

**Borders NHS Board**

**HEALTHCARE ASSOCIATED INFECTION CONTROL AND PREVENTION REPORT – AUGUST 2010**

**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 highlights NHS Borders performance in relation to infection prevention and control including progress against the NHS Scotland HAI Action Plan.

**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 August 2010 (part 2 attached)**

#### **Introduction**

This report provides an overview for Borders NHS Board of performance against Infection Prevention and Control with particular reference to the incidence of Health Care Associated Infections, performance against HEAT targets 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 Bacteraemias*
- *Clostridium difficile*
- *Hand hygiene compliance*
- *Cleanliness monitoring*
- *Education*
- *Outbreaks*

#### **Important Information**

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

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

There are currently mandatory reporting requirements for Meticillin sensitive and resistant *Staphylococcus Aureus Bacteraemias* and on *Clostridium Difficile Infections*.

## 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 August

- **NHS Borders continue to meet their HEAT target for Clostridium difficile (C. diff)**
- **The HEAT target for Clostridium difficile infection has been increased; we are now expected to achieve a 50% reduction.**
- **NHS Borders are experiencing a challenge with their Staph Aureus Bacteraemia Rates. We continue to take a proactive approach in order to decrease the incidence.**
- **Access to hand hygiene facilities has been enhanced within NHS Border's Health Centres, including the extra provision of alcohol gel dispensers.**
- **A new infection control environment and practice audit programme has been introduced**

### 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 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/sshap/publicationsdetail.aspx?id=30248>

Infection rate reduction is a component project within the Scottish Patient Safety Programme (SPSP), of which a reduction in the rate of Staphylococcus Aureus Bacteraemias (SAB's) is a key performance indicator. Local surveillance systems have highlighted an increase in overall SAB rates in NHS Borders and the evidence would suggest that at the current rates that NHS Borders will not meet HEAT Target of 15% reduction of SAB's by end March 2011.

The Prevention of *Staphylococcus aureus* Bacteraemia Group (PSABG) has been convened by NHS Border's consultant microbiologist to identify and implement actions needed in order to reduce our current SAB rates. There is representation on the group from all clinical areas, relevant specialities, infection control, patient safety and education

Enhanced surveillance continues with each SAB in order to ascertain root cause:

In a high number of the SAB cases reviewed, medical devices were identified as the most likely cause. Further investigations have highlighted the need to align local practice and policies to national standards in the following key areas:

- Venous access lines including Hickman and peripherally inserted central catheters (PIC) Lines, peripheral vascular catheters, and renal dialysis catheters
- Urinary catheters
- Venepuncture procedures and blood cultures
- Wound infection

In addition the risk of recurrent bacteraemia in SAB cases should be minimised by adoption of a clinical protocol for investigation and treatment of SAB's.

There are subsequently 5 work streams developed in order to identify gaps and provide support and training for NHS Borders staff to reduce our SAB rates:

- Data gathering, analysis and feedback
- Peripheral Vascular Cannulas
- Hickman line group
- Catheter care
- Venepuncture and blood cultures
- Wound care
- The NHS Borders MRSA policy is currently subject to revision
- MRSA admission screening continues to be supported and monitored and we aim to achieve a 98% compliance with admission screening by end December 2010.

### ***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 are currently on trajectory to meet their HEAT target for CDI
- Following notice of the increase to 50% reduction for the national CDI HEAT target, the NHS Borders Infection Control Team is reviewing current processes designed to prevent CDI, including antimicrobial prescribing, prevention and care bundles.

### **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>

- Monthly Hand Hygiene auditing is now established for all clinical areas; first results are being collated
- Notice boards are now placed outside all clinical areas – these will include displays of hand hygiene compliance; MRSA screening compliance; performance with regard to SAB's and CDI as well as other ward related performance indicators

- Regular hand hygiene training continues for all staff groups
- Rationalisation of access to hand rub dispensers will take place and extra hand hygiene dispensers will be provided where required. This has already taken place within NHS Borders' Health Centres

## 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>

- Reorganisation of general services rotas has taken place in order to ensure that clinical areas continue to receive required coverage, each ward has it's own static core complement of staff.
- A document "**Roles/Responsibilities of Cleaning Furniture/Equipment in Patient Areas**" has been developed and is an appendix of the Standard Precautions section of the Infection Control Manual
- The microfibre system has been fully implemented and it's performance is being monitored
- The rapid response teams have yet to be brought up to full complement

## Outbreaks

*This section should give details on any outbreaks that have taken place in the Board since the last report, or a brief note confirming that none have taken place. Where there has been an outbreak then for most organisms as a minimum this section should state when it was declared, number of patients affected, number of deaths (if any), actions being taken to bring the outbreak under control and whether this was reported to the Scottish Government. For outbreaks of norovirus a more general outline of the outbreak may be more appropriate.*

Norovirus Outbreak:

28/5/10 – 28/6/10, BGH and community involvement

7 days cumulative of ward closure

Total number of patients reported to, or found by, the ICT to have symptoms in accordance with the Health Protection Scotland Case definition over the course of the outbreak was 32 in BGH; community 2.

Total number of laboratory confirmed cases of norovirus was 10

## Other HAI Related Activity

### Staff training

- There have been significant reviews of all induction and clinical update training for all disciplines of staff, including medics
- Local HAI E-learning has been introduced to NHS Borders, beginning with Standard Infection Control Precautions. There has also been access established for other online training for staff via the new HEI/ HAI microsite

### Antimicrobial Prescribing

- The NHS Borders Antimicrobial Group are preparing an action plan to meet the recommendations outlined by The Scottish Antimicrobial Prescribing Group:  
<http://www.scottishmedicines.org.uk/smc/6616.html>

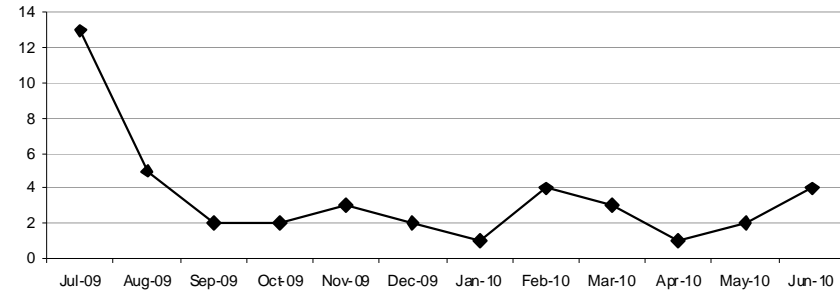
***Scottish Patient Safety Programme***

- Links have been further strengthened between the ICT and SPSP
- A new programme of practice and environmental audits was introduced in June 2010. The new tools are being used by BGH staff initially before rollout to the other Boards. The first submissions have been collated and will be evaluated with a view to any adjustments required.

## NHS Board

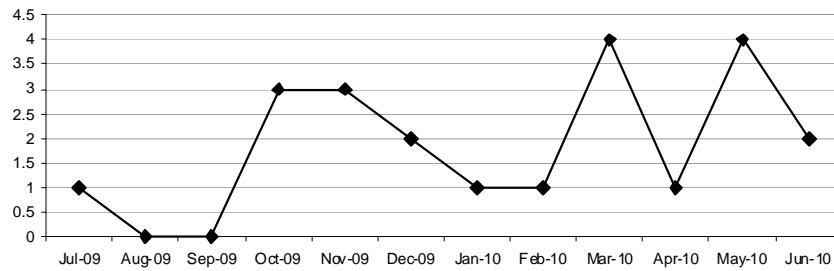
Since October 2009 the rate for Staph aureus bacteraemia's has increased and current trends would suggest that the HEAT target for SAB reduction will not be met; Since August 2009 the number of Clostridium difficile infections have significantly decreased and NHS Borders are currently on trajectory to meet their HEAT target for C. diff.

### Clostridium difficile Infection Cases (all ages)



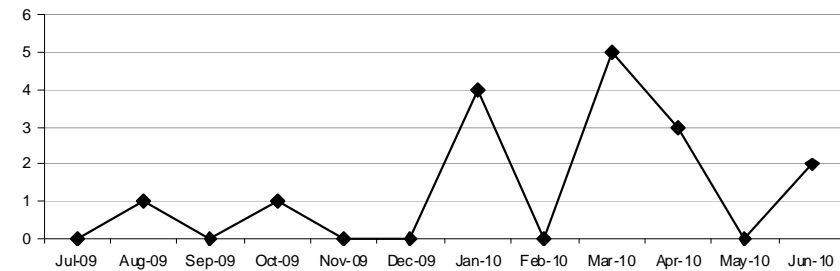
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13	5	2	2	3	2	1	4	3	1	2	4

### MSSA Bacteraemia Cases



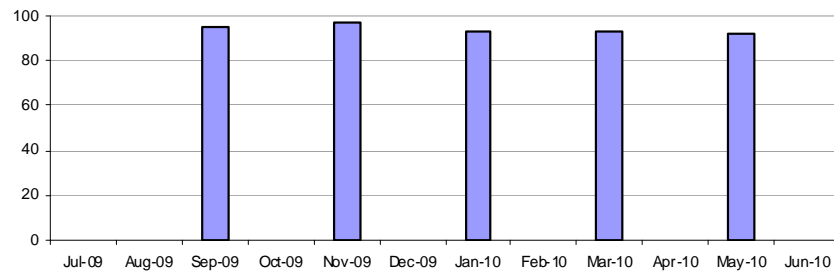
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### MRSA Bacteraemia Cases



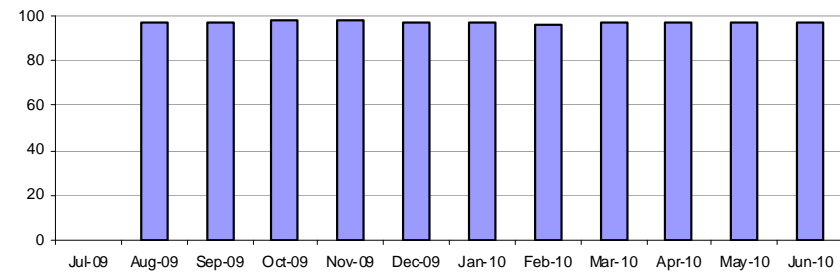
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0	1	0	1	0	0	4	0	5	3	0	2

### Hand Hygiene Compliance



Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10
		95		97		93		93		92	

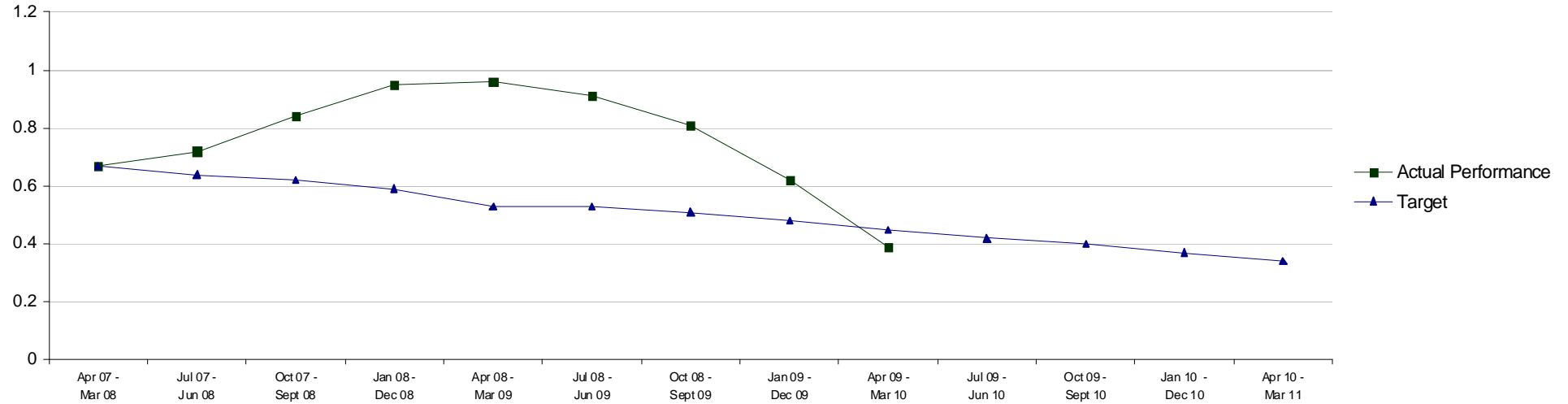
### Cleaning Compliance



Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10
	97.2	97.3	97.8	98.1	96.9	96.7	96.6	96.9	97.6	97.5	96.8

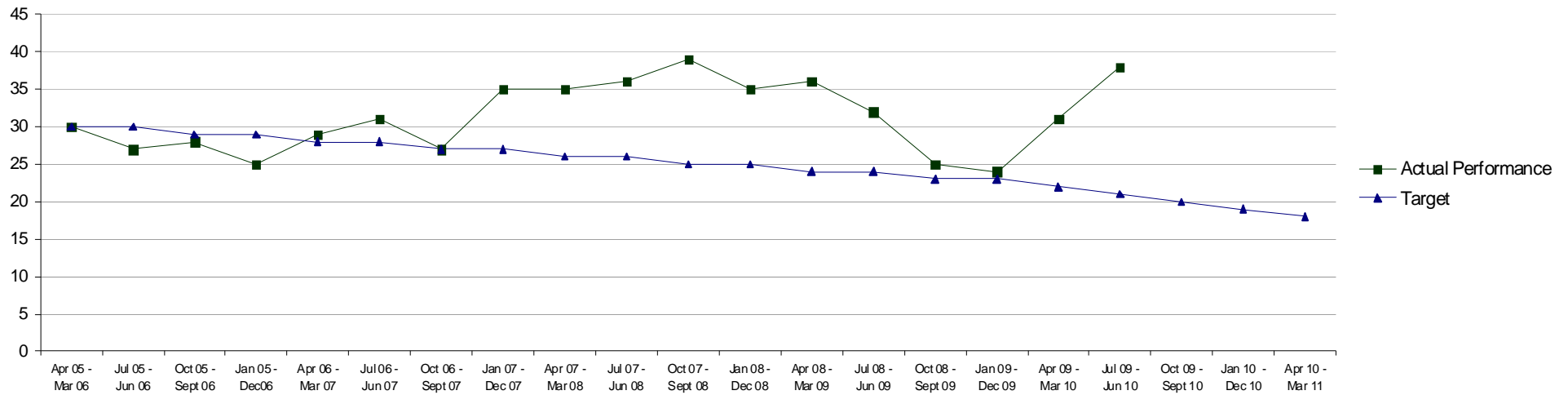


Quarterly rolling year *Clostridium difficile* Infection Cases in patients aged 65 and over per 1000 total occupied bed days for HEAT Target



	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				
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			
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.

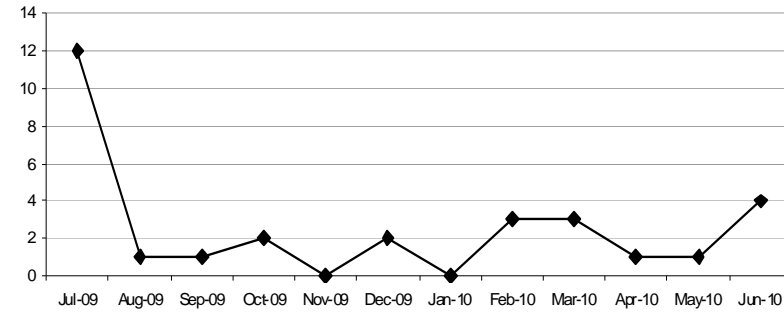


## Borders General Hospital

Since October 2009 the rate for Staph aureus bacteraemia's has increased;  
 Since August 2009 the number of Clostridium difficile infections have significantly decreased.

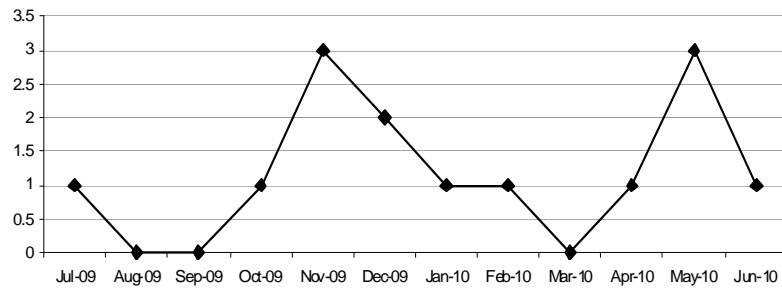
## Clostridium difficile Infection Cases (all ages)

Appendix-2010-00



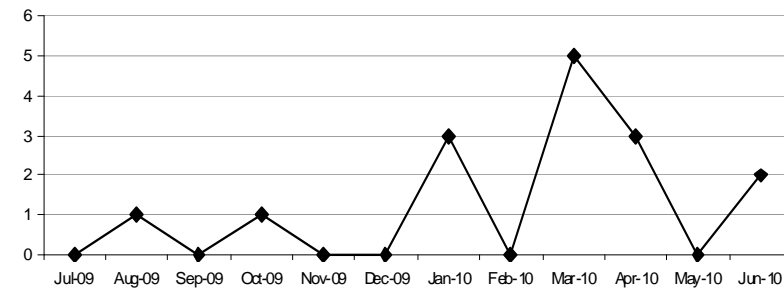
Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10
12	1	1	2	0	2	0	3	3	1	1	4

## MSSA Bacteraemia Cases



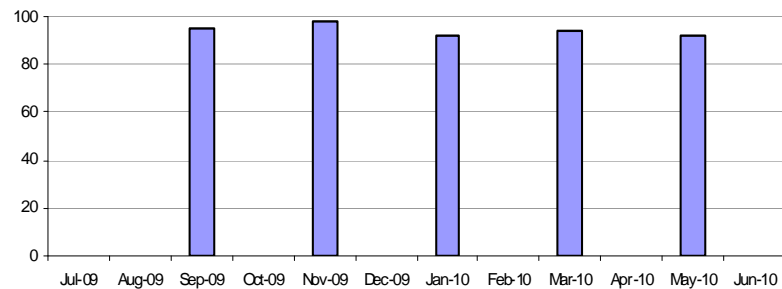
Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10
1	0	0	1	3	2	1	1	0	1	3	1

## MRSA Bacteraemia Cases



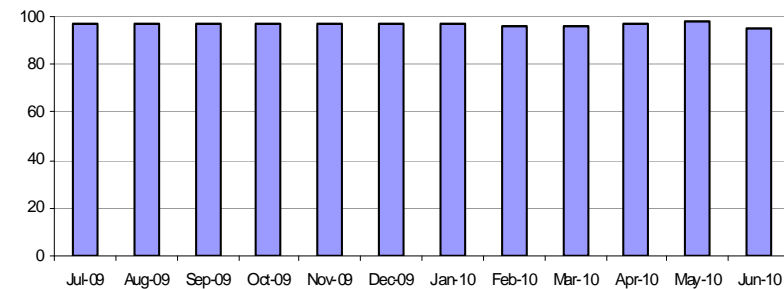
Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10
0	1	0	1	0	0	3	0	5	3	0	2

## Hand Hygiene Compliance



Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10
		95		98		92		94		92	

## Cleaning Compliance



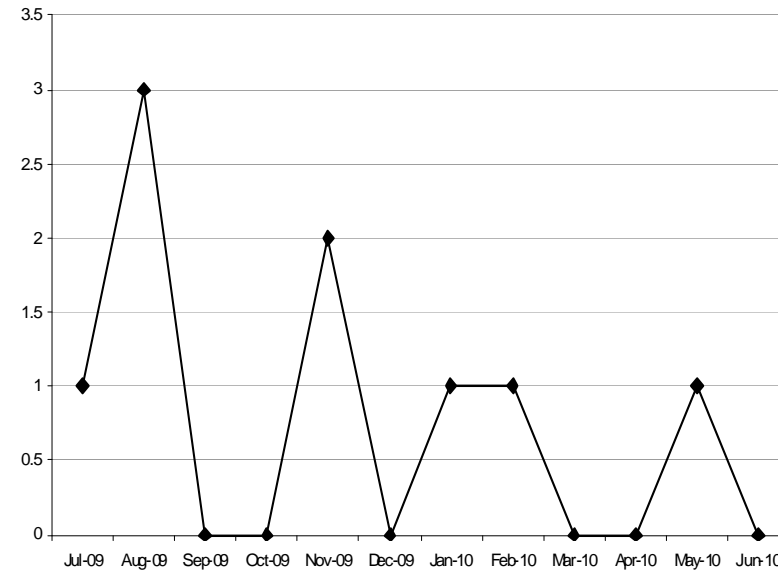
Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10
97.2	96.9	97	97.7	97.6	97.2	96.9	96.4	96.6	97.2	97.8	95.7

## 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 24 hours of admittance. None of the patients appeared to have had recent healthcare interventions within NHS Borders.

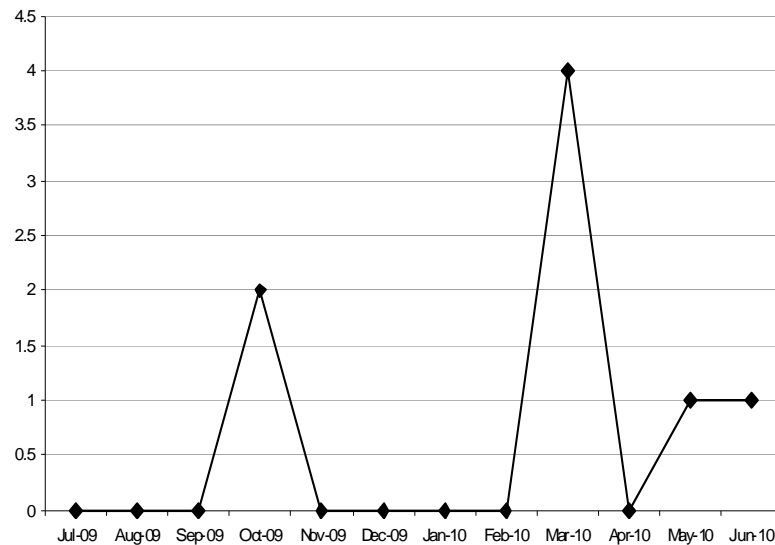
## Clostridium difficile Infection Cases (all ages)

Appendix-2010-00



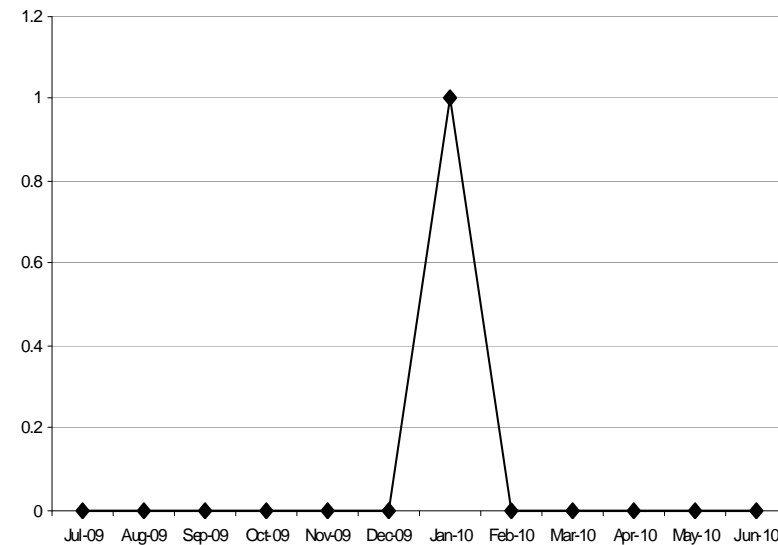
Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10
1	3	0	0	2	0	1	1	0	0	1	0

## MSSA Bacteraemia Cases



Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10
0	0	0	2	0	0	0	0	4	0	1	1

## MRSA Bacteraemia Cases



Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10
0	0	0	0	0	0	1	0	0	0	0	0