

## Healthcare Associated Infection (HAI) Bimonthly Report – March 2019

### Executive Summary

The following HAIRT report contains NHS Grampian's surveillance data and associated infection rates as reported in Health Protection Scotland's (HPS) Quarterly Epidemiological Data for Quarter 3 (July to September 2018) published on 8<sup>th</sup> January 2019.

The following information has been reported as:

### Quarter 3

Please note: NHSG is not an outlier in any category for Q3

#### Above National Average:

- *Clostridioides* (formerly *Clostridium*) *difficile* infection rates - for healthcare
- *Clostridioides* (formerly *Clostridium*) *difficile* infection rates - for community
- *Staphylococcus aureus* bacteraemias (SABs) - for healthcare
- *Staphylococcus aureus* bacteraemias (SABs) - for community

#### Below National Average:

- *E.coli* bacteraemias - for healthcare
- *E.coli* bacteraemias - for community
- Caesarean Section Surgical Site Infection
- Hip Arthroplasty Surgical Site Infection

### Year Ending September 2018

#### Above National Average:

- *Clostridioides* (formerly *Clostridium*) *difficile* infection rates - for healthcare
- *Clostridioides* (formerly *Clostridium*) *difficile* infection rates - for community
- *Staphylococcus aureus* bacteraemias (SABs) - for healthcare

#### Below or Equal to National Average:

- Caesarean Section Surgical Site Infection
- *E.coli* bacteraemias - for healthcare
- *E.coli* bacteraemias - for community
- *Staphylococcus aureus* bacteraemias (SABs) - for community
- Hip Arthroplasty Surgical Site Infection

## **Meticillin-Resistant *Staphylococcus Aureus* (MRSA) Screening**

MRSA (CRA) screening compliance for Quarter 3 (October – December 2018) was 89% which is slightly below the compliance target of 90% but above the national average (83%).

## **Carbapenemase Producing Enterobacteriaceae (CPE) Screening**

CPE (CRA) screening compliance for Quarter 3 (October – December 2018) was 100%. The compliance target is 90% and the national average for Quarter 3 was 78%.

## **Norovirus**

For the period October – December 2018 there were 4 wards completely closed and 3 wards partially closed in NHS Grampian due to enteric illness (confirmed or suspected Norovirus).

## **Health Facilities Scotland (HFS)**

The cleaning compliance for October – December 2018 was 94% and the estates monitoring compliance was 95%; both these scores are above the national targets of 90%.

## **Hand Hygiene**

Hand hygiene compliance for all staff groups for October – December 2018 was above 95% and therefore above the national target (90%).

Please note that there may be missing data for hand hygiene in December 2018 due to NHS Grampian changing the data collection tool used for hand hygiene audits (Snap Survey / Illuminate has replaced LanQIP).

## 1. Actions Recommended

The Board is requested to note the content of this summary bimonthly HAI Report, as directed by the HAI Policy Unit, Scottish Government Health Directorates.

## 2. Strategic Context

- National Hospital Antimicrobial Prescribing Quality Indicators for 2017-18
- Local Delivery Plan Standards for 2016/17
  - *Clostridioides* (formerly *Clostridium*) *difficile* infections (CDI) in patients aged 15 and over is 32 cases or less per 100,000 total occupied bed days (TOBD)
  - *Staphylococcus aureus* bacteraemia (SAB) cases are 0.24 or less per 1,000 acute occupied bed days (AOBD)
- National Key Performance Indicators for MRSA screening
- National Key Performance Indicators for CPE screening
- National Health Facilities Scotland (HFS) Environmental Cleaning Target
- National Health Facilities Scotland (HFS) Estates Monitoring Target
- National Hand Hygiene Compliance Target

### 3. Key matters relevant to recommendation

Issue	Group	Target	Period & source	NHS Scot	NHS G	RAG
CDIs	Healthcare Associated Infection	Local Delivery Plan Standards 32 cases per 100,000 TOBD	Jul – Sep 2018, HPS	14.8	19.4	Amber
	Community Associated Infection			9.1	12.9	Amber
<i>E coli</i> Bacteraemia	Healthcare Associated Infection	No target (rate per 100,000 bed days)	Jul – Sep 2018, HPS	40.2	28.3	Green
	Community Associated Infection	No target (annualised rate per 100,000 population)		48.8	38.6	Green
SABs	Healthcare & Community Associated Infection	Local Delivery Plan Standards 0.24 or less cases per 1,000 AOB	Jul – Sep 2018, HPS	0.33	0.37	Amber
Surgical Site Infections (SSIs)	Caesarean Section	n/a	Jul – Sep 2018, HPS	1.5	0.6	Green
	Hip Arthroplasty	n/a	Jul – Sep 2018, HPS	0.6	0.4	Green
MRSA (CRA) screening		HPS 90%	Oct – Dec 2018, HPS	83	89	Amber
CPE (CRA) screening		HPS 90%	Oct – Dec 2018, HPS	78	100	Green
Cleaning	All clinical areas	HFS 90%	Oct – Dec 2018, NHSG	N/A	94	Green
Estates		HFS 90%	Oct – Dec 2018, NHSG	N/A	95	Green
Hand Hygiene		SGHD 90%	Oct – Dec 2018, NHSG	N/A	98	Green

#### RAG Status Ready Reckoner

Above upper control limit  
 Below upper control limit but above National average  
 Below National average  
 Below lower control limit

Red  
 Amber  
 Green  
 Green

*The information on this page has been provided by the Antimicrobial Pharmacy Team*

### **National Quality Indicators for Antimicrobial Prescribing**

The national indicators have been agreed by the Scottish Antimicrobial Prescribing Group (SAPG) but have not yet been finalised by the Scottish Government. We anticipate the new indicators to be as detailed below.

**1. Use of WHO Access antibiotics (NHSE list)  $\geq$ 60% of total antibiotic use in acute hospitals by 2021**

*Local report not yet available.*

**2. Use of intravenous antibiotics in secondary care defined as DDD/1000population/day will be no higher in 2021 than it was in 2018**

Recent figures produced by SAPG show NHS Grampian has seen only a small increase in IV antibiotic use in the last 2 years so with ongoing work around improving IV antibiotic review, it is hoped that NHS Grampian will meet this target over the next 3 years.

**3. A 10% reduction of antibiotic use in Primary Care (excluding dental) by 2021, using 2015/16 data as a baseline (items/1000/day)**

Work continues in primary care to reduce overall antibiotic use and overall usage continues to decrease. A specific report on this indicator should be available later in the year.

We anticipate data on the above indicators to be available via NSS Discovery in late summer 2019.

We continue to collect the national audit data on antimicrobial prescribing indicators (as previously submitted for this report) but this is no longer aligned to the national indicators, is now a different data set, and is for use in local quality improvement work. We feedback the results from this audit to the wards areas and the Antimicrobial Management Team.

#### 4. Risk Mitigation

By noting the contents of this report, the Board will fulfil its requirement to seek assurance that appropriate surveillance of healthcare associated infection is taking place and that this surveillance is having a positive impact on reducing the risk of avoidable harm to the patients of NHS Grampian.

#### 5. Responsible Executive Director and contact for further information

If you require any further information in advance of the Board meeting please contact:

**Responsible Executive Director**

Caroline Hiscox  
Acting Director of Nursing, Midwifery and  
Allied Health Professions (NMAHP)  
[carolinehiscox@nhs.net](mailto:carolinehiscox@nhs.net)

**Contact for further information**

Grace McKerron  
Infection Prevention and Control Manager  
[grace.mckerron@nhs.net](mailto:grace.mckerron@nhs.net)

## ***Clostridioides (formerly Clostridium) difficile* Infection (CDI) Surveillance**

CDI is the most common cause of intestinal infections (and diarrhoea) associated with antimicrobial therapy. Clinical disease comprises a range of toxin mediated symptoms from mild diarrhoea, which can resolve without treatment, to severe cases such as pseudomembranous colitis, toxic megacolon and peritonitis that can lead to death<sup>1</sup>.

In Scotland mandatory surveillance of CDI commenced in October 2006, with enhanced surveillance commenced in 2009. Historically HPS reported CDI cases based on age ranges 15-64yrs and 65yrs and above but since October 2017 the definitions have changed to healthcare associated infection or community associated infection for all patients over the age of 15 years.

Each new case of CDI is discussed at a weekly multidisciplinary team meeting involving Infection Prevention and Control Doctor(s), Infection Prevention and Control Nurses and Surveillance Nurses. By close investigation of each case and typing of the organisms – when indicated – the Infection Prevention and Control Team is assured that there have not been any outbreaks of CDI.

Further information on CDI surveillance can be found at:

<https://www.hps.scot.nhs.uk/haic/sshaip/clostridiumdifficile.aspx#>

Please see below for abbreviations used in the following tables:

AA	Ayrshire & Arran	HG	Highland
BR	Borders	LO	Lothian
DG	Dumfries & Galloway	LN	Lanarkshire
FF	Fife	NWTC	National Waiting Times Centre
FV	Forth Valley	OR	Orkney
GGC	Greater Glasgow & Clyde	SH	Shetland
GR	Grampian	TY	Tayside
		WI	Western Isles

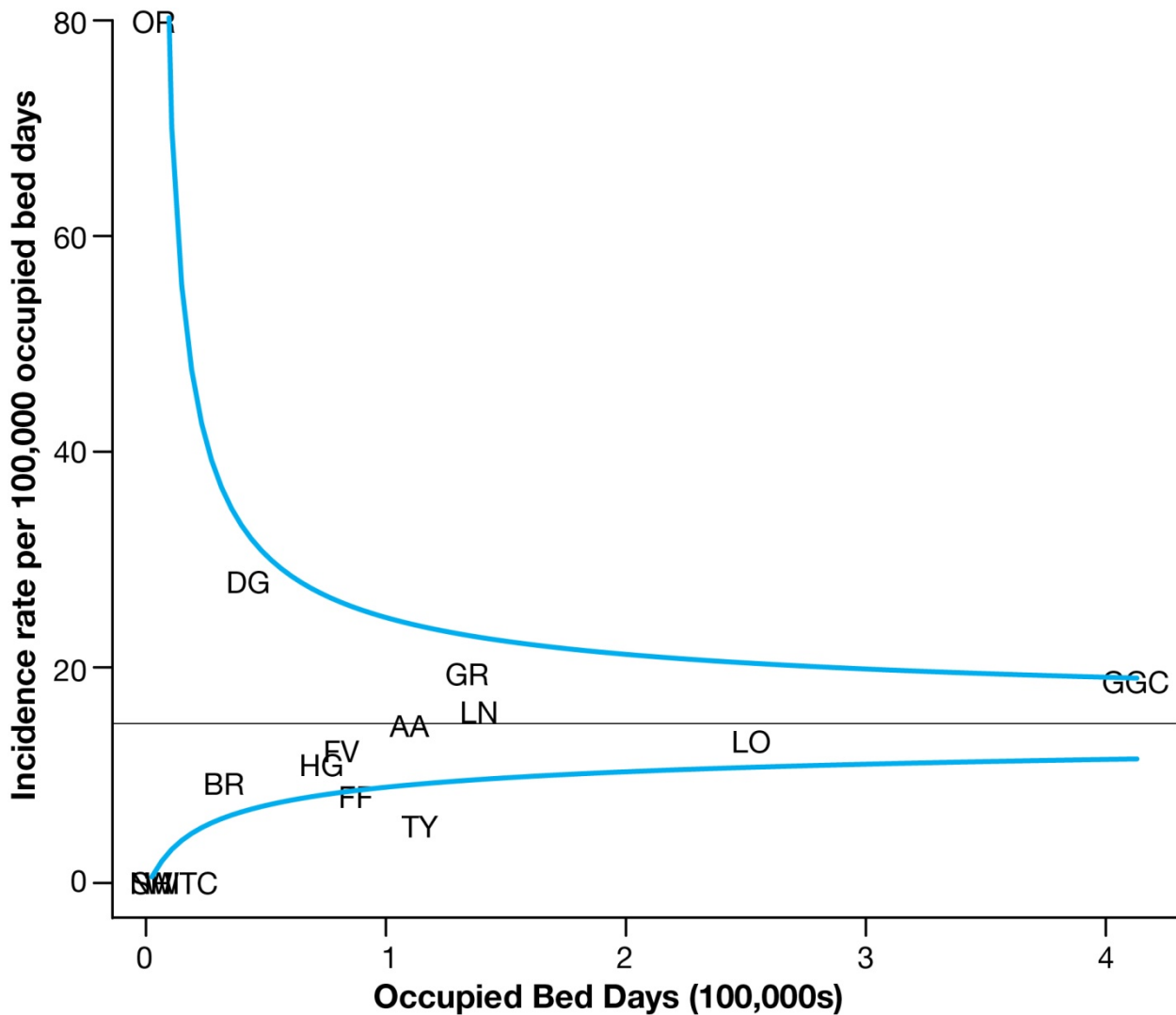
**CDI cases and incidence rates (per 100,000 TOBDs) for healthcare associated infection cases: Q2 2018 (April to June 2018) compared to Q3 2018 (July to September 2018).**

<b>NHS Board</b>	<b>Q2 Cases</b>	<b>Q2 Bed Days</b>	<b>Q2 Rate</b>	<b>Q3 Cases</b>	<b>Q3 Bed Days</b>	<b>Q3 Rate</b>
AA	10	115,914	8.6	16	110,109	14.5
BR	3	31,525	9.5	3	32,651	9.2
DG	7	42,410	16.5	12	43,012	27.9
FF	4	87,527	4.6	7	87,979	8.0
FV	9	83,252	10.8	10	82,126	12.2
<b>GR</b>	<b>43</b>	<b>136,123</b>	<b>31.6</b>	<b>26</b>	<b>134,241</b>	<b>19.4</b>
GGC	82	417,159	19.7	77	412,912	18.6
HG	22	73,332	30.0	8	73,340	10.9
LN	27	136,851	19.7	22	138,817	15.8
LO	27	255,469	10.6	33	252,485	13.1
NWTC	0	12,349	0.0	0	12,390	0.0
OR	0	3,487	0.0	3	3,756	79.9
SH	0	2,417	0.0	0	2,446	0.0
TY	5	117,886	4.2	6	114,636	5.2
WI	0	7,527	0.0	0	7,123	0.0
<b>Scotland</b>	<b>239</b>	<b>1,523,228</b>	<b>15.7</b>	<b>223</b>	<b>1,508,023</b>	<b>14.8</b>

- Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & Total occupied bed days: Information Services Division ISD(S)
- Figures include any updates received following the last publication



**Funnel plot of CDI incidence rates (per 100,000 TOBD) in healthcare associated infection cases for all NHS Boards in Scotland in Q3 2018.**



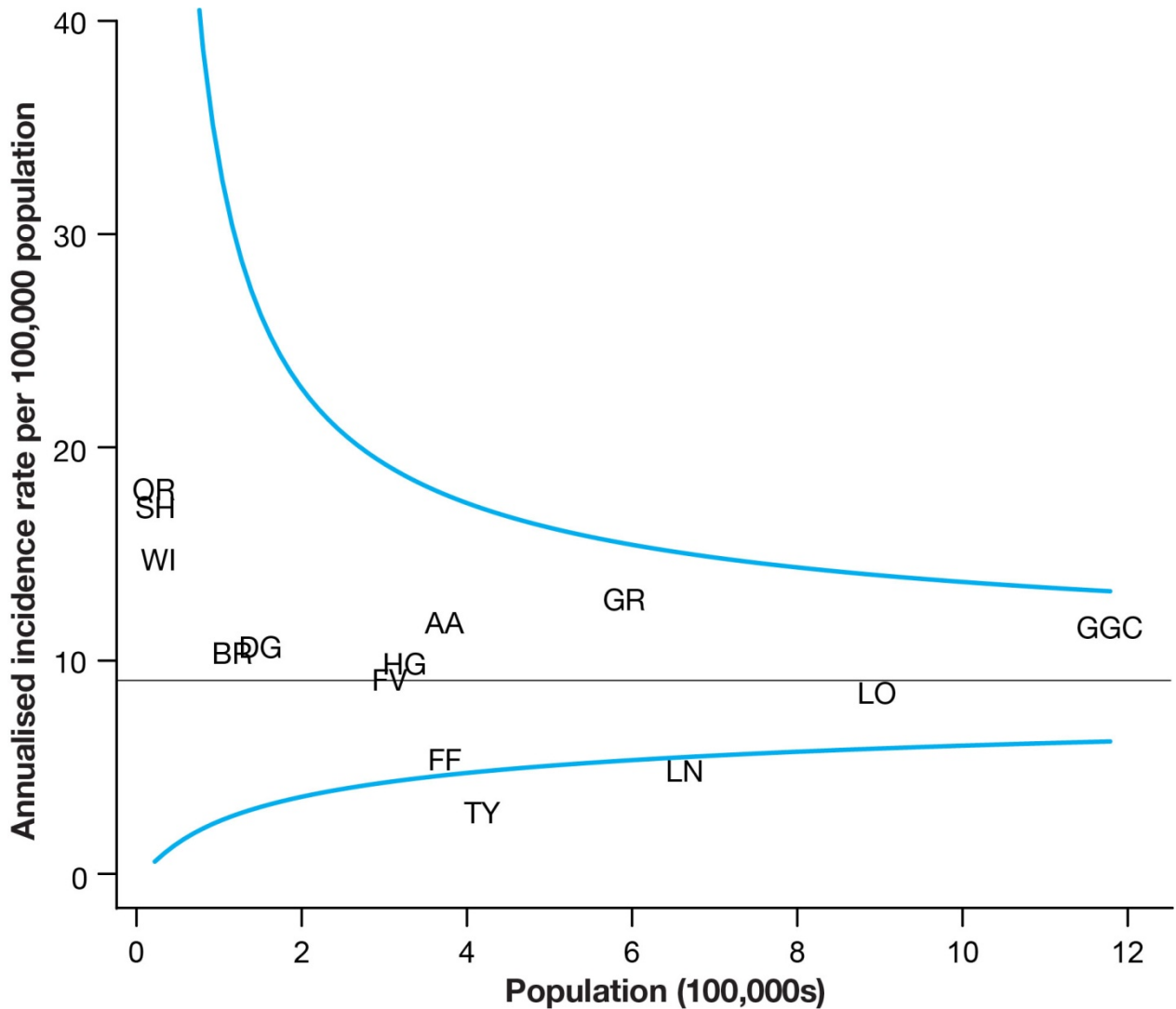
- Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & Total occupied bed days: Information Services Division ISD(S)
- NHS National Waiting Times Centre, NHS Shetlands and NHS Western Isles overlap

**CDI cases and incidence rates (per 100,000 population) for community associated infection cases: Q2 2018 (April to June 2018) compared to Q3 2018 (July to September 2018).**

NHS Board	Q2 Cases	Q2 Population	Q2 Rate	Q3 Cases	Q3 Population	Q3 Rate
AA	9	370,410	9.7	11	370,410	11.8
BR	1	115,020	3.5	3	115,020	10.3
DG	5	149,200	13.4	4	149,200	10.6
FF	8	371,410	8.6	5	371,410	5.3
FV	2	305,580	2.6	7	305,580	9.1
<b>GR</b>	<b>33</b>	<b>586,380</b>	<b>22.6</b>	<b>19</b>	<b>586,380</b>	<b>12.9</b>
GGC	16	1,169,110	5.5	34	1,169,110	11.5
HG	7	321,990	8.7	8	321,990	9.9
LN	8	658,130	4.9	8	658,130	4.8
LO	12	889,450	5.4	19	889,450	8.5
OR	1	22,000	18.2	1	22,000	18.0
SH	1	23,080	17.4	1	23,080	17.2
TY	4	416,090	3.9	3	416,090	2.9
WI	0	26,950	0.0	1	26,950	14.7
<b>Scotland</b>	<b>107</b>	<b>5,424,800</b>	<b>7.9</b>	<b>124</b>	<b>5,424,800</b>	<b>9.1</b>

- Quarterly population rates are based on an annualised population
- Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & NRS mid-year population estimates
- Figures include any updates received following the last publication

**Funnel plot of CDI incidence rates (per 100,000 population) in community associated infection cases for all NHS Boards in Scotland in Q3 2018.**



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

## National *Escherichia coli* Bacteraemia Surveillance Programme

*Escherichia coli* (*E.coli*) is the most common pathogen causing Gram-negative bacteraemias in Scotland and is a frequent cause of infection worldwide. *E.coli* bacteraemia (ECB) usually develops as a complication of other infections including urinary tract infection, surgery, and use of medical devices e.g. catheters. The number of patients with ECBs reported to HPS has increased continually since 2009<sup>2</sup>.

In Scotland, mandatory surveillance for this programme commenced in 2016.

The Healthcare Associated Infection (HAI) *E.coli* is measured as a rate per 100,000 occupied bed days. However, community acquired infections are measured as a rate per 100,000 population.

Information on the national surveillance programme for *Escherichia coli* infection can be found at:

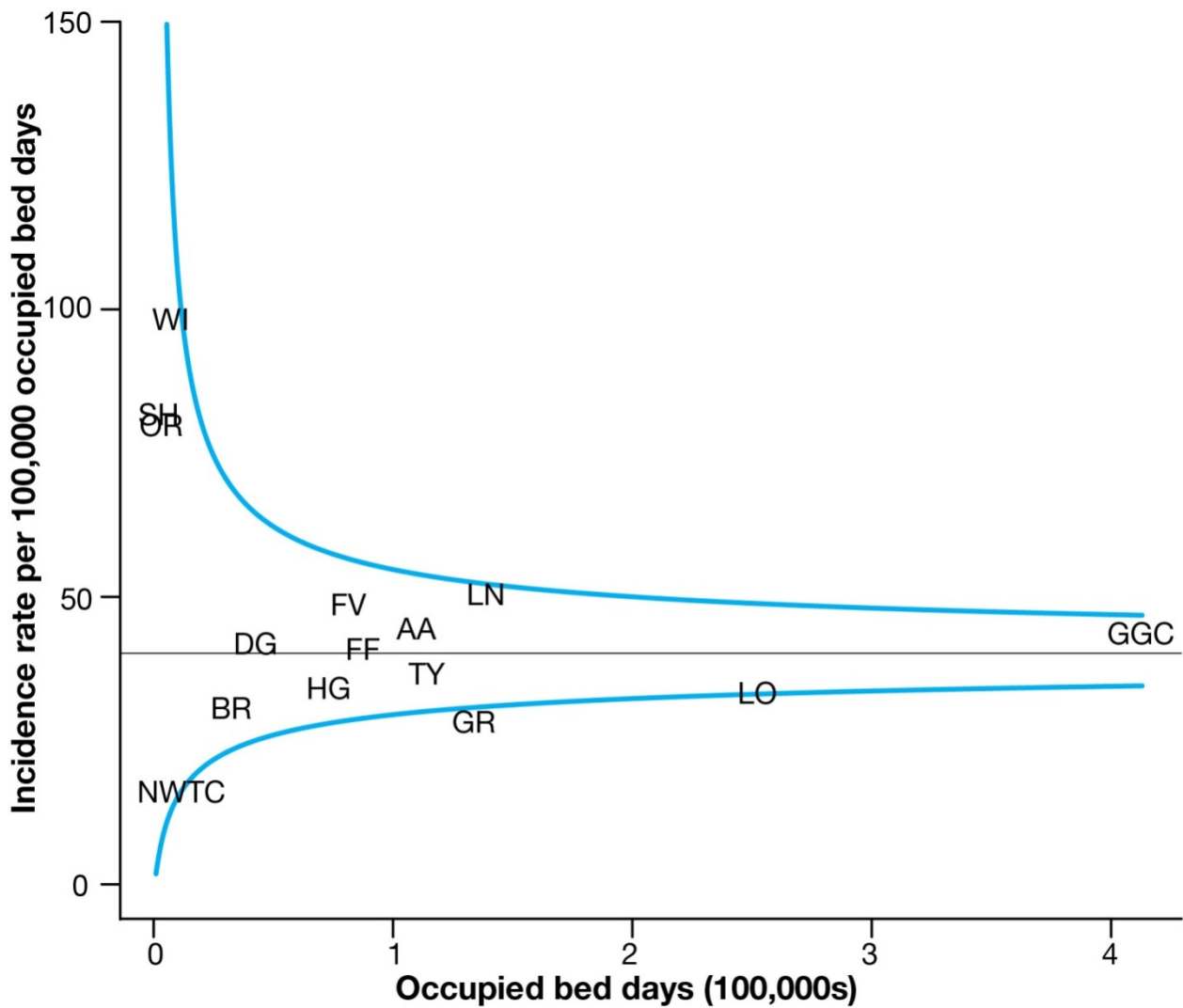
<http://www.hps.scot.nhs.uk/haic/sshaip/ecolibacteraemia.aspx?subjectid=80#mandatory>

**ECB cases and incidence rates (per 100,000 TOBD) for healthcare associated infection cases: Q2 2018 (April to June 2018) compared to Q3 2018 (July to September 2018).**

NHS Board	Q2 Cases	Q2 Bed Days	Q2 Rate	Q3 Cases	Q3 Bed Days	Q3 Rate
AA	64	115,914	55.2	49	110,109	44.5
BR	12	31,525	38.1	10	32,651	30.6
DG	16	42,410	37.7	18	43,012	41.8
FF	43	87,527	49.1	36	87,979	40.9
FV	38	83,252	45.6	40	82,126	48.7
<b>GR</b>	<b>39</b>	<b>136,123</b>	<b>28.7</b>	<b>38</b>	<b>134,241</b>	<b>28.3</b>
GGC	150	417,159	36.0	180	412,912	43.6
HG	13	73,332	17.7	25	73,340	34.1
LN	51	136,851	37.3	70	138,817	50.4
LO	90	255,469	35.2	84	252,485	33.3
NWTC	2	12,349	16.2	2	12,390	16.1
OR	1	3,487	28.7	3	3,756	79.9
SH	4	2,417	165.5	2	2,446	81.8
TY	54	117,886	45.8	42	114,636	36.6
WI	3	7,527	39.9	7	7,123	98.3
<b>Scotland</b>	<b>580</b>	<b>1,523,228</b>	<b>38.1</b>	<b>606</b>	<b>1,508,023</b>	<b>40.2</b>

- An arrow denotes statistically significant change
- Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & Total occupied bed days: Information Services Division ISD(S)
- Figures include any updates received following the last publication

**Funnel plot of ECB incidence rates (per 100,000 TOBD) in healthcare associated infection cases for all NHS Boards in Scotland in Q3 2018.**



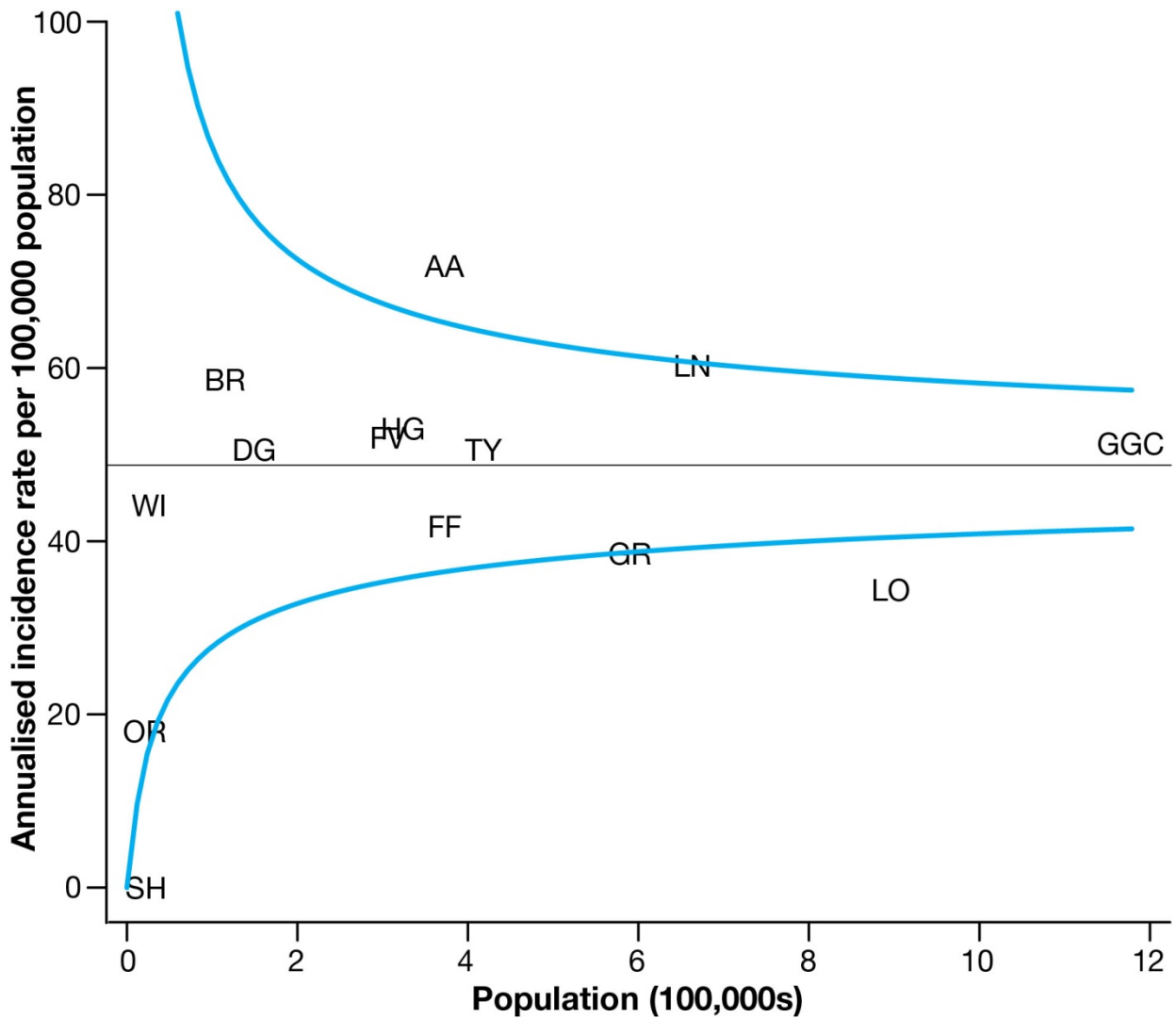
- Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & Total occupied bed days: Information Services Division ISD(S)
- NHS Orkney and NHS Shetland overlap

**ECB cases and incidence rates (per 100,000 population) for community associated infection cases: Q2 2018 (April to June 2018) compared to Q3 2018 (July to September 2018).**

NHS Board	Q2 Cases	Q2 Population	Q2 Rate	Q3 Cases	Q3 Population	Q3 Rate
AA	51	370,410	55.2	67	370,410	71.8
BR	24	115,020	83.7	17	115,020	58.6
DG	19	149,200	51.1	19	149,200	50.5
FF	31	371,410	33.5	39	371,410	41.7
FV	48	305,580	63.0	40	305,580	51.9
<b>GR</b>	<b>50</b>	<b>586,380</b>	<b>34.2</b>	<b>57</b>	<b>586,380</b>	<b>38.6</b>
GGC	138	1,169,110	47.3	151	1,169,110	51.2
HG	42	321,990	52.3	43	321,990	53.0
LN	76	658,130	46.3	100	658,130	60.3
LO	73	889,450	32.9	77	889,450	34.3
OR	2	22,000	36.5	1	22,000	18.0
SH	3	23,080	52.1	0	23,080	0.0
TY	35	416,090	33.7	53	416,090	50.5
WI	6	26,950	89.3	3	26,950	44.2
<b>Scotland</b>	<b>598</b>	<b>5,424,800</b>	<b>44.2</b>	<b>667</b>	<b>5,424,800</b>	<b>48.8</b>

- Quarterly population rates are based on an annualised population
- An arrow denotes statistically significant change
- Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & NRS mid-year population estimates
- Figures include any updates received following the last publication

**Funnel plot of ECB incidence rates (per 100,000 population) in community associated infection cases for all NHS Boards in Scotland in Q3 2018.**



- Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & NRS mid-year population estimates
- NHS Forth Valley and NHS Highland overlap



## Enhanced *Staphylococcus aureus* Bacteraemia (SAB) Surveillance

*Staphylococcus aureus* (*S. aureus*) is a Gram-positive bacterium which colonises the nasal cavity of about a quarter of the healthy population. This colonisation is usually harmless. However, infection can occur if *S. aureus* breaches the body's defence systems leading to illnesses from minor skin infections to serious systemic infections such as bacteraemias<sup>3</sup>.

In Scotland mandatory enhanced surveillance for *Staphylococcus aureus* bacteraemias (SABs) commenced in 2014.

As with *Clostridioides* (formerly *Clostridium*) *difficile*, enhanced SAB surveillance is carried out in all Health Boards using standardised data definitions. Each new case continues to be discussed at a weekly multidisciplinary team meeting involving Infection Prevention and Control Doctors, Infection Prevention and Control Nurses, Surveillance Nurses and an Infection Unit Nurse. The offer of attendance at speciality case review meetings from the IPCT is extended should further discussion be required.

Cases are defined as:

- Healthcare Associated
- Community Associated

More information on the national surveillance programme for *Staphylococcus aureus* bacteraemias can be found at:

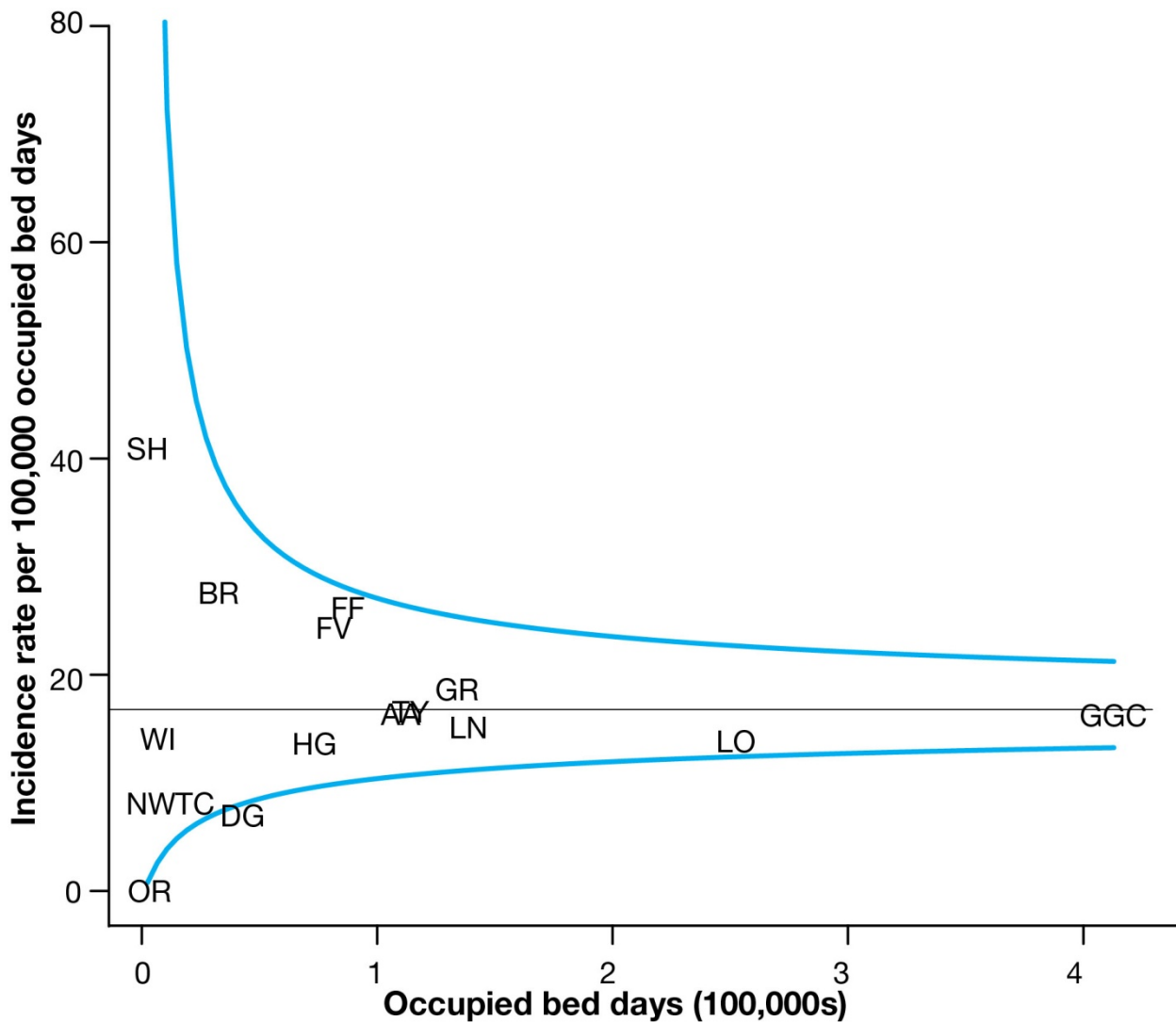
<http://www.hps.scot.nhs.uk/haic/sshaip/quarterlyepidemiologicalcommentaries.aspx>

**SAB cases and incidence rates (per 100,000 TOBDs) for healthcare associated infection cases: Q2 2018 (April to June 2018) compared to Q3 2018 (July to September 2018).**

NHS Board	Q2 Cases	Q2 Bed Days	Q2 Rate	Q3 Cases	Q3 Bed Days	Q3 Rate
AA	16	115,914	13.8	18	110,109	16.3
BR	6	31,525	19.0	9	32,651	27.6
DG	4	42,410	9.4	3	43,012	7.0
FF	24	87,527	27.4	23	87,979	26.1
FV	8	83,252	9.6	20	82,126	24.4
<b>GR</b>	<b>27</b>	<b>136,123</b>	<b>19.8</b>	<b>25</b>	<b>134,241</b>	<b>18.6</b>
GGC	89	417,159	21.3	67	412,912	16.2
HG	14	73,332	19.1	10	73,340	13.6
LN	25	136,851	18.3	21	138,817	15.1
LO	35	255,469	13.7	35	252,485	13.9
NWTC	1	12,349	8.1	1	12,390	8.1
OR	1	3,487	28.7	0	3,756	0.0
SH	2	2,417	82.7	1	2,446	40.9
TY	12	117,886	10.2	19	114,636	16.6
WI	0	7,527	0.0	1	7,123	14.0
<b>Scotland</b>	<b>264</b>	<b>1,523,228</b>	<b>17.3</b>	<b>253</b>	<b>1,508,023</b>	<b>16.8</b>

- An arrow denotes statistically significant change
- Note: Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & Total occupied bed days: Information Services Division ISD(S)
- Figures include any updates received following the last publication

**Funnel plot of SAB incidence rates (per 100,000 TOBD) in healthcare associated infection cases for all NHS Boards in Scotland in Q3 2018.**



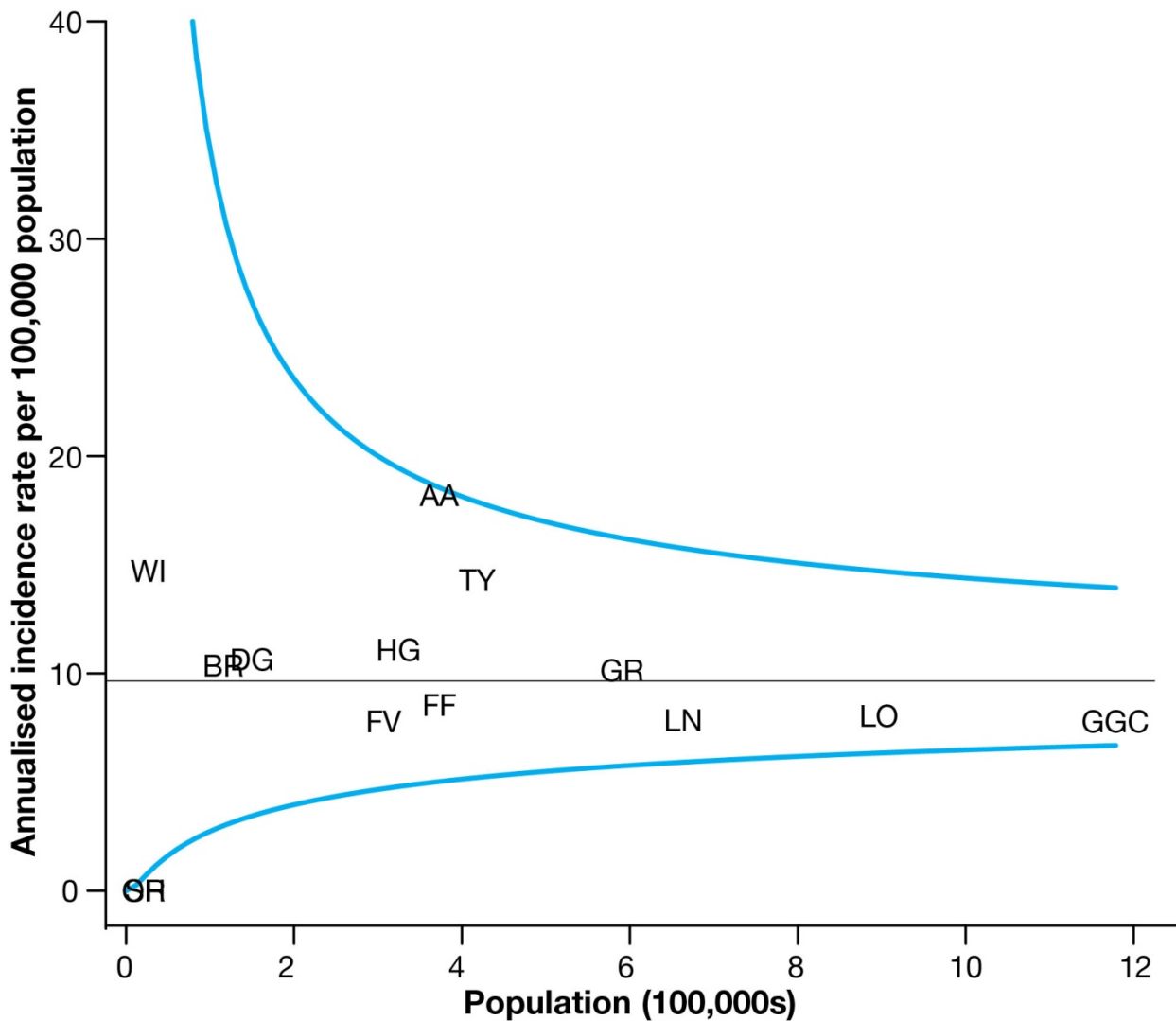
- Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & Total occupied bed days: Information Services Division ISD(S)
- NHS Ayrshire & Arran and NHS Tayside overlap

**SAB cases and incidence rates (per 100,000 population) for community associated infection cases: Q2 2018 (April to June 2018) compared to Q3 2018 (July to September 2018).**

NHS Board	Q2 Cases	Q2 Population	Q2 Rate	Q3 Cases	Q3 Population	Q3 Rate
AA	9	370,410	9.7	17	370,410	18.2
BR	3	115,020	10.5	3	115,020	10.3
DG	5	149,200	13.4	4	149,200	10.6
FF	6	371,410	6.5	8	371,410	8.5
FV	13	305,580	17.1	6	305,580	7.8
<b>GR</b>	<b>9</b>	<b>586,380</b>	<b>6.2</b>	<b>15</b>	<b>586,380</b>	<b>10.1</b>
GGC	16	1,169,110	5.5	23	1,169,110	7.8
HG	10	321,990	12.5	9	321,990	11.1
LN	13	658,130	7.9	13	658,130	7.8
LO	21	889,450	9.5	18	889,450	8.0
OR	0	22,000	0.0	0	22,000	0.0
SH	0	23,080	0.0	0	23,080	0.0
TY	18	416,090	17.4	15	416,090	14.3
WI	0	26,950	0.0	1	26,950	14.7
<b>Scotland</b>	<b>123</b>	<b>5,424,800</b>	<b>9.1</b>	<b>132</b>	<b>5,424,800</b>	<b>9.7</b>

- Quarterly population rates are based on an annualised population
- An arrow denotes statistically significant change
- Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & NRS mid-year population estimates
- Figures include any updates received following the last publication

**Funnel plot of SAB incidence rates (per 100,000 population) in community associated infection cases for all NHS Boards in Scotland in Q3 2018.**



- Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & NRS mid-year population estimates
- NHS Orkney and NHS Shetland overlap as do NHS Borders and NHS Dumfries & Galloway

Healthcare Associated SABs July – September 2018	
Source	Number
Skin & soft tissue (ulcer, cellulitis, other)	6
Devices (PICC/Midline, PVC, CVC tunnelled, urinary catheter, other)	5
Surgical Site Infection (organ/space, superficial)	2
Respiratory infection	2
Contaminant	1
Nephrostomy	1
Not known	8
<b>Total Healthcare Associated SABs</b>	<b>25</b>

Community Associated SABs July – September 2018	
Source	Number
Skin & soft tissue (eczema, skin break, cellulitis, burns)	5
Injection site related to illicit drug use	2
Urinary tract infection	1
ENT	1
Not known	6
<b>Total Community Associated SABs</b>	<b>15</b>

## Surgical Site Infection (SSI) Surveillance

A Surgical Site Infection (SSI) relates to an infection that occurs after surgery in the part of the body on which surgery was performed. SSIs may be superficial infections involving the skin only or can be more serious involving tissues, organs or implanted material. SSI is one of the most common types of HAI in Scotland<sup>4</sup>.

In Scotland the mandatory Surgical Site Infection (SSI) surveillance programme commenced in 2002. All NHS boards are required to undertake surveillance for hip arthroplasty (includes hemiarthroplasty) and caesarean section procedures as per the mandatory requirements of HDL (2006) 38 and CEL (11) 2009.

Post operative surveillance is carried out as follows:

- Caesarean section surveillance is carried out during admission, post discharge up to 10 days and readmission up to 30 days
- Hip arthroplasty (includes hemiarthroplasty) surveillance is carried out during admission, readmission up to 30 days and readmission up to 90 days if there is an implant

Information on the national surveillance programme for Surgical Site Infection can be found at:

<http://www.hps.scot.nhs.uk/haic/sshaip/surgicalsiteinfectionsurveillance.aspx?subjectid=B>

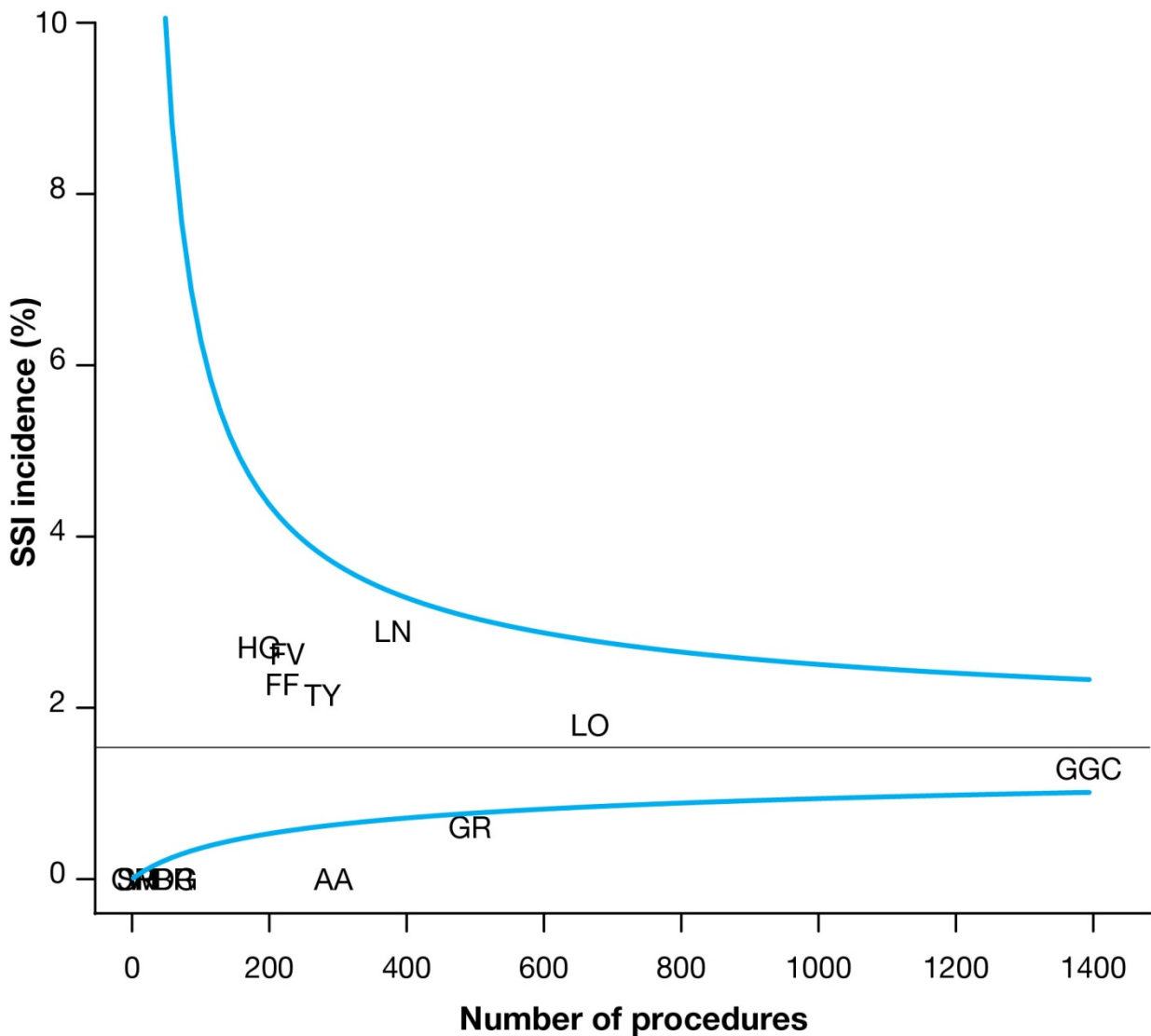
**Caesarean section procedures and SSI incidence (per 100 procedures) for inpatients and PDS to day 10: Q2 2018 (April to June 2018) compared to Q3 2018 (July to September 2018).**

NHS Board	Q2 SSI	Q2 Procedures	Q2 Incidence	Q3 SSI	Q3 Procedures	Q3 Incidence
AA	2	302	0.7	0	294	0.0
BR	0	71	0.0	0	60	0.0
DG	2	78	2.6	0	64	0.0
FF	7	223	3.1	5	220	2.3
FV	4	255	1.6	6	228	2.6
<b>GR</b>	<b>6</b>	<b>497</b>	<b>1.2</b>	<b>3</b>	<b>493</b>	<b>0.6</b>
GGC	15	1,259	1.2	18	1,394	1.3
HG	2	154	1.3	5	185	2.7
LN	4	341	1.2	11	380	2.9
LO	11	701	1.6	12	667	1.8
OR	0	10	0.0	0	2	0.0
SH	0	10	0.0	0	8	0.0
TY	8	268	3.0	6	279	2.2
WI	0	21	0.0	0	18	0.0
<b>Scotland</b>	<b>61</b>	<b>4,190</b>	<b>1.5</b>	<b>66</b>	<b>4,292</b>	<b>1.5</b>

- Source of data is Surgical Site Infection Reporting System (SSIRS)
- Figures include any updates received following the last publication



**Funnel plot of caesarean section SSI incidence (per 100 procedures) in inpatients and PDS to day 10 for all NHS Boards in Scotland in Q3 2018.**



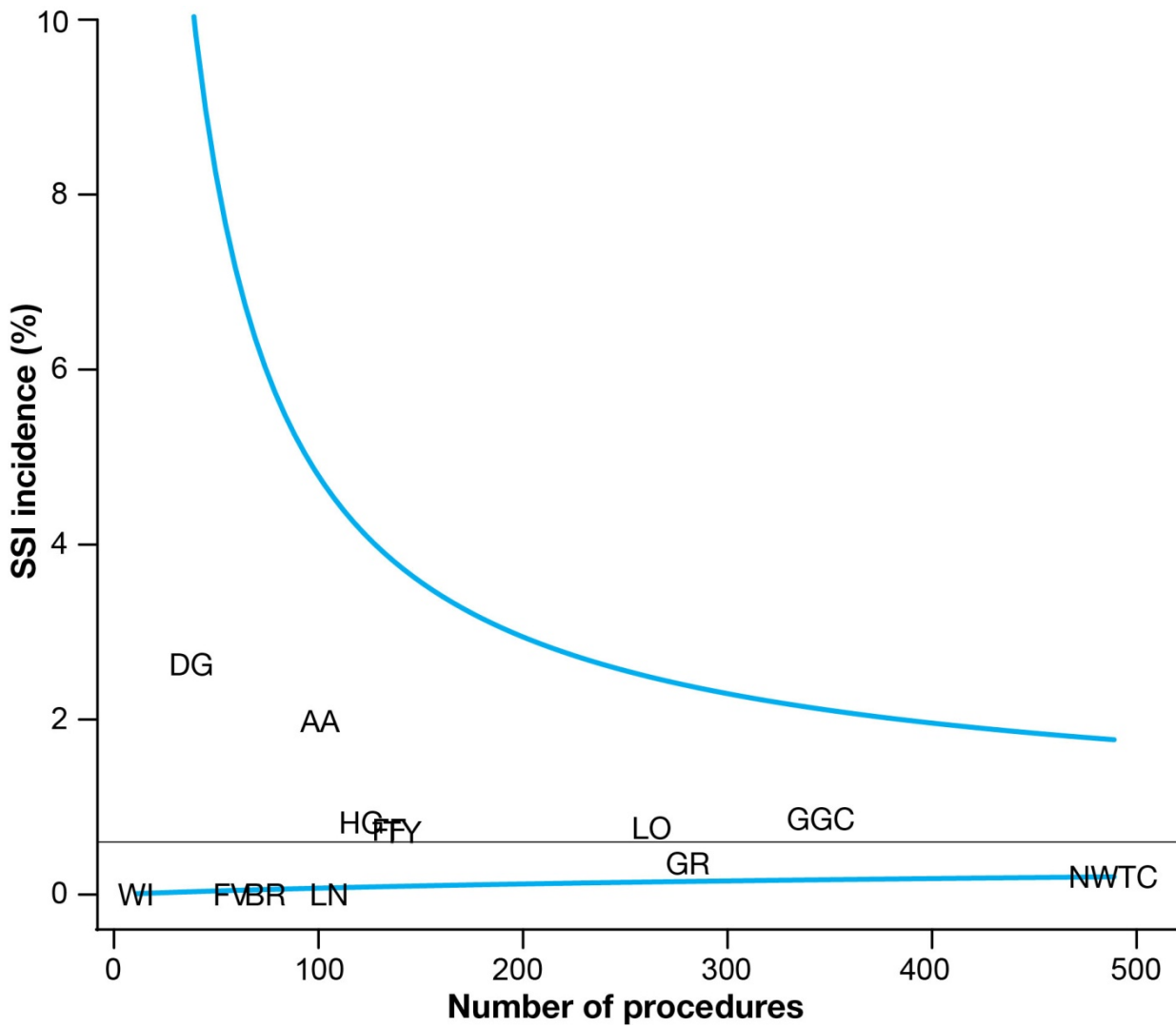
- Source of data is Surgical Site Infection Reporting System (SSIRS)
- NHS Borders and NHS Dumfries & Galloway overlap as do NHS Orkney, NHS Shetland and NHS Western Isles

**Hip arthroplasty procedures and SSI incidence (per 100 procedures) for inpatients and on readmission to day 30: Q2 2018 (April to June 2018) compared to Q3 2018 (July to September 2018).**

NHS Board	Q2 SSI	Q2 Procedures	Q2 Incidence	Q3 SSI	Q3 Procedures	Q3 Incidence
AA	0	133	0.0	2	101	2.0
BR	0	74	0.0	0	74	0.0
DG	0	45	0.0	1	38	2.6
FF	0	143	0.0	1	135	0.7
FV	0	48	0.0	0	58	0.0
<b>GR</b>	<b>1</b>	<b>294</b>	<b>0.3</b>	<b>1</b>	<b>281</b>	<b>0.4</b>
GGC	12	381	3.1	3	346	0.9
HG	0	102	0.0	1	121	0.8
LN	1	107	0.9	0	105	0.0
LO	2	297	0.7	2	263	0.8
NWTC	1	478	0.2	1	489	0.2
OR	0	0	-	0	0	-
TY	1	150	1.3	1	141	0.7
WI	0	15	0.0	0	11	0.0
<b>Scotland</b>	<b>18</b>	<b>2,267</b>	<b>0.8</b>	<b>13</b>	<b>2,163</b>	<b>0.6</b>

- Source of data is Surgical Site Infection Reporting System (SSIRS)
- Figures include any updates received following the last publication

**Funnel plot of hip arthroplasty SSI incidence (per 100 procedures) in inpatients and on readmission to day 30 for all NHS Boards in Scotland in Q3 2018.**



- Source of data is Surgical Site Infection Reporting System (SSIRS)
- NHS Fife and NHS Tayside overlap

## Meticillin-Resistant *Staphylococcus Aureus* (MRSA) Screening

The majority of individuals affected by Meticillin-Resistant *Staphylococcus Aureus* (MRSA) are colonised. This is when an organism lives harmlessly on the body with no ill effects. Infection is when the organism gains entry or penetrates tissue or sterile sites and causes disease process. MRSA is a form of *Staphylococcus aureus* (*S. aureus*). It is transmitted in the same way and causes the same range of infection but is resistant to commonly used antibiotics. This makes MRSA infections more difficult and costly to treat, hence every effort must be made to prevent spread<sup>5</sup>.

In early 2011, the Scottish Government announced new national minimum MRSA screening recommendations. Targeted MRSA screening by specialty (implemented in January 2010) has now been replaced by a Clinical Risk Assessment (CRA) followed by a nose and perineal swab (if the patient answers yes to any of the CRA questions). National Key Performance Indicators (KPIs) have now been implemented with Boards being required to achieve 90% compliance with CRA completion.

MRSA CRA screening compliance for Quarter 3\* (October to December 2018) within NHS Grampian was 89%.

*\*Please note that Quarter 3 for MRSA CRA screening is October – December 2018*

	2017-18 Q3	2017-18 Q4	2018-19 Q1	2018-19 Q2	2018-19 Q3
Grampian	89%	92%	86%	84%	<b>89%</b>
Scotland	88%	83%	84%	84%	83%

More information on the national surveillance programme for MRSA screening can be found at:

<http://www.hps.scot.nhs.uk/haiic/sshaip/mrsascreeningprogramme.aspx?subjectid=>

## Carbapenemase Producing Enterobacteriaceae (CPE) Screening

Infections caused by CPE are associated with high rates of morbidity and mortality and can have severe clinical consequences. Treatment of these infections is increasingly difficult as these organisms are often resistant to many and sometimes all available antibiotics. The number of CPE cases in Scotland remains low however we have seen a 50% increase in cases between 2016 (73) and 2017 (108) across Scotland.

Screening and data collection for CPE commenced 1<sup>st</sup> April 2018 at the request of the Scottish Government. All NHS Boards are required to undertake screening compliance as per the mandatory requirements of DL (2017) 2.

CPE CRA screening compliance for Quarter 3\* (October – December 2018) within NHS Grampian:

*\*Please note that Quarter 3 for CPE CRA screening is October – December 2018*

	2018-19 Q1	2018-19 Q2	2018-19 Q3
Grampian	70%	93%	<b>100%</b>
Scotland	72%	79%	78%

More information on CPE screening can be found at:

<https://www.hps.scot.nhs.uk/resourcedocument.aspx?id=6990>

## Incidents and Outbreaks - Norovirus Prevalence

Monday Point Prevalence Surveillance figures are reported to Health Protection Scotland. These capture the significant outbreaks of Norovirus in NHS Grampian and the prevalence of Norovirus activity in close to real time. They are not and should not be interpreted as data for benchmarking or judgement. The data can be used for the assessment of risk and Norovirus outbreak preparedness only.

The following table details complete and partial ward closures in NHS Grampian due to enteric outbreaks (confirmed or suspected Norovirus).

	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018
Ward Closures	4	9	3	0	3	0	0	0	1	2	0	2
Bay Closures	4	2	8	0	2	1	0	1	0	0	1	2

Data on the numbers of wards closed across NHS Scotland due to confirmed or suspected Norovirus are available from HPS at:

<http://www.hps.scot.nhs.uk/giz/norovirusdashboard.asp>

(Do not use Internet Explorer to open this hyperlink, use Google Chrome instead)

NB. The method of data collection allows for data to be retrospective, therefore on occasions there will be bay/ward closures that are not seen on the dashboard until these areas are re-opened.

## Cleaning and the Healthcare Environment

NHS Grampian continues to achieve the required cleanliness standards across all locations as monitored by the Facilities Monitoring Tool.

	Oct 2018 Domestic	Oct 2018 Estates	Nov 2018 Domestic	Nov 2018 Estates	Dec 2018 Domestic	Dec 2018 Estates	Quarter 3 Domestic	Quarter 3 Estates
<b>NHS Grampian Overall</b>	93.00	93.55	93.75	95.15	93.95	94.85	<b>93.56</b>	<b>94.51</b>
<b>Aberdeen Maternity Hospital, RACH &amp; Outlying Areas</b>	93.60	91.00	94.10	93.30	93.80	94.15	<b>93.83</b>	<b>92.81</b>
<b>Aberdeen Royal Infirmary</b>	92.45	95.40	93.65	96.45	93.55	95.75	<b>93.21</b>	<b>95.86</b>
<b>Aberdeenshire North &amp; Moray Community</b>	96.15	95.75	95.40	95.90	97.00	96.45	<b>96.18</b>	<b>96.03</b>
<b>Aberdeenshire South &amp; Aberdeen City</b>	97.90	100.00	91.70	97.40	94.30	98.15	<b>94.63</b>	<b>98.51</b>
<b>Dr Grays Hospital</b>	91.30	90.20	92.80	91.50	92.75	90.50	<b>92.28</b>	<b>90.73</b>
<b>Royal Cornhill Hospital</b>	96.70	96.90	95.25	92.85	95.05	95.75	<b>95.66</b>	<b>95.16</b>
<b>Woodend Hospital</b>	92.20	92.70	94.85	95.05	94.65	95.30	<b>93.90</b>	<b>94.35</b>

## 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 *Clostridioides* (formerly *Clostridium*) *difficile* infections, as well as cleaning compliance and hand hygiene. 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

*Clostridioides* (formerly *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).

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 CDIs and SABs. More information on these can be found on the Scotland Performs website:

<http://www.gov.scot/About/Performance/scotPerforms/NHSScotlandperformance>

#### 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/publications-/guidance-publications/?keywords=monitoring+framework&section=&category=&month=&year=&show=10>



## 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 – ‘Out of Hospital Infections’

*Clostridioides* (formerly *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.

## NHS BOARD REPORT CARD – NHS Grampian

### Staphylococcus aureus bacteraemia - monthly case numbers

	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	June 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018
<b>MRSA</b>	1	0	0	2	0	1	0	0	1	2	0	2
<b>MSSA</b>	20	10	12	13	9	12	9	18	12	13	15	7
<b>Total SABS</b>	21	10	12	15	9	13	9	18	13	15	15	9

### Clostridioides (formerly Clostridium) difficile infections - monthly case numbers

	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	June 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018
<b>Total CDIs (Ages 15+)</b>	9	13	22	19	37	20	22	12	11	7	7	8

### Cleaning Compliance (%)

	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	June 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018
<b>Board Total</b>	95	94	94	94	94	94	93	94	94	93	94	94

### Estates Monitoring Compliance (%)

	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	June 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018
<b>Board Total</b>	95	95	95	95	95	95	95	95	95	94	95	95

### Hand Hygiene Monitoring Compliance (%)

	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	June 2018	July 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018
<b>AHP</b>	99	99	99	98	98	98	99	99	98	98	99	99
<b>Ancillary</b>	97	97	97	97	97	96	96	96	96	98	96	97
<b>Medical</b>	97	96	96	96	94	97	99	99	99	97	98	100
<b>Nurse</b>	99	99	99	99	99	99	95	98	97	99	95	99
<b>Total</b>	98	98	98	98	97	98	98	98	98	98	98	99

## NHS HOSPITAL A REPORT CARD – Aberdeen Royal Infirmary

### Staphylococcus aureus bacteraemia - monthly case numbers

	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	June 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018
<b>MRSA</b>	1	0	0	0	0	0	0	0	0	0	0	0
<b>MSSA</b>	4	4	2	4	1	3	4	3	3	5	3	3
<b>Total SABS</b>	5	0	2	4	1	3	4	3	3	5	3	3

### Clostridioides (formerly Clostridium) difficile infections - monthly case numbers

	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	June 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018
<b>Total CDIs (Ages 15+)</b>	3	2	6	10	7	6	3	5	3	4	2	1

### Cleaning Compliance (%)

	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	June 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018
<b>ARI Total</b>	94	95	93	93	93	94	93	93	93	92	94	94

### Estates Monitoring Compliance (%)

	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	June 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018
<b>ARI Total</b>	96	96	97	97	96	96	96	96	96	95	96	96

## NHS HOSPITAL B REPORT CARD – Dr Gray’s Hospital

### *Staphylococcus aureus* bacteraemia - monthly case numbers

	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	June 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018
<b>MRSA</b>	0	0	0	0	0	0	0	0	0	0	0	0
<b>MSSA</b>	1	0	0	1	0	0	0	2	0	0	0	0
<b>Total SABS</b>	1	0	0	1	0	0	0	2	0	0	0	0

### *Clostridioides* (formerly *Clostridium*) *difficile* infections - monthly case numbers

	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	June 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018
<b>Total CDIs (Ages 15+)</b>	1	0	3	0	0	0	0	1	0	0	0	0

### Cleaning Compliance (%)

	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	June 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018
<b>DGH Total</b>	94	93	94	94	94	93	93	94	93	91	93	93

### Estates Monitoring Compliance (%)

	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	June 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018
<b>DGH Total</b>	94	93	94	94	92	93	91	91	91	90	92	91

## NHS HOSPITAL C REPORT CARD – Woodend Hospital

### Staphylococcus aureus bacteraemia - monthly case numbers

	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	June 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018
<b>MRSA</b>	0	0	0	0	0	0	0	0	0	0	0	0
<b>MSSA</b>	1	0	0	0	0	0	0	0	0	0	0	1
<b>Total SABS</b>	1	0	0	0	0	0	0	0	0	0	0	1

### Clostridioides (formerly Clostridium) difficile infections - monthly case numbers

	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	June 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018
<b>Total CDIs (Ages 15+)</b>	0	1	0	0	0	0	0	0	0	0	0	0

### Cleaning Compliance (%)

	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	June 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018
<b>WGH Total</b>	96	95	95	94	95	94	95	96	94	92	95	95

### Estates Monitoring Compliance (%)

	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	June 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018
<b>WGH Total</b>	96	96	96	95	94	96	98	99	96	93	95	95

## OTHER NHS HOSPITALS REPORT CARD

The other hospitals covered in this report card include:

Aberdeen Maternity Hospital  
 Royal Cornhill Hospital  
 Royal Aberdeen Children's Hospital  
 Roxburgh House  
 All Community Hospitals

### *Staphylococcus aureus* bacteraemia - monthly case numbers

	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	June 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018
<b>MRSA</b>	0	0	0	0	0	1	0	0	0	0	0	0
<b>MSSA</b>	0	1	2	2	0	1	0	0	1	0	1	0
<b>Total SABS</b>	0	1	2	2	0	2	0	0	1	0	1	0

### *Clostridioides* (formerly *Clostridium*) *difficile* infections - monthly case numbers

	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	June 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018
<b>Total CDIs (Ages 15+)</b>	1	0	4	2	1	2	2	1	0	0	0	1

## NHS OUT OF HOSPITAL REPORT CARD

### *Staphylococcus aureus* bacteraemia - monthly case numbers

	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	June 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018
<b>MRSA</b>	0	0	0	1	0	0	0	0	0	2	0	2
<b>MSSA</b>	14	5	8	7	8	8	5	13	1	8	11	3
<b>Total SABS</b>	14	5	8	8	8	8	5	13	1	10	11	5

### *Clostridioides* (formerly *Clostridium*) *difficile* infections - monthly case numbers

	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	June 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018
<b>Total CDIs (Ages 15+)</b>	4	10	9	7	29	11	17	5	8	4	5	6

## References

- 1 – 4: National Services Scotland. (2019) *Quarterly epidemiological data on Clostridioides Difficile infection, Escherichia coli bacteraemia, Staphylococcus aureus bacteraemia and Surgical Site Infection in Scotland*. Available at: <https://www.hps.scot.nhs.uk/haic/sshap/quarterlyepidemiologicalcommentaries.aspx> (accessed: 16.01.19)
  
- 5: NHS Grampian Staff Protocol for the Screening and Management of Patients with Meticillin-Resistant Staphylococcus aureus (MRSA) within NHS Healthcare Settings (Excluding Care Homes)  
<http://nhgintranet.grampian.scot.nhs.uk/depts/InfectionPreventionAndControlManual/Documents/NHSG%20Staff%20Protocol%20for%20the%20Treatment%20of%20Patients%20with%20MRSA%20in%20Healthcare%20Settings%20March%202017.pdf>