

NHS Ayrshire & Arran



Meeting:	Ayrshire and Arran NHS Board
Meeting date:	Monday 2 February 2021
Title:	Healthcare Associated Infection (HCAI) Report
Responsible Director:	Professor Hazel Borland, Nurse Director and Deputy Chief Executive
Report Author:	Bob Wilson, Infection Control Manager

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 available position against the national Healthcare Associated Infection (HCAI) Standards, with a specific focus on *Staphylococcus aureus* bacteraemias (SABs).

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 June 2020 is:

Infection	NHS A&A Annual Rate Year Ending June 2020	2021-22 Target	2023-24 Target
<i>Clostridium difficile</i> Infection	17.5	13.0	
<i>Staphylococcus aureus</i> Bacteraemia	19.4	12.4	
<i>Escherichia coli</i> Bacteraemia	44.2	34.4	22.8

The Board's quarterly SAB rate rose sharply in the April – June 2020 quarter, increasing from 17.7 to 28.1 (Chart 1). This triggered an exception report from Antimicrobial Resistance and Healthcare Associated Infection (ARHAI) Scotland, formerly Health Protection Scotland (HPS). A review of the data was undertaken and a report submitted to ARHAI Scotland (Appendix 1).

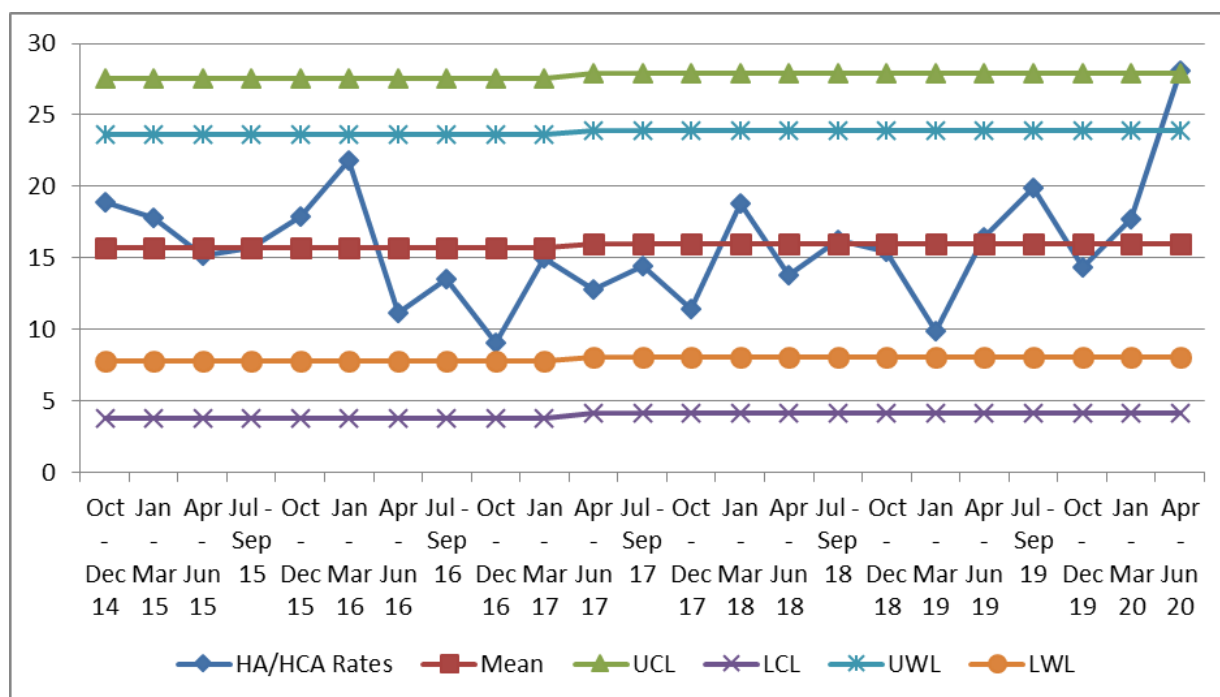


Chart 1 – NHS Ayrshire and Arran Quarterly SAB Rate

There were 23 healthcare associated SABs during the April to June quarter, an increase of 4 (21%) on the previous quarter. This combined with a 24% reduction in the occupied bed days resulted in the sharp rise in the quarterly rate. Both are directly attributable to the onset of the COVID-19 pandemic.

Four cases were identified in the COVID-19 intensive care unit (ICU) in University Hospital Crosshouse (UHC). This was against a background of an increase in infections in the unit caused by a range of organisms. At the time the incident was investigated and reported to HPS.

The increase was determined to be caused by a number of issues including the sessional use of personal protective equipment (PPE), which was promoted by the national COVID-19 infection control guidance, and the requirement to use non-ICU staff to support the unit during the COVID pandemic.

The need to redirect both Infection Prevention and Control Team (IPCT) and consultant microbiology resources to support the organisational response to the COVID-19 pandemic meant it was not possible to fully investigate each SAB during this quarter. As a result the point of entry was assessed as Not Known for 39% of healthcare associated SABs. During this period the IPCT were unable to support any local actions or improvement work in relation to SABs.

The verified data for the July – September quarter will not be published until January 2021 however the number of healthcare associated SAB cases fell from 23 to 17 and it is anticipated that the occupied bed day data will have increased significantly. This is likely to bring the SAB rates into line with the Board's rates prior to April. The number of healthcare associated SABs with a Not Known point of entry fell to 29% during this quarter.

2.3.1 Quality/patient care

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

2.3.2 Workforce

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

2.3.3 Financial

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

2.3.4 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.

2.3.5 Equality and diversity, including health inequalities

An impact assessment has not been completed because this is an update report to Board members.

2.3.6 Other impacts

Nil to note

2.3.7 Communication, involvement, engagement and consultation

These topics are discussed regularly at the Prevention and Control of Infection Committee which has public representatives as members.

2.3.8 Route to the meeting

This report is a standing report to the Committee as required by the national Healthcare Associated Infections Standards 2015.

The SAB increase for Q1 April – June 2020 was discussed at CMT on 01 and 15 December 2020.

A version of this paper was submitted to Healthcare Governance Committee at their meeting on 11 January 2021.

2.4 Recommendation

For discussion. This paper is for discussion and provides an update for Board members on the Board's current performance against the national HCAI standards with a specific focus on SABs.

3. List of appendices

The following appendices are included with this report:

Appendix 1 – Board Response to the ARAHAI Scotland SAB Exception Report

Title: Report and action plan in response to *Staphylococcus aureus* bacteraemias (SAB) exception

Report: The commentary on quarterly epidemiological data on *Clostridium difficile* infection, *Escherichia coli* bacteraemias, *Staphylococcus aureus* bacteraemias and surgical site infection in Scotland Q2-2020

Author: NHS Ayrshire and Arran

Date of Issue:

Situation	NHS Ayrshire and Arran has been highlighted as an exception in healthcare associated SAB this quarter in the SPC analysis over three years.
Background	The quarter in question was the peak of the first wave of COVID-19. Infection Prevention and Control resources were entirely devoted in the management of COVID-19 including outbreak management, advising the organisation on its response to the pandemic and supporting staff in implementing rapidly evolving national guidance.
Assessment	<p>There were 36 cases of SAB reported by NHS Ayrshire and Arran in Q2-2020. Of which 23 (63.4%) cases were healthcare associated SAB (figure 1). This is an increase of 4 on the previous quarter when there were 19 (55.9%) healthcare associated SAB cases. Overall healthcare associated rates of the last 3 years have been stable (figure 2). There was a 23.8% reduction in bed days in Q2 compared with the previous quarter (figure 3). This is the most significant contributory factor in the increase in the rate.</p> <p>19 (82.6%) healthcare associated infections cases were male. Cases aged over 65 accounted for 56.5% of all healthcare associated cases.</p> <p>The most commonly recorded entry point was urinary catheter (figure 4). Due to the demand created by the COVID-19 pandemic the detailed reviews of healthcare associated SABs normally undertaken the IPCT and the clinical microbiology team were suspended during this quarter. Therefore there is limited information on the majority of the cases which in turn has resulted in an increase in the number of Not Known points of entry.</p> <p>Four of the SABs were identified in one of our intensive care units at the peak of the pandemic. This was against a background of an increase in a range of infections within in the unit. A review at the time identified a number of issues including sessional use of personal protective equipment, the high levels of non-ICU staff supporting the unit, line care, etc. The overall increase in infections was reported to ARHAI as a Red Incident in April.</p> <p>The unverified data for quarter 3 (July – October) shows a return to baseline with 16 healthcare associated SABs during this quarter. This allied with an increase in occupied bed days should see the quarterly rate return to baseline levels. However it should be noted that the ongoing demands of COVID-19 and the</p>

emergence of a second wave continues to severely limit the IPCT and clinical microbiology team's ability to investigate SABs and support improvement work. Therefore the Board remains vulnerable to future rate increases.

Figure 1 – Rates of community associated SAB in NHS Ayrshire and Arran by quarter Q3-2017 to Q2-2020

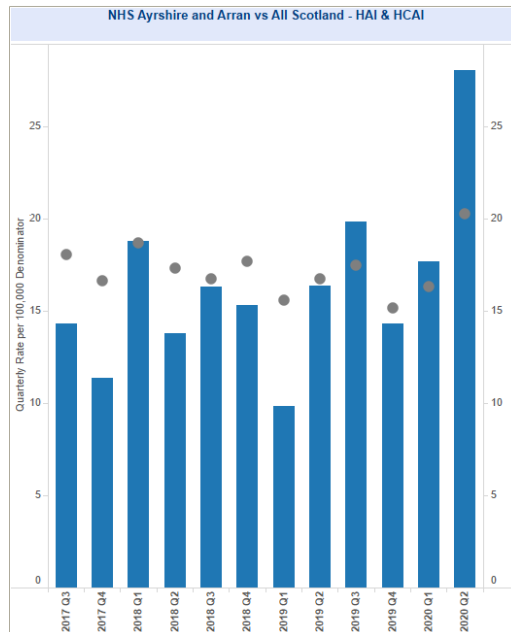
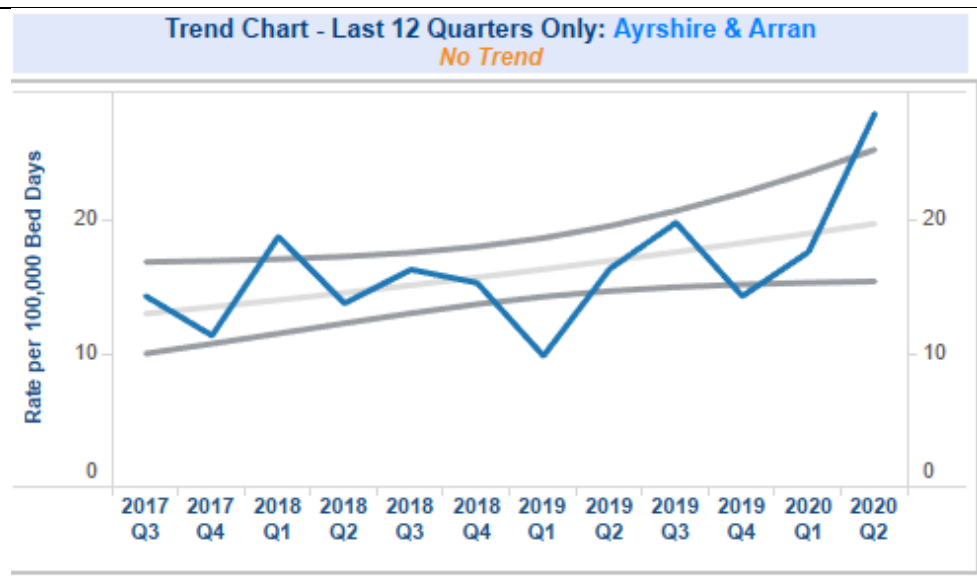


Figure 2 – Trends in rates of healthcare associated SAB in NHS Ayrshire and Arran by quarter Q3-2017 to Q2-2020.



Select Past 12-Quarters Analysis View

U-Chart No Trend Trend Limits
 Trend Chart Best Fit Trend Line

Figure 3 – Trends in rates (Bed days v Cases) healthcare associated SAB in NHS Ayrshire and Arran by quarter Q3-2017 to Q2-2020.

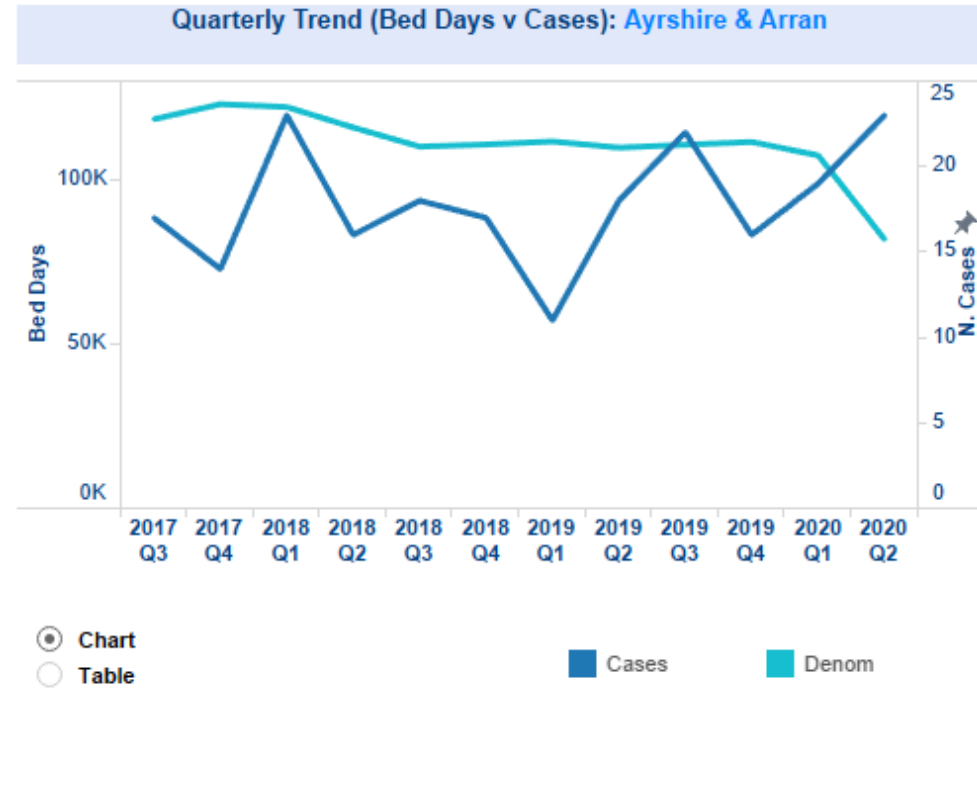
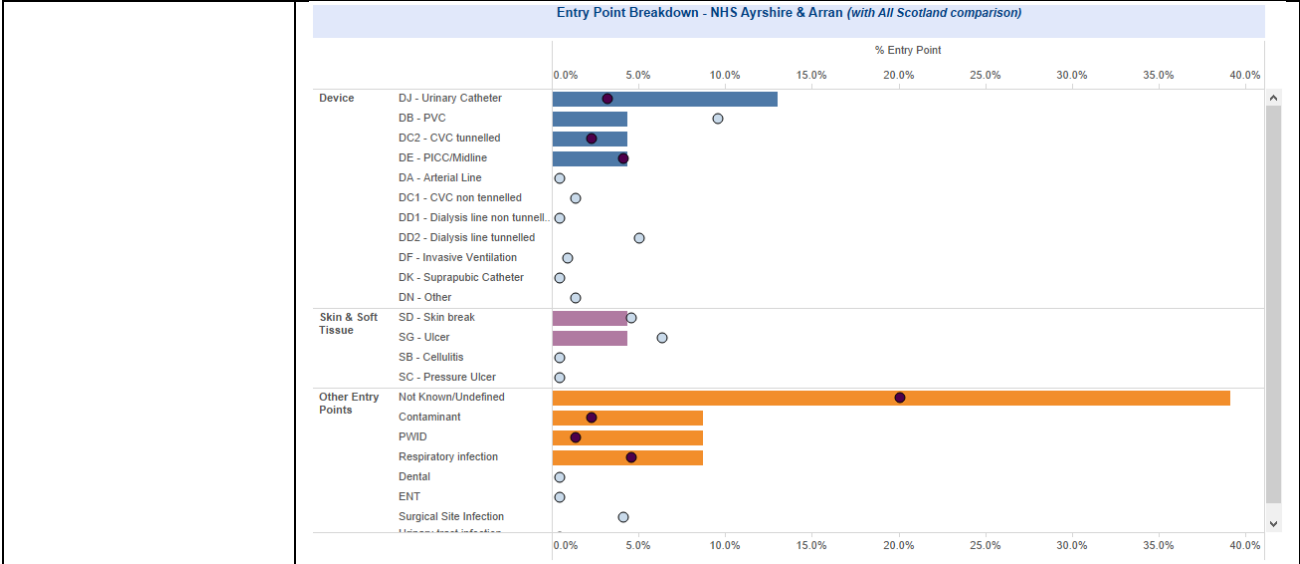


Figure 4 – Entry points of healthcare associated SAB in NHS Ayrshire and Arran (bar) compared to all Scotland (circle) (Q2-2020).



Recommendations (action plan)

- The Board continues to collect the full SAB surveillance data
- The Board will wherever possible fully investigate all cases of healthcare associated SABs subject to available resources.
- Where clusters of infection identified these will be prioritised for review