ARHAI Scotland

Antimicrobial Resistance and Healthcare Associated Infection

NHS National Services Scotland

Clostridioides difficile infection, *Escherichia coli* bacteraemia, *Staphylococcus aureus* bacteraemia and Surgical Site Infection in Scotland

April to June 2022

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Contents

Introduction

Antimicrobial Resistance and Healthcare Associated Infection (ARHAI) Scotland provides a commentary on quarterly epidemiological data in Scotland for April to June (Q2) 2022 on the following:

- *Clostridioides difficile* infection
- *Escherichia coli* bacteraemia
- *Staphylococcus aureus* bacteraemia
- Surgical Site Infection

Data are provided for the 14 NHS boards and one NHS Special Health Board.

Main Points

Clostridioides difficile infection (CDI) during April to June 2022

- The total number of CDI cases in patients reported to ARHAI was 283.
- 217 CDI cases were reported to ARHAI as healthcare associated. This corresponds to an incidence rate of 14.3 cases per 100,000 total occupied bed days (TOBDs).
- 66 CDI cases were reported as community associated. This corresponds to an incidence rate of 4.8 cases per 100,000 population.
- NHS Ayrshire & Arran was above the 95% confidence interval upper limit for healthcare associated CDI in the funnel plot analysis.
- No NHS boards were above the 95% confidence interval upper limit for community associated CDI in the funnel plot analysis.
- No NHS boards were above normal variation for healthcare or community associated CDI when analysing trends over the past three years.

Escherichia coli bacteraemia (ECB) during April to June 2022

- The total number of ECB cases in patients reported to ARHAI was 1,057.
- 528 ECB cases were reported to ARHAI as healthcare associated. This corresponds to an incidence rate of 34.8 cases per 100,000 TOBDs.
- 529 ECB cases were reported as community associated. This corresponds to an incidence rate of 38.7 cases per 100,000 population.
- NHS Forth Valley was above the 95% confidence interval upper limit for healthcare associated ECB in the funnel plot analysis.
- NHS Ayrshire & Arran was above the 95% confidence interval upper limit for community associated ECB in the funnel plot analysis.

- No NHS boards were above normal variation for healthcare or community associated ECB when analysing trends over the past three years.

Staphylococcus aureus bacteraemia (SAB) during April to June 2022

- The total number of SAB cases in patients reported to ARHAI was 401.
- 262 SAB cases were reported to ARHAI as healthcare associated. This corresponds to an incidence rate of 17.3 cases per 100,000 TOBDs.
- 139 SAB cases were reported as community associated. This corresponds to an incidence rate of 10.2 cases per 100,000 population.
- No NHS boards were above the 95% confidence interval upper limit for healthcare or community associated SAB in the funnel plot analysis.
- No NHS boards were above normal variation for community associated SAB when analysing trends over the past three years.

Surgical Site Infection (SSI) April to June 2022

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

Results and Commentary

Clostridioides difficile Infection (CDI)

Total Cases for Quarter

- During Q2 2022, 283 *Clostridioides difficile* infection (CDI) cases in patients were reported to ARHAI. In the previous quarter there were 230 cases.
- All isolates tested were susceptible to metronidazole and vancomycin.

Healthcare associated infection cases by health board where specimen taken

- During Q2 2022, 217 CDI cases were reported to ARHAI as healthcare associated. This corresponds to an incidence rate of 14.3 cases per 100,000 total occupied bed days (TOBDs) (**Table 1**).
- Yearly trends (comparing year-ending June 2021 with year-ending June 2022) show that there was a decrease in NHS Greater Glasgow & Clyde and in Scotland overall (**Table 2**).
- NHS Ayrshire & Arran was above the 95% confidence interval upper limit in the funnel plot analysis (**Figure 1**).
- No NHS boards were above normal variation when analysing trends over the past three years (see **supplementary data**).

Community associated infection cases by health board of residence

- During Q2 2022, 66 CDI cases were reported as community associated. This corresponds to an incidence rate of 4.8 cases per 100,000 population, and is an increase compared to the Q1 2022 incidence rate of 3.2 cases per 100,000 population (**Table 3**).

- Yearly trends (comparing year-ending June 2021 with year-ending June 2022) show that there was an increase in NHS Lothian (**Table 4**).
- No NHS boards were above the 95% confidence interval upper limit in the funnel plot analysis (**Figure 2**).
- No NHS boards were above normal variation when analysing trends over the past three years (see **supplementary data**).

Table 1: CDI cases and incidence rates (per 100,000 TOBDs) for healthcare associated infection cases: Q1 2022 (January to March 2022) compared to Q2 2022 (April to June 2022).[1,2]

NHS Board	Q1 Cases	Q1 Bed Days	Q1 Rate	Q2 Cases	Q2 Bed Days	Q2 Rate
AA	18	112,586	16.0	27	114,387	23.6
BR	1	31,718	3.2	5	32,456	15.4
DG	3	42,386	7.1	12	44,824	26.8
FF	6	85,484	7.0	8	87,168	9.2
FV	9	73,342	12.3	11	76,087	14.5
GJ	0	12,101	0.0	0	12,412	0.0
GR	8	126,203	6.3	20	130,553	15.3
GGC	49	413,693	11.8	59	430,046	13.7
HG	19	70,326	27.0	7	72,775	9.6
LN	22	143,728	15.3	22	142,744	15.4
LO	36	240,326	15.0	28	243,749	11.5
OR	0	3,422	0.0	2	3,242	61.7
SH	2	2,285	87.5	1	2,403	41.6
TY	12	117,130	10.2	14	117,903	11.9
WI	2	6,232	32.1	1	6,287	15.9
Scotland	**187**	**1,480,962**	**12.6**	**217**	**1,517,036**	**14.3**

1. Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & Total occupied bed days: Information Services Division ISD(S)1.
2. Figures include any updates received following the last publication (see Appendix 2).

Table 2: CDI cases and incidence rates (per 100,000 TOBDs) for healthcare associated infection cases: year-ending June 2021 (YE Q2 21) compared to year-ending June 2022 (YE Q2 22).[1,2,3]

NHS Board	YE Q2 21 Cases	YE Q2 21 Bed Days	YE Q2 21 Rate	YE Q2 22 Cases	YE Q2 22 Bed Days	YE Q2 22 Rate
AA	96	402,050	23.9	100	447,441	22.3
BR	7	110,210	6.4	11	124,284	8.9
DG	32	151,606	21.1	28	174,268	16.1
FF	32	311,187	10.3	26	343,451	7.6
FV	35	273,379	12.8	35	295,049	11.9
GJ	5	45,771	10.9	0	49,191	0.0
GR	59	442,550	13.3	54	503,882	10.7
GGC	267	1,548,472	17.2	241	1,673,187	↓ 14.4
HG	54	254,300	21.2	53	284,708	18.6
LN	106	512,184	20.7	104	571,171	18.2
LO	128	903,010	14.2	135	971,109	13.9
OR	0	11,868	0.0	2	12,649	15.8
SH	5	8,296	60.3	4	9,488	42.2
TY	36	412,554	8.7	49	463,706	10.6
WI	3	21,119	14.2	4	24,560	16.3
Scotland	**865**	**5,408,556**	**16.0**	**846**	**5,948,144**	**↓ 14.2**

1. An arrow denotes statistically significant change.
2. Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & Total occupied bed days: Information Services Division ISD(S)1.
3. Figures include any updates received following the last publication (see Appendix 2).

Table 3: CDI cases and incidence rates (per 100,000 population) for community associated infection cases: Q1 2022 (January to March 2022) compared to Q2 2022 (April to June 2022).[1,2,3,4]

NHS Board	Q1 Cases	Q1 Population	Q1 Rate	Q2 Cases	Q2 Population	Q2 Rate
AA	2	368,690	2.2	8	368,690	8.7
BR	0	116,020	0.0	2	116,020	6.9
DG	1	148,790	2.7	1	148,790	2.7
FF	2	374,730	2.2	4	374,730	4.3
FV	0	305,710	0.0	0	305,710	0.0
GR	7	586,530	4.8	5	586,530	3.4
GGC	7	1,185,040	2.4	11	1,185,040	3.7
HG	4	324,280	5.0	6	324,280	7.4
LN	7	664,030	4.3	8	664,030	4.8
LO	7	916,310	3.1	19	916,310	8.3
OR	1	22,540	18.0	0	22,540	0.0
SH	0	22,940	0.0	0	22,940	0.0
TY	2	417,650	1.9	2	417,650	1.9
WI	3	26,640	45.7	0	26,640	0.0
Scotland	**43**	**5,479,900**	**3.2**	**66**	**5,479,900**	**↑ 4.8**

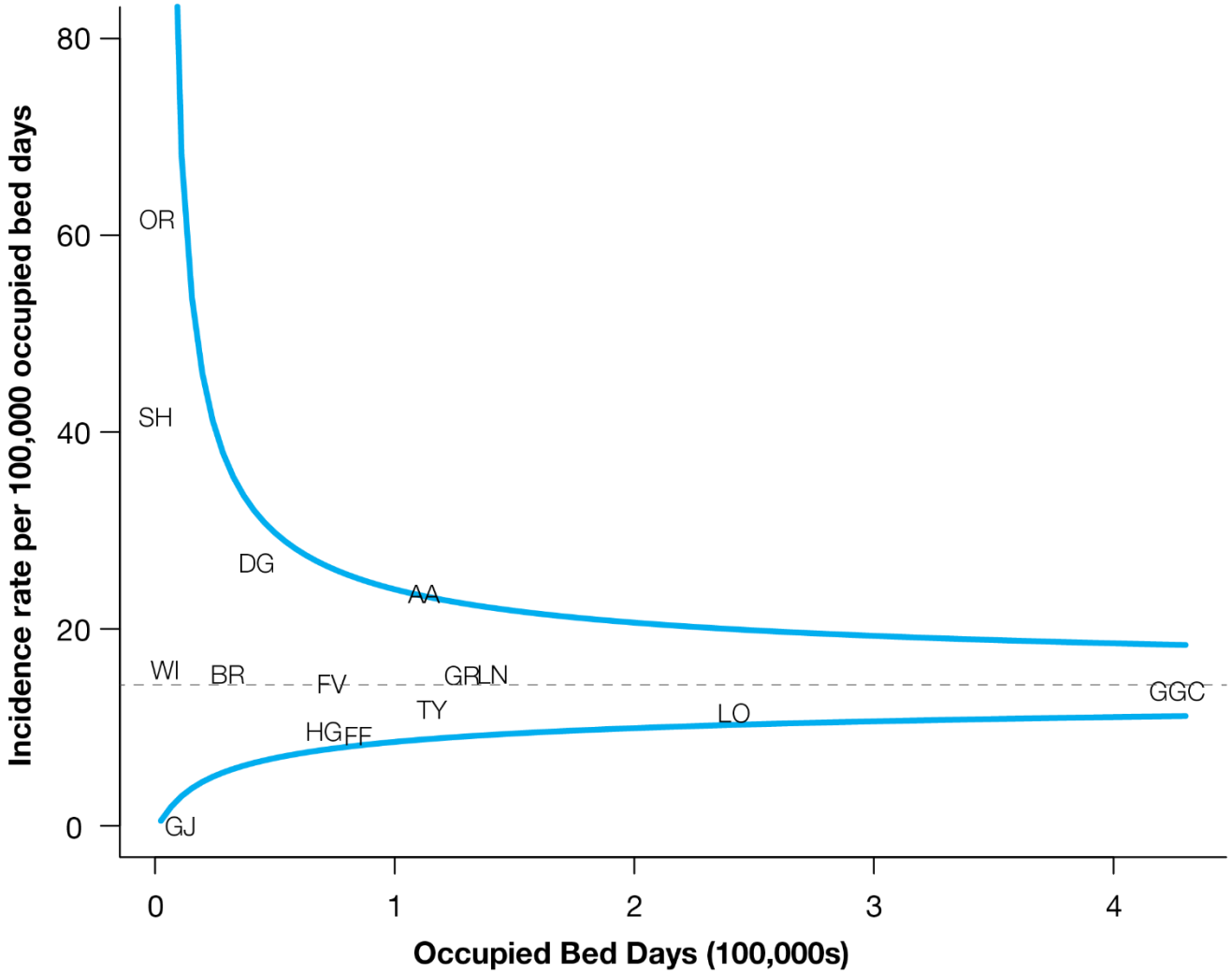
1. An arrow denotes statistically significant change.
2. Quarterly population rates are based on an annualised population.
3. Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & National Records of Scotland (NRS) mid-year population estimates.
4. Figures include any updates received following the last publication (see Appendix 2).

Table 4: CDI cases and incidence rates (per 100,000 population) for community associated infection cases: year-ending June 2021 (YE Q2 21) compared to year-ending June 2022 (YE Q2 22).[1,2,3]

NHS Board	YE Q2 21 Cases	YE Q2 21 Population	YE Q2 21 Rate	YE Q2 22 Cases	YE Q2 22 Population	YE Q2 22 Rate
AA	28	368,690	7.6	25	368,690	6.8
BR	5	116,020	4.3	4	116,020	3.4
DG	18	148,790	12.1	9	148,790	6.0
FF	17	374,730	4.5	11	374,730	2.9
FV	4	305,710	1.3	0	305,710	0.0
GR	30	586,530	5.1	25	586,530	4.3
GGC	44	1,185,040	3.7	48	1,185,040	4.1
HG	20	324,280	6.2	20	324,280	6.2
LN	29	664,030	4.4	33	664,030	5.0
LO	50	916,310	5.5	72	916,310	↑ 7.9
OR	4	22,540	17.7	2	22,540	8.9
SH	2	22,940	8.7	0	22,940	0.0
TY	17	417,650	4.1	10	417,650	2.4
WI	1	26,640	3.8	4	26,640	15.0
Scotland	**269**	**5,479,900**	**4.9**	**263**	**5,479,900**	**4.8**

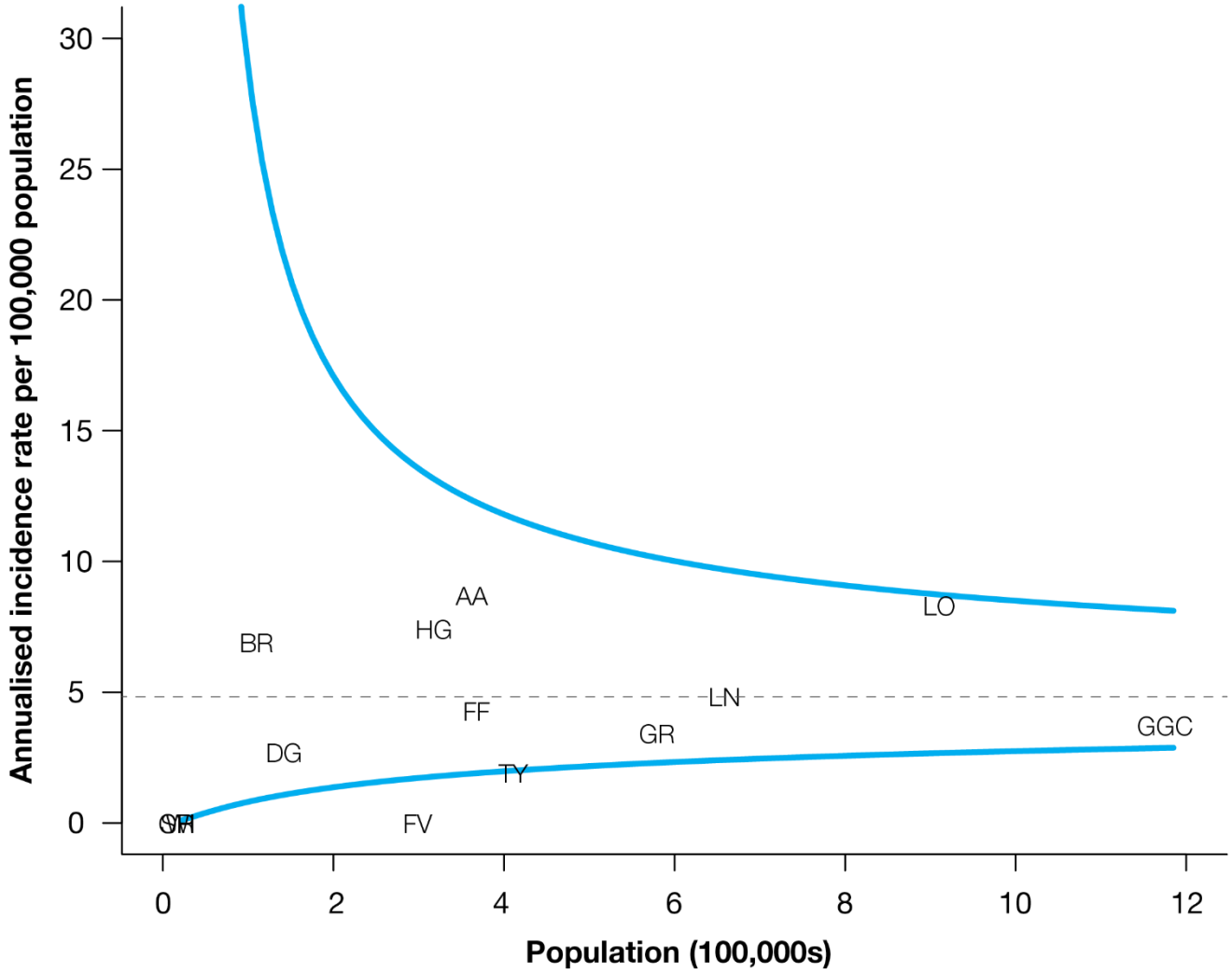
1. An arrow denotes statistically significant change.
2. Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & NRS mid-year population estimates.
3. Figures include any updates received following the last publication (see Appendix 2).

Figure 1: Funnel plot of CDI incidence rates (per 100,000 TOBD) in healthcare associated infection cases for all NHS boards in Scotland in Q2 2022.[1,2]



1. Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & Total occupied bed days: Information Services Division ISD(S)1.
2. NHS Grampian and NHS Lanarkshire overlap.

Figure 2: Funnel plot of CDI incidence rates (per 100,000 population) in community associated infection cases for all NHS boards in Scotland in Q2 2022.[1,2]



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

Escherichia coli bacteraemia (ECB)

Total Cases for Quarter

- During Q2 2022, 1,057 *Escherichia coli* bacteraemia (ECB) cases in patients were reported to ARHAI. In the previous quarter there were 980 cases.

Healthcare associated infection cases by health board where specimen taken

- During Q2 2022, 528 ECB cases were reported to ARHAI as healthcare associated. This corresponds to an incidence rate of 34.8 cases per 100,000 TOBDs, and is an increase compared to the Q1 2022 incidence rate of 30.5 cases per 100,000 population (**Table 5**).
- Yearly trends (comparing year-ending June 2021 with year-ending June 2022) show that there was a decrease in NHS Borders, NHS Greater Glasgow & Clyde, NHS Lothian and in Scotland overall (**Table 6**).
- NHS Forth Valley was above the 95% confidence interval upper limit in the funnel plot analysis **(Figure 3**).
- No NHS boards were above normal variation when analysing trends over the past three years (see **supplementary data**).

Community associated infection cases by health board of residence

- During Q2 2022, 529 ECB cases were reported as community associated. This corresponds to an incidence rate of 38.7 cases per 100,000 population (**Table 7**).
- Yearly trends (comparing year-ending June 2021 with year-ending June 2022) show that there was a decrease in NHS Forth Valley, and an increase in NHS Borders (**Table 8**).
- NHS Ayrshire & Arran was above the 95% confidence interval upper limit in the funnel plot analysis (**Figure 4**).

- No NHS boards were above normal variation when analysing trends over the past three years (see **supplementary data**).

Table 5: ECB cases and incidence rates (per 100,000 TOBD) for healthcare associated infection cases: Q1 2022 (January to March 2022) compared to Q2 2022 (April to June 2022).[1,2,3]

NHS Board	Q1 Cases	Q1 Bed Days	Q1 Rate	Q2 Cases	Q2 Bed Days	Q2 Rate
AA	48	112,586	42.6	44	114,387	38.5
BR	6	31,718	18.9	7	32,456	21.6
DG	14	42,386	33.0	18	44,824	40.2
FF	27	85,484	31.6	35	87,168	40.2
FV	38	73,342	51.8	44	76,087	57.8
GJ	0	12,101	0.0	2	12,412	16.1
GR	41	126,203	32.5	49	130,553	37.5
GGC	109	413,693	26.3	136	430,046	31.6
HG	14	70,326	19.9	14	72,775	19.2
LN	41	143,728	28.5	63	142,744	44.1
LO	61	240,326	25.4	58	243,749	23.8
OR	1	3,422	29.2	2	3,242	61.7
SH	1	2,285	43.8	4	2,403	166.5
TY	50	117,130	42.7	49	117,903	41.6
WI	1	6,232	16.0	3	6,287	47.7
Scotland	**452**	**1,480,962**	**30.5**	**528**	**1,517,036**	**↑ 34.8**

1. An arrow denotes statistically significant change.
2. Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & Total occupied bed days: Information Services Division ISD(S)1.
3. Figures include any updates received following the last publication (see Appendix 2).

Table 6: ECB cases and incidence rates (per 100,000 TOBDs) for healthcare associated infection cases: year-ending June 2021 (YE Q2 21) compared to year-ending June 2022 (YE Q2 22).[1,2,3]

NHS Board	YE Q2 21 Cases	YE Q2 21 Bed days	YE Q2 21 Rate	YE Q2 22 Cases	YE Q2 22 Bed days	YE Q2 22 Rate
AA	207	402,050	51.5	201	447,441	44.9
BR	53	110,210	48.1	39	124,284	↓ 31.4
DG	51	151,606	33.6	65	174,268	37.3
FF	120	311,187	38.6	142	343,451	41.3
FV	142	273,379	51.9	166	295,049	56.3
GJ	3	45,771	6.6	4	49,191	8.1
GR	180	442,550	40.7	178	503,882	35.3
GGC	573	1,548,472	37.0	521	1,673,187	↓ 31.1
HG	76	254,300	29.9	68	284,708	23.9
LN	210	512,184	41.0	220	571,171	38.5
LO	290	903,010	32.1	259	971,109	↓ 26.7
OR	6	11,868	50.6	5	12,649	39.5
SH	9	8,296	108.5	10	9,488	105.4
TY	173	412,554	41.9	204	463,706	44.0
WI	9	21,119	42.6	11	24,560	44.8
Scotland	**2,102**	**5,408,556**	**38.9**	**2,093**	**5,948,144**	**↓ 35.2**

1. An arrow denotes statistically significant change.
2. Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & Total occupied bed days: Information Services Division ISD(S)1.
3. Figures include any updates received following the last publication (see Appendix 2).

Table 7: ECB cases and incidence rates (per 100,000 population) for community associated infection cases: Q1 2022 (January to March 2022) compared to Q2 2022 (April to June 2022).[1,2,3]

NHS Board	Q1 Cases	Q1 Population	Q1 Rate	Q2 Cases	Q2 Population	Q2 Rate
AA	49	368,690	53.9	54	368,690	58.7
BR	15	116,020	52.4	11	116,020	38.0
DG	12	148,790	32.7	22	148,790	59.3
FF	47	374,730	50.9	41	374,730	43.9
FV	27	305,710	35.8	28	305,710	36.7
GR	34	586,530	23.5	45	586,530	30.8
GGC	105	1,185,040	35.9	109	1,185,040	36.9
HG	28	324,280	35.0	25	324,280	30.9
LN	83	664,030	50.7	72	664,030	43.5
LO	83	916,310	36.7	75	916,310	32.8
OR	1	22,540	18.0	2	22,540	35.6
SH	1	22,940	17.7	2	22,940	35.0
TY	41	417,650	39.8	41	417,650	39.4
WI	2	26,640	30.4	2	26,640	30.1
Scotland	**528**	**5,479,900**	**39.1**	**529**	**5,479,900**	**38.7**

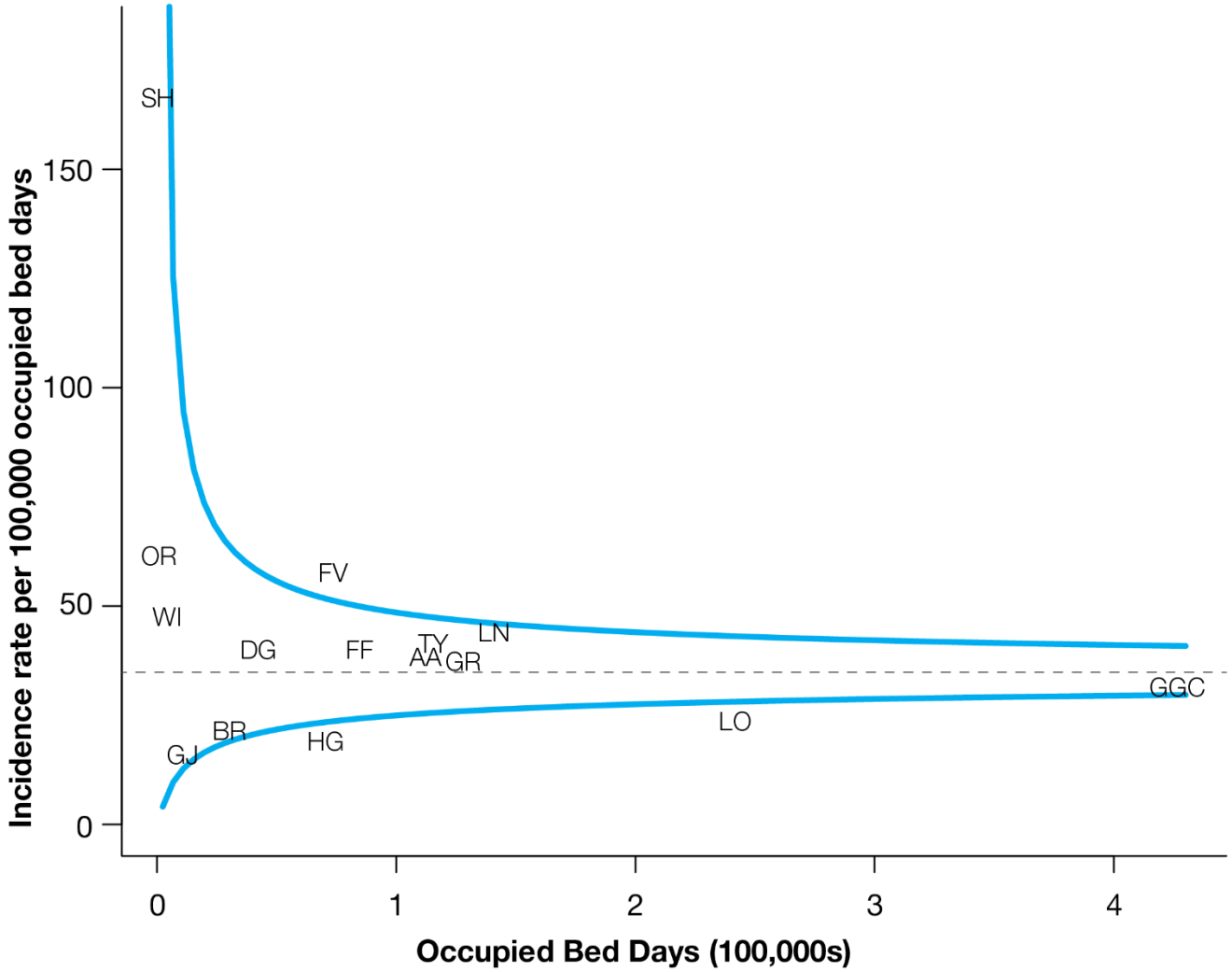
1. Quarterly population rates are based on an annualised population.
2. Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & NRS mid-year population estimates.
3. Figures include any updates received following the last publication (see Appendix 2).

Table 8: ECB cases and incidence rates (per 100,000 population) for community associated infection cases: year-ending June 2021 (YE Q2 21) compared to year-ending June 2022 (YE Q2 22).[1,2,3]

NHS Board	YE Q2 21 Cases	YE Q2 21 Population	YE Q2 21 Rate	YE Q2 22 Cases	YE Q2 22 Population	YE Q2 22 Rate
AA	213	368,690	57.8	221	368,690	59.9
BR	36	116,020	31.0	56	116,020	↑ 48.3
DG	92	148,790	61.8	84	148,790	56.5
FF	132	374,730	35.2	165	374,730	44.0
FV	164	305,710	53.6	100	305,710	↓ 32.7
GR	183	586,530	31.2	165	586,530	28.1
GGC	404	1,185,040	34.1	451	1,185,040	38.1
HG	115	324,280	35.5	106	324,280	32.7
LN	328	664,030	49.4	314	664,030	47.3
LO	328	916,310	35.8	320	916,310	34.9
OR	10	22,540	44.4	6	22,540	26.6
SH	6	22,940	26.2	8	22,940	34.9
TY	168	417,650	40.2	165	417,650	39.5
WI	19	26,640	71.3	11	26,640	41.3
Scotland	**2,198**	**5,479,900**	**40.1**	**2,172**	**5,479,900**	**39.6**

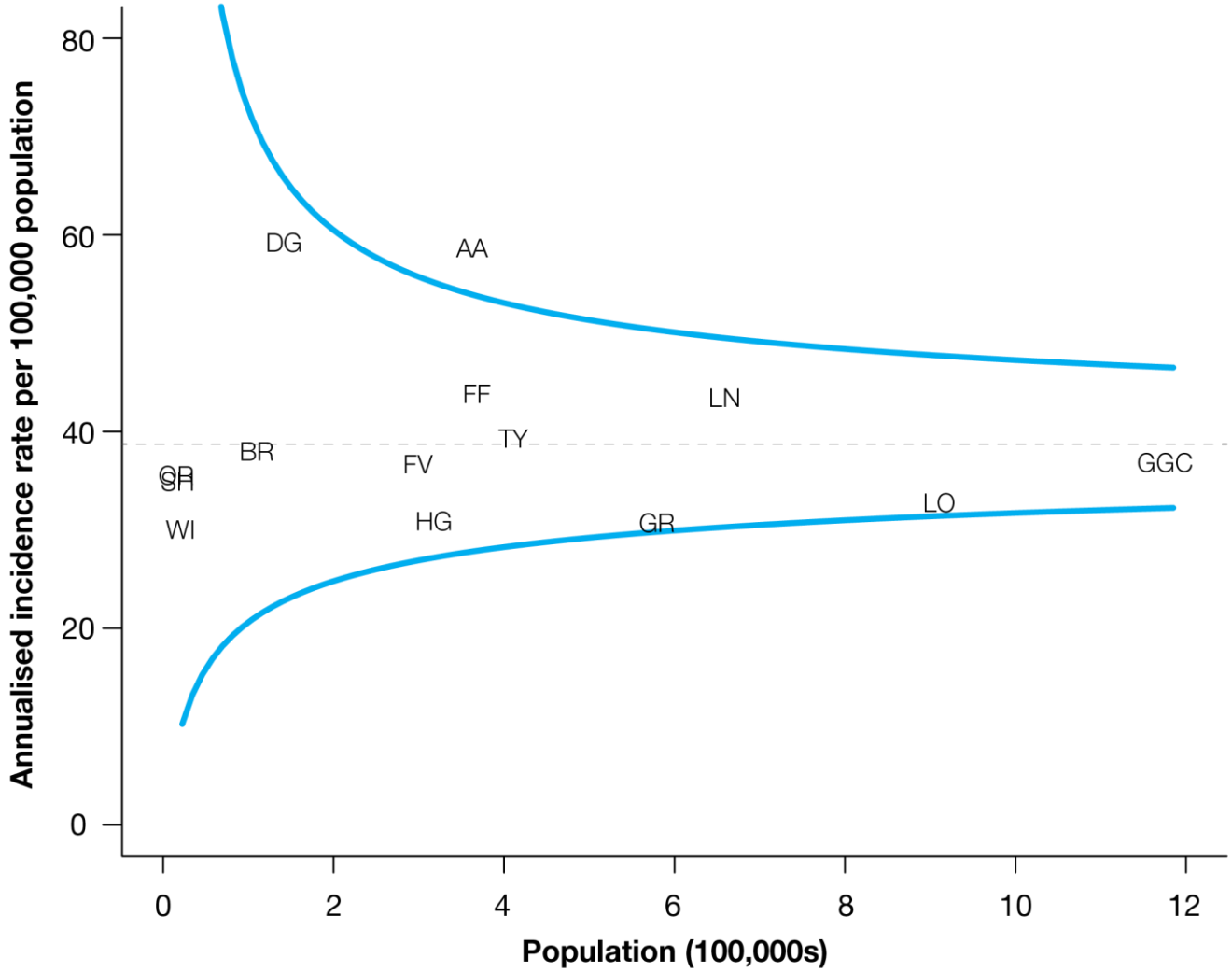
1. An arrow denotes statistically significant change.
2. Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & NRS mid-year population estimates.
3. Figures include any updates received following the last publication (see Appendix 2).

Figure 3: Funnel plot of ECB incidence rates (per 100,000 TOBD) in healthcare associated infection cases for all NHS boards in Scotland in Q2 2022.[1]



1. Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & Total occupied bed days: Information Services Division ISD(S)1.

Figure 4: Funnel plot of ECB incidence rates (per 100,000 population) in community associated infection cases for all NHS boards in Scotland in Q2 2022.[1,2]



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

Staphylococcus aureus bacteraemia (SAB)

Total cases for quarter

- During Q2 2022, 401 *Staphylococcus aureus* bacteraemia (SAB) cases were reported to ARHAI. In the previous quarter there were 371 SAB cases.

Healthcare associated infection cases by health board where specimen taken

- During Q2 2022, 262 SAB cases were reported to ARHAI as healthcare associated. This corresponds to an incidence rate of 17.3 cases per 100,000 TOBDs (**Table 9**).
- Yearly trends (comparing year-ending June 2021 with year-ending June 2022) show that there was a decrease in NHS Lanarkshire (**Table 10**).
- No NHS boards were above the 95% confidence interval upper limit in the funnel plot analysis (**Figure 5**).
- No NHS boards were above normal variation when analysing trends over the past three years (see **supplementary data)**.

Community associated infection cases by health board of residence

- During Q2 2022, 139 SAB cases were reported as community associated. This corresponds to an incidence rate of 10.2 cases per 100,000 population (**Table 11**).
- Yearly trends (comparing year-ending June 2021 with year-ending June 2022) show that that there was no increase or decrease in NHS boards or Scotland overall (**Table 12**).
- No NHS boards were above the 95% confidence interval upper limit in the funnel plot analysis (**Figure 6**).
- No NHS boards were above normal variation when analysing trends over the past three years (see **supplementary data**).

Table 9: SAB cases and incidence rates (per 100,000 TOBDs) for healthcare associated infection cases: Q1 2022 (January to March 2022) compared to Q2 2022 (April to June 2022).[1,2]

NHS Board	Q1 Cases	Q1 Bed Days	Q1 Rate	Q2 Cases	Q2 Bed Days	Q2 Rate
AA	19	112,586	16.9	20	114,387	17.5
BR	4	31,718	12.6	6	32,456	18.5
DG	10	42,386	23.6	7	44,824	15.6
FF	13	85,484	15.2	13	87,168	14.9
FV	10	73,342	13.6	16	76,087	21.0
GJ	1	12,101	8.3	5	12,412	40.3
GR	23	126,203	18.2	20	130,553	15.3
GGC	72	413,693	17.4	72	430,046	16.7
HG	18	70,326	25.6	9	72,775	12.4
LN	21	143,728	14.6	24	142,744	16.8
LO	25	240,326	10.4	40	243,749	16.4
OR	2	3,422	58.4	1	3,242	30.8
SH	1	2,285	43.8	1	2,403	41.6
TY	21	117,130	17.9	25	117,903	21.2
WI	1	6,232	16.0	3	6,287	47.7
Scotland	**241**	**1,480,962**	**16.3**	**262**	**1,517,036**	**17.3**

1. Note: Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & Total occupied bed days: Information Services Division ISD(S)1.
2. Figures include any updates received following the last publication (see Appendix 2).

Table 10: SAB cases and incidence rates (per 100,000 TOBDs) for healthcare associated infection cases: year-ending June 2021 (YE Q2 21) compared to year-ending June 2022 (YE Q2 22).[1,2,3]

NHS Board	YE Q2 21 Cases	YE Q2 21 Bed days	YE Q2 21 Rate	YE Q2 22 Cases	YE Q2 22 Bed days	YE Q2 22 Rate
AA	71	402,050	17.7	71	447,441	15.9
BR	20	110,210	18.1	21	124,284	16.9
DG	25	151,606	16.5	30	174,268	17.2
FF	49	311,187	15.7	51	343,451	14.8
FV	52	273,379	19.0	58	295,049	19.7
GJ	12	45,771	26.2	11	49,191	22.4
GR	91	442,550	20.6	92	503,882	18.3
GGC	294	1,548,472	19.0	305	1,673,187	18.2
HG	40	254,300	15.7	49	284,708	17.2
LN	108	512,184	21.1	90	571,171	↓ 15.8
LO	125	903,010	13.8	135	971,109	13.9
OR	1	11,868	8.4	3	12,649	23.7
SH	2	8,296	24.1	5	9,488	52.7
TY	92	412,554	22.3	99	463,706	21.3
WI	6	21,119	28.4	9	24,560	36.6
Scotland	**988**	**5,408,556**	**18.3**	**1,029**	**5,948,144**	**17.3**

1. An arrow denotes statistically significant change.
2. Note: Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & Total occupied bed days: Information Services Division ISD(S)1.
3. Figures include any updates received following the last publication (see Appendix 2).

Table 11: SAB cases and incidence rates (per 100,000 population) for community associated infection cases: Q1 2022 (January to March 2022) compared to Q2 2022 (April to June 2022).[1,2,3]

NHS Board	Q1 Cases	Q1 Population	Q1 Rate	Q2 Cases	Q2 Population	Q2 Rate
AA	15	368,690	16.5	6	368,690	6.5
BR	5	116,020	17.5	2	116,020	6.9
DG	8	148,790	21.8	6	148,790	16.2
FF	12	374,730	13.0	9	374,730	9.6
FV	9	305,710	11.9	11	305,710	14.4
GR	16	586,530	11.1	21	586,530	14.4
GGC	17	1,185,040	5.8	21	1,185,040	7.1
HG	3	324,280	3.8	10	324,280	12.4
LN	14	664,030	8.6	14	664,030	8.5
LO	19	916,310	8.4	29	916,310	12.7
OR	2	22,540	36.0	0	22,540	0.0
SH	0	22,940	0.0	1	22,940	17.5
TY	9	417,650	8.7	8	417,650	7.7
WI	1	26,640	15.2	1	26,640	15.1
Scotland	**130**	**5,479,900**	**9.6**	**139**	**5,479,900**	**10.2**

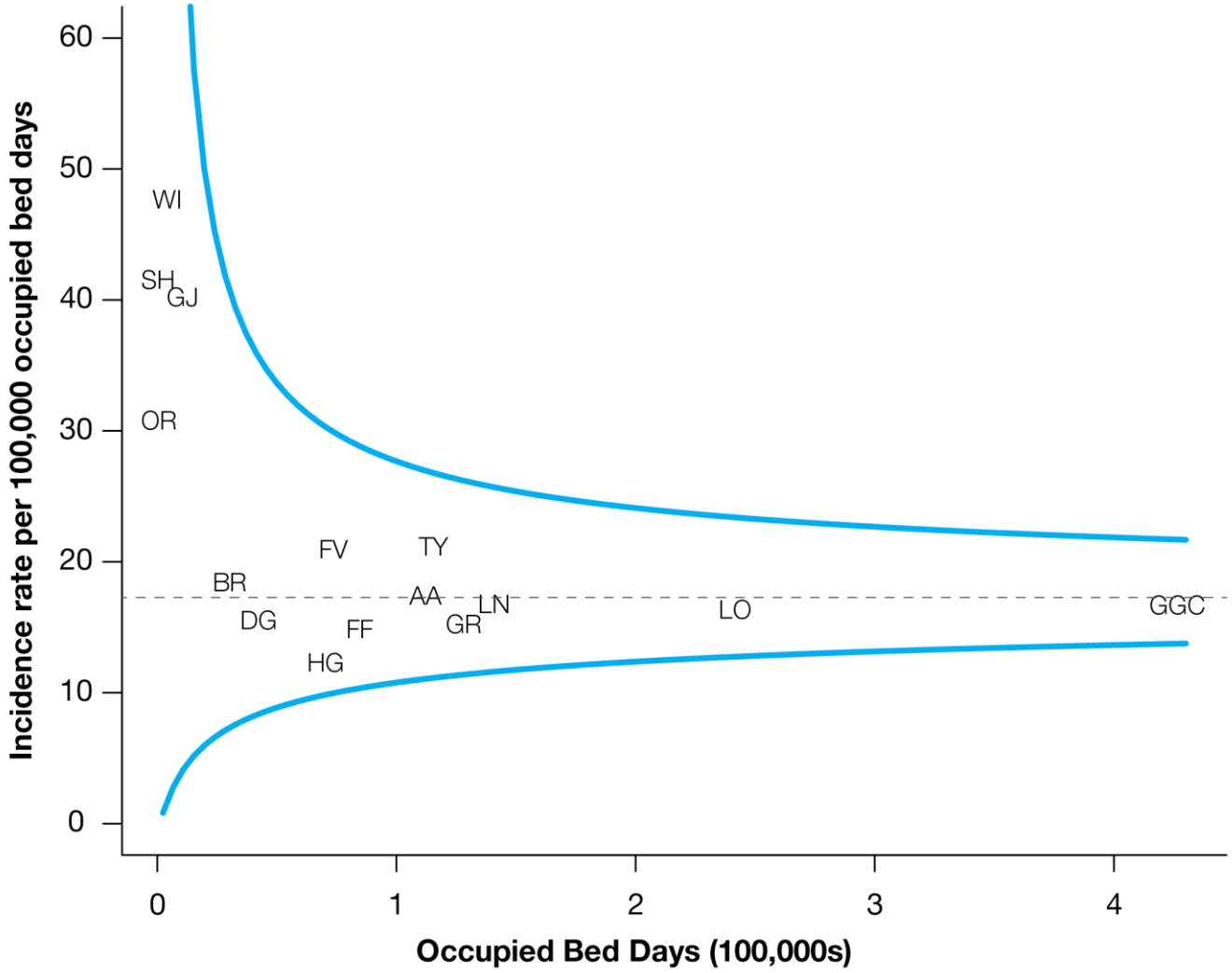
1. Quarterly population rates are based on an annualised population.
2. Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & NRS mid-year population estimates.
3. Figures include any updates received following the last publication (see Appendix 2).

Table 12: SAB cases and incidence rates (per 100,000 population) for community associated infection cases: year-ending June 2021 (YE Q2 21) compared to year-ending June 2022 (YE Q2 22).[1,2]

NHS Board	YE Q2 21 Cases	YE Q2 21 Population	YE Q2 21 Rate	YE Q2 22 Cases	YE Q2 22 Population	YE Q2 22 Rate
AA	44	368,690	11.9	50	368,690	13.6
BR	12	116,020	10.3	16	116,020	13.8
DG	18	148,790	12.1	27	148,790	18.1
FF	39	374,730	10.4	38	374,730	10.1
FV	34	305,710	11.1	36	305,710	11.8
GR	67	586,530	11.4	63	586,530	10.7
GGC	85	1,185,040	7.2	76	1,185,040	6.4
HG	35	324,280	10.8	33	324,280	10.2
LN	76	664,030	11.4	63	664,030	9.5
LO	101	916,310	11.0	88	916,310	9.6
OR	2	22,540	8.9	2	22,540	8.9
SH	1	22,940	4.4	3	22,940	13.1
TY	52	417,650	12.5	39	417,650	9.3
WI	2	26,640	7.5	3	26,640	11.3
Scotland	**568**	**5,479,900**	**10.4**	**537**	**5,479,900**	**9.8**

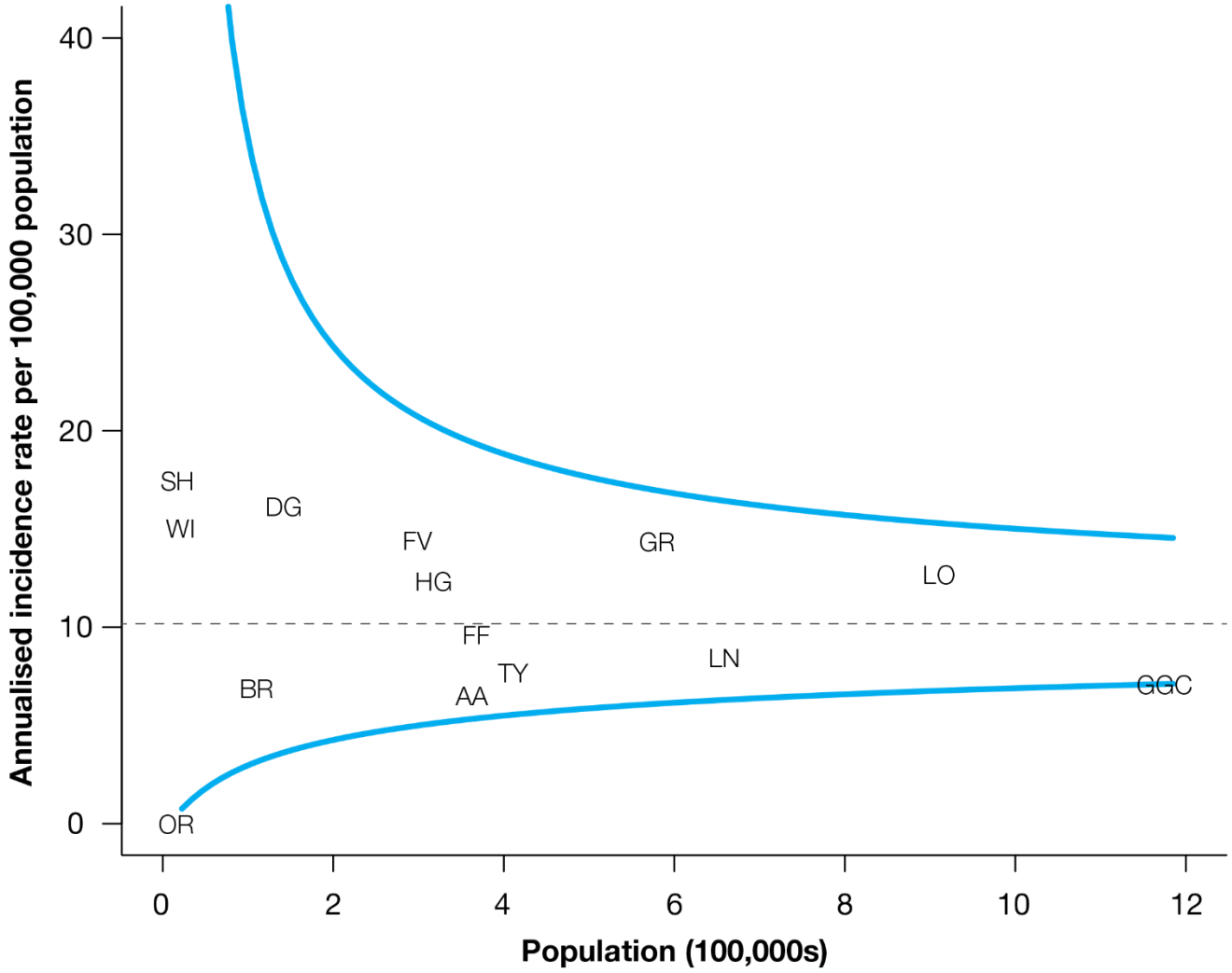
1. Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & NRS mid-year population estimates.
2. Figures include any updates received following the last publication (see Appendix 2).

Figure 5: Funnel plot of SAB incidence rates (per 100,000 TOBD) in healthcare associated infection cases for all NHS boards in Scotland in Q2 2022.[1]



1. Source of data is Electronic Communication of Surveillance in Scotland (ECOSS) & Total occupied bed days: Information Services Division ISD(S)1.

Figure 6: Funnel plot of SAB incidence rates (per 100,000 population) in community associated infection cases for all NHS boards in Scotland in Q2 2022.[1]



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

Surgical Site Infection (SSI)

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

List of Tables

File name	File and size
Table 1: CDI cases and incidence rates (per 100,000 TOBDs) for healthcare associated infection cases: Q1 2022 (January to March 2022) compared to Q2 2022 (April to June 2022).	supplementary data (477 Kb)
Table 2: CDI cases and incidence rates (per 100,000 TOBDs) for healthcare associated infection cases: year-ending June 2021 (YE Q2 21) compared to year-ending June 2022 (YE Q2 22).	supplementary data (477 Kb)
Table 3: CDI cases and incidence rates (per 100,000 population) for community associated infection cases: Q1 2022 (January to March 2022) compared to Q2 2022 (April to June 2022).	supplementary data (477 Kb)
Table 4: CDI cases and incidence rates (per 100,000 population) for community associated infection cases: year-ending June 2021 (YE Q2 21) compared to year-ending June 2022 (YE Q2 22).	supplementary data (477 Kb)
Table 5: ECB cases and incidence rates (per 100,000 TOBD) for healthcare associated infection cases: Q1 2022 (January to March 2022) compared to Q2 2022 (April to June 2022).	supplementary data (477 Kb)
Table 6: ECB cases and incidence rates (per 100,000 TOBDs) for healthcare associated infection cases: year-ending June 2021 (YE Q2 21) compared to year-ending June 2022 (YE Q2 22).	supplementary data (477 Kb)
Table 7: ECB cases and incidence rates (per 100,000 population) for community associated infection cases: Q1 2022 (January to March 2022) compared to Q2 2022 (April to June 2022).	supplementary data (477 Kb)
Table 8: ECB cases and incidence rates (per 100,000 population) for community associated infection cases: year-ending June 2021 (YE Q2 21) compared to year-ending June 2022 (YE Q2 22).	supplementary data (477 Kb)
Table 9: SAB cases and incidence rates (per 100,000 TOBDs) for healthcare associated infection cases: Q1 2022 (January to March 2022) compared to Q2 2022 (April to June 2022).	supplementary data (477 Kb)
Table 10: SAB cases and incidence rates (per 100,000 TOBDs) for healthcare associated infection cases: year-ending June 2021 (YE Q2 21) compared to year-ending June 2022 (YE Q2 22).	supplementary data (477 Kb)

File name	File and size
Table 11: SAB cases and incidence rates (per 100,000 population) for community associated infection cases: Q1 2022 (January to March 2022) compared to Q2 2022 (April to June 2022).	supplementary data (477 Kb)
Table 12: SAB cases and incidence rates (per 100,000 population) for community associated infection cases: year-ending June 2021 (YE Q2 21) compared to year-ending June 2022 (YE Q2 22).	supplementary data (477 Kb)

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Further Information

Further Information can be found on the **HPS website.**

For more information on types of infections included in this report, please see the **CDI, ECB, SAB** and **SSI** pages.

The next release of this publication will be January 2023.

Rate this publication

Please **provide feedback** on this publication to help us improve our services.

Appendices

Appendix 1 – Background information

Revisions to the surveillance

Description of Revision	First report revision applied	Report section(s) revision applies to	Rational for revision
Addition of healthcare/ community case assignment	October 2017	CDI/SAB	An increasing awareness of those infections occurring in community settings has warranted measurement of incidence rates by healthcare setting (healthcare settings vs. community settings) to enable interventions to be targeted to the relevant settings.
Use of standardised denominator data for CDI/ECB/SAB	October 2017	CDI/SAB	The 'total occupied bed days' data will be extracted from the ISD(S)1 data collection which contains aggregated information on acute and non-acute bed days including geriatric medicine and long-term stays in real-time. The standardisation of denominator data across the three surveillance programmes could result in slightly less accurate denominators due to inclusion of persons in the denominator who are at slightly lower risk of infection. However, in surveillance programmes developed for the purpose of preventing infection and driving quality improvement in care, consistency of the denominators over time tend to be more important than getting a very precise estimate of the population at risk, as the primary aim is to reduce infection to a lower incidence relative to what it was at the initial time of benchmarking.

Description of Revision	First report revision applied	Report section(s) revision applies to	Rational for revision
Reporting of CDI cases aged 15 years and above only	October 2017	CDI	Current Scottish Government Local Delivery Plan Standards are based on the incidence rate in cases aged 15 years and above, therefore the report has been aligned to reflect this. ARHAI will continue to monitor CDI incidence rates in the separate age groups (15-64 years and 65 years and above) internally.
Reporting of total SAB cases only (i.e. Removal of MRSA sub-analysis)	October 2017	SAB	MRSA numbers are becoming too small to carry out statistical analysis. ARHAI will continue to monitor internally.
Name change for Clostridium difficile to Clostridioides difficile.	October 2018	CDI	A novel genus *Clostridioides* has been proposed for *Clostridium difficile* which will now be known as *Clostridioides difficile*. There are no implications with regards to the natural history of infection, infection prevention and control, or clinical treatment. **https://www.sciencedirect.com/science/article/pii/S1075996416300762?via%3Dihub**
Addition of year end trends to ECB	October 2018	ECB	This analysis (already included for other reported organisms) is now possible for ECB due the amount of data that has now been collected.
Change in production of Quarterly SPC Charts	April 2020	All sections	Updated method used for calculating exceptions within the SPC charts. The mean, Trigger/warning lines (+2 standard deviations) and upper control limits (+3 standard deviations) presented, are now calculated using the 12 quarters prior to the most recent quarter, as to compare the new rate against an existing baseline.
Changes to data collection in	July 2020	All sections	A CNO letter sent 25th March 2020 asked NHS Boards to continue to report case numbers and origin of infection data but they would not be

Description of Revision	First report revision applied	Report section(s) revision applies to	Rational for revision
response to COVID-19			required to report risk factor data as would normally be expected under enhanced/extended surveillance for *Staphylococcus aureus* bacteraemia (SAB), *Escherichia coli* bacteraemia (ECB) and *Clostridioides difficile* infection (CDI). All mandatory and voluntary Surgical Site Infection (SSI) surveillance was paused until further notice.
Change from Health Protection Scotland to ARHAI Scotland	October 2020	All sections	In April 2020, as part of launch of Public Health Scotland, the ARHAI Group within Health Protection Scotland (HPS) became ARHAI Scotland. ARHAI Scotland will continue to support NHS boards in the prevention and control of healthcare associated infections. The report was updated to reflect this branding change.
Change from National Waiting Times Centre (NWTC) to NHS Golden Jubilee (GJ)	January 2021	All sections	Labelling updated.

Report methods and caveats

Full details of the report methods and caveats can be found here – **https://www.hps.scot.nhs.uk/data/healthcare-associated-infection-quarterly-epidemiological-commentary/**

UK comparisons

Improved collaboration with the other UK nations has made comparisons and standardisation across the UK a high priority for all four nations' governments/health departments. The

changes introduced in the Scottish HAI surveillance, described here facilitate benchmarking of the Scottish data against those of the rest of the UK.

Key to NHS boards

AA = NHS Ayrshire & Arran

BR = NHS Borders

DG = NHS Dumfries & Galloway

FV = NHS Forth Valley

FF = NHS Fife

GJ = NHS Golden Jubilee

GR = NHS Grampian

GGC = NHS Greater Glasgow & Clyde

HG = NHS Highland

LN = NHS Lanarkshire

LO = NHS Lothian

OR = NHS Orkney

SH = NHS Shetland

TY = NHS Tayside

WI = NHS Western Isles

Appendix 2 – Publication Metadata

Publication title

Quarterly epidemiological data on *Clostridioides difficile* infection, *Escherichia coli* bacteraemia, *Staphylococcus aureus* bacteraemia and Surgical Site Infection in Scotland

Description

This release provides information on *Clostridioides difficile* infection, *Escherichia coli* bacteraemia, *Staphylococcus aureus* bacteraemia and Surgical Site Infection in Scotland for the period April to June 2022.

Theme

Infections in Scotland

Topic

Clostridioides difficile infection, *Escherichia coli* bacteraemia, *Staphylococcus aureus* bacteraemia and Surgical Site Infection

Format

Excel workbooks

Data source(s)

Clostridioides difficile infection:

Case data source: Electronic Communication of Surveillance in Scotland (ECOSS)

Data linkage source: General / Acute Inpatient and Day Case Scottish Morbidity Records (SMR01)

Healthcare associated denominator: Total occupied bed days: Information Services Division ISD(S)1

Community associated denominator: National Records of Scotland (NRS) mid-year population estimates

Escherichia coli bacteraemia:

Case data source: Electronic Communication of Surveillance in Scotland (ECOSS) Enhanced Surveillance Web Tool

Healthcare associated denominator: Total occupied bed days: Information Services Division ISD(S)1

Community associated denominator: NRS mid-year population estimates

***Staphylococcus aureus* bacteraemia:**

Case data source: Electronic Communication of Surveillance in Scotland (ECOSS) Enhanced Surveillance Web Tool

Healthcare associated denominator: Total occupied bed days: Information Services Division ISD(S)1

Community associated denominator: NRS mid-year population estimates

Surgical Site Infection:

Case data source: Surgical Site Infection Reporting System (SSIRS)

Number of procedures denominator: SSIRS

Date that data are acquired

The date the data were extracted for analysis.

Clostridioides difficile: 21/07/2022
Escherichia coli Bacteraemia: 26/08/2022
Staphylococcus aureus Bacteraemia: 29/08/2022
Surgical Site Infection: Epidemiological data for SSI are not included for this quarter due to the pausing of surveillance to support the COVID-19 response.

Release date

4 October 2022

Frequency

Quarterly

Timeframe of data and timeliness

The latest iteration of data is 30 June 2022, therefore the data are three months in arrears.

Continuity of data

Quarterly as at March, June, September, December

Revisions statement

These data are not subject to planned major revisions. However, ARHAI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and may be updated in the future.

Revisions relevant to this publication

Updates to previously published figures

NRS mid-year population estimates
Updated to mid-2021 population estimates for 2021 (Q1 - Q4) and 2022 (Q1) as **published** by National Records for Scotland (NRS).

***Clostridioides difficile* Infection (CDI)**
Data linkage between CDI surveillance data and the Scottish Morbidity Records (SMR01) is used to identify community and healthcare associated CDI cases. Delays in SMR01 data availability at the time of report production means that some cases may be reassigned as either healthcare associated or community associated CDI at a later date (see **Methods and Caveats**).

Quarter	NHS board	Previous Healthcare associated CDI cases	Updated Healthcare associated CDI cases	Previous Community associated CDI cases	Updated Community associated CDI cases	Reason
2021 Q4	LO	29	28	23	24	Retrospective data amendment

***Escherichia coli* Bacteraemia (ECB)**

Quarter	NHS Board	Previous Community associated ECB cases	Updated Community associated ECB cases	Reason
2017 Q1	GR	57	56	Retrospective data amendment
2021 Q2	GGC	125	124	Retrospective data amendment

Surgical Site Infection (SSI)

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

Concepts and definitions

***Clostridioides difficile* Infection (CDI)**

Clostridioides difficile infection (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 (PMC), toxic megacolon and peritonitis that can lead to death.

For mild disease, diarrhoea is usually the only symptom. Other clinical features consistent with more severe forms of CDI include fever, leukocytosis, pseudomembranous colitis and ileus.

Symptoms of CDI, and associated immune reactions in children differ from those in adults, but the pathology is not well described. Routine testing in children aged less than 3 years old is not recommended.

Approximately 3% of healthy adults and 20% of hospital patients carry *C. difficile* in their gut. The elderly living in care homes or staying in long-term care facilities are more likely to carry *C. difficile* than other adults. In studies from the US, 20% of care home residents and 50% of patients in long-term care facilities, respectively, were colonised with *C. difficile*.

The Scottish CDI guidance ‘Guidance on Prevention and Control of CDI in Healthcare Settings in Scotland’ and *C. difficile* testing protocol ‘protocol for diagnosis of CDI’ are key documents for the control and reduction of CDI in Scotland.

There remains scope for a reduction of incidence rates through continued local monitoring, appropriate prescribing, and compliance with infection prevention and control measures.

Escherichia coli **Bacteraemia (ECB)**

Escherichia coli (*E. coli*) is a bacterium commonly found in the gut of animals and people where it forms part of the normal gut flora that helps human digestion. Although most types of *E. coli* live harmlessly in your gut, some types can make you unwell. Some types *E. coli* can cause urinary tract infections (UTI) and illnesses such as pneumonia.

E. coli continues to be the most frequent cause of Gram-negative bacteraemia in Scotland and is a frequent cause of infection worldwide. The number of patients with *E. coli* bacteraemia (ECB) reported to ARHAI has increased continuously since 2009.

New cases of ECB are identified by laboratory testing (via positive blood cultures) and submitted to the national system ECOSS. Only cases of ECB that have been reviewed and confirmed by the NHS boards in the enhanced surveillance system are included in the quarterly commentaries.

Staphylococcus aureus **Bacteraemia (SAB)**

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 and can cause a range of illnesses from minor skin infections to serious systemic infections such as bacteraemia. Some strains of *S. aureus* produce toxins or show resistance to first line treatments therefore can be more complicated to treat.

Scotland has had a mandatory meticillin resistant *S. aureus* (MRSA) bacteraemia surveillance programme since 2001. The programme was extended to include meticillin sensitive *S. aureus* (MSSA) bacteraemias in 2006 and in 2014 to include enhanced *S. aureus* bacteraemia (SAB) surveillance. Full details of the surveillance methods may be found in the protocol.

Surgical Site Infection (SSI)

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 healthcare associated infection in Scotland, estimated to account for 16.5% of inpatient healthcare associated infection within NHSScotland, according to Scottish Point Prevalence Survey 2016. Surgical Site Infection Surveillance (SSIS) is mandatory across NHSScotland and all NHS boards participate in SSI surveillance for all inpatient and post discharge surveillance (PDS) for 10 post-operative days for caesarean section procedures and prospective readmission surveillance for hip arthroplasty for 30 post-operative days. Additional new mandatory large bowel and vascular procedures commenced since April 2017. Reporting these procedures will not take place until it is assessed that robust data have been provided by boards.

Further information on the methods and caveats for can be found here:
https://www.hps.scot.nhs.uk/web-resources-container/quarterly-epidemiological-commentary-for-the-surveillance-of-healthcare-associated-infections-in-scotland-methods-caveats/

When a board is highlighted as an exception this will be looked at further as per the exception reporting process.

Further information on the production of quarterly exception reports (SOP) can be found here:
https://www.hps.scot.nhs.uk/web-resources-container/quarterly-epidemiological-commentary-for-the-surveillance-of-healthcare-associated-infections-in-scotland-production-of-quarterly-exception-reports-sop/

Relevance and key uses of the statistics

***Clostridioides difficile* Infection (CDI)**

Surveillance data is essential for monitoring trends and assisting in outbreak investigations. Certain strains of *C. difficile* have been associated with more severe disease (e.g. PCR types 027 and 078) and antibiotic resistance has been suggested to be a factor in the emergence and spread of *C. difficile* epidemic types. In addition, the identification of ribotypes and whole genome sequencing can assist in the investigation of outbreaks.

The surveillance data should inform and support NHS boards in implementing antimicrobial prescribing policies, infection control and prevention interventions.

Escherichia coli **Bacteraemia (ECB)**

The outputs of the surveillance programme are intended to support the NHS boards in controlling and reducing the burden of ECB. Benchmarking against other NHS boards (and other countries) is an important function of the surveillance. In conjunction with other sources of intelligence (including enhanced surveillance data) the outputs of the quarterly surveillance can also help the NHS boards with planning and targeting activities to reduce risk to patient of becoming infected and improve the care of patients (i.e. strategic planning, targeted intervention, care quality improvement).

As urinary tract infections are commonly associated with *E. coli* bacteraemia cases, ARHAI Scotland coordinates the sharing of urinary tract infection (UTI) reduction resources. These include the National Hydration Campaign which aims to convey the public health benefits of good hydration in terms of UTI prevention, and the National Catheter Passport which gives information on how to care for urinary catheters at home as well as aclinical section for a nurse, doctor or carer. Work is also being done on improving antimicrobial treatment of people with infections – co-ordinated by the Scottish Antimicrobial Prescribing Group (SAPG) through a network of antimicrobial management teams.

Staphylococcus aureus **Bacteraemia (SAB)**

ARHAI continues to offer support to NHS boards across Scotland to aid their local SAB reduction strategies. A programme of enhanced SAB surveillance commenced in all NHS boards in Scotland on 1 October 2014. This is providing further intelligence to focus future reduction interventions.

Surgical Site Infection (SSI)

SSIs are estimated to double the length of post-operative stay in hospital and significantly increase the cost of care. The national SSIS programme is intended to enhance the quality of patient care with use of data obtained from surveillance to compare incidence of SSI over time and against a benchmark rate and to use this information locally to review and guide clinical practice.

Accuracy

CDI, ECB and SAB data are the product of the Electronic Communication of Surveillance in Scotland (ECOSS). Participating laboratories routinely report all identifications of organisms, infection or microbiological intoxication, unless they are known to be of no clinical or public health importance. The collected data is used for: the identification of single cases of severe disease, outbreaks, and longer term trends in the incidence of laboratory reported infections, enhanced surveillance, health protection, analytical and statistical use.

Delays in SMR01 data availability at the time of report production means that some CDI cases may be reassigned at a later date. Therefore, healthcare-associated and community-associated CDI cases in this report are provisional and may change as more data becomes available.

The enhanced ECB and SAB ECOSS web tool has built-in validation rules that have to be met before the data is submitted. Further checks of the data are made by ARHAI before the data are analysed. CDI validation of collected data entails sending a list of CDI cases extracted from ECOSS and asking for confirmation that the cases represent true CDI cases, i.e., meet the case definition which is defined in the surveillance protocol sent to all the NHS boards and available on the **website**. The final list of CDI cases is then agreed before publishing.

SSI data comes from the Surgical Site Infection Reporting System (SSIRS). Complying with a national minimum dataset and definitions for Surgical Site Infections, enables the data submitted to Health Protection Scotland to be mapped into the national dataset following a rigorous quality assurance process.

SSIRS has built-in validation rules and data cannot be submitted until rules are met. SSIRS primary validation checks for incomplete or ambiguous core data fields, for example, if presentation to the surgery is ’emergency’ the OPCS code should correspond. Secondary validation includes data checks that can be accepted without completion and/or values that are outside the stated requirements.

Completeness

ECB/SAB:
Surveillance data are collected using an ECOSS Surveillance Web Tool that allows data collectors in NHS boards to validate ECOSS records as well as additional cases that may not be included in the ECOSS system. This therefore means that completeness is near to 100%. Only cases reviewed in the enhanced surveillance are included in the 'analysis' in the commentary publication.

CDI:
Diagnosis of CDI is confirmed in a patient who is both symptomatic with diarrhoea and whose stool has tested positive using a two-step diagnostic algorithm. Laboratory reports of positive samples are then sent to ECOSS for data extraction. In the community, patients with CDI may have a mild illness that does not require a GP visit, or the symptoms may not be recognised by a GP for a *C. difficile* test request. In hospitals, the chance of a diarrhoea sample not being tested for *C. difficile* is much lower, and patients who have ileus (i.e., CDI but with no diarrhoea) might be missed; however, as a result of ARHAI published guidance on managing CDI patients, this is not likely. ARHAI carries out validation with the NHS boards to check that no CDI cases have been missed from ECOSS each quarter. As with most surveillance programmes, completeness will not be 100% but mandatory surveillance, supported by ARHAI through issued guidance on diagnosis of CDI and validation of cases, ensures this is as near to 100% as practically possible. When categorising by healthcare or community, not all cases may be successfully data linked in any one quarter. Therefore, the sum total of the healthcare and community CDI cases may not equal the total number of CDI cases reported to ARHAI.

SSI:
Surveillance coordinators are responsible for completeness and accuracy of data. At hospital level, processes are in placed to ensure all patients included in the standard surveillance have

had forms completed (e.g. cross checking with admission or theatre list). ARHAI also compare SSIRS data with data from ISD to a make sure all procedures under surveillance have been included; however, this comparison is only done annually.

Comparability

CDI / ECB / SAB:
Public Health England report rates per quarter for CDI, ECB and SAB (methods and definitions may differ) – **https://www.gov.uk/government/statistics/mrsa-mssa-and-e-coli-bacteraemia-and-c-difficile-infection-quarterly-epidemiological-commentary**

SSI:
SSI rates by health board are not published by the rest of UK. Annual numbers are reported by Public Health England - **https://www.gov.uk/government/publications/surgical-site-infections-ssi-surveillance-nhs-hospitals-in-england**

Accessibility

It is the policy of ARHAI to make its web sites and products accessible according to **published guidelines**.

Coherence and clarity

Tables and charts are accessible via the HPS website at:
https://www.hps.scot.nhs.uk/data/healthcare-associated-infection-quarterly-epidemiological-commentary/

Value type and unit of measurement

Healthcare associated cases and incidence rates (per 100,000 Total occupied bed days (TOBDs)) for *Clostridioides difficile* infection, *Escherichia coli* bacteraemia & *Staphylococcus aureus* bacteraemia.

Community associated cases and incidence rates (per 100,000 population) for *Clostridioides difficile* infection, *Escherichia coli* bacteraemia & *Staphylococcus aureus* bacteraemia.
Number of procedures and Surgical Site Infections and incidence per categories (per 100 procedures) for inpatients and post discharge surveillance.

Disclosure

The PHS protocol on Statistical Disclosure Protocol is followed
https://publichealthscotland.scot/publications/statistical-disclosure-protocol/

Official Statistics designation

Official Statistics

UK Statistics Authority Assessment

Not Assessed

Last published

5 July 2022

Next published

January 2023

Date of first publication

7 April 2015

Prior to this *Clostridioides difficile* infection (first publication - 2 Apr 2008) and *Staphylococcus aureus* bacteraemia (first publication - 3 Apr 2002) were separate reports.

Help email

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Date form completed

4 October 2022

Appendix 3 – Early access details

Pre-Release Access

Under terms of the "Pre-Release Access to Official Statistics (Scotland) Order 2008", ARHAI is obliged to publish information on those receiving Pre-Release Access ("Pre-Release Access" refers to statistics in their final form prior to publication). The standard maximum Pre-Release Access is five working days. Shown below are details of those receiving standard Pre-Release Access.

Standard Pre-Release Access:

- Scottish Government Health Department
- NHS Board Chief Executives
- NHS Board Communication leads

Appendix 4 – ARHAI Scotland and Official Statistics

About ARHAI Scotland

ARHAI Scotland works at the very heart of the health service across Scotland, delivering services critical to frontline patient care and supporting the efficient and effective operation of NHS Scotland.

Official Statistics

Our statistics comply with the **Code of Practice for Statistics** in terms of trustworthiness, high quality and public value. This also means that we keep data secure at all stages, through collection, processing, analysis and output production, and adhere to the **'five safes'**.