

Infection Prevention & Control Report to Trust Board

Meeting Date – 2nd February 2023

1. Executive Summary

The Infection Prevention & Control (IP&C) Team continue to be significantly involved with the management of any suspected or confirmed cases of COVID-19 and outbreak management, whilst also managing the rise in Influenza, Respiratory Syntical Virus (RSV) and Group A Streptococcus cases. The rise in these infections has increased the workload for the IP&C Team. This has been compounded by the current IP&C Nursing workforce challenges, with the recent retirements of two out of three Senior IP&C Nurses and vacant Band 6 IP&C Nursing posts. As a result of the increased demands upon the Team and within the current IP&C resources, there are challenges in attending to other routine work whilst recruitment is ongoing.

Reduction Targets

The Department of Health for Northern Ireland (NI) has not yet issued new reduction targets for healthcare-associated infections (HCAIs) in 2022/23. These targets relate to *Clostridium difficile* (*C. difficile*) associated disease, Meticillin-Resistant *Staphylococcus aureus* (MRSA) bacteraemia and gram-negative bacteraemia (GNB), specifically *Escherichia coli*, *Klebsiella species* and *Pseudomonas aeruginosa*.

The most recent year for which targets were available is 2019/20. The Trust's actual performance in that year is discussed in subsequent relevant sections to provide a point of reference when examining performance in 2022/23.

Current *C. difficile* Performance

So far this year 70 cases of *C. difficile* have been reported. 41 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 (29) are classified as community-acquired as the patients presented with symptoms within a 72-hour period after admission.

This year's performance has already exceeded the total number of *C. difficile* cases recorded in the whole of 2019/20 (63).

Current MRSA Bacteraemia Performance

Since the beginning of April 2022 seven MRSA bacteraemia cases have been reported. Three are categorised as community-associated as they occurred less than 48 hours after admission to hospital and four are categorised as healthcare-associated as they occurred more than 48 hours after admission to hospital (definition used by the PHA).

This year's performance has already exceeded the total number of MRSA bacteraemia cases recorded in the whole of 2019/20 (four).

Current GNB Performance

As of 20th January 2022, 33 healthcare-associated GNB cases have been reported.

In 2019/20 a total of 59 cases were recorded. 52 of those cases had occurred by mid-January 2020 and, by comparison, this year's performance is currently showing a reduction of 36.54%

against that figure.

2. Coronavirus (COVID-19)

Outbreak Management

COVID-19 outbreaks continue to be declared in Trust wards, departments and facilities. Between November 2022 and mid-January 2023, a total of 31 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.

3. Infection Prevention & Control Induction and Mandatory Training

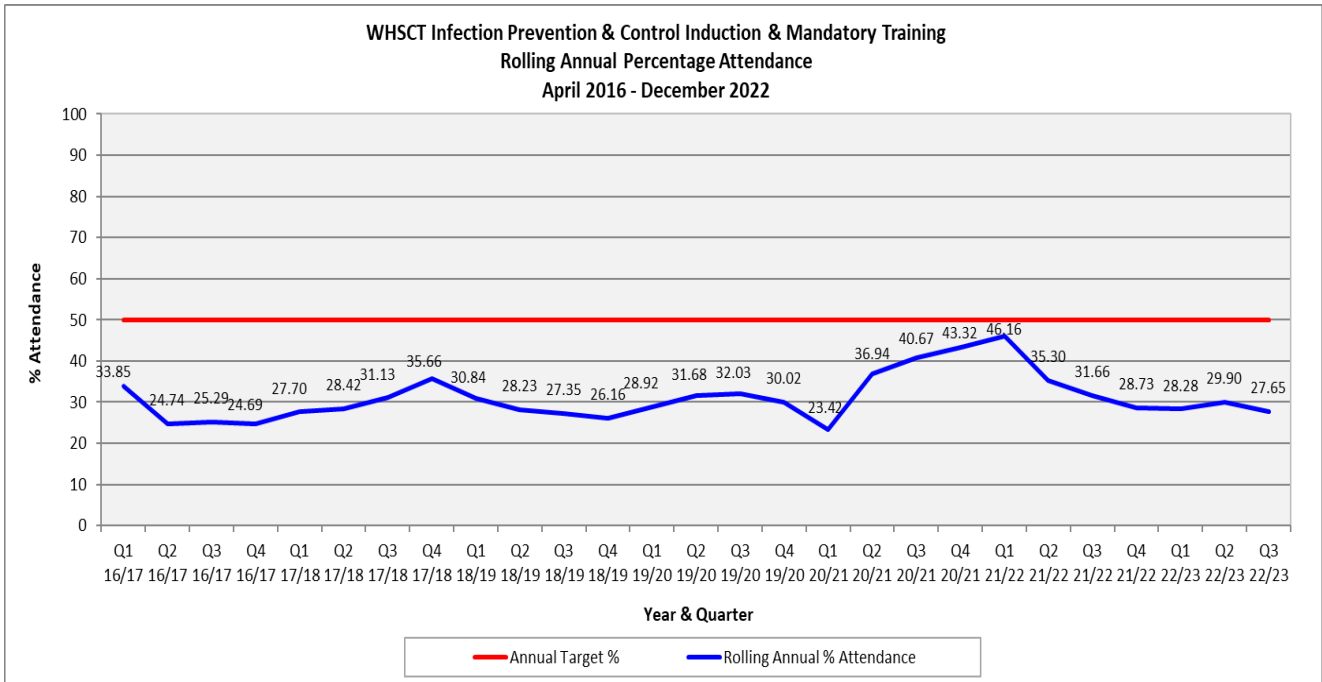
IP&C Induction and Mandatory Training is delivered online via an e-learning programme. This was developed regionally for use by all health and social care organisations in NI and was originally launched across the Trust in late June 2020.

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 HSC Learning website (www.hsclearning.com) 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).

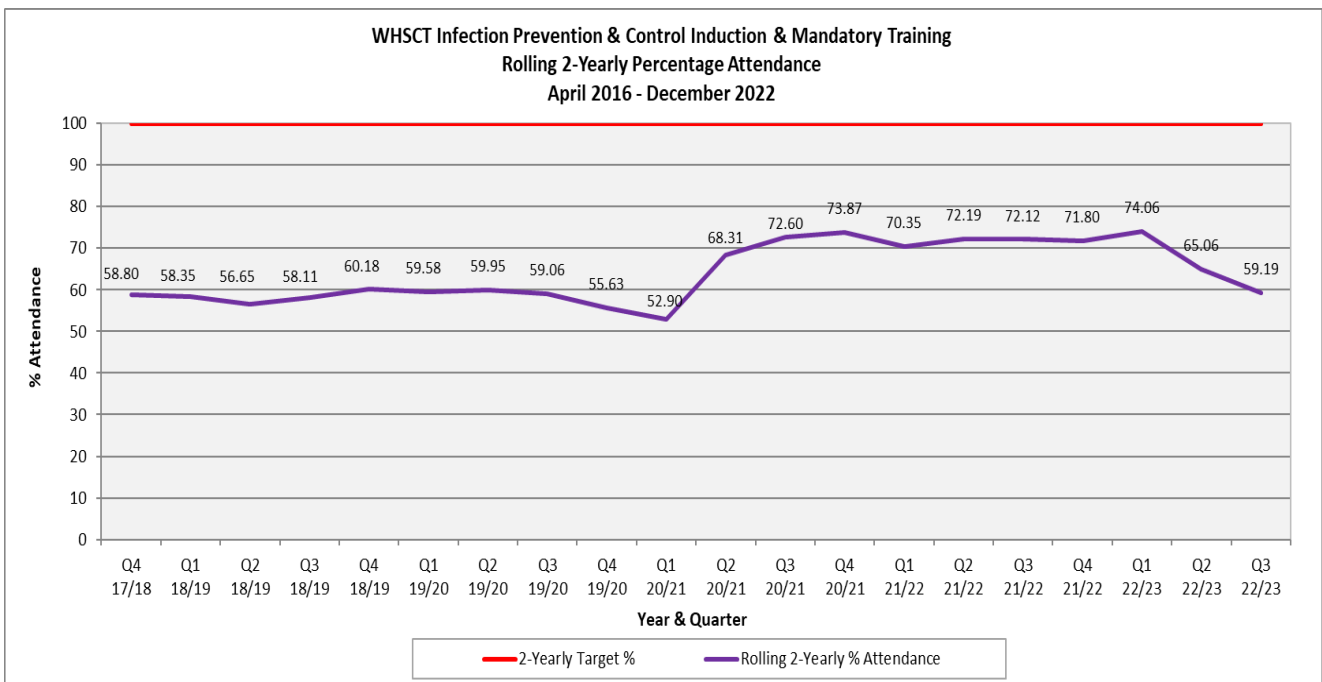
Training must be completed every two years.

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 2022, a total of 2668 staff completed the training. The attendance target for each year is 50% of the total number of staff who require training (i.e. 6047 out of 12,094 applicable staff). For the 12 months ending December 2022, the percentage stands at 27.65%. That is 22.35% 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 2022, it is 59.19%.



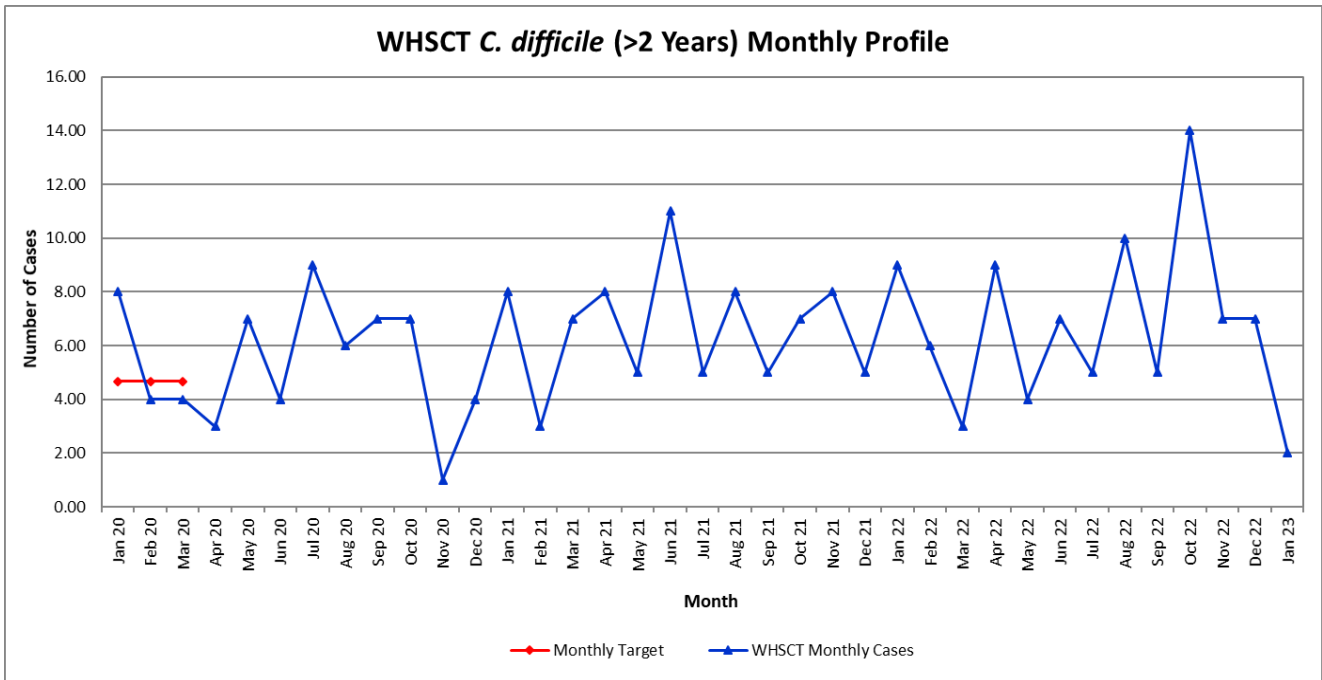
In January 2023, the IP&C Team recommended delivery of virtual training sessions via Microsoft Teams. These sessions are aimed at staff who come under Tier 1B of the Tier Matrix (i.e. “healthcare staff with minimal or no patient/ client contact or healthcare staff with patient contact who require role specific training”), such as Support Services, HSDU, Estates, Transport, Social Workers, Chaplains, etc.

4. C. difficile Performance

The new 2022/23 reduction target for *C. difficile* (≥ 2 years) has not yet been issued.

Since the beginning of April 2022 70 cases have been reported, with 41 of those being categorised as healthcare-associated.

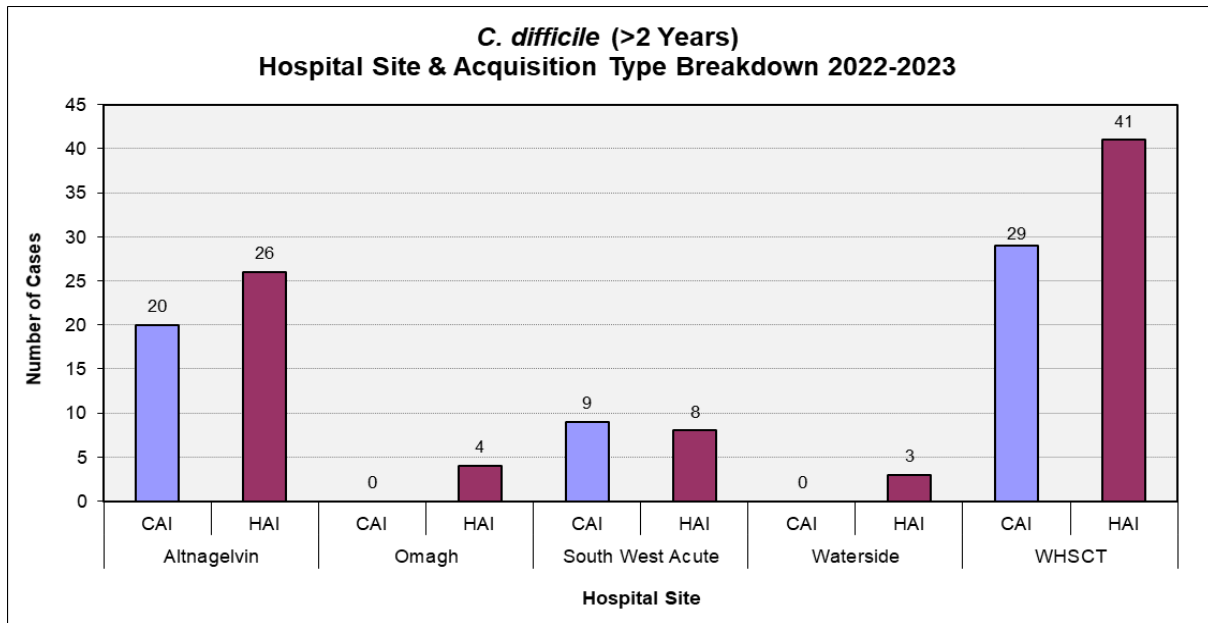
As a point of comparison, the total number of cases recorded in 2019/20 was 63. 53 of those cases had occurred by mid-January 2020. This year's performance is currently in excess of both figures; an increase of 32.08% against the mid-January figure (comprising an increase in healthcare-associated infection cases of 36.67% and an increase in community-acquired infection cases of 26.09%) and an increase of 11.11% against the whole year figure (comprising an increase in healthcare-associated infection cases of 7.89% and an increase in community-acquired infection cases of 16%).



* The value for Jan 23 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



Preventable/ Non-Preventable

In respect of *C. difficile* cases occurring during 2022/23 a total of 13 post-infection reviews (PIRs) have been conducted. These found that none of the cases were preventable and 13 were non-preventable.

PIRs are pending for a further 42 cases. Work is ongoing to update and streamline the current PIR process.

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 2022. The table below summarises the number of *C. difficile* cases and the rate per 1000 bed days for each Trust, plus NI averages, for the first two quarters of 2022/23.

	April-June 2022		July-September 2022	
	Number of Cases	Rate	Number of Cases	Rate
Western Trust	20	0.329	20	0.320
Southern Trust	20	0.323	19	0.287
South Eastern Trust	19	0.282	19	0.276
Northern Trust	6	0.090	11	0.162
Belfast Trust	24	0.191	27	0.212
Northern Ireland	89	0.233	96	0.244

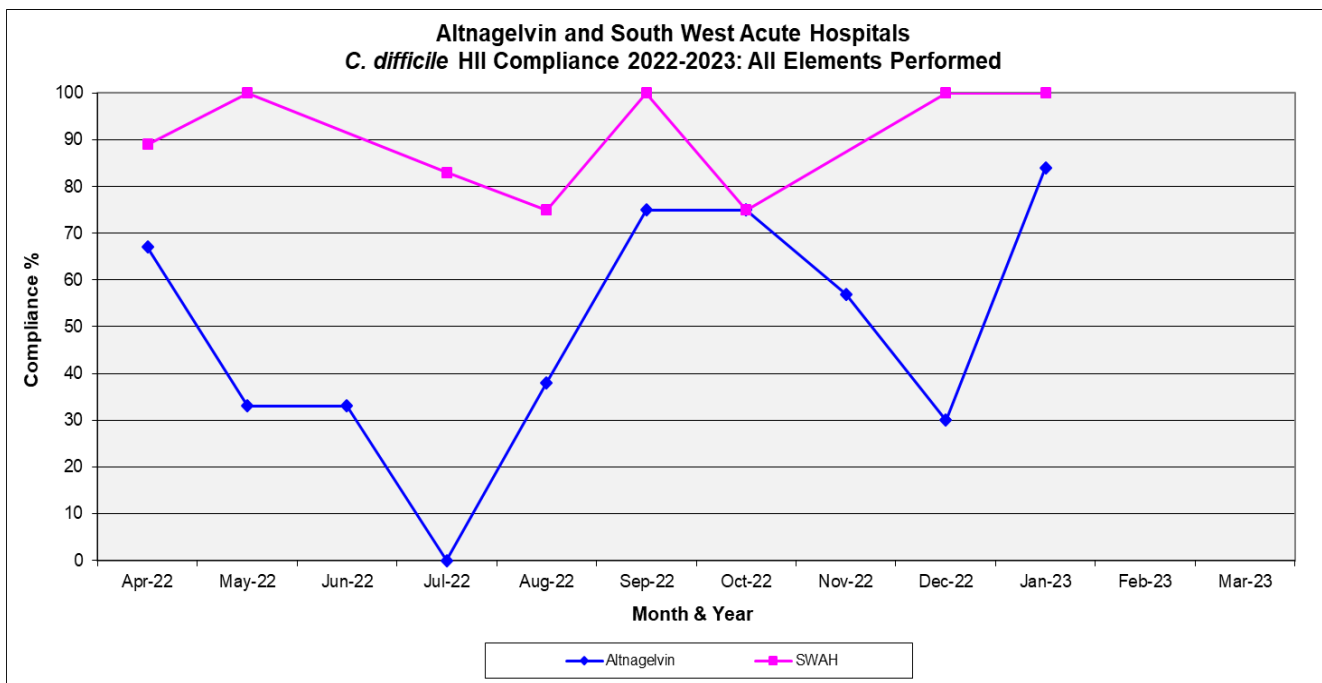
The rise in the number of cases in the Western Trust has been highlighted at the Chief Executive HCAI Accountability Forum, IP&C Committee, Safe & Effective Care, Corporate Safety Huddle and Antimicrobial Management Team.

An action plan is being developed to try to address the issue but the ability to make any significant improvements will be affected by the staffing challenges within the Microbiology, Antimicrobial Pharmacy and IP&C Services. There is also a need to effect wider change in community prescribing in Primary Care.

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 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 South West Acute Hospital (SWAH).



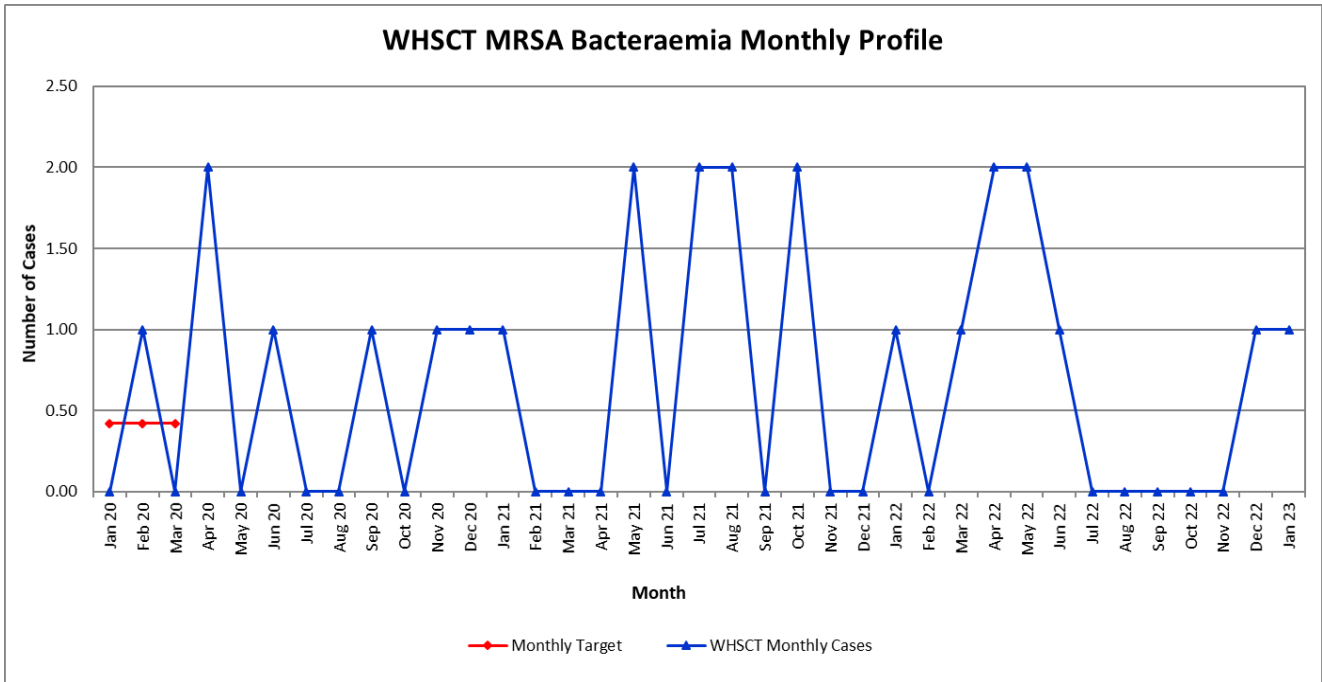
5. S. aureus Bacteraemia Performance

MRSA Bacteraemia

The new MRSA bacteraemia reduction target for 2022/23 has not yet been issued.

Since the beginning of April 2022 seven cases have been reported, with four of those being categorised as healthcare-associated.

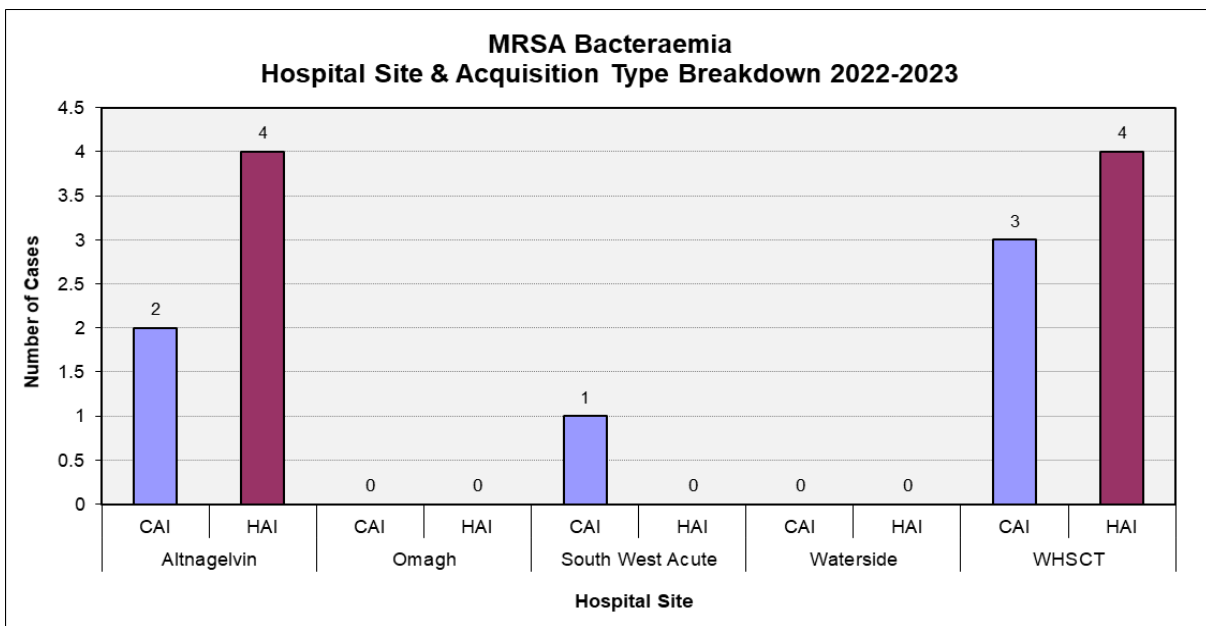
In 2019/20 a total of four cases were recorded. Three of those cases had occurred by mid-January 2020. By contrast, this year’s performance is showing an increase of 133% against the mid-January figure and an increase of 75% against the whole year figure.



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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 20th January 2023, the total number of days since the last Trust hospital-associated MRSA bacteraemia is:

Altnagelvin – 5 days	(Last recorded case was in Ward 50 Sperrin)
SWAH – 949 days	(Last recorded case was in Ward 8)
Tyrone County Hospital/ Omagh Hospital & Primary Care Complex (OHPCC) – 2921 days	(Last recorded case was in the Rehab Unit)

Comparison with Other Trusts

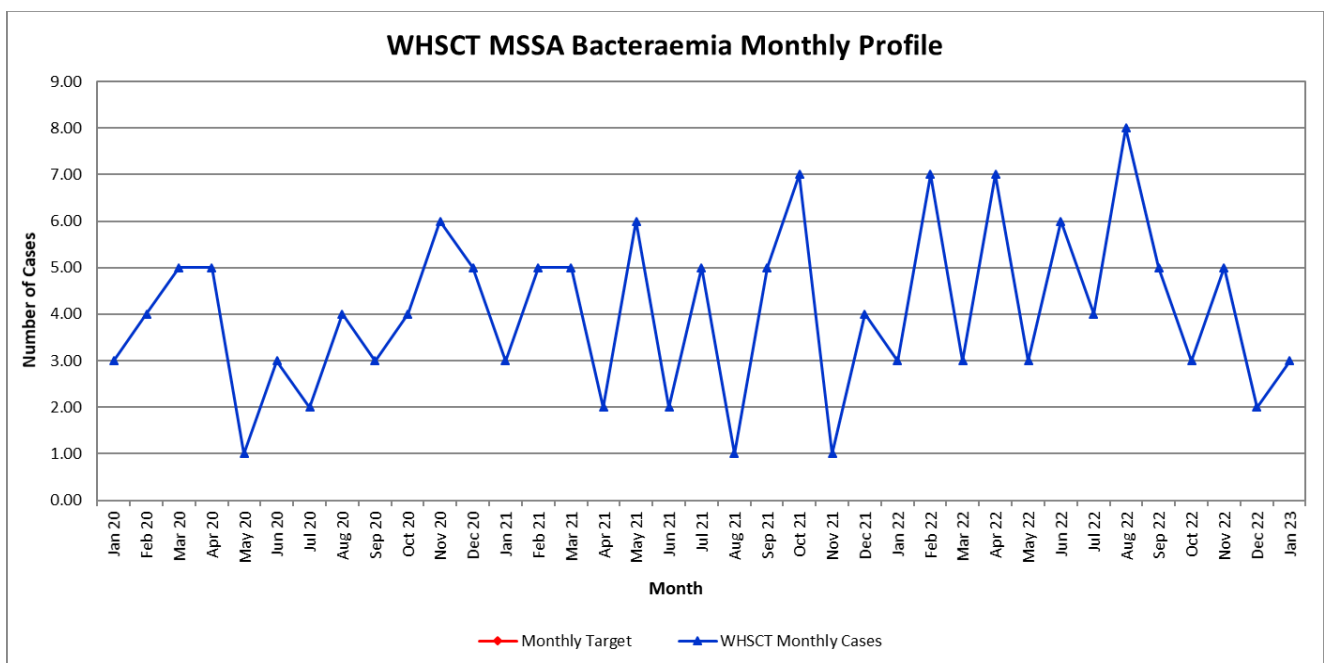
The PHA releases regional comparator information on a quarterly basis. The most recent data available covers up to the end of September 2022. The table below summaries the number of MRSA bacteraemia cases and the rate per 1000 bed days for each Trust, plus NI averages, for the first two quarters of 2022/23.

	April-June 2022		July-September 2022	
	Number of Cases	Rate	Number of Cases	Rate
Western Trust	5	0.082	0	0.000
Southern Trust	5	0.081	2	0.030
South Eastern Trust	1	0.015	3	0.044
Northern Trust	0	0.000	2	0.029
Belfast Trust	4	0.032	4	0.031
Northern Ireland	15	0.039	11	0.028

Meticillin-Sensitive Staphylococcus aureus (MSSA) Bacteraemia

There is no reduction target associated with MSSA bacteraemia for 2022/23, 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 46 cases.

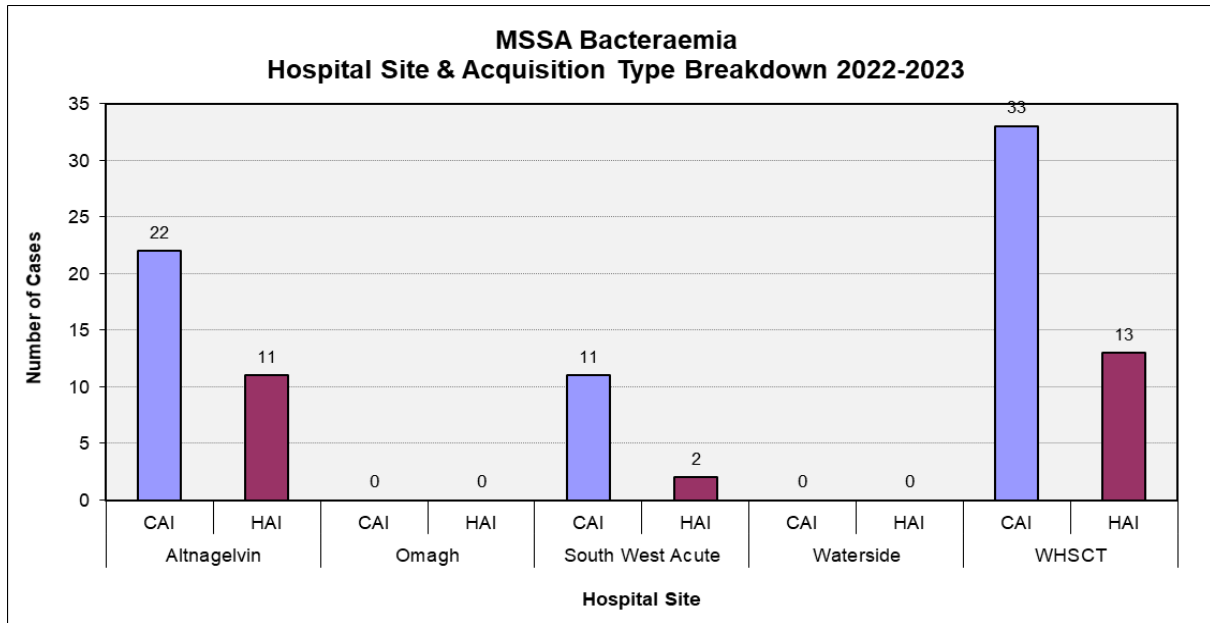


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A breakdown of the cases by hospital site and acquisition type is given in the chart below.

Key:

CAI Community-associated infection
HAI Hospital-associated infection



As of 20th January 2023, the total number of days since the last Trust hospital-associated MSSA bacteraemia is as follows:

Altnagelvin – 7 days
SWAH – 93 days
OHPCC – 1922 days

(Last recorded case was in ICU)
(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 2022. The table below summaries the number of MSSA bacteraemia cases and the rate per 1000 bed days for each Trust, plus NI averages, for the first two quarters of 2022/23.

	April-June 2022		July-September 2022	
	Number of Cases	Rate	Number of Cases	Rate
Western Trust	16	0.263	17	0.272
Southern Trust	15	0.242	14	0.211
South Eastern Trust	15	0.222	17	0.247
Northern Trust	21	0.314	19	0.279
Belfast Trust	35	0.279	39	0.306
Northern Ireland	102	0.267	106	0.270

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

Results, as of December 2022, 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	0.55
Catheter-Associated Urinary Tract Infection	Zero to date	23/07/2011	0.00	0.00	0.04
Central Line Associated Blood Stream Infection	Zero to date	11/03/2012	0.00	0.00	0.65

7. Legionella

Water testing continues throughout key Trust owned facilities. A range of mitigating actions are in place, ranging from increased flushing, chlorination and placement of PAL filters to the removal of dead legs and replacement of pipework.

A planned Legionella and *Pseudomonas* 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 multidisciplinary 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 increase in the number of outlets testing positive for Legionella in the North Wing, Altnagelvin. On investigation by the Trust Estates Team it was identified that there had been failure of three pressure vessels. This is concerning given the three-year timeframe. Interim measures have been put in place to maintain the water system and services whilst further information and investigations are being undertaken with Strategic Capital Development and the Contractor.

There has been an increase in the number of outlets testing positive for Legionella since the previous exception report (27% of outlets testing positive), with the North Wing contributing to this increase. This is currently being managed, as per the Water Safety Plan, with the use of point-of-use filters. These ensure the safety of users and allow the facilities to remain operational, with no adverse effect on the service.

Further Improvement Works 2022/23

The Trust continues to utilise the current Risk Assessments to target areas which require improvement works for 2022/23. Risk Assessments will be amended to reflect the improvements

made to particular installations. Works planned include:

- Nucleus, Altnagelvin: DHW improvement works (due to Legionella positives).
- Tyrone & Fermanagh Hospital, Omagh: New cold water main upgrade.

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 96%.