

Agenda Item 10

Hospital Acquired Infection Performance Report



Falkirk IJB Clinical and Care Governance Committee

25 February 2022

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 October 2021 to December 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 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:

- 2.1 consider and comment on 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.
- 4.2 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 remained stable this quarter.
- 5.2 This report to CCGC is part of the monthly and quarterly reporting through NHS Forth Valley 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.

Directions

A new Direction or amendment to an existing Direction is not required.

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 October 2021 – December 2021

Healthcare Acquired Infection Performance Report

Reporting Period
October 2021 – December 2021



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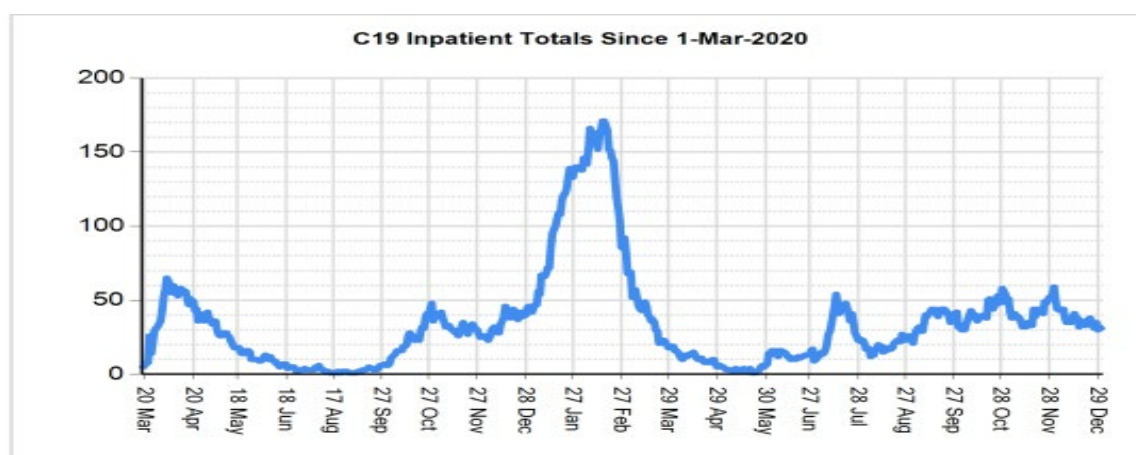
1. Key challenges this quarter

1.1. Covid-19 Pandemic

This quarter COVID-19 hospital admission has remained relatively stable with an inpatient average of approximately 35-40 inpatients per day. This quarter saw the emergence of the Omicron variant which predicted an increase in hospital admissions due to the increased transmissibility of this variant. This variant is the predominant strain in Scotland and experience over this quarter and early indications suggest that symptoms appear less acute compared to the Delta variant and hasn't impacted our inpatient numbers so far.

There were four Covid related outbreaks reported for this quarter across NHSFV. There were no reported or identified outbreaks in Falkirk and Bo'ness hospitals.

Graph of inpatients with confirmed Covid -19



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. NHS Forth Valley's rate for hospital onset COVID is currently 0.5% compared to the national rate of 0.6%.

Table 1: Number of COVID-19 cases, by onset status and NHS board: specimen dates up to 12 December 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	55,172	1,203	168	289	536	2.2%	0.3%	0.5%	1.0%
Borders	11,571	188	24	31	73	1.6%	0.2%	0.3%	0.6%
Dumfries & Galloway	16,942	359	32	11	30	2.1%	0.2%	0.1%	0.2%
Fife	50,691	844	60	53	292	1.7%	0.1%	0.1%	0.6%
Forth Valley	45,398	892	101	92	222	2.0%	0.2%	0.2%	0.5%
Golden Jubilee	36	20	8	3	5	-	-	-	-
Grampian	60,734	681	86	81	254	1.1%	0.1%	0.1%	0.4%
Greater Glasgow & Clyde	201,821	3,805	617	656	1,574	1.9%	0.3%	0.3%	0.8%
Highland	29,288	289	19	9	43	1.0%	0.1%	0.0%	0.1%
Lanarkshire	117,948	1,416	270	306	593	1.2%	0.2%	0.3%	0.5%
Lothian	125,406	1,871	240	355	716	1.5%	0.2%	0.3%	0.6%
Orkney	977	11	0	1	5	1.1%	0.0%	0.1%	0.5%
Shetland	1,103	17	1	0	0	1.5%	0.1%	0.0%	0.0%
Tayside	54,637	1,125	138	154	306	2.1%	0.3%	0.3%	0.6%
Western Isles	1,622	17	1	3	6	1.0%	0.1%	0.2%	0.4%
Scotland	773,346	12,738	1,765	2,044	4,655	1.6%	0.2%	0.3%	0.6%

1. Source of data are Corporate Data Warehouse (CDW) that contains test results from Electronic Communication of Surveillance in Scotland (ECOSS) and Rapid Admission Preliminary Inpatient Data (RAPID) or local admission data.
2. NHS Golden Jubilee has been excluded from the proportions data since data for this board will not be comparable with others due to no "community onset" cases assigned to that board.
3. The data used has not been adjusted for different patient groups and size of NHS board.

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.

1.4. Draft National HAI Standards

The new national HAI Standards has been drafted and were sent out for consultation in October. This revised standard (previously 2015 HAI Standards) will now also apply to care homes and it is due for final publication in May 2022.

2. Annual Operating Plan Target

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

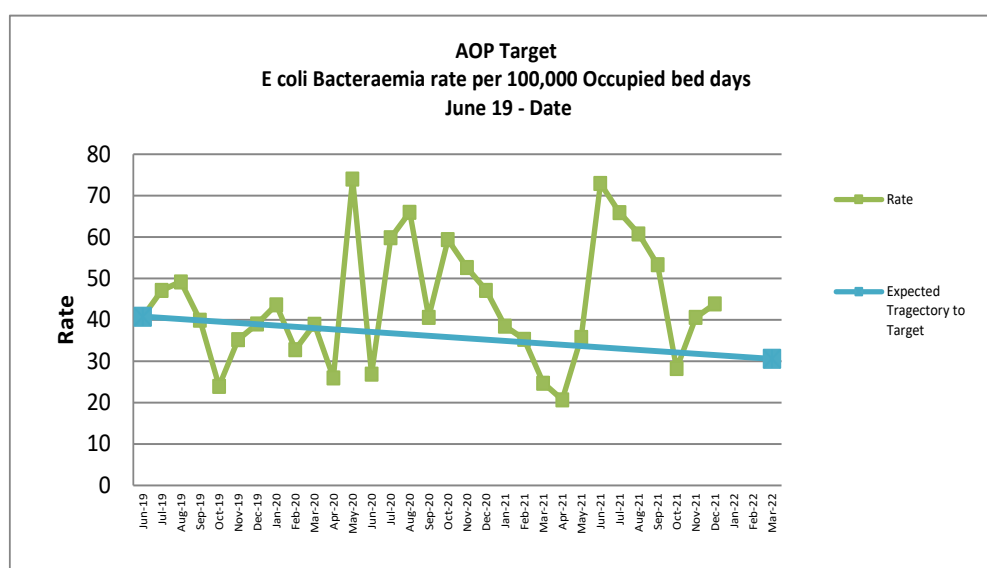
On the 10th October 2019, a letter was sent to all Health Board Chief Executives highlighting our new HAI targets. These targets are based on our (Forth Valley) current rates of infection and a percentage reduction has been set to be achieved by March 2022. This target is different from our previous targets and includes the reduction in hospital and healthcare acquired infections and does not include community acquired. 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.

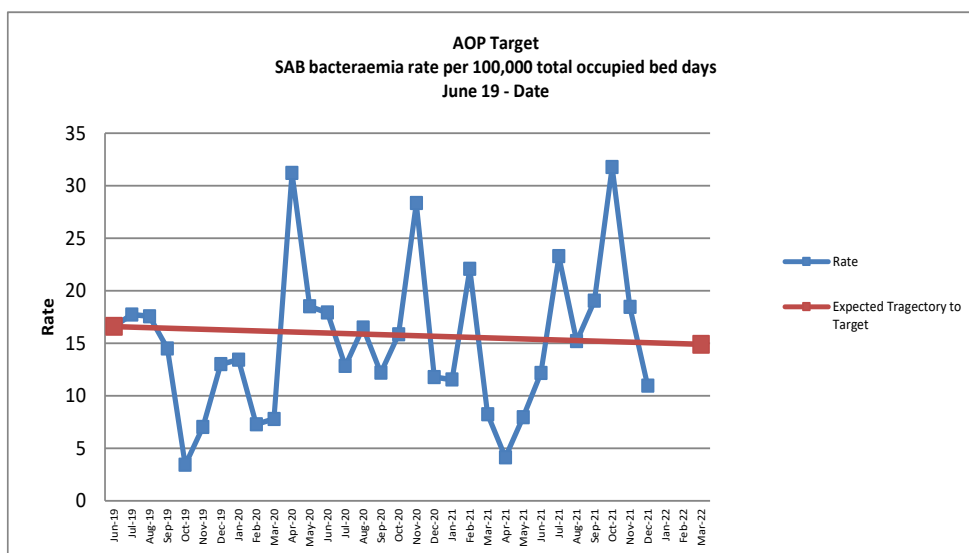
The data is currently being reformatted to address these targets and will be included in future reports. Please see table below for our new targets:

	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

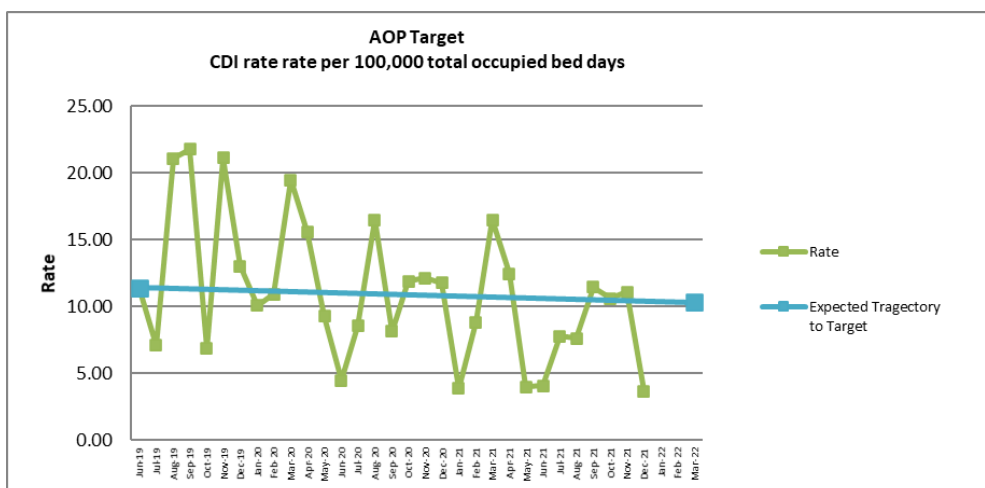
2.2. AOP Target Progress to date



Comments: Infection rate has decreased compared to the previous quarter. However as the target is based on a mean rate, it is anticipated that FV will not achieve the target rate by March 2022.



Comments: Reduction is on trajectory. No concerns to raise



Comments: Reduction is on trajectory. No concerns to raise

The table below shows the current rate and the target rate to date.

Target Organism	Target Rate (per 100,000 total bed days)	Current Rate April 21 - date (per 100,000 total bed days)	Status
ECB	30.6	46.9	Unlikely to achieve target
SAB	14.9	15.8	Likely to achieve target
CDI	10.3	8.1	Likely to achieve target

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

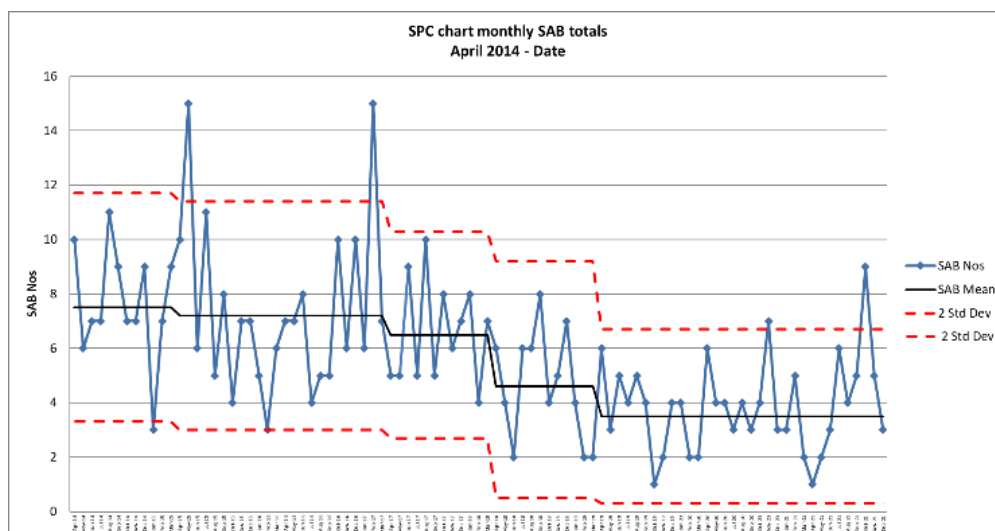
All *Staph aureus* bacteraemia are monitored and reported by the IPCT. Investigations to the cause of infection consist of examining the patients notes, microbiology, biochemistry and haematology reports to identify potential causes of the infection; from this, in most cases, a provisional cause is identified, 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.

October - December 2021

	July – Sept 2021	Oct – Dec 2021
Hospital	4	4
Healthcare	11	12
Nursing Home	0	1
Quarterly Total	15	17

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



Comments: This quarter has seen a slight increase in SABs compared to the last quarter and case numbers exceeded control limits in September. This exceedance was attributed to an increase in healthcare sourced infections. 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

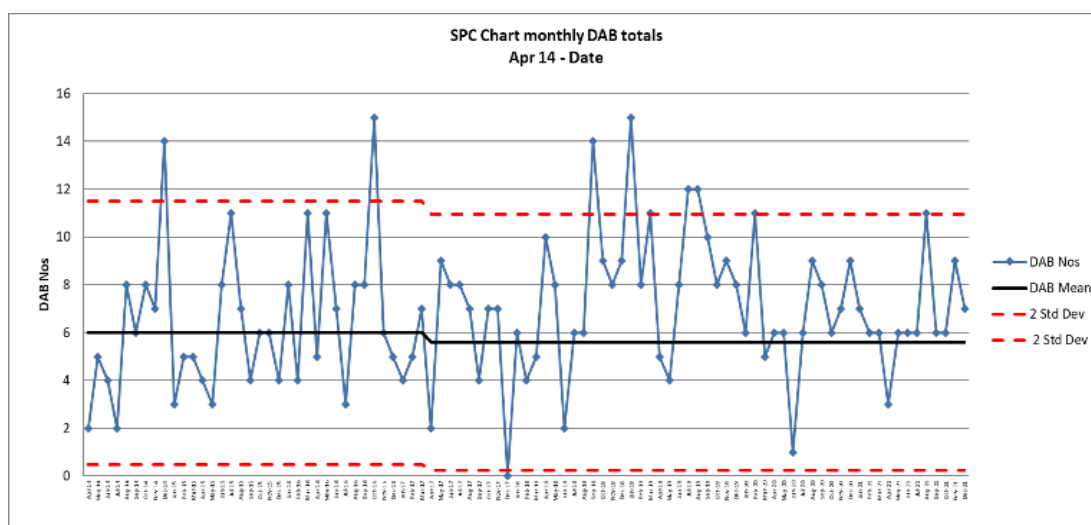
Continual monitoring and analysis of local surveillance data enables the IPCT and managers to identify and work towards ways to reduce infections associated with devices. All DABs are reviewed and investigated fully and highlighted to the patients' clinicians, nursing staff and management. Where appropriate 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.

October - December 2021

	July -Sept 2021	Oct – Dec 2021
Hospital	6	10
Healthcare	15	11
Nursing Home	2	1
Quarterly Total	23	22

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



Comments: This quarter has remained stable in reported cases compared to the previous quarter; Case numbers remained within 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

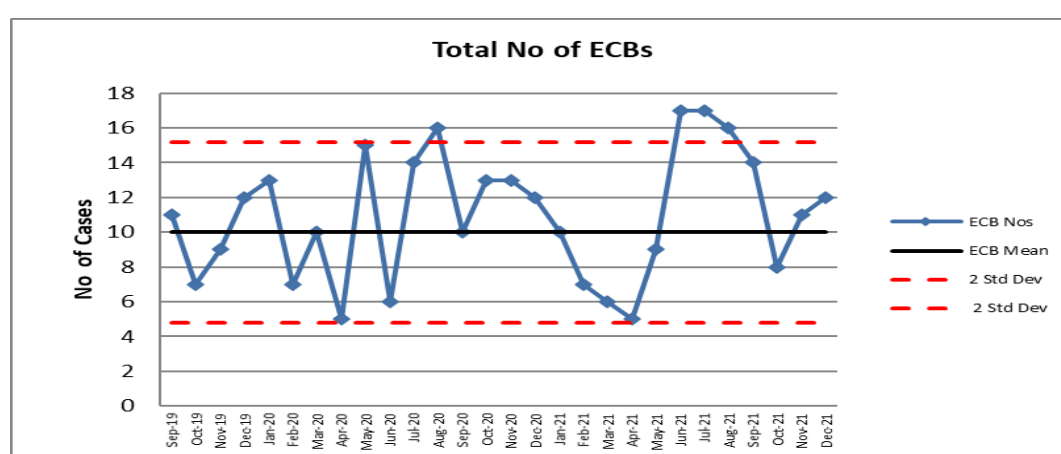
Escherichia coli (E coli) is one of the most predominant organism of the gut flora and for the last several years the incidence of E coli isolated from blood cultures i.e. causing sepsis, has increased so much that it is the most frequently isolated organism in the UK. As a result of this, the Healthcare 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.

October - December 2021

	July – Sept 2021	Oct – Dec 2021
Hospital	11	16
Healthcare	33	17
Nursing Home	3	3
Quarterly Total	47	36

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



Comments: This quarter has seen a decrease in reported cases particularly in healthcare sourced infections. There has been a slight increase in hospital infections. Both healthcare and hospital acquired infections remained within control limits this quarter. There were no reported ECBs from Falkirk or Bo'ness hospitals this quarter.

6. Clostridioides difficile Infections (CDIs)

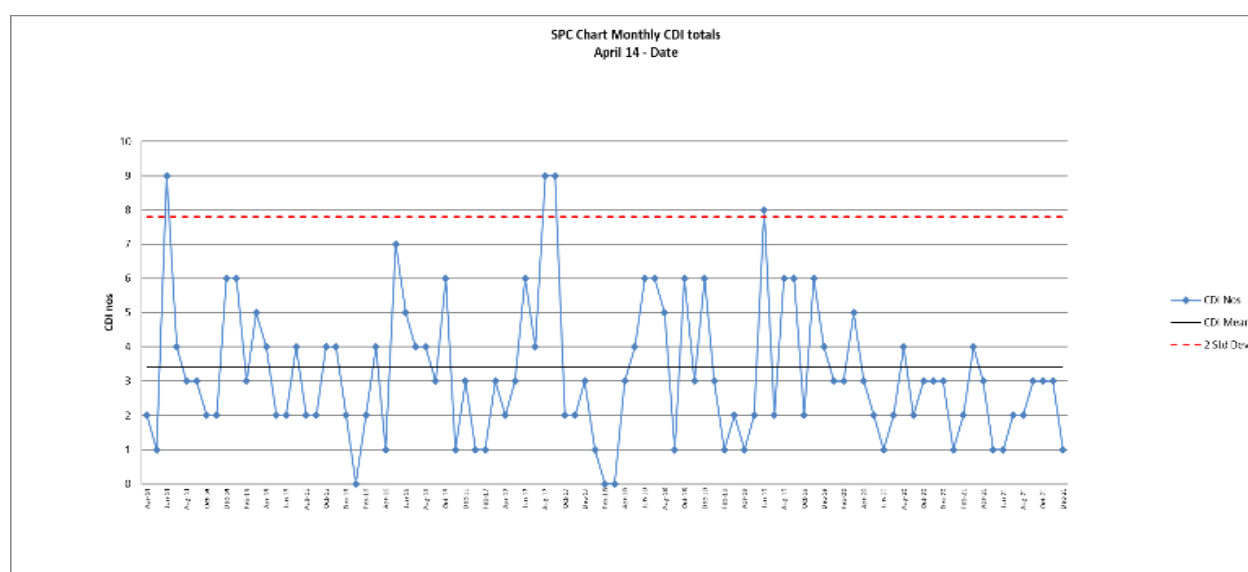
6.1. NHS Forth Valley's approach to CDI prevention and reduction

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.

October – December 2021

	July – Sept 2021	Oct – Dec 2021
Hospital	2	4
Healthcare	5	3
Nursing Home	0	0
Quarterly Total	7	7

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



Comments: Reported CDI case numbers have remained stable compared to the last quarter and 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				
	Jan-Mar 2021	Apr - June 2021	July – Sept 2021	Oct- Dec 2021
Cleaning	96	95	95	95
Estates	94	95	94	95

Falkirk Community Hospital				
	Jan-Mar 2021	Apr - June 2021	July – Sept 2021	Oct- Dec 2021
Cleaning	94	93	93	95
Estates	89	89	89	89

Bo'ness Hospital				
	Jan-Mar 2021	Apr - June 2021	July – Sept 2021	Oct- Dec 2021
Cleaning	96	97	94	96
Estates	91	90	90	97

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 in Falkirk and Bo'ness Hospitals.