

# 8.4

## **LOTHIAN NHS BOARD**

Board Meeting  
24 September 2008

Director of Public Health & Health Policy

### **HEALTHCARE ASSOCIATED INFECTION**

#### **1 Purpose of the Report**

The purpose of this report is to update the Board on progress and actions to reduce Healthcare Associated Infection across NHS Lothian.

#### **2 Recommendations**

The Board is asked to note the following activities in delivering the agenda to reduce and manage Healthcare Associated Infection, under the Director of Public Health and Health Policy's leadership:

- Enhanced surveillance of Staphylococcus aureus bacteraemia through root cause analysis.
- Each Clinical Management Team will be working with infection control staff to agree and deliver local action plans to meet the local targets for reducing Staphylococcus Bacteraemias. These action plans will, together, produce the required ongoing reduction in bacteraemia rates.
- The establishment of a project management team for the implementation of Clostridium difficile care bundles to Lothian. A care bundle is a collection of interventions applicable to the management of Clostridium difficile, such as reviewing anti-microbial prescribing and environmental cleaning.
- Quality improvement in mandatory surveillance data submitted by clinical staff.
- The continuation of education programmes for prevention and management of healthcare associated infections including mandatory education in acute services and CHPs.

### 3 Summary of the Issues

- Twenty-seven episodes of Staphylococcus aureus bacteraemia were reported in August 08 (14 MRSA, 13 MSSA), compared to 32 in June and 28 in July.

Clostridium difficile rates for the last 4 reported months have shown a decrease in the number of cases:

May – 116                  June – 102                  July – 96                  August - 91

- Mandatory surveillance of surgical site infections: additional investigation is undertaken routinely where rates are above the Scottish average.
- NHS Lothian staff achieved an overall compliance rate of 87% in the last national Hand Hygiene campaign. It is anticipated the results of most recent audit, due to be published 1st October, will show NHS Lothian has achieved an overall 90% compliance rate.
- The NHS Lothian DVD “It all comes out in the wash” has been awarded a certificate of excellence from The Communicators in Business Award team.
- NHS Lothian National Monitoring Framework Cleaning Standards achieved 94.7% compliance overall.
- In July, chlorine-based disinfectant for discharge and post infection cleaning was introduced.
- The implementation of National Colour Coding for domestic services has been delayed due to supplier difficulties.
- Work on WGH Oncology Decontamination facility has been deferred until January 2009.
- HAI Audit tools for specialist areas are under development.
- Sharps related incidents remain the main HAI related incident reported in DATIX.

## 4 Progress & Achievements

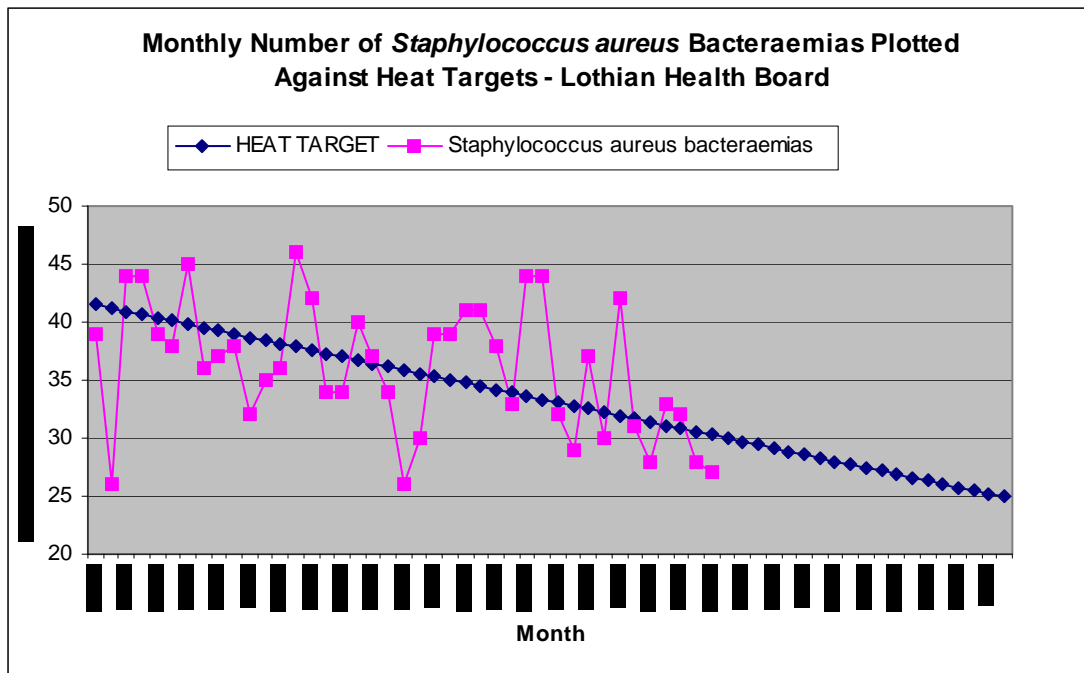
### 4.1 Health Efficiency Access Treatment Target to reduce Staphylococcus Aureus Bacteraemia

#### *Reduction of Meticillin Resistant and Meticillin Sensitive Staphylococcus aureus (MRSA & MSSA)*

Twenty-seven episodes of bacteraemia were reported in August 08 (14 MRSA, 13 MSSA). This compares with 33 episodes in May 2008 (13 and 20 respectively) and 32 in June 2008 (8 and 24 respectively). In July and August 2008 the rate fell below the HEAT target but the overall picture shows that the rates are not yet in line with the HEAT targets (Figure 1).

To meet the Government's HEAT target, enhanced surveillance and root cause analysis is being introduced. This will assist in the categorisation of the bacteraemias enabling a focused approach.

Figure 1 NHS Lothian Monthly Staphylococcus aureus bacteraemia rates



## 4.2 *Clostridium difficile* Associated Disease (CDAD)

*Clostridium difficile* rate for the last quarter was 1.47 per 1000 patient bed days. The rate for the quarter is lower than the rates for the preceding two quarters (Tables 1, 2, 3).

Rates for the last 4 months have shown a decrease in the number of cases:

May – 116                      June – 102                      July – 96                      August – 91

**Table 1 Quarterly Rates of CDAD per 1000 Occupied Bed Days Jan 07 to Mar 08**

	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun
<b>Acute Sector</b>	1.65	1.64	1.42	1.60	1.73	1.47

\*These figures include all ages.

**Table 2 Quarterly Numbers Acute sector**

	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jun-July-Aug
<b>Liberton</b>	35	33	18	35	44	17	6
<b>RIE</b>	135	112	101	125	125	120	95
<b>RVH</b>	21	23	14	10	17	10	7
<b>SJH</b>	20	34	39	38	35	34	41
<b>WGH</b>	108	102	85	77	99	88	61
<b>TOTAL</b>	<b>319</b>	<b>304</b>	<b>257</b>	<b>285</b>	<b>320</b>	<b>269</b>	<b>210</b>

\*These figures include all ages

**Table 3 Quarterly Numbers Primary Care**

	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jun-July-Aug
<b>AAH</b>	7	13	12	16	20	8	7
<b>Roodlands</b>	4	12	7	8	12	5	7
<b>GP</b>	25	24	23	34	50	52	44
<b>Others</b>	14	12	7	5	3	3	4
<b>TOTAL</b>	<b>50</b>	<b>61</b>	<b>49</b>	<b>63</b>	<b>85</b>	<b>68</b>	<b>62</b>

\*These figures include all ages

## 4.3 Surveillance programme

### 4.3.1 Mandatory

Mandatory surgical site surveillance continues within Orthopaedics, Obstetrics and Gynaecology. Infection rates for Obstetrics and Gynaecology remain a concern for NHS Lothian with 27 infections from 599 procedures, an average rate of 4.5%. Surveillance data submissions are incomplete and risk factors such as Body Mass Index have not been provided on data collection tool. It is difficult to analyse the information with data provided. Work is ongoing with the clinical teams to improve the quality of data collection.

**Table 4 Mandatory Surgical Site Surveillance Report 01/04/08 to 30/06/08**

<b>Site</b>	<b>Procedure</b>	<b>Number of procedures</b>	<b>Number of infections</b>	<b>Infection Rate</b>
<b>RIE</b>	Hip Arthroplasty	303	6	1.98%
	C-sections	406	15	3.69%
	Abdominal Hysterectomy	68	4	5.88%
<b>West Lothian</b>	C-sections	112	8	7.14%
	Abdominal Hysterectomy	13	0	0%

#### **4.3.2 Critical Care**

As part of the Scottish Safer Patient Programme NHS Lothian Critical Care are implementing the Ventilator Associated Pneumonia and Central Line Insertion and Care bundles. A care bundle is a series of procedural steps and interventions to reduce the risk of infections. Table 5 provides results for May - July 2008 using the HELICS database.

**Table 5 Critical Care Infections for 01/04/08 to 30/06/08**

<b>Infection type</b>	<b>RIE</b>	<b>WGH</b>	<b>St John's</b>
<b>Ventilator associated pneumonia</b>	2	5	0
<b>Bloodstream infection</b>	7	9	2
<b>Catheter related bloodstream infection</b>	1	2	1

#### **4.3.3 Norovirus**

A point prevalence report is submitted weekly to Health Protection Scotland. Current trends in Scotland show low-level incidence. Within NHS Lothian there have been no outbreaks since June. However the situation is being closely monitored as the Norovirus season in 2007 started in September.

#### **4.3.4 Antibiotic resistance**

Additional electronic antibiotic resistance surveillance is underway. Urinary tract antibiotic resistance data from primary care sector has been collated and the final report is expected imminently. Additional surveillance will be phased in as part of the program to tackle antimicrobial resistance with the assistance of the Healthcare Associated Infection funded biomedical Scientists.

#### 4.4 Hand Hygiene

The 3<sup>rd</sup> National Compliance with Hand Hygiene – Audit Report, released July 2<sup>nd</sup> 2008 indicated that NHS Lothian achieved 87% compliance with hand hygiene. Preliminary reports from the audit phase in August 2008, due to be reported 1st October, indicate NHS Lothian will achieve the target of 90% compliance. The Hand Hygiene Co-ordinator completed audits in Liberton Hospital and Royal Hospital for Sick Children. The hand hygiene audits of the Western General Hospital are in progress.

Hand hygiene posters continue to be refreshed regularly, with the addition of the recently launched NHS Lothian eye-catching 'exgerminate' posters.

#### 4.5 HAI Audit Tools

Follow up awareness sessions for the audit packages were held on each site in the acute operating division. Returns of completed audits are increasing consistently across the division. A report is being compiled for presentation at the Clinical Governance and Risk Management Group in October 2008 detailing progress made to date and plans for further development, including the roll out of the package into all Lothian CHP areas.

Discussions are ongoing to determine the most effective and useful way in which to feedback audit data to individual Clinical Management Teams.

#### 4.6 Education and Training

##### 4.6.1 Cleanliness Champion Programme

The Cleanliness Champions Programme continues to be actively promoted amongst all staff across NHS Lothian. With the issue of the HDL (2005) 7, Chief Nursing Officer for Scotland urged all G grades to complete the programme. To date of the 790 who have completed in NHS Lothian are G grade or equivalent (Table 6).

**Table 6 Cleanliness Champion Programmes**

<b>Hospital</b>	<b>Number G Grades completed</b>
<b>WGH</b>	38
<b>RIE</b>	63
<b>Liberton</b>	All
<b>RVH</b>	All
<b>Lauriston</b>	2
<b>PAEP</b>	2
<b>RHSC</b>	18
<b>St John's</b>	56

#### **4.6.2 Study days**

In addition to the mandatory and local education sessions a study afternoon was held in July at Royal Edinburgh Hospital. Content included E. Coli O157, T.B. & virology update including Norovirus.

### **4.7 Domestic Services**

#### **4.7.1 Laundry**

The NHS Lothian DVD "It all comes out in the wash" has been awarded a certificate of excellence from The Communicators in Business Award team. This is in addition to the Health Facilities Innovation Award received in November 2007.

#### **4.7.2 National Framework for Monitoring Services**

The First Quarterly (April to June) Compliance report was published in August 2008. NHS Lothian's overall total score in quarter one for 2008/2009 was 94.7% compared to 94.6% the previous quarter.

All NHS Lothian's Healthcare Facilities received an overall green compliance rating for this quarter. Peer reviews with public involvement continue as a means of validating the self-monitoring results. Ten percent of the audits conducted this quarter were peer reviews.

#### **4.7.3 Terminal Cleans (Post Infection or Discharge Cleaning)**

In July, chlorine-based disinfectant for terminal cleans was introduced. Chlorine based products currently supplied in Lothian have no cleaning ability therefore areas require duplicating cleaning with detergent products.

#### **4.7.4 National Colour Coding**

There has been a delay with NHS Lothian complying with the HAI Task Force's recommendation that NHS Scotland move to an agreed national colour coding method for cleaning materials and equipment. Our supplier is experiencing difficulties in supplying the volume of materials required. We have moved the commencement date to October 2008.

#### **4.7.5 Laundry**

Monitoring and recording of inappropriate items sent to the laundry continues. Whilst there is an improvement on the number of items received previously, the laundry staffs continue to be exposed to at risk items.

### **4.8 Decontamination**

#### **4.8.1 Oncology**

Due to other site works being carried out at the WGH this project has been deferred until January 2009.

#### **4.8.2 Lauriston ENT**

Work has not yet commenced. A project leader is to be identified to progress this project.

### 4.8.3 Lauriston Dental Services

An outline business case is being developed for a central decontamination facility.

### 4.8.4 Endoscopy

Work on the upgrade of the St Johns Hospital endoscopy unit, incorporating the centralised decontamination facility, is progressing well and on time. The work of the Short Life Endoscopy Review Group continues. A sub group was convened to take forward the procurement process, in collaboration with National Procurement. The first stage of the tender process has been completed.

### 4.8.5 Tracking and Traceability

Two companies have presented to the endoscopy managers and charge nurses. A business case will be developed and presented to SCCP for approval of funding. The business case will propose this system is installed in St John's as part of the current upgrade followed with a rolling programme to extend to all other areas carrying out endoscopy reprocessing.

### 4.8.6 Primary care Audit Tool

The action plans are being developed by Healthcare Science in collaboration with key stakeholders from podiatry and dental services. It is anticipated that they should be available for comment by end of September prior to submission to the SGHD.

## 4.9 DATIX

There were 154 incidents reported across NHS Lothian (Figure 2) Lothian. The main incident reported remains sharps related (Figure 3).

Figure 2 Datix incidents by hospital

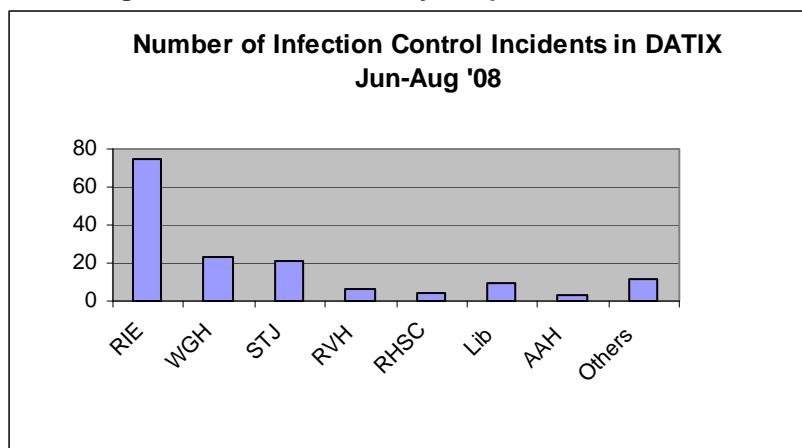
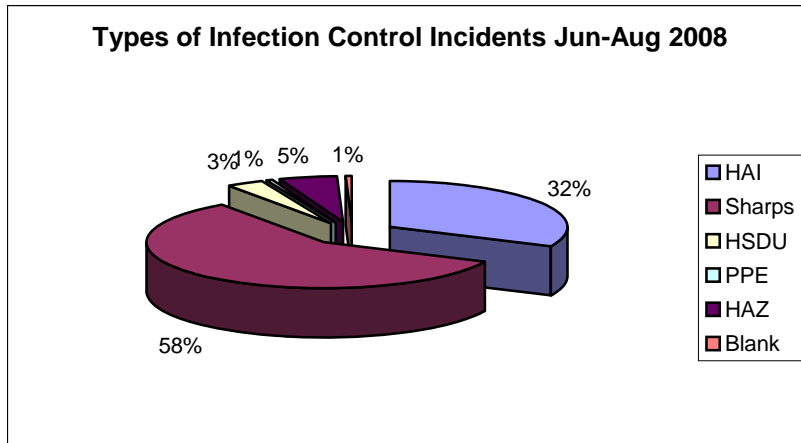


Figure 3 Datix incidents by type



## 5 Areas for Development and Improvement

### 5.1 *Clostridium difficile* Associated Disease

Following on from the interim *Clostridium difficile* pilot results that have shown a reduction of 50% there is a need for a project management group to progress the introduction across Lothian. This should be led by area Clinical Management and Quality Improvement Teams with support from Lothian Scottish Safer Patient team and include key stakeholders representatives from Infection Control, Pharmacy, and Domestic Services.

Liberton Hospital and two ward areas in St John's are currently working towards introduction of the bundles. Work has also commenced in some high-risk areas of the RIE.

### 5.2 Hand Hygiene

Patient and Public Volunteers are presently being recruited NHS Lothian – wide to assist with a variety of hand hygiene awareness raising events.

### 5.3 HAI Audits

Specialist tools for theatres and Outpatients are in draft format for consultation. It is anticipated these tools will be completed and released by the end of October 2008. Additional tools for Neonatal Unit, Accident & Emergency areas will then be developed.

### 5.4 Education

#### 5.4.1 Cleanliness Champion Programme

The Cleanliness Champion Programme team are working with the Non-registered Work Force Planning Team to promote the programme with SVQ2 and SVQ3 candidates and study sessions for Clinical Support Workers. RHSC continues to be proactive in promoting study days for Cleanliness Champions to complete. Renal and Transplant have followed their lead and are now in the process of having twice monthly study days until the end of 2008.

#### **5.4.2 Additional Study Days**

The second of three planned Infection Control Study days for NHS Lothian staff is scheduled to take place on the 9<sup>th</sup> September. The theme for the day is viral infections.

#### **5.4 Decontamination**

The tendering process has commenced for the St John's endoscopy decontamination equipment. There are 10 notes of interest progressing to the next stage.

#### **5.5 Domestic Services**

In partnership with Infection Control, a product which combines cleaning and disinfection in a single step has been identified. Staff training has commenced with a view to introducing this product for use by all staff involved in a terminal clean.

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