

# NHS Ayrshire & Arran



<b>Meeting:</b>	<b>Ayrshire and Arran NHS Board</b>
<b>Meeting date:</b>	<b>Tuesday 21 May 2024</b>
<b>Title:</b>	<b>Healthcare Associated Infection Report</b>
<b>Responsible Director:</b>	<b>Jennifer Wilson, Nurse Director</b>
<b>Report Author:</b>	<b>Alison Chandler, Business Manager, Infection Prevention and Control Team</b> <b>Adam Crolley, Data Analyst, Infection Prevention and Control Team</b>

## 1. Purpose

This is presented to the Board for:

- Discussion

This paper relates to:

- Annual Operational Plan

This aligns to the following NHSScotland quality ambition(s):

- Safe

## 2. Report summary

### 2.1 Situation

This paper provides Board members with the current position against the National Healthcare Associated Infection (HCAI) Standards and reflects national HAI performance data for Quarter 3 2023-24 for discussion and assurance.

### 2.2 Background

On 28 February 2023, the DL(2023)06 *Further Update on Standards on HCAI Infections and Indicators on Antibiotic Use and Changes to Hospital Onset COVID-19 Reporting*, was released. This further extended the previous targets by another year. It also established that the previous 50% reduction of ECBs was unrealistic and adopted a 25% reduction target based on an assessment of what can reasonably be achieved.

The following quarterly data covers the time period October to December 2023.

## 2.3 Assessment

### HCAI Standards

Aligns to National IPC Standards (2022)	
Standard 4	Assurance and Monitoring Systems

### *Clostridioides difficile* (CDI) Standard

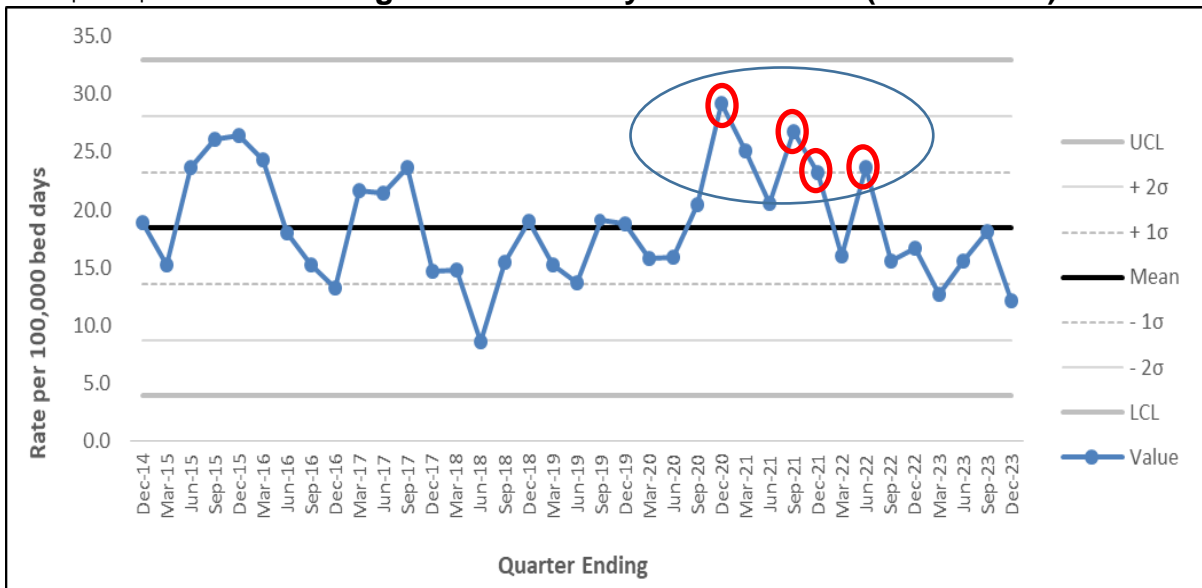
The CDI target is a reduction of 10% in the national rate of HCA CDI for the year ending March 2024, with 2018-19 used as the baseline.

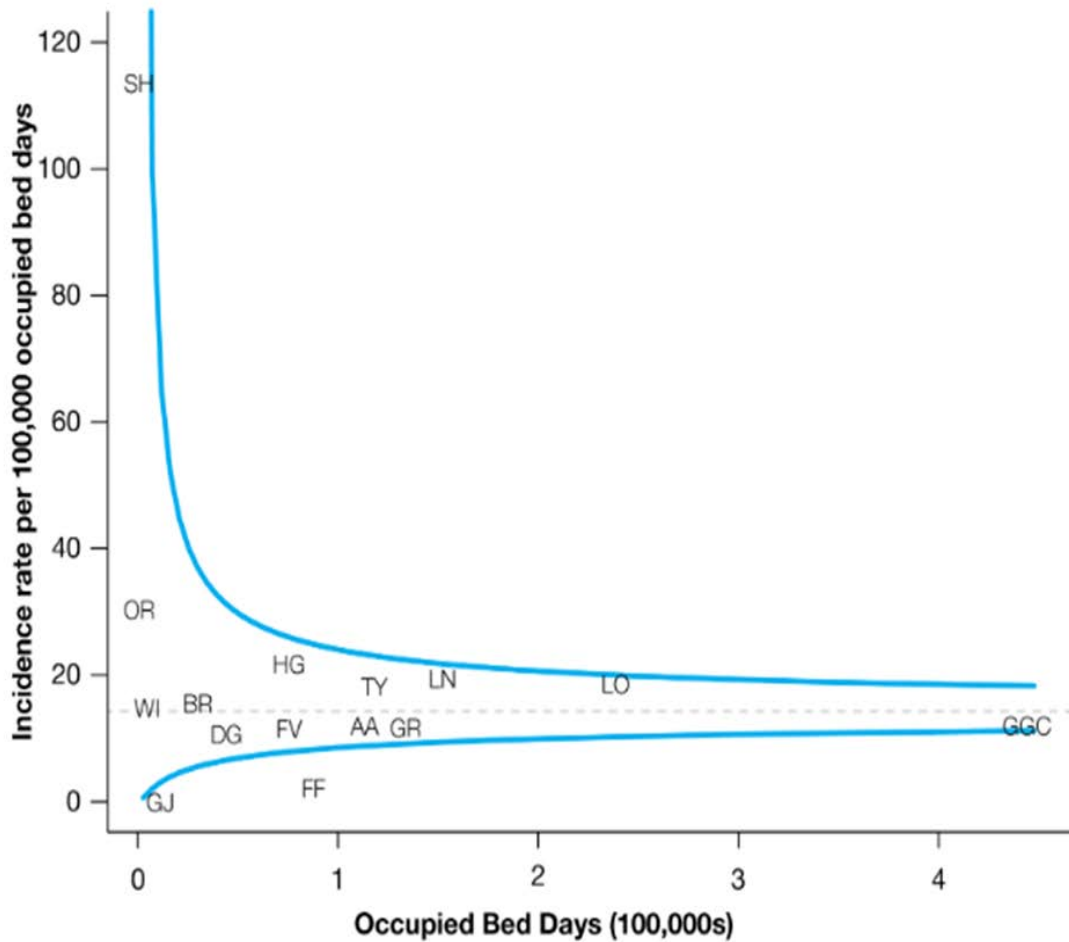
Infection	Baseline Rate 2018-19 (per 100,000 Total Occupied Bed Days (TOBDs))	2023-24 Target (per 100,000 TOBDs)	Annual Rate Year Ending December 2023 (per 100,000 TOBDs)	Quarterly Rate October - December 2023 (per 100,000 TOBDs)
<i>Clostridioides difficile</i> Infection	14.5	13.0	14.4 (67 cases)	12.1 (14 cases)  Decrease from 18.1 (21* cases) previous quarter

The Board's verified HCA CDI rate for October – December 2023 (**Figure 1**).

● Exception reports

**Figure 1 – Quarterly HCA CDI Rate (ARHAI data)**





**Figure 2 – Funnel plot of CDI incidence rates (per 100,000 TOBD) in healthcare associated infection cases for all NHS Boards in Scotland October – December 2023**

**Figure 2** provides the Board's position in comparison to the rest of Scotland. The NHS Ayrshire & Arran (NHSAA) rate of 12.1 is within the 95% confidence interval upper limit, and below the Scottish rate of 14.3.

The verified rolling annual rate for year ending December 2023 was 14.4. This compares with a year ending rate of 17.9 for December 2022 (**Figure 3**).

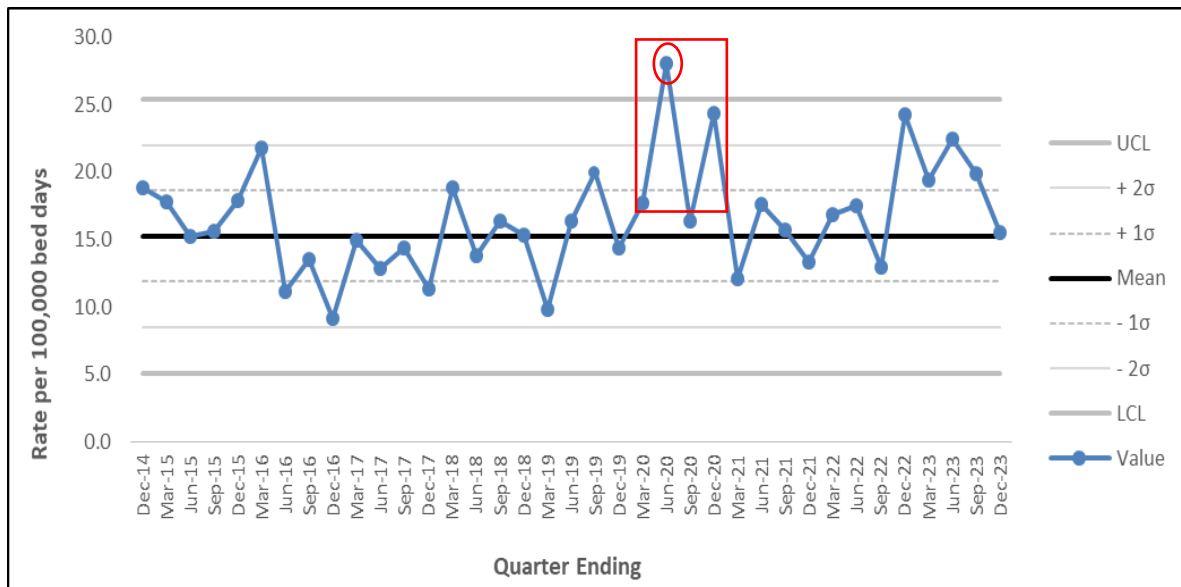


**Figure 3 – Rolling Annual HCA CDI Rate vs National Standard**

***Staphylococcus aureus* Bacteraemia (SAB) Standard**

The SAB standard is a reduction of 10% in the national rate of HCA SABs by year end March 2024, with 2018-19 used as the baseline.

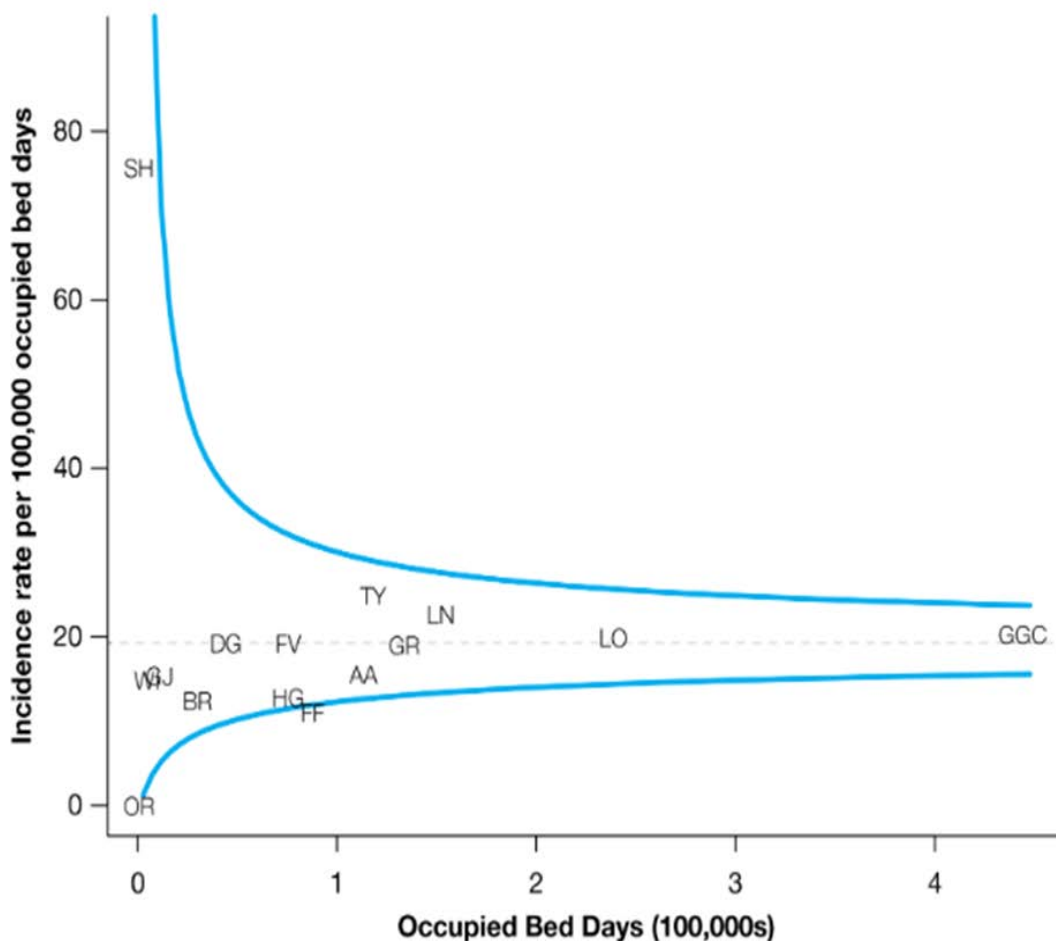
Infection	Baseline Rate 2018-19 (per 100,000 Total Occupied Bed Days (TOBDs))	2023-24 Target (per 100,000 TOBDs)	Annual Rate Year Ending December 2023 (per 100,000 TOBDs)	Quarterly Rate October - December 2023 (per 100,000 TOBDs)
<i>Staphylococcus aureus</i> bacteraemia	13.8	12.4	19.3 (90 cases)  Increase from 17.9 (83) year-end December 2022	15.6 (18 cases)  Decrease from 19.9 (23 cases in previous quarter)



● Exception reports

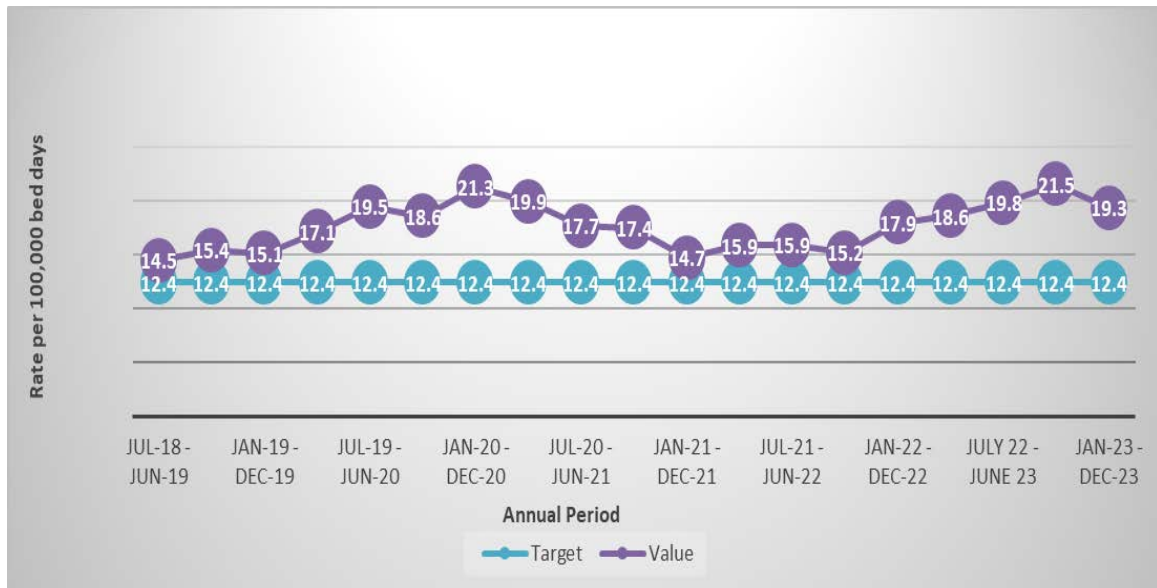
**Figure 4 – SABs Quarterly HCA Rate**

**Figure 5** provides the Board’s position in comparison to the rest of Scotland. NHSAA rate of 15.6 is within the 95% confidence interval upper limit and is below the Scottish rate 19.2.



**Figure 5 – Funnel plot of SAB incidence rates (per 100,000 TOBD) in healthcare associated infection cases for all NHS Boards in Scotland in October – December 2023**

The Board’s verified rolling annual rate was 19.3 for year ending December 2023. This is an increase in comparison to a year ending rate of 17.9 December 2022 (Figure 6).



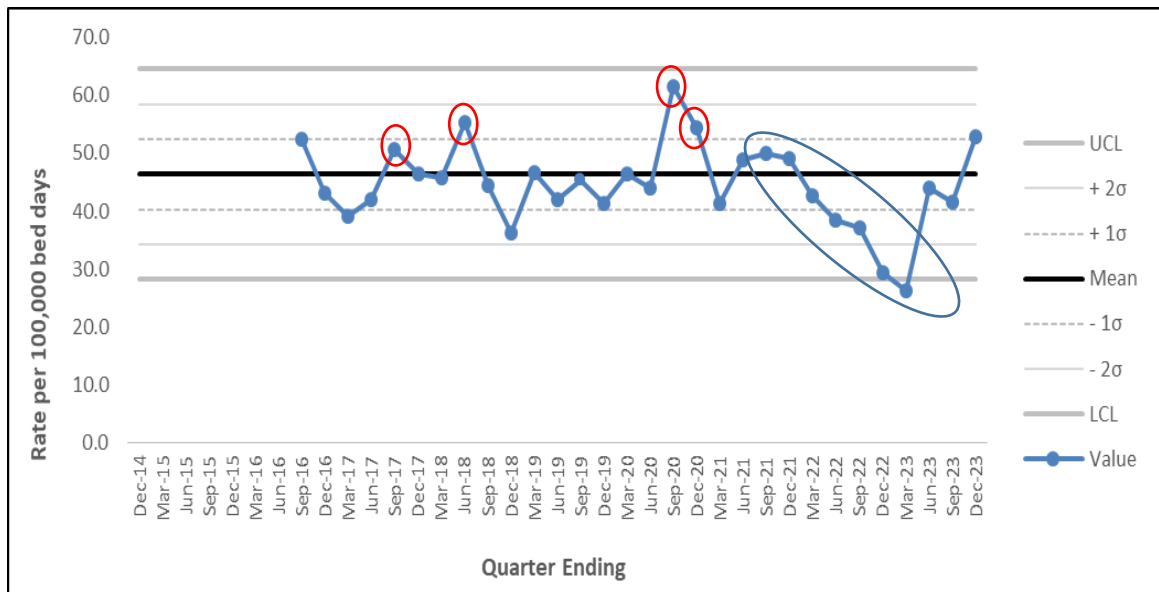
**Figure 6 - Rolling Annual HCA SAB rate vs National Standard**

An action plan to improve the NHSAA community acquired SAB rates was agreed and submitted to ARHAI Scotland and was presented to the Prevention and Control of Infection Committee (PCOIC) in January 2024. The action plan was created following an exception report, from ARHAI Scotland, highlighting the Board was a high outlier for our rate of community-acquired SAB in the July – September 2023 quarter. This action plan will be overseen by the PCOIC and an update will be provided to the Committee at the July meeting.

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

The ECB standard is a reduction of 25% in the national rate of HCA ECBs by year end March 2024, with 2018-19 used as the baseline.

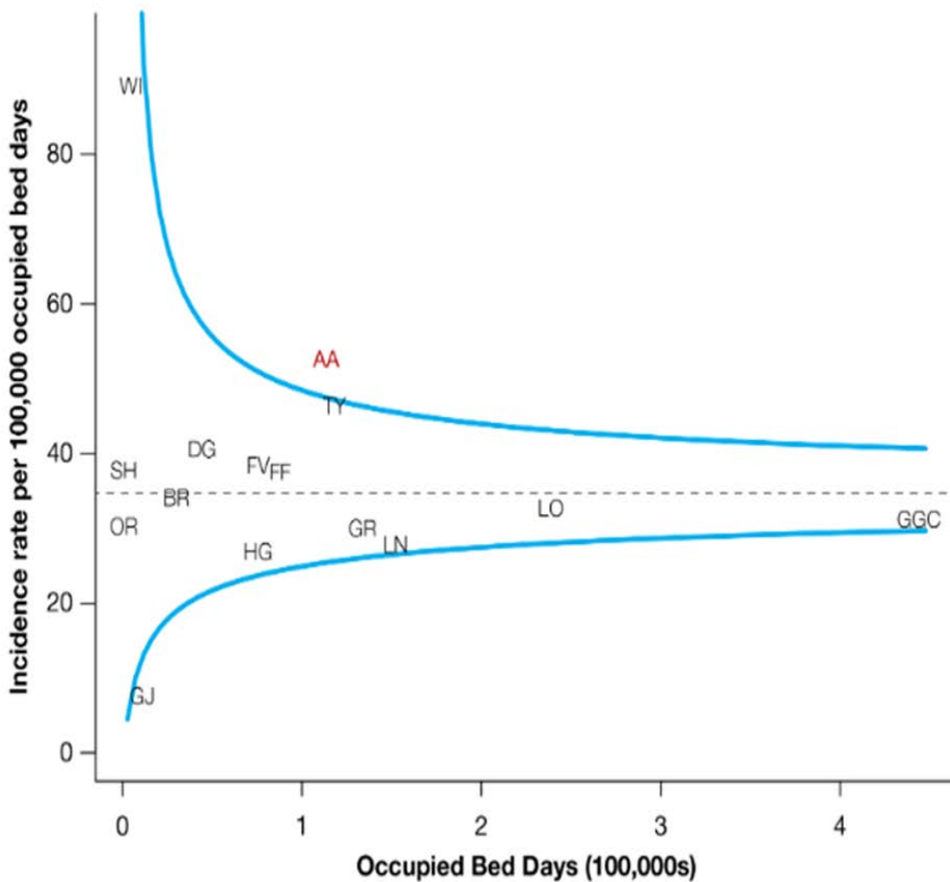
Infection	Baseline Rate 2018-19 (per 100,000 Total Occupied Bed Days (TOBDs))	2023-24 Target (per 100,000 TOBDs)	Annual Rate Year Ending December 2023 (per 100,000 TOBDs)	Quarterly Rate October - December 2023 (per 100,000 TOBDs)
E coli bacteraemia	45.7	34.3	41.7 (194 cases)  Increase from 38.5 (178 cases) year-end December 2022	52.8 (61 cases)  Increase from 41.5 (48 cases) the previous quarter



● Exception reports

**Figure 7 – Quarterly Healthcare Associated ECB Rate**

**Figure 8** provides the Board’s position in comparison to the rest of Scotland. NHSAA rate of 52.8 is not within the 95% confidence interval upper limit and is above the Scottish rate 37.8.



**Figure 8 – Funnel plot of ECB incidence rates (per 100,000 TOBD) in healthcare associated infection cases for all NHS Boards in Scotland in October – December 2023**

NHSAA received an exception report from ARHAI Scotland for their high rate of healthcare associated ECB infection in quarter 3 (October – December 2023). NHSAA have previously submitted an action plan to ARHAI Scotland. This action plan continues to be updated with actions progressing to reduce ECB rates in NHSAA.

### Community Acquired ECB Rate

There are currently no targets for community acquired ECB.

Quarter	Oct - Dec 22	Jan – Mar 23	Apr – Jun 23	Jul – Sept 23	Oct – Dec 23
No of ECB	51	46	48	53	42
Rate (per 100,000 population)				57	45.2

Figure 9 – Number of ECBs per quarter for 2022/23 and 2023/24

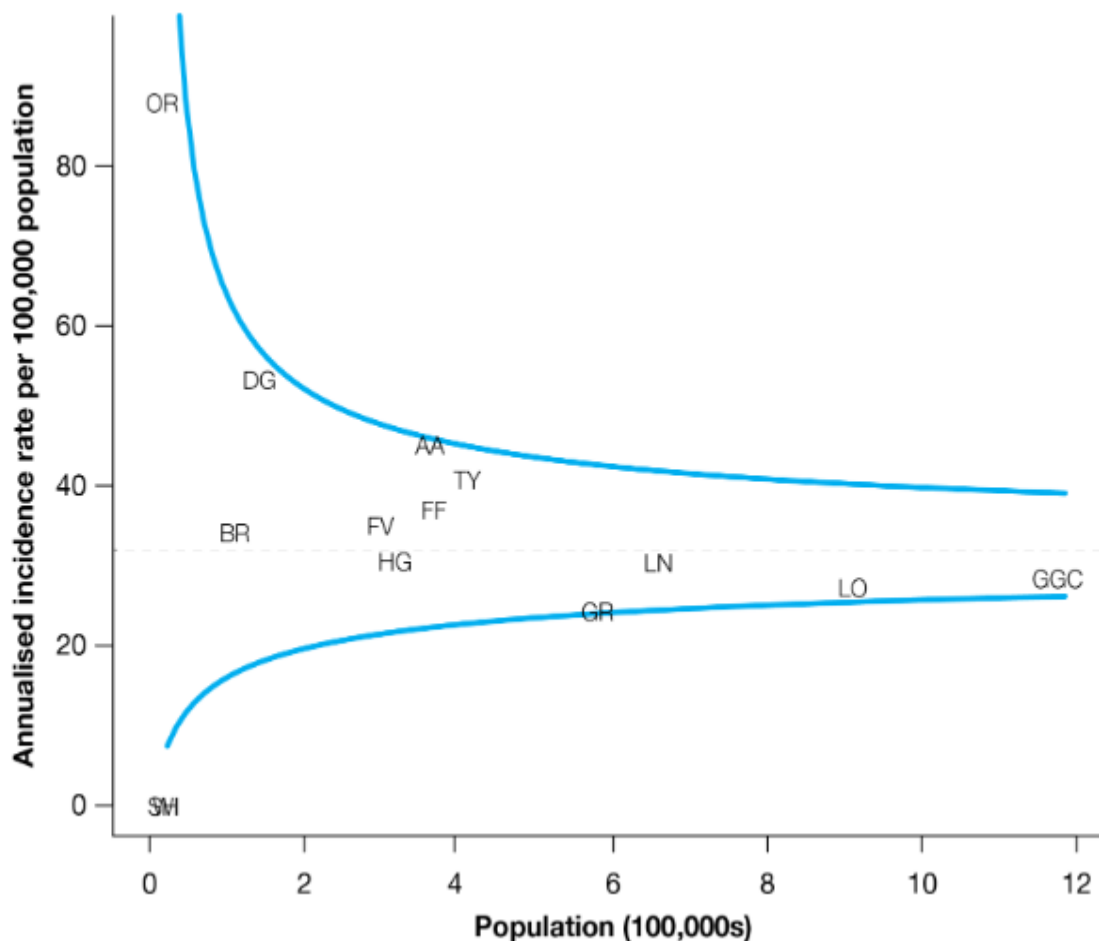


Figure 10 – Funnel plot of ECB incidence rates (per 100,000 population) in community associated infection cases for all NHS Boards in Scotland in October – December 2023

Figure 10 provides the Board’s position in comparison to the rest of Scotland. NHSAA’s rate of 45.2 is within the 95% confidence interval upper limit and is above the Scottish rate 32.0.



In Quarter 2 NHSAA received an ARHAI Scotland exception report highlighting the Board was a high outlier for our rate of community-acquired ECB. This has continued in quarter 3 2023-24. Work to understand the reasons for this increase continues, and an action plan is in place which aims to reduce these infections. The action plan was scrutinised by PCOIC in January 2024.

### Standard Infection Control Precautions (SICPs)

Aligns to National IPC Standards (2022)	
Standard 2	Education and Training
Standard 4	Assurance and monitoring systems
Standard 6	Infection prevention and control policies, procedures and guidance
Standard 8	The Built Environment

The Infection Prevention and Control Team (IPCT) undertakes independent monitoring of Standard Infection Control Precautions (SICPs) in accordance with a planned audit programme, as part of an agreed monitoring framework. The framework sets out the roles and responsibilities of staff within acute and non-acute hospitals for audit, as well as the IPCT.

#### Hand Hygiene

For audits performed by the IPCT, compliance ranged from 86-95% across the different staff groups (**Figure 11**) with an overall compliance of 89% in Quarter 3. This compares to an overall compliance of 96% for audits performed by ward staff. The national standard to be achieved is 95%.

Month	Oct – Dec 2022	Jan – Mar 2022	Apr – Jun 2023	July – Sep 2023	Oct – Dec 2023
<b>IPCT Score</b>	95%	86%	90%	88%	89%
<b>Ward Score</b>	97%	96%	97%	96%	96%

**Figure 11 – SICPs Monitoring Framework**

These results are reviewed by the PCOIC, with actions agreed as needed to support clinical improvement. There is also an increased leadership focus in relation to hand hygiene, including focus on compliance with bare below the elbow.

### Estates and Cleaning Compliance

Aligns to National IPC Standards (2022)	
Standard 6	Infection prevention and control policies, procedures and guidance
Standard 7	Clean and safe care of equipment
Standard 8	The built environment

**Figure 12** presents data on compliance with the requirements set out in the NHS Scotland National Cleaning Services Specification (NCSS).

The NCSS sets out the requirements for minimum frequency and methods of cleaning carried out by Domestic staff. It sets out the same requirements for Estates staff when cleaning the Estates fabric.

The minimum national standard of cleanliness to be achieved is 90%. The Health Board met the national standard for both Domestic Service and Estates.

	<b>NHS Ayrshire &amp; Arran</b>	<b>Scotland</b>
<b>Domestic Services</b>	95.27%	95.2%
<b>Estates Services</b>	96.99%	96.1%

**Figure 12 – Estates and Cleaning Compliance October - December 2023**

A robust audit programme structured in line with national requirements is in place: 458 domestic audits were carried out during the period July - September 2023 (**Figure 13**).

At the end of an audit, if the area falls below 90%, a re-audit is carried out. This is undertaken within 21 days if the score is between 70-90% and within 7 days if the score is below 70%.

<b>Sector</b>	<b>Audits Undertaken</b>	<b>Re-audit of areas below 90%</b>	<b>Number below 70%</b>	<b>Domestic score</b>	<b>Estates score</b>
<b>East</b>	229	5	0	95.70%	97.43%
<b>North</b>	75	1	0	94.28%	96.98%
<b>South</b>	154	2	0	95.12%	96.33%
<b>Total</b>	<b>458</b>	<b>8</b>	<b>0</b>	<b>95.27%</b>	<b>96.99%</b>

**Figure 13 – Domestic Audits October - December 2023**

### **Infection Outbreaks and Incidents**

<b>Aligns to National IPC Standards (2022)</b>	
Standard 2	Education and training
Standard 4	Assurance and monitoring systems
Standard 6	Infection prevention and control policies, procedures and guidance
Standard 7	Clean and safe care equipment

### Healthcare Infection Incident Assessment Tool (HIIAT)

The ARHAI Healthcare Infection Incident Assessment Tool (HIIAT) is a tool used by NHS Boards to assess the impact of an outbreak or incident. The tool is a risk assessment allowing Boards to rate each outbreak/incident as **RED**, **AMBER** or **GREEN**.

In the event of an outbreak or incident, a Problem Assessment Group (PAG) or Incident Management Team (IMT) meeting is convened, and actions are implemented to control further transmission of infection. All outbreaks/incidents are reported to ARHAI who then report to the Scottish Government Health and Social Care Directorate (SGHSCD).

The most common reason for an outbreak being reported as a Red HIIAT is if there is a patient death associated with the outbreak, where the infection is a possible contributory factor and is recorded on the death certificate.

HIIAT Red	HIIAT Amber	HIIAT Green
3	3	19

**Figure 14 – Number of incidents reported to ARHAI (including COVID19) January – March 2024**

Outbreaks of COVID continue to occur across Scotland, and within NHSAA. In Quarter 4 2023-24, the Board dealt with 18 COVID outbreaks. Each has been dealt with in line with guidance in place at the time, and reported as required to ARHAI via the national outbreak reporting system. **Figure 15** provides information on the number of COVID and other respiratory outbreaks from April 2023 to March 2024.

Month	April – June 2023	July – September 2023	October – December 2023	January - March 2024
<b>COVID</b>	17	27	42	18
<b>Influenza</b>	0	0	4	5
<b>RSV</b>	0	0	2	0
<b>Mixed</b>	0	0	1	0
<b>Other</b>	1	0	1	0
<b>Total</b>	<b>18</b>	<b>27</b>	<b>50</b>	<b>23</b>

**Figure 15 – Respiratory Outbreak Activity – April 2023 to March 2023**

**Figure 16** provides information on the number of non-respiratory outbreaks and incidents which have occurred during Quarter 4, 2023-24 along with examples of key learning.

Non-respiratory Outbreaks/Incidents	Examples of Key Learning & Actions
Total of 5, caused by a range of organisms	<ul style="list-style-type: none"> <li>▪ Increased leadership focus on bare below the elbows, hand hygiene and correct use of personal protective equipment.</li> <li>▪ Staffing challenges, with high use of bank staff in some areas. Additional bank staff education being progressed.</li> <li>▪ Work with ARHAI to understand complex epidemiology of some infections.</li> <li>▪ Facilities cleaning equipment reviewed and processes strengthened to ensure these are replaced if damaged, and maintained in optimum condition.</li> <li>▪ Significant leadership focus in place, with peer audit programme, resulting in improvements in clinical practice and environmental standards.</li> <li>▪ Established practice for nursing staff to request specialist ventilation systems to be switched on and off. Based upon patient infection risks, and for Estates to action this without detailed risk assessment on the impact of ward ventilation.</li> <li>▪ Local protocol reviewed for equipment cleaning and storage.</li> </ul>

**Figure 16 – Non-respiratory outbreaks and incidents**

PCOIC has reviewed a summary of learning from each outbreak and it should be noted that a number of the actions arising have been rolled out Board-wide to all relevant areas, in order to ensure shared learning and maximum improvement in patient safety.

### **2.3.7 Communication, involvement, engagement and consultation**

This is a standing report to the Board.

### **2.3.8 Route to the meeting**

This has been previously considered by the following groups as part of its development. The groups have either supported the content, or their feedback has informed the development of the content presented in this report.

- Prevention and Control of Infection Committee, 4 April 2024
- Healthcare Governance Committee, 22 April 2024

## **2.4 Recommendation**

For discussion. Board members are asked to:

1. Scrutinise the current Board position in relation to national HCAI Standards, note the exception reports received, and the work in progress to further reduce infections.
2. Note the differing hand hygiene performance reported by the IPCT and ward staff auditing, and the cleaning standards performance which achieved national requirements.
3. Note the HIIAT reports made to ARHAI Scotland, the summary of learning in relation to outbreaks of infection, and the continuing challenge to patient safety posed by COVID-19.
4. Confirm the report provides suitable assurance in relation to the HCAI Standards, and request further assurance if necessary.