Borders NHS Board

Meeting Date: 24 September 2020

Approved by:	Nicky Berry, Director of Nursing, Midwifery and Acute Services
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HEALTHCARE ASSOCIATED INFECTION PREVENTION AND CONTROL REPORT August 2020

Purpose of Report:

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

Recommendations:

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

Approval Pathways:

The format of this report is in accordance with Scottish Government requirements for reporting HAI to NHS Boards. This report has not been submitted to any prior groups or committees but much of the content will be presented to the Clinical Governance Committee.

Executive 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 targets for infection control.
The report provides updates on:-

- NHS Borders infection surveillance against Scottish Government targets including *S.aureus* bacteraemia, *C.difficile* infections and *E.coli* bacteraemia
- Cleanliness monitoring, hand hygiene and the Infection Control compliance monitoring programme
- Infection Control work plan
- COVID-19 update

Impact of item/issues on:

Strategic Context	This report is in line with the NHS Scotland HAI Action Plan.
Patient Safety/Clinical Impact	Infection prevention and control is central to patient safety
Staffing/Workforce	Infection Control staffing issues are detailed in this report.
Finance/Resources	This assessment has not identified any resource implications.
Risk Implications	All risks are highlighted within the paper.

Equality and Diversity	This is an update paper so a full impact assessment is not required.
Consultation	This is a regular bi-monthly update as required by SGHD. As with all Board papers, this update will be shared with the Area Clinical Forum for information.
Glossary	See Appendix A.

Healthcare Associated Infection Reporting Template (HAIRT)

Section 1– Board Wide Issues

Key Healthcare Associated Infection Headlines for August 2020

- NHS Borders had a total of 12 *Staphylococcus aureus* Bacteraemia (SAB) cases between April and August 2020, 6 cases were **healthcare associated** infections. The previous HEAT target has been replaced with an individual target for each Board to achieve 10% reduction in the **healthcare associated** SAB rate per 100,000 bed days by 2021/22 (using 2018/19 as the baseline).

  To achieve this target, NHS Borders should have no more than 19 **healthcare associated** SAB cases per year. NHS Borders is on target to achieve this.

- NHS Borders had a total of 6 *C. difficile* Infection (CDI) cases between April and August 2020, 5 of which were healthcare associated infections. The previous HEAT target has been replaced with an individual target for each Board to achieve a 10% reduction in the **healthcare associated** CDI rate per 100,000 bed days by 2021/22 (using 2018/19 as the baseline).

  To achieve this target, NHS Borders should have no more than 11 **healthcare associated** cases per year. NHS Borders is not on target to achieve this. This target is particularly challenging for NHS Borders due to the low infection rate during our baseline period of 2018-19 when our incidence rate was 10.4 compared with a Scottish incidence rate of 14.7 for healthcare associated CDI cases.

- NHS Borders had a total of 36 *E. coli* Bacteraemia cases between April and August 2020, 24 of which were **healthcare associated**. A new HEAT target has been published for each Board to achieve a 25% reduction in the **healthcare associated** *E. coli* Bacteraemia rate per 100,000 bed days by 2021/22 with a total reduction of 50% by 2023/24 (using 2018/19 as the baseline).

  To achieve this target, NHS Borders should have no more than 32 healthcare associated cases per year by 2021/22 and no more than 21 healthcare associated cases per year by 2023/24. NHS Borders is not on target to achieve this.

  The biggest risk factor for patients in relation to *E. coli* Bacteraemia is Catheter Associated Urinary Tract Infection (CAUTI). COVID activity has been prioritised by the Infection Control Team over the last few months. However, the CAUTI Group will be reconvened in September 2020 to oversee an improvement programme.

***Staphylococcus aureus* Bacteraemia (SAB)**

See Appendix A for definition.

Between April and August 2020, there have been 11 cases of Meticillin-sensitive *Staphylococcus aureus* (MSSA) bacteraemia and 1 case of Meticillin-resistant *Staphylococcus aureus* (MRSA) bacteraemia.

Figure 1 shows a Statistical Process Control (SPC) chart showing the number of days between each SAB case. The reason for displaying the data in this type of chart is due to SAB cases being rare events with low numbers each month.

Traditional charts which show the number of cases per month can make it more difficult to spot either improvement or deterioration. These charts highlight any statistically significant events which are not part of the natural variation within our health system.

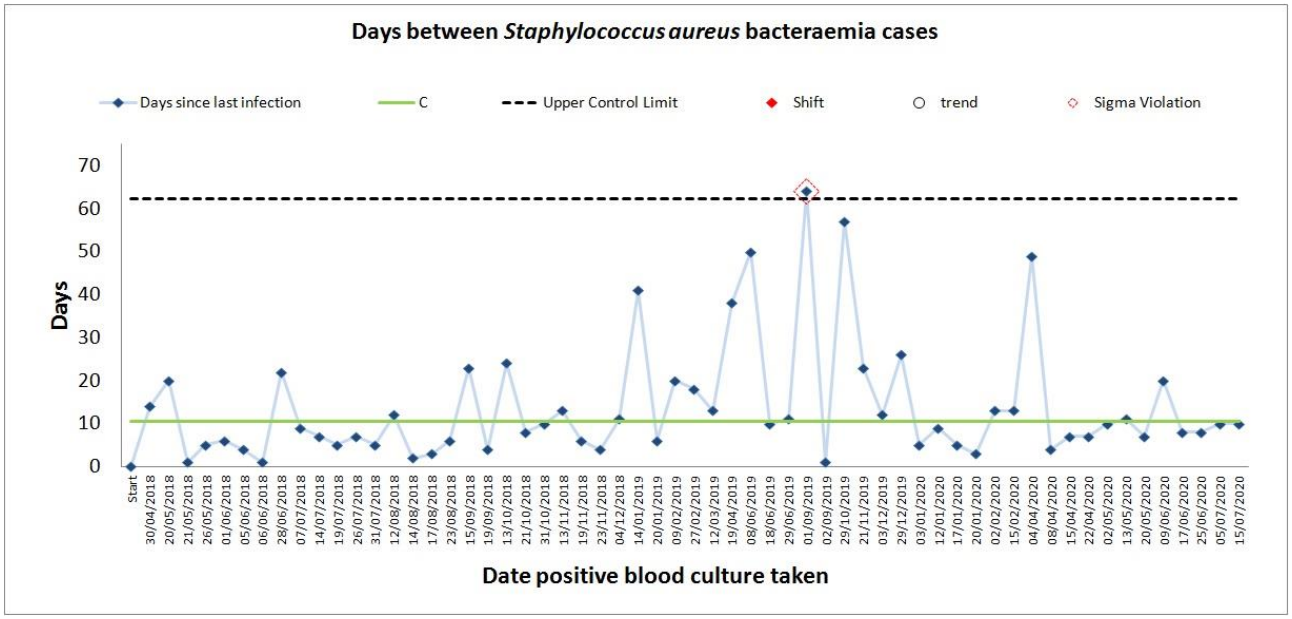


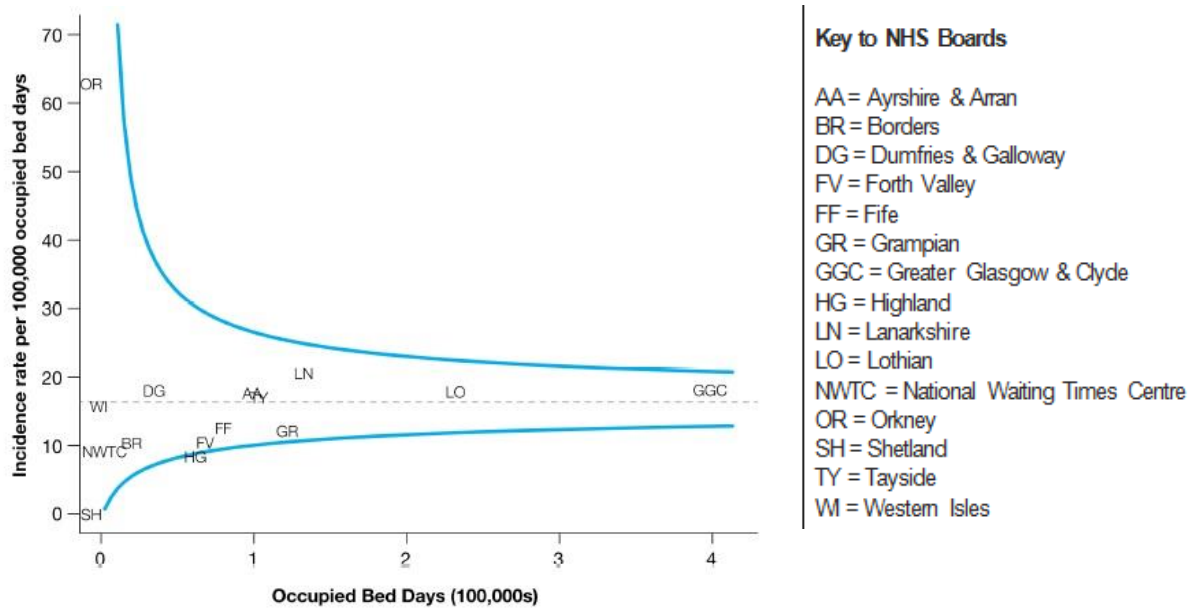
Figure1: NHS Borders days between SAB cases (April 2018 – August 2020)

In interpreting Figure 1, it is important to remember that as this graph plots the number of days between infections, we are trying to achieve performance above the green average line.

The graph shows that there have been no statistically significant events since the last Board update.

Health Protection Scotland produces quarterly reports showing infection rates for all Scottish Boards. Figure 2 below shows the most recently published data as a funnel plot of healthcare associated SAB cases as rates per 100,000 Total Occupied Bed Days (TOBDs) for all NHS boards in Scotland in Quarter 1 (Jan – Mar 2020).

During this period, NHS Borders (BR) had a rate of 10.4. The Scottish average rate is 16.3.

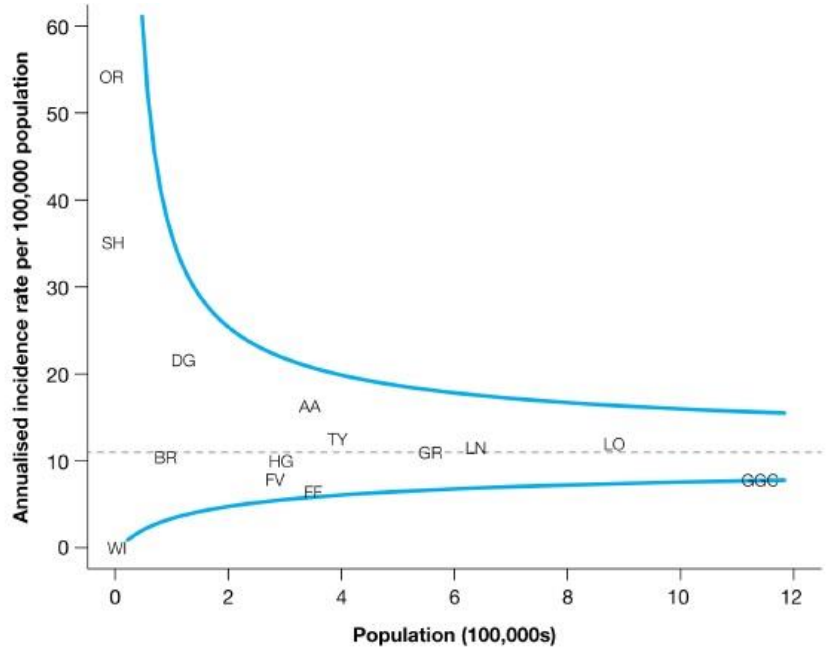


1. Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & Total occupied bed days: Information Services Division ISD(S)1.
2. NHS Ayrshire & Arran and NHS Tayside overlap.

Figure 2: Funnel plot of SAB incidence rates (per 100,000 TOBD) in healthcare associated infection cases for all NHS Boards in Scotland in Q1 2020

A funnel plot chart is designed to distinguish natural variation from statistically significant outliers. The funnel narrows on the right of the graph as the larger health Boards will have less fluctuation in their rates due to greater Total Occupied Bed Days. Figure 2 shows that NHS Borders was within the blue funnel, which means that it is not a statistical outlier.

Figure 3 below shows a funnel plot of community associated SAB cases as rates per 100,000 population for all NHS boards in Scotland in Q1 2020.



1. Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & NRS mid-year population estimates.

Figure 3: Funnel plot of SAB incidence rates (per 100,000 population) in community associated infection cases for all NHS Boards in Scotland in Q1 2020

During this period NHS Borders (BR) had a rate of 10.4 which was below the Scottish average rate of 11.

***Clostridium difficile* infections (CDI)**

See Appendix A for definition.

Figure 4 below shows a Statistical Process Control (SPC) chart showing the number of days between each CDI case. As with SAB cases, the reason for displaying the data in this type of chart is due to CDI cases being rare events with low numbers each month.

The graph shows that there have been no statistically significant events since the last Board update.

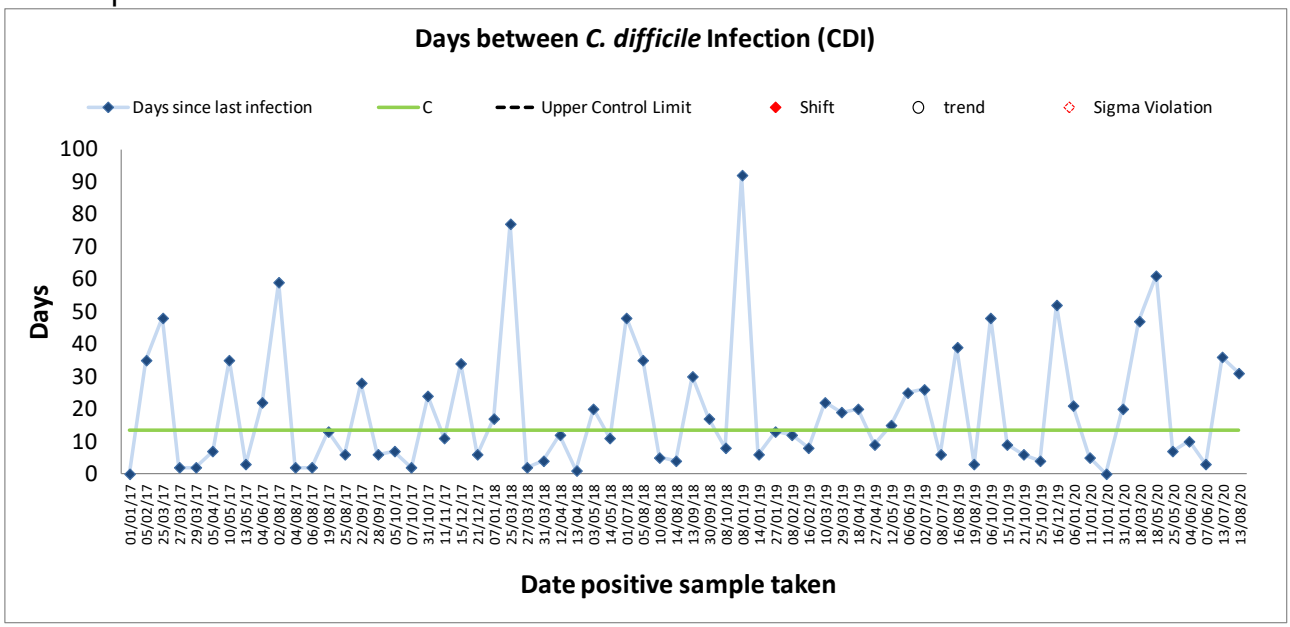
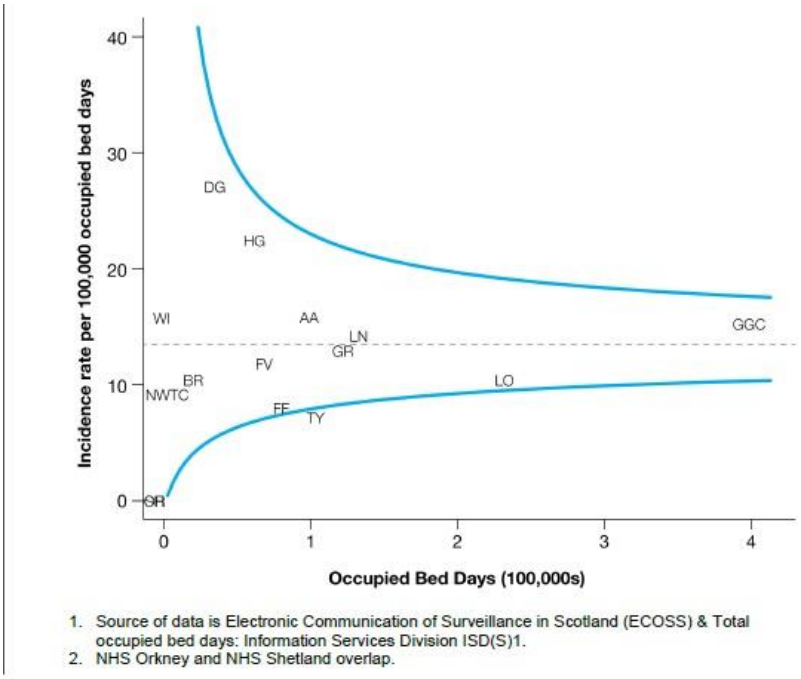


Figure 4: NHS Borders days between CDI cases (January 2017 – August 2020)

Health Protection Scotland produces quarterly reports showing infection rates for all Scottish Boards. Figure 5 below shows a funnel plot of CDI incidence rates (per 100,000 TOBD) in healthcare associated infection cases for all NHS Boards in Scotland in Q1 2020.

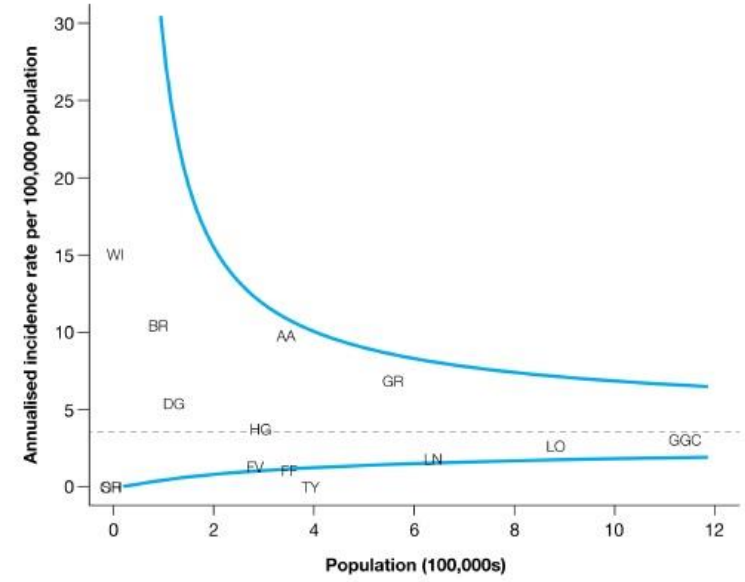


1. Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & Total occupied bed days: Information Services Division ISD(S)1.
2. NHS Orkney and NHS Shetland overlap.

Figure 5: Funnel plot of CDI incidence rates (per 100,000 TOBD) in healthcare associated infection cases for all NHS Boards in Scotland in Q1 2020

The graph shows that NHS Borders (BR) had a rate of 12 which is below the Scottish average rate of 13.6.

Figure 6 below shows a funnel plot of CDI incidence rates (per 100,000 population) in community associated infection cases for all NHS Boards in Scotland in Q1 2020.



1. Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & NRS mid-year population estimates.
2. NHS Orkney and NHS Shetland overlap.

Figure 6: Funnel plot of CDI incidence rates (per 100,000 population) in community associated infection cases for all NHS Boards in Scotland in Q1 2020

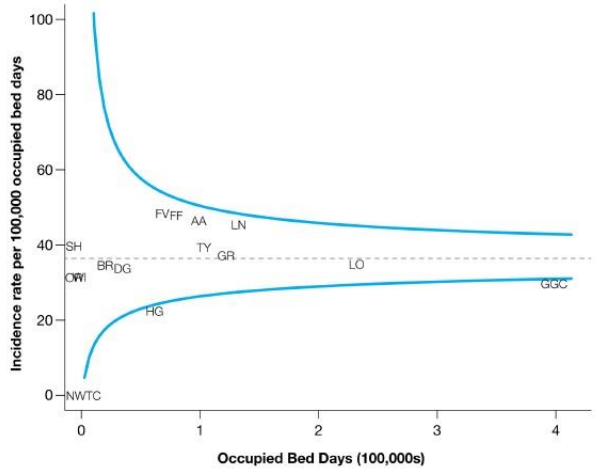
The graph shows that NHS Borders (BR) had a rate of 10.4 which is above the Scottish average rate of 3.5; however, we are not a statistical outlier from the rest of Scotland. Community cases were either identified from samples taken within 48 hours of hospital

admission or in primary care. The Antimicrobial Management Team continues to oversee antimicrobial stewardship across NHS Borders.

***Escherichia coli (E. coli)* Bacteraemia (ECB)**

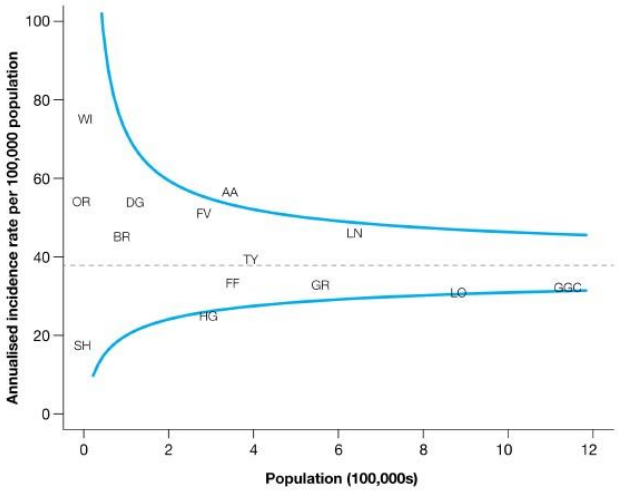
Health Protection Scotland produces quarterly reports showing infection rates for all Scottish Boards. Figure 8 below shows a funnel plot of ECB incidence rates (per 100,000 TOBD) in healthcare associated infection cases for all NHS Boards in Scotland in Q1 2020 (Jan – Mar 2020). NHS Borders (BR) had a rate of 34.7 for healthcare associated infection cases which is below the Scottish average rate of 36.4.

Figure 9 below shows a funnel plot of ECB incidence rates (per 100,000 population) in community associated infection cases for all NHS Boards in Scotland in Q1 2020.NHS Borders (BR) had a rate of 40.2 for community associated infection cases which is above the Scottish average rate of 39.1. However, NHS Borders is not a statistical outlier from the rest of Scotland. It is worth noting that community acquired ECB cases had no healthcare intervention prior to the positive blood culture being taken.



1. Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & Total occupied bed days: Information Services Division ISD(S)1.
2. NHS Orkney and NHS Western Isles overlap.

Figure 8: Funnel plot of ECB incidence rates (per 100,000 TOBD) in healthcare associated infection cases for all NHS Boards in Scotland in Q1 2020



1. Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & NRS mid-year population estimates.

Figure 9: Funnel plot of ECB incidence rates (per 100,000 population) in community associated infection cases for all NHS Boards in Scotland in Q1 2020

NHS Borders Surgical Site Infection (SSI) Surveillance

The Scottish Government updated the requirements for HAI surveillance on the 25th of March 2020. In light of the prioritisation of COVID-19 surveillance, all mandatory and voluntary surgical site infection surveillance has been paused from this date. Mandatory surveillance of *E.coli* bacteraemia, *Staphylococcus aureus* bacteraemia and *C. difficile* Infections has continued but as light surveillance only.

Hand Hygiene

Self audit hand hygiene data reporting re-commenced in July 2020. A new hand hygiene audit template has been developed for use by ward staff. The importance of strict hand hygiene continues to be promoted as part of the COVID-19 precautions aimed at patients, staff and members of the public. Hand hygiene floor transfers have been installed at the entrance to each ward to encourage hand hygiene.

Infection Prevention and Control Compliance Monitoring Programme

In response to the requirement to prioritise activity associated with COVID-19, the Infection Prevention and Control Team (IPCT) programme of Standard Infection Control Precautions (SICPs) audits had been suspended; audits have now recommenced as of July 2020. The audit monitoring programme has been reviewed and a new programme for 2020-22 has been approved by the Infection Control Committee. IPCT have completed a full review of the audit tool to ensure all key areas are incorporated and scores are now related to issues that can be rectified by the wards so that areas are not penalised for issues outwith their control.

A new spot check tool will be tested in September 2020. We currently complete these audits with a 'tick' or 'cross' process to show compliance, however this does not reflect how many items were checked so does not provide a sense of proportionality. A new model has been designed to make the spot check reporting tool more consistent and proportionate; data will now be displayed as percentage compliance. It is hoped this will give more meaning and value and enable us to focus on wards which are a genuine concern.

Cleaning and the Healthcare Environment

For supplementary information see Appendix A.

The data presented within the NHS Borders Report Card (Section 2 p.12) is an average figure across the sites using the national cleaning and estates monitoring tool that was implemented in April 2012. All areas met the Health Facilities Scotland national target of 90%.

2020/21 Infection Control Workplan

It was agreed with the Infection Control Committee that outstanding actions from the 2019/20 Infection Control work plan could be extended to September 2020 in light of the current pressures around COVID-19. A new work plan for 2020/21 has now been developed and approved by the Infection Control Committee. There are currently no overdue actions.

Outbreaks

- COVID-19

The following graphs are now produced by Business Intelligence. Figure 11 shows the cumulative number of COVID-19 positive cases per day in the Scottish Borders since 7th February 2020. As at 4th September 2020, there have been a total of 384 cases.

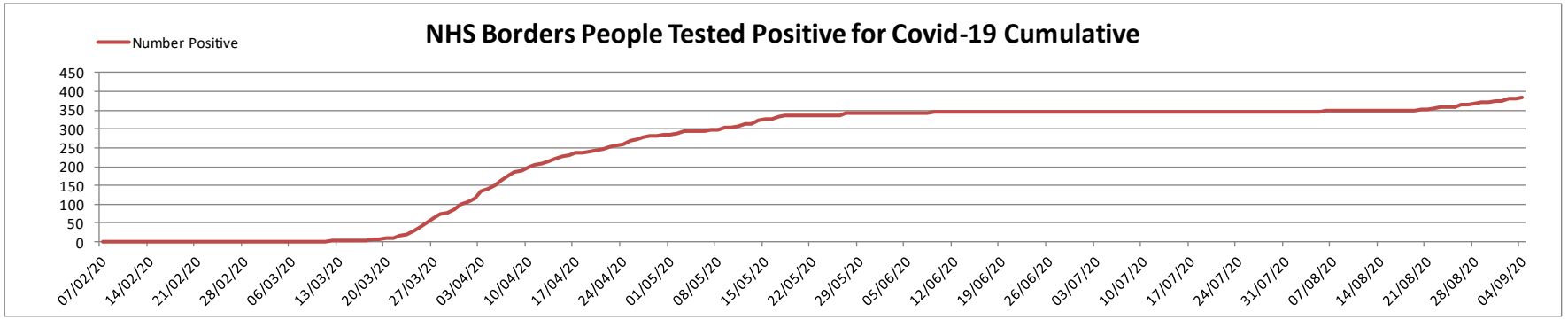


Figure 11: Cumulative Positive COVID-19 cases per day 07/02/2020 – 04/09/2020

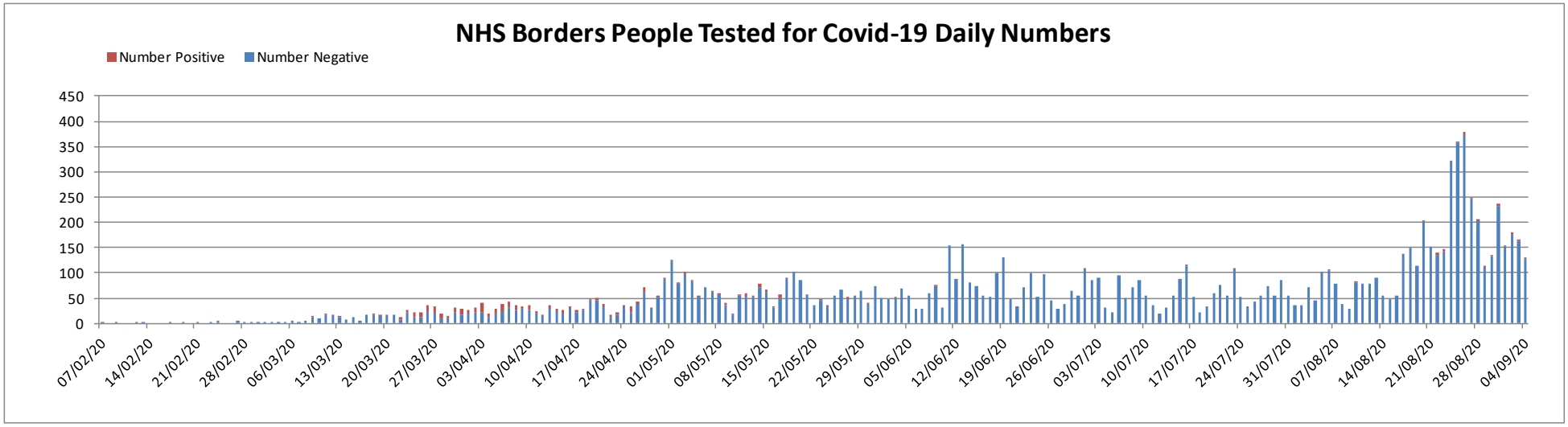


Figure 13: COVID-19 negative and positive results per day 07/02/2020 – 04/09/2020

Infection Prevention and Control Team Capacity

In response to the COVID-19 pandemic, a Community Infection Control Advisory Service (CICAS) was established to provide a single point of contact for infection control advice to community health and social care services.

CICAS is an office-based service managed through the Director of Public Health staffed to 31st March 2021 which has developed an increasing knowledge to answer questions and respond to concerns with escalation to the Community Infection Control Nurse.

The ongoing pandemic along with the variation to the Director of Nursing remit requires ongoing infection control capability and capacity to implement further changes in national guidance, respond to clusters/outbreaks (including influenza and norovirus) and support delivery of high quality care through training and education. This requires sufficient infection control nursing capacity for site visits to care homes and community services.

A single infection control team covering acute, community, mental health and LD as well as care homes and care at home services would provide greatest resilience and synergy. To this end, management of the CICAS Team transferred to the Infection Control Manager from Monday 17th August 2020.

Infection Control Nurses are specialist roles and there is a national shortage which has resulted in Boards generally having to 'grow their own' which requires significant personal investment by the post holder and financial investment by employers to attain the post graduate infection control qualification. The impact of COVID on infection control teams has been significant with a number of Boards describing their Teams as being at breaking point. Concerns regarding the pressures on infection control teams and staffing have been formally raised by the Infection Control Managers Network with SGHD which is convening a meeting about this later this month.

Across Scotland the role of Infection Control Nurse is not generally considered to be attractive and NHS Borders has previously struggled to recruit to vacant posts on a number of occasions.

Given the factors detailed above and the expectation of an ongoing need to provide infection control support to community health and social care services as well as maintain a resilient service across acute, community and mental health areas, Board Executive Team (BET) has supported the recruitment of 2.0wte permanent Infection Control Nurses. When they have been recruited and trained, this additional capacity will replace the current CICAS service.

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 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 out with 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). 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**

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&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.

Targets
There are national targets associated with reductions in C.diff and SABs. More information on these can be found on the Scotland Performs website:

http://www.scotland.gov.uk/About/Performance/scotPerforms/partnerstories/NHSScotlandperformance

Understanding the Report Cards – Hand Hygiene Compliance
Hospitals carry out regular audits of how well their staff are complying with hand hygiene. Each hospital report card presents the combined percentage of hand hygiene compliance with both opportunity taken and technique used broken down by staff group.

Understanding the Report Cards – Cleaning Compliance
Hospitals strive to keep the care environment as clean as possible. This is monitored through cleaning and estates 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/

Understanding the Report Cards – *'Out of Hospital Infections'*
Clostridium difficile infections and *Staphylococcus aureus (*including MRSA*)* bacteraemia cases are 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.

NHS BORDERS BOARD REPORT CARD

Staphylococcus aureus bacteraemia monthly case numbers

	Sep 2019	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	June 2020	July 2020	Aug 2020
MRSA	0	0	1	0	0	0	0	0	0	1	0	0
MSSA	2	1	0	2	4	2	0	4	3	2	2	0
Total SABS	2	1	1	2	4	2	0	4	3	3	2	0

Clostridium difficile infection monthly case numbers

	Sep 2019	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	June 2020	July 2020	Aug 2020
Ages 15-64	0	1	0	0	2	0	0	0	0	0	1	0
Ages 65 plus	0	3	0	1	2	0	1	0	2	2	0	1
Ages 15 plus	0	4	0	1	4	0	1	0	2	2	1	1

Hand Hygiene Monitoring Compliance (%)

	Sep 2019	Oct 2019	Nov 2019	Dec 2019	Jan 2019	Feb 2020*	Mar 2020*	Apr 2020*	May 2020*	June 2020*	July 2020	Aug 2020
AHP	96	100	100	98	100	-	-	-	-	-	100	100
Ancillary	97	94	100	100	100	-	-	-	-	-	100	100
Medical	97	98	95	100	100	-	-	-	-	-	99	99
Nurse	98	99	98	99	100	-	-	-	-	-	99	99
Board Total	**97**	**98**	**98**	**99**	**100**	**-**	**-**	**-**	**-**	**-**	**99**	**99**

*Self audit hygiene data reporting paused due to prioritisation of COVID-19 related work

Cleaning Compliance (%)

	Sep 2019	Oct 2019*	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	June 2020	July 2020	Aug 2020
Board Total	94.5	97.8	94.1	95.8	94.7	96.1	95.3	93.5	95.5	95.8	96.6	97.0

*BGH only: Community, Mental Health and Non-clinical areas not audited in October 2019

Estates Monitoring Compliance (%)

	Sep 2019	Oct 2019*	Nov 2018	Dec 2018	Jan 2019	Feb 2020	Mar 2020	Apr 2020	May 2020	June 2020	July 2020	Aug 2020
Board Total	98.6	98.6	97.2	98.7	97.8	98.9	98.5	99.7	97.9	99.2	98.7	99.8

*BGH only: Community, Mental Health and Non-clinical areas not audited in October 2019

BORDERS GENERAL HOSPITAL REPORT CARD

Staphylococcus aureus bacteraemia monthly case numbers

	Sep 2019	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	June 2020	July 2020	Aug 2020
MRSA	0	0	0	0	0	0	0	0	0	0	0	0
MSSA	0	0	0	0	2	0	0	2	1	0	1	0
Total SABS	0	0	0	0	2	0	0	2	1	0	1	0

Clostridium difficile infection monthly case numbers

	Sep 2019	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	June 2020	July 2020	Aug 2020
Ages 15-64	0	0	0	0	0	0	0	0	0	0	0	0
Ages 65 plus	0	2	0	0	1	0	0	0	0	0	0	0
Ages 15 plus	0	2	0	0	1	0	0	0	0	0	0	0

Cleaning Compliance (%)

	Sep 2019	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	June 2020	July 2020	Aug 2020
Board Total	97.2	97.8	96.1	95.8	96.8	96.0	96.4	97.4	97.4	97.3	97.1	96.4

Estates Monitoring Compliance (%)

	Sep 2019	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	June 2020	July 2020	Aug 2020
Board Total	99.6	98.6	98.7	97.9	98.6	98.6	99.5	99.4	99.6	99.3	99.8	99.6

NHS COMMUNITY HOSPITALS REPORT CARD

The community hospitals covered in this report card include:

- **Haylodge Community Hospital**
- **Hawick Community Hospital**
- **Kelso Community Hospital**
- **Knoll Community Hospital**
- **Melburn Lodge**

***Staphylococcus aureus* bacteraemia monthly case numbers**

	Sep 2019	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	June 2020	July 2020	Aug 2020
MRSA	0	0	0	0	0	0	0	0	0	0	0	0
MSSA	0	0	0	0	0	0	0	0	0	0	0	0
Total SABS	0	0	0	0	0	0	0	0	0	0	0	0

***Clostridium difficile* infection monthly case numbers**

	Sep 2019	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	June 2020	July 2020	Aug 2020
Ages 15-64	0	0	0	0	0	0	0	0	0	0	0	0
Ages 65 plus	0	0	0	0	0	0	0	0	0	1	0	0
Ages 15 plus	0	0	0	0	0	0	0	0	0	1	0	0

NHS OUT OF HOSPITAL REPORT CARD

***Staphylococcus aureus* bacteraemia monthly case numbers**

	Sep 2019	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	June 2020	July 2020	Aug 2020
MRSA	0	0	1	0	0	0	0	0	0	1	0	0
MSSA	0	1	0	2	2	2	0	2	2	2	1	0
Total SABS	0	1	1	2	2	2	0	2	2	3	1	0

***Clostridium difficile* infection monthly case numbers**

	Sep 2019	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	June 2020	July 2020	Aug 2020
Ages 15-64	0	1	0	0	2	0	0	0	0	0	1	0
Ages 65 plus	0	1	0	1	1	0	1	0	2	1	0	1
Ages 15 plus	0	2	0	1	3	0	1	0	2	1	1	1

Appendix A

Definitions and Supplementary Information

Staphylococcus aureus Bacteraemia (SAB)

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/haiic/sshaip/publicationsdetail.aspx?id=30248

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.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/haiic/sshaip/ssdetail.aspx?id=277

Escherichia coli bacteraemia (ECB)

Escherichia coli (*E. coli*) is a bacterium that forms part of the normal gut flora that helps human digestion. Although most types of *E. coli* live harmlessly in your gut, some types can make you unwell. When it gets into your blood stream, *E. coli* can cause a bacteraemia. Further information is available here:

https://www.gov.uk/government/collections/escherichia-coli-e-coli-guidance-data-and-analysis

NHS Borders participate in the HPS mandatory surveillance programme for ECB.This surveillance supports local and national improvement strategies to reduce these infections and improve the outcomes for those affected. Further information on the surveillance programme can be found here:

https://www.hps.scot.nhs.uk/a-to-z-of-topics/escherichia-coli-bacteraemia-surveillance/

Hand Hygiene

Information on national hand hygiene monitoring can be found at:

http://www.hps.scot.nhs.uk/haiic/ic/nationalhandhygienecampaign.aspx

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/

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