

Infection Prevention & Control Report to Trust Board

Meeting Date – 9th January 2025

1. Executive Summary

Healthcare-Associated Infection (HCAI) Reduction Targets

Reduction Targets

The Department of Health for Northern Ireland (NI) has issued new HCAI reduction targets covering a five-year period from 2024/25 to 2028/29. These targets relate to *Clostridium difficile* (*C. difficile*) associated disease and Meticillin-Resistant *Staphylococcus aureus* (MRSA) bacteraemia. A new methodology has been adopted for setting the targets in line with the new UK Antimicrobial Resistance National Action Plan, which was launched in May 2024. Changes include:

- Targets will now be measured as an incidence rate per 100,000 occupied bed days instead of the previous count of cases.
- The Decision to Admit Date will be used as the starting point of admission for categorising cases as either healthcare-associated or community-associated instead of the Inpatient Admission Date. (Where a Decision to Admit Date is unavailable, the Inpatient Admission Date will continue to be used).
- Attribution of *C. difficile* cases to healthcare-associated or community-associated categories will be based on a two-day timeframe from admission instead of the previous three-day timeframe. (The two-day rule is already in use for MRSA bacteraemia so that definition has not changed).

The latter two changes have the potential to increase the proportion of cases being categorised as healthcare-associated compared to previous years.

The new reduction targets are:

Organism	Year	Maximum target incidence rate, measured as cases per 100,000 occupied beds
<i>C. difficile</i>	2024/25	13.5
	2025/26	12.5
	2026/27	11.6
	2027/28	10.6
	2028/29	9.7
MRSA	2024/25	1.613
	2025/26	1.613
	2026/27	1.613
	2027/28	1.613
	2028/29	1.613

The baseline years against which the targets are measured are different for the two organisms. For MRSA, the baseline figure is taken from 2019/20, prior to the impact of the COVID-19 pandemic, and this is set out in the National Action Plan. For *C. difficile*, however, the National Action Plan includes no directive so last year, 2023/24, has been chosen as the baseline.

The Trust has raised concerns regionally regarding the new methodologies being used and the use of a single year's performance as the baseline. A meeting was held with the Public Health Agency

(PHA) on 16th December 2024 where the Trust reiterated concerns regarding the current target setting but, unfortunately, no further dispensations or suggestions were provided on how this might be addressed.

Surveillance of Meticillin-Sensitive *Staphylococcus aureus* (MSSA) bacteraemia and gram-negative bacteraemia (GNB), specifically *Escherichia coli*, *Klebsiella species* and *Pseudomonas aeruginosa*, remains mandatory but there are no targets associated with these organisms.

Current *C. difficile* Performance

So far this year 39 cases of *C. difficile* have been reported. 26 of the cases are classified as healthcare-associated as they occurred two or more days after admission to hospital (definition used by the PHA). However, this is not always an accurate predictor of being healthcare-associated. The remainder (13) are classified as community-associated as the patients presented with symptoms within a two-day period after admission.

The most recent incidence rate available is for October 2024 and it is 20.47. As such, the Trust is off track for meeting the reduction target.

Current MRSA Bacteraemia Performance

Since the beginning of April 2024 three MRSA bacteraemia cases have been reported. One is categorised as healthcare-associated as it occurred two or more days after admission to hospital (definition used by the PHA). The other two are classified as community-associated as the patients presented with symptoms within a two-day period after admission.

The most recent incidence rate available is for October 2024 and it is 1.28. As such, the Trust is on track to achieve the reduction target.

2. Coronavirus (COVID-19)

Outbreak Management

COVID-19 outbreaks continue to be declared in Trust wards, departments and facilities. Between October and late December 2024, a total of six outbreaks occurred. The Infection Prevention & Control (IP&C) Team are leading on the management of these incidents as applicable. Incident meetings are taking place when required and all IP&C measures have been instigated as necessary.

3. Target Organisms Performance

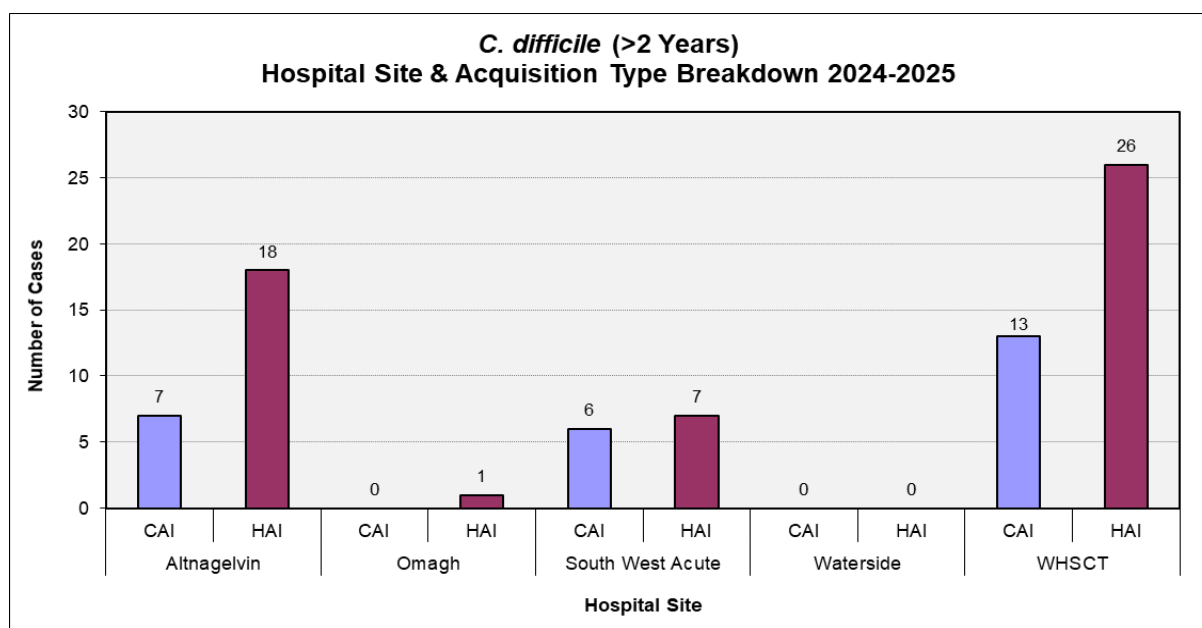
C. difficile

The 2024/25 target for *C. difficile* (\geq two years of age) is an incidence rate of 13.5 per 100,000 occupied bed days. This is a reduction of 0.9 on the baseline of 14.4 in 2023/24.

Between 1st April and 24th December 2024 39 cases were reported. A breakdown of the cases by hospital site and acquisition type is given in the chart below.

Key:

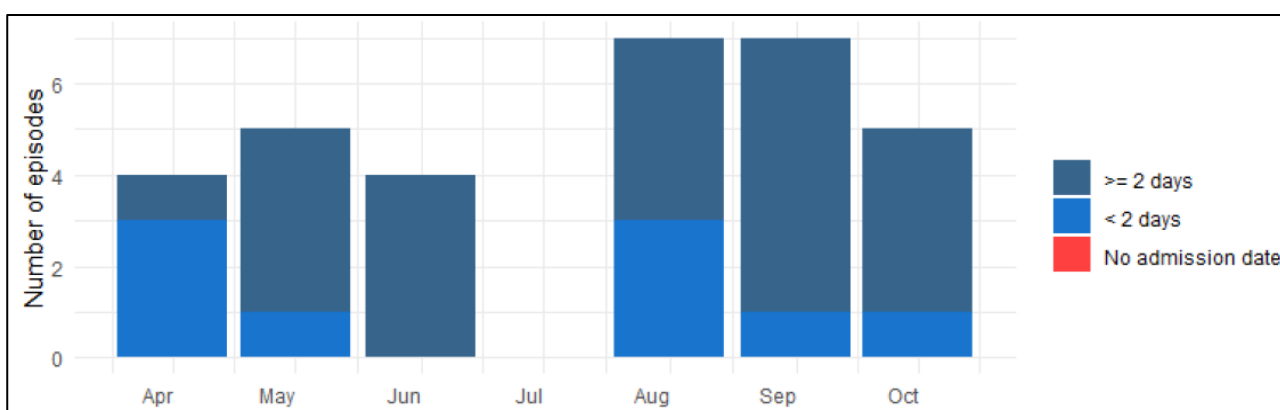
CAI Community-associated infection
HAI Hospital-associated infection

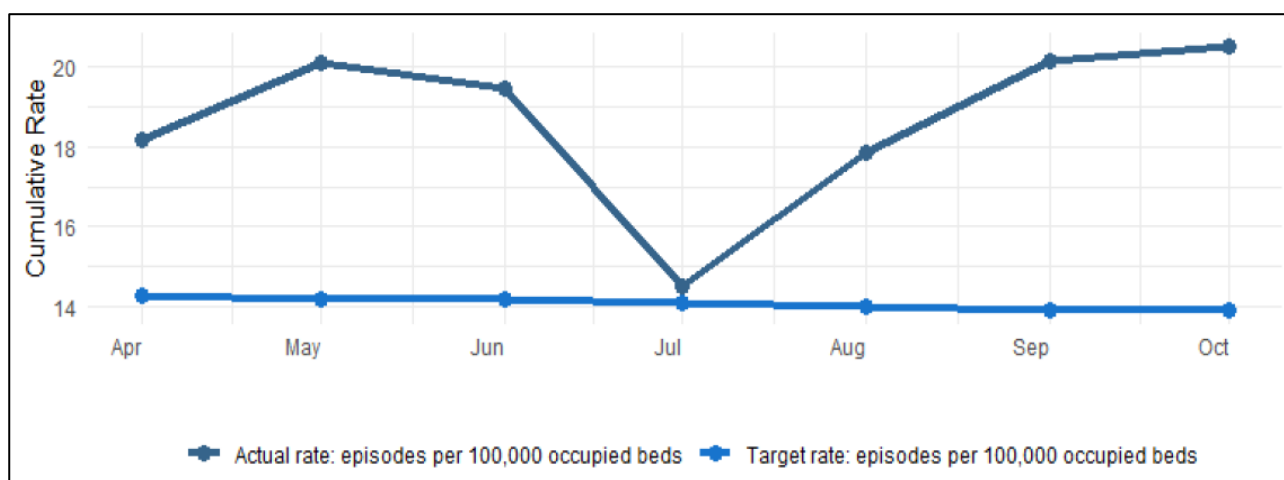


Since occupied bed days denominator data is released several months in arrears it is not possible to provide an up-to-date incidence rate. However, the most recent target monitoring report from the PHA includes data up to the end of October 2024, as follows:

Attribution	Apr	May	Jun	Jul	Aug	Sep	Oct	Cumulative
<2 days	3	1	0	0	3	1	1	9
>=2 days	1	4	4	0	4	6	4	23
No admission date*	0	0	0	0	0	0	0	0
Cases	4	5	4	0	7	7	5	32

*No Admission Date refers to cases where the admission date field was blank on Hi-Surv. These cases cannot be apportioned to < 2 or >= 2 days.





As of October 2024, the Trust was not meeting the reduction target set for *C. difficile*, having a cumulative rate of 20.47.

Comparison with Other Trusts

The PHA releases regional comparator information on a quarterly basis. The most recent data available covers up to the end of September 2024. The table below summarises the number of *C. difficile* cases and the rate per 100,000 occupied bed days for each Trust, plus NI averages, for each of the last four quarters.

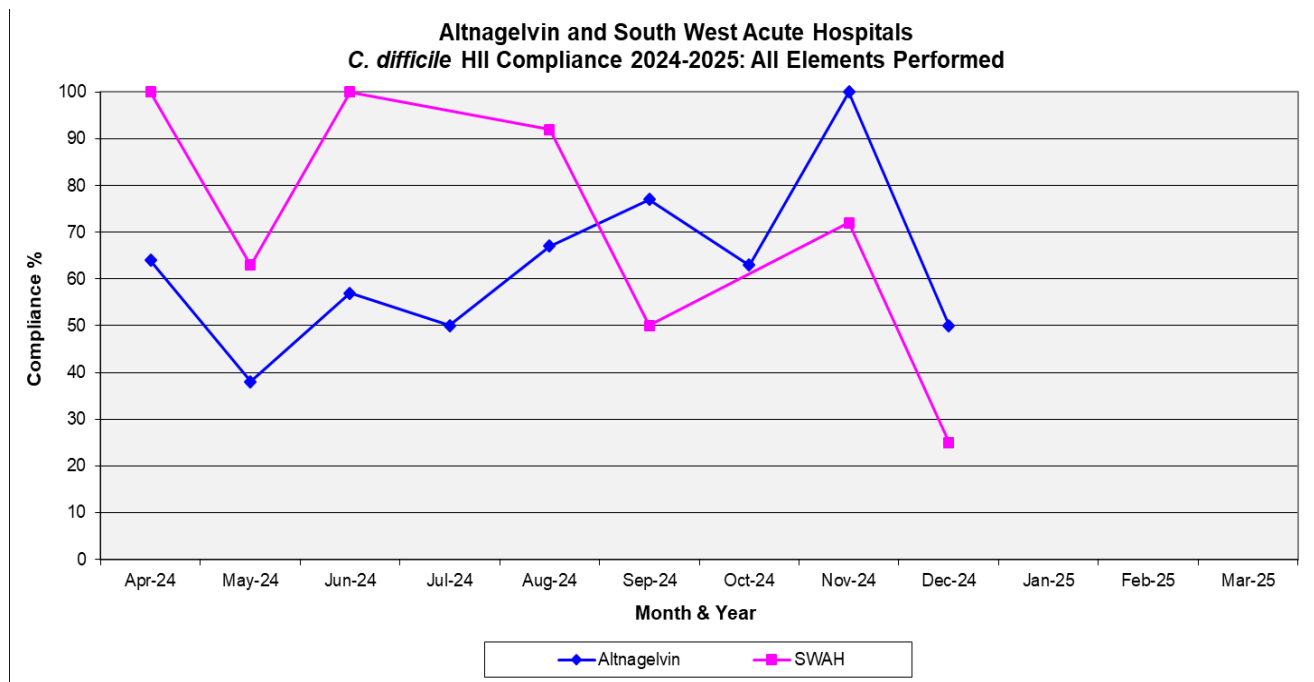
Between October 2023 and September 2024, the number of *C. difficile* cases in the Western Trust has increased quarter-on-quarter, as has the corresponding rate. Although the Trust has also reported the second lowest rate in NI for the last three quarters in a row.

	October-December 2023		January-March 2024		April-June 2024		July-September 2024	
	Number of Cases	Rate	Number of Cases	Rate	Number of Cases	Rate	Number of Cases	Rate
Western Trust	6	9.11	11	16.26	13	19.44	14	20.83
Southern Trust	26	36.63	25	33.89	27	37.32	20	28.00
South Eastern Trust	15	23.77	12	19.01	21	29.26	24	33.07
Northern Trust	15	20.20	6	7.94	8	8.01	10	13.20
Belfast Trust	31	21.97	41	28.66	31	22.80	29	21.77
Northern Ireland	93	22.39	95	22.45	100	22.38	97	23.08

C. difficile Care Bundle and Care Pathway Audits

Evidence based care bundles are effective when all elements of care are performed consistently. Therefore, scores are represented as either Pass (100%) or Fail (anything less than 100%). Consistent compliance with the *C. difficile* care bundle remains a challenge and is currently poor across both acute sites. The findings indicate issues around prudent antibiotic prescribing, correct hand hygiene and isolation/ cohort nursing.

The graph below illustrates the overall compliance with all of the elements of the *C. difficile* high impact intervention (HII) care bundle for Altnagelvin Hospital and the South West Acute Hospital (SWAH).



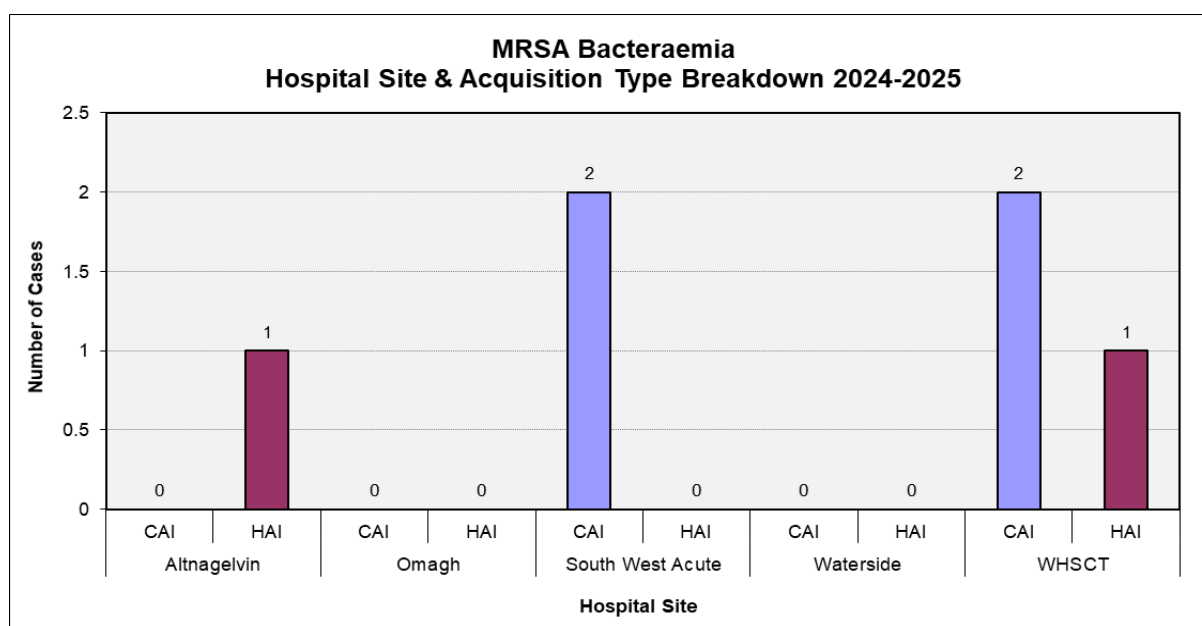
MRSA Bacteraemia

The 2024/25 target for MRSA bacteraemia is an incidence rate of 1.613 per 100,000 occupied bed days. This represents no change compared to the 2019/20 baseline.

Between 1st April and 24th December 2024 three cases were reported. A breakdown of the cases by hospital site and acquisition type is given in the chart below.

Key:

CAI Community-associated infection
HAI Hospital-associated infection



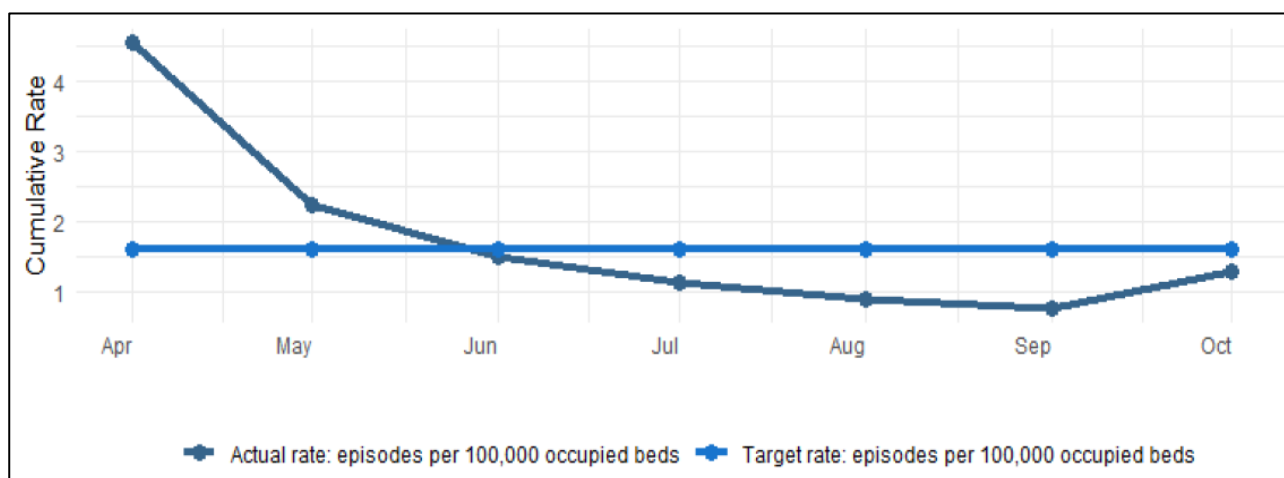
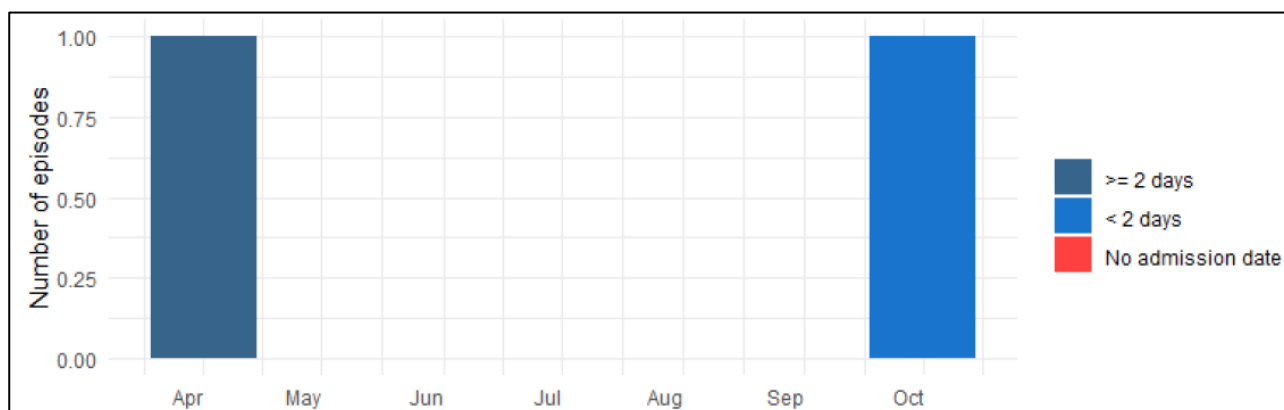
As of 24th December 2024, the total number of days since the last Trust hospital-associated MRSA bacteraemia is:

Altnagelvin – 242 days (Last recorded case was in Ward 32 ESU)
 SWAH – 1653 days (Last recorded case was in Ward 8)
 Tyrone County Hospital/ Omagh Hospital
 & Primary Care Complex (OHPCC) – 3625 days (Last recorded case was in the Rehab Unit)

Since occupied bed days denominator data is released several months in arrears it is not possible to provide an up-to-date incidence rate. However, the most recent target monitoring report from the PHA includes data up to the end of October 2024, as follows:

Attribution	Apr	May	Jun	Jul	Aug	Sep	Oct	Cumulative
<2 days	0	0	0	0	0	0	1	1
>=2 days	1	0	0	0	0	0	0	1
No admission date*	0	0	0	0	0	0	0	0
Cases	1	0	0	0	0	0	1	2

*No Admission Date refers to cases where the admission date field was blank on Hi-Surv. These cases cannot be apportioned to < 2 or >= 2 days.



As of October 2024, the Trust was achieving and exceeding the reduction target set for MRSA bacteraemia with a cumulative rate of 1.28.

Comparison with Other Trusts

The PHA releases regional comparator information on a quarterly basis. The most recent data available covers up to the end of September 2024. The table below summarises the number of MRSA bacteraemia cases and the rate per 100,000 occupied bed days for each Trust, plus NI averages, for each of the last four quarters.

The Western Trust's rate remains very low and stable. As of July-September 2024, the Trust was reporting the lowest rate in NI.

	October-December 2023		January-March 2024		April-June 2024		July-September 2024	
	Number of Cases	Rate	Number of Cases	Rate	Number of Cases	Rate	Number of Cases	Rate
Western Trust	1	1.52	1	1.48	1	1.50	0	0.00
Southern Trust	0	0.00	0	0.00	1	1.40	1	1.40
South Eastern Trust	1	1.58	3	4.75	2	2.79	2	2.76
Northern Trust	3	4.04	2	2.65	1	1.00	2	2.64
Belfast Trust	6	4.25	2	1.40	6	4.41	6	4.50
Northern Ireland	11	2.65	8	1.89	11	2.46	11	2.62

4. *Pseudomonas*

Pseudomonas aeruginosa is an opportunistic pathogen or coloniser, well known in the hospital environment. *Pseudomonas* is predominantly an environmental organism and is highly attracted to water sources. *Pseudomonas* is ubiquitous in the alimentary tract of humans and, therefore, carriage is normal and its presence is not indicative of infection. The term 'colonisation' is used to describe the identification of any organism without signs of infection. Specific groups of patients who are immunocompromised are at a higher risk of colonisation or infection than the normal population. The Trust has stringent measures in place regarding the surveillance and management of *Pseudomonas* in augmented care areas and participates in the PHA surveillance as detailed below.

Pseudomonas Surveillance (Augmented Care* Areas Only)

	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
2021/22	0	0	1	0	0	0	2	1	0	0	0	0	4
2022/23	1	1	0	0	0	0	0	1	2	0	1	0	6
2023/24	0	0	0	0	0	1	0	0	0	0	0	0	1
2024/25	0	0	0	0	0	0	1	0	1†				2†

* The PHA defines augmented care as NNICU, Adult ICU/ HDU, Renal, Oncology/ Haematology.

† These values are subject to change as the report was compiled prior to the end of the month/ year.

Since the beginning of April 2024 two *Pseudomonas* cases have been reported. One is categorised as healthcare-associated and the other as community-associated.

The most recent healthcare-associated positive blood culture in an augmented care area pertains to an inpatient admission in NNICU, Altnagelvin, in October 2024. Applicable IP&C measures were put in place. No other positive blood cultures have been identified in NNICU since the surveillance programme began in 2012 and the last positive colonisation occurred in November 2021. A series of multi-disciplinary meetings were held and a range of investigations took place, including water testing, environmental screening and assurance checks on departmental processes. No identifiable source for the infection could be found and there was no evidence of ongoing transmission within the Unit. The Molecular Typing Service confirmed that this new isolate did not match any other clinical or environmental isolates referred to them for typing from the Western Trust within the previous six months. A serious adverse incident investigation is to be carried out.

5. Legionella

Water testing continues throughout key Trust owned facilities and a range of mitigating actions are in place as per the Trust Water Safety Plan. A planned *Legionella* and *Pseudomonas aeruginosa* testing programme is also in place for PFI buildings, including the SWAH and the Labs & Pharmacy Building, Altnagelvin. The process is managed by Mitie FM and Integral FM respectively. All positive results and proposed actions are reported to core members of the Trust's Water Safety Group (WSG) on an ongoing basis. Exceptions are discussed at the WSG meetings.

The WSG, which is a multi-disciplinary group, is responsible for ensuring the Trust's water systems are safe for all patients, staff and visitors at point of use. In order to ensure the Trust has safe, clean water systems the WSG has a robust process in place to monitor all water sampling results.

There has been an upward trend in the number of outlets testing positive for *Legionella* on the Altnagelvin site. These are mainly from underused outlets, which are managed, as per the Water Safety Plan, by the use of point-of-use filters. These ensure the safety of users and allow facilities to remain operational, with no adverse effect on services. The Trust's Water Safety Team continues to proactively work on reducing the number of positives. A planned programme of work is in place to improve the water system infrastructure, including exploring automated flushing options.

Increasing Compliance

The Estates' Water Safety Team continues to build compliance and demonstrate this via the Zetasafe compliance database tool. The Trust's compliance position is risk based and, although not 100% compliant, it is currently stable and high risks are being managed appropriately. The Trust's current compliance level is 99%.

6. Aseptic Non-Touch Technique (ANTT)

ANTT is a technique to prevent micro-organisms from being introduced to sterile/ susceptible body sites during any invasive procedure that bypasses the body's natural defences, such as wound care or when handling/ manipulating medical devices (urinary catheters, peripheral and central venous cannulas).

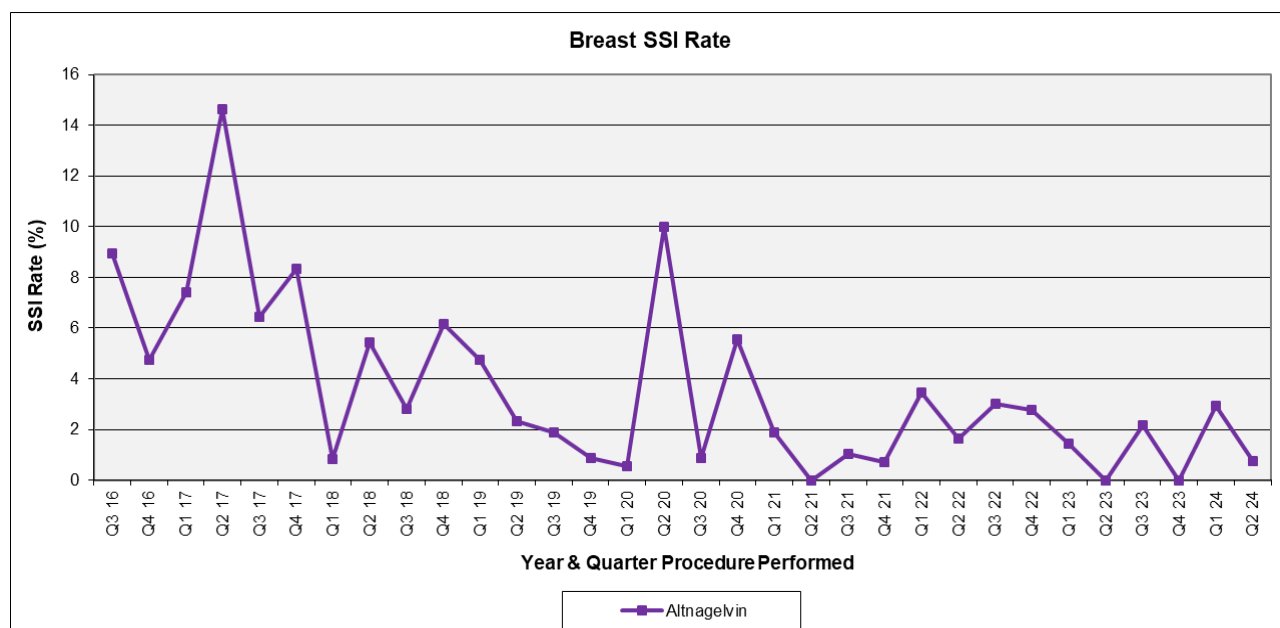
An ANTT e-learning programme is available on the regional learning management system, LearnHSCNI (<https://learn.hscni.net/>), which is available to all Western Trust staff. The website can be accessed from any internet-enabled Trust or personal device (PC/ laptop/ mobile phone/ tablet). Relevant staff (e.g. those with responsibility for the insertion and management of invasive devices) should update their ANTT training every two years. Between 1st April and 30th September 2024, a

total of 534 staff completed this training.

7. Breast Surgical Site Infection (SSI) Surveillance

A pilot surveillance programme for breast SSI commenced in July 2016. As the Western Trust is the only one undertaking this at present there is no comparator data for the rest of NI. The Trust's SSI rate has fallen significantly since the pilot began and is sitting at 0.75% (equating to one SSI) in quarter two 2024. This is a decrease when compared to the previous quarter (2.91%) and it is well down from the peak of 14.63% in quarter two 2017.

Multi-disciplinary team work is ongoing with regard to validation and assurance of the surveillance information and to continue driving forward improvements.



8. IP&C Nurse Independent Audits

The tables below show average compliance per quarter on a number of IP&C key performance indicators where audits have been completed by the IP&C Team. The audit results are discussed at the time with each staff member and used as learning opportunities. The audits are also shared with the ward/department manager and Professional Lead responsible for the area. If compliance is suboptimal it is the responsibility of the Professional Lead and Ward Manager to develop and action plan and this can be supported by the IPC team. This should also form part of their normal governance arrangements and is included in the Accountability & Assurance Meetings and the Chief Executive HCAI Accountability Forum.

As the information in the table is average compliance per quarter it is difficult to identify specific improvement plans as different wards/departments are captured in each quarter and the improvement plans are owned by the individual areas concerned.

Key:

80-100%	Green
60-79%	Amber
0-59%	Red

No audits completed – This is risk assessed and audits may not be completed due to a range of factors; none required, no identified triggers, a focus on other improvement work and other competing IPC demands.

April – June 2024

	Northern Sector Average Compliance	Southern Sector Average Compliance	Trust Average Compliance
Hand Hygiene	80%	93%	82%
Personal Protective Equipment (PPE)	75%	90%	77%
<i>C. difficile</i>	56%	72%	61%
<i>C. difficile</i> Care Pathway	Pass x 11 Fail x 7	Pass x 5 Fail x 4	Pass x 16 Fail x 11
Peripheral Line Ongoing Care	42%	75%	50%
Urinary Catheter Ongoing Care	64%	70%	66%
Commode	80%	No audits completed	80%
Cleaning & Decontamination	31%	88%	50%
MRSA	59%	49%	57%

July – September 2024

	Northern Sector Average Compliance	Southern Sector Average Compliance	Trust Average Compliance
Hand Hygiene	77%	79%	78%
PPE	76%	54%	74%
<i>C. difficile</i>	68%	70%	69%
<i>C. difficile</i> Care Pathway	Pass x 10 Fail x 0	Pass x 9 Fail x 1	Pass x 19 Fail x 1
Peripheral Line Ongoing Care	52%	75%	60%
Urinary Catheter Ongoing Care	72%	90%	80%
ANTT	94%	100%	94%
Commode	83%	No audits completed	83%
Cleaning & Decontamination	36%	19%	33%
Mattress	95%	No audits completed	95%
MRSA	68%	62%	64%

October – December 2024

*** Includes data up to 24th December 2024 only ***

	Northern Sector Average Compliance	Southern Sector Average Compliance	Trust Average Compliance
Hand Hygiene	81%	93%	84%
PPE	85%	100%	86%
<i>C. difficile</i>	69%	61%	67%
<i>C. difficile</i> Care Pathway	Pass x 10 Fail x 6	Pass x 6 Fail x 0	Pass x 16 Fail x 6
Peripheral Line Ongoing Care	50%	80%	78%
Urinary Catheter Ongoing Care	50%	94%	91%
Central Line Ongoing Care	No audits completed	100%	100%
ANTT	93%	No audits completed	93%
Commode	60%	No audits completed	60%
4 Cloth Cleaning	98%	No audits completed	98%
Cleaning & Decontamination	50%	No audits completed	50%
Mattress	86%	No audits completed	86%
MRSA	89%	73%	75%
SSI Preoperative Actions	100%	No audits completed	100%
SSI Intraoperative Actions	0%	No audits completed	0%