

Agenda Item 7

Hospital Acquired Infection Performance Report



Falkirk IJB Clinical and Care Governance Committee

26 November 2021

Hospital Acquired Infection Performance Report

For Consideration and Comment

1. Executive Summary

- 1.1 The purpose of this report to provide an oversight of all Hospital Acquired Infection (HAI) related activity across Falkirk Community Hospital and Bo'ness Community Hospitals from July 2021 to September 2021. Included in the report are details of all *Staph aureus* bacteraemias (SABs), *Clostridioides difficile* Infections (CDIs), *Escherichia coli* Bacteraemia (ECBs) and Device Associated Bacteraemias (DABs) for these areas with a brief summary of the investigations that have been carried out.
- 1.2 The report also provides details of COVID-19 work. The report contains more graphs to enable the reader to have a more comprehensive and clearer understanding of the data.

2. Recommendations

The Clinical and Care Governance Committee is asked to consider and comment on:

- 2.1 the content of the report.

3. Background

- 3.1 NHS Forth Valley recognises the importance of the prevention and control of infections. The Board supports the principle that infections should be prevented wherever possible or, where this is not possible, minimised to an irreducible level and that effective systematic arrangements for the surveillance, prevention and control of infection are provided within the Board.
- 3.2 The Board has in place a programme for prevention, surveillance, active investigation, and control of infection in patients, staff and visitors to the Board. This programme is the responsibility of all staff, not just the central Infection Prevention & Control Team (IPCT), and the delegation to and acceptance of this responsibility by clinical divisional and corporate teams has increased and is key to success. The infection control programme aims to continuously review and build on existing activity, driven by local needs, while incorporating and complying with the latest relevant strategy and regulations as laid out by ARHAI Scotland.

4. Hospital Acquired Infection Performance Report

- 4.1 The HAI related activity across Falkirk Community Hospital and Bo'ness Community Hospital for the reporting period is attached at Appendix 1. This includes details of all HAI activities across both sites including brief summaries of the investigations carried out where appropriate. The CCGC will note from the appendix that there are no concerns and that appropriate actions continue to be taken.

5. Conclusions

- 5.1 COVID-19 continues to present many challenges across the hospital sites, inpatient cases have increased this quarter but have broadly stabilised.
- 5.2 This report to CCGC is part of the monthly and quarterly reporting through NHS FV governance structures.

Resource Implications

There is no resource implication arising from the report.

Impact on IJB Outcomes and Priorities

There is no direct impact resulting from the recommendations of this report.

Legal & Risk Implications

There are no legal or risk implications arising from the report and data presented.

Consultation

No consultation was required to develop the report although the author recognises and thanks members of the oversight group for their contribution to the report.

Equalities Assessment

There are no equalities impacts arising from the report.

6. Report Author

Jonathon Horwood, Area Infection Control Manager

7. List of Background Papers

n/a

8. Appendices

Appendix 1: HAI Performance Report July 2021 – September 2021

Healthcare Acquired Infection Performance Report

Reporting Period
July 2021 – September 2021



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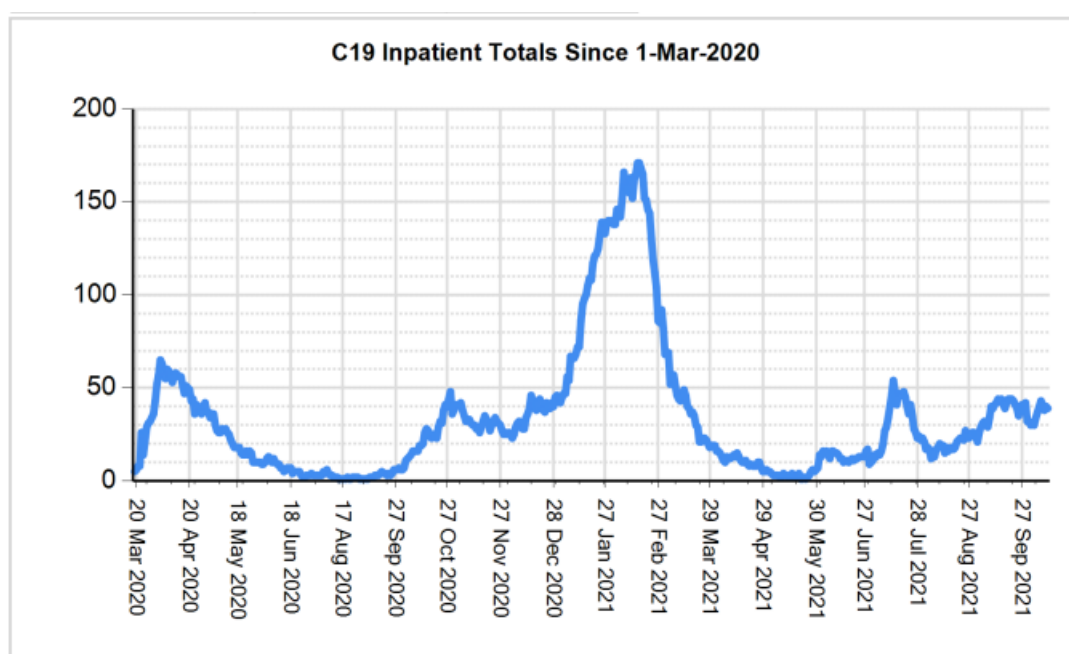
1. Key challenges this quarter

1.1. Covid-19 Pandemic

This quarter COVID-19 hospital admission has steadily increased with an inpatient average of approximately 40 inpatients per day; inpatient numbers remained relatively stable by the end of September.

There were no Covid related outbreaks reported for this quarter.

Graph of inpatients with confirmed Covid -19 (up until April 2021)



1.2. Hospital Onset Covid-19

On a weekly basis Health Protection Scotland publish infection figures based on electronic data submitted to them on the rate of COVID-19 infection that has been acquired during the patients hospital stay. This is calculated solely based on the time the patient was admitted to the hospital and the incubation period of COVID-19 (14 days). For example, if a patient stay has exceeded 14 days and became COVID-19 positive after day 14 then it is determined to be hospital acquired. Based on purely on admission times does not necessary mean hospital acquired, however, these are the limitations of the data and the report.

The table below is an extract from the report detailing COVID-19 infections and where they were acquired. NHSFV current hospital infection is 0.7%, the same as the national average.

Table 1: Number of COVID-19 cases, by onset status and NHS board: specimen dates up to 19 September 2021.^{1,2,3}

NHS board	Total COVID-19 cases (n)	Non-hospital onset (n)	Indeterminate hospital onset cases (n)	Probable hospital onset cases (n)	Definite hospital onset cases (n)	Non-hospital onset (%)	Indeterminate hospital onset cases (%)	Probable hospital onset cases (%)	Definite hospital onset cases (%)
Ayrshire & Arran	37,321	995	140	237	417	2.7%	0.4%	0.6%	1.1%
Borders	7,129	162	21	23	62	2.3%	0.3%	0.3%	0.9%
Dumfries & Galloway	10,230	283	25	9	18	2.8%	0.2%	0.1%	0.2%
Fife	31,892	659	42	37	269	2.1%	0.1%	0.1%	0.8%
Forth Valley	28,436	710	94	80	187	2.5%	0.3%	0.3%	0.7%
Golden Jubilee	30	17	7	3	3	-	-	-	-
Grampian	35,906	522	66	60	195	1.5%	0.2%	0.2%	0.5%
Greater Glasgow & Clyde	155,820	3,516	547	596	1,409	2.3%	0.4%	0.4%	0.9%
Highland	17,743	201	14	8	29	1.1%	0.1%	0.0%	0.2%
Lanarkshire	86,721	1,322	234	286	518	1.5%	0.3%	0.3%	0.6%
Lothian	88,742	1,579	207	326	638	1.8%	0.2%	0.4%	0.7%
Orkney	293	6	0	1	3	2.0%	0.0%	0.3%	1.0%
Shetland	629	17	1	0	0	2.7%	0.2%	0.0%	0.0%
Tayside	37,338	886	128	146	284	2.4%	0.3%	0.4%	0.8%
Western Isles	690	14	1	3	3	2.0%	0.1%	0.4%	0.4%
Scotland	538,920	10,889	1,527	1,815	4,035	2.0%	0.3%	0.3%	0.7%

1.3. IPCT Support to Care Homes

In collaboration with the Care Assurance Team, work continues supporting care homes during identified outbreaks and clusters across Forth Valley. The IPCT has successfully recruited staff to further support care homes across Forth Valley. This will enable a more proactive and structured approach to care homes. Activities will be agreed and be included in the IPCT Annual Workplan to ensure appropriate governance and transparency of activities. It is anticipated that routine supportive visits will commence this winter providing education and training in all IPC related activities eg norovirus training, hand hygiene training etc. Updates will also be provided in the monthly HAI reports and the Board HAIRT Report.

1.4. Gold Standard Tool

Earlier this year, the IPCT developed the Gold Standard Tool. This tool provides an aide memoir for care home managers to enable IPC standards to be maintained and support national guidance documents such as the National Infection Prevention and Control Manual for Care Homes and the Care Home National Cleaning Specifications. Rollout to care homes has commenced and has been received positively by care home management.

1.5. Draft National HAI Standards

The HAI standards were published in 2015, and new national HAI Standards were issued for consultation in October. These are due for final publication in March 2022. The standards will apply to all health and social care settings and will now apply to care homes.

2. Annual Operating Plan Target

2.1. Hospital Acquired Infection Annual Operating Plan targets for 2019-2022

On the 10th October 2019, a letter was sent to all Health Board Chief Executives highlighting our new HAI targets. These targets are based on our (Forth Valley) current rates of infection and a percentage reduction has been set to be achieved by March 2022.

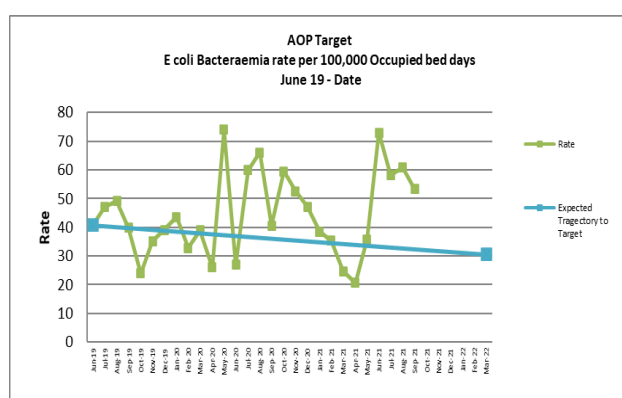
This target is different from our previous targets and includes the reduction in hospital and healthcare acquired infections and does not include community acquired infections. Hospital and healthcare acquired infections are now classified as healthcare infections as it is perceived nationally that all hospital and healthcare infections are all reducible.

For continuity, we will continue to report separately hospital and healthcare infections to maintain our quality and transparency in our data, however, the total number of infections will reflect on what we are reported nationally and in line with our set targets. In addition to Staph aureus bacteraemia, (SABs) and Clostridioides difficile infection (CDI) targets, Escherichia coli bacteraemia (ECB) is now included in our targets.

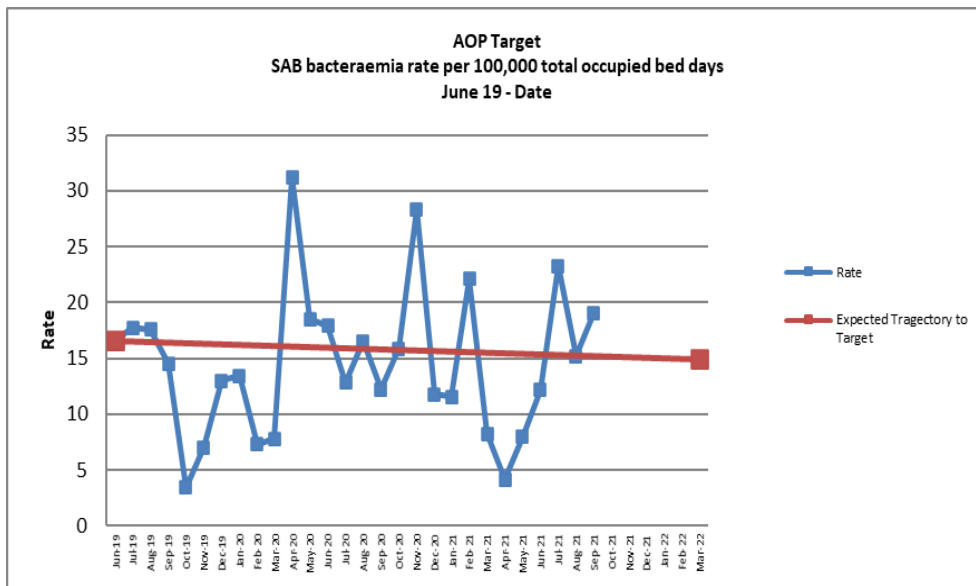
The data is currently being reformatted to address these targets and will be included in future reports. Please see table below for our new targets:

	2018/19 Rate (base line) per 100,000 total bed days	No of cases (per annum)	Reduction %	Date for reduction	Target rate per 100,000 total bed days	Target cases per annum
ECB	40.8	135	25	2022	30.6	101
SAB	16.6	55	10	2022	14.9	50
CDI	11.4	38	10	2022	10.3	34

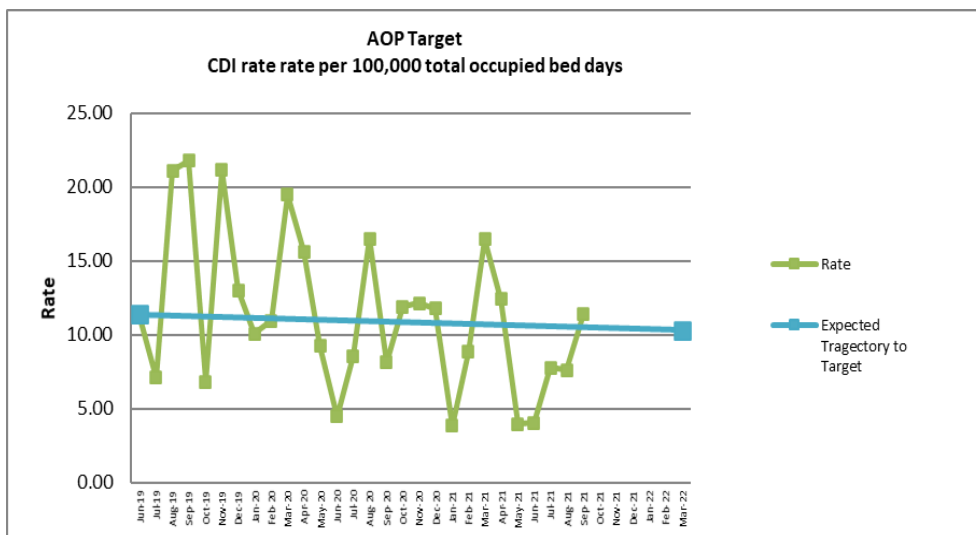
2.2. AOP Target Progress to date



Comments: Infection rate has decreased this month, however as the AOP target is based on a mean rate and achieving the target for March 2022 will be challenging.



Comments: Reduction is on trajectory. No concerns to raise



Comments: Reduction is on trajectory. No concerns to raise

July - September 2021

Target	Status
ECB	↑
SAB	↑
CDI	↔

3. Staph Aureus Bacteraemias (SABs)

All blood cultures that grow bacteria are reported nationally and it was found that *Staph aureus* became the most common bacteria isolated from blood culture. As *Staph aureus* is an organism that is found commonly on skin it was assumed (nationally) the bacteraemias occurred via a device such as a peripheral vascular catheter (PVC) and as such a national reduction strategy was initiated and became part of the then HEAT targets in 2006. The target was a national reduction rather than a board specific reduction, however the latest target set for 2019-2022 are Board specific, based on our current infection rates.

3.1. NHS Forth Valley's approach to SAB prevention and reduction

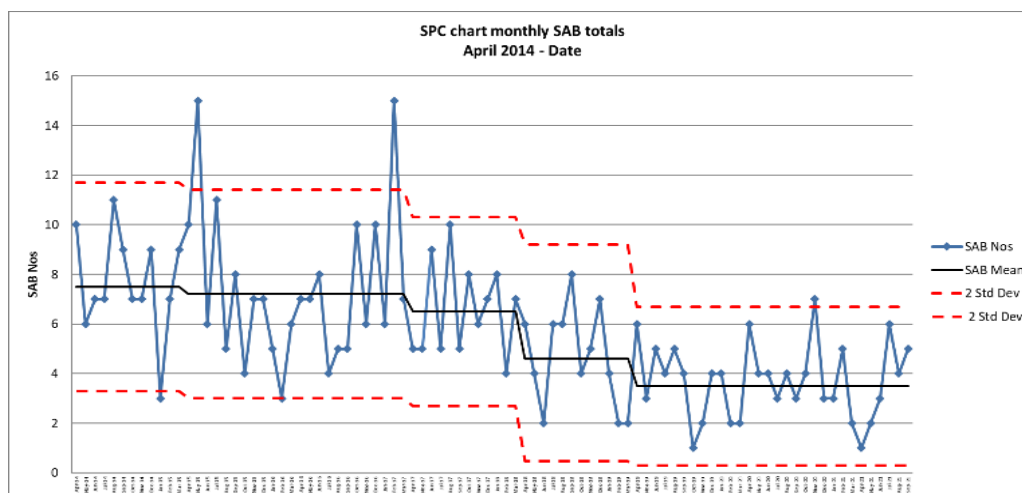
All *Staph aureus* bacteraemia are monitored and reported by the IPCT. Investigations to the cause of infection consist of examining the patients notes, microbiology, biochemistry and haematology reports to identify potential causes of the infection; from this, in most cases, a provisional cause is identified, however this is discussed further with the clinical team responsible for the management of the patient to assist further with the investigation. Any issues identified during the investigations, such as incomplete bundle completion etc is highlighted at this time and where appropriate an IR1 is reported. Once a conclusion has been agreed, the investigations are presented to the Infection Control Doctor/Microbiologist for approval. The investigation is concluded with the IPCT reporting their findings to the clinical team and management.

This data is entered into the IPCT database collated, analysed and reported on a monthly basis. The analysis of the data enables the IPCT to identify trends in particular sources of infections, such as Hickman line infections etc and identifying areas requiring further support. The data also influences the direction of the HAI annual workplan.

July – September 2021

	April - June	July - Sept
Hospital	2	4
Healthcare	4	11
Nursing Home	0	0
Quarterly Total	6	15

Hospital	No of SABs
Falkirk Community Hospital	0
Bo'ness Community Hospital	0



Comments: This quarter has seen an increase in SABs compared to the last quarter however case numbers remain within control limits; Hospital case numbers have increased slightly, however, hospital activity has also increased this quarter which might reflect this increase. The predominant increase was attributed to healthcare sourced SABs. There were no reported cases in Falkirk or Bo'ness hospitals this quarter.

4. Device Associated Bacteraemias (DABs)

In addition to the nationally set targets, infections from an invasive device caused by *Staph aureus* would be investigated fully and reported, any other organism causing the same infection was not mandated to report nationally or to be investigated. As a result of this, in 2014, the IPCT started reporting all bacteraemias attributed to an invasive device regardless of the bacterium causing the infection. Due to the importance and significance of this surveillance, it is now part of our local AOP.

4.1. NHS Forth Valley's approach to DAB prevention and reduction

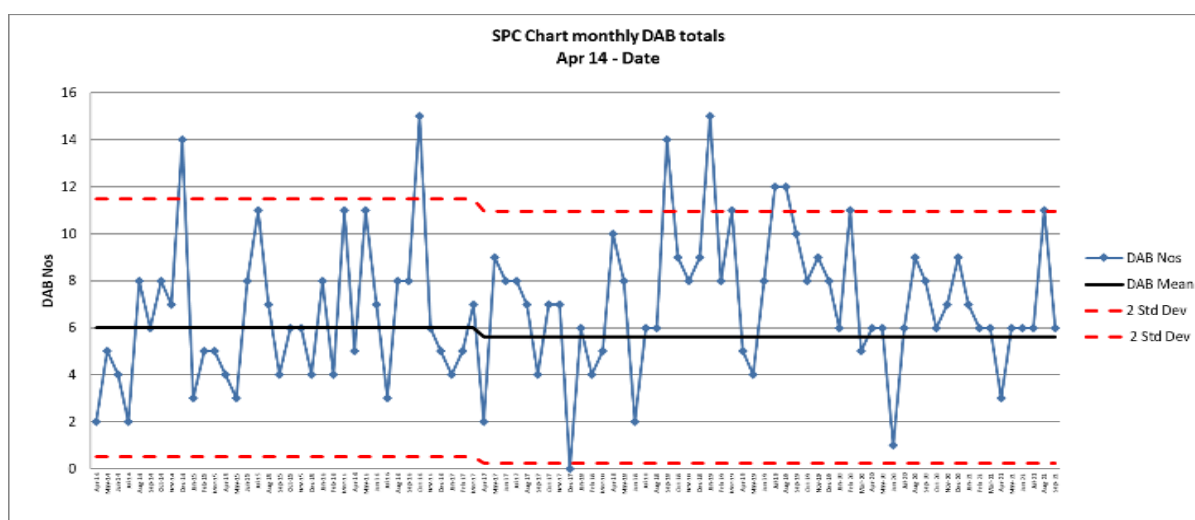
Continual monitoring and analysis of local surveillance data enables the IPCT and managers to identify and work towards ways to reduce infections associated with devices. All DABs are reviewed and investigated fully and highlighted to the patients' clinicians, nursing staff and management. Where appropriate an IR1 is generated to enable infections that require learning is shared and discussed at local clinical governance meetings.

In addition, on a weekly basis the IPCT assess bundle compliance of three invasive devices peripheral vascular catheters (PVCs), urinary catheters, central venous catheters (CVCs) etc) as part of their ward visit programme and this is reported in the monthly Directorate Reports.

July – September 2021

	April - June	July -Sept
Hospital	4	6
Healthcare	13	15
Nursing Home	0	2
Quarterly Total	17	23

Hospital	No of DABs
Falkirk Community Hospital	0
Bo'ness Community Hospital	0



Comments: This quarter has seen a slight increase in reported cases compared to the previous quarter; Case numbers remained within control limits for hospital, however in August healthcare sourced DABs exceeded control limits.

There were no reported DABs for Falkirk or Bo'ness hospitals this quarter.

5. Escherichia coli Bacteraemia (ECB)

5.1. NHS Forth Valley's approach to ECB prevention and reduction

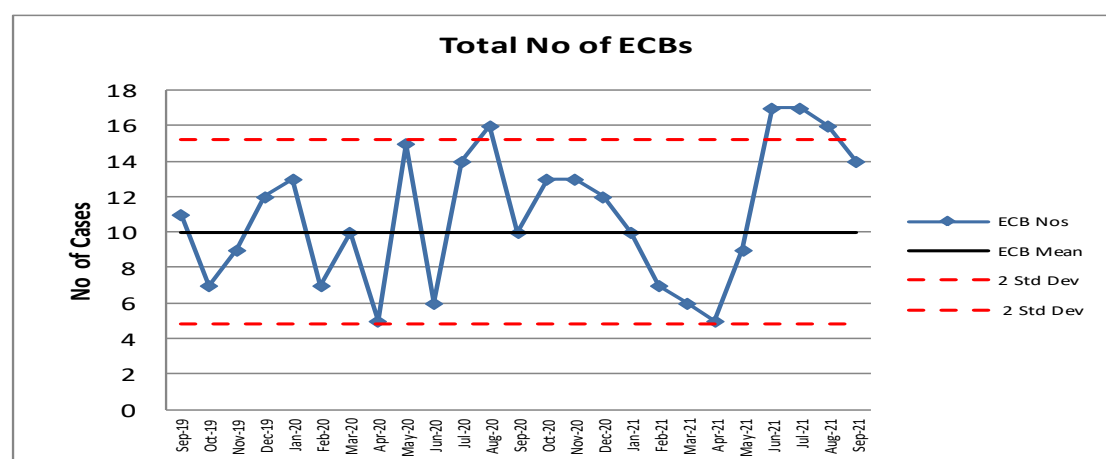
Escherichia coli (E coli) is one of the most predominant organism of the gut flora and for the last several years the incidence of E coli isolated from blood cultures i.e. causing sepsis, has increased so much that it is the most frequently isolated organism in the UK. As a result of this, the Healthcare Acquired Infection (HAI) Policy Unit has now included E coli as part of the AOP targets. The most common cause of E coli bacteraemia (ECB) is from complications arising from urinary tract infections (UTIs), hepato-biliary infections (gall bladder infections) and urinary catheters infections.

In NHS Forth Valley, device associated bacteraemias (DABs) surveillance has been ongoing since 2014 and have seen a reduction in urinary catheter bacteraemias over the years including E. coli associated infections and will hope to continue to reduce so to achieve our target for 2022.

July – September 2021

	April - June	July - Sept
Hospital	8	11
Healthcare	23	33
Nursing Home	0	3
Quarterly Total	31	47

Hospital	No of ECBs
Falkirk Community Hospital	0
Bo'ness Community Hospital	0



Comments: This quarter has seen an increase in reported cases compared to the previous quarter both from hospital but predominantly from healthcare sourced bacteraemias. In July and August, case numbers exceeded control limits for healthcare sourced infections. Hospital activity has also increased which may account for the increase in hospital infections. There were no reported ECBs from Falkirk or Bo'ness hospitals this quarter.

6. Clostridioides difficile Infections (CDIs)

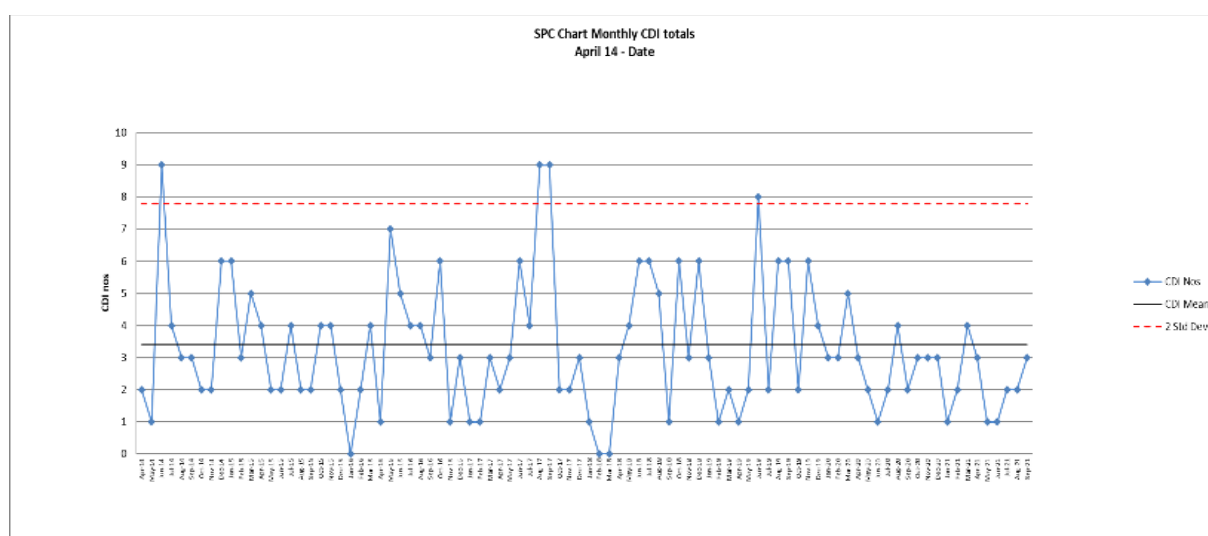
6.1. NHS Forth Valley's approach to CDI prevention and reduction

Similar to our SABs and DABs investigation, patient history is gathered including any antibiotics prescribed over the last few months. Discussion with the clinical teams and microbiologists assist in the determination and conclusion of the significance of the organism, as sometimes the organism isolated can be an incidental finding and not the cause of infection. Data is shared with the antimicrobial pharmacist and cases are discussed at the Antimicrobial Management Group to identify inappropriate antimicrobial prescribing.

July – September 2021

	April - June	July - Sept
Hospital	1	2
Healthcare	3	5
Nursing Home	1	0
Quarterly Total	5	7

Hospital	No of CDIs
Falkirk Community Hospital	0
Bo'ness Community Hospital	0



Comments: There was a slight decrease in CDIs compared to the previous quarter. Cases numbers remained within control limits this quarter. No reported cases were identified in either Bo'ness or Falkirk community hospitals this quarter.

7. Estate and Cleaning Compliance (per hospital)

The data is collected through audit by the Domestic Services team using the Domestic Monitoring National Tool and areas chosen within each hospital is randomly selected by the audit tool. Any issues such as inadequate cleaning is scored appropriately and if the score is less than 80% then a re-audit is scheduled. Estates compliance is assessed whether the environment can be effectively cleaned; this can be a combination of minor non-compliances such as missing screwcaps, damaged sanitary sealant, scratches to woodwork etc. The results of these findings are shared with Serco/Estates for repair. Similar to the cleaning audit, scores below 80% triggers a re-audit.

Board wide totals




	Oct-Dec 2020	Jan-Mar 2021	Apr - June 2021	July – Sept 2021
Cleaning	96	96	95	95
Estates	94	94	95	94

Falkirk Community Hospital

	Oct-Dec 2020	Jan-Mar 2021	Apr - June 2021	July – Sept 2021
Cleaning	96	94	93	93
Estates	87	89	89	89

Bo'ness Hospital

	Oct-Dec 2020	Jan-Mar 2021	Apr - June 2021	July – Sept 2021
Cleaning	94	96	97	94
Estates	90	91	90	90

	Colour	Description
	Green	compliance level 90% and above - Compliant
	Amber	compliance level between 70% and 90% - Partially compliant
	Red	compliance level below 70% - Non-compliant

7.1. Falkirk Community & Bo'ness Hospital Estate and Cleaning Scores

Both cleaning and estate scores remained consistent over the last quarter. Results from the monthly audits are discussed at the Estates Compliance Group to look at ways to improve the scores.

8. Incidence/Outbreaks

Incidence and outbreaks across NHSFV are identified primarily through ICNet, microbiology or from the ward. ICNet is the IPCT data management system that automatically identifies clusters of infections and specific organisms such as MRSA, admission of patients with known infections etc to enable timely patient management to prevent any possible spread of infection. The identification of outbreaks is determined following discussion with the Microbiologist. In the event of a declared outbreak a Problem Assessment Group or Incident Management Team meeting is held with staff from the area concerned and actions are implemented to control further infection and transmission.

All outbreaks are notified to ARHAI Scotland and Scottish Government (see below for further details).

8.1. Healthcare Acquired Infection Incident Template (HAIT)

The HAIT is a tool used by boards to assess the impact of an incident or outbreak. The tool is a risk assessment and allows boards to rate the incident/outbreak as a red, amber, or green. The tool also directs boards whether to inform ARHAI Scotland/SG of the incident (if amber or red), release a media statement etc.

- HAIT **Green** – None reported this quarter
- HAIT **Amber** – One was reported this quarter
- HAIT **Red** – None reported this quarter

All outbreaks are notified to Health Protection Scotland and Scottish Government.

There were no reported outbreaks for this quarter.