

Healthcare Associated Infection (HAI)
Quarterly Report – November 2020

Board Meeting
010421
Open Session
5.1

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 2 \(April to June 2020\)](#) published on 6th October 2020.

HAI Summary - Quarter Ending June 2020

Clostridioides difficile infection (CDI)

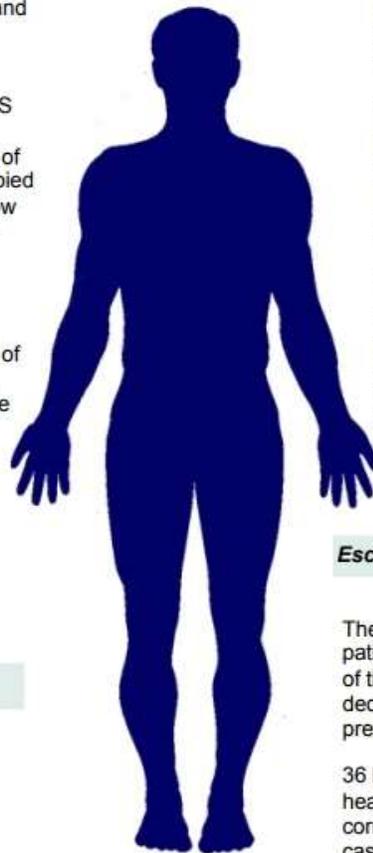
The total number of CDI cases in patients reported to HPS was 23 – 9.3% of the total across Scotland and a decrease of 15% from 27 in the previous quarter.

13 CDI cases were reported to HPS as healthcare associated. This corresponded to an incidence rate of 13.7 cases per 100,000 total occupied bed days (TOBDs) which was below the Scotland wide rate of 15.4 per 100,000 TOBDs.

10 CDI cases were reported as community associated. This corresponded to an incidence rate of 6.9 cases per 100,000 population, which was above the Scotland wide rate of 5.9 cases per 100,000 population.

Surgical Site Infection (SSI)

Epidemiological data for SSI are not available for this quarter due to the pausing of surveillance to support the COVID-19 response.



Staphylococcus aureus bacteraemia (SAB)

The total number of SAB cases in patients reported to HPS was 31 – 8.8% of the total across Scotland and a decrease of 3.1% from 32 in the previous quarter.

18 SAB cases were reported to HPS as healthcare associated. This corresponded to an incidence rate of 19.0 cases per 100,000 TOBDs. The Scotland wide rate was higher at 20.3 cases per 100,000 TOBDs.

13 SAB cases were reported as community associated. This corresponded to an incidence rate of 8.9 cases per 100,000 population, below the Scotland wide rate of 9.7 cases per 100,000 population.

Escherichia coli bacteraemia (ECB)

The total number of ECB cases in patients reported to HPS was 81 – 8.8% of the total across Scotland and a decrease of 16.5% from 97 in the previous quarter.

36 ECB cases were reported to HPS as healthcare associated. This corresponded to an incidence rate 38.1 cases per 100,000 TOBD compared to the Scotland wide rate of 39.7 cases per 100,000 TOBDs.

45 ECB cases were reported as community associated. This corresponded to an incidence rate of 30.9 cases per 100,000 population, which was below the Scotland wide rate of 35.9 per 100,000 population.

Additional Surveillance not reported in Health Protection Scotland's Quarterly Epidemiological report:

Methicillin-Resistant *Staphylococcus Aureus* (MRSA) Screening

MRSA (CRA) screening compliance for Quarter 2 (July – September 2020) was 81%, which is below both the compliance target of 90% and the national average (86%).

Carbapenemase Producing Enterobacteriaceae (CPE) Screening

CPE (CRA) screening compliance for Quarter 2 (July – September 2020) was 93%, which is above both the compliance target (90%) and the national average (85%).

Norovirus

For the period July – September 2020 there were no ward closures in NHS Grampian due to enteric illness.

Health Facilities Scotland (HFS)

The cleaning compliance for July – September 2020 was 93% and the estates monitoring compliance was 95%; both these scores are above the national targets of 90%.

1. Actions Recommended

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

2. Strategic Context

- Updated Healthcare Associated Infections (HCAI) Standards for Scotland
- Updated Antibiotic Use Indicators for Scotland
- 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	Reduction of 10%^	Apr – Jun 2020, HPS	15.4	13.7	Green
	Community Associated Infection	-		5.9	6.9	Amber
<i>E coli</i> Bacteraemia	Healthcare Associated Infection	Reduction of 25%^^	Apr – Jun 2020, HPS	39.7	38.1	Green
	Community Associated Infection	-		35.9	30.9	Green
SABs	Healthcare Associated Infection	Reduction of 10%^	Apr – Jun 2020, HPS	20.3	19.0	Green
	Community Associated Infection	-		9.7	8.9	Green
Surgical Site Infections (SSIs)	Caesarean Section	-	Apr – Jun 2020, HPS	N/A **	N/A **	N/A **
	Hip Arthroplasty	-	Apr – Jun 2020, HPS	N/A **	N/A **	N/A **
MRSA (CRA) screening	-	HPS 90%	Jul – Sep 2020, HPS	86	81	N/A ***
CPE (CRA) screening	-	HPS 90%	Jul – Sep 2020, HPS	85	93	N/A ***

***RAG (Red / Amber / Green) Status**

Above upper control limit = **Red**
Below National average = **Green**

Below upper control limit but above National average = **Amber**
Below lower control limit = **Green**

[^] Reduction of 10% in the national rate from 2019 to 2022, with 2018/19 used as the baseline for reduction

^{^^} An initial reduction of 25% by 2021/22, with 2018/19 used as the baseline for reduction
Reduction of 50% by 2023/24

** Surveillance paused to support the COVID-19 response

** Official RAG status not provided

Issue	Group	Target	Period & source	NHS Scot	NHS G	RAG*
Cleaning	All clinical areas	HFS 90%	Jul – Sep 2020, NHSG	N/A	93	Green
Estates		HFS 90%	Jul – Sep 2020, NHSG	N/A	95	Green
Hand Hygiene	Nursing staff	SGHD 90%	Jul – Sep 2020, NHSG	N/A	99	Green
	Medical staff	SGHD 90%	Jul – Sep 2020, NHSG	N/A	96	Green
	Allied Health Professionals	SGHD 90%	Jul – Sep 2020, NHSG	N/A	98	Green
	Ancillary staff	SGHD 90%	Jul – Sep 2020, NHSG	N/A	97	Green

***RAG (Red / Amber / Green) Status**

Above upper control limit = **Red**
Below National average = **Green**

Below upper control limit but above National average = **Amber**
Below lower control limit = **Green**

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

June Brown
Interim Executive Nurse Director
june.brown@nhs.scot

Contact for further information

Grace Johnston
Interim Infection Prevention & Control Manager
grace.johnston@nhs.scot

Antibiotic Use Indicators for Scotland

The national indicators, agreed by the Scottish Antimicrobial Prescribing Group (SAPG), and approved by the Scottish Government in October 2019 are detailed below:

1. A 10% reduction of antibiotic use in Primary Care (excluding dental) by 2022, using 2015/16 data as a baseline (items/1000/day)

Work is ongoing in primary care to reduce overall antibiotic use which continues to decrease. E-prescribing data showed an initial small spike (over a 2 week period) in prescriptions for antibiotics commonly used for treatment of respiratory tract infection (amoxicillin, doxycycline, clarithromycin, azithromycin and co-amoxiclav) during the early weeks of the COVID-19 pandemic. Since the end of March, prescription rates for these antibiotics have fallen to well below that of 2019. The NHS Grampian picture mirrors the national trend. Updated empiric guidance namely The NHS Grampian Protocol For The Treatment of Common Infections in Adults in Primary Care along with NHS Grampian Guidance notes on the Treatment of Children in Primary Care were published in April with a focus on reduction of course duration to 5 days especially for respiratory tract infections. Resulting updates to GP computer systems and the Electronic Joint Formulary are to follow but are not under the control of the AMT.

2. Use of intravenous antibiotics in secondary care defined as DDD/1000population/day will be no higher in 2022 than it was in 2018

NHS Grampian are currently meeting this target. The DDD/1000population/day for Q1 2018 was 0.82. The NHS Grampian figure for Q1 2020 is 0.78. To maintain and improve progress towards this target, the AMT have now had an updated IV to oral switch (IVOST) guideline approved, which will be launched during antibiotic awareness week in November 2020, and then followed by implementation of the Hospital Antibiotic Review Programme (HARP) resource from SAPG.

3. Use of WHO Access antibiotics (NHSE list) \geq 60% of total antibiotic use in acute hospitals by 2022

NHS Grampian is currently meeting this target with 68.2% of total antibiotic use in acute hospitals from the WHO Access list.

Unfortunately the Discovery database has not been updated recently so there is no update from previous usage figures.

The Scottish Antimicrobial Prescribing Group (SAPG) recently issued updated versions of their documents entitled '*Interim advice to Antimicrobial Management Teams (AMTs) on antibiotic management/antimicrobial stewardship in the context of the COVID-19 pandemic*' and '*Advice on management of people with respiratory infections presenting in the community during the COVID-19 pandemic*'. These documents were discussed at the October 2020 AMT meeting and are in the process of being adapted for local use.

***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 death¹.

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/web-resources-container/protocol-for-the-scottish-surveillance-programme-for-clostridium-difficile-infection-user-manual/>

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 total occupied bed days) for healthcare associated infection cases

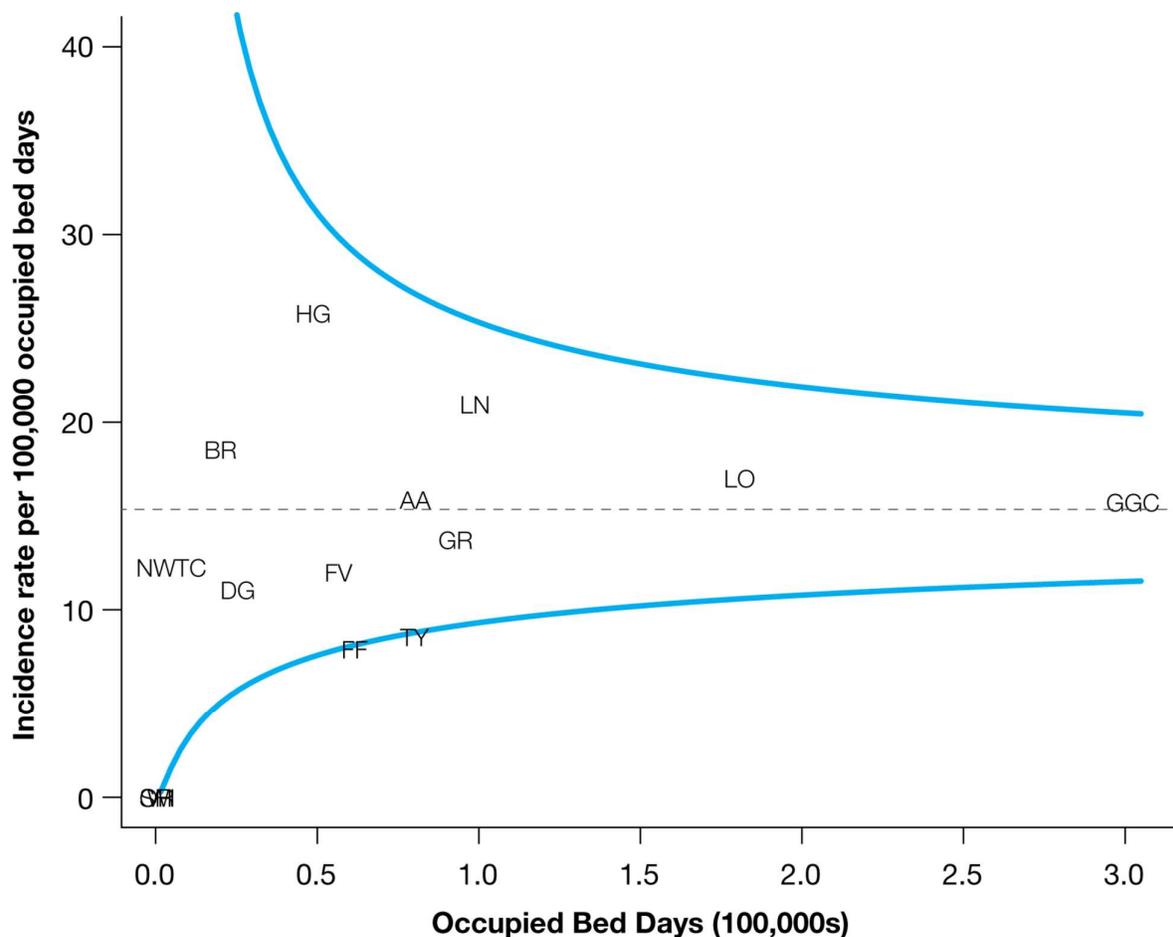
Q1 (January to March 2020) compared to Q2 (April – June 2020)

NHS Board	Q1 Cases	Q1 Bed Days	Q1 Rate	Q2 Cases	Q2 Bed Days	Q2 Rate
AA	17	107,446	15.8	13	81,868	15.9
BR	3	28,855	10.4	4	21,568	18.5
DG	12	44,334	27.1	3	27,088	11.1
FF	7	87,695	8.0	5	63,241	7.9
FV	9	76,312	11.8	7	58,320	12.0
GR	17	131,518	12.9	13	94,592	13.7
GGC	65	413,057	15.7	48	304,920	15.7
HG	16	71,286	22.4	13	50,361	25.8
LN	20	140,747	14.2	21	100,174	21.0
LO	25	240,426	10.4	31	182,151	17.0
NWTC	1	10,915	9.2	1	8,152	12.3
OR	0	3,184	0.0	0	2,102	0.0
SH	0	2,514	0.0	0	1,591	0.0
TY	8	111,519	7.2	7	81,757	8.6
WI	1	6,357	15.7	0	3,200	0.0
Scotland	201	1,476,165	13.6	166	1,081,085	15.4

- 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 total occupied bed days) in healthcare associated infection cases for all NHS Boards in Scotland

Q2 (April – June 2020)



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

CDI cases and incidence rates (per 100,000 population) for community associated infection cases

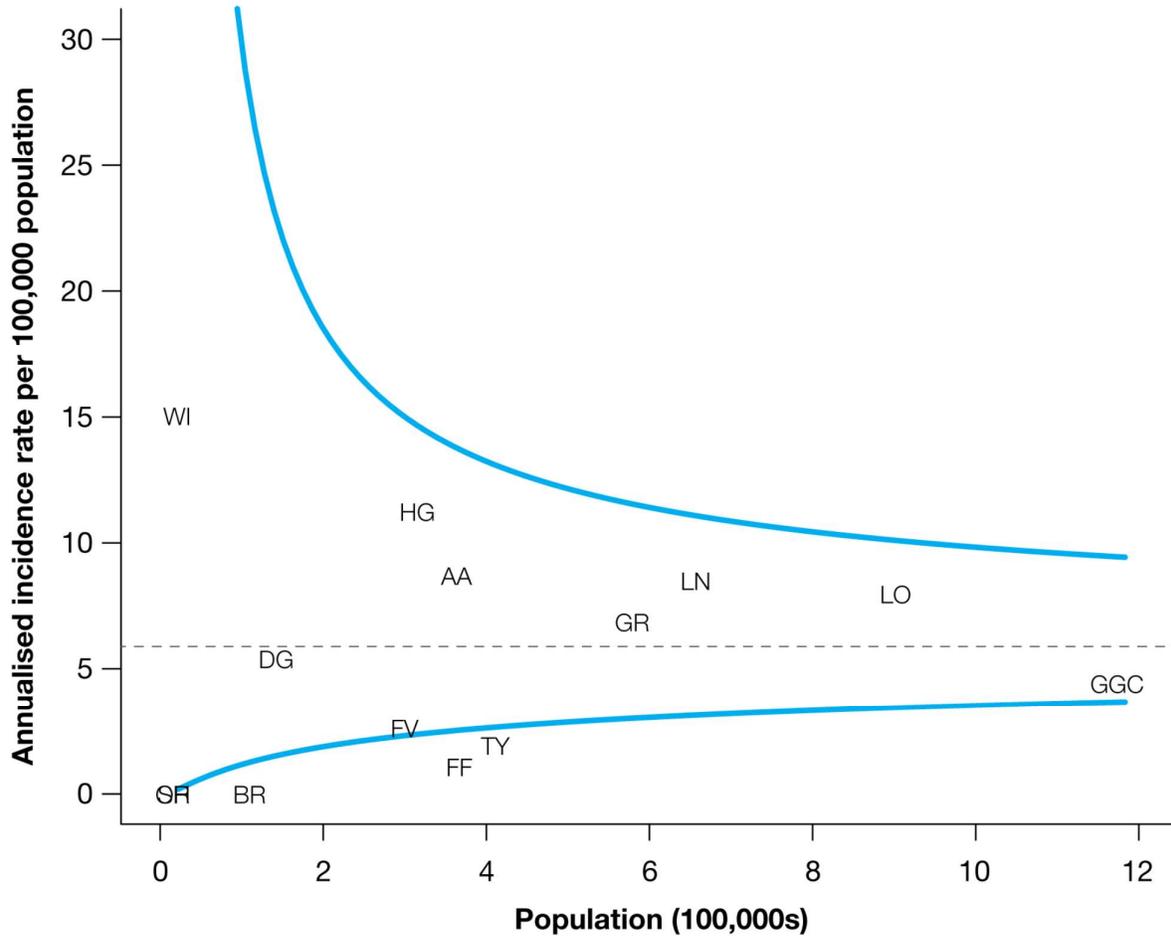
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NHS Board	Q1 Cases	Q1 Bed Days	Q1 Rate	Q2 Cases	Q2 Bed Days	Q2 Rate
AA	9	369,360	9.8	8	369,360	8.7
BR	3	115,510	10.4	0	115,510	0.0
DG	2	148,860	5.4	2	148,860	5.4
FF	1	373,550	1.1	1	373,550	1.1
FV	1	306,640	1.3	2	306,640	2.6
GR	10	585,700	6.9	10	585,700	6.9
GGC	7	1,183,120	2.4	13	1,183,120	4.4
HG	3	321,700	3.8	9	321,700	11.3
LN	3	661,900	1.8	14	661,900	8.5
LO	6	907,580	2.7	18	907,580	8.0
OR	0	22,270	0.0	0	22,270	0.0
SH	0	22,920	0.0	0	22,920	0.0
TY	0	417,470	0.0	2	417,470	1.9
WI	1	26,720	15.1	1	26,720	15.1
Scotland	46	5,463,300	3.3	80	5,463,300	5.9 ↑

- An arrow denotes statistically significant change
- Quarterly population rates are based on an annualised population
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Funnel plot of CDI incidence rates (per 100,000 population) in community associated infection cases for all NHS Boards in Scotland

Q2 (April – June 2020)



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

National *Escherichia coli* Bacteraemia Surveillance Programme

Escherichia coli (*E.coli*) is the most frequent cause of Gram-negative bacteraemia 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 2009².

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 total 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:

<https://www.hps.scot.nhs.uk/web-resources-container/quarterly-epidemiological-commentary-for-the-surveillance-of-healthcare-associated-infections-in-scotland-methods-caveats/>

ECB cases and incidence rates (per 100,000 total occupied bed days) for healthcare associated infection cases

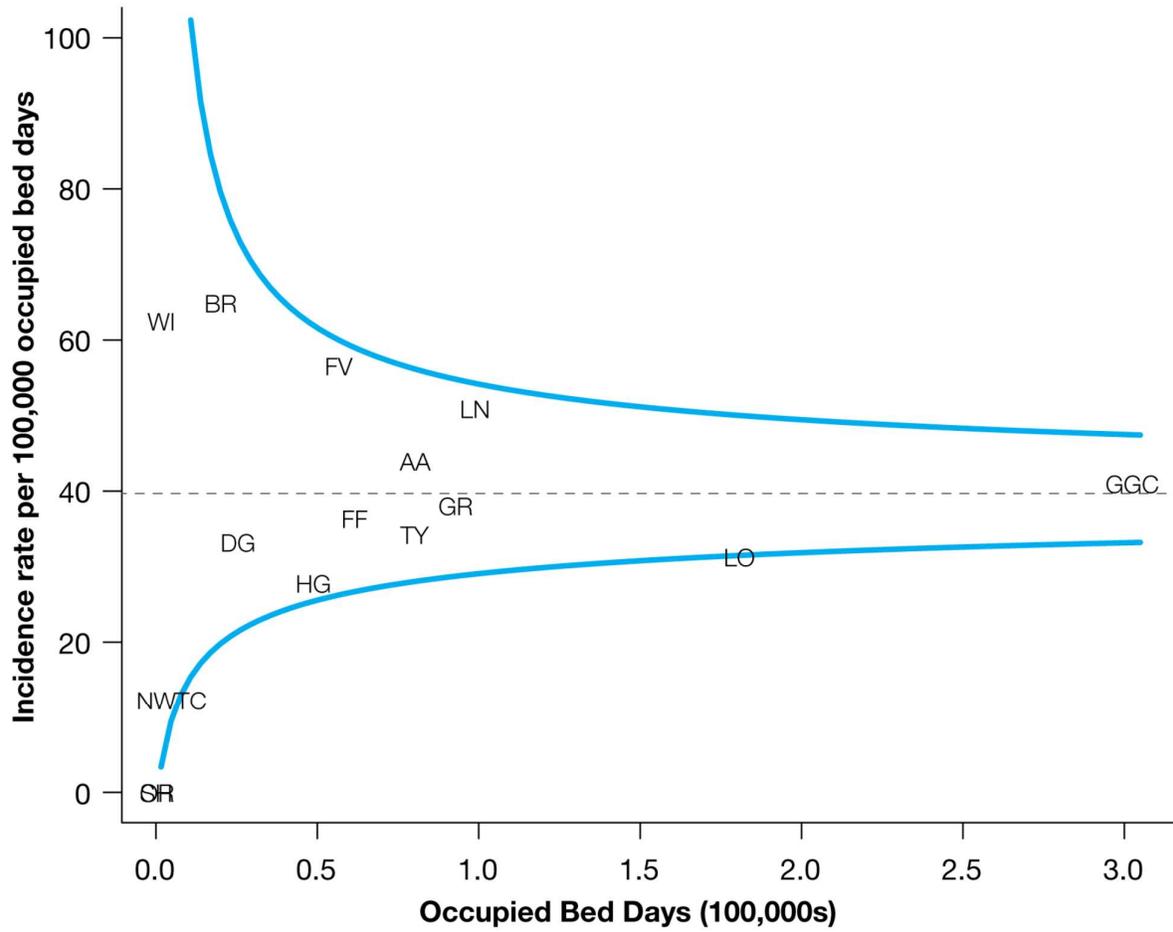
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AA	50	107,446	46.5	36	81,868	44.0
BR	10	28,855	34.7	14	21,568	64.9
DG	15	44,334	33.8	9	27,088	33.2
FF	42	87,695	47.9	23	63,241	36.4
FV	37	76,312	48.5	33	58,320	56.6
GR	49	131,518	37.3	36	94,592	38.1
GGC	123	413,057	29.8	125	304,920	41.0
HG	16	71,286	22.4	14	50,361	27.8
LN	64	140,747	45.5	51	100,174	50.9
LO	84	240,426	34.9	57	182,151	31.3
NWTC	0	10,915	0.0	1	8,152	12.3
OR	1	3,184	31.4	0	2,102	0.0
SH	1	2,514	39.8	0	1,591	0.0
TY	44	111,519	39.5	28	81,757	34.2
WI	2	6,357	31.5	2	3,200	62.5
Scotland	538	1,476,165	36.4	429	1,081,085	39.7

- 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 total occupied bed days) in healthcare associated infection cases for all NHS Boards in Scotland

Q2 (April – June 2020)



- 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

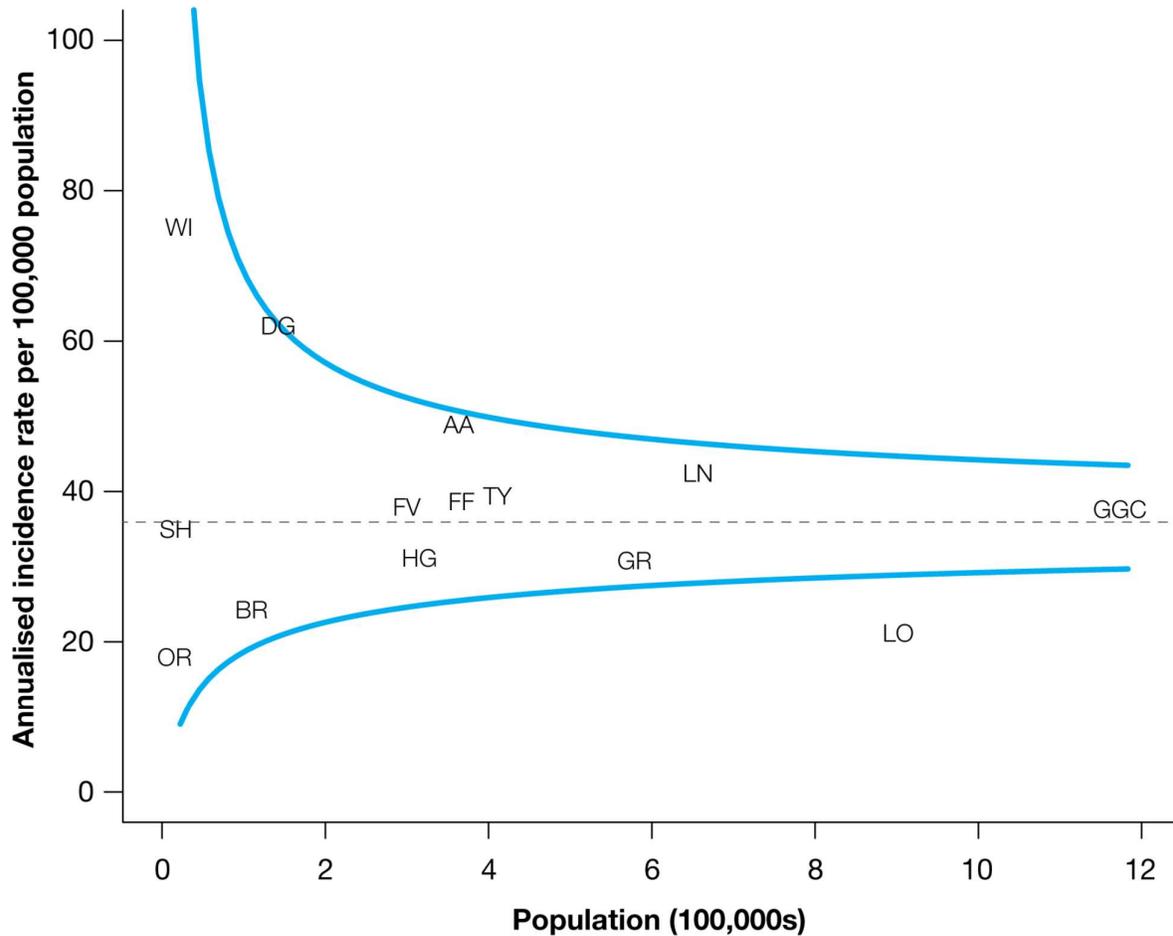
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BR	13	115,510	45.3	7	115,510	24.4
DG	20	148,860	54.0	23	148,860	62.1
FF	31	373,550	33.4	36	373,550	38.8
FV	39	306,640	51.2	29	306,640	38.0
GR	48	585,700	33.0	45	585,700	30.9
GGC	95	1,183,120	32.3	111	1,183,120	37.7
HG	20	321,700	25.0	25	321,700	31.3
LN	76	661,900	46.2	70	661,900	42.5
LO	70	907,580	31.0	48	907,580	21.3
OR	3	22,270	54.2	1	22,270	18.1
SH	1	22,920	17.5	2	22,920	35.1
TY	41	417,470	39.5	41	417,470	39.5
WI	5	26,720	75.3	5	26,720	75.3
Scotland	514	5,463,300	37.8	488	5,463,300	35.9

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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 bacteraemia³.

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 Infection Prevention and Control Team 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:

https://hpspubsrepo.blob.core.windows.net/hps-website/nss/2931/documents/1_protocol-national-enhanced-surveillance-bacteraemia.pdf

* Enhanced surveillance data (providing details of source of entry) for SABs between April and June 2020 is not available, due to the Scottish Government pausing enhanced surveillance data for SABs, to support the COVID-19 response

SAB cases and incidence rates (per 100,000 total occupied bed days) for healthcare associated infection cases

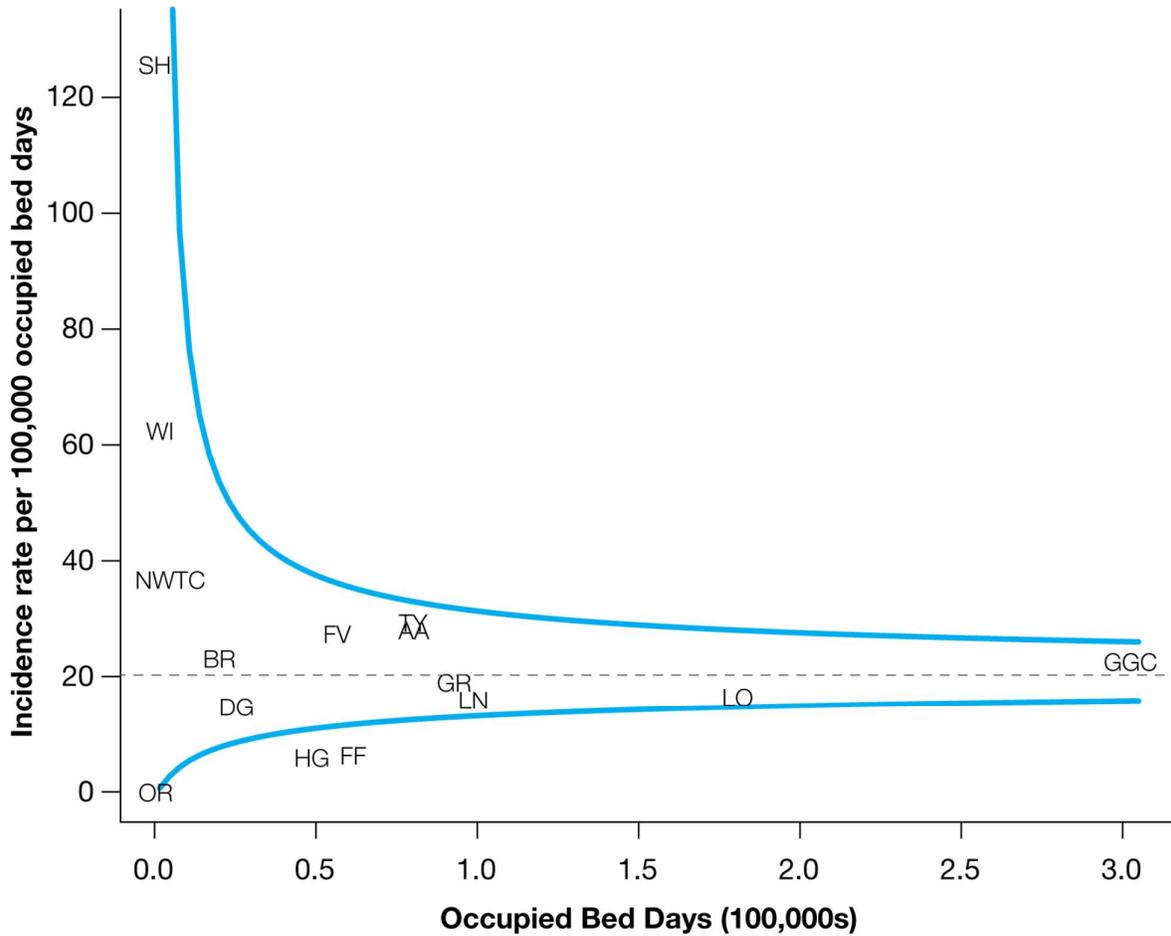
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SH	0	2,514	0.0	2	1,591	125.7
TY	19	111,519	17.0	24	81,757	29.4
WI	1	6,357	15.7	2	3,200	62.5
Scotland	241	1,476,165	16.3	219	1,081,085	20.3 ↑

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

Q2 (April – June 2020)



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- NHS Ayrshire & Arran and NHS Tayside overlap

SAB cases and incidence rates (per 100,000 population) for community associated infection cases

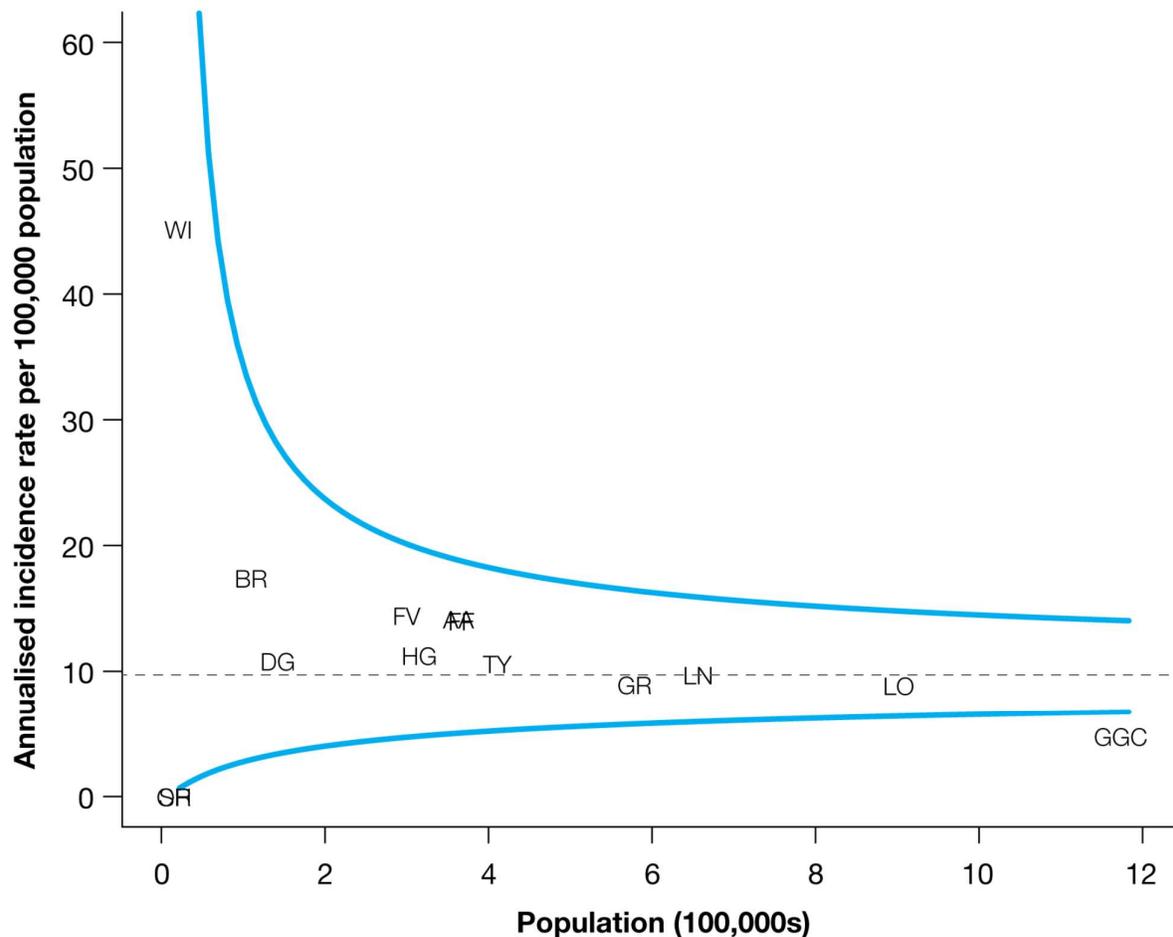
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OR	3	22,270	54.2	0	22,270	0.0
SH	2	22,920	35.1	0	22,920	0.0
TY	13	417,470	12.5	11	417,470	10.6
WI	0	26,720	0.0	3	26,720	45.2
Scotland	149	5,463,300	11.0	132	5,463,300	9.7

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

Q2 (April – June 2020)



- 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 Ayrshire & Arran and NHS Fife

Surgical Site Infection (SSI) Surveillance *

A Surgical Site Infection (SSI) is an infection that occurs after surgery in the part of the body where the surgery took place. SSI may be superficial infections involving the skin only while other SSI is more serious and can involve tissues under the skin, organs or implanted material. SSI is one of the most common types of HAI in Scotland⁴.

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:

<https://www.hps.scot.nhs.uk/web-resources-container/surgical-site-infection-surveillance-protocol-and-resource-pack-edition-71/>

** SSI data for April – June 2020 is not available due to surveillance being paused, by the Scottish Government, to support the COVID-19 response*

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 spread⁵.

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 2* (July – September 2020) within NHS Grampian was 81%.

**Please note that Quarter 2 for MRSA CRA screening is July – September 2020*

	2019-20 Q2	2019-20 Q3	2019-20 Q4	2020-21 Q1	2020-21 Q2
Grampian	86%	81%	85%	82%	81%
Scotland	88%	88%	87%	84%	86%

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

<https://www.hps.scot.nhs.uk/web-resources-container/protocol-for-cra-mrsa-screening-national-rollout-in-scotland/>

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 1st 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 Clinical Risk Assessment (CRA) screening compliance for Quarter 2* (July – September 2020) within NHS Grampian was 93%.

**Please note that Quarter 2 for MRSA CRA screening is July – September 2020*

	2019-20 Q2	2019-20 Q3	2019-20 Q4	2020-21 Q1	2020-21 Q2
Grampian	96%	88%	93%	78%	93%
Scotland	86%	85%	85%	80%	85%

More information on CPE screening can be found at:

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

Enteric Incidents and Outbreaks

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

	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020
Ward Closures	2	4	3	1	0	0	0	0	0	0	0	0
Bay Closures	5	0	0	0	0	0	0	0	0	0	0	0

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 comparison. The data can be used for the assessment of risk and Norovirus outbreak preparedness only.

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

<https://www.hps.scot.nhs.uk/a-to-z-of-topics/norovirus/#data>

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

Incident Management Team (IMT) and Preliminary* Assessment Group (PAG) Meetings

In NHS Grampian the Infection Prevention and Control Team (IPCT) are continually alert for an actual or potential healthcare incident, infection and outbreak or data exceedance. We apply Chapter 3 of the National Infection Prevention and Control Manual⁶. The Healthcare Infection Incident Assessment Tool (HIIAT)⁷ guides assessment, communication and escalation of risk within the Health Board, Health Protection Scotland (HPS) and Scottish Government. Multi-disciplinary meetings to address the infection risk are called Preliminary* Assessment Groups (PAGs) and Incident Management Team meetings (IMTs).

A PAG may be convened to assess and determine if an IMT is required or whether there has been a greater than expected data exceedance such as non-compliant hand hygiene audits.

An IMT is defined as a multi-disciplinary, multi-agency group with responsibility for investigating and managing an incident⁸.

PAGs and IMTs can be supported by NHS Grampian's Health Protection Team (HPT) and HPS.

In NHS Grampian, between July and September 2020, a total of 14 IMT meetings and 15 PAG meetings took place. These meetings establish and monitor risk control measures for patient and staff safety. Additionally, NHS Grampian's HPT and IPCT supported a total of 26 IMTs and 1 PAG for local educational establishments.

**Preliminary Assessment Group (PAG) meetings were previously referred to as Problem Assessment Group (PAG) meetings. In November 2019, following feedback from clinical staff, the NHS Grampian Infection Prevention & Control Team, on behalf of the NHS Grampian HAI Executive, changed the name from 'Problem' to 'Preliminary'. It is hoped that the change in name will make the PAG process less intimidating for clinical staff.*

PAG meetings July – September 2020			
Date	Area	Reason	HIIAT assessment*
19.07.20	Ward 5, Dr Gray's Hospital / Cathay Nursing Home	COVID-19	Amber
20.07.20	Ward 108, ARI	Non-compliance with high level disinfection of semi-critical ultrasound probes	Green
10.08.20	Ward 209, ARI	COVID-19	Green
16.08.20	Ward 112, ARI	COVID-19	Green
19.08.20	Ward 204, ARI	Water Safety	Green
19.08.20	Ward 210, ARI	COVID-19	Green
27.08.20	Radiology, ARI / WGH	Non-compliance with high level disinfection of semi-critical ultrasound probes	Green
28.08.20	Ward 201, ARI	COVID-19	Green
28.08.20	Ward 205, ARI	Non-compliant hand hygiene audit	N / A [^]
31.08.20	Yellow Zone, ARI	COVID-19	Green
03.09.20	Jubilee Hospital, Huntly	Legionella	Green
21.09.20	Ward 201, ARI	Non-compliant hand hygiene audit	N / A [^]
24.09.20	Rubislaw Medical Practice, Aberdeen	COVID-19	Green
25.09.20	Ward 17, WGH	COVID-19	N / A ^{^^}
29.09.20	Ward 216, ARI	COVID-19	N / A ^{^^}

***HIIAT assessment (dynamic assessment accurate at the time of reporting)**

All Minor = **Green**

No Major and 2-4 Moderate = **Amber**

3 Minor and 1 Moderate = **Green**

Any Major = **Red**

[^] Hand Hygiene PAG meetings do not require a HIIAT assessment

^{^^} Healthcare Incident Reporting Template (HIRT) was submitted, therefore no HIIAT assessment

Cleaning and the Healthcare Environment

Between July and September 2020, NHS Grampian, as a whole, were compliant with the required cleanliness standards, as monitored by the Facilities Monitoring Tool.

Information on how hospitals carry out the cleaning and estates audits can be found at:

<http://www.hfs.scot.nhs.uk/publications-/guidance-publications/?keywords=monitoring+framework§ion=&category=&month=&year=&show=10>

	July 2020 Domestic	July 2020 Estates	August 2020 Domestic	August 2020 Estates	September 2020 Domestic	September 2020 Estates	Quarter 2 Domestic	Quarter 2 Estates
NHS Grampian Overall	93.40	94.90	93.40	94.80	93.15	94.75	93.31	94.81
Aberdeen Maternity Hospital, RACH & Outlying Areas	93.85	93.95	92.65	93.80	91.40	93.45	92.63	93.75
Aberdeen Royal Infirmary	93.05	94.90	92.60	95.90	92.35	94.75	92.66	95.18
Aberdeenshire North & Moray Community	95.20	91.15	94.95	89.60	94.70	93.70	94.95	91.48
Aberdeenshire South & Aberdeen City	96.30	97.30	93.20	96.40	93.40	97.25	94.30	96.98
Dr Gray's Hospital	94.35	94.15	93.85	95.45	94.10	95.15	94.10	94.91
Royal Cornhill Hospital	92.10	96.55	96.00	94.10	94.95	95.50	94.35	95.38
Woodend Hospital	93.25	98.05	94.60	96.60	93.85	96.70	93.90	97.11

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

The national targets associated with reductions in CDIs and SABs are currently under review. 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§ion=&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

	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020
MRSA	0	0	0	0	1	0	0	2	1	0	0	0
MSSA	12	10	11	11	14	6	6	10	12	9	16	14
Total SABS	12	10	11	11	15	6	6	12	13	9	16	14

Clostridioides (formerly Clostridium) difficile infections - monthly case numbers

	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020
Total CDIs (Ages 15+)	11	5	9	10	8	9	9	9	5	10	7	7

Cleaning Compliance (%)

	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020
Board Total	94	93	93	93	93	93	95	95	93	93	93	93

Estates Monitoring Compliance (%)

	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020
Board Total	95	94	95	95	95	94	97	95	94	95	95	95

Hand Hygiene Monitoring Compliance (%)

	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020
AHP	98	98	99	98	99	99	98	99	100	98	98	99
Ancillary	95	97	95	92	93	97	100	97	97	98	97	97

Medical	95	97	96	95	95	97	97	98	95	97	95	96
Nurse	98	98	99	98	99	99	99	99	99	99	99	99

NHS HOSPITAL A REPORT CARD – Aberdeen Royal Infirmary

Staphylococcus aureus bacteraemia - monthly case numbers

	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020
MRSA	0	0	0	0	0	0	0	1	0	0	0	0
MSSA	2	3	5	1	1	0	0	3	7	2	5	5
Total SABS	2	3	5	1	1	0	0	4	7	2	5	5

Clostridioides (formerly Clostridium) difficile infections - monthly case numbers

	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020
Total CDIs (Ages 15+)	4	2	3	2	1	3	3	1	0	7	3	1

Cleaning Compliance (%)

	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020
ARI Total	92	91	93	92	92	92	N/A *	93	93	93	93	92

Estates Monitoring Compliance (%)

	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020
ARI Total	95	94	95	95	95	94	N/A *	94	95	95	96	95

** Auditing paused to support the COVID-19 response*

NHS HOSPITAL B REPORT CARD – Dr Gray’s Hospital

Staphylococcus aureus bacteraemia - monthly case numbers

	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020
MRSA	0	0	0	0	0	0	0	0	0	0	0	0
MSSA	1	0	0	0	0	0	0	0	0	1	0	0
Total SABS	1	0	0	0	0	0	0	0	0	1	0	0

Clostridioides (formerly Clostridium) difficile infections - monthly case numbers

	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020
Total CDIs (Ages 15+)	1	0	1	1	0	0	0	1	0	0	3	0

Cleaning Compliance (%)

	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020
	9	9	9	0	0	0	0	0	0	0	0	0
DGH Total	94	94	94	94	93	94	94	94	95	94	94	94

Estates Monitoring Compliance (%)

	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020
	9	9	9	0	0	0	0	0	0	0	0	0
DGH Total	94	95	95	95	95	95	94	96	95	94	95	95

NHS HOSPITAL C REPORT CARD – Woodend Hospital

Staphylococcus aureus bacteraemia - monthly case numbers

	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020
MRS A	0	0	0	0	0	0	0	0	0	0	0	0
MSS A	0	0	0	1	1	0	0	1	0	0	1	0
Total SABS	0	0	0	1	1	0	0	1	0	0	1	0

Clostridioides (formerly Clostridium) difficile infections - monthly case numbers

	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020
Total CDIs (Age 15+)	0	0	1	0	0	0	0	0	0	0	0	0

Cleaning Compliance (%)

	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020
WG H Total	94	94	92	93	94	94	96	95	94	93	95	94

Estates Monitoring Compliance (%)

	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020
WG H Total	96	96	95	95	96	96	97	96	97	98	97	97

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

	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020
	9	9	9	0	0	0	0	0	0	0	0	0
MRS A	0	0	0	0	0	0	0	0	0	0	0	0
MSS A	1	0	0	1	0	0	0	0	0	0	0	0
Total SABS	1	0	0	1	0	0	0	0	0	0	0	0

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

	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020
	9	9	9	0	0	0	0	0	0	0	0	0
Total CDIs (Ages 15+)	0	0	0	0	1	1	1	0	0	0	0	0

NHS OUT OF HOSPITAL REPORT CARD

Staphylococcus aureus bacteraemia - monthly case numbers

	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020
	9	9	9	0	0	0	0	0	0	0	0	0
MRS A	0	0	0	0	1	0	0	1	1	0	0	0
MSS A	8	7	6	8	12	6	6	6	5	6	10	9
Total SABS	8	7	6	8	13	6	6	7	6	6	10	9

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

	Oct 201 9	Nov 201 9	Dec 201 9	Jan 202 0	Feb 202 0	Mar 202 0	Apr 202 0	May 202 0	Jun 202 0	Jul 202 0	Aug 202 0	Sep 202 0
Total CDIs (Age s 15+)	6	3	4	7	6	5	5	7	5	3	1	6

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