

Infection Prevention & Control Report to Trust Board

Meeting Date – 15th July 2024

1. Executive Summary

Healthcare-Associated Infection (HCAI) Reduction Targets

Reduction Targets

The Department of Health for Northern Ireland (NI) has not yet issued new HCAI reduction targets for 2024/25. These targets relate to *Clostridium difficile* (*C. difficile*) associated disease, Methicillin-Resistant *Staphylococcus aureus* (MRSA) bacteraemia and gram-negative bacteraemia (GNB), specifically *Escherichia coli*, *Klebsiella species* and *Pseudomonas aeruginosa*.

Current *C. difficile* Performance

So far this year 13 cases of *C. difficile* have been reported. Eight 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 (five) 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 2024 one MRSA bacteraemia case has been reported. It is categorised as healthcare-associated as it occurred more than 48 hours after admission to hospital (definition used by the PHA).

Current GNB Performance

As of 5th July 2024, six healthcare-associated GNB cases have been reported.

Pertussis

Pertussis (also known as “whooping cough”) is a highly contagious but vaccine preventable bacterial respiratory disease that is usually caused by *Bordetella pertussis*. It is normally characterised by a “whooping” cough, cold and fever.

There has been a significant increase in the number of pertussis cases in NI during 2024. This increase is continuing and the PHA are seeing unprecedented numbers of notifications. Current high levels of pertussis in circulation in the community increases the risk of serious illness in vulnerable infants and unvaccinated pregnant women. Between 1st January and 30th June 2024 there were 2235 laboratory-confirmed cases in NI.

There has also been an increase in the number of patients and staff in the Western Trust who have tested positive for pertussis. The Infection Prevention & Control (IP&C) Team have been responding to this increase in terms of identification, appropriate isolation/ management and subsequent contact tracing. Outbreaks of pertussis can occur in healthcare settings. If outbreaks are detected at an early stage, prompt action including chemoprophylaxis and vaccination of close contacts can limit the spread. To date no outbreaks have been identified.

2. Coronavirus (COVID-19)

In recent weeks the Trust has experienced an increase in the number of patients and staff testing positive for COVID-19. The Trust continues to manage these cases in line with the current Chief Medical Officer and PHA testing guidance.

Outbreak Management

COVID-19 outbreaks continue to be declared in Trust wards, departments and facilities. Between April and early July 2024, a total of 24 outbreaks occurred. The 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 as necessary.

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.

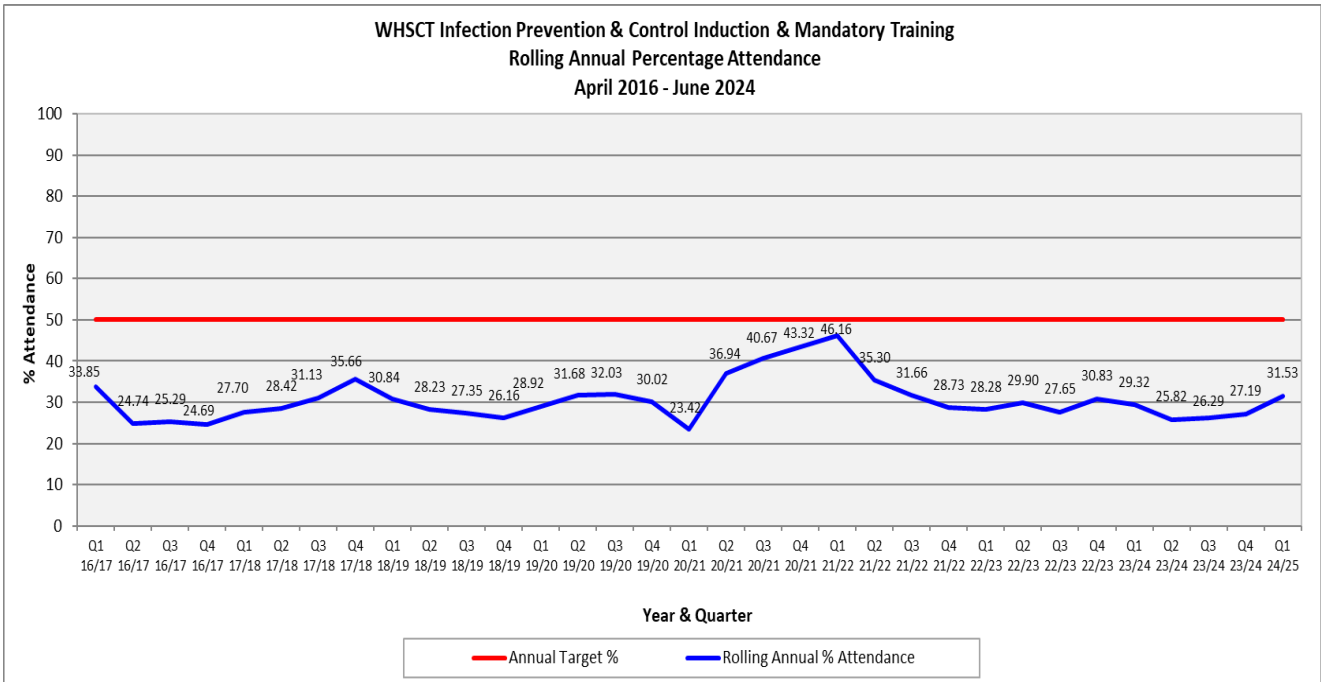
Access to the e-learning is through the regional learning management system, LearnHSCNI (<https://learn.hscni.net/>), which is available to all Western Trust staff. The website can be accessed from any internet-enabled Trust or personal device (PC/ laptop/ mobile phone/ tablet).

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.

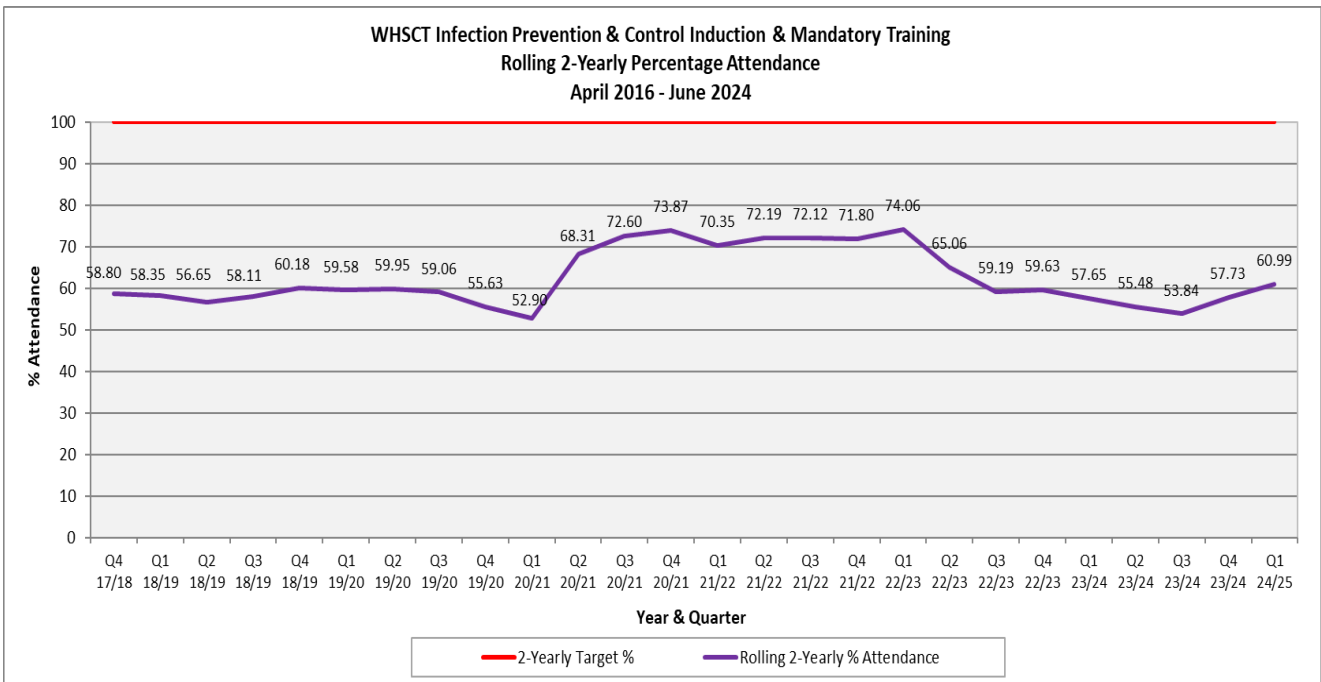
Training must be completed every two years.

The content of the e-learning is currently being reviewed by the Regional IP&C Lead Nurses Forum.

Between 1st April and 30th June 2024, a total of 1556 staff completed the training. The attendance target for each year is 50% of the total number of staff who require training (i.e. 7201 out of 14,402 applicable staff). For the 12 months ending June 2024, the percentage stands at 31.53%. That is 18.47% 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 June 2024, it is 60.99%.



The table below shows the rolling annual attendance rate broken down by staff group. This level of detail only became available from January 2023, so this is the third occasion that a full year's worth of information is able to be reported. The IP&C Team have focused recent efforts with Professional Leads and Managers to improve attendance, which has shown an increase as detailed in the table.

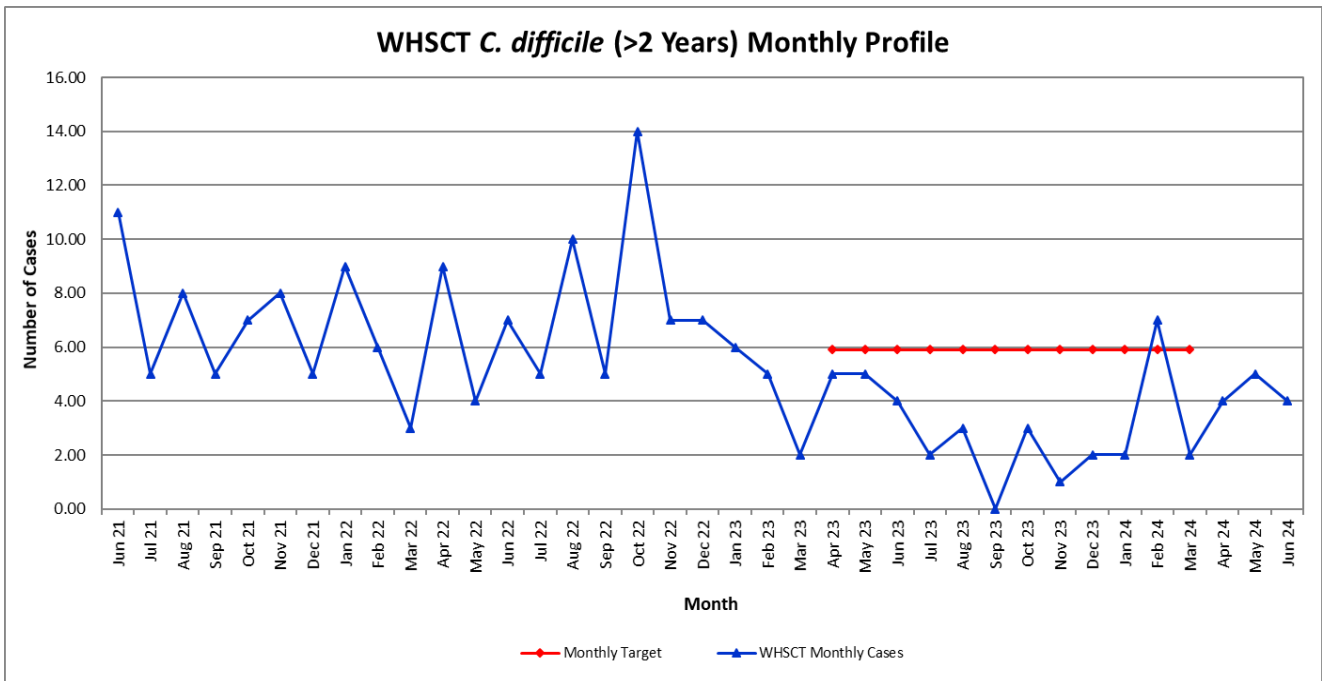
NB: The attendance figures in this table relate to the IP&C Tiers 1 & 2 e-learning modules, Training Tracker Online e-learning module (used by trainee doctors) and Specialist Groups training sessions (where it is possible to determine an individual's staff group allocation). They do not include General training sessions, which are open to various/ all staff groups, thus making it difficult to determine an individual's allocation. The number of General training sessions undertaken is limited so the discrepancies arising from their omission should be minimal.

	Annual Target Percentage	Rolling Annual Percentage Attendance			
		Jan-Dec 2023	Apr 2023-Mar 2024	Jul 2023-Jun 2024	
Nursing & Midwifery	50%	31.33%	32.31%	39.90%	↑
Medical & Dental	50%	36.23%	26.75%	27.85%	↑
Professional & Technical	50%	32.35%	34.06%	30.10%	↓
Social Services	50%	13.97%	13.77%	20.20%	↑
Support Services/ User Experience	50%	15.82%	33.29%	35.12%	↑
Admin & Clerical	50%	8.98%	9.27%	9.77%	↑

4. C. difficile Performance

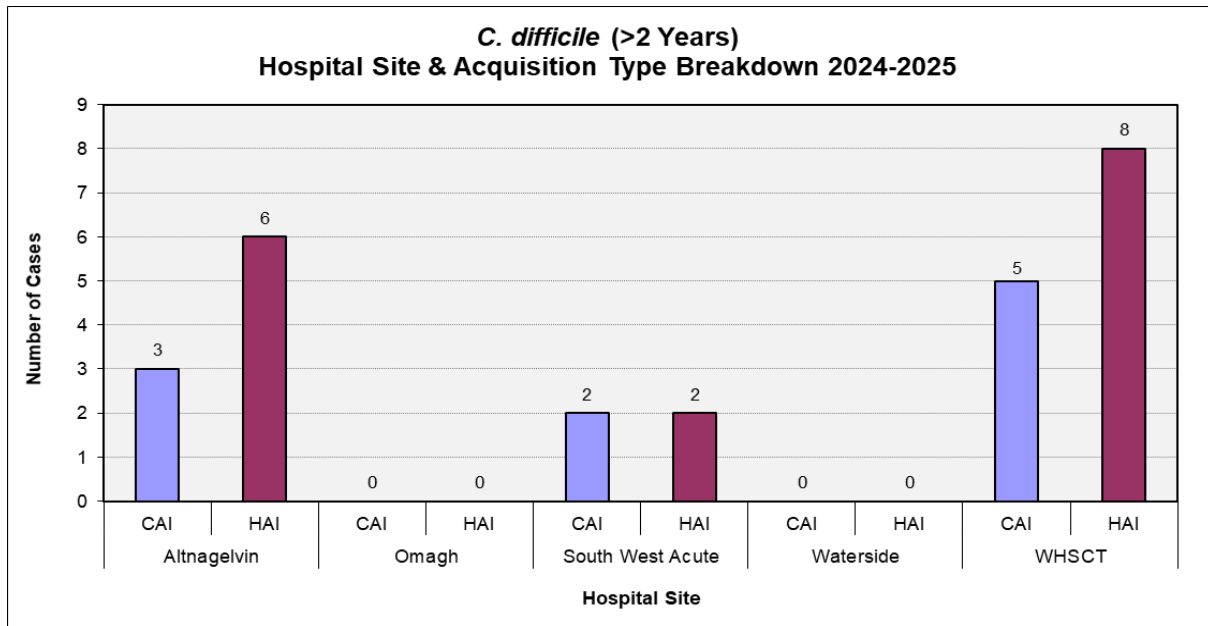
The new 2024/25 reduction target for *C. difficile* (≥ two years) has not yet been issued.

Since the beginning of April 2024 13 cases have been reported, with five of those being categorised as community-associated.



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 March 2024. 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.

During 2023 the number of *C. difficile* cases in the Western Trust decreased quite significantly and in the first quarter of 2024 the Trust has reported the second lowest rate in NI.

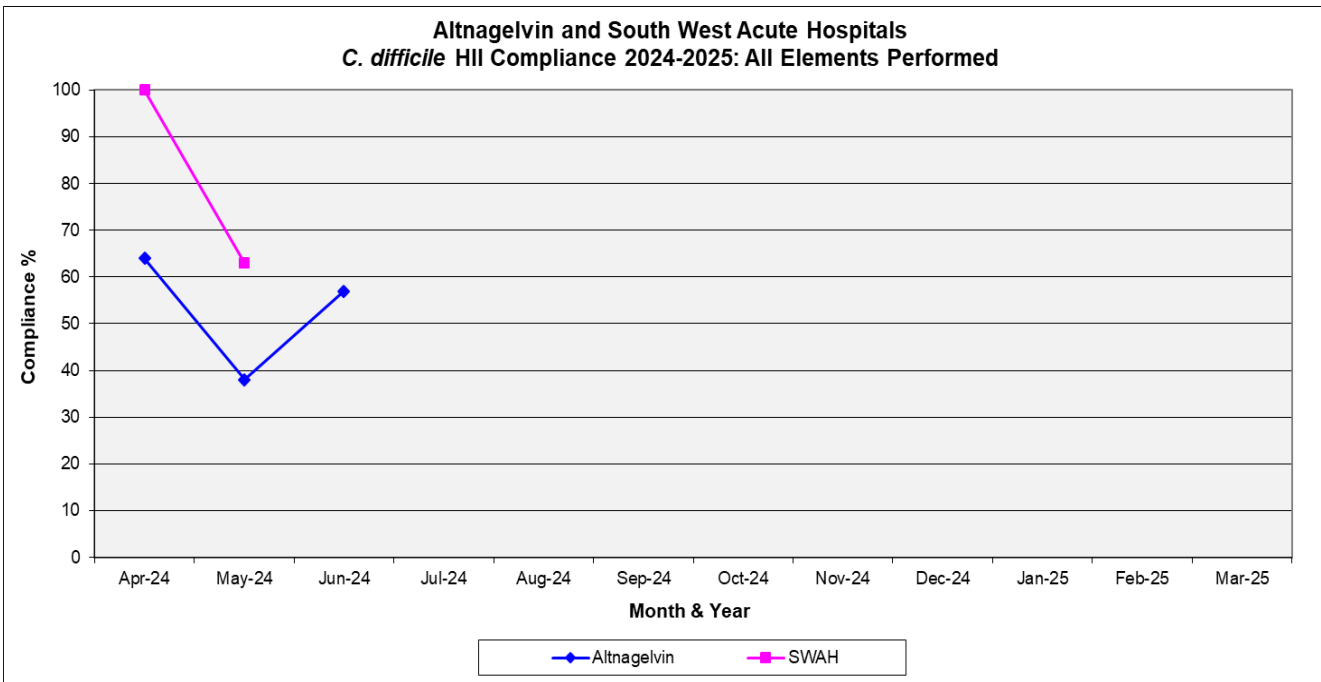
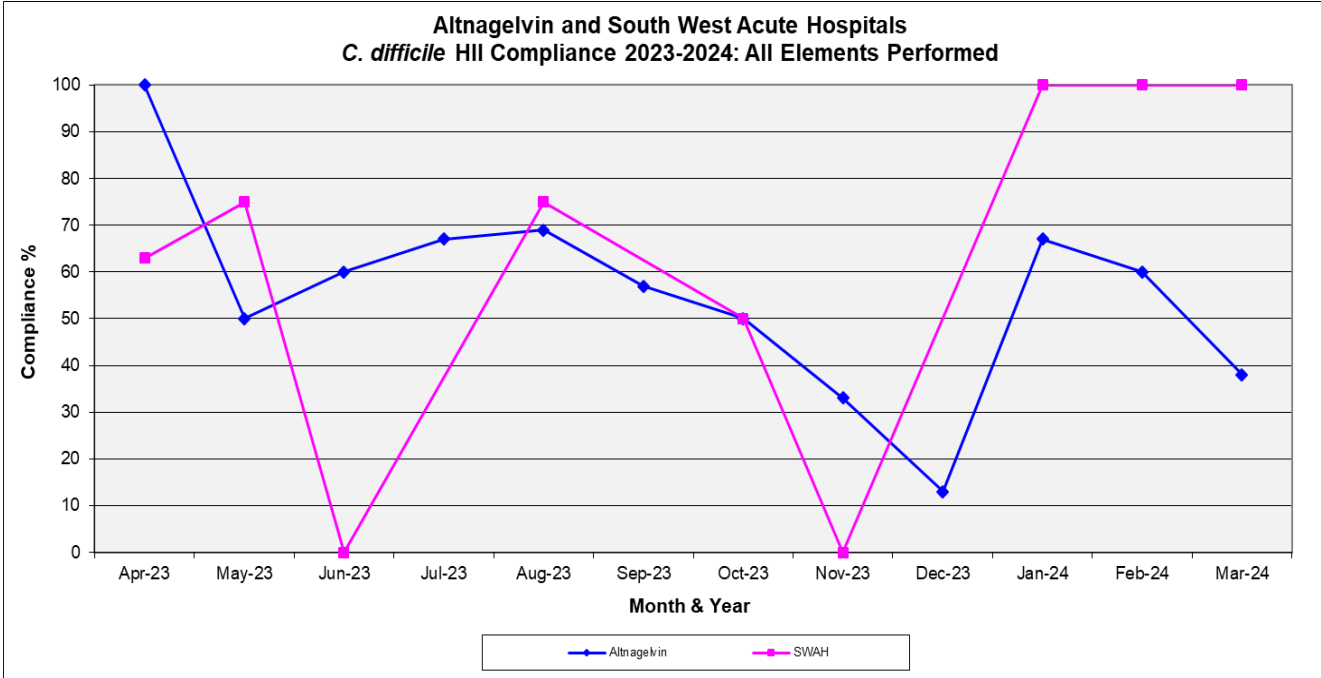
	April-June 2023		July-September 2023		October-December 2023		January-March 2024	
	Number of Cases	Rate	Number of Cases	Rate	Number of Cases	Rate	Number of Cases	Rate
Western Trust	14	0.221	5	0.079	6	0.091	11	0.163
Southern Trust	23	0.341	25	0.360	26	0.366	25	0.339
South Eastern Trust	19	0.265	26	0.358	15	0.238	12	0.190
Northern Trust	10	0.144	14	0.194	15	0.202	6	0.079
Belfast Trust	28	0.206	33	0.248	31	0.220	41	0.287
Northern Ireland	94	0.230	103	0.251	93	0.224	95	0.225

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; although, there was a recent period of four months when improvement

was noted in the South West Acute Hospital (SWAH). The findings indicate issues around prudent antibiotic prescribing, environmental decontamination 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 SWAH.

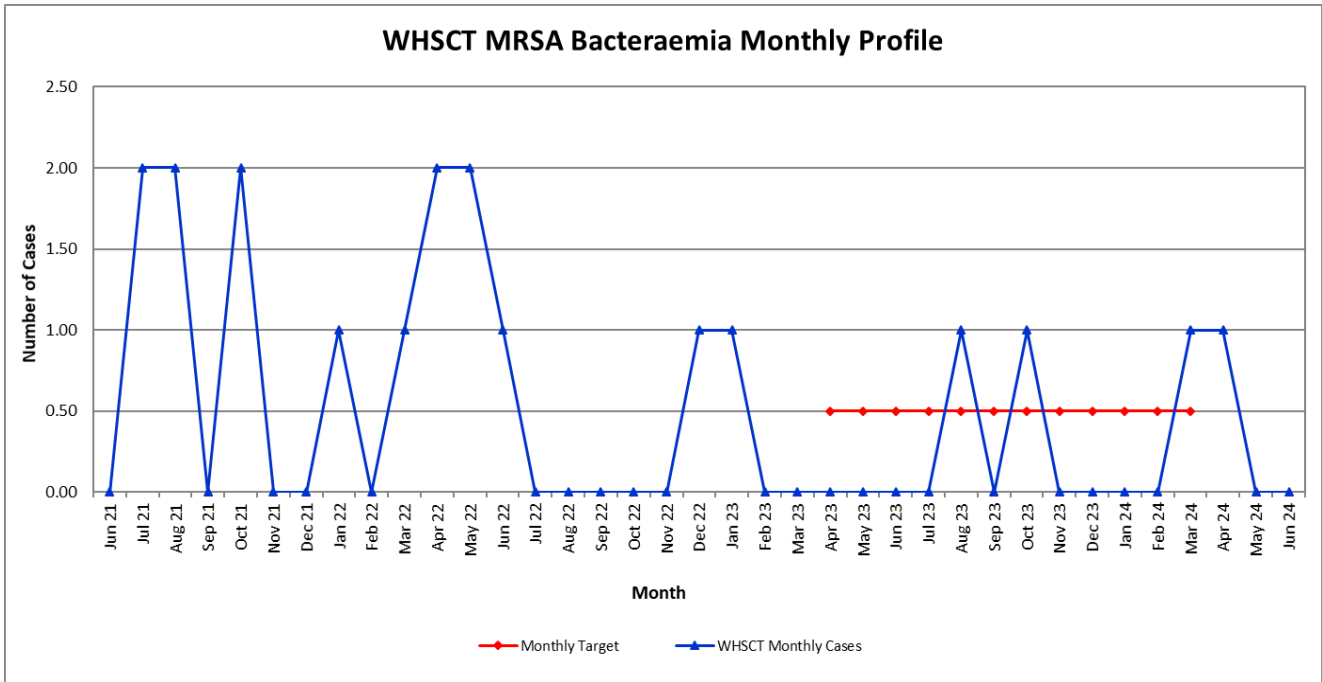


5. S. aureus Bacteraemia Performance

MRSA Bacteraemia

The new 2024/25 reduction target for MRSA bacteraemia has not yet been issued.

Since the beginning of April 2024 one case has been reported. It is categorised as healthcare-associated.



As of 5th July 2024, the total number of days since the last Trust hospital-associated MRSA bacteraemia is:

- Altnagelvin – 70 days (Last recorded case was in Ward 32 ESU)
- SWAH – 1481 days (Last recorded case was in Ward 8)
- Tyrone County Hospital/ Omagh Hospital & Primary Care Complex (OHPCC) – 3453 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 March 2024. 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.

During 2023 the Western Trust’s rate remained very low and stable. As of January-March 2024, the Trust was reporting the third lowest rate in NI.

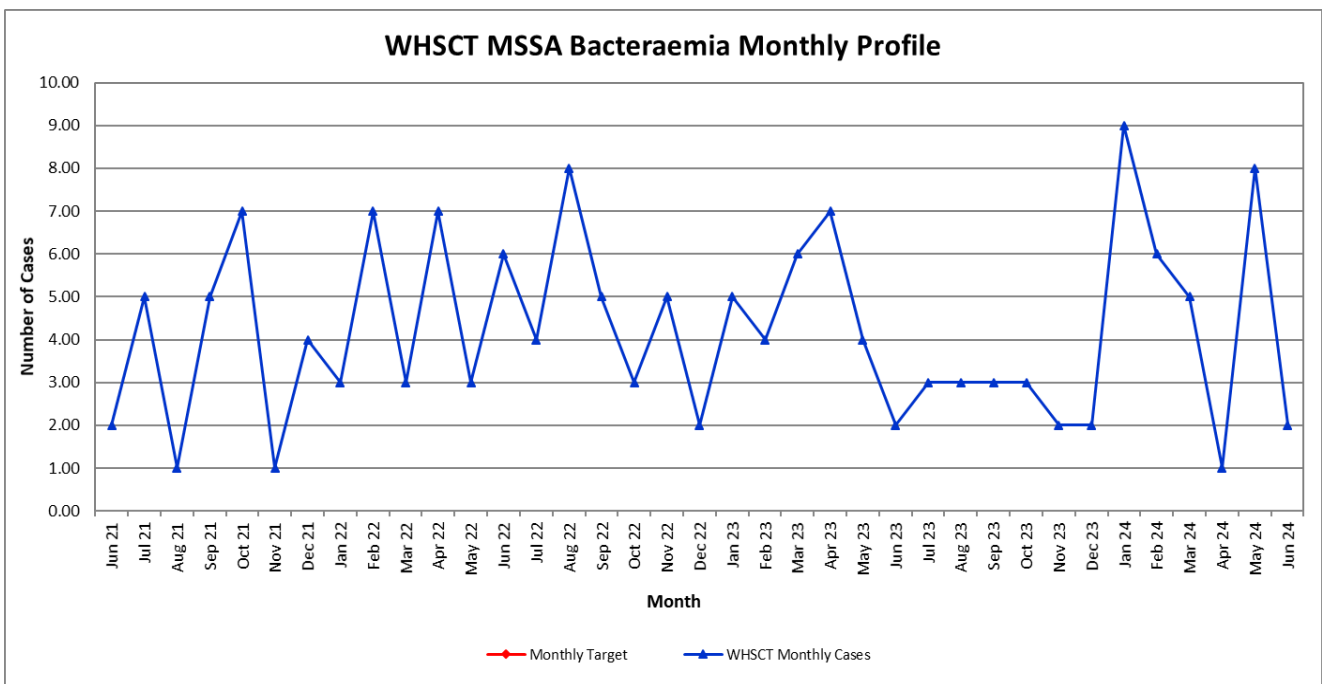
	April-June 2023		July-September 2023		October-December 2023		January-March 2024	
	Number of Cases	Rate	Number of Cases	Rate	Number of Cases	Rate	Number of Cases	Rate
Western Trust	0	0.000	1	0.016	1	0.015	1	0.015
Southern Trust	2	0.030	1	0.014	0	0.000	0	0.000
South Eastern Trust	1	0.014	3	0.041	1	0.016	3	0.048
Northern Trust	3	0.043	5	0.069	3	0.040	2	0.026

Belfast Trust	7	0.051	6	0.045	5	0.035	1	0.007
Northern Ireland	13	0.032	16	0.039	10	0.024	7	0.017

Meticillin-Sensitive Staphylococcus aureus (MSSA) Bacteraemia

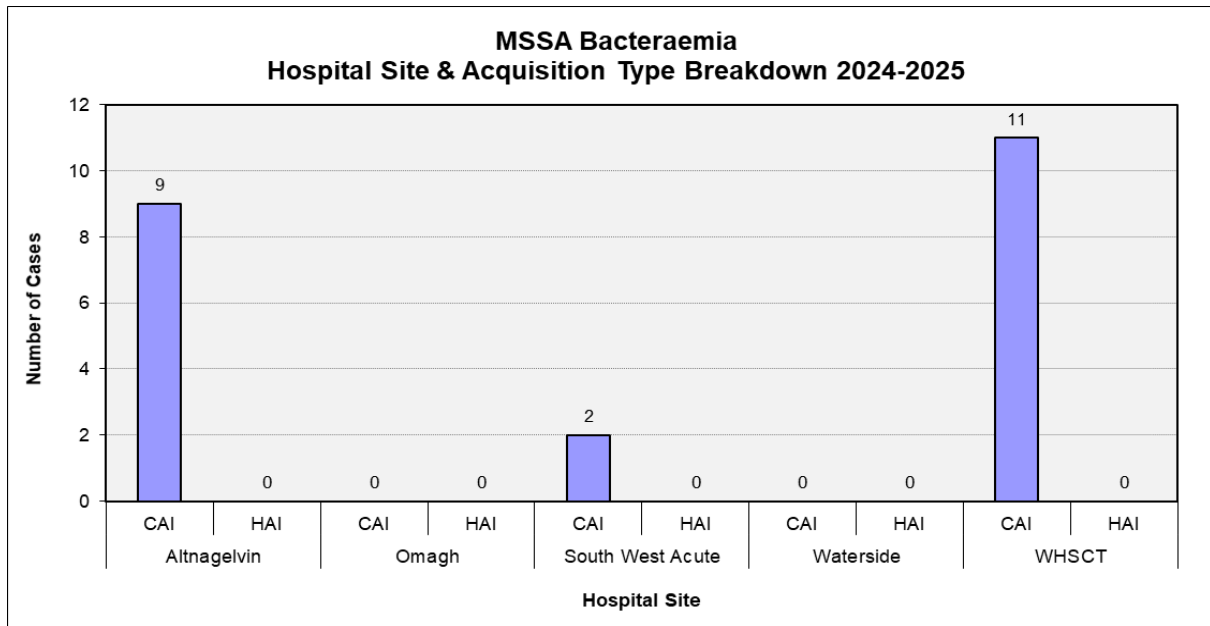
There is no reduction target associated with MSSA bacteraemia for 2024/25, however surveillance remains mandatory. MSSA is part of the skin normal flora of approximately 25-30% of the well population. It is, therefore, more difficult to control endogenous (self) exposure, which is the reason for removing the target associated with this organism. The controls in place for MRSA will go some way to also protect patients from MSSA, 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 11 cases.



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 5th July 2024, the total number of days since the last Trust hospital-associated MSSA bacteraemia is as follows:

Altnagelvin – 131 days

(Last recorded case was in Ward 23 TOU)

SWAH – 149 days

(Last recorded case was in Ward 2)

OHPCC – 2454 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 March 2024. 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.

The Western Trust's rate reduced quarter-on-quarter during 2023 and in the first quarter of 2024 the Trust has reported the third lowest rate in NI.

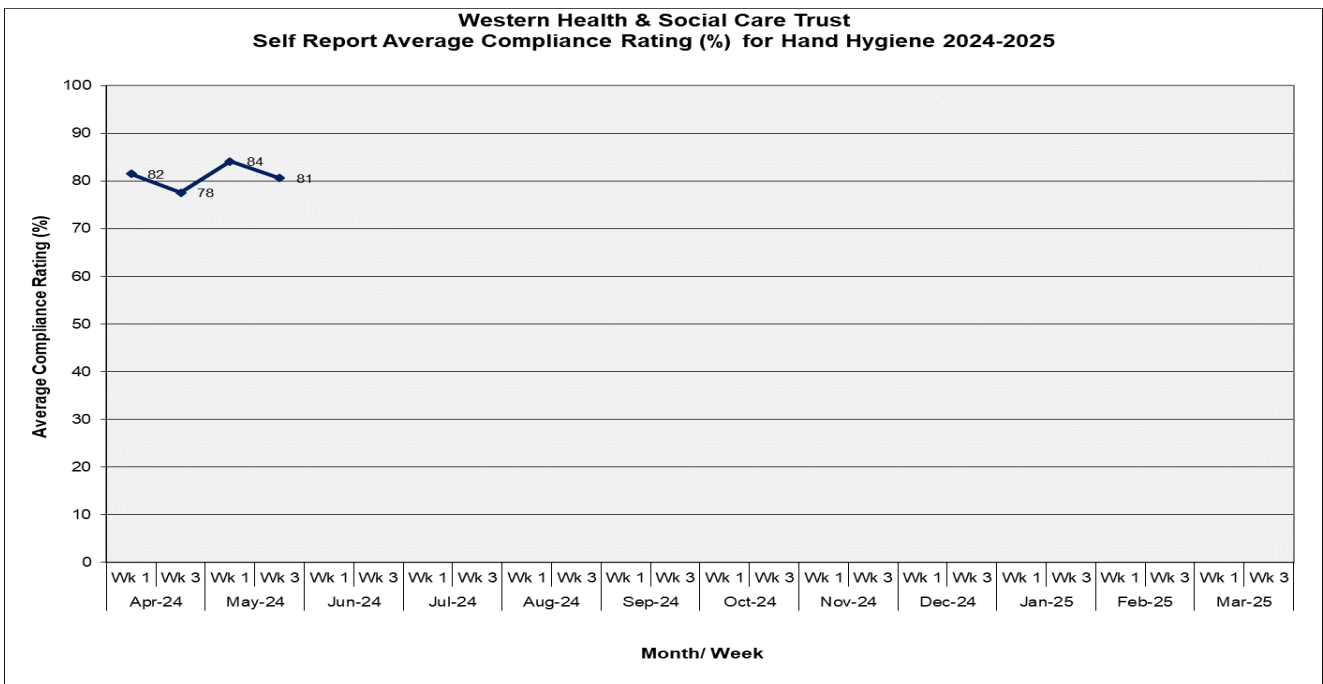
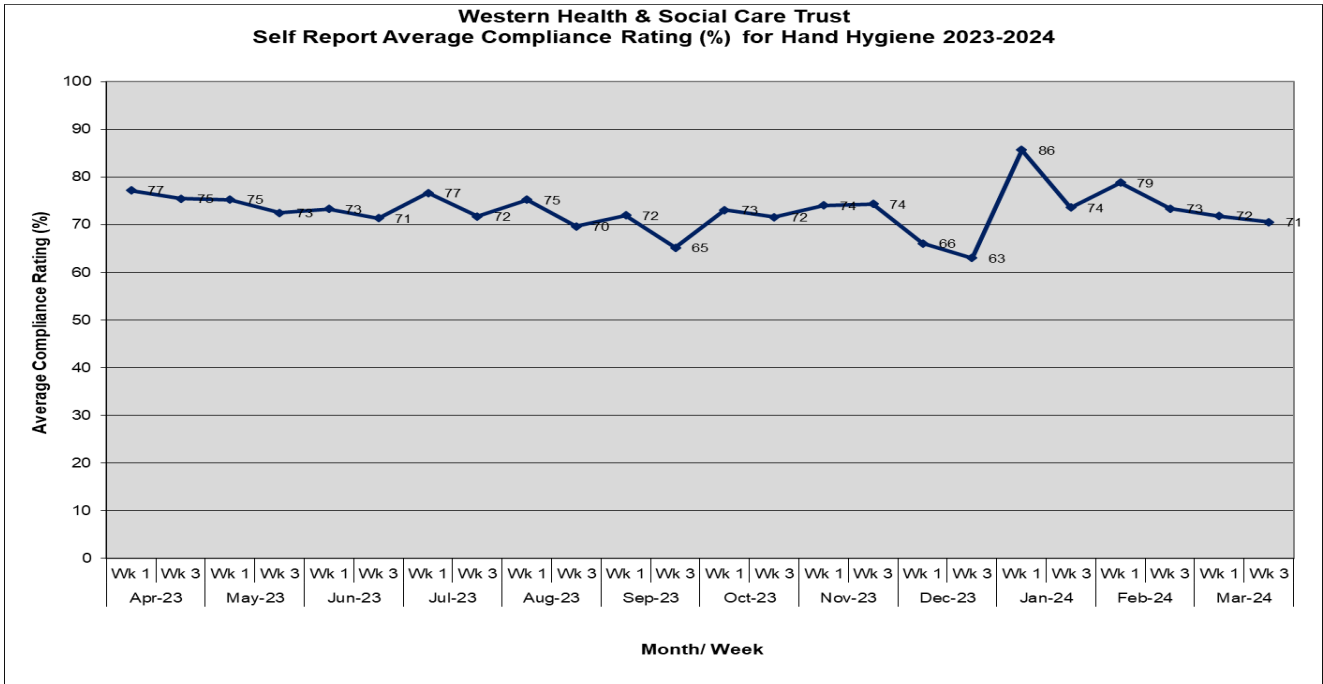
	April-June 2023		July-September 2023		October-December 2023		January-March 2024	
	Number of Cases	Rate	Number of Cases	Rate	Number of Cases	Rate	Number of Cases	Rate
Western Trust	13	0.205	9	0.143	7	0.106	20	0.296
Southern Trust	11	0.163	15	0.216	17	0.239	15	0.203
South Eastern Trust	26	0.362	30	0.413	38	0.602	31	0.491
Northern Trust	20	0.288	22	0.304	25	0.337	18	0.238
Belfast Trust	47	0.346	50	0.375	36	0.255	49	0.343
Northern Ireland	117	0.287	126	0.307	123	0.296	133	0.314

6. Hand Hygiene Compliance

The Trust's overall average self-reported hand hygiene score is 83% when non-submission areas are included. These areas score an automatic 0%. 37 areas out of 194 applicable areas failed to submit scores for May 2024. They are as follows:

Site	Ward/ Department/ Facility
Altnagelvin	Ward 9 Rheumatology Ward 24 AMU Ward 25 FOU Ward 26 ARM Ward 40 Ward 42 ACU Antenatal Clinic Breast Screening Unit DCU Theatre 9 Emergency Department GUM Clinic Main Theatre 3 OPALS South Wing Clinics Spruce House
SWAH	Ward 1 MSAU Ward 2 Ward 5 Ward 6 Ward 7 Ward 9 Emergency Department Women's Health Centre
OHPCC	Outpatients Department Theatres Women's Centre
Tyrone & Fermanagh Hospital	Elm Villa
Lakeview Hospital	Strule Lodge Berryburn Centre
Grangewood Hospital	Carrick Ward
Day Care	Benbradagh ATC Creggan Day Centre Tempo Road Day Centre
Other Community	Avalon House Rapid Response Team, Derry Rapid Response Team, Omagh Rapid Response Team, Fermanagh

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. The table below shows the wards/ departments where the IP&C Team undertook validation audits during May 2024 and the scores obtained compared with self-reported scores for the same areas.

Ward/ Department/ Facility	IP&C Team Validation Score	Self-Reported Score
Ward 3, Altnagelvin	83%	1) 90% 2) 95%
Ward 6, Altnagelvin	62%	1) 100% 2) 100%
Ward 23 TOU, Altnagelvin	80%	1) 100% 2) 100%
Ward 24 AMU, Altnagelvin	100%	1) Not submitted 2) 90%
Ward 31, Altnagelvin	90% (Pass) 85% 80%	1) 100% 2) 100%
Ward 40, Altnagelvin	73%	1) Not submitted 2) 95%
Ward 41 AGM, Altnagelvin	90% (Pass)	1) 100% 2) 100%
Ward 42, Altnagelvin	100%	1) 100% 2) Not submitted
Ward 43, Altnagelvin	90% (Pass)	1) 100% 2) 100%
Ward 44, Altnagelvin	80% 56%	1) 100% 2) 100%
Ward 49 NNICU, Altnagelvin	100%	1) 100% 2) 100%
Ward 7, SWAH	100%	1) 100% 2) Not submitted
Children's Ward, SWAH	100%	1) 100% 2) 100%

7. 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. These audits are discussed through the normal governance arrangements, as well as at Accountability & Assurance Meetings and the Chief Executive HCAI Accountability Forum.

Key:

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

October – December 2023

	Northern Sector Average Compliance	Southern Sector Average Compliance	Trust Average Compliance
Hand Hygiene	78%	82%	80%
PPE	87%	90%	89%
C. difficile	39%	25%	36%
C. difficile Care Pathway	Pass x 12 Fail x 2	Pass x 4 Fail x 0	Pass x 16 Fail x 2
Peripheral Line Ongoing Care	No audits completed	72%	72%
Urinary Catheter Ongoing Care	No audits completed	48%	48%
Renal Dialysis Catheter Insertion	No audits completed	67%	67%

Renal Dialysis Catheter Ongoing Care	No audits completed	100%	100%
Commode	43%	100%	53%
Mattress	60%	No audits completed	60%
MRSA	No audits completed	85%	85%

January – March 2024

	Northern Sector Average Compliance	Southern Sector Average Compliance	Trust Average Compliance
Hand Hygiene	78%	83%	80%
PPE	69%	100%	73%
<i>C. difficile</i>	57%	88%	67%
<i>C. difficile</i> Care Pathway	Pass x 14 Fail x 1	Pass x 6 Fail x 2	Pass x 20 Fail x 3
Peripheral Line Ongoing Care	23%	88%	46%
Urinary Catheter Ongoing Care	25%	83%	45%
Central Line Ongoing Care	100%	100%	100%
ANTT	90%	No audits completed	90%
Commode	50%	100%	69%
Cleaning & Decontamination	6%	95%	75%
MRSA	67%	65%	66%

April – June 2024

	Northern Sector Average Compliance	Southern Sector Average Compliance	Trust Average Compliance
Hand Hygiene	80%	93%	82%
PPE	75%	90%	77%
<i>C. difficile</i>	50%	69%	56%
<i>C. difficile</i> Care Pathway	Pass x 11 Fail x 7	Pass x 5 Fail x 3	Pass x 16 Fail x 10
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%

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 and a half years. The most recent infection recorded was a ventilator-associated pneumonia, which occurred in ICU, Altnagelvin, in October 2018.

Results, as of May 2024, 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	0.77
Catheter-Associated Urinary Tract Infection	Zero to date	23/07/2011	0.00	0.00	0.10
Central Line Associated Blood Stream Infection	Zero to date	11/03/2012	0.00	0.00	0.32