NHS Ayrshire & Arran

Meeting:	**Ayrshire and Arran NHS Board**
Meeting date:	**Monday 28 March 2022**
Title:	**Healthcare Associated Infection Report**
Responsible Director:	**Jennifer Wilson, Interim Deputy Nurse Director**
Report Author:	**Sharon Leitch, Senior Nurse Infection Prevention and Control**

1. Purpose

This is presented to the Committee for:

- Discussion

This paper relates to:

- Annual Operational Plan

This aligns to the following NHS Scotland quality ambition(s):

- Safe

2. Report summary

2.1 Situation

This paper provides Board members with an update on the Board's performance against the national healthcare associated infection (HCAI) Standards using the latest verified national data for the year ending September 2021

2.2 Background

The Scottish Government has established national HCAI Standards for:

- *Clostridium difficile* infection (CDI) - a reduction of 10% in the national rate of healthcare associated (HCA) CDI for the year ending March 2022, with 2018-19 used as the baseline.
- *Staphylococcus aureus* bacteraemias (SABs) - a reduction of 10% in the national rate of HCA SAB by year end March 2022, with 2018-19 used as the baseline.
- *Escherichia coli* bacteraemias (ECBs) - a 50% reduction in HCA ECBs by 2023-24, with an initial reduction of 25% by 2021-22. The baseline is the 2018-19 rate.

Each Board is required to contribute its own proportionate reduction to achieve the national standard

2.3 Assessment

The Board's current verified position against each HCAI standard for the year ending September 2021 is:

Infection	**NHS A&A Annual Rate Year Ending September 2021** (number of cases per 100,000 Total Occupied Bed Days (TOBDs))	**2021-22 Target** (cases per 100,000 TOBDs)	**2023-24 Target** (cases per 100,000 TOBDs)
Clostridium difficile Infection	25.4	13.0	
Staphylococcus aureus Bacteraemia	17.4	12.4	
Escherichia coli Bacteraemia	48.5	34.4	22.8

2.3.1 CDI Standard

The CDI target is a reduction of 10% in the national rate of HCA CDI for the year ending March 2022, with 2018-19 used as the baseline.

NHS Ayrshire & Arran's HCA rate for 2018-19 was 14.5 cases per 100,000 TOBDs therefore in order to deliver our contribution to the national standard we must achieve a rate of no more than 13.0 for the year 2021-22.

The Board's verified HCA CDI rate for the July – September 2021 is 26.8 (29 cases) (Chart 1). This is an increase from 20.6 (21 cases) the previous quarter. The increase resulted in the Board receiving an Exception Report from Antimicrobial Resistance Scotland and Healthcare Associated Infection (ARHAI) Scotland.

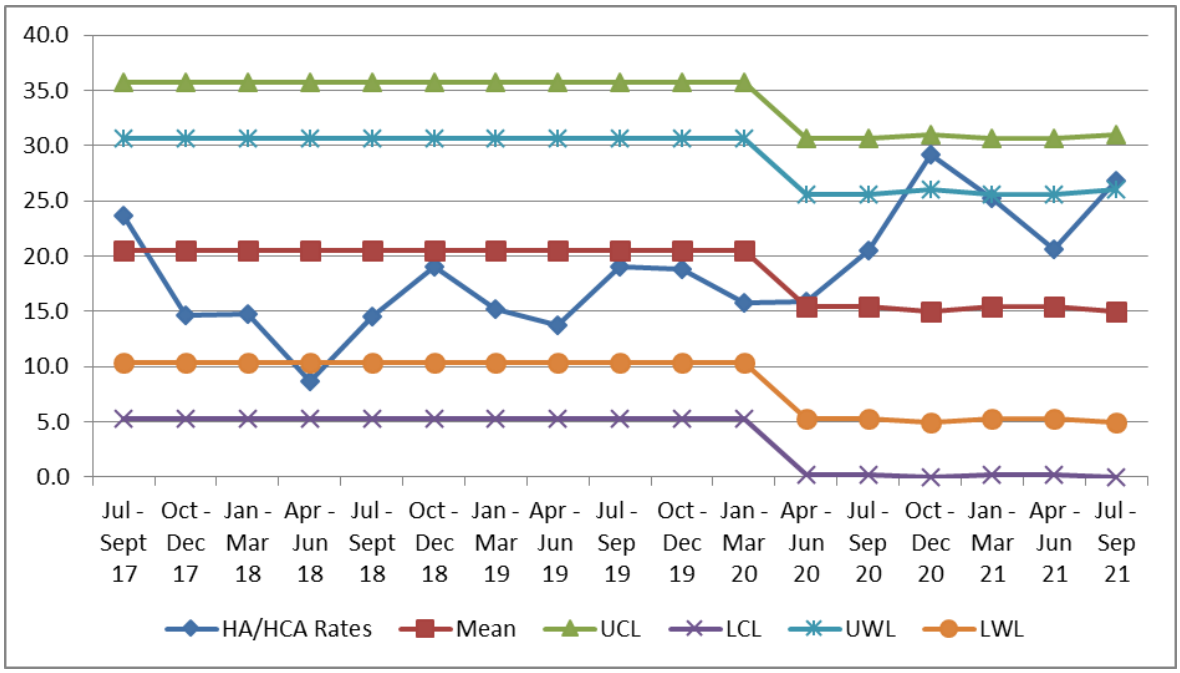

Chart 1 – Quarterly HCA CDI Rate

Of the 29 HCA cases identified during the July – September 2021 quarter:

- 15 (51.7%) had their first positive specimen taken on or after day 3 of a hospital inpatient stay and were classed as Hospital Acquired (HAI).
- 11 (34.5%) were not HAI but had been discharged from a healthcare facility within the previous 4 weeks. These cases are counted as Healthcare Associated (HCAI).
- 3 (13.8%) had their first positive specimen taken within 2 or less days of hospital admission and had been discharged from a hospital between 4 and 12 weeks before the positive specimen. These cases are counted as Unknown, which is included under the wider definition of healthcare associated CDI.

The verified rolling annual rate for the year ending September 2021 was 25.4. This compares with a year ending rate of 17.8 for the quarter ending September 2020 (Chart 2). The rise is considered to be statistically significant by ARHAI Scotland. Based on the verified data for the first 6 months of 2021-22 it is extremely unlikely that the Board will achieve the percentage reduction required to meet the National Standard for the year ending March 2022.

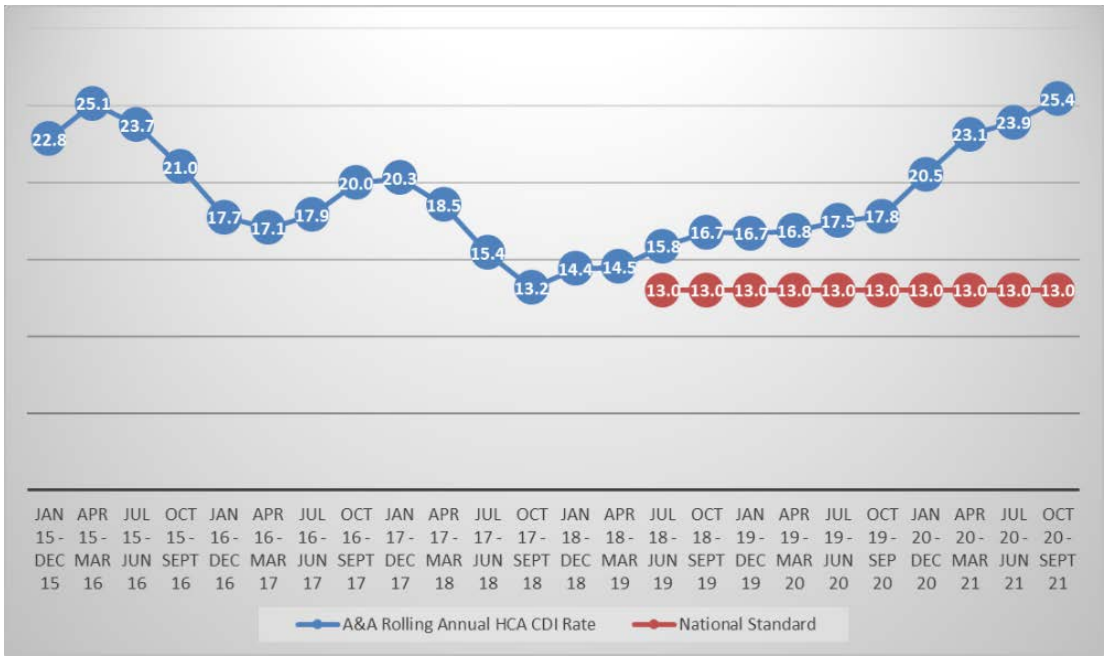

Chart 2 – Rolling Annual HCA Rate vs National Standard

Due to the impact of the Delta and Omicron COVID variants on IPCT activity a planned enhanced review of the April – June 2021 cases, including primary and secondary care prescribing, was not progressed due to the need to redirect resources to support the organisational response to the surge in COVID cases and associated outbreaks.

2.3.2 SAB Standard

The SAB standard is a reduction of 10% in the national rate of HCA SABs by year end March 2022, with 2018-19 used as the baseline.

NHS Ayrshire & Arran's HCA rate for 2018-19 was 13.8 cases per 100,000 TOBDs therefore in order to deliver our contribution to the national standard we must achieve a rate of no more than 12.4 for the year 2021-22.

The Board's verified rate for the July - September 2021 quarter was 15.7, down from 17.6 the previous quarter (Chart 3). The number of individual cases decreased from 18 to 17 (8 hospital acquired and 9 healthcare associated).

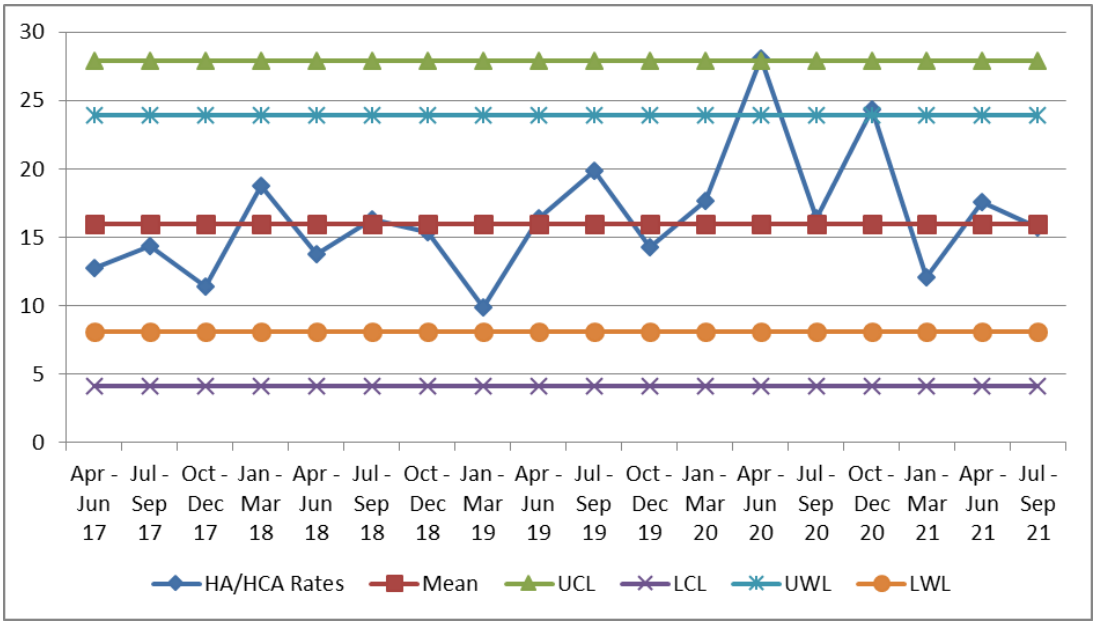

Chart 3 – SABs Quarterly HCA Rate

As a result of the Board's verified rolling annual rate for the year ending June 2021 fell to 17.4 from 17.7 (Chart 4). After 6 months it is unclear whether the Board will meet the National Standard by year end March 2022.

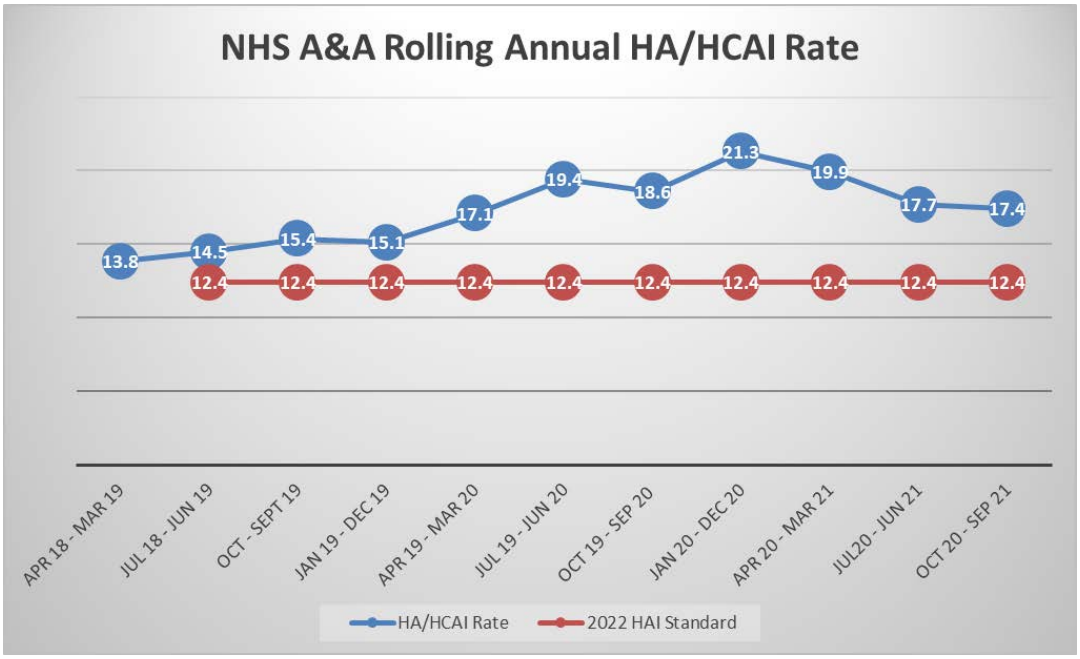

Chart 4 - Rolling Annual HCA SAB rate vs National Standard

- **Hospital Acquired SABs**

During the July – September 2021 quarter there have been 8 hospital acquired SABs, 3 of which were device related - 2 peripheral vascular catheters (PVCs) and 1 central vascular catheter (CVC) (Table 1).

Point of Entry	July – September
Contaminant	1
CVC non tunnelled	1
PVC	2
Not known	1
Respiratory tract infection	1
Skin	1
Surgical site infection	1
Total	**8**

Table 1 - Hospital Acquired SABs Point of Entry July – September 2021

- **Healthcare Associated SABs**

There were 9 healthcare associated SABs during July – September 2021, 3 of which were vascular access devices (2 PVCs and 1 PICC/Midline) (Table 2). The 2 PVC related infections were related to PVCs inserted during a previous hospital admission.

Point of Entry	July - September
PICC / Midline	1
PVC	2
Not known	4
Skin	2
Total	**9**

Table 2 – Healthcare Associated SABs Point of Entry July - September 2021

2.3.3 ECB Standard

The ECB target is a 50% reduction in HCA ECBs by 2023-24, with an initial reduction of 25% by 2021-22. The baseline is the 2018-19 rate.

NHS Ayrshire and Arran's HCA rate for 2018-19 was 45.7 cases per 100,000 TOBDs therefore in order to deliver our contribution the national standard we must have achieved a rate of no more than 34.4 cases per 100,00 TOBDs for the year 2021-22 and rate of no more than 22.8 cases per 100,000 TOBDs by 2023-24.

It was been agreed that there should be annual graduated reduction targets against which we should measure progress towards the national target. Given that year 1 had already commenced when the target was announced and a number of interventions in relation to urinary catheters are still to be fully developed and implemented it was agreed that we should aim for a 5% reduction in year one followed by 10% reductions in years 2, 3 & 4 with a 15% reduction in year 5 (Table 3 below).

Year	Percentage Reduction	Target rate	Target Case Numbers
Baseline	-	45.7	205
2019-20	5%	43.4	195
2020-21	10%	38.5	174
2021-22 (Interim Target)	10%	34.5	153
2022-23	10%	29.9	132
2023-24 (Final target)	15%	22.8	102

Table 3 –Graduated Reduction Targets for HCA ECBs

The Board's verified **quarterly** rate for the July – September quarter increased slightly to 49.0 from 48.9 (Chart 5).

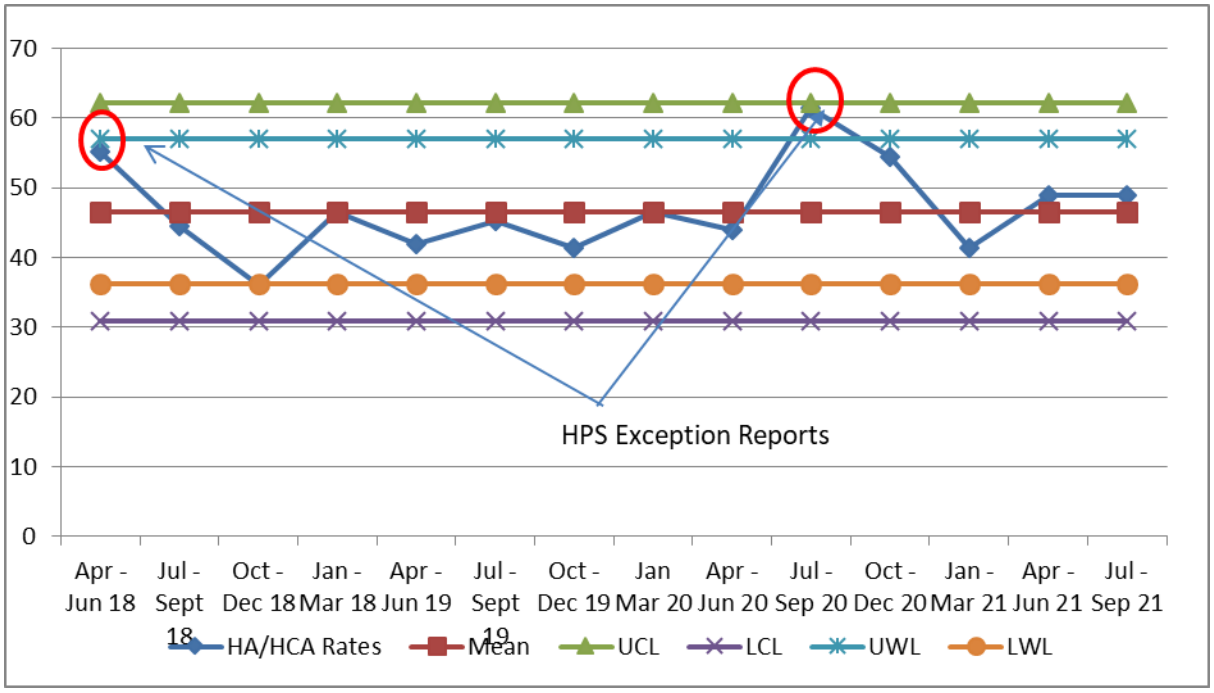

Chart 5 – Quarterly Healthcare Associated ECB Rate

The Board's verified **annual** HCA rate for the year ending June 2021 was 48.5 down from 51.5. This is well above the year 3 reduction target of 34.5 (Chart 6, below).

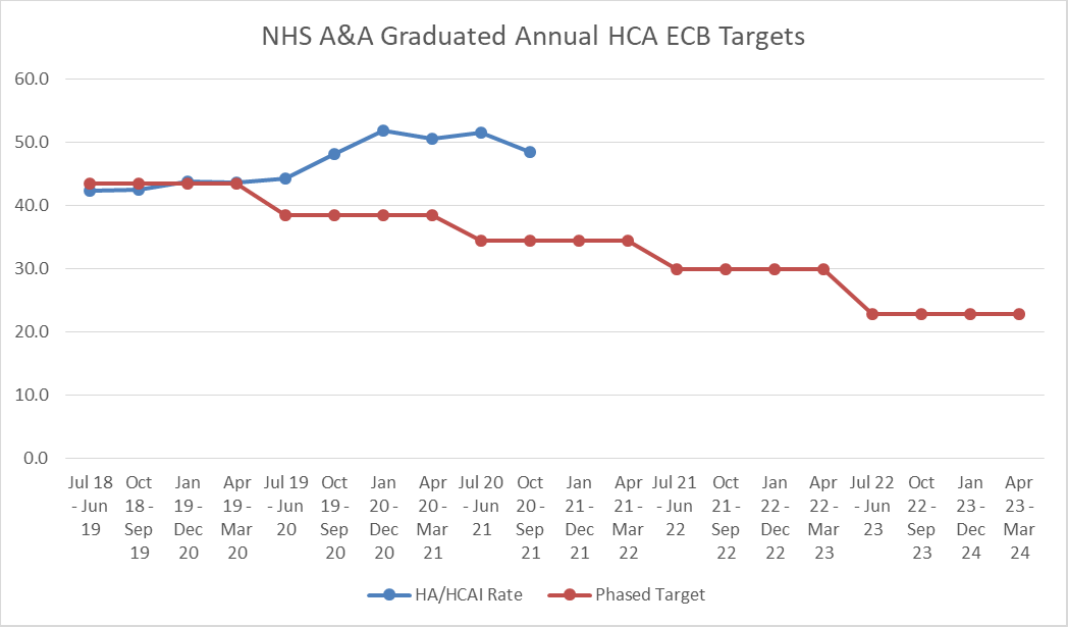

Chart 6 – NHS A&A graduated rolling annual HCA target trajectory

The local ECB surveillance data is entered directly onto the national surveillance database with the results accessed via the Discovery platform. At the time of writing, the system had not been updated to include the July – September 2021 data therefore no further analysis can be provided at this point.

As previously reported, reducing urinary catheter related infections remains the Board's primary strategy for lowering the overall bacteraemia rate. However, the work of the Urinary Catheter Improvement Group remains paused as a result of resources diverted to support the organisational response to the COVID-19 pandemic. As a result, the Board will not meet the National Standard by year end March 2022.

- **Community Acquired ECB Rate**

The Board has been issued with an Exception Report for its Community Acquired ECB rate for the July – September 2021 quarter by ARHAI Scotland. There is no national target for community acquired ECBs and there are no identified healthcare interventions to further reduce rates.

Previously the Board received three consecutive Exception Reports covering the July 2020 – March 2021 period. As a result, the Chief Nursing Officer's Support Algorithm was triggered. The interim Nurse Director and Infection Control Manager met the Scottish Government Healthcare Associated Infection Policy Unit (SGHAIPU) on 27 August 2021. It was agreed that the Board would contact ARHAI for support. It was also noted that some clarity was needed with regards to the National Support Framework, especially in relation to community acquired infections.

The Infection Control Manager and the Infection Prevention and Control Doctor met with ARHAI Scotland on 25 November 2021 to review the Board's data. It was noted that although higher than the Scottish rate, the Board's rate was stable over the last three years and it was fluctuations in the Scottish rate that determined whether the Board received an Exception Report or not. No Exception Report was received for the April – June 2021 quarter. The data review did not identify any

areas for intervention. This position remains unchanged despite the latest Exception Report.

2.3.4 Quality/patient care

Attainment of the national HCAI standards will result in fewer infections in patients and improve patient outcome.

2.3.5 Workforce

Reductions in HCAI will reduce the exposure risk to staff from harmful infections

2.3.6 Financial

Reductions in HCAI will lead to reduced inpatient lengths of stay and associated treatment costs

2.3.7 Risk assessment/management

The IPCT provide clinical teams and managers with risk assessed advice and guidance based on national policy and best practice.

Current activity required in order to respond to COVID-19 has significantly impacted on the capacity of the IPCT to continue with routine IPC activity.

2.3.8 Equality and diversity, including health inequalities

An impact assessment has not been completed because this is an update report. Effective management of IPC cuts across all protected characteristics.

2.3.9 Other impacts

No other impacts to note.

2.3.10 Communication, involvement, engagement and consultation

These topics are discussed regularly at the Prevention and Control of Infection Committee.

2.3.11 Route to the meeting

The data contained within this report was discussed at the Prevention and Control of Infection Committee on 27 January 2022 and a version of this paper was presented to Healthcare Governance Committee on 28 February 2022

2.4 Recommendation

For discussion. Board Members are asked to review and discuss the paper.