

NHS Greater Glasgow & Clyde

NHS Board Meeting

26 June 2018



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Medical Director

Paper No: 18/28

Healthcare Associated Infection Reporting Template (HAIRT)

Recommendation: For noting

Purpose of Paper: Update on NHSGGC performance against HEAT and other HAI Targets and performance measures.

Key Issues to be considered:

Validated HPS / ISD data : Quarter 4 (October - December) 2017			
Please note this table uses old denominators which are unpublished.			
HEAT Targets	GGC	National	HEAT/LDP target
SAB rate per 100,000 AOB	34.5	32.3	24.0
CDI cases in age 15+ rate per 100,000 non acute OBD	29.0	25.1	32.0

Table 1. Progress against National HAI HEAT/LDP targets 01/10/2017 – 31/12/2017

- **116** validated *Staphylococcus aureus* Bacteraemia (SAB) cases were reported for October to December 2017 with a rate of **34.5** cases per 100,000 AOB. This is **above** the national rate. SABs remain a priority and we have re- established the GGC SAB group with clinician input to further develop the GGC action plan. IPCT have also organised a SAB summit with other health boards
- **94** validated *Clostridium difficile* (CDI) cases were reported for October to December 2017 with a rate of **29.0** cases per 100,000 non-acute bed days for ages 15+. This is above the national rate but **below** HEAT/LDP requirements.

Any Patient Safety /Patient Experience Issues:

Local surveillance for January-March (Q1) 2018 shows that NHSGGC has reported a slightly higher number of SABs with 119 cases.

Any Financial Implications from this Paper: No

Any Staffing Implications from this Paper: No

Any Equality Implications from this Paper: No

Any Health Inequalities Implications from this Paper: No

Has a Risk Assessment been carried out for this issue? If yes, please detail the outcome:

No

Highlight the Corporate Plan priorities to which your paper relates: Improving quality, efficiency and effectiveness.

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Healthcare Associated Infection Reporting Template (HAIRT)

Section 1 – Board Wide Issues

This is the bi-monthly publication of the reporting template for submission to the NHS Board as required by the national HAI Action Plan.

Changes to National Definitions/Denominators

This is the first HAIRT which presents data based on the new national definition of Healthcare Associated and Community Infections. Below is a short summary of the changes which have been applied to the presented data.

Definitions

From this point onward rates will be split into two:

- Healthcare Associated Infections i.e. *any infections associated with Healthcare (hospital or GP)*
- Community Infections

Denominators

Healthcare Associated Infection (HAI)

Rates will be worked out by number over total occupied bed days (TOBDs)

Community Infections

Rates will be worked out by number over population.

***Staphylococcus aureus* (including Meticillin resistant *Staphylococcus aureus* (MRSA))**

Staphylococcus aureus Bacteraemia (SAB) Surveillance and Actions

Quarter 4: 2017 (October - December) Surveillance

For the last published reporting quarter (October – December 2017) NHS Greater Glasgow & Clyde report a total of **116** SAB cases. These are further classified as healthcare associated or community associated.

88 healthcare associated cases were reported for the quarter equating to a rate of 20.1 per 100,000 occupied bed days (Figure 1.) This is above the NHS Scotland rate of 16.6.

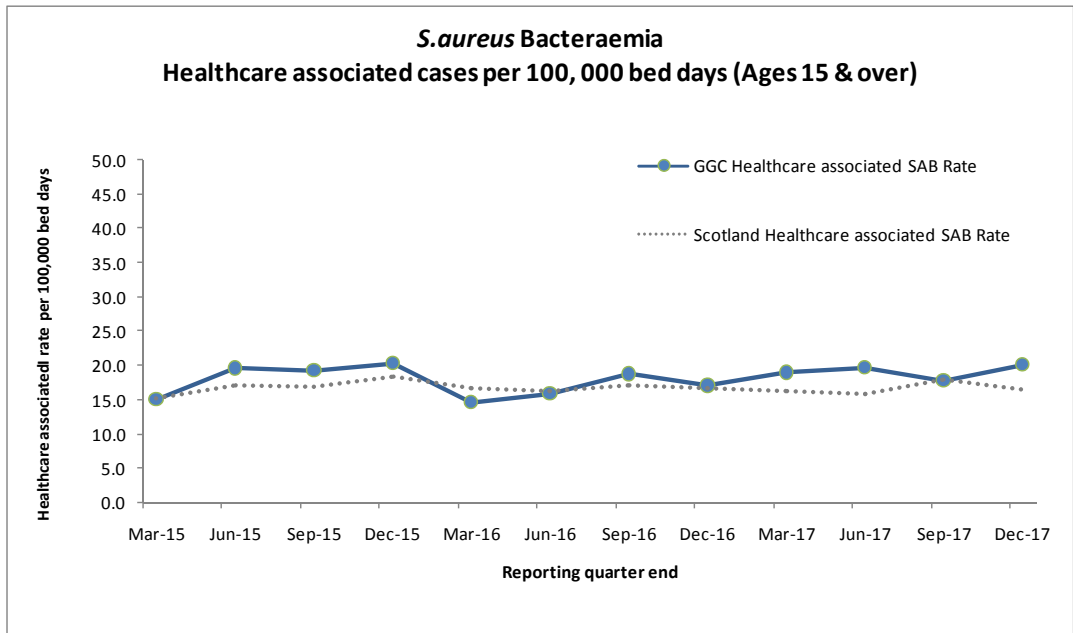


Figure 1. Healthcare associated SAB comparison by quarter for NHSGGC and Scotland.

Intravascular Access Devices (IVADs) are devices that need to be inserted via the skin into patients blood stream to deliver life saving fluids, nutrition or drugs. IVADs are key to delivering care but breach the bodys natural defence (skin) which means that they are in themselves a potential reason that patients aquire infections. In Q4-17 IVADs continue to be the most common entry points for hospital acquired cases of SABs in GGC and NHS Scotland. Ongoing education on the insertion, care and maintenance of these devices which include peripheral venous catheters (PVCs), central venous catheters (CVCs) and renal haemodialysis catheters remains high priority for our Board and we will continue to update progress on continuing the reduction of vascular access device related cases. Preventing infections with PVC is a mandatory element of medical staff induction programme.

Community associated cases are now reported against a denominator rate per 100,000 population (Figure 2.) These cases include SABs in people who have had no recent healthcare interaction in the 30 days prior to SAB onset and are therefore less amenable to reduction measures within GGC Acute hospitals. The rate of community associated cases in NHSGGC was 9.6 compared to 9.7 in NHS Scotland.

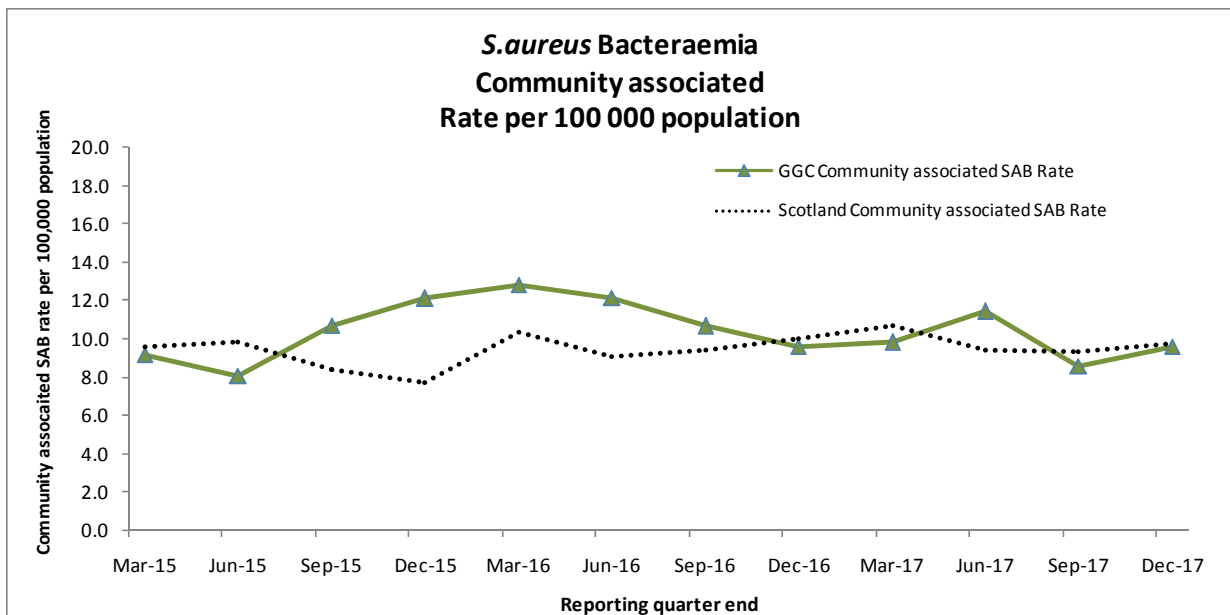


Figure 2. Community associated SAB comparison by quarter for NHSGGC and Scotland.

Quarter 1: 2018 (January – March) NHSGGC Surveillance

Data for January to March 2018 will not be published by HPS until early July. Local surveillance reports 119 patient cases. This is a slight increase from the previous quarter. 94 cases were categorised as Healthcare Associated/Hospital Acquired as shown in Table 2. below.

HPS reporting category	Origin of SAB	Number of patient cases (Unvalidated and subject to change)
Healthcare Associated	Hospital acquired	49
	Healthcare associated	45
Community	Community	25
	Total	119

Table 2. Origin of SAB – local surveillance data for Q1-18

Of the hospital acquired cases (49/119), 31% (n=15) were attributed to an IVAD. Sources which have been able to be identified are displayed in Figure 3.

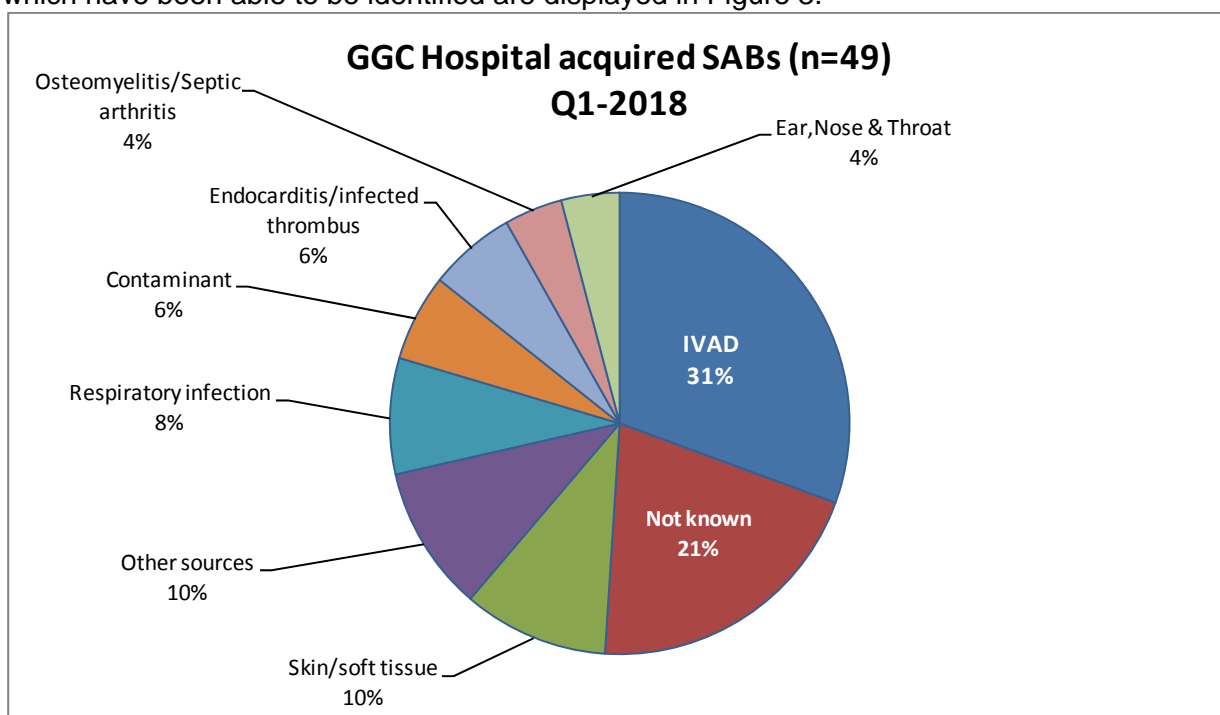


Figure 3. Source of hospital acquired cases

Not Known Source

All SABs are reviewed by the Infection Prevention and Control Team (IPCT) to try to determine the source of the infection. On many occasions patients present with many potential sources of infection which means that determining a single source is extremely difficult and in many cases impossible, e.g. patient with a community acquired pneumonia with a pressure ulcer and a CVC in situ; there are multiple ways bacterial could get into this patient’s blood stream and often the IPCT are unable to determine a single source. The national protocol requires that when the IPCT are unable to do this the cases are categorised as ‘unknown’ but these cases are reviewed (normally more intensely) than those when the source is more obvious.

Other Sources

There are less common entry sources of SAB, e.g. intra-abdominal, urinary tract infections, or surgical site infections. These are grouped together in Figure 3 as these occurred in single patient cases.

Figure 4 below displays the number of hospital acquired IVAD device related *S.aureus* bacteraemia from January 2016. Please note NHSGGC IVAD related SABs have been below the mean for the past 5 months, this could indicate an improvement in the rates associated with devices and the SAB steering group continues to work to sustain this.

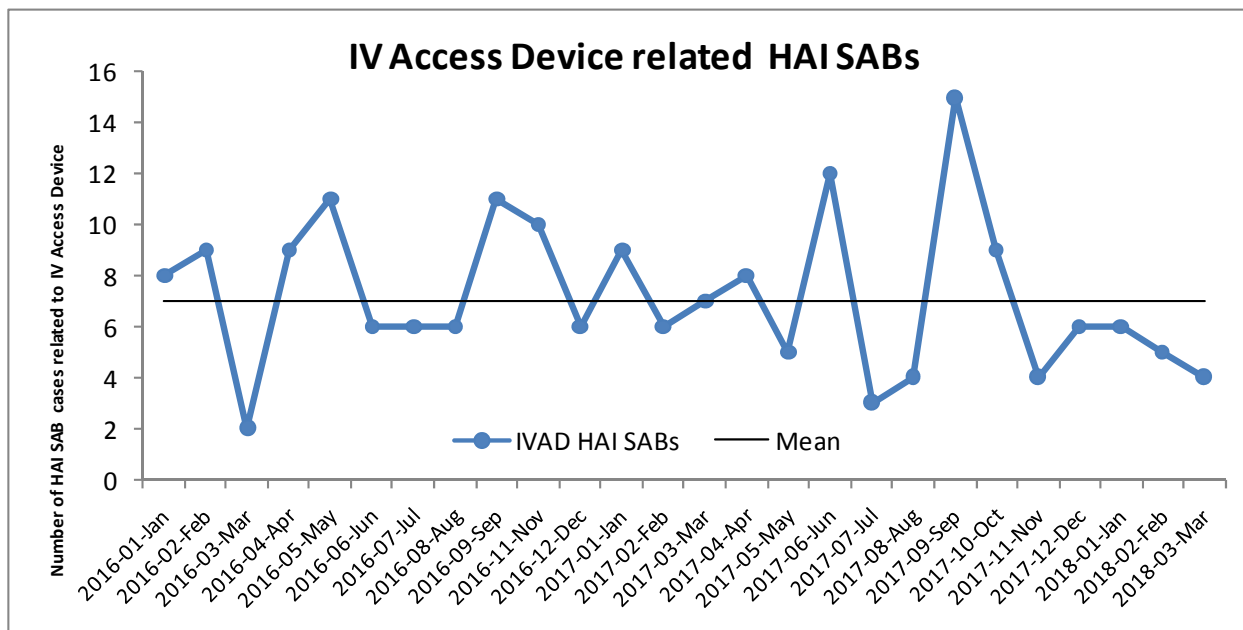


Figure 4. Number of SABs by month attributed to an IV access device

SAB Actions Update

In the past several years the overall number of SABs in NHSGGC has continued to plateau despite efforts to reduce the numbers over time. This is a summary of the actions taken to address this:

- Audit of Care Plan compliance
- Education, including novel approaches to learning
- Care Plan development and amendment
- Development of a Vascular Access Policy
- Screening of renal patients prior to line insertion
- Line locks in high-risk specialties
- Targeted information to and from Chiefs of Medicine
- Optimum prescribing of antibiotics and IV oral switch promoted to reduce the risk from vascular access lines
- Updates monthly to SMTs, Acute Clinical Governance Committees regarding rates
- Review Compliance with Antimicrobial Therapy 2017
- Rapid Alert Initiative
- Review of “unknown source” of Bacteraemia cases by Infection Control Doctors 2018
- Reconvening of multi-disciplinary SAB Group
- Review of the use of PVCs in Emergency Departments is currently in progress

A summit with other Health Board areas, which have been more successful than GGC in achieving progress towards this challenging target has been arranged for 22 June 2018. Learning from this will be added to the list of actions currently being implemented by the GGC SAB steering group.

NHSGGC MRSA Screening Project

CRA compliance for GGC in Q4 (January – March 2018) increased to 92%. Ward compliance rates are returned to the Sector / Directorate Senior Management Teams to identify areas that require support / education in relation to improved screening.

The next table shows the CRA compliance rate over the past four quarters.

Please note that HPS reporting quarters for this project are different to those used for CDI, SAB and SSI.

	2017-18 Q1 (Apr-Jun)	2017-18 Q2 (Jul-Sep)	2017-18 Q3 (Oct-Dec)	2017-18 Q4 (Jan-Mar)
Greater Glasgow & Clyde	92%	89%	89%	92%
Scotland	85%	90%	88%	83%

*Table3. Quarterly screening compliance
National Data Source: HPS MRSA Screening Team April 2018*

Clostridium difficile

Surveillance and Actions

89 validated cases were reported in the last published quarter (October – December 2017). 67 cases were healthcare associated and this provided a rate of 15.3 cases per 100,000 bed days. The rate for NHS Scotland was 13.7(Figure 5.).

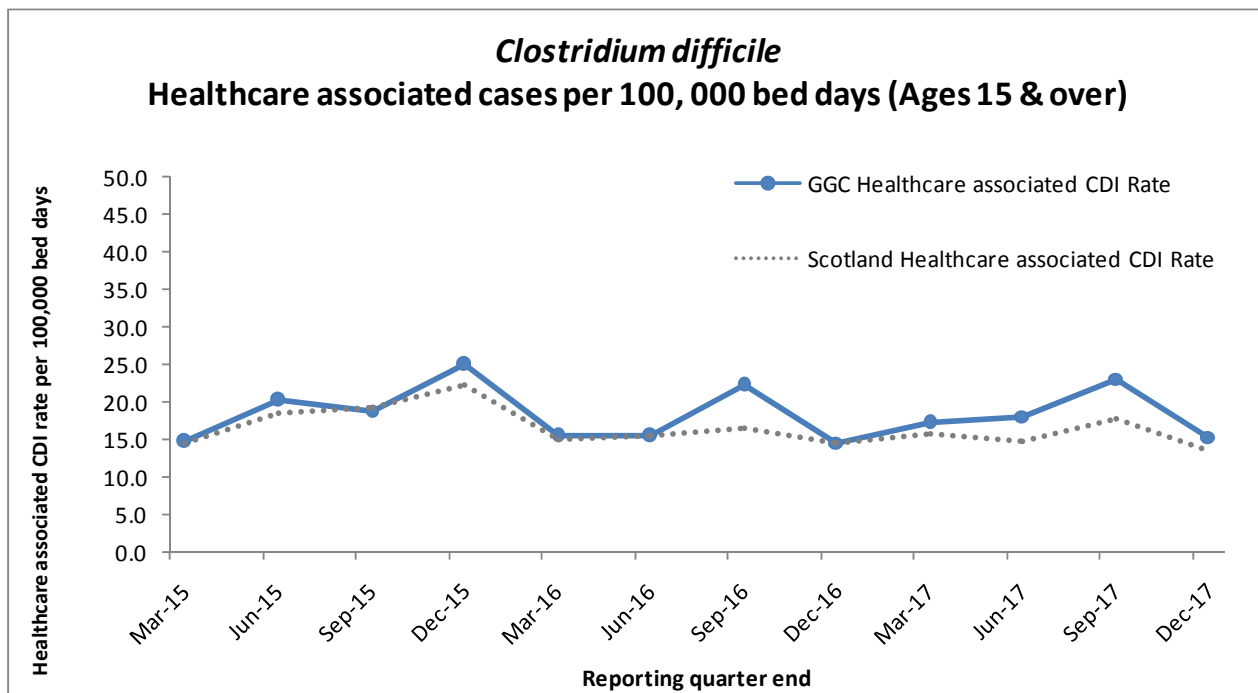


Figure 5. Healthcare associated CDI comparison by quarter for NHSGGC and Scotland.

22 community associated CDI cases were reported in Q4-17 with a rate of 7.5 per 100,000 population (Figure 6.) The rate for NHS Scotland was 6.8.

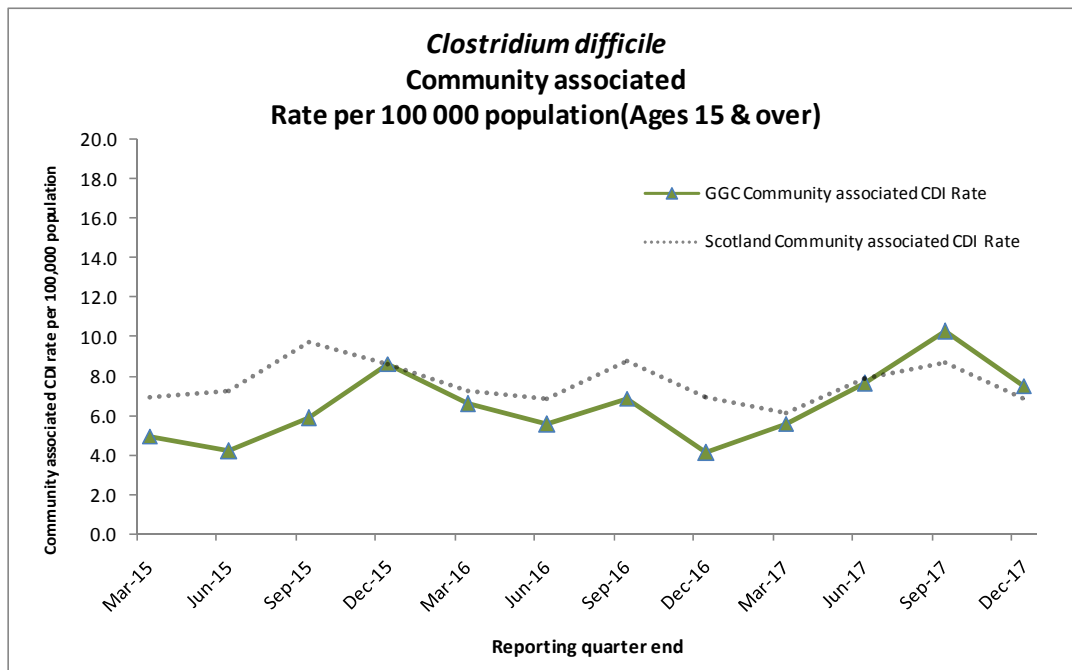


Figure 6. Community associated CDI comparison by quarter for NHSGGC and Scotland.

Quarter 1: 2018 (January – March) NHSGGC Surveillance

Local surveillance has shown a further reduction in CDI cases for Q1-18 with 81 cases reported in total (Table 4). 58 cases met the case definition for healthcare associated (total of every category except community). This is a **reduction** of 13% in healthcare associated cases.

HPS reporting category	Origin of CDI	Number of patient cases (Unvalidated and subject to change)
Healthcare associated	Hospital acquired (HAI)	36
	Healthcare associated (HCAI)	19
	Indeterminate	3
Community associated	Community associated	23
Total		81

Table 4. Origin of CDI – local surveillance data for Q1-18

OUTBREAKS / EXCEPTIONS – March/April 2018

(Reported are those that are assessed as AMBER or RED using the HPS HIIAT tool)

February-June 2018

QEUH and RHC – Bacteria in Water System – HIIAT RED Update

In January 2018, an investigation was initiated in response to a single case of an unusual bacterial blood stream infection e.g. cupriavidus. Sampling of the water in QEUH and RHC confirmed the presence of multiple types of environmental organisms in the water supply. As previously reported, immediate actions were taken to address several general environmental issues, e.g. domestic cleaning, cleaning of equipment, hand hygiene etc, however the most significant action was the addition of end of tap filters to the water system. The addition of the filters is considered to be a medium term solution with the longer term solution possibly being the continuous dosing of the system with a chemical disinfectant. Despite this prompt action additional cases, possibly previously exposed to the water supply or the environment, continued to occur. As part of the initial actions NHSGGC convened a water group to explore all actions and options going forward. Advice and recommendations from Health Protection Scotland (HPS), Health Facilities Scotland (HFS) and international water experts was sought and have been submitted to this group. HPS and HFS have been contributing to the Incident Management Meetings (IMTs) since March.

As previously stated cases occurred after filters were in place and it was hypothesised that there may be seeding of the drains with the environmental organisms identified in the water; in addition it was suggested that the reduction in the space between the filter and the drain was causing an increase in splashing of water into the surrounding area. When the drains themselves were examined parts were found to be corroded which is an ideal environment for the formation of biofilm which harbours the types of bacteria found in both the drains and in the patients; however it should also be noted that at this time the results from the reference laboratory indicate that these are all different types, but this is not unusual in this type of incident. It is possible that these types of organisms can be acquired via contact with the environment, equipment or others. The ward is reviewed daily by the IPCT who recommend actions to rectify any issues identified.

The definition was extended to include all patients who presented with any type of gram negative bacteria. This was a deliberately broad definition with the intention of capturing all patients potentially exposed in this complex group of patients. Below is listed the types of bacterial infections included in the incident.

The total number of cases potentially linked to the 2018 water incident:

- 1 cupriavidus
- 1 pseudomonas
- 6 stenotrophomonas
- 6 enterobacter
- 1 pseudomonas/stenotrophomonas
- 1 Stenotrophomonas, acinetobacter
- 1 multi: pseudomonas, stenotrophomonas, acinteobacter.

HPS are currently undertaking a review of the epidemiology (pattern/number) of these cases to establish what are the expected levels of gram negative bacteraemias in this very specific group of patients. In addition, HPS are contacting other centres including Public Health England to obtain comparable data from similar centres.

Actions taken to address this problem have been:

- All areas of ward 2A/2B were deep cleaned then decontaminated using hydrogen peroxide vapour (HPV).
- Drains (including shower outlets) were initially decontaminated with Chlorine dioxide.
- Plan was initiated to replace all drains then repeat the HPV clean.
- Health Protection Scotland will review Ward 2a week beginning 18.06.18, included in this review will be domestic services, equipment, line care, staffing, and the physical environment. They will also review the epidemiology of the cases.

Incident Management Team (IMT) meetings have been ongoing, overseen by the NHSGGC Executive Group. HIIAT remains at RED as of 15.06.18 but the ward should once again be fully operational by 18.06.18 and the HIIAT will be assessed at this time.

April 2018

RHC ward 2a Astrovirus – HIIAT AMBER

On Tuesday 3rd April Ward 2a in the RHC reported 3 confirmed cases of Astrovirus; this was in addition to one case that was already confirmed positive and present on the ward. Control measures were implemented on the 3rd but a 5th case of Astrovirus was reported from a sample obtained 4th April. In addition to the confirmed cases there were 9 possible cases reported throughout the course of the outbreak. Additional control measures were put in place and the last confirmed positive case was the case from the 4th April. This outbreak was considered during an incident management team meeting on the 6th April which was convened in response to a general increase in diarrhoeal disease across the site. At this time the incident scored HIIAT Green.

Although the last positive case was 4th April symptomatic cases continued to be referred as possible cases and a Problem Assessment Group met and scored this outbreak HIIAT AMBER on 9th April. Testing of these cases confirmed them to be negative for Astrovirus and the incident was declared over on 16th April.

Norovirus

There were 12 wards closed in 7 hospitals due to Norovirus activity in March and April.

Month	May-17	Jun-17	Jul-17	Aug -17	Sep-17	Oct-17	Nov-17	Dec-17	Jan -18	Feb -18	Mar-18	Apr-18
Ward Closures	2	2*	0	0	2	2	4**	6	0	1	5***	7
Bed Days Lost	53	39	0	0	10	49	34	210	0	7	55	228

Table 5: NHSGGC Ward closures due to suspected/confirmed Norovirus.

*Both wards closed in May and remained closed in to the start of June

**One ward closed in November and remained closed in to the start of December

***One ward closed in March and remained closed in to the start of April

Data on the numbers of wards closed due to confirmed or suspected Norovirus is available from HPS on a weekly basis: <http://www.hps.scot.nhs.uk/giz/norovirusurveillance.aspx>

Healthcare Environment Inspectorate (HEI)

There has been no unannounced HEI / HAI inspection since the last published HAIRT.

Other HAI Related Activity

Surgical Site Infection (SSI) Surveillance

All NHS Boards are required to undertake in-patient and 30-day re-admission surveillance as per HDL (2006) 38 and CEL (11) 2009.

Quarter 4 (October - December 2017)

Category of Procedure	Operations	Infections	NHSGGC SSI rate (%)	NHSGGC 95% CI	National Dataset SSI rate (%)	National 95% CI
Caesarean section	1311	16	1.2	(0.7 ,1.9)	1.5	(1.2 ,1.9)
Hip arthroplasty	397	6	1.5	(0.6 ,3.2)	0.8	(0.4 ,1.2)

Table 6. SSI rates for Caesarean section (in-patient and PDS to day 10), Hip arthroplasty (in-patient and re-admission to day-30), NHS GG&C

The SSI rate for hip arthroplasty procedures was higher than the national dataset SSI rate, however HPS have confirmed that NHSGGC were not above the 95% confidence interval upper limit this quarter in the published funnel plot analysis for hip procedures. We continue to work with orthopaedic surgery colleagues on a range of quality improvement measures.

It should also be noted that no NHS boards were above normal variation this quarter for caesarean section and hip arthroplasty when analysing trends over the past three years.

Q1 (January – March 2018) Local SSI Surveillance Status

Surveillance to 30 day post operatively is still ongoing at time of report compilation for the quarter and local data, at time of publication, for January – March 2018 is displayed in Table 7 below.

It should be noted that the non-mandatory surgical procedures are included in the national reporting figures or published by Health Protection Scotland therefore **caution should be exercised** when interpreting local SSI rates in future publications to enable local baseline data to be established.

Large bowel and major vascular surgery became a mandatory requirement for SSI surveillance in April 2017 and as these are new categories of surveillance comparative data is awaited, however NHSGGC rates are below those in the published literature.

Quarter 1-18 (January – March) : Local SSI Surveillance Status				
	Category of Procedure	Operations	Infections	NHSGGC SSI Rate (%)
Mandatory (reported to HPS)	Caesarean section	1255	10	0.8%
	Hip arthroplasty	338	2	0.6%
	Large Bowel Surgery	212	3	1.4%
	Major Vascular Surgery	187	5	2.7%
Voluntary	Knee arthroplasty	297	5	1.7%
	Repair of neck of femur	434	6	1.4%
Additional INS,QEUH only	Cranial Surgery	178	5	2.8%
	Spinal Surgery	171	5	2.9%

Table 7. Local SSI Surveillance. Procedures undertaken 01/01/18 - 31/03/18 (In-patient and 30 day readmission; C-section in-patient and PDS to day 10)

Surveillance for procedures undertaken in April and May 2018 is ongoing at time of report publication.

Statistical Process Control Charts

All Hospital Level Statistical Process Control Charts (SPCs) continue to remain within normal control limits.

Cleaning and the Healthcare Environment

All areas within NHSGGC scored **GREEN (>90%)** in the most recent report on the National Cleaning Specification.

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 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 (HPS) and Health Facilities Scotland (HFS). 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. 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 HPS website:

Clostridium difficile: <http://www.hps.scot.nhs.uk/haic/sshap/clostridiumdifficile.aspx?subjectid=79>
Staphylococcus aureus Bacteraemia: <http://www.hps.scot.nhs.uk/haic/sshap/mrsabacteraemiasurveillance.aspx?subjectid=D>

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. The Board 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 HFS website: <http://www.hfs.scot.nhs.uk/online-services/publications/hai/>

Understanding the Report Cards – ‘Out of Hospital Infections’

CDI and SAB cases (including MRSA) 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.

NHS GREATER GLASGOW & CLYDE

REPORT CARD

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

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
MRSA	2	1	0	1	1	3	1	3	1	1	2	5
MSSA	27	43	32	31	35	36	32	41	42	31	42	39
Total SABS	29	44	32	32	36	39	33	44	43	32	44	44

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

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Ages 15-64	13	10	18	16	15	15	13	9	9	4	9	10
Ages 65 plus	28	24	27	25	30	17	23	18	29	16	14	19
Total Ages 15 plus	41	34	45	41	45	32	36	27	38	20	23	29

Hand Hygiene Monitoring Compliance (%)

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Board Total	97	97	97	97	97	97	98	98	97	97	97	97

Cleaning Compliance (%)

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Board Total	95.6	95.4	95.2	95.2	95.3	95.2	95.4	95.8	95.5	95.5	95.5	95.0

Estates Monitoring Compliance (%)

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Board Total	99.1	99.3	99.0	99.2	98.9	98.9	99.1	99.5	98.9	99.0	99.0	99.0

GLASGOW ROYAL INFIRMARY / PRINCESS ROYAL MATERNITY

REPORT CARD

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

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
MRSA	1	0	0	0	0	0	0	0	0	0	0	1
MSSA	8	4	1	2	9	2	3	3	2	7	2	7
Total SABS	9	4	1	2	9	2	3	3	2	7	2	8

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

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Ages 15-64	5	1	2	1	0	1	2	0	0	2	1	0
Ages 65 plus	2	5	3	5	3	4	3	5	4	2	2	3
Ages 15 plus	7	6	5	6	3	5	5	5	4	4	3	3

Cleaning Compliance (%)

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Board Total	96.0	96.0	95.9	95.6	95.6	95.8	95.9	96.0	95.8	95.7	95.7	95.2

Estates Monitoring Compliance (%)

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Board Total	99.6	99.7	99.0	99.7	99.5	99.6	99.7	99.9	99.9	99.8	99.7	99.7

ROYAL ALEXANDRA HOSPITAL

REPORT CARD

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

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
MRSA	1	0	0	0	0	0	0	0	0	0	0	0
MSSA	0	2	2	1	2	4	0	2	1	1	3	4
Total SABS	1	2	2	1	2	4	0	2	1	1	3	4

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

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Ages 15-64	0	2	0	0	0	0	0	0	0	0	0	2
Ages 65 plus	0	1	4	3	1	0	0	4	2	4	0	2
Ages 15 plus	0	3	4	3	1	0	0	4	2	4	0	4

Cleaning Compliance (%)

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Board Total	96.2	95.1	96.2	96.2	95.4	95.9	95.8	95.5	95.9	95.4	95.4	95.7

Estates Monitoring Compliance (%)

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Board Total	99.1	98.5	99.0	98.5	96.7	98.4	98.3	99.1	99.3	98.2	98.4	99.1

INVERCLYDE ROYAL HOSPITAL

REPORT CARD

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

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
MRSA	0	0	0	0	0	0	0	0	0	0	0	0
MSSA	0	2	0	2	1	1	2	1	1	1	1	1
Total SABS	0	2	0	2	1	1	2	1	1	1	1	1

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

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Ages 15-64	0	0	0	0	0	0	0	0	0	0	0	0
Ages 65 plus	2	1	0	2	0	0	0	1	0	0	0	0
Ages 15 plus	2	1	0	2	0	0	0	1	0	0	0	0

Cleaning Compliance (%)

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Board Total	94.5	95.8	95.2	96.3	94.7	95.6	95.8	95.0	94.1	95.5	94.3	94.5

Estates Monitoring Compliance (%)

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Board Total	95.8	97.5	99.0	98.3	97.8	97.8	98.4	98.5	97.5	96.4	96.9	95.3

VALE OF LEVEN HOSPITAL

REPORT CARD

Staphylococcus aureus bacteraemia monthly case numbers

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
MRSA	0	0	0	0	0	0	0	0	0	0	0	1
MSSA	0	0	0	0	0	0	0	1	0	0	0	0
Total SABS	0	0	0	0	0	0	0	1	0	0	0	1

Clostridium difficile infection monthly case numbers

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
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	0	0	1
Ages 15 plus	0	0	0	0	0	0	0	0	0	0	0	1

Cleaning Compliance (%)

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Board Total	97.6	97.3	97.5	97.5	97.7	97.7	97.8	97.7	97.7	97.6	97.3	97.5

Estates Monitoring Compliance (%)

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Board Total	99.6	99.6	99.0	99.7	99.8	99.5	99.7	99.7	99.6	99.7	99.6	99.7

GARTNAVEL GENERAL HOSPITAL

REPORT CARD

Figures combined for

Gartnavel General Hospital, Beatson WoSCC and Homeopathic Hospital

Staphylococcus aureus bacteraemia monthly case numbers

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
MRSA	0	0	0	0	0	0	0	0	0	0	1	0
MSSA	0	3	2	0	0	0	1	3	1	1	5	4
Total SABS	0	3	2	0	0	0	1	3	1	1	6	4

Clostridium difficile infection monthly case numbers

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Ages 15-64	0	0	3	0	1	1	0	1	2	1	2	0
Ages 65 plus	2	2	2	0	1	0	0	0	1	1	0	0
Ages 15 plus	2	2	5	0	2	1	0	1	3	2	2	0

Cleaning Compliance (%)

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Board Total	96.9	96.9	96.2	96.4	97.1	96.2	96.3	96.9	96.2	97.6	96.8	96.0

Estates Monitoring Compliance (%)

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Board Total	99.4	99.5	99.0	99.6	99.4	99.6	99.6	99.7	99.4	99.7	99.7	99.5

QUEEN ELIZABETH UNIVERSITY HOSPITAL

REPORT CARD

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

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
MRSA	0	0	0	1	1	1	1	0	0	0	0	2
MSSA	2	6	6	3	10	4	6	8	6	3	5	5
Total SABS	2	6	6	4	11	5	7	8	6	3	5	7

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

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Ages 15-64	1	0	1	2	1	1	1	0	1	0	0	1
Ages 65 plus	6	1	2	1	3	3	2	0	4	3	2	1
Ages 15 plus	7	1	3	3	4	4	3	0	5	3	2	2

Cleaning Compliance (%)

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Board Total	93.8	91.8	92.0	91.1	93.3	91.4	92.1	94.4	93.0	93.3	92.7	90.6

Estates Monitoring Compliance (%)

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Board Total	99.2	99.9	99.0	99.6	99.7	99.5	99.7	99.9	99.8	99.1	99.9	99.9

ROYAL HOSPITAL FOR CHILDREN

REPORT CARD

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

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
MRSA	0	0	0	0	0	0	0	1	0	0	0	0
MSSA	0	4	1	1	4	0	2	0	3	2	0	2
Total SABS	0	4	1	1	4	0	2	1	3	2	0	2

***Clostridium difficile* infection monthly case numbers (in ages 15 & over only)**

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Ages 15 plus	0	0	0	0	0	0	0	0	0	0	0	0

Cleaning Compliance (%)

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Board Total	93.6	94.3	93.9	95.2	93.3	94.1	92.1	94.4	95.0	95.2	94.6	94.9

Estates Monitoring Compliance (%)

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Board Total	99.7	98.8	99.0	99.5	99.5	99.1	99.7	99.9	99.8	99.4	99.5	99.4

**NHS GREATER GLASGOW & CLYDE
COMMUNITY HOSPITALS REPORT CARD**

The community hospitals covered in this report card include:

- Lightburn Hospital
- Dykebar Hospital
- Gartnavel Royal Hospital
- Leverndale Hospital
- MacKinnon House
- Mearnskirck House
- New Victoria Hospital
- Parkhead Hospital (closed 28 March 2018)
- Orchard View (Inverclyde Royal Hospital campus)
- Stobhill Hospital

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

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
MRSA	0	0	0	0	0	0	0	0	0	1	0	0
MSSA	0	1	1	1	1	3	1	1	0	1	1	0
Total SABS	0	1	1	1	1	3	1	1	0	2	1	0

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

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Ages 15-64	0	0	0	0	0	0	0	0	1	0	0	0
Ages 65 plus	1	1	0	0	1	0	2	1	0	0	1	0
Ages 15 plus	1	1	0	0	1	0	2	1	1	0	1	0

NHS GREATER GLASGOW & CLYDE

OUT OF HOSPITAL REPORT CARD

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

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
MRSA	0	1	0	0	0	2	0	2	1	0	1	1
MSSA	17	21	19	21	8	22	17	22	28	15	25	16
Total SABS	17	22	19	21	8	24	17	24	29	15	26	17

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

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Ages 15-64	7	7	12	13	13	12	10	8	5	1	6	7
Ages 65 plus	15	13	16	14	21	10	16	7	18	6	9	12
Ages 15 plus (Total)	22	20	28	27	34	22	26	15	23	7	15	19

Data for *Staphylococcus aureus* bacteraemia (SAB) cases:

53% of all *Staphylococcus aureus* Bacteraemia cases reported in NHSGGC between May 2017 and April 2018 are attributed as *Out of Hospital* infections.

Data for *Clostridium difficile* Infection (CDI) cases in ages 15 plus:

63% of all CDI cases reported in NHSGGC between May 2017 and April 2018 are attributed as *Out of Hospital* infections.

GLOSSARY

AMT	Antimicrobial Management Team
AOBD	Acute Occupied Bed Days
Alert organism alert condition	Any of a number of organisms or infections that could indicate, or cause, outbreaks of infection in the hospital or community.
Bacteraemia	Infection in the blood. Also known as Blood Stream Infection (BSI).
CDI	<i>Clostridium difficile</i> Infection. Also referred to as <i>C. diff</i> is a Gram-positive spore-forming anaerobic bacterium. <i>C. difficile</i> is the most common cause of gastro-intestinal infection in hospitals. It causes two conditions; antibiotic associated diarrhoea and the more severe and occasionally life-threatening pseudomembranous colitis. Control of the organism can be problematic due to the formation of spores and difficulty in removing them. Patients who have had antibiotics within the last eight weeks are most at risk of acquisition of the organism.
CEL	Chief Executive Letter issued by Scottish Government Health Directorates (SGHD)
CRA	Clinical Risk Assessment
CVC	Central Vascular Catheter
Code of Practice	Code of Practice - The NHS Scotland Code of Practice for the Local Management of Hygiene and Healthcare Associated Infection issued 2004 contains the components that must be complied with by all NHS HCWs in Scotland. http://www.scotland.gov.uk/Publications/2004/05/19315/36624
GRO	General Registers Office
HAI	Originally used to mean hospital acquired infection, the official 'Scottish Government' term is now Healthcare Associated Infection . These are considered to be infections that were not incubating prior to contact with a healthcare facility or undergoing a healthcare intervention. It must be noted that HAI infection is not always an avoidable infection. Please note that for <i>S.aureus</i> Bacteraemia surveillance – HAI refers to 'hospital acquired cases as per HPS National reporting requirements. See http://www.documents.hps.scot.nhs.uk/hai/sshaip/guidelines/s-aureus/esab-protocol-v2-2014-11.pdf
HCAI	Healthcare Associated Infection (for CDI and SAB classification)
HCW	Healthcare Worker
HDL	Health Department Letter
HDU	High Dependency Unit
HEAT Target	Health Efficiency and Access to Treatment . Targets set by the Scottish Government.
HFS	Health Facilities Scotland
HH	Hand Hygiene
HIAT	Hospital Infection Incident Assessment Tool
HIORT	Healthcare Infection Incident and Outbreak Reporting Template
HIS	Health Improvement Scotland
HPS	Health Protection Scotland
HSCP	Health & Social Care Partnerships
ICN / T / D / M	Infection Control Nurse / Team / Doctor / Manager
ICP	Infection Control Programme
ICU	Intensive Care Unit
ISD	Information Services Division A division of National Services Scotland, part of NHS Scotland. ISD provides health information, health intelligence, statistical services and advice that support the NHS in progressing quality improvement in health and care, and facilitates robust planning and decision making.
KPI	Key Performance Indicator
MRSA	Meticillin resistant <i>Staphylococcus aureus</i> . A <i>Staphylococcus aureus</i> resistant to first line antibiotics; most commonly known as a hospital acquired organism.
MSSA	Meticillin Sensitive <i>Staphylococcus aureus</i>
OPAT	Outpatient Parenteral Antibiotic Therapy
PDS	Post Discharge Surveillance (Caesarean Section procedures only)
PFPI	Public Focus Patient Involvement
PHPU	Public Health Protection Unit
PPI	Proton Pump Inhibitors . A group of medications used to decrease gastric acid production.
PVC	Peripheral Vascular Catheter
QIF	Quality Improvement Facilitator
RRT	Renal Replacement Therapy
RSV	Respiratory Syncytial Virus . A contagious respiratory infection.
SAB	<i>Staphylococcus aureus</i> Bacteraemia
SCN / M	Senior Charge Nurse / Midwife
SICP	Standard Infection Control Precautions
SGHD	Scottish Government Health Directorate
SOP	Standard Operating Procedure
SPC	Statistical Process Control (Charts)
SSI	Surgical Site Infection
TOBD	Total Occupied Bed Days
VRE	Vancomycin resistant enterococcus - an alert organism. A common organism that can be inherently resistant to Vancomycin but can also acquire (and transfer resistance) to other organisms. Has caused outbreaks reported in the literature in a variety of high-risk settings, e.g. renal or bone marrow transplant units.

Enhanced S. aureus Bacteraemia Surveillance Definitions

Hospital Acquired Infection

Positive blood culture obtained from a patient who has been hospitalised for >48 hours. The patient was discharged from hospital in the 48 hours prior to the positive blood culture being taken. If the patient was a neonate/baby who has never left hospital since being born.

OR

A patient who receives regular haemodialysis as an outpatient.

OR

Contaminant if blood aspirated from hospital

Healthcare Associated Infection

Positive blood culture obtained from a patient within 48 hours of admission to hospital and fulfils one or more of the following criteria:

1. Was hospitalised overnight in the 30 days prior to the positive blood culture being taken

OR

2. Resides in a nursing home

OR

3. IV, or intraarticular medication in the 30 days prior to the positive blood culture being taken, but excluding illicit drug use

OR

4. Regular user of a registered medical device

OR

5. Underwent a medical procedure which broke mucous or skin barrier in the 30 days prior to the positive blood cultures being taken

OR

6. Underwent care for a medical condition by a healthcare worker in the community which involved contact with non intact skin, mucous membranes or the use of an invasive device 30 days prior to the positive blood culture being taken

Community Acquired Infection

Positive blood culture obtained from a patient within 48 hours of admission to hospital who does not fulfil any criteria for healthcare associated bloodstream infection

HPS Protocol

April 2016, Version 1.0