0)
1.3	The Trust has an infection prevention and control strategy that reflects best practice and is aligned with the organisational objectives	Develop strategy for the next three years, building on the strategy 2008-11	Lead Nurse Infection Prevention and Control	Director of Infection Prevention and Control	Draft strategy to December HIPCC Launch the new strategy April 4 th 2011	Nil

Criterion Two - Provide and maintain a clean and appropriate environment in managed premises that facilitates the prevention and control of infections

No	OUTCOME	ACTION	LEAD RESPONSIBILITY	EXECUTIVE LEAD	DEADLINE AND REPORTS	COST
2.1	Comprehensive assurance that clinical equipment is cleaned appropriately	Launch High Impact Intervention 8 (Care bundle to improve the cleaning and decontamination of clinical equipment)	Lead Nurse Infection Prevention and Control	Director of Infection Prevention and Control	August 31 st 2010 Report through the HCAI group monthly and to the HIPCC and Trust Board quarterly Report to the commissioning body monthly on balanced scorecard	Nil Nil Nil
2.2	Comprehensive assurance of effective hand hygiene	Review the compliance audit process	Lead Nurse Infection Prevention and Control	Director of Infection Prevention and Control	October 31 st 2010 Report through the HCAI group monthly Report to the commissioning body monthly on balanced scorecard	Nil Nil Nil
2.3	Enhanced cleaning of the clinical environment is carried out promptly	Develop business case to increase the "Special Cleans Team" hours during the winter months when the demand is much higher	Hotel Services Manager	Director of Infection Prevention and Control		£10936

2.4	The clinical environment is well maintained, easy to clean and aesthetically acceptable for patients, visitors and staff	Develop programme of minor upgrade and refurbishment to take place during summer 2011 for consideration by the Capital Control Group	Head of Estates	Director of Finance	31 st March 2011 Report through the environmental cleanliness group to the HIPCC and Trust Board	Not yet known
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Criterion Three - Provide suitable accurate information on infections to service users and their visitors.

No	OUTCOME	ACTION	LEAD RESPONSIBILITY	EXECUTIVE LEAD	DEADLINE AND REPORTS	COST
3.1	Patients and the public have easy access to contemporary, accurate information regarding infection prevention and control at our hospital	Redesign the hospital website infection control pages Update written information for patients and visitors	Lead Nurse Infection Control Lead Nurse Infection Control	Director of Infection Prevention and Control Director of Infection Prevention and Control	31 st March 2011 Report progress through the HIPCC	Nil Nil
3.2	Our local community is assured that our performance and strategy for infection control deliver clean, safe care	Stage a Patient Safety Open Day at the hospital for the public, to incorporate infection control and other safety aspects (such as VTE prophylaxis and pressure ulcer prevention)	Lead Nurse Infection Control and Patient Safety Coordinator	Director of Infection Prevention and Control	The day will be hosted on Saturday 16 th October 2010	£3K (Charities application for monies made)

Criterion Four - Provide suitable accurate information on infections to any person concerned with providing further support or nursing/medical care in a timely fashion.

No	OUTCOME	ACTION	LEAD RESPONSIBILITY	EXECUTIVE LEAD	DEADLINE AND REPORTS	COST
4.1	Medical discharge letters include comprehensive information regarding the patient's infection status	Separate action plan from the EDS Project Group	General Manager, Women and Children Division	Separate action plan from the EDS Project Group		
4.2	Nursing discharge and transfer letters include comprehensive information regarding the patient's infection status	This information is routinely included in discharge and transfer documentation	Matrons	Chief Operating Officer	31 st March 2011	Nil

Criterion Five - 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.

No	OUTCOME	ACTION	LEAD RESPONSIBILITY	EXECUTIVE LEAD	DEADLINE AND REPORTS	COST
5.1	Aseptic non-touch technique is routine clinical practice throughout the hospital	Fully roll the programme out	Lead Nurse Infection Control	Director of Infection Prevention and Control	March 2011 Assurance through training records and audit monitored through HIPCC	Nil

Criterion Six - Ensure that all staff and those employed to provide care in all settings are fully involved in the process of preventing and controlling infection.

No	OUTCOME	ACTION	LEAD RESPONSIBILITY	EXECUTIVE LEAD	DEADLINE AND REPORTS	COST
6.1	Senior managers are fully aware of their roles and responsibilities with regard to infection prevention and control	Facilitate a Trust Board Development session Define expectations for divisional reporting to the HIPCC Review membership of the HIPCC Review the terms of reference for the HIPCC	Director of Infection Prevention and Control Lead Nurse Infection Control Director of Infection Prevention and Control Lead Nurse Infection Control	Director of Infection Prevention and Control Director of Infection Prevention and Control Director of Infection Prevention and Control Director of Infection Prevention and Control	31 st March 2011 31 st December 2010 30 th November 2010 30 th November 2010	Nil Nil Nil Nil
6.2	Placement of patients in the hospital follows and supports the principles to reduce the risk of cross-infection	Develop a bed management strategy for the hospital that supports the principles of effective infection control	General Managers	Chief Operating Officer	31 st March 2010	Nil

6.3	The hospital has a strategy in place to reduce cross-infection	The current strategy expires at the end of this year. Develop strategy for the next three years	Lead Nurse Infection Control	Director of Infection Prevention and Control	31 st March 2010	Nil
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Criterion Seven - Provide or secure adequate isolation facilities.

No	OUTCOME	ACTION	LEAD RESPONSIBILITY	EXECUTIVE LEAD	DEADLINE AND REPORTS	COST
7.1	Patients requiring isolation are isolated within two hours of recognising the need to	The bed management strategy supports the prioritisation of isolation for those patients who require it to	General Managers	Chief Operating Officer	31 st March 2010 Report through HIPCC to the Trust Board	Nil
		The bed management strategy supports the creation of MRSA cohort bays as required (to release single rooms)	General Managers	Chief Operating Officer	31 st March 2010	Nil
		Monitor the time taken to isolate patients and the trend over time	Lead Nurse Infection Control	Chief Operating Officer	30 th June 2010. Report through the Patient Safety Committee to the Trust Board	Nil

Criterion Eight - Secure adequate access to laboratory support as appropriate.

No	OUTCOME	ACTION	LEAD RESPONSIBILITY	EXECUTIVE LEAD	DEADLINE AND REPORTS	COST
8.1	The hospital has an infection control doctor in post	Recruit an infection control doctor	Clinical Director Pathology	Medical Director	31 st March 2011 Report through the HIPCC to the Trust Board	Already budgeted for – vacancy unfilled

Criterion Nine - Have and adhere to policies, designed for the individual's care and provider organisations that will help to prevent and control infections.

No	OUTCOME	ACTION	LEAD RESPONSIBILITY	EXECUTIVE LEAD	DEADLINE AND REPORTS	COST
9.1	The hospital has comprehensive, evidence-based policies	Review the infection control policies and update as required	Lead Nurse Infection Control	Director of Infection Prevention and Control	31 st March 2011 Report through the HIPCC to the Trust Board	Nil

Criterion Ten - 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

No	OUTCOME	ACTION	LEAD RESPONSIBILITY	EXECUTIVE LEAD	DEADLINE AND REPORTS	COST
10.1	Staff are competent in infection prevention and control practice	All staff are up-to-date with their training	General Managers	Chief Operating Officer	31 st March 2011	Not known