

Borders NHS Board

HEALTHCARE ASSOCIATED INFECTION CONTROL AND PREVENTION REPORT – MARCH 2011

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

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

Approved by

Name	Designation	Name	Designation
Sheena Wright	Director of Nursing		

	and Midwifery		
--	---------------	--	--

Author(s)

Name	Designation	Name	Designation
Sam Whiting	Infection Control Manager	Judith Machell	Surveillance Coordinator

Healthcare Associated Infection Reporting template (HAIRT)

NHS Borders (Healthcare Associated Infection Reporting Template (HAIRT) Part 1 Up to February 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 Health Care Associated Infections, 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 Bacteraemias*
- *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 August

- NHS Borders remains on track to meet the HEAT target to reduce *Clostridium difficile* Infection (CDI) by 50% by 31st March 2011.
- NHS Borders has not achieved the HEAT target to reduce the incidence of *Staphylococcus aureus* Bacteraemia (SAB) by 15% by 31st march 2011. Significant work is in progress to improve systems and processes which are expected to reduce the incidence of these infections.

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

MRSA: 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 has a HEAT target to achieve a maximum of 19 *Staphylococcus aureus* Bacteraemia (SAB) cases between 1st April 2010 and 31st March 2011. As at the end of February 2011 there have been 44 SAB cases since 1st April 2010.

A Prevention of *Staphylococcus aureus* Bacteraemia (PSAB) Group has been convened reporting directly to the Board Executive Team. 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

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 is currently on trajectory to meet the HEAT target to reduce *Clostridium difficile* Infection (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 and over. In the quarter ending December 2010, NHS Borders achieved a rate of 0.25 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 Figure for January to December 2010 is provisional and will be revised when HPS release a further report.

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.

In a recent independent hand hygiene audit, there was a drop in the overall compliance rate for NHS Borders.

During the independent hand hygiene audit period, NHS Borders experienced a range of staffing issues which impacted on the overall hand hygiene compliance rate. Whilst the hand hygiene compliance of trained doctors and nurses remained very high, there were a significant number of other new staff working for NHS Borders during the audit period which has led NHS Borders to review the induction and training arrangements for all new staff. The following additional actions have also been taken:

- Any non-compliance continues to be fed back to individual staff members and their line managers
- Targeted on-site hand hygiene training is being delivered in wards with poor compliance
- The Hand Hygiene Policy is being revised to be more explicit about our approach to zero tolerance and the Uniform Policy will be updated this year
- Wards with poor compliance are required to increase the frequency of their audits to weekly
- The Hand Hygiene Coordinator is monitoring activity in these wards

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

There have been no outbreaks since the last Board update paper.

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, over 2200 members of staff have completed this module across NHS Borders

Infection Control Audits

- A new infection control audit tool is now being testing in Community Hospitals before a review to consider further use and spread.

2010/11 Infection Control Work Plan

- As at 18th March 2011, 71% of the 2010/11 Infection Control Work Plan has been completed. The Infection Control Team support a range of estates projects which will continue into the new financial year. When these are taken into account the true proportion of deliverable actions completed is 78%.
- A number of outstanding actions are still on target for completion by 31st March 2011. Any outstanding issues remaining at the end of March will be added to the 2011/12 Infection Control Work Plan.

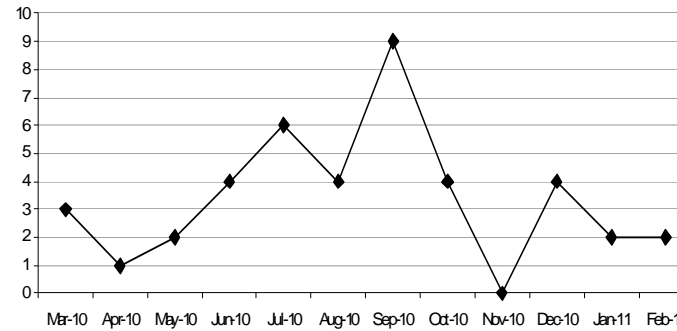
NHS Board

NHS Borders remains on track to achieve 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 June 2010, NHS Borders achieved a rate of 0.25 cases per 1000 occupied bed days for patients aged 65+.

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

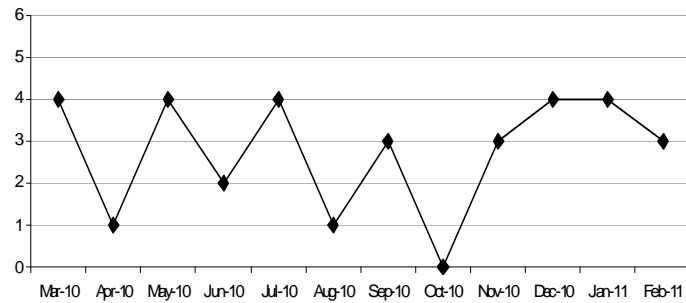
The hand hygiene compliance data is now based on monthly patient safety audit. National hand hygiene monitoring continues and this is reported on Page 6.

Clostridium difficile Infection (CDI) Cases (all ages)



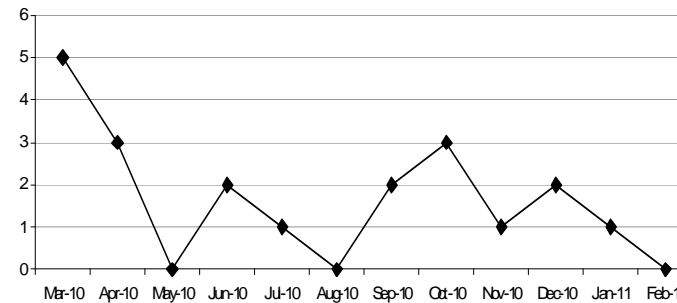
Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11
3	1	2	4	6	4	9	4	0	4	2	2

MSSA Bacteraemia Cases



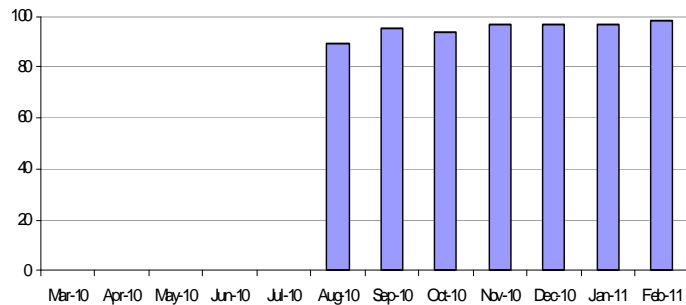
Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11
4	1	4	2	4	1	3	0	3	4	4	3

MRSA Bacteraemia Cases



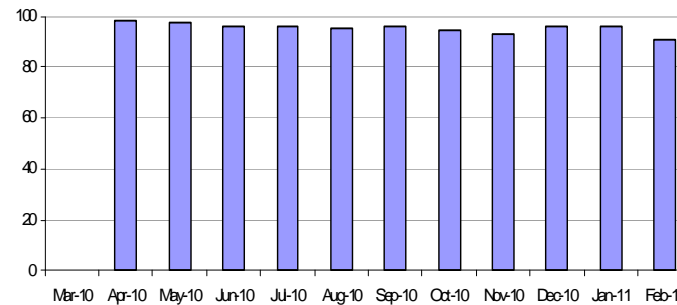
Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11
5	3	0	2	1	0	2	3	1	2	1	0

Hand Hygiene Compliance



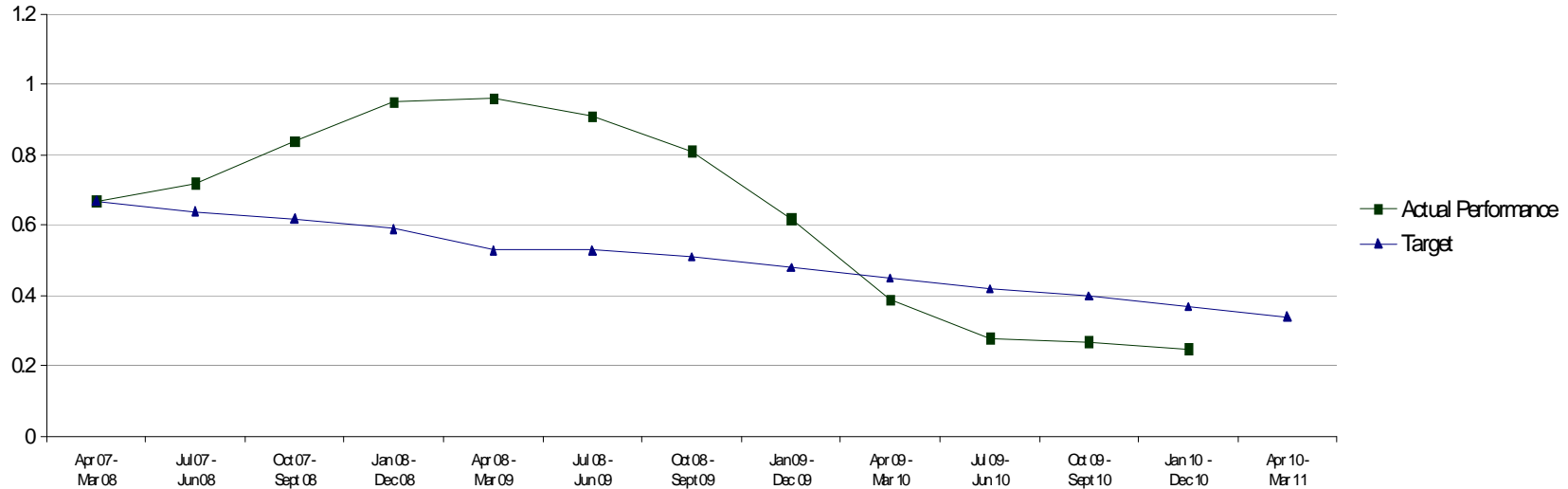
Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11
					89	95	94	97	97	97	98

Cleaning Compliance



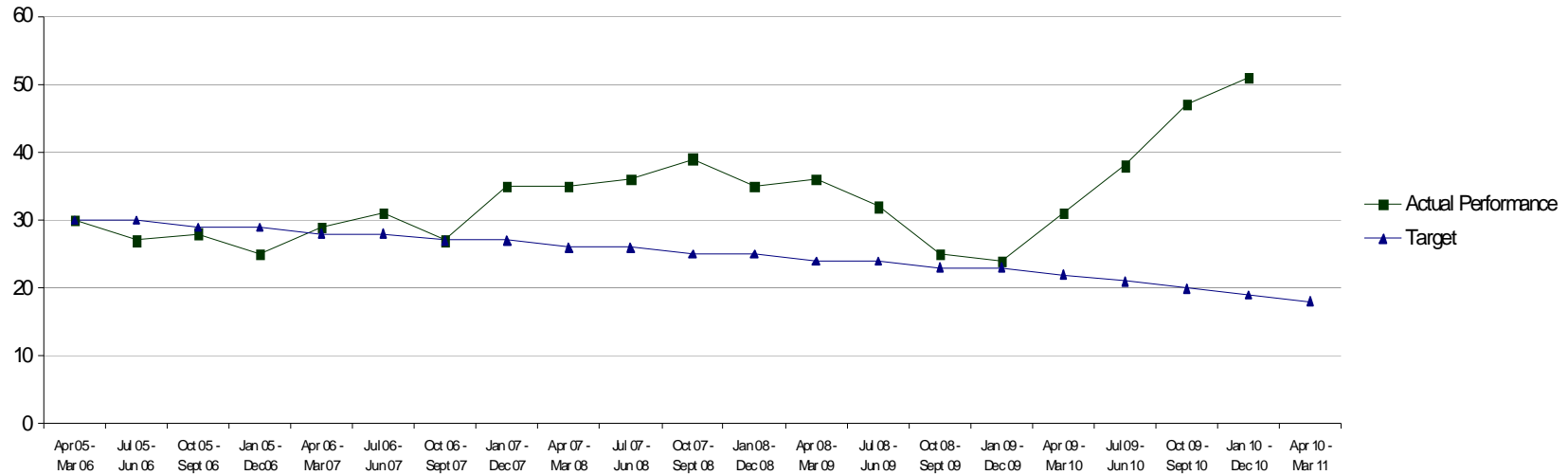
Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11
	97.8	97.3	95.8	95.8	95.6	96.2	94.2	93.3	95.8	95.8	91

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	
Target	0.67	0.64	0.62	0.59	0.53	0.53	0.51	0.48	0.46	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	
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§ionID=1

Staphylococcus aureus : 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§ionID=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'

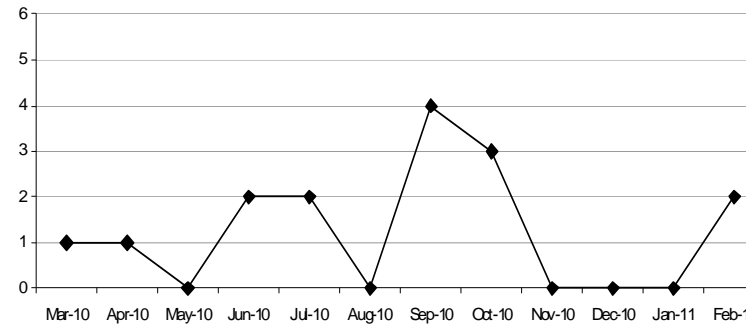
Clostridium difficile infections and *Staphylococcus aureus* (including MRSA) bacteraemia cases are all associated with being treated in hospitals. However, this is not the only place a patient may contract an infection. This total will also include infection from community sources such as GP surgeries 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

NHS Borders remains on track to achieve the HEAT target to reduce CDI by 50% by 31st March 2011.

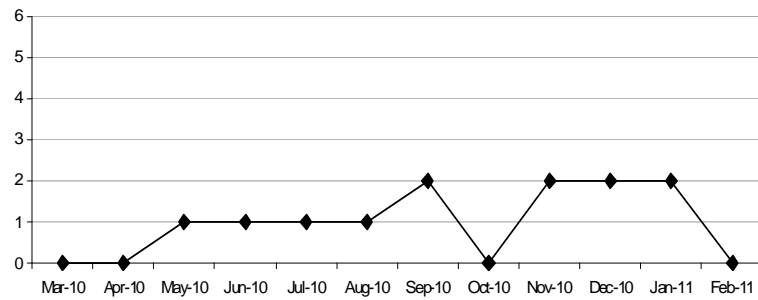
The total number of SAB cases (MRSA and MSSA) has remains a challenge. NHS Borders has not achieved the SAB HEAT target to reduce the number of SAB cases by 15% by 31st March 2011. A detailed action plan targeted to reduce SAB incidence is being implemented.

Clostridium difficile Infection Cases (all ages)



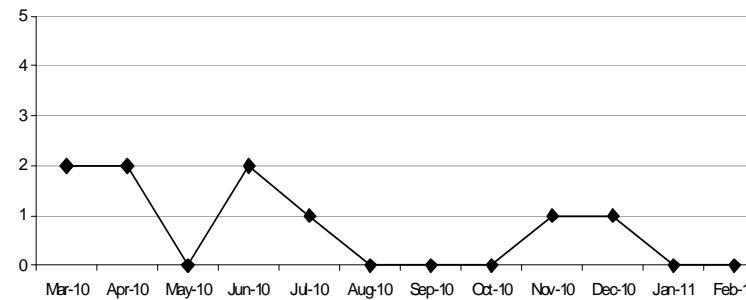
Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11
1	1	0	2	2	0	4	3	0	0	0	2

MSSA Bacteraemia Cases



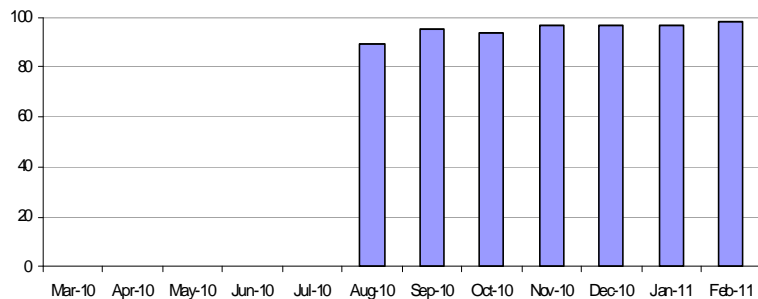
Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11
0	0	1	1	1	1	2	0	2	2	2	0

MRSA Bacteraemia Cases



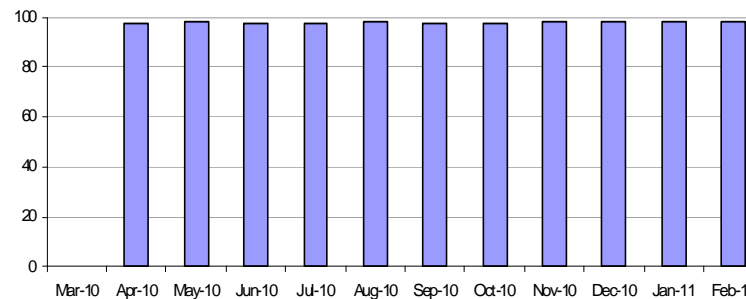
Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11
2	2	0	2	1	0	0	0	1	1	0	0

Hand Hygiene Compliance



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

Cleaning Compliance



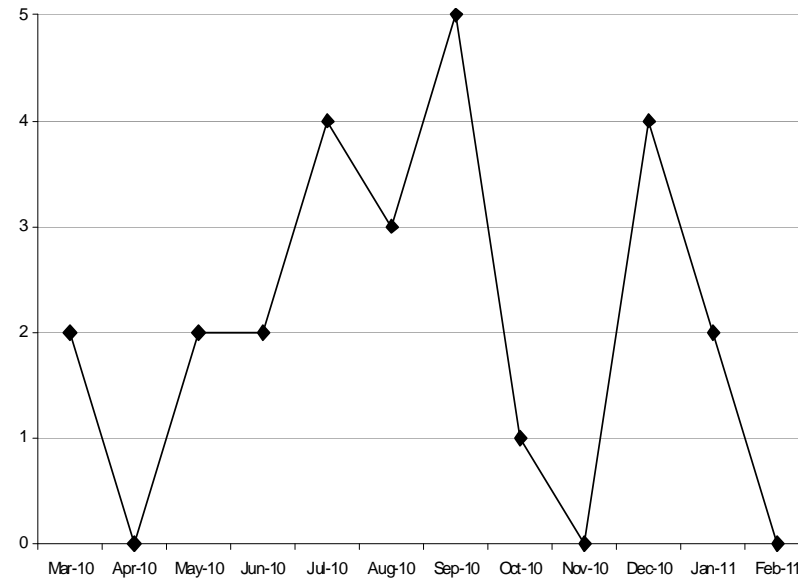
Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11
	97.2	97.8	97.3	97.3	97.9	97.7	97.5	98.2	98	98.3	97.9

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.

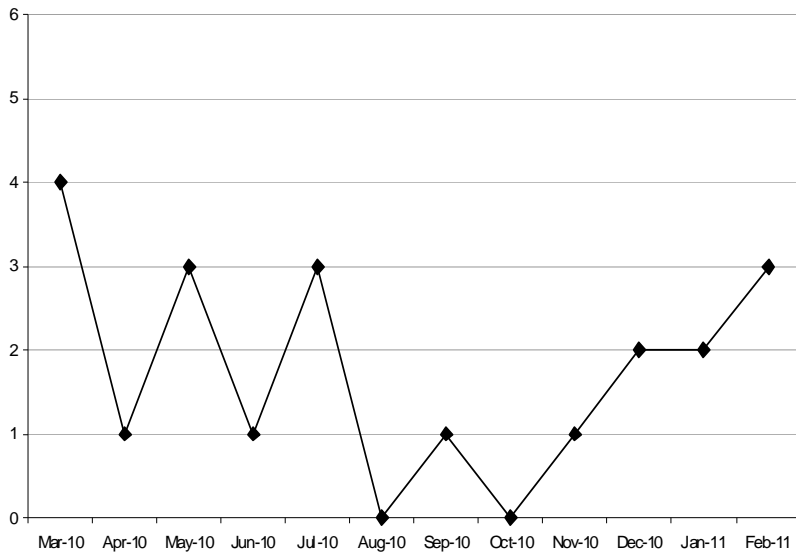
The MSSA and MRSA graphs show the ongoing challenge relating to community acquired bacteraemia.

Clostridium difficile Infection Cases (all ages)



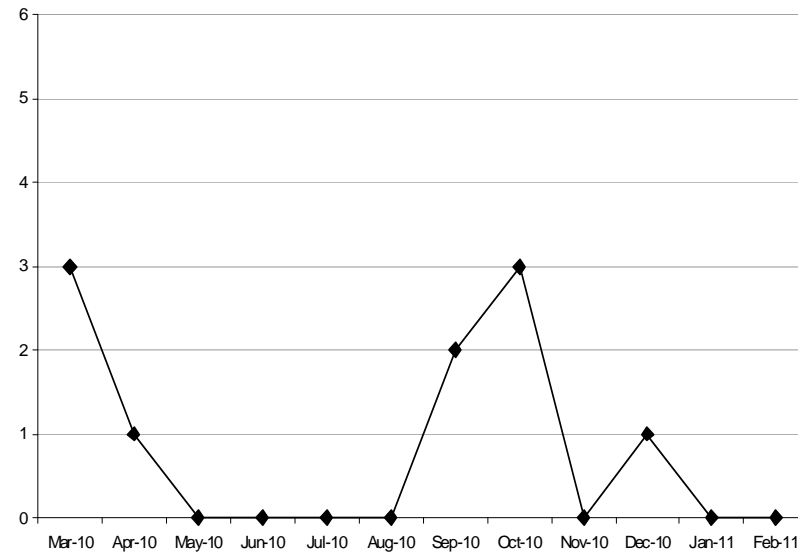
Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11
2	0	2	2	4	3	5	1	0	4	2	0

MSSA Bacteraemia Cases



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

MRSA Bacteraemia Cases



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