

**Borders NHS Board**



**HEALTHCARE ASSOCIATED INFECTION CONTROL AND PREVENTION REPORT – JANUARY 2012**

**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 HAI report to be presented to the Board on a two monthly basis.

**Summary**

This report provides an overview for Borders NHS Board of 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)

### 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 January 2012

- There has been an increase in the number of *Staphylococcus aureus* Bacteraemia (SAB) since the last Board update.
- NHS Borders remains on target to achieve the new HEAT target to reduce *Clostridium difficile* Infection (CDI) to a rate of 0.39 per 1000 Total Occupied Bed Days by 31<sup>st</sup> March 2013.

#### ***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 Methicillin Sensitive *Staphylococcus Aureus* (MSSA), but the more well known is MRSA (Methicillin 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.nhsinform.co.uk/Health-Library/Articles/S/staphylococcal-infections/introduction>

MRSA: <http://www.nhsinform.co.uk/Health-Library/Articles/M/mrsa/introduction>

NHS Boards carry out surveillance of *Staphylococcus aureus* blood stream infections, known as bacteraemias. These are a serious form of infection and there is a national target to reduce them. The number of patients with MSSA and MRSA bacteraemias 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* bacteraemias can be found at:

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

NHS Borders has a Scottish Government HEAT target to achieve a rate of 0.26 *Staphylococcus aureus* Bacteraemia (SAB) cases per 1000 acute occupied bed days by 2013. This rate was the “best in class” rate achieved by a single Health Board in the year ending March 2010; and is a rate that is considered to be achievable by all Boards.

This new target is reflected in the graph on page 7. The performance data in this graph is provided by Health Protection Scotland (HPS) and includes the most recent available data.

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 SAB section of the Infection Control Work Plan.

There has been an increase in the number of *Staphylococcus aureus* Bacteraemia (SAB) cases since the last Board update. Three cases relate to patients under shared care with another Health Board and these are being jointly investigated with the other Board.

The following table provides a summary of the cause of all NHS Borders SAB cases since April 2011. The data in this table is based on the root cause analysis findings using Health Protection Scotland definitions. This differs from the graphs shown later in this report which are based on mandatory Scottish Government definitions to ensure consistency and comparability in reporting from NHS Boards across Scotland.

<b>Cause of SAB</b>	<b>Hospital Acquired</b>	<b>Healthcare Acquired</b>	<b>Community Acquired</b>	<b>TOTAL NUMBER OF CASES</b>
Bone & Joint / Septic Arthritis	0	1	4	5
Peripheral venous catheter (PVC)	4	0	0	4
Central venous catheter (CVC)	2	1	1	4
Skin soft tissue / Surgical Site Infection (SSI)	2	0	1	3
Injecting Drug User (IDU)	0	0	2	2
Urinary catheter	0	1	0	1
Chest infection	0	0	1	1
Unknown	1	0	0	1
<b>TOTAL</b>	<b>9</b>	<b>3</b>	<b>9</b>	<b>21</b>

The table above highlights the challenge of reducing SAB numbers given the significant proportion of community acquired cases. This represents a significant shift indicating improvement when compared with the same period in 2010 as summarised in the table below.

<b>Number (proportion) of SABs / Year</b>	<b>Hospital Acquired</b>	<b>Healthcare Acquired</b>	<b>Community Acquired</b>	<b>TOTAL NUMBER OF CASES</b>
Apr – Dec 2010	21 (58%)	10 (28%)	5 (14%)	36 (100%)
Apr – Dec 2011	9 (43%)	3 (14%)	9 (43%)	21 (100%)

The Prevention of SABs Group continues to meet every month to monitor the implementation of actions to reduce the risks associated with SABs. Each ward is audited by the Infection Prevention and Control Team every month for compliance with best practice measures that have been implemented relating to the insertion and maintenance of peripheral venous catheters (PVCs). The most recent audits show that significant progress has been achieved although further improvement is still required. Work continues with clinical services to continue to improve compliance.

In January, NHS Borders will be participating in a national initiative together with multiple sites across England, Wales, Northern Ireland, Southern Ireland and Scotland in implementing measures to reduce the risks of infection associated with urinary catheters.

## **Clostridium difficile infection (CDI)**

*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.nhsinform.co.uk/Health-Library/Articles/C/clostridium-difficile/introduction>

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/clostridiumdifficile.aspx?subjectid=79>

NHS Borders has a HEAT target to achieve a rate of 0.39 or less cases of *Clostridium difficile* infections (CDI) per 1000 total occupied bed days in patients aged 65 and over by the year ending March 2013.

The rate of 0.39 is based on the best performing board as measured in the year ending March 2010, demonstrating that this rate should be achievable by all boards.

NHS Borders is on target to achieve this HEAT target with a current rate of 0.22 CDI cases per 1000 total occupied bed days in patients aged 65 and over.

## **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 each hospital in section 2. Information on national hand hygiene monitoring can be found at:

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

The data in the graphs within this report have been revised to now show the results from the monthly patient safety hand hygiene audits. This data is based on wards conducting self-audits.

NHS Borders also continues to participate in national hand hygiene audits which are conducted every other month. The most recent published report is from November 2011. During the audit period (26<sup>th</sup> September – 7<sup>th</sup> October) NHS Borders achieved an overall compliance rate of 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>

High levels of cleanliness continue to be recorded through the monitoring process across NHS Borders estate.

### Outbreaks

Since the last Board update, there have been no outbreaks of infection across NHS Borders although there has been a cluster of patients with Norovirus in Hawick Community Hospital.

Health protection Scotland has notified us that “Norovirus season” has started and local and national surveillance shows an increase in prevalence across Scotland including the Borders region. NHS Borders has re-established a Norovirus Preparedness Group to develop and implement measures to reduce the risks associated with Norovirus outbreaks.

The following range of measures has already been implemented:

- evaluation of anti-viral hand gel
- installation of additional hand washing sinks outside wards at more risk of outbreak
- press release and use of TV screens in Borders General Hospital to advise the public on precautions to take

### 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. To date, 80% of all staff have completed this training with compliance monitored via the Performance Scorecards. Work continues with Service and Operational Managers to increase the uptake of this training.

#### Infection Control Audits

- A new infection control audit programme commenced in July 2011 with the Infection Control Team conducting an annual schedule of audits across BGH and Community Hospitals. The specific locations and audits included have been prioritised according to infection risk. Best practice is shared with Mental Health and Community Nursing.

**2010/11 Infection Control Work Plan**

- As at 9<sup>th</sup> January 2012, 86% of actions scheduled for completion have been completed. There has been some slippage in a number of actions due to prioritisation of mandatory national initiatives including implementing a revised MRSA screening process and undertaking a major infection point prevalence survey. It is expected that all actions will still be completed by 31<sup>st</sup> March 2011.

# 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 [and key community hospitals – *delete if appropriate*] 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 each hospital, 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 each hospital 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 and. 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.

## NHS Borders Board Report Card

The HEAT target graphs on the following page have been adjusted to include the new targets to be achieved by 31st March 2013. The new targets are a rate of 0.39 cases of CDI per 1000 occupied bed days for patients aged 65+, and a rate of 0.26 SAB cases per 1000 acute occupied bed days. The performance figures against these targets are currently provisional and will be revised once official data is available from Health Protection Scotland.

The hand hygiene compliance data is now based on monthly patient safety audit. National hand hygiene monitoring continues on a bi-monthly basis.

### Hand Hygiene Monitoring Compliance (%)

Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
97.0	97.0	97.0	98.0	96.0	98.0	96.0	94.8	96.9	97.2	95.0	96.4

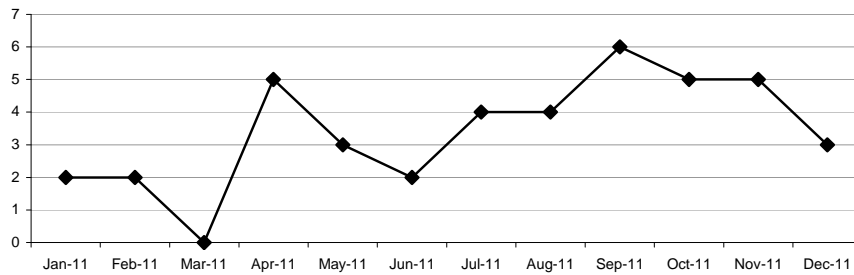
### Cleaning Compliance (%)

Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
93.3	95.8	95.8	96.9	97.0	97.8	97.6	97.4	97.3	96.9	97.3	97.3

### Estates Monitoring Compliance (%)

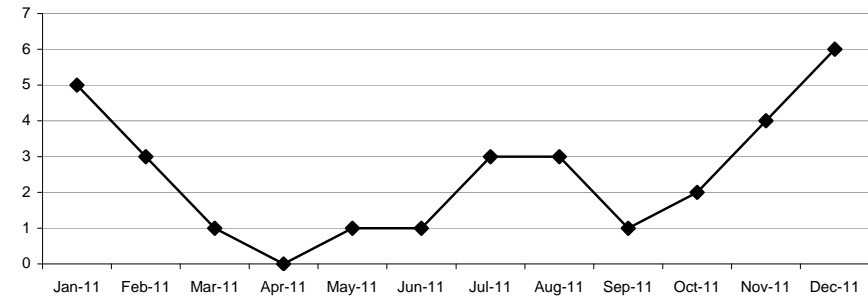
Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
			94.4	96.4	96.7	96.9	97.0	97.6	97.2	97.1	96.5

### Clostridium difficile Cases (ages 15 and over)



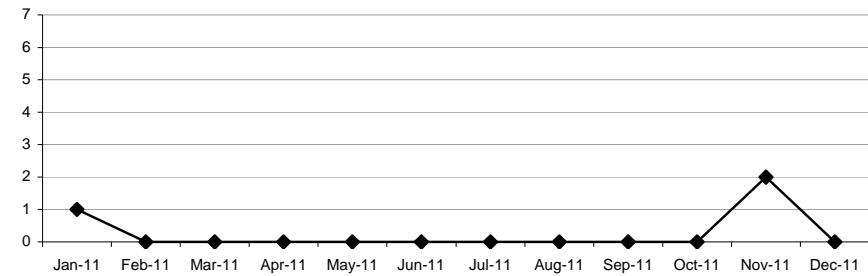
Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
2	2	0	5	3	2	4	4	6	5	5	3

### Total Staphylococcus aureus Bacteraemia Cases (all ages)



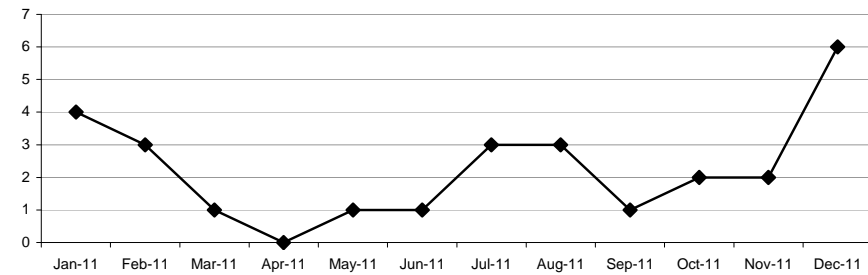
Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
5	3	1	0	1	1	3	3	1	2	4	6

### MRSA Bacteraemia Cases (all ages)



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

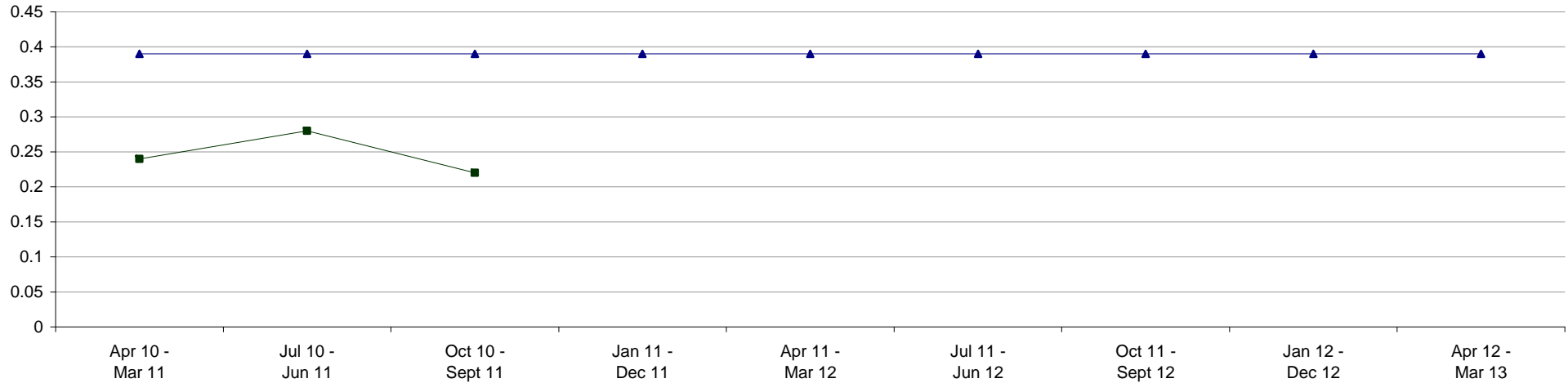
### MSSA Bacteraemia Cases (all ages)



Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
4	3	1	0	1	1	3	3	1	2	2	6

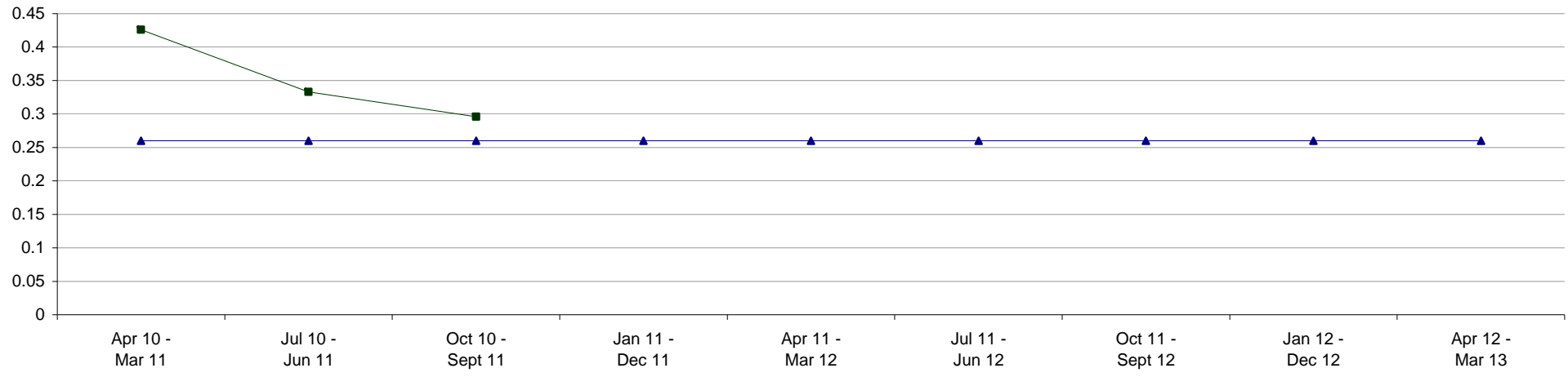


**Quarterly rolling year *Clostridium difficile* Infection Cases per 1000 total occupied bed days for HEAT Target Measurement**



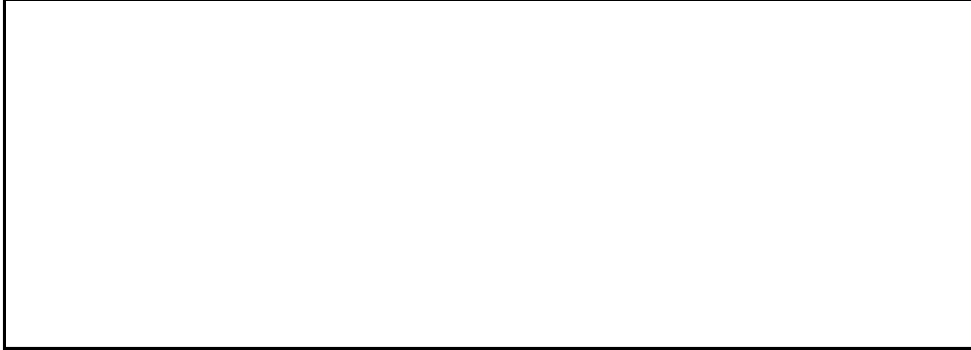
	Apr 10 - Mar 11	Jul 10 - Jun 11	Oct 10 - Sept 11	Jan 11 - Dec 11	Apr 11 - Mar 12	Jul 11 - Jun 12	Oct 11 - Sept 12	Jan 12 - Dec 12	Apr 12 - Mar 13
Actual Performance	0.24	0.28	0.22						
Target	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39

**Quarterly rolling year *Staphylococcus aureus* Bacteraemia Rates per 1000 Acute Occupied Bed Days for HEAT Target Measurement**



	Apr 10 - Mar 11	Jul 10 - Jun 11	Oct 10 - Sept 11	Jan 11 - Dec 11	Apr 11 - Mar 12	Jul 11 - Jun 12	Oct 11 - Sept 12	Jan 12 - Dec 12	Apr 12 - Mar 13
Actual Performance	0.43	0.33	0.30						
Target	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26

# Borders General Hospital Report Card



## Hand Hygiene Monitoring Compliance (%)

Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
97	97	97	98	96	98	96	98.9	97.5	98	97.3	97.9

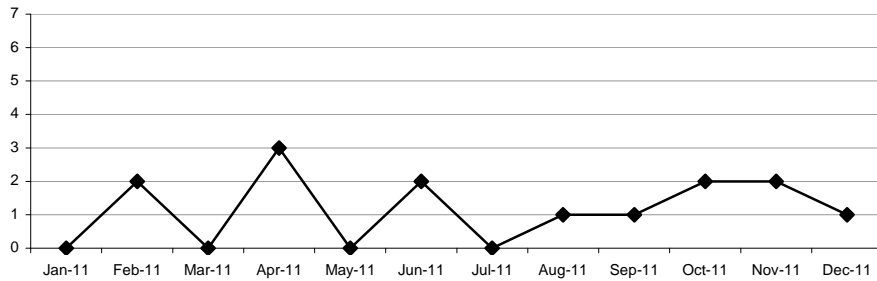
## Cleaning Compliance (%)

Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
98.2	98.0	98.3	97.5	97.9	98.2	97.7	97.7	97.7	97.5	97.3	97.4

## Estates Monitoring Compliance (%)

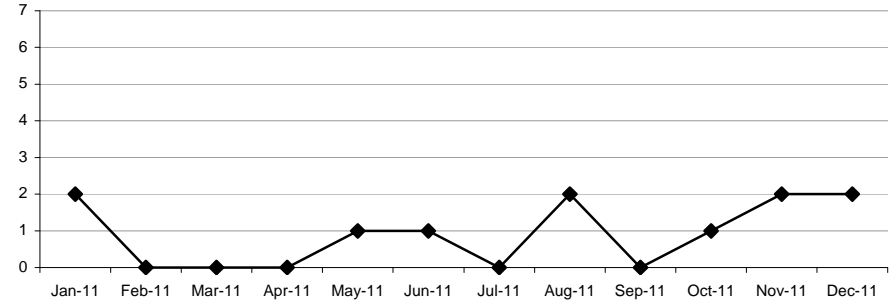
Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
			93.7	96.8	96.8	97.4	97.6	98.1	98.1	96.9	96.9

## Clostridium difficile Cases (ages 15 and over)



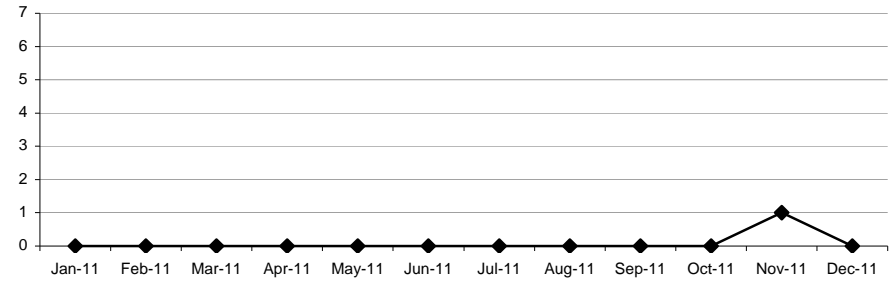
Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
0	2	0	3	0	2	0	1	1	2	2	1

## Total Staphylococcus aureus Bacteraemia Cases (all ages)



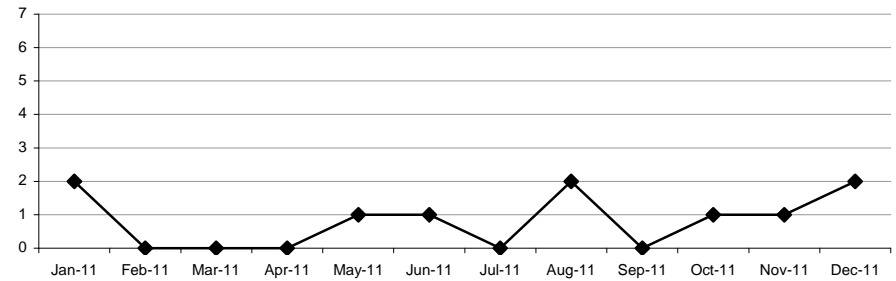
Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
2	0	0	0	1	1	0	2	0	1	2	2

## MRSA Bacteraemia Cases (all ages)



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

## MSSA Bacteraemia Cases (all ages)

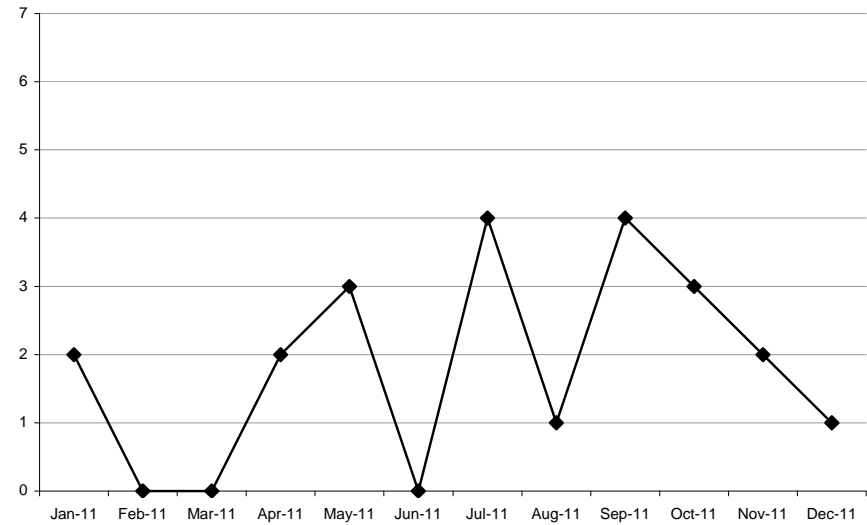


Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
2	0	0	0	1	1	0	2	0	1	1	2

## Out of Hospital Infections

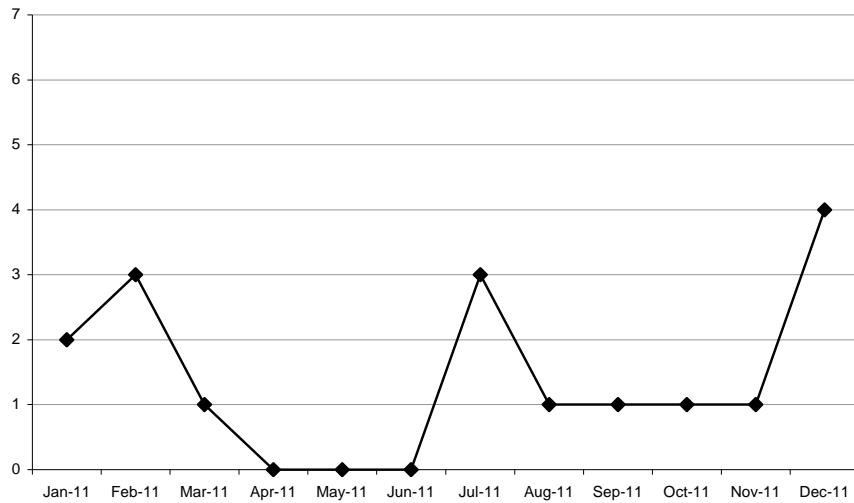
The one case of MRSA bacteraemia came from a patient admitted from a Care Home. All cases of MSSA bacteraemia were admitted via A&E, blood cultures were taken within 48 hours of admittance.

## Clostridium difficile Infection Cases



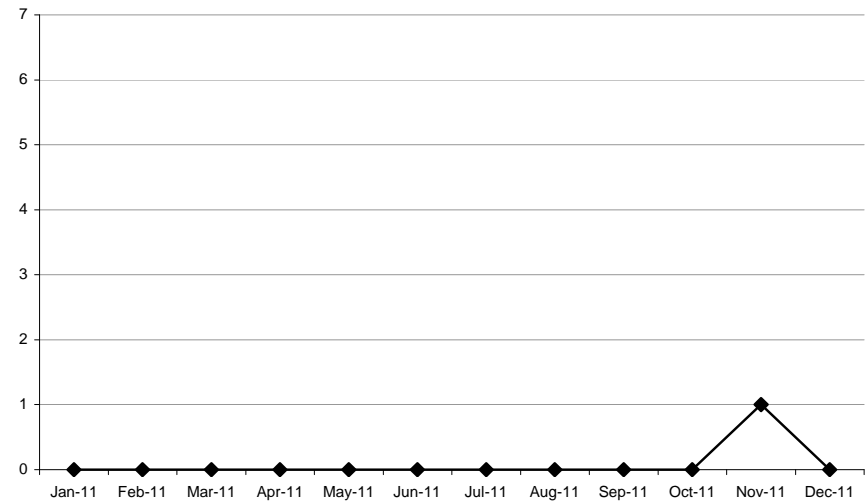
Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
2	0	0	2	3	0	4	1	4	3	2	1

## MSSA Bacteraemia Cases



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

## MRSA Bacteraemia Cases

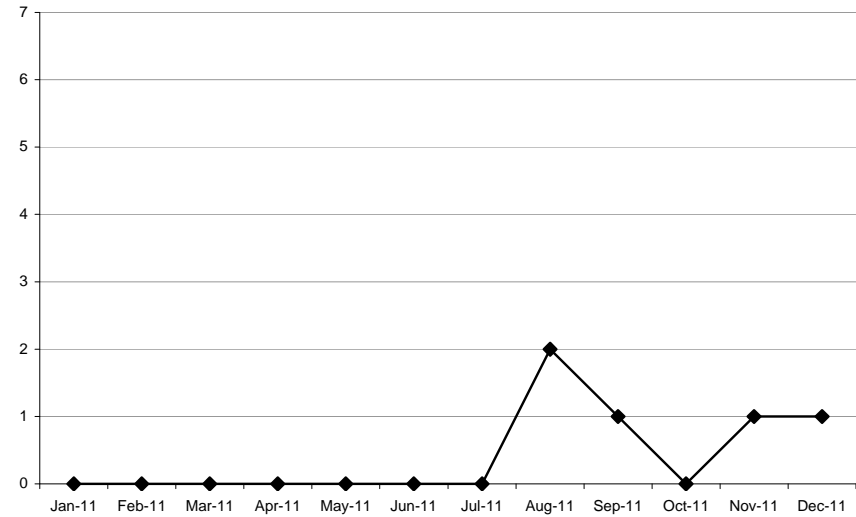


Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
0	0	0	0	0	0	0	0	0	0	1	0

## Community Hospitals

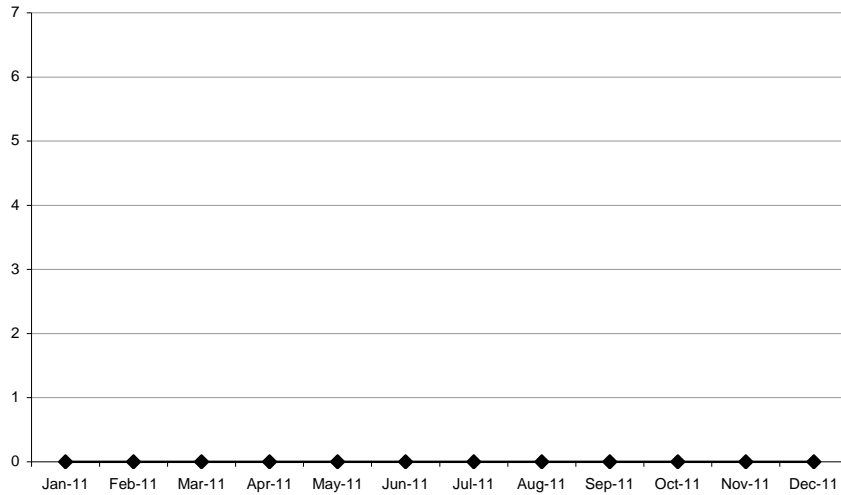
The one case of MRSA bacteraemia came from a patient admitted from a Care Home. All cases of MSSA bacteraemia were admitted via A&E, blood cultures were taken within 48 hours of admittance.

## Clostridium difficile Infection Cases



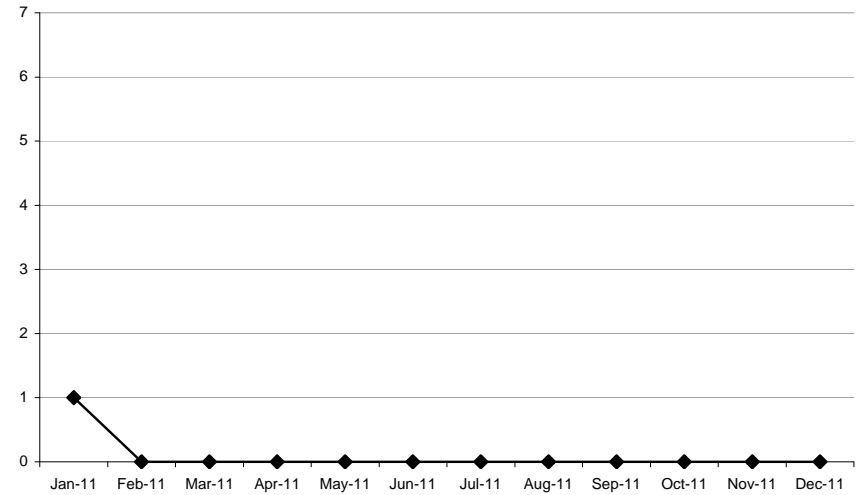
Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
0	0	0	0	0	0	0	2	1	0	1	1

## MSSA Bacteraemia Cases



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

## MRSA Bacteraemia Cases



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