

Infection Prevention & Control Report to Trust Board

Meeting Date – 1st February 2024

1. Executive Summary

Reduction Targets

The Department of Health for Northern Ireland (DoH NI) has issued healthcare-associated infection (HCAI) reduction targets for 2023/24. These are the first since 2019/20, following a three-year hiatus due to the COVID-19 pandemic.

For Meticillin-Resistant *Staphylococcus aureus* (MRSA) bacteraemia, the Trust's target is six cases. That is a reduction of one case or 14.29% compared to the 2022/23 baseline (seven cases).

The Trust's reduction target for *Clostridium difficile* (*C. difficile*) associated disease is 71; a reduction of ten cases or 12.35% compared to last year's baseline (81 cases).

Given the challenges associated with reducing healthcare-associated gram-negative bacteraemias (GNBs) to date, specifically *Escherichia coli*, *Klebsiella species* and *Pseudomonas aeruginosa*, the DoH NI has decided not to set a target for 2023/24. Rather Trusts are being encouraged to minimise risk factors for GNB infections where possible.

Current *C. difficile* Performance

So far this year 27 cases of *C. difficile* have been reported. 18 of the cases are classified as healthcare-acquired or associated as they occurred more than 72 hours after admission to hospital (definition used by the Public Health Agency [PHA]). However, this is not always an accurate predictor of being healthcare-associated. The remainder (nine) are classified as community-acquired as the patients presented with symptoms within a 72-hour period after admission.

Current MRSA Bacteraemia Performance

Since the beginning of April 2023 one MRSA bacteraemia case has been reported. It is categorised as community-associated as it occurred less than 48 hours after admission to hospital (definition used by the PHA).

Current GNB Performance

As of 19th January 2024, 39 healthcare-associated GNB cases have been reported.

2. Coronavirus (COVID-19)

Outbreak Management

COVID-19 outbreaks continue to be declared in Trust wards, departments and facilities. Between October 2023 and mid-January 2024, a total of 35 outbreaks occurred. The Infection Prevention & Control (IP&C) Team are leading on the management of these incidents as applicable. Incident meetings are taking place and all IP&C measures have been instigated.

3. Infection Prevention & Control Induction and Mandatory Training

IP&C Induction and Mandatory Training is delivered online via an e-learning programme. This was developed regionally for use by all health and social care organisations in NI.

The e-learning programme comprises two tiers – Tier 1 and Tier 2. Staff only need to complete one of the tiers. Clarification on which tier each staff member should complete is provided via a Tier Matrix. The e-learning includes a short assessment to test understanding and awareness, with a certificate available to be printed after successful completion.

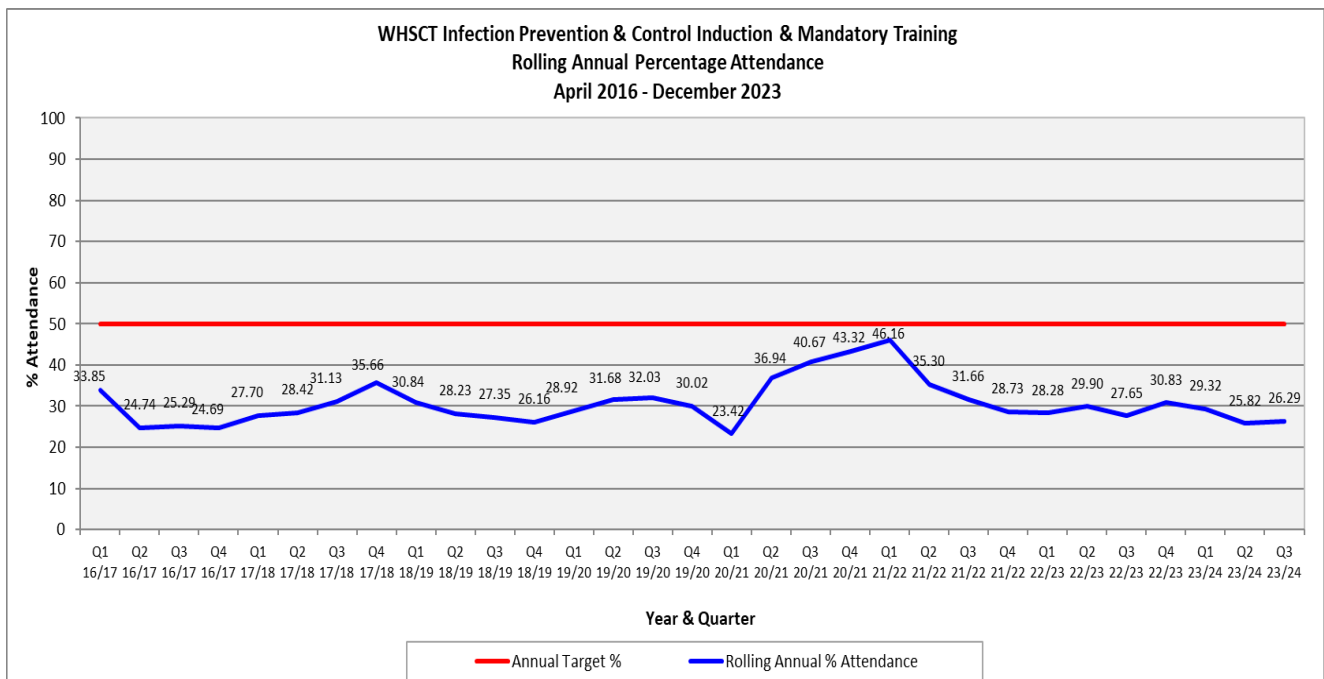
Access to the e-learning is through the regional learning management system, LearnHSCNI (<https://learn.hscni.net/>), which is available to all Western Trust staff. The website can be accessed from any internet-enabled Trust or personal device (PC/ laptop/ mobile phone/ tablet).

The IP&C Team also deliver a series of bespoke training sessions virtually via the Microsoft Teams app and face-to-face. These sessions are aimed at staff who come under Tier 1B of the Tier Matrix (i.e. “healthcare staff with minimal or no patient/ client contact or healthcare staff with patient contact who require role specific training”), such as Support Services, HSDU, Estates, Transport, Social Workers, Chaplains, etc. The Team also facilitate face-to-face Induction Training for large groups of new staff in departments, e.g. Support Services staff.

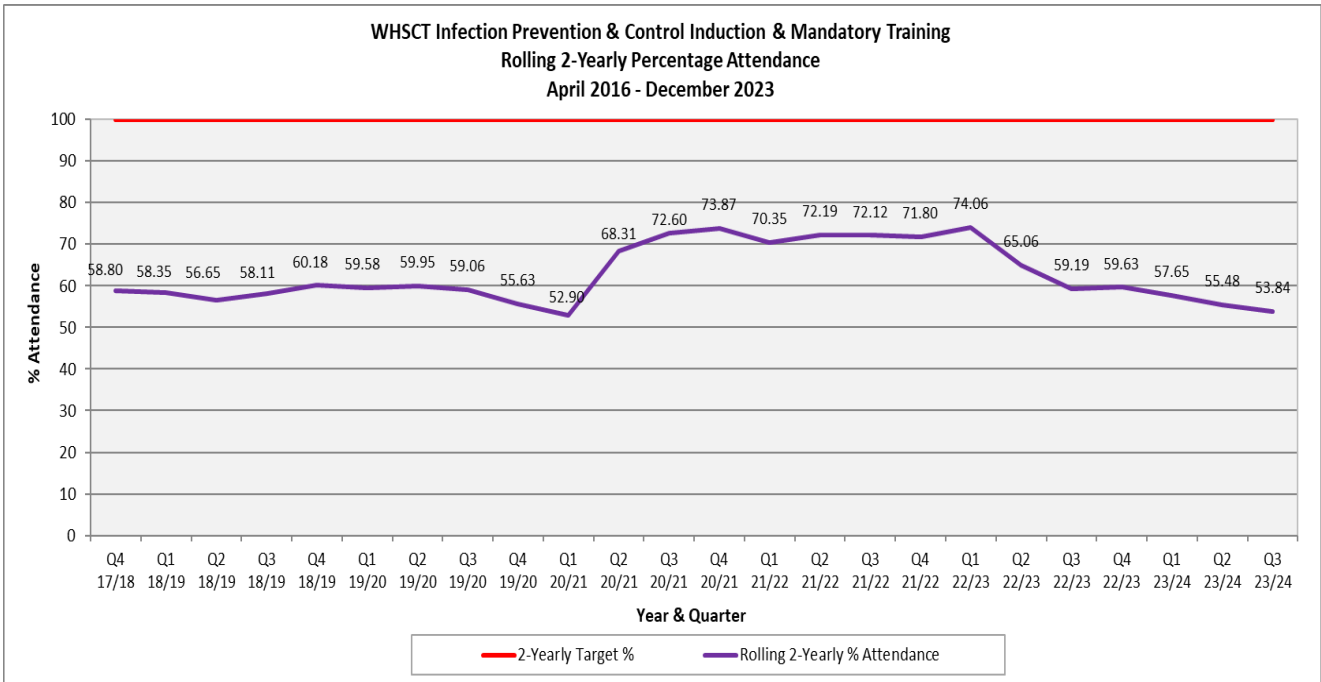
Training must be completed every two years.

The content of the e-learning is currently being reviewed by the Regional IP&C Lead Nurses Forum. They are also looking at developing a shorter, more bespoke version for medical staff.

In the period April to December 2023, a total of 2538 staff completed the training. The attendance target for each year is 50% of the total number of staff who require training (i.e. 7111 out of 14,222 applicable staff). For the 12 months ending December 2023, the percentage stands at 26.29%. That is 23.71% less than required.



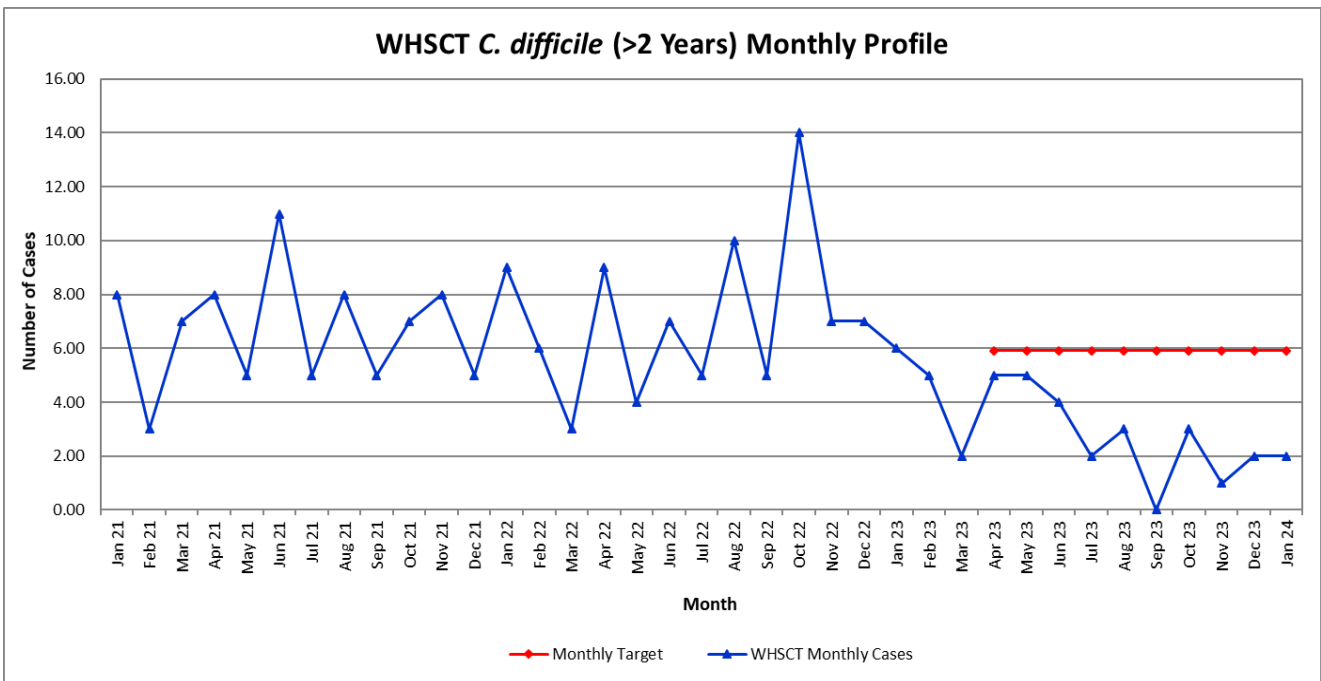
As attendance at IP&C Training is required on a biennial basis, the attendance rate over a 24-month period has also been calculated. As of the end of December 2023, it is 53.84%.



4. C. difficile Performance

The 2023/24 target for *C. difficile* (\geq two years) is 71 cases, which equates to a reduction of 12.35% on the baseline figure of 2022/23 (81 cases).

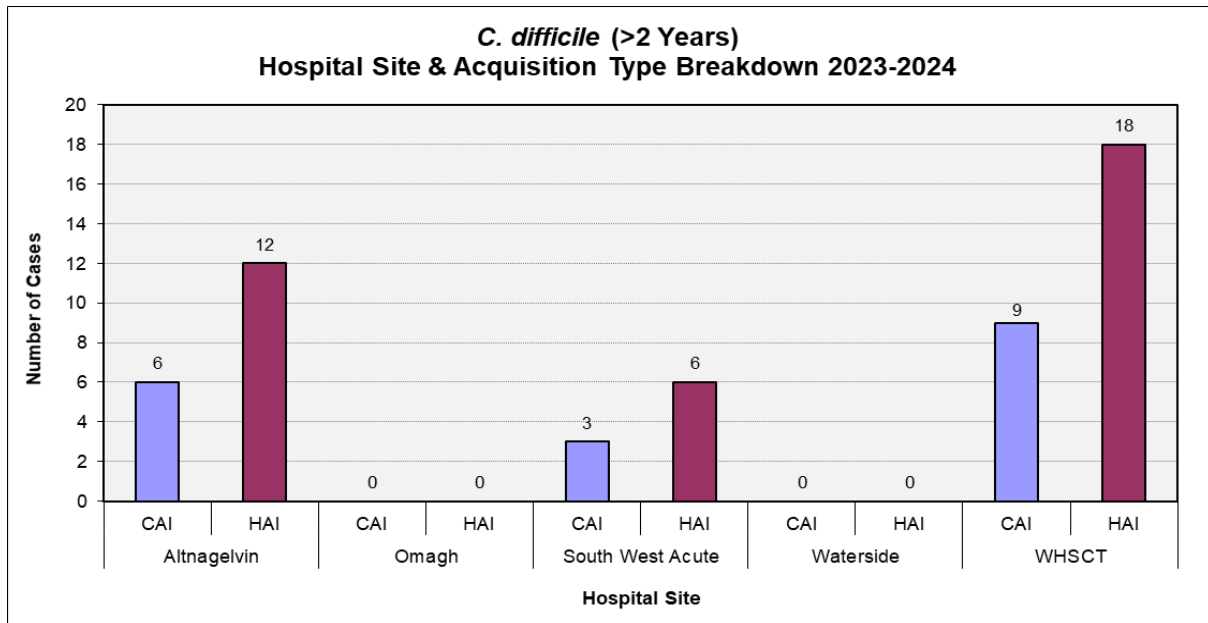
As of 19th January 2024, 27 cases have been reported, with nine of those being categorised as community-associated. Therefore, the Trust is currently on track to achieve the target, with a cumulative decrease of 57.89% compared to 2022/23. This comprises a decrease in healthcare-associated infection cases of 53.6% versus a decrease in community-acquired infection cases of 64.47%.



* The value for Jan 24 is subject to change as the report was compiled prior to the end of the month.

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



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 2023. The table below summarises the number of *C. difficile* cases and the rate per 1000 bed days for each Trust, plus NI averages, for each of the last four quarters.

	October-December 2022		January-March 2023		April-June 2023		July-September 2023	
	Number of Cases	Rate	Number of Cases	Rate	Number of Cases	Rate	Number of Cases	Rate
Western Trust	28	0.437	13	0.205	14	0.221	5	0.079
Southern Trust	21	0.296	22	0.305	23	0.341	24	0.345
South Eastern Trust	20	0.280	17	0.240	19	0.265	26	0.358
Northern Trust	13	0.182	7	0.097	10	0.144	14	0.194
Belfast Trust	22	0.163	34	0.251	28	0.206	33	0.248
Northern Ireland	104	0.252	93	0.225	94	0.230	102	0.248

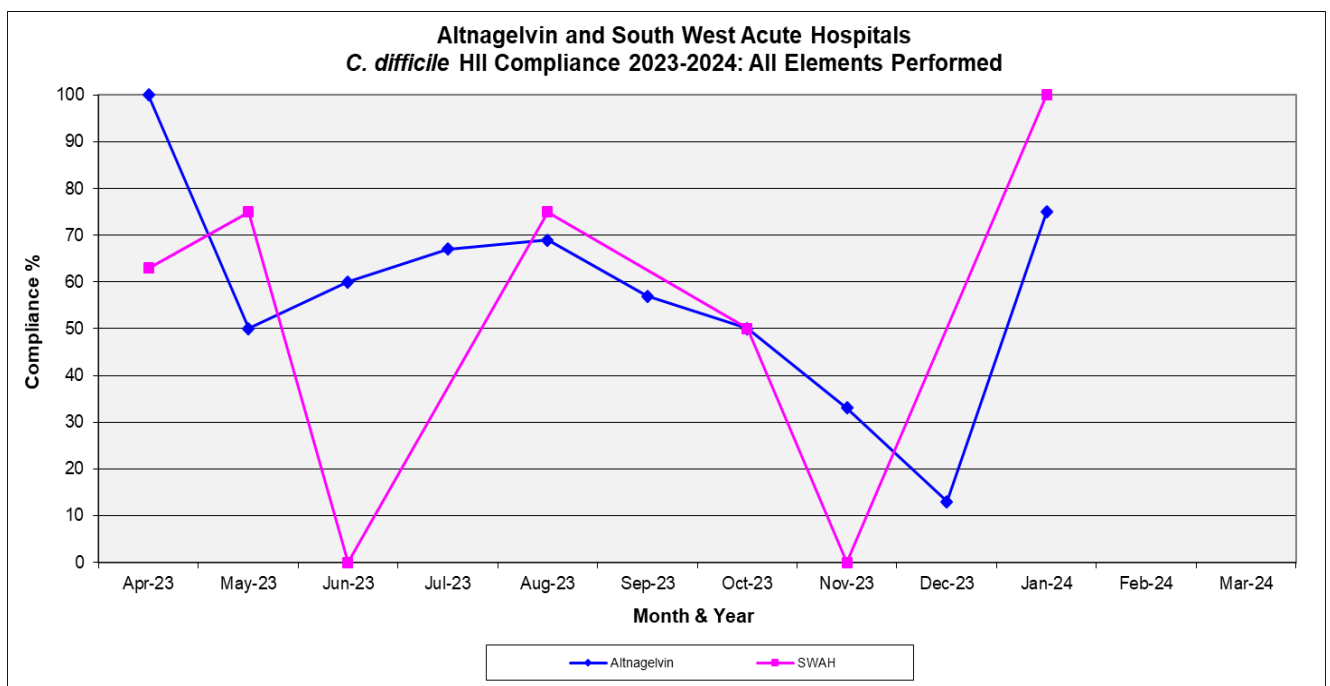
Previously a rise in the number of cases in the Western Trust was noted. This was highlighted at the Chief Executive HCAI Accountability Forum, IP&C Committee, Safe & Effective Care, Corporate Safety Huddle and Antimicrobial Management Team. An action plan was also developed to try to address the issue. It was recognised that the ability to make any significant improvements would be affected by staffing challenges, as well as the need to effect wider change

in community prescribing in Primary Care. Over the last three quarters the number of *C. difficile* cases in the Western Trust has decreased quite significantly and, as of July-September 2023, the Trust is reporting the lowest rate in NI. Trends will continue to be monitored moving forward.

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, although there has been an improvement in January 2024. The findings indicate issues around prudent antibiotic prescribing, correct hand hygiene and environmental decontamination.

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).

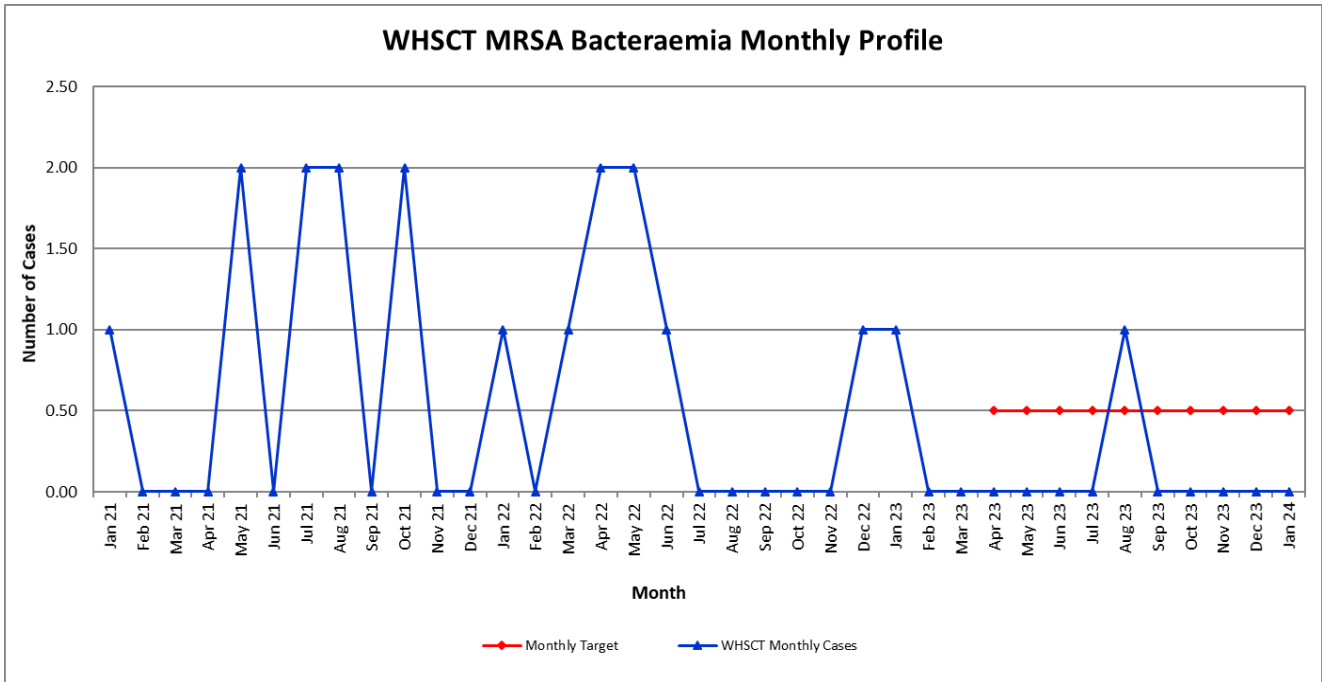


5. S. aureus Bacteraemia Performance

MRSA Bacteraemia

The 2023/24 target for MRSA bacteraemia is six cases, which equates to a reduction of 14.29% on the baseline figure of 2022/23 (seven cases).

Since the beginning of April 2023 one case has been reported. It is categorised as community-associated. As such, the Trust is currently on track to meet the reduction target, with a cumulative decrease of 81.96% compared to last year.



* The value for Jan 24 is subject to change as the report was compiled prior to the end of the month.

As of 19th January 2024, the total number of days since the last Trust hospital-associated MRSA bacteraemia is:

Altnagelvin – 369 days (Last recorded case was in Ward 50 Sperrin)
 SWAH – 1313 days (Last recorded case was in Ward 8)
 Tyrone County Hospital/ Omagh Hospital
 & Primary Care Complex (OHPCC) – 3285 days (Last recorded case was in the Rehab Unit)

Comparison with Other Trusts

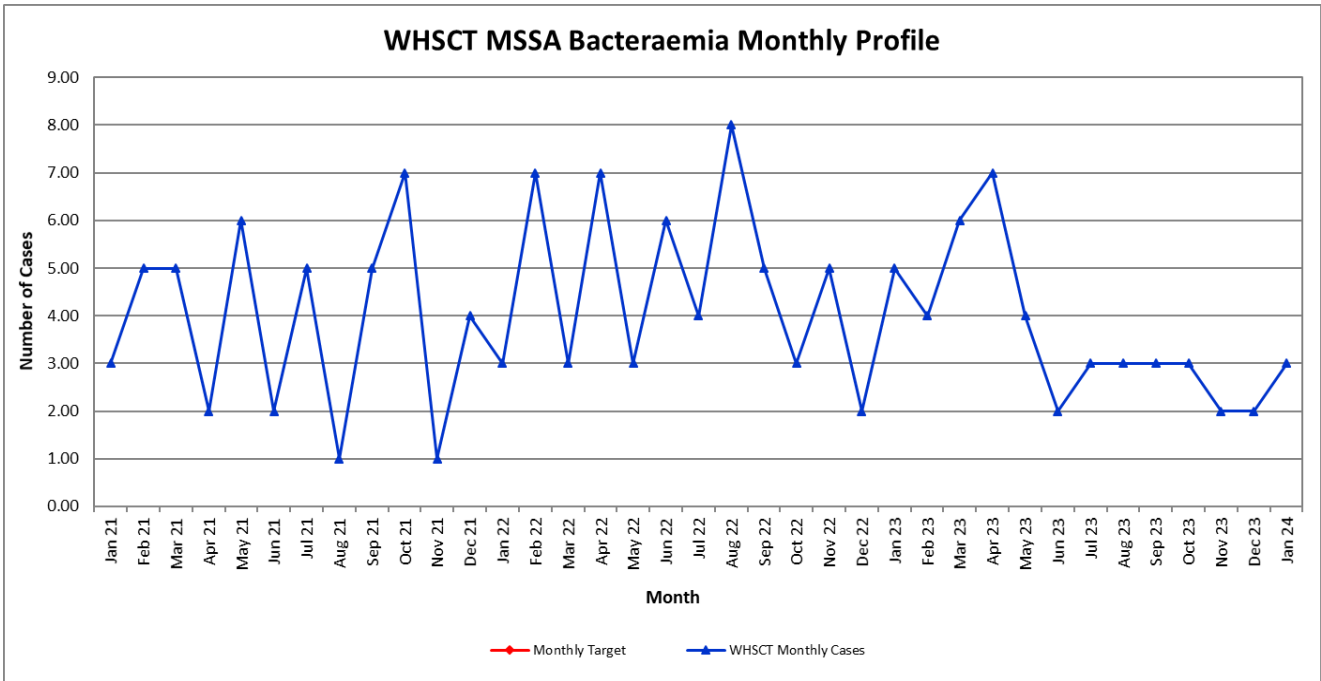
The PHA releases regional comparator information on a quarterly basis. The most recent data available covers up to the end of September 2023. The table below summarises the number of MRSA bacteraemia cases and the rate per 1000 bed days for each Trust, plus NI averages, for each of the last four quarters.

	October-December 2022		January-March 2023		April-June 2023		July-September 2023	
	Number of Cases	Rate	Number of Cases	Rate	Number of Cases	Rate	Number of Cases	Rate
Western Trust	1	0.016	1	0.016	0	0.000	1	0.016
Southern Trust	0	0.000	2	0.028	2	0.030	1	0.014
South Eastern Trust	0	0.000	4	0.056	1	0.014	3	0.041
Northern Trust	4	0.056	1	0.014	3	0.043	5	0.069
Belfast Trust	1	0.007	2	0.015	7	0.051	6	0.045
Northern Ireland	6	0.015	10	0.024	13	0.032	16	0.039

Meticillin-Sensitive Staphylococcus aureus (MSSA) Bacteraemia

There is no reduction target associated with MSSA bacteraemia for 2023/24, however surveillance remains mandatory. MSSA is part of the skin normal flora of approximately 25-30% of the well population. It is, therefore, more difficult to control endogenous (self) exposure, which is the reason for removing the target associated with this organism. The controls in place for MRSA will go some way to protect patients, but do not provide the same level of safeguard because of the ubiquitous nature of the organism.

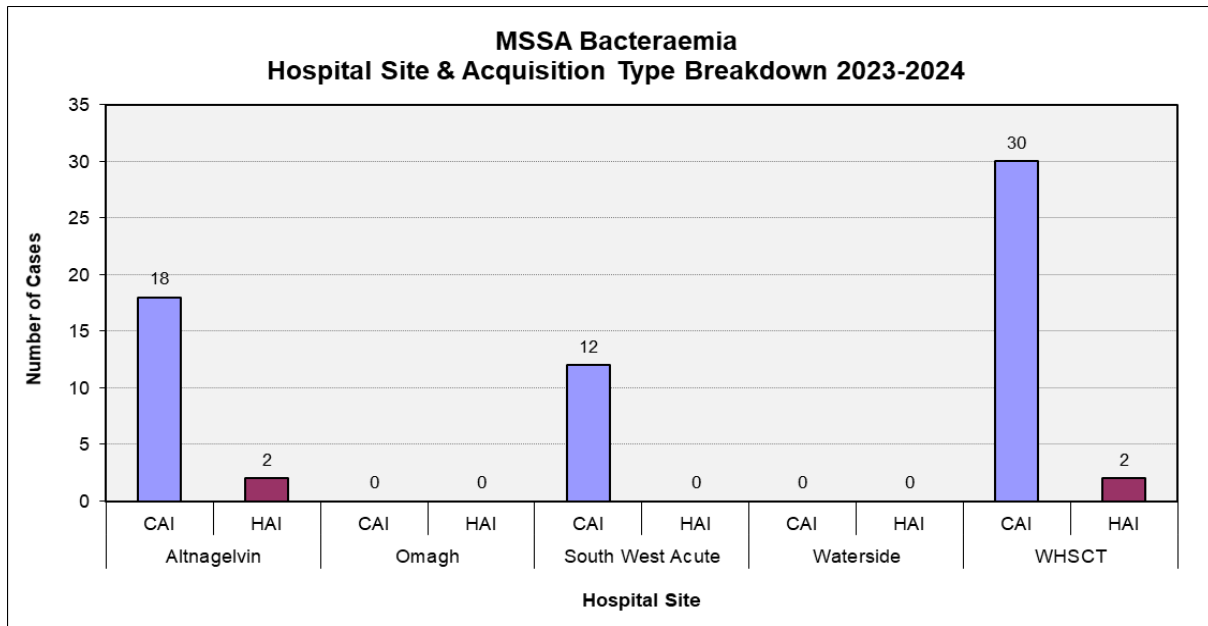
So far this year the Trust has reported 32 cases.



* The value for Jan 24 is subject to change as the report was compiled prior to the end of the month.

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 19th January 2024, the total number of days since the last Trust hospital-associated MSSA bacteraemia is as follows:

Altnagelvin – 11 days
SWAH – 457 days
OHPCC – 2286 days

(Last recorded case was in Ward 42)
(Last recorded case was in Ward 2)
(Last recorded case was in the Rehab Unit)

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 2023. The table below summarises the number of MSSA bacteraemia cases and the rate per 1000 bed days for each Trust, plus NI averages, for each of the last four quarters.

	October-December 2022		January-March 2023		April-June 2023		July-September 2023	
	Number of Cases	Rate	Number of Cases	Rate	Number of Cases	Rate	Number of Cases	Rate
Western Trust	10	0.156	15	0.236	13	0.205	9	0.143
Southern Trust	17	0.240	13	0.180	11	0.163	15	0.216
South Eastern Trust	14	0.196	16	0.226	26	0.362	30	0.413
Northern Trust	15	0.210	20	0.279	20	0.288	22	0.304
Belfast Trust	64	0.473	38	0.281	47	0.346	50	0.375
Northern Ireland	120	0.291	102	0.246	117	0.287	126	0.307

6. 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
2020/21	0	0	0	2	0	0	0	0	1	0	1	0	4
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†			1†

* 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 2023 one *Pseudomonas* case has been reported. It is categorised as healthcare-associated.

The most recent healthcare-associated positive blood culture in an augmented care area pertains to an inpatient admission in ICU, Altnagelvin, in September 2023. Applicable IP&C measures were put in place. There have been no other positive patients in this area since December 2022, and the Molecular Typing Service confirmed that this isolate did not match any other clinical or environmental isolates referred to them for typing from the Western Trust within the previous six months.

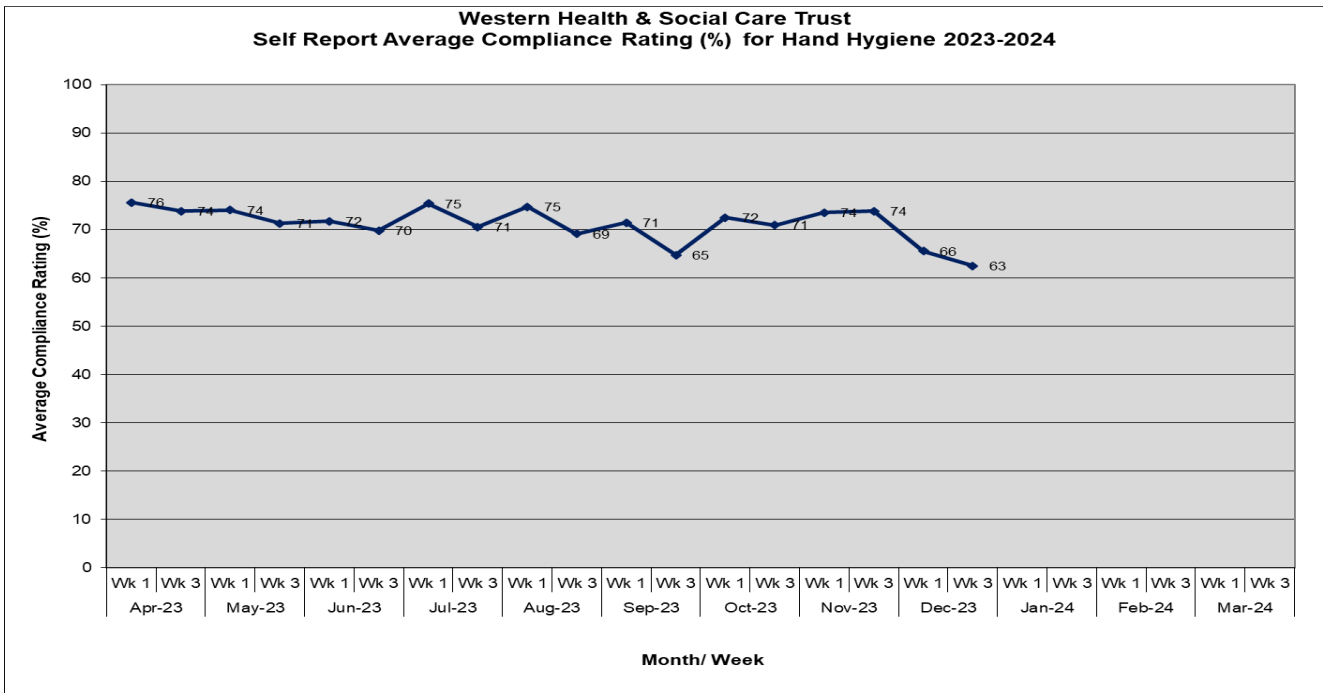
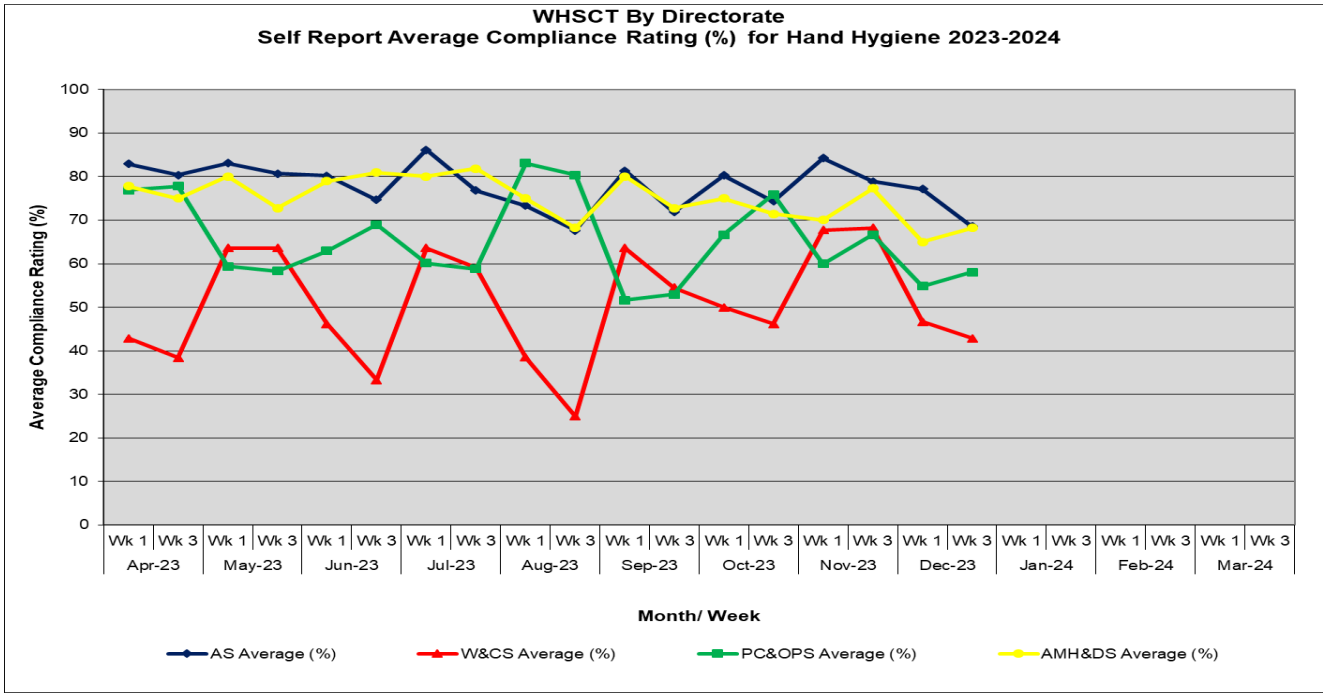
7. Hand Hygiene Compliance

The Trust's overall average self-reported hand hygiene score is 65% when non-submission areas are included. These areas score an automatic 0%. 49 areas out of 194 applicable areas failed to submit scores for December 2023. They are as follows:

Site	Ward/ Department/ Facility
Altnagelvin	Ward 3 Ward 9 Rheumatology Ward 22 ASM Ward 26 ARM Ward 40 Ward 41 AGM ACU Antenatal Clinic DCU Ophthalmic Theatre Emergency Department GUM Clinic

	Main Theatre 1 Main Theatre 3 Main Theatre 7 OPALS South Wing Clinics Physiotherapy Outpatients Department Spruce House
SWAH	Ward 2 Ward 3 Ward 7 Cardiac Investigations Emergency Department Physiotherapy Outpatients Department Women's Health Centre
OHPCC	Cardiac Assessment Unit Cardiac Investigations Outpatients Department Physiotherapy Outpatients Department Rehab Unit Urgent Care & Treatment Centre Women's Centre
Waterside Hospital	Ward 3
Lakeview Hospital	Melvin Lodge Strule Lodge Berryburn Centre
Residential Homes	Greenfield Residential Home
Day Care	Benbradagh ATC Beragh Day Centre Dromore Day Centre Drumcoo Day Centre Glen Oaks Gortin Day Centre Newtownstewart Day Centre Strabane Day Centre
Other Community	Avalon House Children's Community Nursing Team The Cottages Children's Respite Crannog Intensive Treatment Team Rapid Response Team Derry

A number of the areas also did not submit scores for the previous month. These are highlighted in yellow on the above table.



However, when adjusted for non-submission areas, the Trust’s overall self-reported hand hygiene score improves to 100%.

The hand hygiene dashboard has been circulated to Directors for action through their governance arrangements.

It is important to note that scores from independent audits conducted by the IP&C Team and Lead Nurses tend to be lower than self-reported scores.

8. Critical Care Device-Associated Infection Surveillance

Critical care device-associated infection surveillance commenced in June 2011. There have been no infections in the Trust for over five years. The most recent infection recorded was a ventilator-associated pneumonia, which occurred in ICU, Altnagelvin, in October 2018.

Results, as of December 2023, are shown in the table below.

	Date of Last Recorded Case in Hospital		Hospital Rolling Average Infection Rate Per 1000 Device Utilisation Days		NI Rolling Average Infection Rate Per 1000 Device Utilisation Days
	Altnagelvin	SWAH	Altnagelvin	SWAH	
Ventilator-Associated Pneumonia	11/10/2018	21/09/2016	0.00	0.00	0.53
Catheter-Associated Urinary Tract Infection	Zero to date	23/07/2011	0.00	0.00	0.03
Central Line Associated Blood Stream Infection	Zero to date	11/03/2012	0.00	0.00	0.31