

Infection Control Team
Annual Report

April 2007 – March 2008



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1. INTRODUCTION

The term 'Healthcare Associated Infections' (HCAI's) includes any infection acquired as a consequence of a person's treatment by the NHS, or which is acquired by a health care worker in the course of their NHS duties. The prevention and control of HCAI's is a high priority across the NHS. However, it is not possible to prevent all infections.

Effective prevention and control of HCAI's needs to be embedded into every day practices and applied consistently by everyone. In essence we all need to be:

'Working together to reduce Healthcare Associated Infection'

West Hertfordshire Hospitals NHS Trust (WHHT) is fully committed to implementing National Guidance which includes:

- **Hygiene Code**

The purpose of the Code is to help NHS organisations to plan and implement how they can prevent and control HCAI. Compliance with this Code of Practice is fundamental to ensure that our patients are cared for in a clean environment where the risk of HCAI is minimised. The Trust has undertaken a baseline assessment against the 11 Hygiene Code Duties.

- **Cleanyourhands Campaign**

The Cleanyourhands campaign is now in its third year and firmly embedded within the Trust. Promotional/educational posters continue to be rotated in clinical areas across the Trust at six weekly intervals to encourage optimal hand-hygiene. Patients are actively encouraged to ask staff if their hands are clean and alcohol hand gel is situated at the point of care.

- **Saving Lives & Winning Ways**

The ICT produced a 'Rolling 3 year Winning Ways Action Plan/Infection Control Programme 2005-2008 in May 2005. This together with the Divisional Infection Control Plans formed the Trust's Annual Infection Control Plan. In October 2007 the revised Department of Health 'Saving Lives' initiative was actively driven forward within the Trust. The overall aim of this programme is to ensure that all Trust healthcare staff recognise how they can contribute to reducing infection rates and adopt best practice to achieve this.

2. THE TRUST'S INFECTION CONTROL TEAM (ICT)

The Trust's Infection Control Team comprises of the Medical Director, who has recently been appointed as the Director of Infection, Prevention and Control (DIPC) who chairs the Trust's weekly and monthly Infection Control Group, Microbiologists, Infection Control Nurses, Intra-venous Therapy Nurse (currently a seconded post), Infection Control Support Worker, Secretary and Data Administrator. The ICT are also supported by the Director of Nursing and liaise closely with ICT members from the Health Protection Agency, Primary Care Trust and Hertfordshire Partnership Foundation NHS Trust.

Throughout the past financial year (2007/08), the ICT have continued their efforts to limit the spread of healthcare associated infections and encourage good infection control practice. These activities have centred particularly on hand hygiene, reducing MRSA bacteraemias and *Clostridium difficile* (*C.diff*).

The Director of Nursing has reviewed all nursing Job Descriptions to ensure they include Infection Control responsibilities. In addition, Job descriptions have also been reviewed for the Director of

Infection Prevention and Control, Medical Director and Director of Delivery, ensuring Infection Control responsibilities are clearly defined.

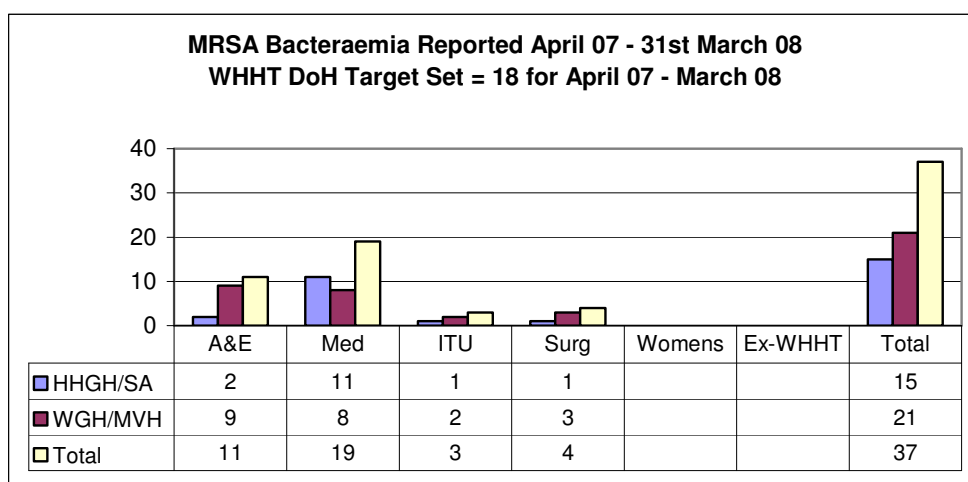
3. MRSA BACTERAEMIAS

The Trust continues to participate in the mandatory methicillin resistant *Staphylococcus aureus* (MRSA) bacteraemia surveillance, which was initiated in all acute NHS Trusts in April 2001. The data is now differentiated between Community and Hospital Acquired. A Root Cause Analysis (RCA) is undertaken for all MRSA bacteraemias irrespective of whether it is Community or Hospital Acquired. Following the completion of an RCA investigation an action plan is developed with the clinical area and is monitored by the appropriate clinical staff. The Chief Executive Officer, DIPC and Director of Nursing continue to meet with all relevant staff to discuss the outcome of RCA's.

The Trust continues to implement measures to reduce MRSA bacteraemias. The Trust was set a target of a reduction of 60% over the period April 2005 to March 2008. The year on year reduction was aiming at 18 bacteraemias for the last financial year however the total number reported was 37 (see Figure 1). Although the trajectory was exceeded, it was lower than that in the year 2006-2007 where 42 MRSA bacteraemias were reported against a trajectory of 27.

Figure 1.

Reported MRSA Bacteraemias April '07- March '08



Themes identified from the RCA's can be seen in the table 1 below:

Table 1.

Pre/post 48 hrs		Likely Cause		Recurrent Themes	
Pre 48 hrs	46%	Wound	38%	Poor IV documentation	35%
Post 48 hrs	54%	Supra pubic	14%	Non-adherence to screening policy	19%
Gender		IV	30%	Non-compliance with decolonisation	14%
Male	68%	Unknown	13%		
Female	32%	Other	5%		

(Please note: The themes identified within the table are only those that are recurrent therefore totalling 68%)

Initiatives to reduce the risk of MRSA bacteraemias include the screening of all elective surgical patients, trauma patients and patients who have risk factors for MRSA carriage. Patients identified as MRSA positive are treated topically prior to surgery where possible. Chloraprep has been introduced to the Trust for use as skin preparation for central line insertion. This contains 2% chlorhexidine in line with the Evidence Based Practice in Infection Control (EPIC) Guidelines. Central line boxes are also kept on each Ward to ensure all equipment is available to enable best practice when inserting central lines.

The MRSA isolation bays on Sarratt Ward (WGH) and Lancaster Ward (HHGH) remain open and ensure effective isolation of patients.

Other infection control initiatives include:

- Appointment of an IV Nurse to improve and monitor practice
- Appointment of an Infection Control Administrator, Infection Control Support Worker and Data Administrator
- Yellow badges stating 'Please ask me if my hands are clean' to encourage patient empowerment
- Large banners and posters encouraging hand hygiene amongst visitors as well as staff, strategically placed throughout the Trust
- All Wards/Departments have a designated infection control notice board
- Bi-monthly Infection Control Link Persons meetings attended by the Director of Nursing
- Continued participation in the cleanyourhands campaign
- Dress code has been implemented for all clinical staff
- An infection control article/features in the Trust's quarterly Nursing & Midwifery newsletter
- Participation in the National bi-annual 'Think Clean Week'
- Screen saver promoting hand hygiene for all Trust users
- Increased awareness of hand hygiene ie. Introduction of Dr's dress code and zero tolerance of non-compliance
- 'Bare below the elbow' posters across the Trust to re-enforce zero tolerance of non-compliance
- Weekly hand hygiene audits in all clinical areas
- Implementation of yellow aprons for isolation areas in line with National standards

4. **CONTINUOUS MONITORING OF 'ALERT' ORGANISMS MAINLY, MRSA & CLOSTRIDIUM DIFFICILE (C. DIFF)**

Surveillance data of MRSA and CDT isolates are disseminated to Departmental Heads on a monthly basis and are then cascaded to each Ward/Department. The graph below identifies the number of new *C. diff* isolates reported within the Trust throughout the year (April '07 - March '08).

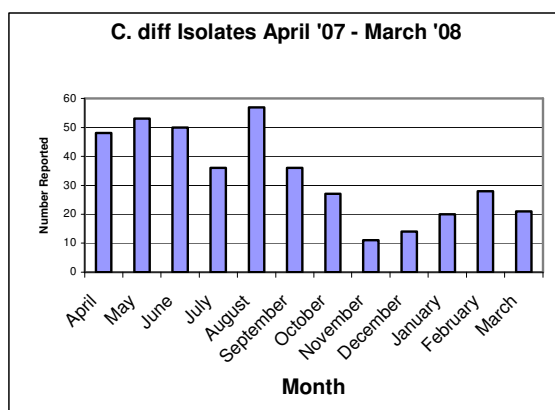


Figure 2. *C. difficile* Isolates Reported

The Trust has updated its Antibiotic Guidelines designed to reduce the number of patients who may develop *C.diff* associated diarrhoea (CDAD). Antibiotic usage is audited by the Pharmacy Department and findings are discussed at the weekly Infection Control meeting. Further initiatives include the administration of Probiotics, reviewing Protein Pump Inhibitors, appointment of an Antibiotic Pharmacist and identifying patients with an increased susceptibility to CDAD by putting a green dot on patient drug charts.

To enable rapid isolation and appropriate treatment of CDAD, testing is now undertaken six days a week and results are available by mid-day.

An Isolation Ward has opened in both Hemel Hempstead and Watford General Hospitals for patients with CDAD. This measure was instigated due to insufficient isolation facilities and following recommendations made following a visit by the MRSA Department of Health Team, due to the high number of positive *C.diff* isolates across the Trust. Since opening these Wards, along with a number of other initiatives implemented, there has been a dramatic reduction in *C. diff* rates.

The use of Antibiotics and Protein Pump Inhibitors are actively monitored by the Trust's Pharmacy Department. This enables audit of the compliance with Trust guidelines as part of the initiative to reduce the incidence of *C. diff* diarrhoea.

5. HAND HYGIENE

Hand hygiene education is taught on all infection control mandatory and induction sessions and continually re-enforced on a day-to-day basis. Purell secured the contract for soap and moisturiser in November 2007 for use within the Trust in line with requirements from the National Patient Safety Agency (NPASA). Education continues to be on-going by the ICN's and Purell.

Weekly Lewisham hand hygiene observations are undertaken in all clinical areas and results displayed on Ward/Department infection control notice boards. The Director of Nursing investigates areas scoring less than 90% compliance to ascertain what actions are being taken to improve compliance. Executive Directors also undertake weekly walk-about in the clinical areas to monitor hand hygiene compliance. In an attempt to improve hand hygiene compliance, there is now a Dress Code for all clinical staff including Doctors stating '*bare below the elbow*'.

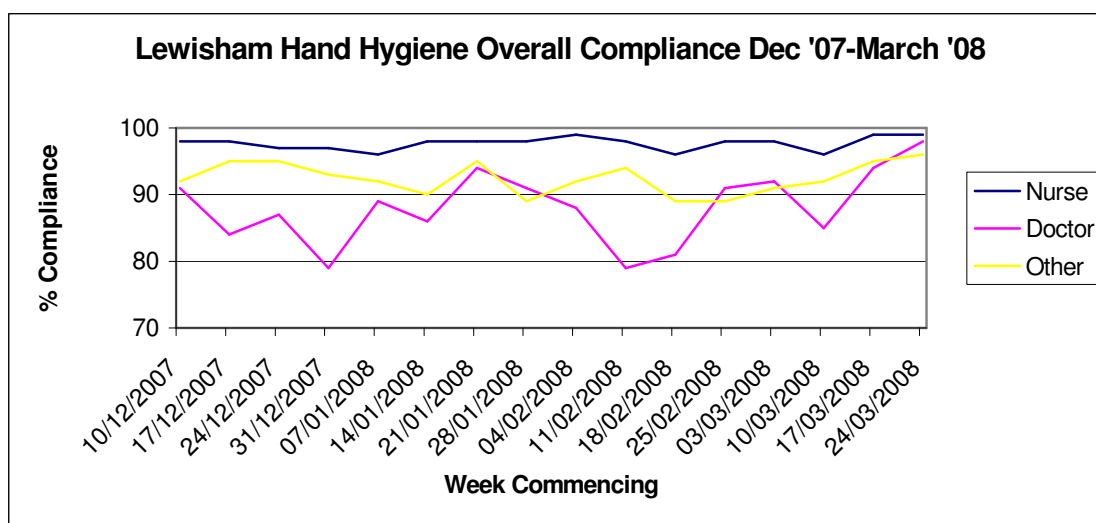


Figure 4. Lewisham Hand Hygiene overall Compliance December '07 - March '08

6. OUTBREAKS

There were no outbreaks during the year requiring closure of any Wards. There were however investigations undertaken by the ICN's following concerns reported by Wards.

Diarrhoea and Vomiting - Three Wards in Medicine and Elderly Care raised concerns about diarrhoea and vomiting at HHGH. On investigation two Wards (January and March '08) were not of concern as most patients had been taking laxatives or had underlying medical conditions resulting in altered bowel habits. The third case (November '07) where six patients were involved, resolved in four days after rapid isolation and review of laxatives and antibiotic therapy. There were no problems reported on the Watford or St Albans sites.

Norovirus - One Norovirus isolate was identified in the Trust in A&E in December '07 and one on Sopwell Ward (PCT) in January '08. Following investigation there was no obvious link between these two cases.

MRSA on Special Care Baby Unit (SCBU) - An outbreak of MRSA in the SCBU involved five babies. Upon investigation by the ICT and staff screening, a member of staff was identified as the index case. The outbreak was successfully handled and brought under control.

7. POLICIES AND PROCEDURES

The following policies and procedures were up-dated and ratified in early 2008 and are now available on the Trust Intranet site.

- Introduction - Control of Infection Manual Containing Policies and Guidelines for Safe Practice (January '08)
- Policy for Standard Infection Control Precautions (January '08)
- Hand Hygiene Policy (February '08)
- Infection Control Clinical Waste Policy (January '08)
- Isolation Policy for Patients with Communicable Diseases / Infections and Immunocompromised Patients (January '08)
- Guidelines for the Management of Meningococcal and Haemophilus Influenzae Meningitis, Septicaemia and Other Related Diseases (January '08)
- Guidelines for the Prevention and Management of Methicillin Resistant *Staphylococcus aureus* (MRSA) (January '08)
- Tuberculosis Management in a Hospital Setting (January '08)
- Outbreak Policy (January '08)
- Guidelines for the Management of Creutzfeldt Jakob Disease (CJD) and Related Disorders in Hospital (January '08)
- Vancomycin / Glycopeptide Resistant Enterococcus (VRE / GRE) Guidelines (January '08)
- Guidelines for the Prevention and Management of Severe Acute Respiratory Syndrome Guidelines (SARS) (January '08)
- Guidelines for the Prevention and Management of *Clostridium difficile* Associated Disease (CDAD) (January '08)
- Guidelines for the Management of Patient's Soiled Personal Clothing (January '08)

The Trust's Decontamination Policy is currently under review.

Compliance with these policies is monitored through audits, root cause analysis and surveillance. This enables timely provision of infection control data and feedback to individual Divisions.

8. DEPARTMENT OF HEALTH VISITS

The Department of Health MRSA Team visited the Trust on several occasions during the 2007/08 to investigate the high number of *C. diff* isolates within the Trust, and review progress against recommended actions. Following their initial visit, a Trust Health-care Associated Infection Action Plan was produced and is reviewed regularly.

9. ENVIRONMENT

A 12-week rolling programme for environmental deep cleaning was initiated in September '07 and was completed on target by 31st March 2008 for all in-patient areas. This includes the use of Sterinis machines purchased by the Trust, which release Hydrogen Peroxide vapour into the room after the deep clean. The vapour is able to penetrate the most inaccessible places and is effective in destroying *C.diff* spores therefore reducing the environmental load.

Bed capacity in the Isolation Wards has been reduced from six to four beds per bay, which enables enhanced environmental cleaning and reduced risk of cross-infection. This measure allows the strategic management of patients with *C.diff* diarrhoea by:

- Reducing the number of additional exposed patients
- Reducing bed days lost on wards across the Trust
- Assisting in the reduction in patients and staff exposure to environmental contamination

This has contributed to the measures already in place to reduce the number of *C. diff* cases.

10. DECONTAMINATION

A further initiative to reduce health care associated infection across the Trust was the implementation of Chlorclean, which is a detergent/hypochlorite that can be used for decontamination of the environment and equipment. The advantages of this product are a reduction in time and labour associated with separate activities of cleaning and disinfection and it's effectiveness against *C. diff* spores contaminating the environment and services. Any adverse reactions are reported and escalated to both Occupational Health and the Health and Safety Officer.

Additional initiatives implemented include:

- Implementation of National Cleaning Standards and cleaning requirements of Domestics, Nurses and Estates
- Commode replacement programme with easily dismantled commodes to aid cleaning
- Due to the insufficient number of curtains within the organisation at any one time, disposable curtains are used in the Isolation Wards to ensure they are changed frequently in line with the Trust's Operational Policy. This measure fosters patient perception that the Trust is being thoroughly cleaned.
- Rapid Response Teams are in place on Hospital sites to ensure prompt response to requests by wards for urgent cleaning.

11. AUDIT

A number of audits have been undertaken during the year which include:

Table 2.**Audits undertaken April '07 - March '08**

Audit	Date	Frequency	Carried out by:
Sharps audit	August '07	Annually	Daniels
Sluice / commode audit	September '07	Annually	Vernacare
Intravenous audits	October '07	On-going	IV nurse
Environmental audits	On-going	On-going	ICT
Hand Hygiene audits	On-going	Weekly	Wards/Departments/ICT
HII Urinary catheter audits	On-going	Weekly	Matrons

Audit results are disseminated to Departmental Heads and Matrons for cascading within their clinical area. Where appropriate, results are also forwarded to Infection Control Link Persons.

12. TRAINING

Staff training has continued throughout the year, both formally and informally. Much of the education is ad hoc on a daily basis. A representative from Purell has provided ward based hand hygiene training on four occasions since the introduction of Purell soap in November '07. This will continue as part of their educational service to the Trust. Medical training has also taken place on a number of occasions both formally and informally.

Table 3.**Training and Education Undertaken for Staff**

Training	No. of Staff Trained
Mandatory training	1262
Induction training	354
Infection Control single study day	13
IV study day	31
Sarratt ward – MRSA & <i>C.diff</i> teaching	10
Chlorclean training by Guest Medical	158
Medirest training	8

Infection control awareness days continue to be undertaken. This is directed at raising awareness of infection control and is directed towards our staff and visiting public. Competitions and other events are included in the days. These were undertaken on 23 - 27th April 2007 and October 29th - November 2nd 2007 during the Trust's Think Clean Week where nearly 1000 members of staff and the public visited displays.

13. FUTURE PRIORITIES & DIRECTION - 2008/09

- Appointment of an Assistant Director of Infection, Prevention & Control
- Provide monthly formal mandatory infection control update/education for all staff (approximately 4 to 6 sessions per month)
- Provide infection control training on Medical Staff Induction programmes, 4 sessions at least twice yearly - February and August

- Continue to raise awareness amongst staff regarding the importance of hand decontamination in the prevention and control of infection in all educational sessions and on routine visits to the clinical areas
- Continue to deliver the 6 day Infection Control Awareness course in August/September 2008
- Implementation of a detailed audit programme to determine Trust compliance with key Infection Control Policies and Procedure
- Assist Divisions in embedding the principles outlined in the Hygiene Code Duties
- The ICT will continue to advise, contribute and/or lead on the following organisation action plans:
 - ◆ Hygiene Code Action Plans
 - ◆ 'Saving Lives' Action Plan and Balance Scorecard
 - ◆ Trust HCAI Action Plan
 - ◆ NHSLA Standards

14. CONCLUSION

During the past year there has been a substantial rise in the profile of infection control within the Trust. By continuing the current practice of audit, surveillance, development of new policies and continually finding ways to enhance best practice, this will reduce HCAI's even further.

Infection control is the responsibility of every member of staff and must remain a high priority for all to ensure the best outcome for our patients.

Infection Control Team
May 2008