

NHS Ayrshire & Arran



Meeting:	Ayrshire and Arran NHS Board
Meeting date:	Tuesday 26 March 2024
Title:	Healthcare Associated Infection Report
Responsible Director:	Jennifer Wilson, Nurse Director
Report Author:	Tracey Cooper, Associate Nurse Director, Infection Prevention and Control Alison Chandler, Business Manager, Infection Prevention and Control Team

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 2, 2023-24 for discussion and assurance. Data for Quarter 3 is expected to be published by Antimicrobial Resistance & Healthcare Associated Infection (ARHAI) Scotland in March 2024, and will be reviewed by the Prevention & Control of Infection Committee (PCOIC) at its April meeting, with onward reporting of that data to the Healthcare Governance Committee and the Board.

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 July to September 2023.

2.3 Assessment

HCAI Standards

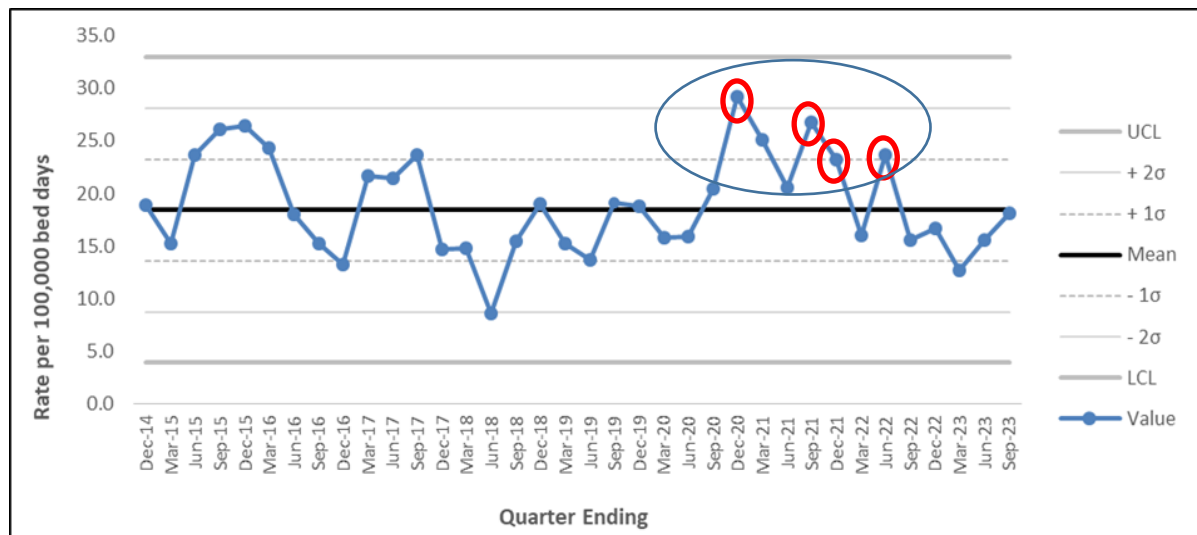
Aligns to National IPC Standards (2022)	
Standard 4	Assurance and Monitoring Systems

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 September 2023 (per 100,000 TOBDs)	Quarterly Rate July - September 2023 (per 100,000 TOBDs)
<i>Clostridioides difficile</i> Infection	14.5	13.0	15.6 (73 cases)	18.1 (21 cases) Increase from 14.7 (17 cases) previous quarter

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



○ Exception reports

Figure 1 – Quarterly HCA CDI Rate (ARHAI data)

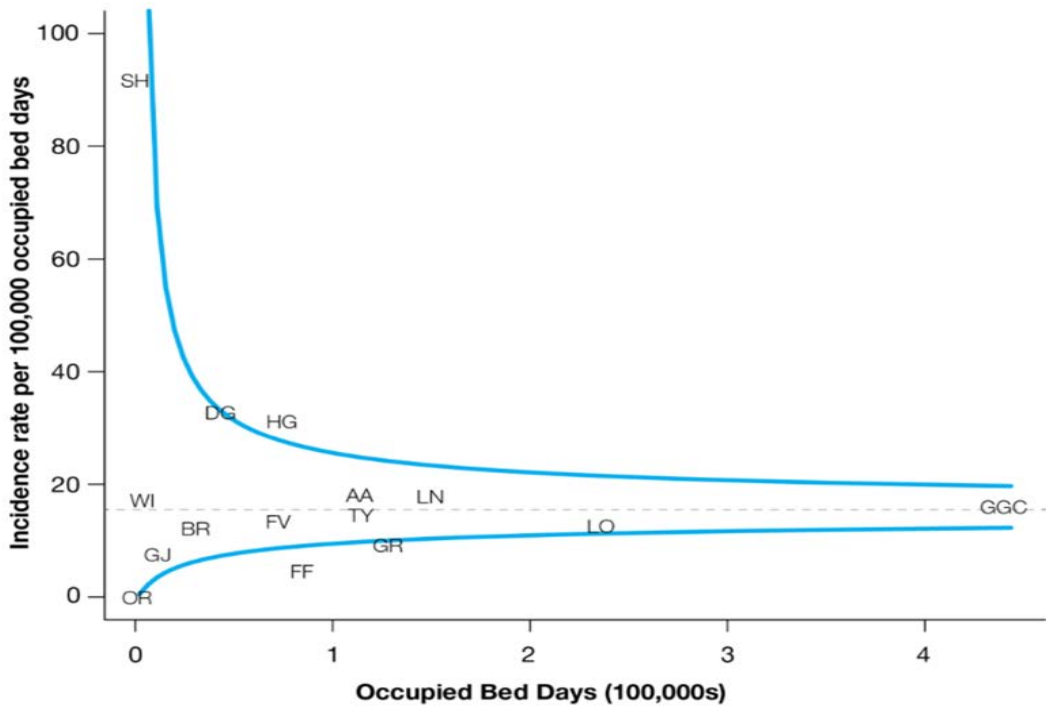


Figure 2 – Funnel plot of CDI incidence rates (per 100,000 TOBD) in healthcare associated infection cases for all NHS Boards in Scotland July – September 2023

Figure 2 provides the Board’s position in comparison to the rest of Scotland. NHS Ayrshire & Arran’s (NHSAA) rate of 18.1 is within the 95% confidence interval upper limit, and above the Scottish rate of 15.5.

The verified rolling annual rate for year ending September 2023 was 15.6. This compares with a year ending rate of 19.6 for September 2022 (**Figure 3**).

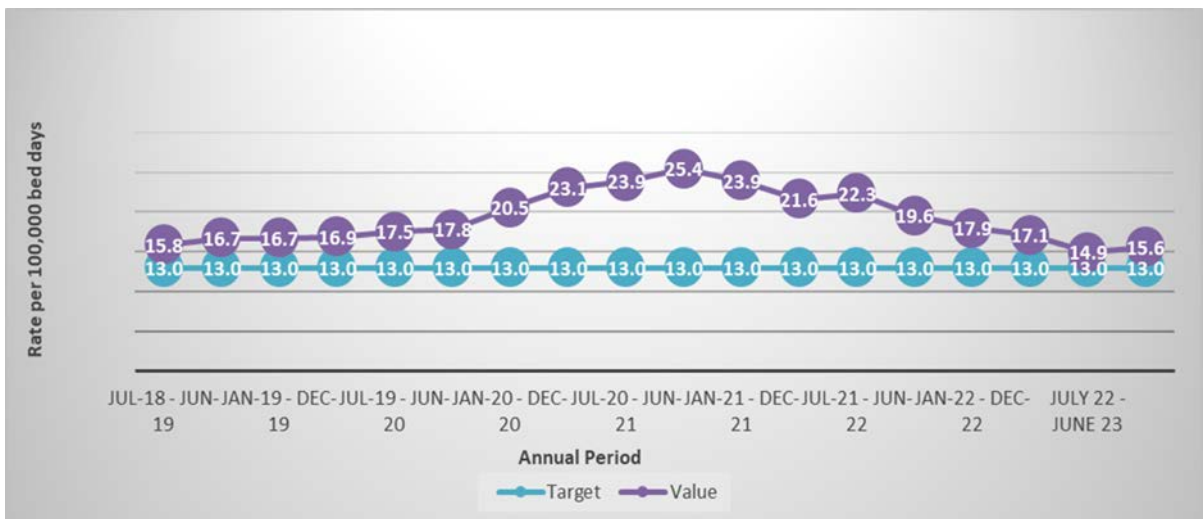
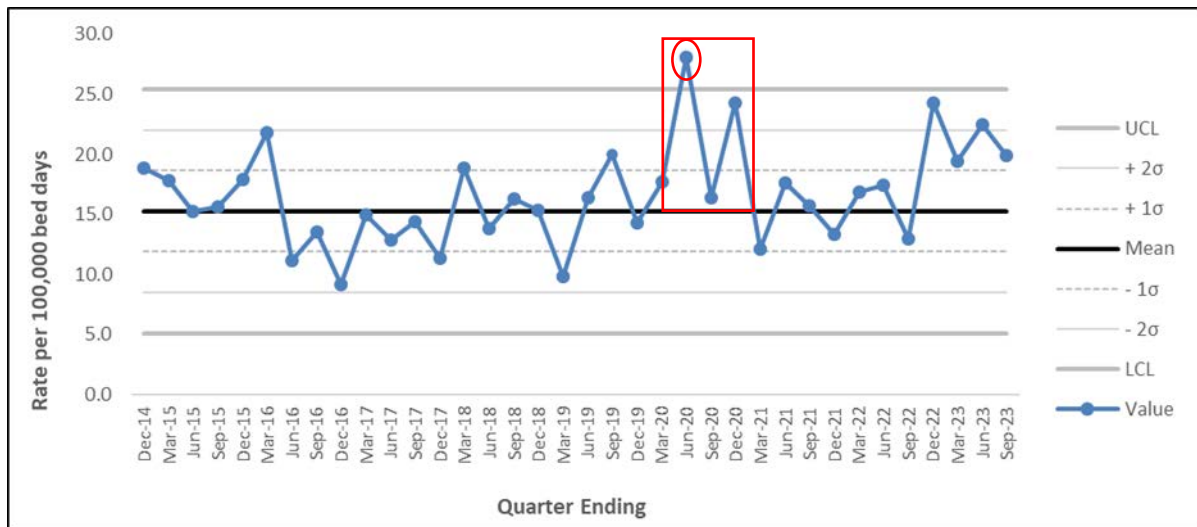


Figure 3 – Rolling Annual HCA CDI Rate vs National Standard

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 September 2023 (per 100,000 TOBDs)	Quarterly Rate July - September 2023 (per 100,000 TOBDs)
<i>Staphylococcus aureus</i> bacteraemia	13.8	12.4	21.5 (101 cases) Significant increase from 15.2 (69 year-end September 22)	19.9 (23 cases) Decrease from 22.5 (26 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's rate of 19.9 is within the 95% confidence interval upper limit, however, is above the Scottish rate 18.1.

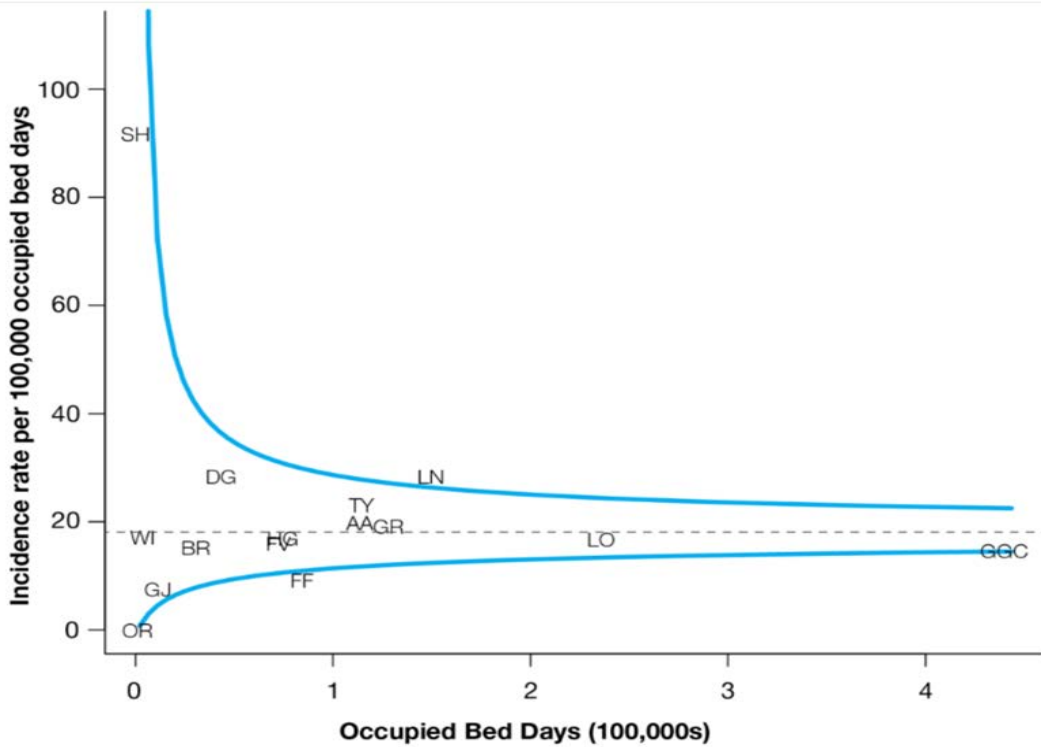


Figure 5 – Funnel plot of SAB incidence rates (per 100,000 TOBD) in healthcare associated infection cases for all NHS Boards in Scotland in July – September 2023

The Board's verified rolling annual rate was 21.5 for year ending September 2023. This is a significant increase in comparison to a year ending rate of 15.2 September 2022 (**Figure 6**).



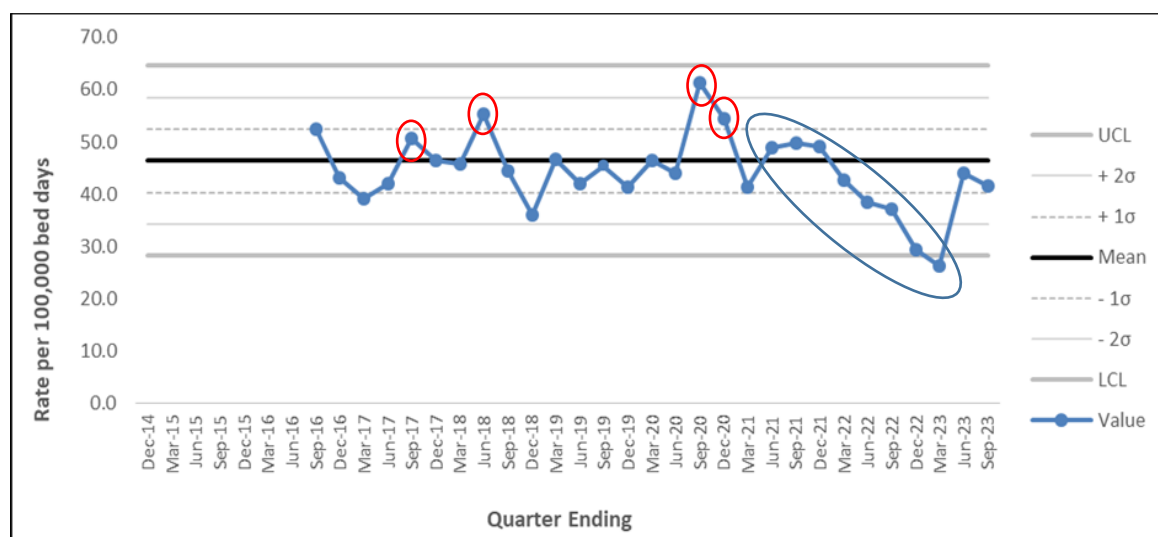
Figure 6 - Rolling Annual HCA SAB rate vs National Standard

Focussed work is underway to address areas of increase, with the detail overseen by the Prevention and Control of Infection Committee (PCOIC). An ARHAI Scotland exception report was received for Quarter 2, highlighting the Board was a high outlier for our rate of community-acquired SAB. An action plan is in place in relation to this increase which was scrutinised by PCOIC in January 24.

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 September 2023 (per 100,000 TOBDs)	Quarterly Rate July - Sept 2023 (per 100,000 TOBDs)
E coli bacteraemia	45.7	34.3	37.5 (176 cases) Reduction from 41.7 (190 cases) year-end September 2022	41.5 (48 cases) Reduction from 44.1 (51 cases) the previous quarter



○ Exception reports

Figure 7 – Quarterly Healthcare Associated ECB Rate

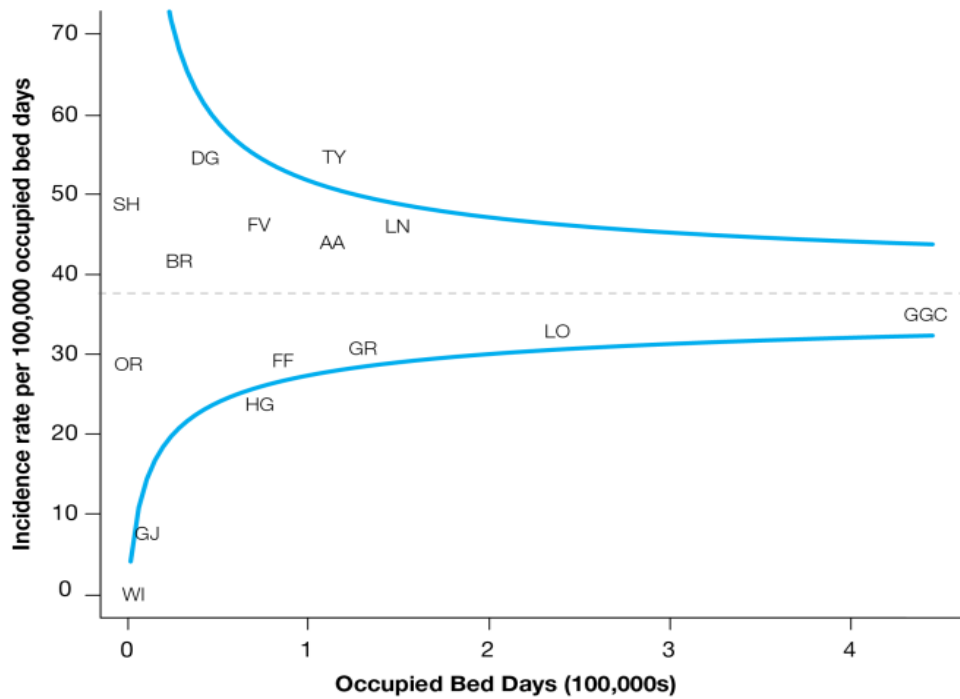


Figure 8 – Funnel plot of ECB incidence rates (per 100,000 TOBD) in healthcare associated infection cases for all NHS Boards in Scotland in July – September 2023

Figure 8 provides the Board’s position in comparison to the rest of Scotland. NHSAA’s rate of 41.5 is within the 95% confidence interval upper limit but is above the Scottish rate 37.8.

Focussed work continues aiming to reduce these infections, including a work programme on the care of urinary catheters.

Community Acquired ECB Rate

There are currently no targets for community acquired ECB.

Quarter	Apr – Jun 22	Jul – Sept 22	Oct – Dec 22	Jan – Mar 23	Apr – Jun 23	Jul – Sep 23
No of ECB	54	43	51	46	48	53
Rate (per 100,000 population)					52.2	57.0

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

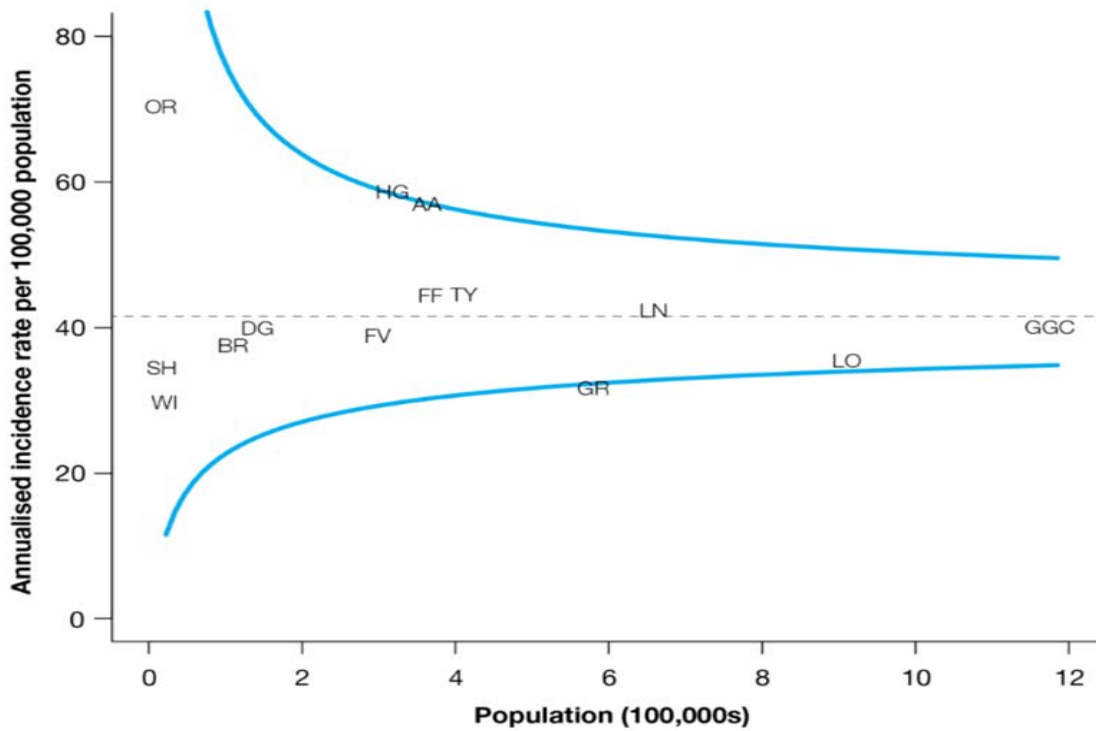


Figure 10 – Funnel plot of ECB incidence rates (per 100,000 population) in community associated infection cases for all NHS Boards in Scotland in July – September 2023

Figure 10 provides the Board’s position in comparison to the rest of Scotland. NHSAA’s rate of 57 is not within the 95% confidence interval upper limit and is above the Scottish rate 37.8.

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.

The SICPs audit programme for Quarter 2 was amended following a safe delivery of care inspection by Healthcare Improvement Scotland in June 2023, to focus on SICPs that were identified as areas for improvement by Inspectors.

Hand Hygiene

For audits performed by the IPCT, compliance ranged from 72-92% across the different staff groups (**Figure 11**) with an overall compliance of 88% in Quarter 2. This compares to an overall compliance of 96% for audits performed by ward staff. The national standard to be achieved is 95%.

Month	Jul – Sep 2022	Oct – Dec 2022	Jan – Mar 2023	Apr – Jun 2023	July – Sep 2023
IPCT Score	95%	95%	86%	90%	88%
Ward Score	98%	97%	96%	97%	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.

	NHS Ayrshire & Arran	Scotland
Domestic Services	95.7%	95.2%
Estates Services	96.9%	96.1%

Figure 12 – Estates and Cleaning Compliance July - September 2023

A robust audit programme structured in line with national requirements is in place: 493 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%.

Sector	Audits Undertaken	Re-audit of areas below 90%	Number below 70%	Domestic score	Estates score
East	248	4	0	95.89%	97.01%
North	86	2	0	94.95%	97.67%
South	159	4	0	95.78%	96.16%
Total	493	10	0	95.69%	96.85%

Figure 13 – Domestic Audits July - September 2023

Infection Outbreaks and Incidents

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 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).

HIIAT Red	HIIAT Amber	HIIAT Green
14	5	32

Figure 14 – Number of incidents reported to ARHAI (including COVID19) October – December 2023

Outbreaks of COVID continue to occur across Scotland, and within NHSAA. In quarter 3 2023-24, the Board dealt with 43 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 to December 2023. (Note: some outbreaks were due to multiple respiratory viruses, and were reported to ARHAI as a multi-cause outbreak).

Month	April – June 2023	July – September 2023	October – December 2023
COVID	17	27	43
Influenza	0	0	4
Respiratory Syncytial Virus (RSV)	0	0	2
Mixed	0	0	1
Other	1	0	1
Totals	18	27	51

Figure 15 – Respiratory Outbreak Activity – April to December 2023

Figure 16 provides information on the number of non-respiratory outbreaks and incidents which have occurred during Quarter 3, 2023-24 along with examples of key learning.

Non-respiratory Outbreaks/Incidents	Examples of Key Learning & Actions
Total of 7, caused by a range of organisms	<ul style="list-style-type: none"> ▪ Review of clinical practices and equipment including storage identified opportunity for improvement ▪ Increased leadership focus on bare below the elbows, hand hygiene and correct use of personal protective equipment ▪ Links to a national poster and video about management of clinical wash hand basins circulated to support water safety ▪ Work with ARHAI to understand complex epidemiology of some infections ▪ Facilities cleaning equipment reviewed and processes strengthened to ensure these are replaced if damaged, and maintained in optimum condition

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, 25 January 2024
- Healthcare Governance Committee, 4 March 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.