

6.4

LOTHIAN NHS BOARD

Board Meeting
24 March 2010

Director of Public Health & Health Policy

HEALTHCARE ASSOCIATED INFECTION

1 Purpose of the Report

- 1.1 The purpose of this Report is to update the Board on progress and actions to reduce and manage Healthcare Associated Infection (HAI) across NHS Lothian. Actions from this report are overseen through Infection Control Committees and the Lothian Infection Control Advisory Committee (LICAC).

2 Recommendations

- 2.1 The Board is recommended to support the following activities in delivering the agenda to reduce and manage Healthcare Associated Infection:

- The ongoing surveillance of MRSA and MSSA Bacteraemia to target resources for a sustained reduction
- Scottish Patient Safety Programme (SPSP) work within Lothian on the development and testing of processes and practice to prevent Healthcare Associated Infection related to central venous and peripheral cannulae
- The ongoing progression of the *Clostridium difficile* (CDI) reduction programme into other care areas using the Scottish Patient Safety Programme Approach
- Continuing communications to staff, patients and the public about the importance of hand hygiene
- The ongoing roll-out of the of the MRSA screening programme
- Promotion of the principles of prudent antibiotic prescribing through the work of the Antimicrobial Team (AMT) in the production, implementation and audit of adherence to the Antibiotic Prescribing Guidelines, which promote use of antimicrobials with a low propensity to cause *Clostridium difficile*.

3 Summary of the Issues

- In February 2010, 33 *Staphylococcus aureus* Bacteraemia (SAB) episodes were recorded (5 MRSA, 28 MSSA), compared to 31 in January 2010 (11 MRSA, 20 MSSA). Early indications for March 2010 are that MRSA and MSSA rates will remain stable at the current level.
- In February 2010, 46 *Clostridium difficile* episodes were recorded, of which 31 were in patients aged 65 or over; this is a decrease

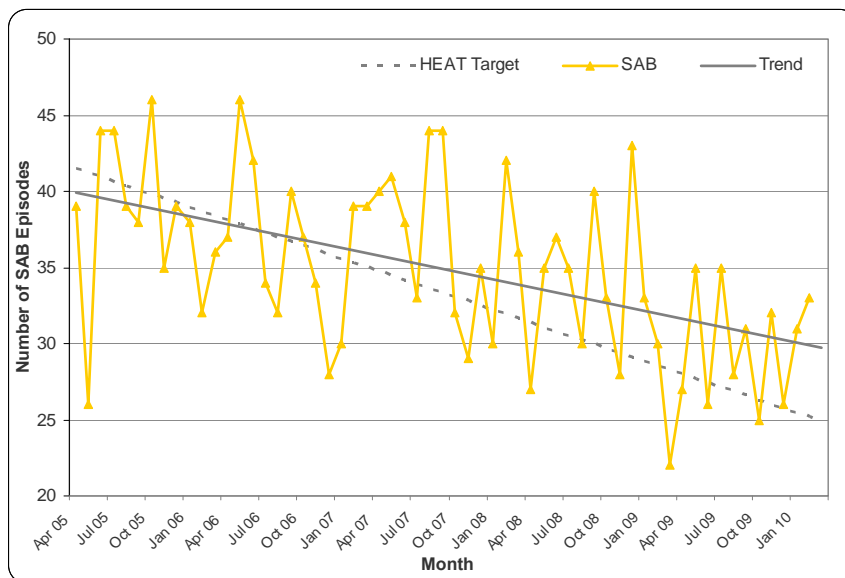
from January 2010 when there were 60, of which 45 were in patients aged 65.

- The most recent National Hand Hygiene Audits indicate that NHS Lothian is achieving a compliance rate of 94%.
- NHS Lothian's MRSA screening programme roll-out has been completed in all 'in scope' areas and good progress has been made within all project work streams.

4 Healthcare Associated Infection Report

4.1 MRSA rates continue to be low. Infection Control within NHS Lothian is working closely with the Scottish Patient Safety Programme, Health Protection Scotland (HPS) and NHS Quality Improvement Scotland (QIS) to address the issue of *Staphylococcus aureus* bacteraemias. Work continues to tackle MSSA that originates in the community to reduce the proportion of patients admitted for treatment. In relation to the current HEAT Status, the target for March 2010 is 299 episodes of *Staphylococcus aureus* Bacteraemia. To date there have been 329 episodes, 32 over target. The recent figure, 329, includes those who have been admitted for treatment and over the next year we will move towards a new figure of 265.

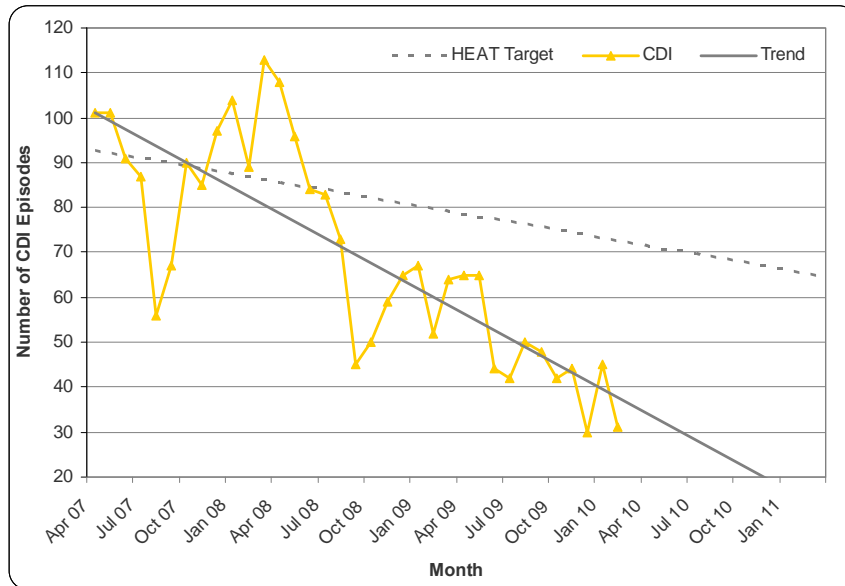
Figure 1: NHS Lothian SAB Trajectory



4.2 Clostridium difficile infection (CDI)

The annual incidence rate in Scotland is 1.29 cases of *Clostridium difficile* per 1000 total Occupied Bed Days (OCBDs). NHS Lothian's annual incidence is reported by Health Protection Scotland as below the national average, at 1.20. In relation to the current HEAT status, the target for March 2010 is 891. To date, there have been 506 episodes.

Figure 2: CDI HEAT Target Trajectory NHS Lothian (>65 years)



4.2.1 Current/new initiatives to reduce cases include:

- NHS Lothian has set NES Clinical Scenario training for *Clostridium difficile* as a requirement for medical staff for the completion of Continuing Professional Development (CPD).
- Testing of the *Clostridium difficile* toolkit continues across all acute sites and data return continues to improve. The Infection Control Team (ICT) are continuing discussions with community in-patient sites about the potential for adapting and using the tool in the non-acute setting.
- The Antimicrobial and Infection Control Team are testing a system of reporting antimicrobial usage in conjunction with *Clostridium difficile* rates to clinical teams.
- Information leaflets, developed in consultation with our patient/public representatives, are available.

4.3 **Critical Care Surveillance**

Patients who have been in the Intensive Care Unit for longer than 48 hours are monitored for Catheter Related Blood Stream Infections (CRBSI) and Ventilator Associated Pneumonia (VAP). The bloodstream infection rate within the Royal Infirmary Edinburgh has been below average for three consecutive months. At the time of writing, it has been nearly seven months since the last Catheter-related Blood Stream Infection at Western General Hospital. Ventilator Associated Pneumonia rates remain in control within the Royal Infirmary Edinburgh (RIE). The Ventilator Associated Pneumonia rate in December 2009 was above average, which further analysis indicated was due to the H1N1 burden. To date this winter the Ventilator Associated Pneumonia rate within the Western General Hospital (WGH) has remained below average. As in previous reports, the incidence of infection within the ITU at St John's remains so low as to be statistically insignificant.

Figure 3: RIE ITU VAP per 1000 ventilator days

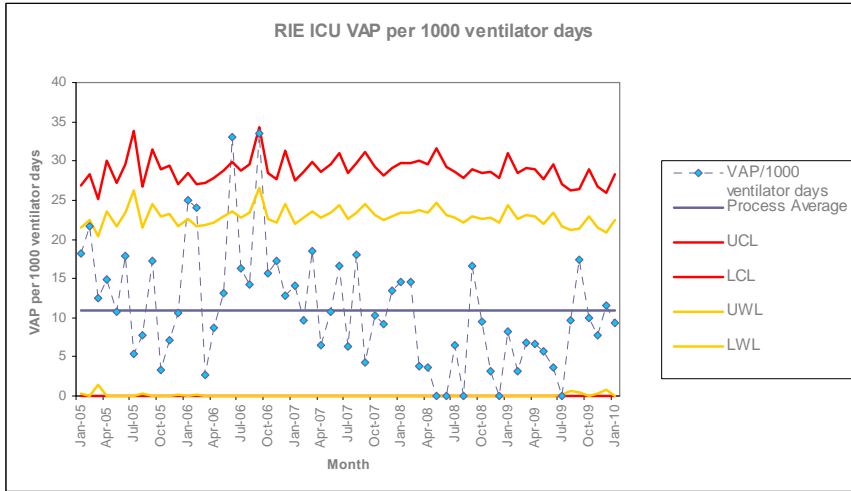


Figure 5: WGH ITU VAP per 1000 ventilator days

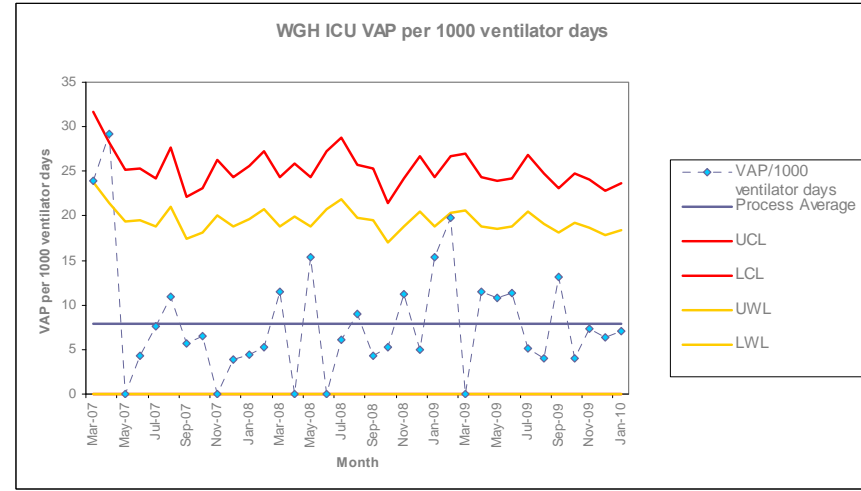


Figure 4: RIE ITU CRBSI per 1000 catheter days

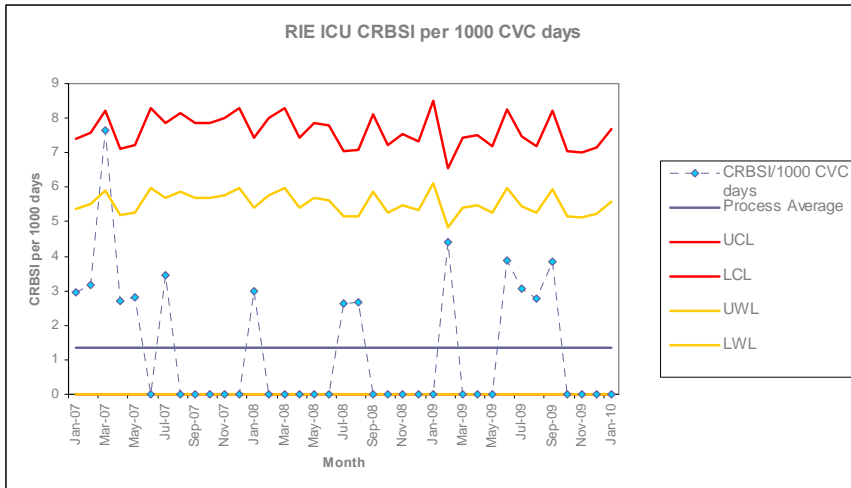
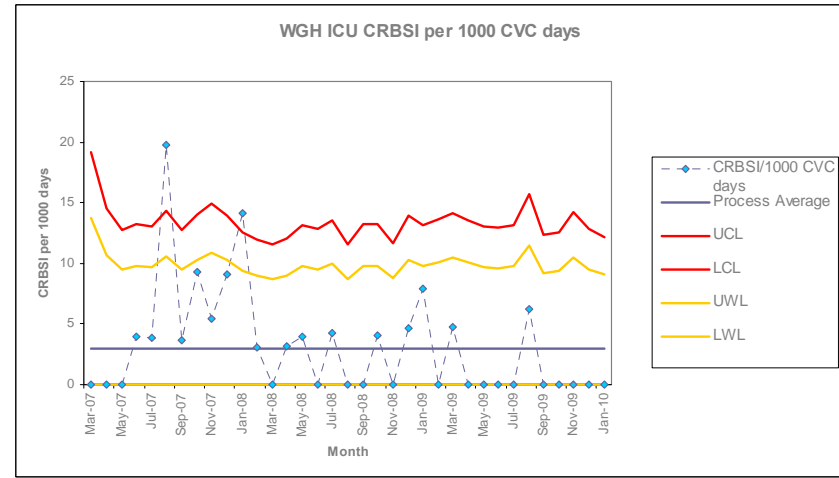


Figure 6: WGH ITU CRBSI per 1000 catheter days



4.4 Surgical Site Surveillance

Table 1: Infection Rates for NHS Lothian October to December 2009

Site	Procedure	Number of procedures	Number of infections	Infection Rate	National Data set
RIE	Hip Arthroplasty	317	9	2.84%	1.74%
	C-sections	422	17	4.03%	3.21%
	Abdominal Hysterectomy	83	8	9.64%	5.85%
SJH	C-sections	202	7	3.47%	3.21%
	Abdominal Hysterectomy	25	0	0%	5.85%

Table 2: Combined Lothian Figures for January to December 2009

Lothian	Procedure	Number of procedures	Number of infections	Infection Rate	National Data set
Lothian	Hip Arthroplasty	1293	23	1.78%	1.58%
	C-sections	2401	115	4.79%	4.11%
	Abdominal Hysterectomy	428	37	8.64%	6.12%

Current developments include collaborative working with Tissue Viability Nurses to produce a patient information booklet, a new waterproof dressing which allows visual assessment and a wound management guideline. At present this development is targeting caesarean section; a similar activity is scheduled for patients following Abdominal Hysterectomy.

4.5 Norovirus

To date there have been 150 incidents of gastro-enteritis investigated in NHS Lothian. Of these Norovirus has been confirmed in 127 (84.7%) of the incidents by the Virology laboratory. In the remaining 23 (15.3%) the cause was not identified.

5 Healthcare Inspectorate Visits

5.1 There have been two Healthcare Environment Inspectorate (HEI) visits to the Royal Infirmary Edinburgh (RIE) in January and February 2010. The announced visit took place on 18-19/1/2010; the unannounced on 2/2/2010. The short timeframe between them was a consequence of the Healthcare Environment Inspectorate's administrative error in providing a detailed programme for the announced visit and the subsequent publicity. They have acknowledged this was an error on their part and have issued an apology. The Inspectorate provided feedback after both visits and, overall, was satisfied with the standards being achieved. The Regional Inspector stated the findings of the unannounced visit were consistent with that of the announced. Of all the visits and reports so far, NHS Lothian's has been the most positive. Some of the positive findings were:

- There was a comprehensive infection control manual from a well-defined Infection Control Team.
- There were accessible anti-microbial prescribing policies, available to all staff, along with new anti-microbial prescribing guidelines released in December 2009.

- There was evidence throughout the Royal Infirmary Edinburgh that risk assessment formed part of the day-to-day running and management of ward areas.
- There was a communication strategy that provides a framework to ensure communication was central to activities at all levels, both internally and externally. There was a large selection of leaflets/posters available giving information on Healthcare Associated Infection and other topics
- Public representatives confirmed that members of the public are involved in infection control activities across NHS Lothian. There is a strong public involvement programme and patient representatives reported that they were involved in the review and development of Healthcare Associated Infection information and leaflets for patients and the wider public. The Inspection Team considered that NHS Lothian was committed to involving members of the public in infection control.
- There was a very high focus on education in the prevention and control of infection for new staff, alongside mandatory infection control update training every 18 months. The Inspection Team commended NHS Lothian for their approach.
- The Inspectorate Team highlighted that NHS Lothian encouraged staff to undertake the Cleanliness Champions programme which, at the time of inspection, over 200 staff members in the Royal Infirmary of Edinburgh had completed.
- The majority of patients spoke positively regarding ward cleanliness.

Areas for further development were:

- To continue the review and update of the Infection Control Manual.
- Clearer lines of responsibility and accountability, alongside more effective communication to ward staff.
- A review of the procedure for the dissemination of patient leaflets and the placement of Healthcare Associated Infection and hand hygiene information
- To review the use of pictorial notices in addition to written signage to ensure information is accessible to all.
- To ensure consistency in the recording of cleaning activities.
- The continued monitoring of local waste policy implementation
- To review the placement of alcohol gel dispensers in outpatients to improve access.

6 MRSA Screening Programme

6.1 All required areas are screening per criteria: to date, over 1,000 screens have been taken, with a MRSA positive rate of 4%. Daily automated reports are used to monitor swabbing activity. Processes to ensure the efficient supply of the required decolonisation medication have been implemented.

7 Antimicrobial Management Team (AMT)

- 7.1 A revised version of the Antibiotic Prescribing Guidelines, advocating minimal use of antibiotics with a high association with *Clostridium difficile* has been published.

An audit of the national key prescribing indicator for empiric antibiotic prescribing for new admissions has been implemented in all acute sites. Within Primary Care an audit on the seasonal variation in prescribing of quinolones has been undertaken.

Surgical prophylaxis prescribing policies have been reviewed to ensure compliance with SIGN 104 and Indicators set to measure adherence.

The Anti-microbial Team has delivered education programmes for non-medical prescribers on prudent antibiotic prescribing and is participating in the mandatory induction training programme for junior clinicians. Training has also been delivered to GPs in selected general practices.

8 Hand Hygiene programme

- 8.1 The sixth bi-monthly National Hand Hygiene Audits (January 2010) indicate a compliance rate of 94%. All staff groups are above the minimum national target of 90% compliance.

9 Cleaning Services Specification Compliance

- 9.1 In the year to date, 3,762 audits have been conducted. Of these, 3,563 audits were above 90% (green); 194 audits were between 70% and 90% (amber); 5 audits were below 70% (red).

- 9.2 Current/new initiatives include that in preparation for the HEI Inspections, Domestic Services compiled a manual which will hold all relevant documentation pertaining to the cleaning and maintenance.

10 Decontamination

- 10.1 Lauriston Ear, Nose and Throat (ENT)
Funding has now been approved for the redesign and refit of the decontamination unit within Ear, Nose and Throat.

- 10.2 Lauriston Central Sterilising Unit
All reprocessing of instruments has now been transferred to HSDU. Additional single-use dental instruments are being sourced to ensure sufficient equipment is available at all times.

- 10.3 Dental and Podiatry Decontamination
The Service is developing an option appraisal for centralising decontamination for podiatry and salaried dental services.

- 10.4 Endoscopy

The decontamination unit is in the final stages of completion and validation.

11. Progress on compliance with the national HAI programme

- 11.1 The remaining action is implementation of the recommendations of the Charge Nurse review (target date December 2010).

12. Significant HAI incidents / outbreaks, emerging threats

- 12.1 Liberton Hospital: four patients were identified with invasive group A *Streptococcal* (iGAS) infection from blood cultures in one ward at Liberton Hospital between 28/01/10 and 12/02/10. Two patients subsequently died, one was discharged and the last patient remains in the ward and is clinically well. There have been no further cases since 12/02/10.
- 12.2 Western General Hospital: a cluster of ten patients presented with Respiratory Syncytial Virus. There have been no further cases since 15/02/10.

Fiona Cameron
Infection Control Manager
18 March 2010