

**Borders NHS Board****HEALTHCARE ASSOCIATED INFECTION CONTROL AND PREVENTION REPORT****Aim**

The purpose of this paper is to update Board members of the current status of Healthcare Associated Infections (HAI) and infection control measures in NHS Borders.

**Background**

In line with the NHS Scotland HAI Action Plan 2008, there is a requirement for a Healthcare Associated Infection Control and Prevention report to be presented to the Board on a two monthly basis.

**Summary**

This report provides an overview for Borders NHS Board of performance against Infection Prevention and Control with particular reference to the incidence of Healthcare Associated Infections (HAI) against Scottish Government HEAT targets, together with results from cleanliness monitoring and hand hygiene audit results.

**Recommendation**

The Board is asked to **note** this report

<b>Policy/Strategy Implications</b>	This report is in line with the NHS Scotland HAI Action Plan
<b>Consultation</b>	Not applicable
<b>Consultation with Professional Committees</b>	Not applicable
<b>Risk Assessment</b>	Not applicable
<b>Compliance with Board Policy requirements on Equality and Diversity</b>	Yes
<b>Resource/Staffing Implications</b>	None identified

**Approved by**

<b>Name</b>	<b>Designation</b>	<b>Name</b>	<b>Designation</b>
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## **Healthcare Associated Infection Reporting template (HAIRT)**

### **NHS Borders (Healthcare Associated Infection Reporting Template (HAIRT) Part 1 Up to May 2011 (part 2 attached)**

#### **Introduction**

This report provides an overview for Board of progress relating to Infection Prevention and Control with particular reference to the incidence of Healthcare Associated Infections (HAI), performance against HEAT targets, hand hygiene and cleanliness monitoring.

In line with the NHS Scotland HAI Action Plan 2008, there is a requirement for a Healthcare Associated Infection Control and Prevention report to be presented to the Board on a two monthly basis.

#### **Key Issues**

- Staph aureus Bacteraemia
- Clostridium difficile
- Hand hygiene compliance
- Cleanliness monitoring
- Education
- Outbreaks
- Progress against the 2010/11 Infection Control Work Plan

#### **Important Information**

Important information is presented in graphical format at the end of the report.

#### **Incidence of Healthcare Associated Infections**

All Scottish Health Boards are required to follow mandatory reporting requirements for Meticillin sensitive and resistant *Staphylococcus aureus* Bacteraemias (SAB) and on *Clostridium difficile* Infections (CDI). Health Protection Scotland compile quarterly reports comparing infection rates for all Scottish NHS Boards.

## Healthcare Associated Infection Reporting Template (HAIRT)

### Section 1 – Board Wide Issues

This section of the HAIRT covers Board wide infection prevention and control activity and actions. For reports on individual hospitals, please refer to the 'Healthcare Associated Infection Report Cards' in Section 2.

A report card summarising Board wide statistics can be found at the end of section 1

#### Key Healthcare Associated Infection Headlines for May 2011

- NHS Borders achieved the HEAT target to reduce *Clostridium difficile* Infection (CDI) by 50% by 31<sup>st</sup> March 2011.
- NHS Borders did not achieve the HEAT target to reduce the incidence of *Staphylococcus aureus* Bacteraemia (SAB) by 15% by 31<sup>st</sup> March 2011. However, over the last few months there has been a statistically significant improvement with a period of 57 days without a SAB.
- In the national report on hand hygiene published in May 2011, NHS Borders achieved an overall compliance rate of 94%.

#### **Staphylococcus aureus (including MRSA)**

*Staphylococcus aureus* is an organism which is responsible for a large number of healthcare associated infections, although it can also cause infections in people who have not had any recent contact with the healthcare system. The most common form of this is Meticillin Sensitive *Staphylococcus aureus* (MSSA), but the more well known is MRSA (Meticillin Resistant *Staphylococcus aureus*), which is a specific type of the organism which is resistant to certain antibiotics and is therefore more difficult to treat. More information on these organisms can be found at:

*Staphylococcus aureus*: [http://www.nhs24.com/content/default.asp?page=s5\\_4&articleID=346](http://www.nhs24.com/content/default.asp?page=s5_4&articleID=346)

MRSA: [http://www.nhs24.com/content/default.asp?page=s5\\_4&articleID=252](http://www.nhs24.com/content/default.asp?page=s5_4&articleID=252)

NHS Boards carry out surveillance of *Staphylococcus aureus* blood stream infections, known as bacteraemia. These are a serious form of infection and there is a national target to reduce them. The number of patients with MSSA and MRSA bacteraemia for the Board can be found at the end of section 1 and for each hospital in section 2. Information on the national surveillance programme for *Staphylococcus aureus* bacteraemia can be found at:

<http://www.hps.scot.nhs.uk/haic/sshaip/publicationsdetail.aspx?id=30248>

NHS Borders had a HEAT target to achieve a maximum of 19 *Staphylococcus aureus* Bacteraemia (SAB) cases between 1<sup>st</sup> April 2010 and 31<sup>st</sup> March 2011. During this period, NHS Borders had a total of 45 SAB cases.

Since March, there has been a statistically significant improvement with a period of 57 days without a SAB.

A Prevention of *Staphylococcus aureus* Bacteraemia (PSAB) Group reporting directly to the Board Executive Team was established in 2010. This Group has already implemented a range of targeted measures to reduce the risk to patients of developing a SAB.

A detailed SAB Work Plan which includes a responsible officer and clear deadline against each action has been developed. This programme of work takes account of expert advice sought from Health Protection Scotland, Quality Improvement Scotland and the Scottish Patient Safety Programme, with the PSAB Group continuing to monitor progress against this plan.

Every SAB case is subject to a rigorous Root Cause Analysis (RCA) which includes a feedback process to the clinicians caring for the patient. Any actions identified through this process are added to the overall SAB Work Plan.

Based on the RCA findings, the PSAB Group has established five work streams targeted to improving systems and processes relating to the following areas:

- Data gathering, analysis and feedback
- Peripheral Vascular Cannulae (PVC)
- Hickman lines
- Urinary catheters
- Venepuncture and blood cultures
- Wound care

Care 'bundles' to enforce good practice when using Peripheral Venous Catheters (PVC) have been implemented across Borders General Hospital (BGH). A recent audit showed that compliance with the use of these bundles is steadily improving.

The most common cause of SAB is associated with urinary catheters. A patient-held record has been developed and is currently being testing in a number of locations. This brings together best practice guidance from across the United Kingdom in relation to catheter insertion and maintenance as well as improving communication across clinical boards and with patients and carers.

### ***Clostridium difficile***

*Clostridium difficile* is an organism which is responsible for a large number of healthcare associated infections, although it can also cause infections in people who have not had any recent contact with the healthcare system. More information can be found at:

<http://www.nhs.uk/conditions/Clostridium-difficile/Pages/Introduction.aspx>

NHS Boards carry out surveillance of *Clostridium difficile* infections (CDI), and there is a national target to reduce these. The number of patients with CDI for the Board can be found at the end of section 1 and for each hospital in section 2. Information on the national surveillance programme for *Clostridium difficile* infections can be found at:

<http://www.hps.scot.nhs.uk/haic/sshaip/ssdetail.aspx?id=277>

NHS Borders achieved the HEAT target to reduce *Clostridium difficile* Infection (CDI) by 50% by 31<sup>st</sup> March 2011.

The HEAT target equated to a rate of 0.34 cases of CDI per 1000 occupied bed days for patients aged 65 and over. In the year ending March 2011, NHS Borders achieved a rate of 0.23 cases per 1000 occupied bed days for patients aged 65 and over.

Board should note data used in the graph on page 9 is sourced from Health Protection Scotland (HPS). The CDI figure for the year ending March 2011, is provisional and will be revised once HPS release confirmed data.

## Hand Hygiene

Good hand hygiene by staff, patients and visitors is a key way to prevent the spread of infections. More information on the importance of good hand hygiene can be found at:

<http://www.washyourhandsofthem.com/>

NHS Boards monitor hand hygiene and ensure a zero tolerance approach to non compliance. The hand hygiene compliance score for the Board can be found at the end of section 1 and for BGH in section 2. Information on national hand hygiene monitoring can be found at:

<http://www.hps.scot.nhs.uk/haic/ic/nationalhandhygienecampaign.aspx>

Board should note that following a request by the Government, the data in the graph on page 8 of this report has been revised to now show the results from the monthly patient safety hand hygiene audits. This data is based on wards conducting self-audits.

Since the last Board update, an independent hand hygiene audit report has been published by Health Protection Scotland which shows an improvement in the overall compliance rate for NHS Borders to 94%.

## Cleaning and the Healthcare Environment

Keeping the healthcare environment clean is essential to prevent the spread of infections. NHS Boards monitor the cleanliness of hospitals and there is a national target to maintain compliance with standards above 90%. The cleaning compliance score for the Board can be found at the end of section 1 and for each hospital in section 2. Information on national cleanliness compliance monitoring can be found at:

<http://www.hfs.scot.nhs.uk/online-services/publications/hai/>

Healthcare environment standards are also independently inspected by the Healthcare Environment Inspectorate. More details can be found at:

<http://www.nhshealthquality.org/nhsqis/6710.140.1366.html>

Following additional investment, Domestic Services Rapid Response Teams are being developed. These teams will respond to ad-hoc cleaning duties to enable duty staff allocated to each clinical area to focus on core cleaning tasks.

## **Outbreaks**

Since the last Board update, there has been one outbreak of confirmed Norovirus affecting one community hospital. The outbreak lasted for 17 days starting on 3<sup>rd</sup> April 2011 and affected 9 patients.

## **Other HAI Related Activity**

### **Staff training**

- An Infection Control e-learning module has been developed and introduced in NHS Borders focussed on Standard Infection Control Precautions. Compliance continues to improve and is monitored via the Performance Scorecards.

### **Infection Control Audits**

- A new infection control audit tool is now being testing in Community Hospitals and Borders General Hospital.

### **2010/11 Infection Control Work Plan**

- As at 31<sup>st</sup> March 2011, 93% of the 2010/11 Infection Control Work Plan was completed. The remaining actions have been added to the 2011/12 Work Plan.

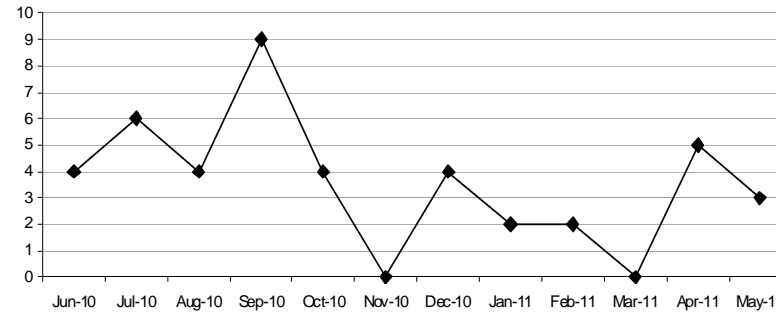
## NHS Board

NHS Borders achieved the HEAT target to reduce CDI by 50% by 31st March 2011. The HEAT target equates to a rate of 0.34 cases of CDI per 1000 occupied bed days for patients aged 65+. In the quarter ending March 2011, NHS Borders achieved a rate of 0.23 cases per 1000 occupied bed days for patients aged 65+ (this figure is provisional and will be revised once official data is available from Health Protection Scotland).

NHS Borders has not achieved the SAB HEAT target to reduce the number of SAB cases by 15% by 31st March 2011. A detailed action plan targeted to reduce SAB incidence is being implemented.

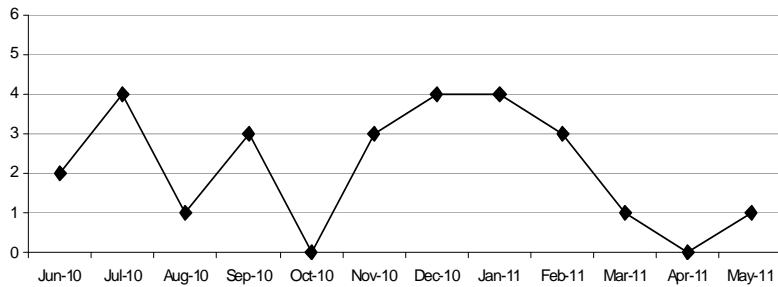
The hand hygiene compliance data is now based on monthly patient safety audit. National hand hygiene monitoring continues and this is reported on Page 6.

## Clostridium difficile Infection (CDI) Cases (all ages)



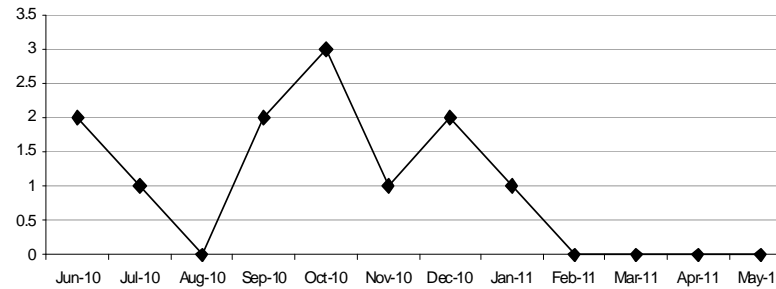
Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11
4	6	4	9	4	0	4	2	2	0	5	3

## MSSA Bacteraemia Cases



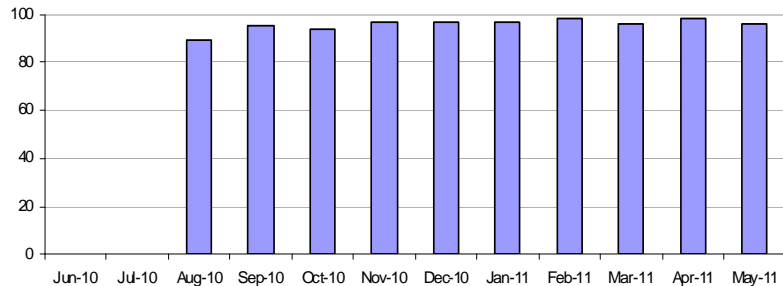
Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11
2	4	1	3	0	3	4	4	3	1	0	1

## MRSA Bacteraemia Cases



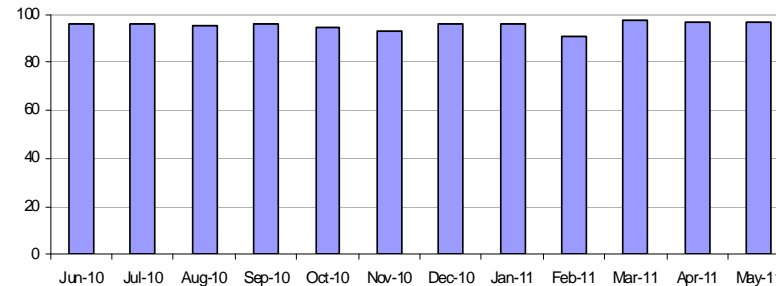
Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11
2	1	0	2	3	1	2	1	0	0	0	0

## Hand Hygiene Compliance



Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11
		89	95	94	97	97	97	98	96	98	96

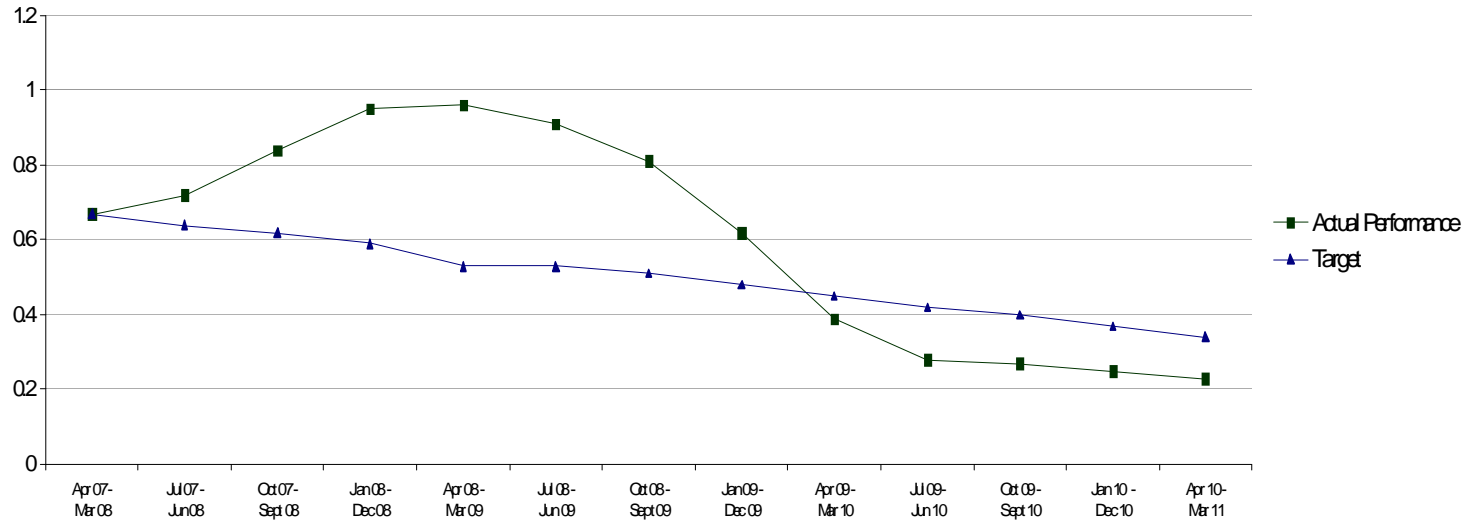
## Cleaning Compliance



Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11
95.8	95.8	95.6	96.2	94.2	93.3	95.8	95.8	91	97.7	96.7	96.4

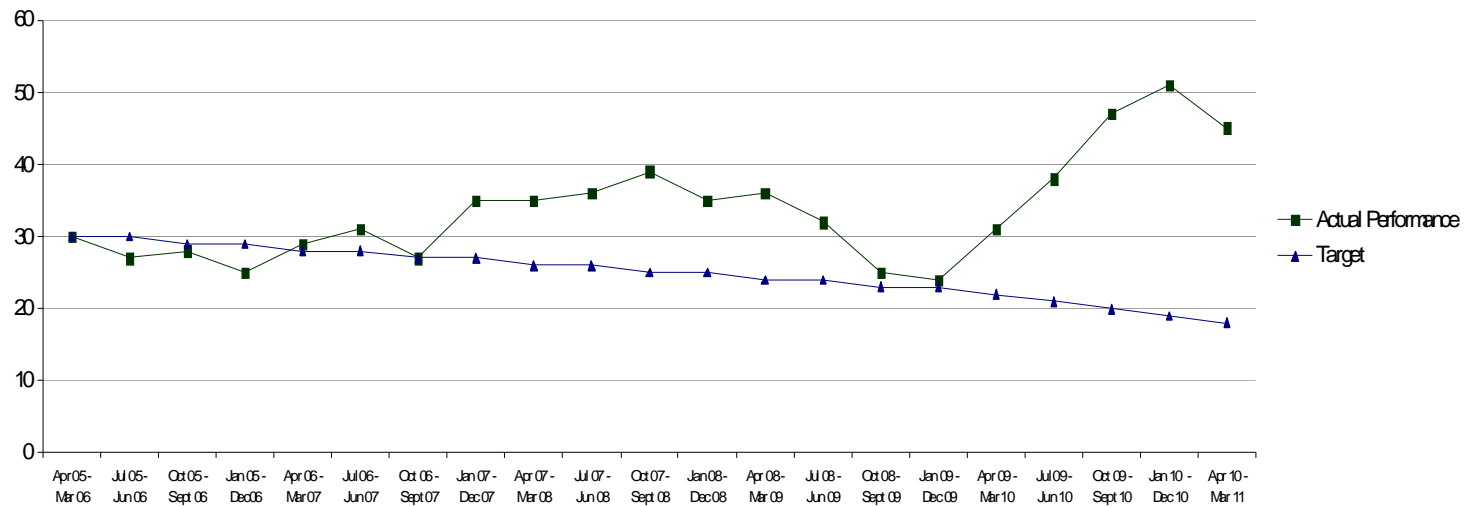


Quarterly rolling year *Clostridium difficile* Infection Cases in patients aged 65 and over per 1000 total occupied bed days for HEAT Target



	Apr 07-Mar 08	Jul 07-Jun 08	Oct 07-Sept 08	Jan 08-Dec 08	Apr 08-Mar 09	Jul 08-Jun 09	Oct 08-Sept 09	Jan 09-Dec 09	Apr 09-Mar 10	Jul 09-Jun 10	Oct 09-Sept 10	Jan 10-Dec 10	Apr 10-Mar 11
Actual Performance	0.67	0.72	0.84	0.95	0.96	0.91	0.81	0.62	0.39	0.28	0.27	0.25	0.23
Target	0.67	0.64	0.62	0.59	0.53	0.53	0.51	0.48	0.45	0.42	0.40	0.37	0.34

Quarterly rolling year *Staphylococcus aureus* Bacteraemia Cases for HEAT Target



	Apr 05-Mar 06	Jul 05-Jun 06	Oct 05-Sept 06	Jan 05-Dec 06	Apr 06-Mar 07	Jul 06-Jun 07	Oct 06-Sept 07	Jan 07-Dec 07	Apr 07-Mar 08	Jul 07-Jun 08	Oct 07-Sept 08	Jan 08-Dec 08	Apr 08-Mar 09	Jul 08-Jun 09	Oct 08-Sept 09	Jan 09-Dec 09	Apr 09-Mar 10	Jul 09-Jun 10	Oct 09-Sept 10	Jan 10-Dec 10	Apr 10-Mar 11
Actual Performance	30	27	28	25	29	31	27	35	35	36	39	35	36	32	25	24	31	38	47	51	45
Target	30	30	29	29	28	28	27	27	26	26	25	25	24	24	23	23	22	21	20	19	18

## Healthcare Associated Infection Reporting Template (HAIRT)

### Section 2 – Healthcare Associated Infection Report Cards

The following section is a series of 'Report Cards' that provide information, for each acute hospital in the Board, on the number of cases of *Staphylococcus aureus* blood stream infections (also broken down into MSSA and MRSA) and *Clostridium difficile* infections, as well as hand hygiene and cleaning compliance. In addition, there is a single report card which covers all community hospitals [which do not have individual cards], and a report which covers infections identified as having been contracted from outwith hospital. The information in the report cards is provisional local data, and may differ from the national surveillance reports carried out by Health Protection Scotland and Health Facilities Scotland. The national reports are official statistics which undergo rigorous validation, which means final national figures may differ from those reported here. However, these reports aim to provide more detailed and up to date information on HAI activities at local level than is possible to provide through the national statistics.

#### Understanding the Report Cards – Infection Case Numbers

*Clostridium difficile* infections (CDI) and *Staphylococcus aureus* bacteraemia (SAB) cases are presented for Borders General Hospital (BGH), broken down by month. *Staphylococcus aureus* bacteraemia (SAB) cases are further broken down into Meticillin Sensitive *Staphylococcus aureus* (MSSA) and Meticillin Resistant *Staphylococcus aureus* (MRSA). Data are presented as both a graph and a table giving case numbers. More information on these organisms can be found on the NHS24 website:

*Clostridium difficile* : [http://www.nhs24.com/content/default.asp?page=s5\\_4&articleID=2139&sectionID=1](http://www.nhs24.com/content/default.asp?page=s5_4&articleID=2139&sectionID=1)

*Staphylococcus aureus* : [http://www.nhs24.com/content/default.asp?page=s5\\_4&articleID=346](http://www.nhs24.com/content/default.asp?page=s5_4&articleID=346)

MRSA: [http://www.nhs24.com/content/default.asp?page=s5\\_4&articleID=252&sectionID=1](http://www.nhs24.com/content/default.asp?page=s5_4&articleID=252&sectionID=1)

For BGH the total number of cases for each month are those which have been reported as positive from a laboratory report on samples taken more than 48 hours after admission. For the purposes of these reports, positive samples taken from patients within 48 hours of admission will be considered to be confirmation that the infection was contracted prior to hospital admission and will be shown in the "out of hospital" report card.

#### Understanding the Report Cards – Hand Hygiene Compliance

Good hand hygiene is crucial for infection prevention and control. More information can be found from the Health Protection Scotland's national hand hygiene campaign website:

<http://www.washyourhandsofthem.com/>

Hospitals carry out regular audits of how well their staff are complying with hand hygiene. The first page of each hospital report card presents the percentage of hand hygiene compliance for all staff in both graph and table form.

#### Understanding the Report Cards – Cleaning Compliance

Hospitals strive to keep the care environment as clean as possible. This is monitored through cleaning compliance audits. More information on how hospitals carry out these audits can be found on the Health Facilities Scotland website:

<http://www.hfs.scot.nhs.uk/online-services/publications/hai/>

The first page of each hospital Report Card gives the hospitals cleaning compliance percentage in both graph and table form.

#### Understanding the Report Cards – 'Out of Hospital Infections'

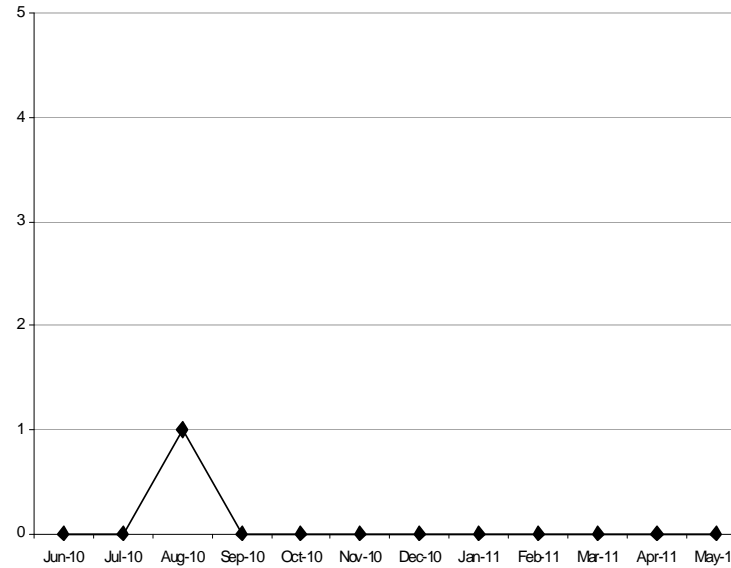
*Clostridium difficile* infections and *Staphylococcus aureus* (including MRSA) bacteraemia cases are all associated with being treated in hospitals. However, this is not the only place a patient may contract an infection. This total will also include infection from community sources such as GP surgeries and care homes. The final Report Card report in this section covers 'Out of Hospital Infections' and reports on SAB and CDI cases reported to a Health Board which are not attributable to a hospital. Given the complex variety of sources for these infections it is not possible to break this data down in any more detail.

### Community Hospitals

In August there was 1 case of CDI in a community hospital.

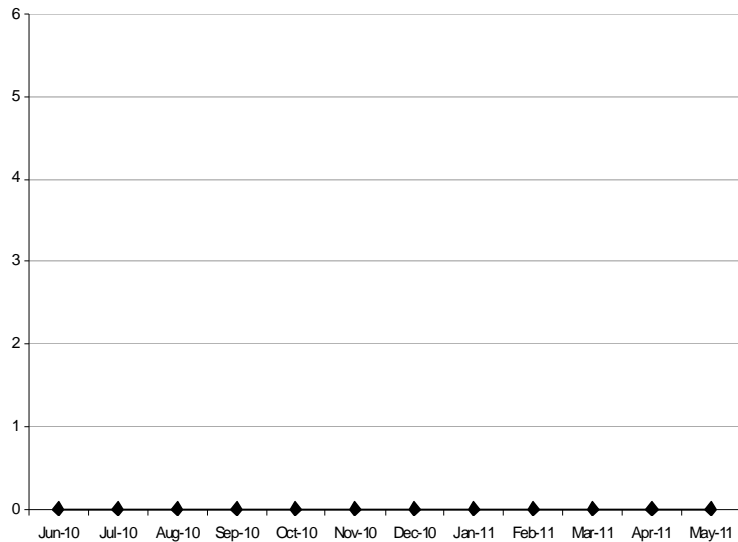
There has been one MRSA bacteraemia admitted into the BGH from a community hospital.

### Clostridium difficile Infection Cases (all ages)



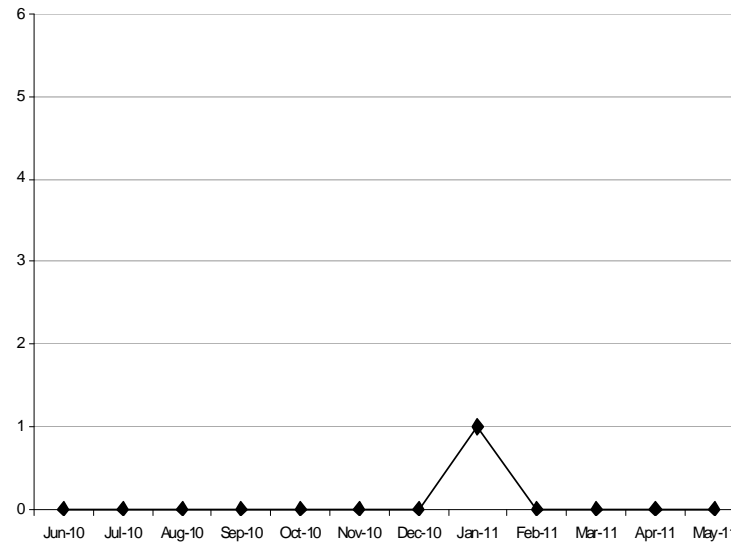
Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11
0	0	1	0	0	0	0	0	0	0	0	0

### MSSA Bacteraemia Cases



Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11
0	0	0	0	0	0	0	0	0	0	0	0

### MRSA Bacteraemia Cases



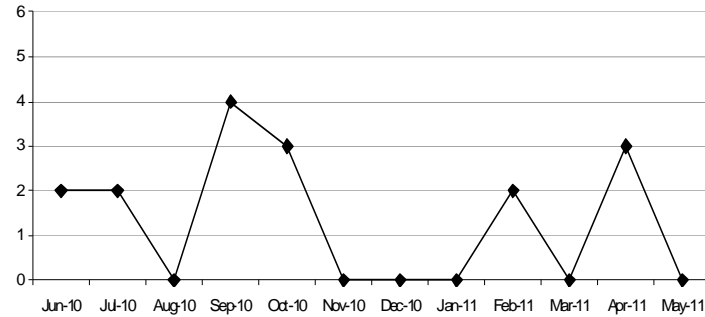
Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11
0	0	0	0	0	0	0	1	0	0	0	0

### Borders General Hospital

NHS Borders achieved the HEAT target to reduce CDI by 50% by 31st March 2011.

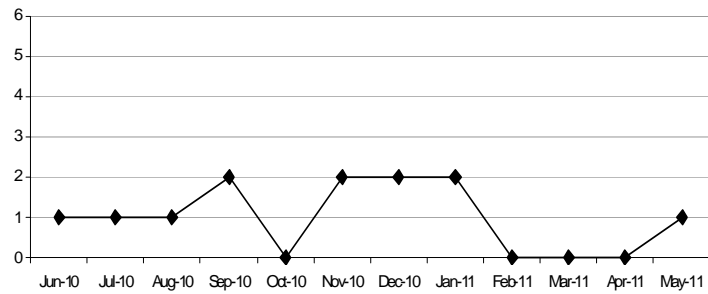
NHS Borders has not achieved the SAB HEAT target to reduce the number of SAB cases by 15% by 31st March 2011. A detailed action plan targeted to reduce SAB incidence is being implemented.

### Clostridium difficile Infection Cases (all ages)



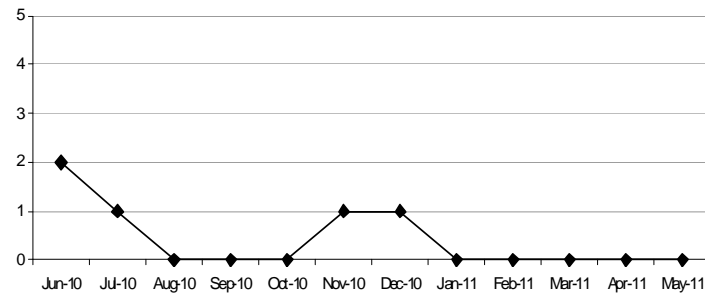
Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11
2	2	0	4	3	0	0	0	2	0	3	0

### MSSA Bacteraemia Cases



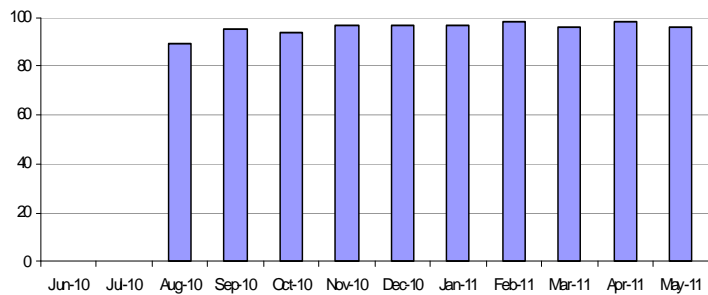
Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11
1	1	1	2	0	2	2	2	0	0	0	1

### MRSA Bacteraemia Cases



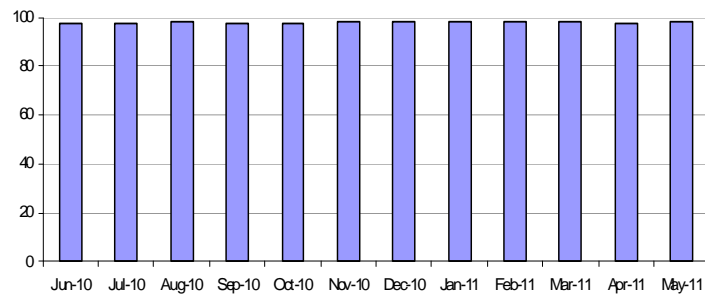
Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11
2	1	0	0	0	1	1	0	0	0	0	0

### Hand Hygiene Compliance



Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11
		89	95	94	97	97	97	98	96	98	96

### Cleaning Compliance



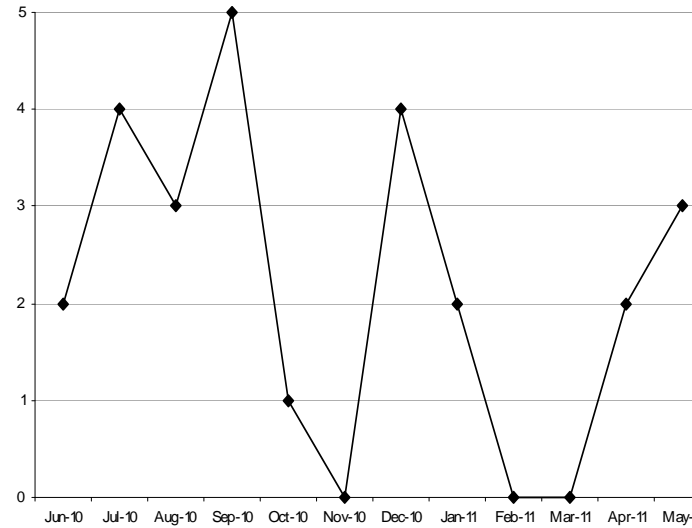
Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11
97.3	97.3	97.9	97.7	97.5	98.2	98	98.3	97.9	98.3	97.5	97.9

### Out of Hospital Infections

In December, all cases of *Clostridium difficile* were community acquired using the national definition of diagnosis within 48 hours of admission.

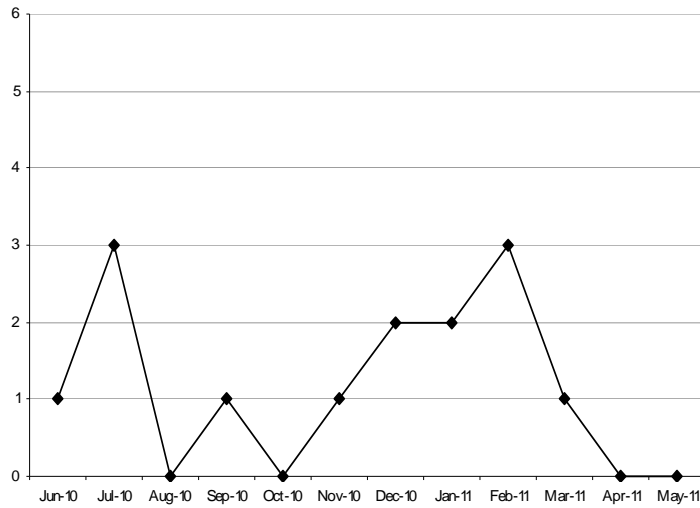
The MSSA and MRSA graphs show the ongoing challenge relating to community acquired bacteraemia.

### *Clostridium difficile* Infection Cases (all ages)



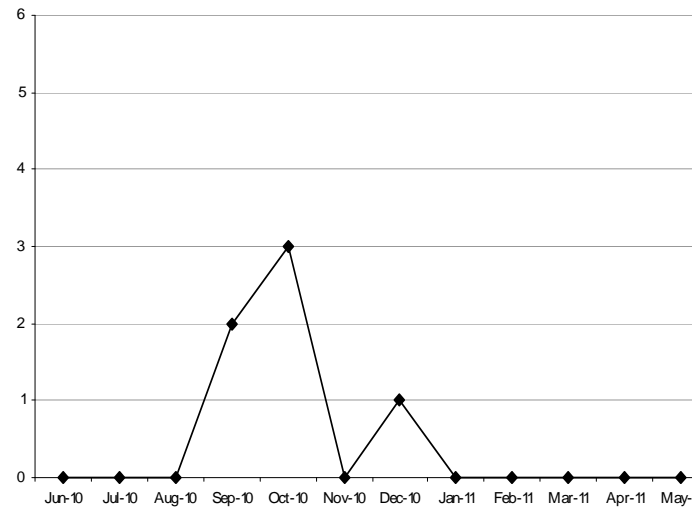
Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11
2	4	3	5	1	0	4	2	0	0	2	3

### MSSA Bacteraemia Cases



Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11
1	3	0	1	0	1	2	2	3	1	0	0

### MRSA Bacteraemia Cases



Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11
0	0	0	2	3	0	1	0	0	0	0	0