Borders NHS Board

**NHS
Borders**

Meeting Date: 4 June 2020

Approved by:	Nicky Berry, Director of Nursing, Midwifery and Acute Services
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HEALTHCARE ASSOCIATED INFECTION PREVENTION AND CONTROL REPORT May 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, and *C.difficile* infections
➢ Cleanliness monitoring, hand hygiene and the Infection Control compliance monitoring programme
➢ Infection Control work plan
➢ COVID-19 Outbreak

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	This assessment has not identified any staffing

	implications.
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 April 2020

- NHS Borders had no healthcare associated *Staphylococcus aureus* Bacteraemia (SAB) cases in April 2020. The previous HEAT target has been replaced with an individual target for each Board to achieve 10% reduction in healthcare associated SAB rate per 100,000 bed days by 2022 (using 2018/19 as the baseline).

  To achieve this target, NHS Borders should have no more than 22 cases per year. NHS Borders is on target to achieve this.

- NHS Borders had no healthcare associated *Clostridium difficile* infection (CDI) cases in April 2020. The previous HEAT target has been replaced with an individual target for each Board to achieve a 10% reduction in healthcare associated CDI rate per 100,000 bed days by 2022 (using 2018/19 as the baseline). To achieve this target, NHS Borders should have no more than 22 cases per year. NHS Borders is on target to achieve this.

Staphylococcus aureus Bacteraemia (SAB)

See Appendix A for definition.

In April 2020, there were 3 cases of Meticillin-sensitive *Staphylococcus aureus* (MSSA) and 0 Meticillin-resistant *Staphylococcus aureus* (MRSA). All these cases were community associated.

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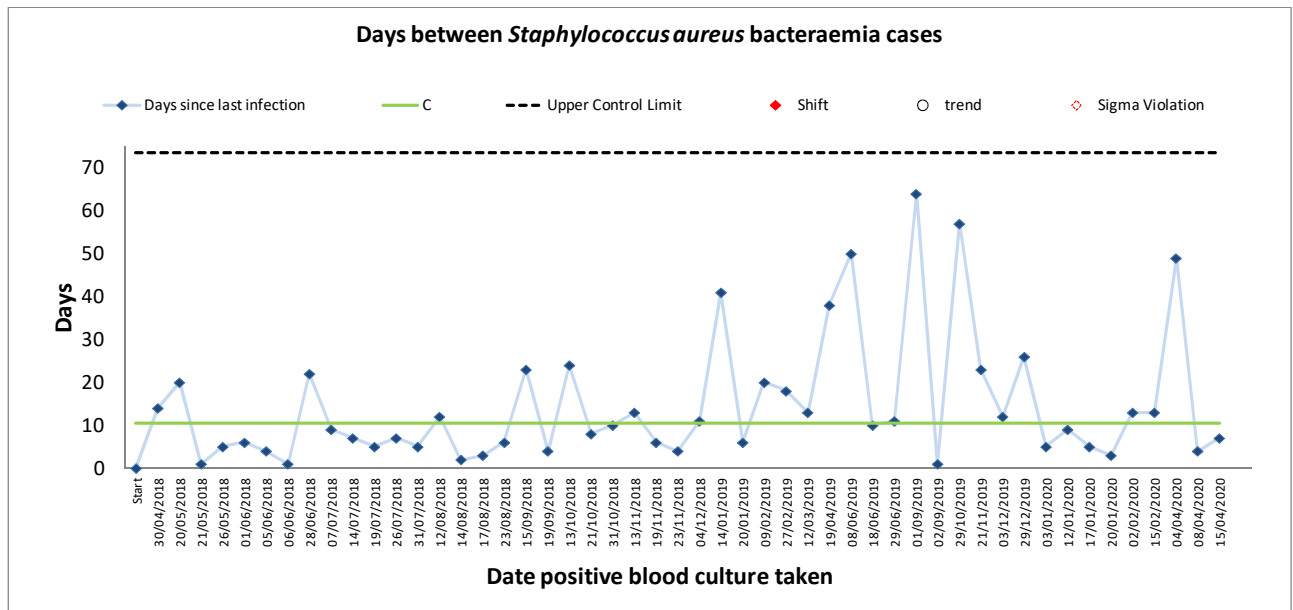
Figure1: NHS Borders days between SAB cases (April 2018 – April 2020)

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 havebeen no statistically significant events since the last Board update.

Clostridium difficile infections (CDI)
See Appendix A for definition.

Figure 2 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.

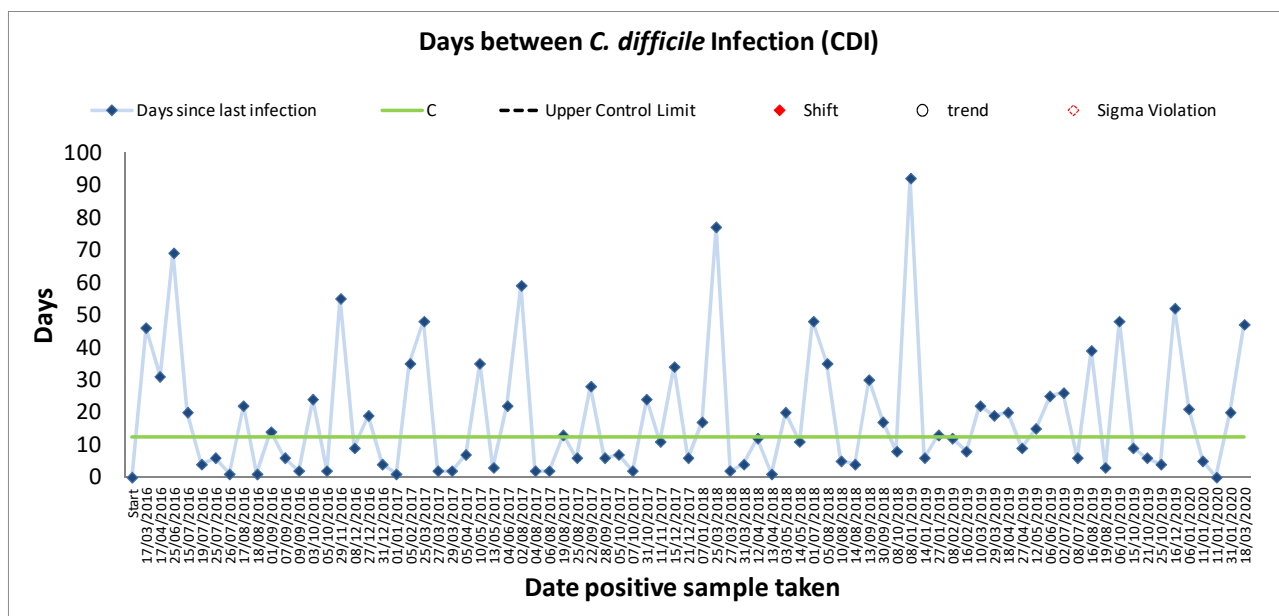The graph shows that there have been no statistically significant events since the last Board update.

Figure 2: NHS Borders days between CDI cases (March 2016 – April 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. Surveillance of *E.coli* bacteraemia, *Staphylococcus aureus* bacteraemia and *C. difficile* Infections will continue but this will be light surveillance only. See Appendix B for full detail.

Hand Hygiene

For supplementary information see Appendix A

Due to prioritisation of COVID-19 there is no self audit hand hygiene data available for February or March 2020. However, the importance of strict hand hygiene is being promoted as part of the COVID-19 national campaign aimed at the public and staff.

In April 2020, additional hand gel dispensers were installed across BGH site to improve staff and public access at the entrance to clinical areas.

Different communications methods are currently being explored with the support of Procurement to improve signage and ensure consistency to promote good hand hygiene practice amongst patients, staff and visitors.

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 audits has been suspended. However, the Infection Prevention & Control Nurses are maintaining high visibility in clinical areas with a significant focus on providing advice and support in relation to COVID-19.

The volume of requests from all staff groups across NHS Borders for advice and guidance in relation to COVID-19 has been, and continues to be significant. In that

context, NHS Lothian has been approached and is providing additional on-site Infection Control Nurse support to NHS Borders one day per week as well as telephone support two days per week.

A new spot check tool has been implemented from April 2020 with a specific focus on precautions to reduce the risk of COVID-19 including PPE, hand hygiene and cleaning. The outcome from these checks will be used to inform further activity to support staff compliance to reduce the risk of infection to staff and patients.

The IPCT are taking action to support those areas with a higher number of issues as highlighted during the recent spot checks.

Cleaning and the Healthcare Environment
For supplementary information see Appendix A.

Activity to validate audits for Cleanliness and Estates has been suspended due to prioritisation of COVID-19 work.

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 is currently in development.

Outbreaks
The following graph shows the cumulative number of COVID-19 positive cases per day in the Borders since 9th February 2020. As at 22nd May 2020 there have been a total of 308 cases.

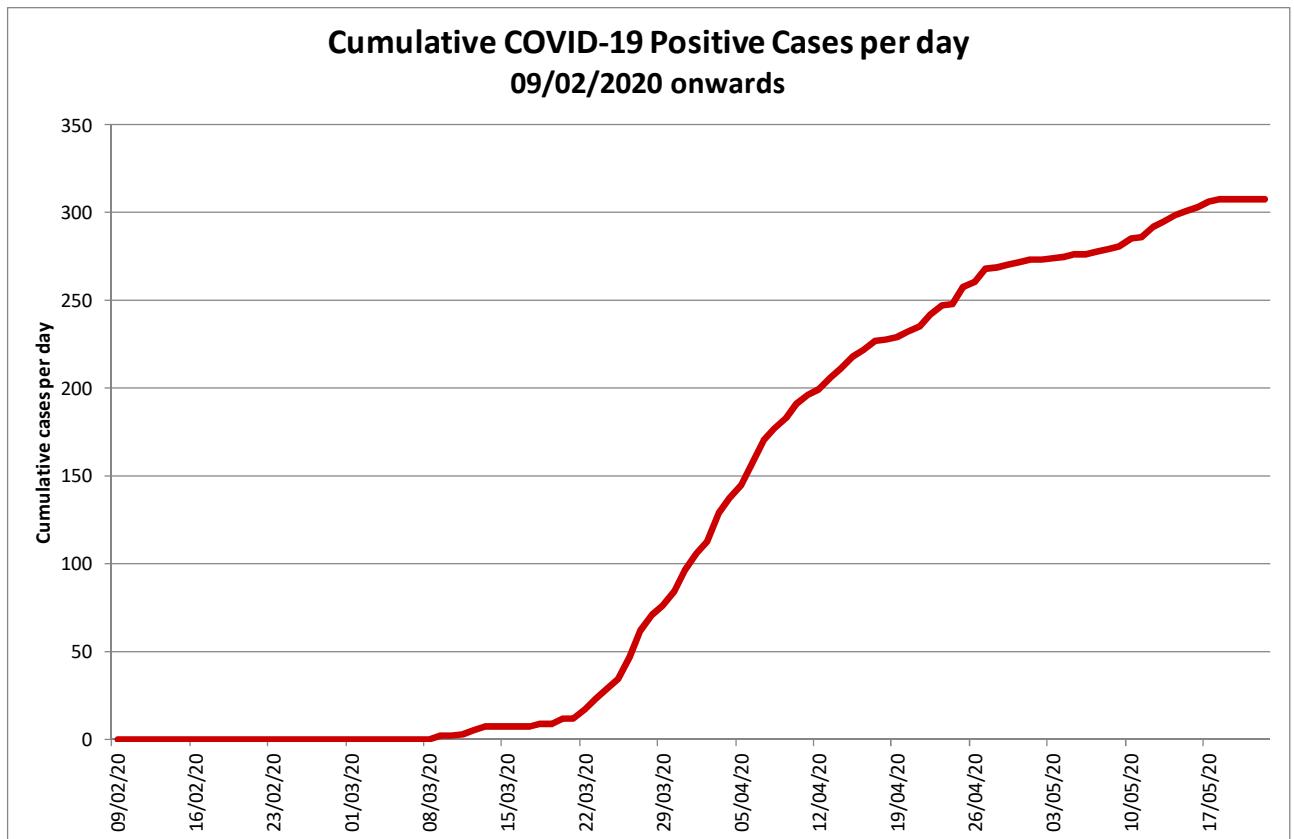**Cumulative COVID-19 Positive Cases per day**
09/02/2020 onwards

Figure 3: Cumulative Positive COVID-19 cases per day 09/02/2020 – 22/05/2020

Figure 4 shows the number of confirmed COVID-19 positive inpatient deaths per day in the Borders. As at 24th May 2020 a total of 35 people have sadly died.
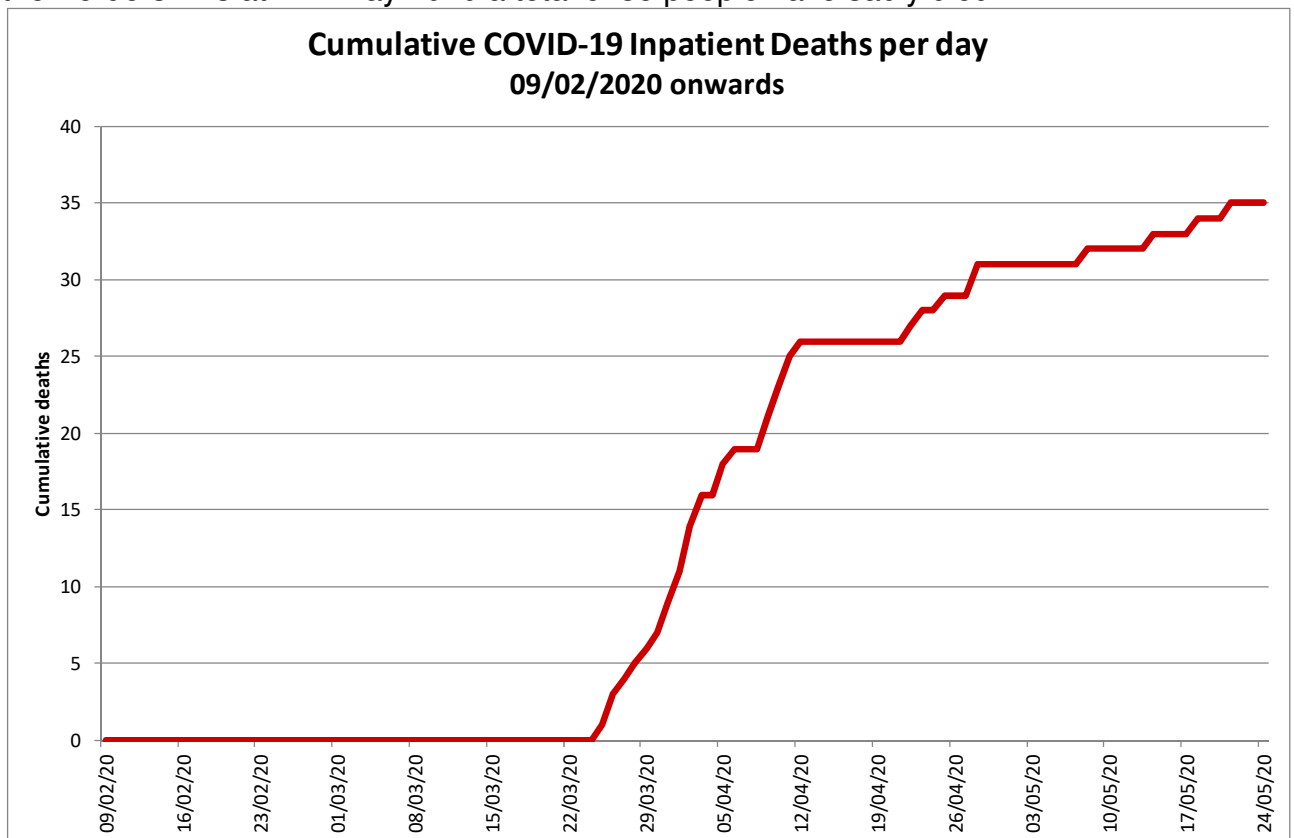
Cumulative COVID-19 Inpatient Deaths per day
09/02/2020 onwards

Figure 4: Cumulative COVID-19 deaths per day 09/02/2020 – 24/05/2020

COVID-19 Positive & Negative Results by day
09/02/2020 onwards

Duplicate positives are removed. Each positive patient is only recorded once

Total tested

■ Total negative COVID-19 patients   ■ Total positive COVID-19 patients
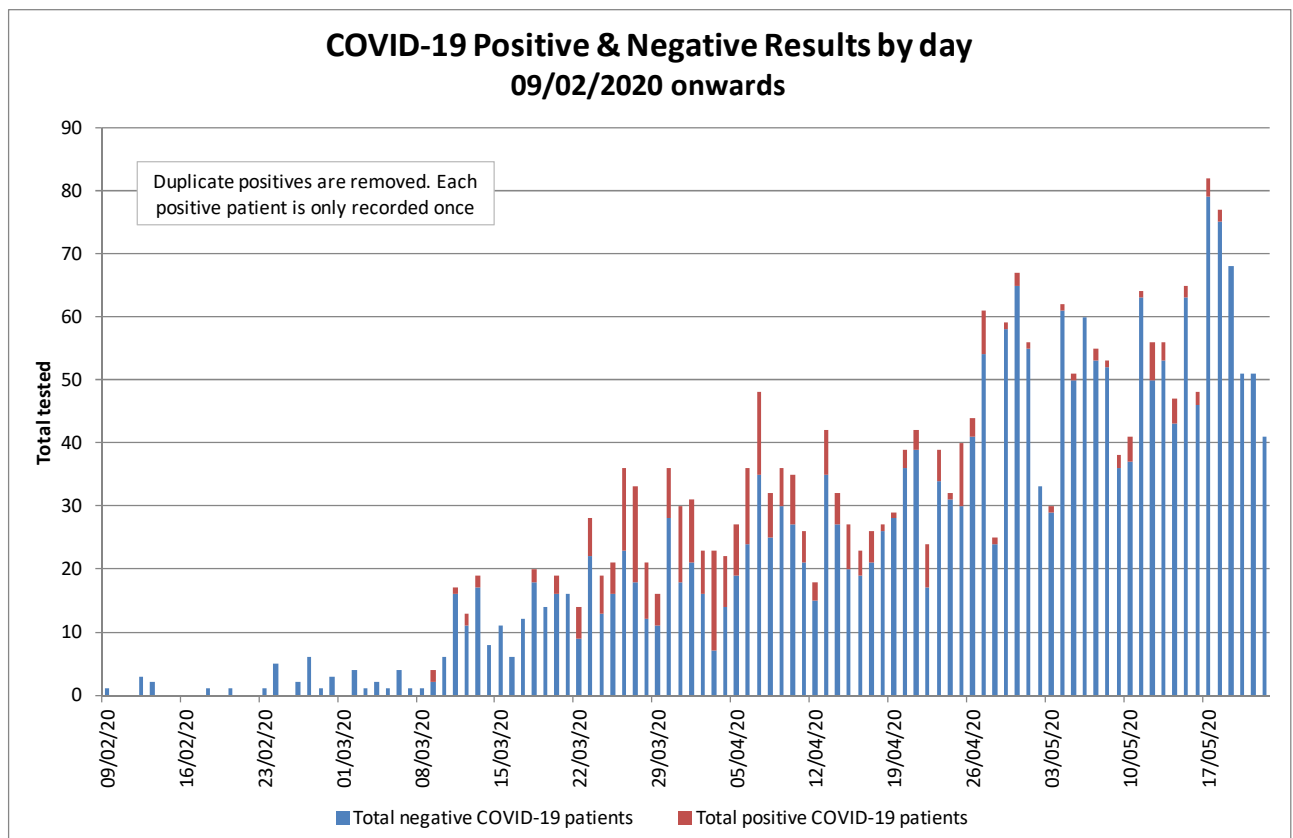
Figure 5: COVID-19 negative and positive results per day 09/02/2020 – 22/05/2020

Figure 5 shows the total number of people tested per day in the Borders for COVID-19 by result (positive or negative). As at 22nd May 2020 a total of 2693 people have been tested.

Figure 6 shows the number of staff tested per week for COVID-19 by test outcome (positive or negative). In the most recent week, around 10% of tested staff were positive.
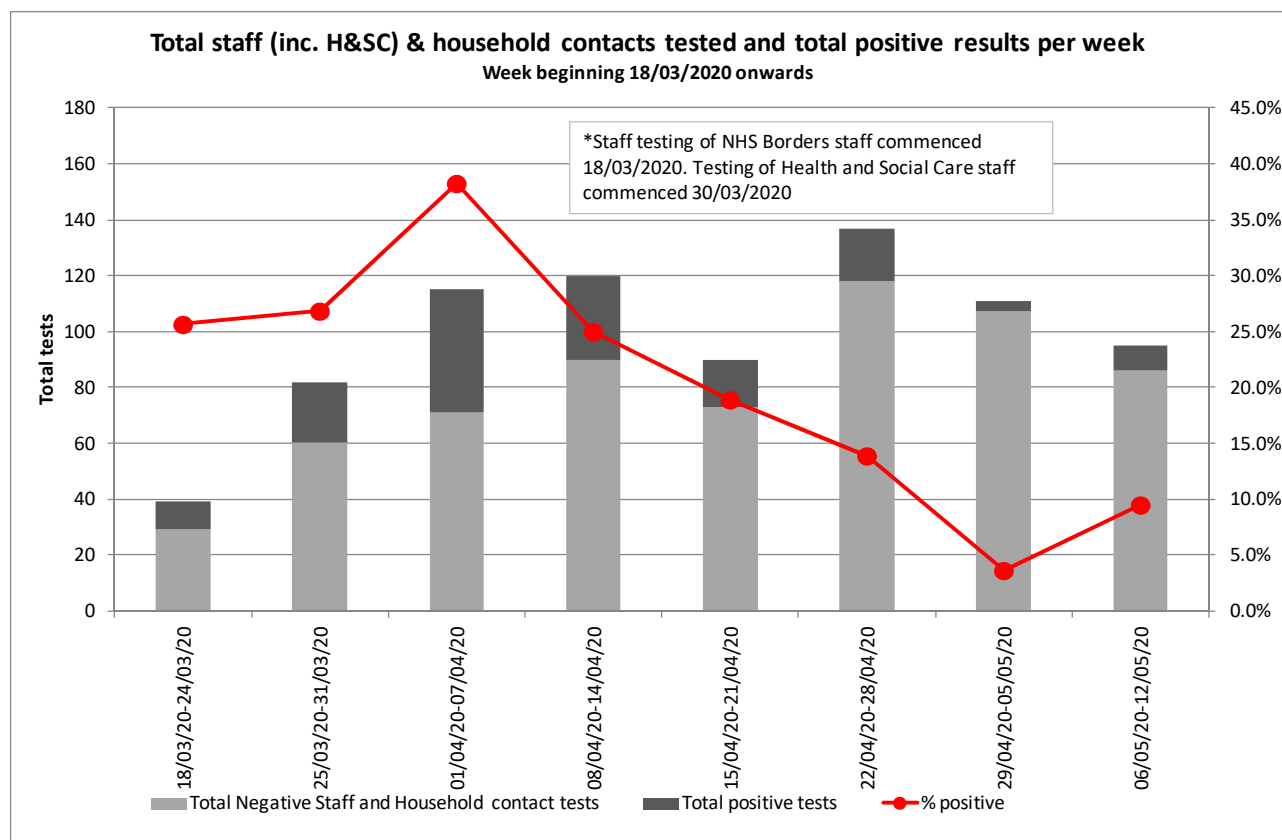
Figure 6: Total staff & household contacts tested and positive results per day 18/03/2020 - 12/05/2020

NHS Borders has established a COVID-19 pandemic committee which meets twice per week and includes representation from each clinical board and the Health and Social Care partnership.

The Infection Prevention & Control Team, Work & Well-being and Health and Safety Team have been working together to provide training for frontline staff to undertake full PPE training to ensure they are prepared to care for potential and confirmed cases of COVID-19.

Personal Protective Equipment (PPE)
The careful control and management of necessary PPE has proved to be one of the key challenges of the COVID pandemic. NHS Borders put in place mechanisms to ensure that the supply and distribution of key items is controlled, and developed predictive modelling to highlight potential issues before they arise.

This information is now collated into a dashboard showing the current and predicted future position in relation to key PPE items utilising knowledge of usage, stocks and future deliveries.

NHS Borders moved very early in placing the following items on a list of controlled stock, and introduced a specific supply distribution team to work with individual clinical areas to ensure sufficient stock was held locally based on an assessment of immediate needs:-

- FFP3 Masks
- Disposable Fluid Resistant Gowns

- Purple Long Sleeve Gloves
- Visors
- Type IIR Surgical Masks
- Eye Protection/Goggles

Working between Procurement, Work & Well-being, Health and Safety and Infection Control this system has ensured that available stocks have been used to maximum effect and avoided any critical shortages associated with distribution or local stock piling.

The distribution team have also worked to ensure that clinical teams are using PPE items appropriately and consistently and they continue to deliver staff training where required.

NHS National Services Scotland alongside Scottish Enterprise and Scottish Government is continuing its efforts to increase the amount of PPE that can be manufactured, sourced and supplied in Scotland.

Contracts have been established between NHS Scotland and a number of Scottish-based companies helping strengthen and expand the supply of protective gowns and visors in Scotland, securing long-term stock levels. This has provided increased confidence in national PPE supplies to NHS Borders.

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

Appendix B

CNO Letter to
Boards regarding revi

Chief Nursing Officer Directorate
Fiona McQueen, Chief Nursing Officer

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Scottish Government
Riaghaltas na h-Alba
gov.scot

Chief Executives NHS Scotland
HAI Executive Leads
Cc Infection Control Managers

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25 March 2020

Colleagues

In recognition that Infection Prevention Control Teams (IPCTs) have a critical role in providing Infection Prevention Control (IPC) advice to frontline clinicians in response to the COVID-19 pandemic, Scottish Government has agreed the following temporary changes to routine surveillance requirements:

- All mandatory and voluntary Surgical Site Infection (SSI) surveillance should be paused until further notice.
- For *Staphylococcus aureus* bacteraemia (SAB), *Escherichia coli* bacteraemia (ECB) and *Clostridioides difficile* infection (CDI), Boards should continue to report case numbers and origin of infection data but are **not** required to report risk factor data as would normally be expected under enhanced/extended surveillance. This will still allow Boards to report on case numbers and to establish whether cases are healthcare or community associated.
- Routine surveillance in ICU will pause in order to prioritise resource for enhanced surveillance of COVID-19 specifically. Any Ventilator Associated Pneumonia (VAP) and other infections associated with COVID-19 will be identified and reported through this enhanced surveillance programme. As part of the COVID-19 response, there will be dedicated enhanced surveillance of COVID-19 infections specifically. It is important to note that extra surveillance resource will be required to support this enhanced COVID-19 surveillance in ICU and Chief Executives should look to resource this appropriately within their own Boards.

The data for CDI, SAB and ECB will continue to be fed into the Quarterly Epidemiological Data Officials Statistics, enabling Boards and HPS to identify trends, exceptions and to take immediate mitigating action where necessary.

Please note that, throughout this period, Boards are still required to implement local surveillance of all mandatory NHS Scotland alert organisms and conditions set out in Appendix 13 of the National Infection Prevention and Control Manual (NIPCM).

With best wishes

Professor Fiona McQueen
Chief Nursing Officer

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