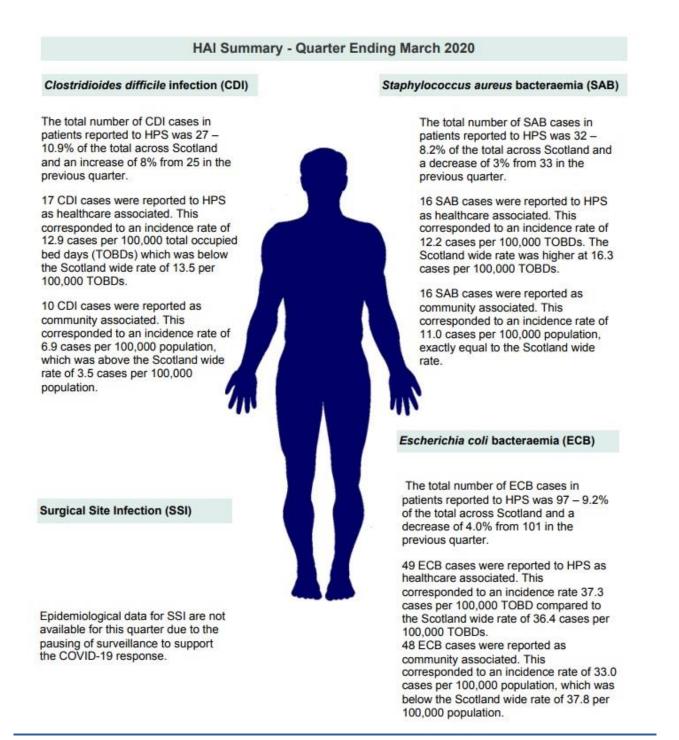
Board Meeting 3 12 20 Open Session Item 5.2



NHS GRAMPIAN

Healthcare Associated Infection (HAI) Quarterly Report – August 2020

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 1 (January to March 2020) published on 7th July 2020.



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

Methicillin-Resistant Staphylococcus Aureus (MRSA) Screening

MRSA (CRA) screening compliance for Quarter 1 (April – June 2020) was 82%, which is below both the compliance target of 90% and the national average (84%).

Carbapenemase Producing Enterobacteriaceae (CPE) Screening

CPE (CRA) screening compliance for Quarter 1 (April – June 2020) was 78%, which is below both the compliance target (90%) and the national average (80%).

Norovirus

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

Health Facilities Scotland (HFS)

The cleaning compliance for April – June 2020 was 94% 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% [^]	Jan – Mar 2020,	13.5	12.9	Green
CDIS	Community Associated Infection	-	HPS	3.5	6.9	Amber
E coli	Healthcare Associated Infection	Reduction of 25%^^	Jan – Mar 2020,	36.4	37.3	Amber
Bacteraemia	Community Associated Infection	-	HPS	37.8	33.0	Green
SABs	Healthcare Associated Infection	Reduction of 10%^	Jan – Mar 2020,	16.3	12.2	Green
0/123	Community Associated Infection	-	HPS	11.0	11.0	Green
Surgical Site	Caesarean Section	-	Jan – Mar 2020, HPS	N/A **	N/A **	N/A **
Infections (SSIs)	Hip Arthroplasty	-	Jan – Mar 2020, HPS	N/A **	N/A **	N/A **
MRSA (CRA) screening	-	HPS 90%	Apr – Jun 2020, HPS	84	82	Amber
CPE (CRA) screening	-	HPS 90%	Apr – Jun 2020, HPS	80	78	Amber

*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

Issue	Group	Target	Period & source	NHS Scot	NHS G	RAG*
Cleaning	All clinical areas	HFS 90%	Apr – Jun 2020, NHSG	N/A	94	Green
Estates		HFS 90%	Apr – Jun 2020, NHSG	N/A	95	Green
Hand Hygiene	Nursing staff	SGHD 90%	Apr – Jun 2020, NHSG	N/A	99	Green
	Medical staff	SGHD 90%	Apr – Jun 2020, NHSG	N/A	97	Green
	Allied Health Professionals	SGHD 90%	Apr – Jun 2020, NHSG	N/A	99	Green
	Ancillary staff	SGHD 90%	Apr – Jun 2020, NHSG	N/A	98	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 Caroline Hiscox Executive Nurse Director carolinehiscox@nhs.net Contact for further information Grace Johnston Interim Infection Prevention & Control Manager grace.johnston@nhs.net

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 defined care 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 are in the process of approving an updated IV to oral switch (IVOST) guideline which will be launched, followed by implementation of the Hospital Antibiotic Review Programme (HARP) resource from SAPG.
- 3. Use of WHO Access antibiotics (NHSE list) ≥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.

The Scottish Antimicrobial Prescribing Group (SAPG) issued a document entitled 'Interim advice to Antimicrobial Management Teams (AMTs) on antibiotic management / antimicrobial stewardship in the context of the COVID-19 Pandemic' in March 2020 and this was adapted for local use. Following a SAPG update, the local version was amended and published in May 2020. The AMT Chair and Antibiotic Pharmacists agreed an SBAR, giving more information on Antimicrobial Management Team (AMT) Activity and Antibiotic Consumption during the COVID-19 Pandemic, in June 2020.

Antimicrobial Management Team (AMT) Activity and Antibiotic Consumption during the COVID-19 Pandemic

Situation:

On March 11th 2020, the World Health Organisation (WHO) declared COVID-19 a pandemic. During this unprecedented period of pressure, it is recognised that changes will result in the operation of health services and the consumption of antimicrobial medications.

Background:

Antimicrobial Stewardship (AMS) activities are key to slowing the emergence of antibiotic resistance and managing antimicrobial usage. Prescribing indicators are dictated at a national level and progress towards these is the responsibility of the Antimicrobial Management Team (AMT). Additionally the AMT have an ongoing workplan, which includes (but is not limited to) responsibility for local antimicrobial prescribing policies and education. The AMT routinely have a monthly meeting, and report to the Grampian Area Drug and Therapeutics Committee (GADTC), as well as contributing to the Healthcare Associated Infection Reporting Template (HAIRT) for NHS Grampian. The Scottish Antimicrobial Prescribing Group (SAPG) issued a document entitled *'Interim advice to Antimicrobial Management Teams (AMTs) on antibiotic management / antimicrobial stewardship in the context of the COVID-19 pandemic'* on 13th March 2020, and an update on 13th May 2020. The document includes therapy choices for varying respiratory presentations.

Assessment:

The NHS Grampian AMT recognise the pressures on the health service during the current pandemic and will continue to provide support and information where requested. The SAPG document 'Interim advice to Antimicrobial Management Teams (AMTs) on antibiotic management / antimicrobial stewardship in the context of the COVID-19 pandemic' has been adapted for local use, endorsed by the AMT Chair, and made available on the NHSG intranet home page, Antimicrobial Companion app, Grampian Joint Formulary (GJF) and Grampian Guidance. The initial document was shared with all NHSG consultants, Senior Charge Nurses and pharmacists. The updated version was highlighted in the NHSG COVID daily brief.

The AMT predict there may be a local increase in the use of antibiotics for lower respiratory tract infections in both primary and secondary care, and in hospital an increase in broad spectrum antibiotics, particularly co-amoxiclav, piperacillin / tazobactam, and possibly ceftriaxone. This increased antibiotic consumption is likely to impact on progress towards national prescribing indicators and may impact negatively on Healthcare Associated Infection (HAI) rates e.g. Clostridioides difficile. With an anticipated increase in the proportion of the hospital population being frail/elderly, this may be particularly significant. Increased use of broad spectrum antibiotics may also negatively impact on the prevalence of multi-drug resistant organisms. Data recently obtained for antibiotic use per occupied bed day – particularly for amoxicillin, co-amoxiclav, piperacillin / tazobactam, and gentamicin. However, usage for high risk for CDI antibiotics has not exceeded monthly totals seen during the previous 12 months, likely due to the reduction in general hospital activity.

The AMT workplan was not able to continue in its current format, with staffing resources being concentrated on the NHS Grampian response to COVID-19, and essential daily workload. Routine physical AMT monthly meetings were suspended, with all essential communication via e-mail to protect staff and public representatives from close contact. However, an AMT meeting was held successfully at the end of May using TEAMs. The

AMT will continue to monitor local antimicrobial consumption data and facilitate audit of antibiotic prescribing (depending on staff resources available).

The primary care empirical prescribing guidance was approved, published and circulated during March.

The AMT co-ordinated the collection of data to contribute to a national point prevalence survey of antibiotic prescribing in patients with suspected / confirmed COVID-19, organised by SAPG. Interim analysis of local data showed that 60% of patients with suspected / confirmed COVID-19 were prescribed antibiotics on admission and 54% were prescribed antibiotics at the time of the survey. Reasons for prescribing antibiotics were well documented and the choice of antibiotic (mainly for respiratory tract infections) was deemed to be appropriate in 85% of cases.

Recommendation:

The NHS Grampian AMT will meet via TEAMs until further notice and while staff capacity allows.

The NHS Grampian AMT workplan should be suspended, with staff resources used to concentrate on the COVID-19 response and related national directives from SAPG. The GADTC and NHSG Infection Prevention and Control Strategic Committee are asked to:

- a) Recognise and acknowledge that AMS activities will be limited at this time and local antimicrobial consumption figures are expected to rise
- b) Recognise the potential for increased HAI rates, e.g. Clostridioides difficile, and increased prevalence of drug-resistant organisms, and address accordingly
- c) Align AMT activities to work with IPCT in terms of mitigating identified outbreaks
- d) Consider adding these concerns to the relevant risk register

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-scottishsurveillance-programme-for-clostridium-difficile-infection-user-manual/

Please see below for abbreviations used in the following tables:

AA Ayrshire & Arran BR Borders DG Dumfries & Galloway FF Fife FV Forth Valley GGC Greater Glasgow & Clyde GR Grampian

HG	Highland
LO	Lothian
LN	Lanarkshire
NWTC	National Waiting Times Centre
OR	Orkney
SH	Shetland
TY	Tayside
WI	Western Isles

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

NHS Board	Q4 Cases	Q4 Bed Days	Q4 Rate	Q1 Cases	Q1 Bed Days	Q1 Rate
AA	21	111,501	18.8	17	107,446	15.8
BR	3	29,415	10.2	3	28,855	10.4
DG	6	46,458	12.9	12	44,334	27.1
FF	12	91,708	13.1	7	87,695	8.0
FV	13	79,712	16.3	9	76,312	11.8
GR	17	133,259	12.8	17	131,518	12.9
GGC	70	429,650	16.3	63	413,057	15.3
HG	8	73,909	10.8	16	71,286	22.4
LN	25	147,326	17.0	20	140,747	14.2
LO	42	249,135	16.9	25	240,426	10.4
NWTC	1	11,659	8.6	1	10,915	9.2
OR	0	2,915	0.0	0	3,184	0.0
SH	2	2,673	74.8	0	2,514	0.0
ΤY	8	117,973	6.8	8	111,519	7.2
WI	3	6,884	43.6	1	6,346	15.8
Scotland	231	1,534,177	15.1	199	1,476,154	13.5

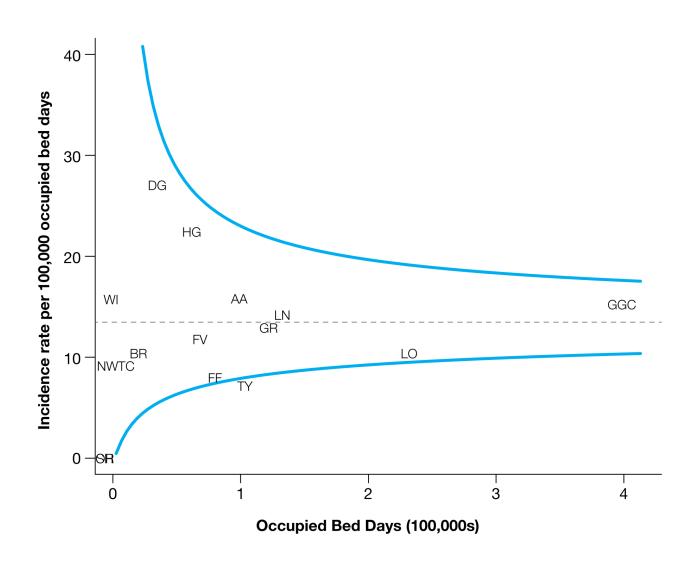
Q4 (October to December 2019) compared to Q1 (January to March 2020)

• 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

Q1 (January to March 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

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

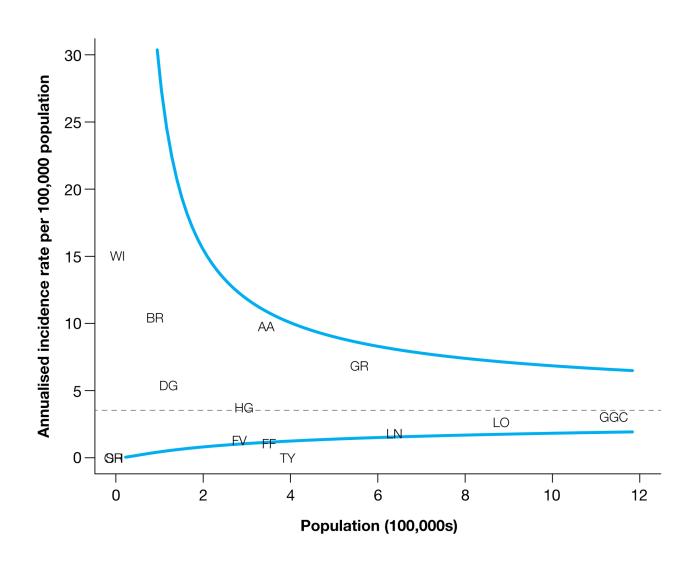
NHS Board	Q4 Cases	Q4 Population	Q4 Rate	Q1 Cases	Q1 Population	Q1 Rate
AA	6	369,360	6.4	9	369,360	9.8
BR	2	115,510	6.9	3	115,510	10.4
DG	2	148,860	5.3	2	148,860	5.4
FF	4	373,550	4.2	1	373,550	1.1
FV	0	306,640	0.0	1	306,640	1.3
GR	8	585,700	5.4	10	585,700	6.9
GGC	10	1,183,120	3.4	9	1,183,120	3.1
HG	3	321,700	3.7	3	321,700	3.8
LN	12	661,900	7.2	3	661,900	1.8
LO	11	907,580	4.8	6	907,580	2.7
OR	0	22,270	0.0	0	22,270	0.0
SH	0	22,920	0.0	0	22,920	0.0
ΤY	4	417,470	3.8	0	417,470	0.0
WI	1	26,720	14.8	1	26,720	15.1
Scotland	63	5,463,300	4.6	48	5,463,300	3.5

Q4 (October to December 2019) compared to Q1 (January to March 2020)

- Quarterly population rates are based on an annualised population
- Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & NRS midyear 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

Q1 (January to March 2020)



- Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & NRS midyear 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-epidemiologicalcommentary-for-the-surveillance-of-healthcare-associated-infections-in-scotland-methodscaveats/

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

NHS Board	Q4 Cases	Q4 Bed Days	Q4 Rate	Q1 Cases	Q1 Bed Days	Q1 Rate
AA	46	111,501	41.3	50	107,446	46.5
BR	14	29,415	47.6	10	28,855	34.7
DG	18	46,458	38.7	15	44,334	33.8
FF	55	91,708	60.0	42	87,695	47.9
FV	38	79,712	47.7	37	76,312	48.5
GR	53	133,259	39.8	49	131,518	37.3
GGC	151	429,650	35.1	123	413,057	29.8
HG	18	73,909	24.4	16	71,286	22.4
LN	77	147,326	52.3	64	140,747	45.5
LO	95	249,135	38.1	84	240,426	34.9
NWTC	1	11,659	8.6	0	10,915	0.0
OR	1	2,915	34.3	1	3,184	31.4
SH	3	2,673	112.2	1	2,514	39.8
TY	54	117,973	45.8	44	111,519	39.5
WI	2	6,884	29.1	2	6,346	31.5
Scotland	626	1,534,177	40.8	538	1,476,154	36.4

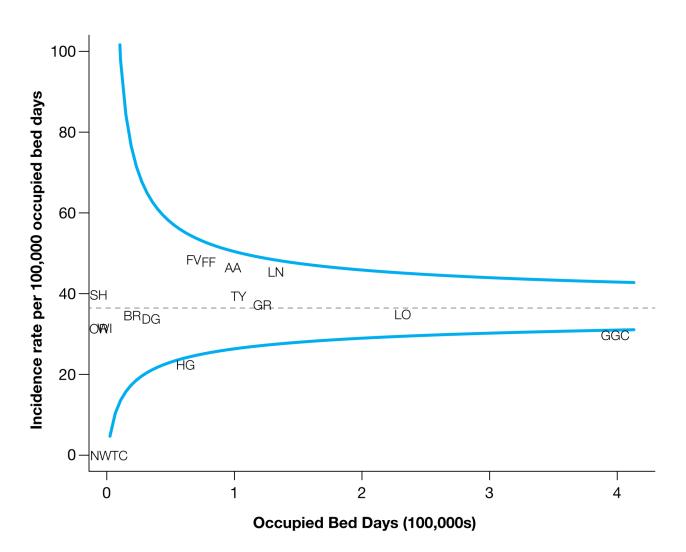
Q4 (October to December 2019) compared to Q1 (January to March 2020)

• 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

Q1 (January to March 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 Western Isles overlap

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

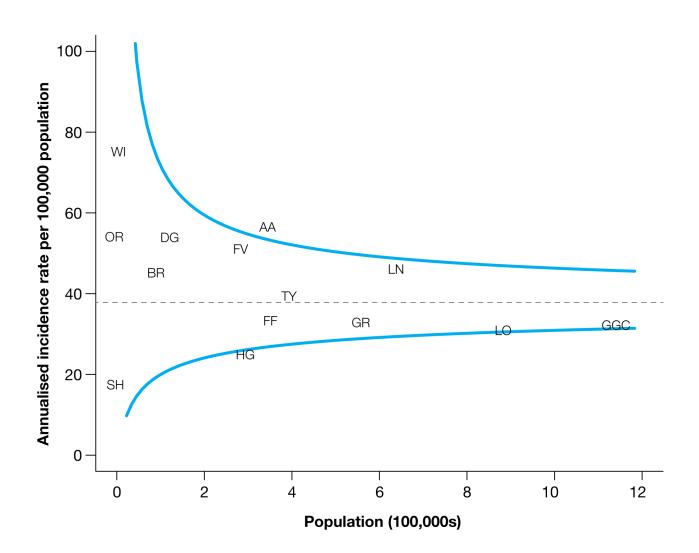
NHS Board	Q4 Cases	Q4 Population	Q4 Rate	Q1 Cases	Q1 Population	Q1 Rate
AA	41	369,360	44.0	52	369,360	56.6
BR	12	115,510	41.2	13	115,510	45.3
DG	21	148,860	56.0	20	148,860	54.0
FF	34	373,550	36.1	31	373,550	33.4
FV	53	306,640	68.6	39	306,640	51.2
GR	38	585,700	25.7	48	585,700	33.0
GGC	125	1,183,120	41.9	95	1,183,120	32.3
HG	43	321,700	53.0	20	321,700	25.0
LN	73	661,900	43.8	76	661,900	46.2
LO	63	907,580	27.5	70	907,580	31.0
OR	2	22,270	35.6	3	22,270	54.2
SH	4	22,920	69.2	1	22,920	17.5
TY	54	417,470	51.3	41	417,470	39.5
WI	5	26,720	74.2	5	26,720	75.3
Scotland	568	5,463,300	41.2	514	5,463,300	37.8

Q4 (October to December 2019) compared to Q1 (January to March 2020)

- Quarterly population rates are based on an annualised population
- Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & NRS midyear 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

Q1 (January to March 2020)



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

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://www.hps.scot.nhs.uk/web-resources-container/protocol-for-enhancedstaphylococcus-aureus-bacteraemia-surveillance/

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

NHS Board	Q4 Cases	Q4 Bed Days	Q4 Rate	Q1 Cases	Q1 Bed Days	Q1 Rate
AA	16	111,501	14.3	19	107,446	17.7
BR	2	29,415	6.8	3	28,855	10.4
DG	2	46,458	4.3	8	44,334	18.0
FF	10	91,708	10.9	11	87,695	12.5
FV	8	79,712	10.0	8	76,312	10.5
GR	20	133,259	15.0	16	131,518	12.2
GGC	69	429,650	16.1	75	413,057	18.2
HG	10	73,909	13.5	6	71,286	8.4
LN	30	147,326	20.4	29	140,747	20.6
LO	32	249,135	12.8	43	240,426	17.9
NWTC	1	11,659	8.6	1	10,915	9.2
OR	1	2,915	34.3	2	3,184	62.8
SH	1	2,673	37.4	0	2,514	0.0
ΤY	30	117,973	25.4	19	111,519	17.0
WI	1	6,884	14.5	1	6,346	15.8
Scotland	233	1,534,177	15.2	241	1,476,154	16.3

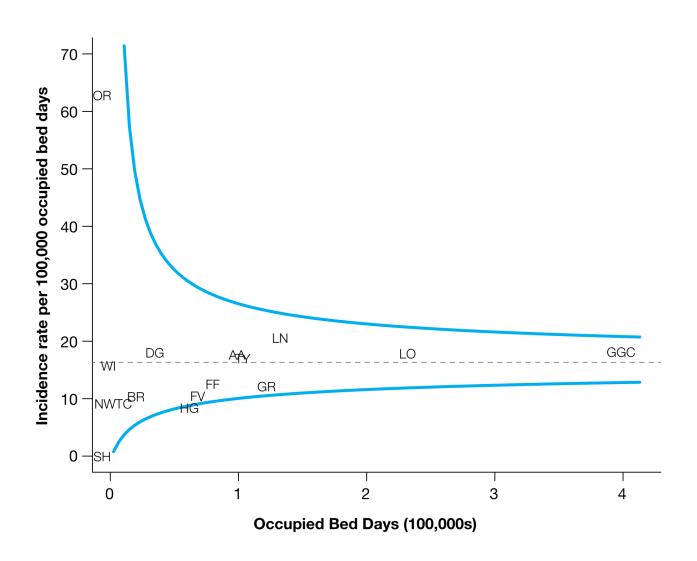
Q4 (October to December 2019) compared to Q1 (January to March 2020)

• 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

Q1 (January to March 2020)



- 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

NHS Board	Q4 Cases	Q4 Population	Q4 Rate	Q1 Cases	Q1 Population	Q1 Rate
AA	9	369,360	9.7	15	369,360	16.3
BR	2	115,510	6.9	3	115,510	10.4
DG	2	148,860	5.3	8	148,860	21.6
FF	8	373,550	8.5	6	373,550	6.5
FV	14	306,640	18.1	6	306,640	7.9
GR	13	585,700	8.8	16	585,700	11.0
GGC	22	1,183,120	7.4	23	1,183,120	7.8
HG	10	321,700	12.3	8	321,700	10.0
LN	16	661,900	9.6	19	661,900	11.5
LO	21	907,580	9.2	27	907,580	12.0
OR	0	22,270	0.0	3	22,270	54.2
SH	1	22,920	17.3	2	22,920	35.1
TY	14	417,470	13.3	13	417,470	12.5
WI	0	26,720	0.0	0	26,720	0.0
Scotland	132	5,463,300	9.6	149	5,463,300	11.0

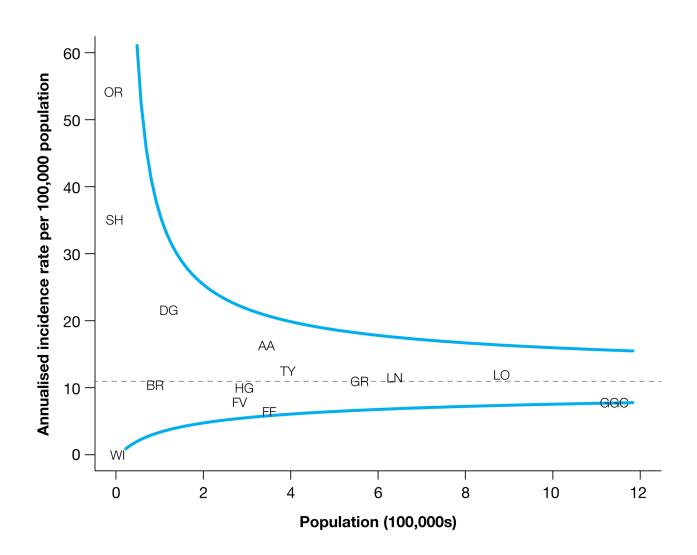
Q4 (October to December 2019) compared to Q1 (January to March 2020)

Quarterly population rates are based on an annualised populationAn arrow denotes statistically significant change

- Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & NRS midyear 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

Q1 (January to March 2020)



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

Healthcare Associated SABs January to March 2020					
Source	Number				
Skin & soft tissue (skin break, ulcer, eczema)	8				
Devices (PICC/Midline, CVC tunnelled, urinary catheter)	3				
Not known	3				
Injection site related to illicit drug use	1				
Respiratory Infection	1				
Total Healthcare Associated SABs	16				

Community Associated SABs January to March 2020				
Source	Number			
Not known	10			
Skin & soft tissue (skin break)	4			
Injection site related to illicit drug use				
Total Community Associated SABs	16			

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 January – March 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 1* (April – June 2020) within NHS Grampian was 82%.

*Please note that Quarter 1 for MRSA CRA screening is April – June 2020

	2019-20 Q1	2019-20 Q2	2019-20 Q3	2019-20 Q4	2020-21 Q1
Grampian	89 %	86%	81%	85 %	82%
Scotland	89%	88%	88%	87%	84%

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-screeningnational-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 1* (April – June 2020) within NHS Grampian was 78%.

*Please note that Quarter 1 for CPE CRA screening is April – June 2020

	2019-20 Q1	2019-20 Q2	2019-20 Q3	2019-20 Q4	2020-21 Q1
Grampian	98 %	96%	88%	93%	78%
Scotland	86%	86%	85%	85%	80%

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).

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

In NHS Grampian, between April and June 2020, there were a total of 34 IMT meetings and 1 PAG meetings. These meetings establish and monitor risk control measures for patient and staff safety.

* 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.

	IMT mee April - Jun	•	
Date	Area	Reason	HIIAT assessment*
03.04.20	Wards 15 & 16,		N/A^
06.04.20	Woodend Hospital	COVID-19	N/A^
14.04.20			N/A^
17.04.20	Roxburghe House, Aberdeen	COVID-19	N/A^
22.04.20			N/A^
15.04.20			N/A^
20.04.20	Anchor Outpatient Department, Royal Aberdeen's Children's Hospital	COVID-19	N/A^
22.04.20			N/A^
18.04.20			N/A^
21.04.20			N/A^
28.04.20	Woodend Hospital		N/A^
01.05.20	(Links Unit; Stroke Rehab Unit – East; Ortho Rehab Unit; Neuro Rehab Unit;	COVID-19	N/A^
05.05.20	Morningfield House; Ward 16; Ward 17)		N/A^
12.05.20			N/A^
19.05.20			N/A^
27.04.20	Ward 205,		N/A^
30.04.20	Aberdeen Royal Infirmary	COVID-19	N/A^
29.04.20			N/A^
01.05.20			N/A^
07.05.20	Ward 110, Aberdeen Royal Infirmary	COVID-19	N/A^
14.05.20			N/A^
29.05.20			N/A^

	IMT mee April - Jur	•				
Date	Area	Reason	HIIAT assessment [*]			
20.04.20	Ward 5,	COVID-19	N/A^			
29.04.20	Dr Gray's Hospital, Elgin	0010-19	N/A^			
05.05.20			N/A^			
13.05.20	Seafield Hospital, Buckie	COVID-19	N/A^			
00.05.00	Ward 215,		N/A^			
06.05.20	Aberdeen Royal Infirmary	COVID-19	N/A^			
09.05.20	Ward 105,	COVID-19	N/A^			
08.05.20	Aberdeen Royal Infirmary	0010-19	N/A^			
18.05.20	Foresterhill Community Nursing Team,	COVID-19	N/A^			
25.05.20	Foresterhill Health Centre, Aberdeen	0000-19	N/A^			
18.05.20	Dermatology,	COVID-19	N/A^			
16.05.20	Burnside House, Aberdeen	0000-19	N/A^			
18.05.20	Community Adult Assessment & Rehab Service (CAARS), City Hospital, Aberdeen	COVID-19	N/A^			
29.05.20	Eye Outpatient Department, Aberdeen Royal Infirmary	COVID-19	N/A^			
22.06.20	Eye Outpatient Department,	Endopthalmitia	Red			
30.06.20	Aberdeen Royal Infirmary	Endopthalmitis	Red			

*HIIAT assessment (dynamic assessment accurate at the time of reporting)All Minor = Green3 Minor and 1 Moderate = GreenNo Major and 2-4 Moderate = AmberAny Major = Red

^A Between April and June 2020, Health Protection Scotland introduced a new Healthcare Incident Reporting Template (HIRT) for reporting COVID-19 clusters / outbreaks within in-patient areas

	PAG me April - Ju	•	
Date	Area	Reason	HIIAT assessment*
25.06.20	Intensive Care Unit, Aberdeen Royal Infirmary	SAB Upper Control Limit Reached	Green

*HIIAT assessment (dynamic assessment accurate at the time of reporting) All Minor = Green 3 Minor and 1 Moderate = Green

No Major and 2-4 Moderate =_Amber

Any Major = **Red**

Cleaning and the Healthcare Environment

Between April and June 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=&sho w=10

	April 2020 Domestic	April 2020 Estates	May 2020 Domestic	May 2020 Estates	June 2020 Domestic	June 2020 Estates	Quarter 1 Domestic	Quarter 1 Estates
NHS Grampian Overall	94.90	96.50	94.50	95.15	92.65	93.90	94	95.18
Aberdeen Maternity Hospital, RACH & Outlying Areas	0.00*	0.00*	93.30	93.45	91.40	92.30	92.35	92.87
Aberdeen Royal Infirmary	0.00*	0.00*	92.55	94.15	93.05	94.75	92.8	94.45
Aberdeenshire North & Moray Community	0.00*	0.00*	97.00	98.30	95.00	91.45	96	94.87
Aberdeenshire South & Aberdeen City	0.00*	0.00*	97.40	98.10	88.90	90.90	93.15	94.50
Dr Gray's Hospital	93.55	93.75	93.60	96.20	95.00	94.65	94.05	94.86
Royal Cornhill Hospital	0.00*	0.00*	0.00*	0.00*	89.20	95.10	89.2	95.10
Woodend Hospital	95.50	96.95	94.75	96.00	94.35	97.45	94.8	96.80

* Score of zero is due to auditing being paused to support the COVID-19 response

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 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 <u>each hospital</u> the total number of cases for each month are those which have been reported as positive from a laboratory report on samples taken <u>more than</u> 48 hours after admission. For the purposes of these reports, positive samples taken from patients <u>within</u> 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=&sho w=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

	Jul 2019	Aug 2019	Sep 2019	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020
MRSA	0	0	0	0	0	0	0	1	0	0	2	1
MSSA	10	7	9	12	10	11	11	14	6	6	10	12
Total SABS	10	7	9	12	10	11	11	15	6	6	12	13

Staphylococcus aureus bacteraemia - monthly case numbers

Clostridioides (formerly Clostridium) difficile infections - monthly case numbers

	Jul 2019	Aug 2019	Sep 2019	Oct 2019	Nov 2019	Dec 2019		Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020
Total CDIs (Ages 15+)	5	4	7	11	5	9	10	8	9	9	9	5

Cleaning Compliance (%)

		Aug 2019										
Board Total	92	93	93	94	93	93	93	93	93	95	95	93

Estates Monitoring Compliance (%)

							Jan 2020				· · · · · · · · · · · · · · · · · · ·	
Board Total	94	94	94	95	94	95	95	95	94	97	95	94

Hand Hygiene Monitoring Compliance (%)

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
	2019	2019	2019	2019	2019	2019	2020	2020	2020	2020	2020	2020
AHP	99	99	99	98	98	99	98	99	99	98	99	100
Ancillary	92	96	97	95	97	95	92	93	97	100	97	97
Medical	96	96	96	95	97	96	95	95	97	97	98	95
Nurse	98	98	98	98	98	99	98	99	99	99	99	99

NHS HOSPITAL A REPORT CARD – Aberdeen Royal Infirmary

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

Staphylococcus aureus bacteraemia - monthly case numbers

Clostridioides (formerly Clostridium) difficile infections - monthly case numbers

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

Cleaning Compliance (%)

_		Aug 2019										
ARI Total	91	91	90	92	91	93	92	92	92	N/A *	93	93

Estates Monitoring Compliance (%)

						Dec 2019						
ARI Total	94	95	94	95	94	95	95	95	94	N/A *	94	95

* Auditing paused to support the COVID-19 response

NHS HOSPITAL B REPORT CARD – Dr Gray's Hospital

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

Staphylococcus aureus bacteraemia - monthly case numbers

Clostridioides (formerly Clostridium) difficile infections - monthly case numbers

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

Cleaning Compliance (%)

											May 2020	
DGH Total	93	94	95	94	94	94	94	93	94	94	94	95

Estates Monitoring Compliance (%)

											May 2020	
DGH Total	93	94	92	94	95	95	95	95	95	94	96	95

NHS HOSPITAL C REPORT CARD – Woodend Hospital

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

Staphylococcus aureus bacteraemia - monthly case numbers

Clostridioides (formerly Clostridium) difficile infections - monthly case numbers

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

Cleaning Compliance (%)

						Dec 2019						Jun 2020
WGH Total	95	94	94	94	94	92	93	94	94	96	95	94

Estates Monitoring Compliance (%)

											May 2020	
WGH Total	96	95	97	96	96	95	95	96	96	97	96	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

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

Clostridioides (formerly Clostridium) difficile infections - monthly case numbers

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

NHS OUT OF HOSPITAL REPORT CARD

Staphylococcus aureus bacteraemia - monthly case numbers

		Jul 2019	Aug 2019	Sep 2019	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020
I	MRSA	0	0	0	0	0	0	0	1	0	0	1	1
	MSSA	5	2	5	8	7	6	8	12	6	6	6	5
	Total SABS	5	2	5	8	7	6	8	13	6	6	7	6

Clostridioides (formerly Clostridium) difficile infections - monthly case numbers

	Jul 2019	Aug 2019	Sep 2019		Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020
Total CDIs (Ages 15+)	3	4	4	6	3	4	7	6	5	5	7	5

References

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