

Infection Prevention & Control Report to Trust Board

Meeting Date – 6th April 2023

1. Executive Summary

The Infection Prevention & Control (IP&C) Team continue to be involved with the management of any suspected or confirmed cases of COVID-19 and outbreak management. This has been compounded by the current IP&C Nursing workforce challenges. 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 81 cases of *C. difficile* have been reported. 49 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 (32) 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 28th March 2023, 37 healthcare-associated GNB cases have been reported.

In 2019/20 a total of 59 cases were recorded. All 59 of those cases had occurred by mid-March 2020 and, by comparison, this year's performance is currently showing a reduction of 37.29% against that figure.

2. Coronavirus (COVID-19)

Outbreak Management

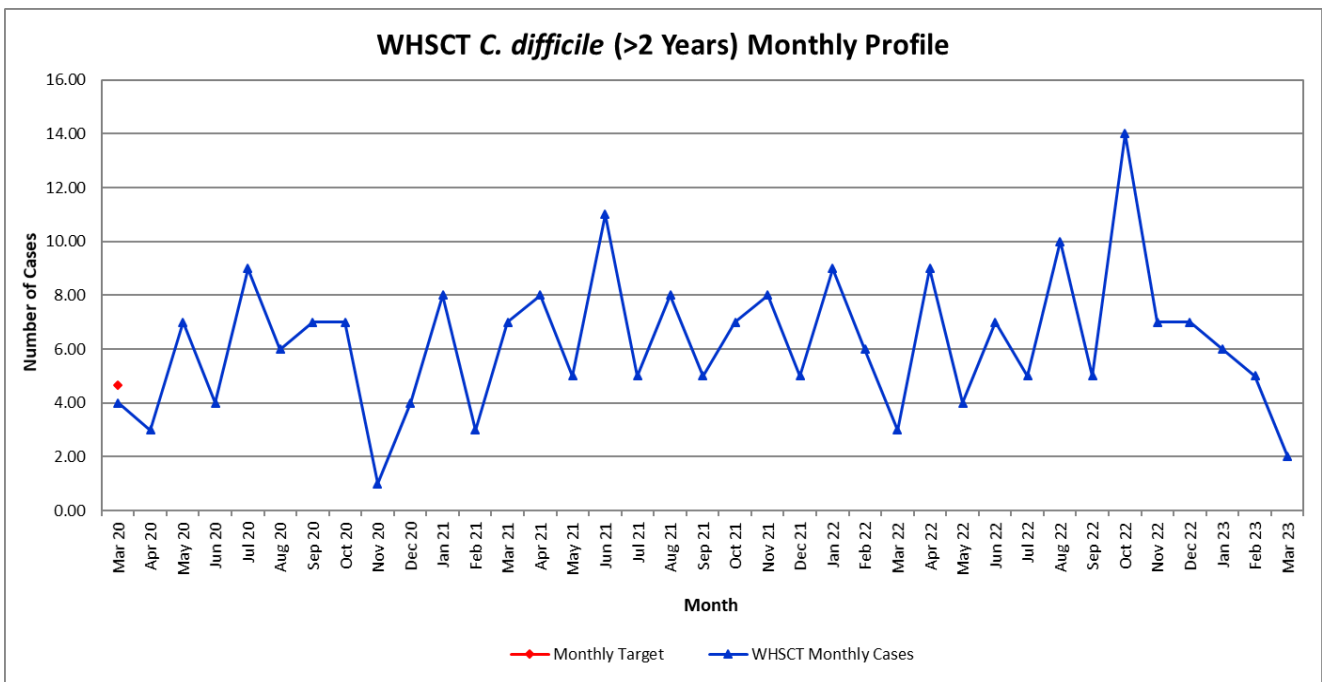
COVID-19 outbreaks continue to be declared in Trust wards, departments and facilities. Between January and mid-March 2023, a total of 18 outbreaks occurred. The IP&C Team are leading on the management of these incidents as applicable. Incident meetings are taking place and all IP&C measures have been instigated.

3. 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 81 cases have been reported, with 49 of those being categorised as healthcare-associated.

As a point of comparison, the total number of cases recorded in 2019/20 was 63. All 63 of those cases had occurred by mid-March 2020. This year's performance is currently in excess of both the mid-March figure and the whole year figure; an increase of 28.57% (comprising an increase in healthcare-associated infection cases of 32.43% and an increase in community-acquired infection cases of 23.08%).

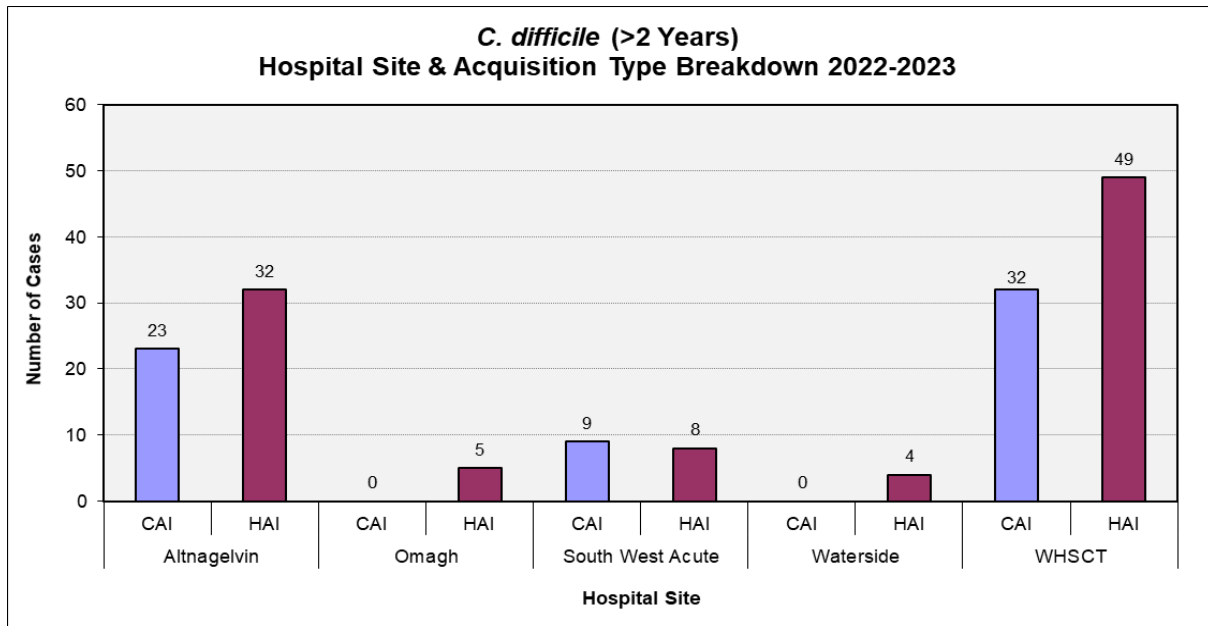


* The value for Mar 23 is subject to change as the report was compiled prior to the end of the month.

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 18 post-infection reviews (PIRs) have been conducted. These found that one of the cases was preventable and 17 were non-preventable.

- PIRs are pending for a further 49 cases. Work is ongoing to update and streamline the current PIR process and an updated guideline has been approved “Post-Infection Review (PIR) Guidelines for Healthcare-Associated *Clostridium difficile*, Meticillin Resistant/ Sensitive *Staphylococcus aureus* (MRSA/ MSSA) Infections, COVID-19 and Other Infection Related Incidents”.

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

	April-June 2022		July-September 2022		October-December 2022	
	Number of Cases	Rate	Number of Cases	Rate	Number of Cases	Rate
Western Trust	20	0.329	20	0.320	28	0.437
Southern Trust	20	0.323	19	0.287	21	0.296
South Eastern Trust	19	0.282	19	0.276	20	0.280
Northern Trust	6	0.090	11	0.162	13	0.182
Belfast Trust	24	0.191	27	0.212	22	0.163
Northern Ireland	89	0.233	96	0.244	104	0.252

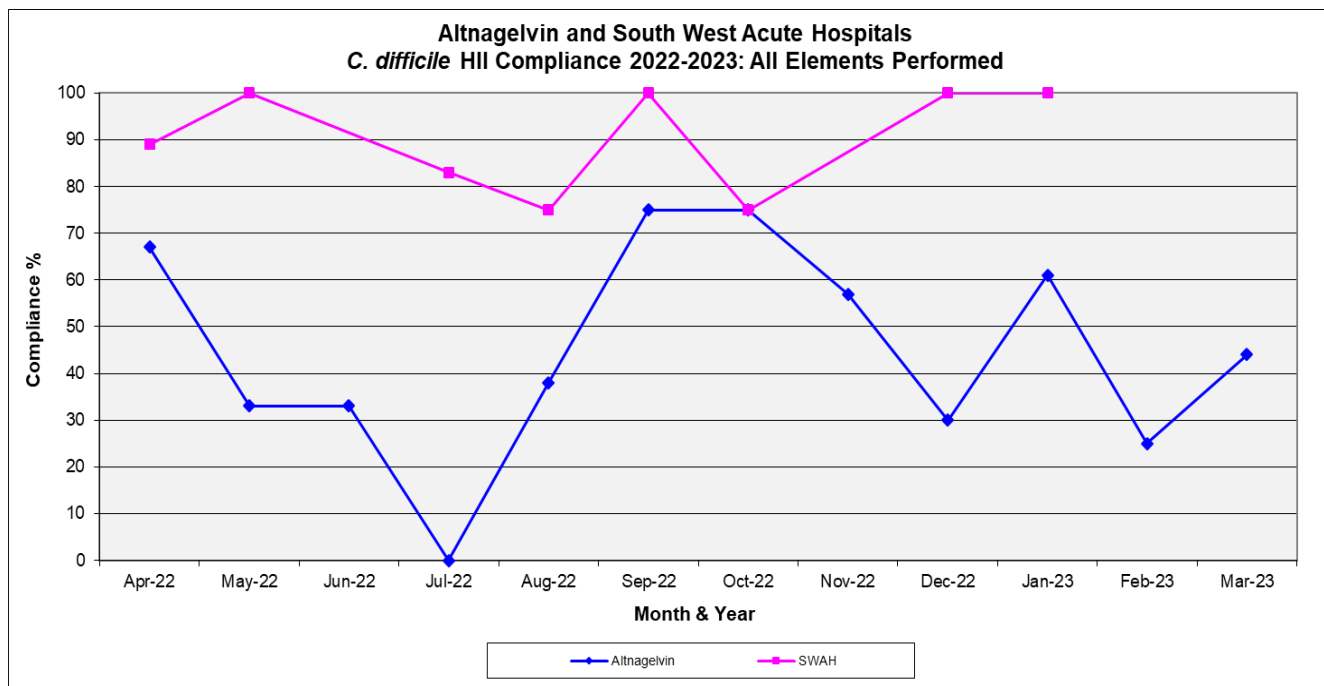
The rise in the number of cases in the Western Trust has been highlighted at the Chief Executive HCAI Accountability Forum, IP&C Committee, Safe & Effective Care, Corporate Safety Huddle and Antimicrobial Management Team.

An action plan has been 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).



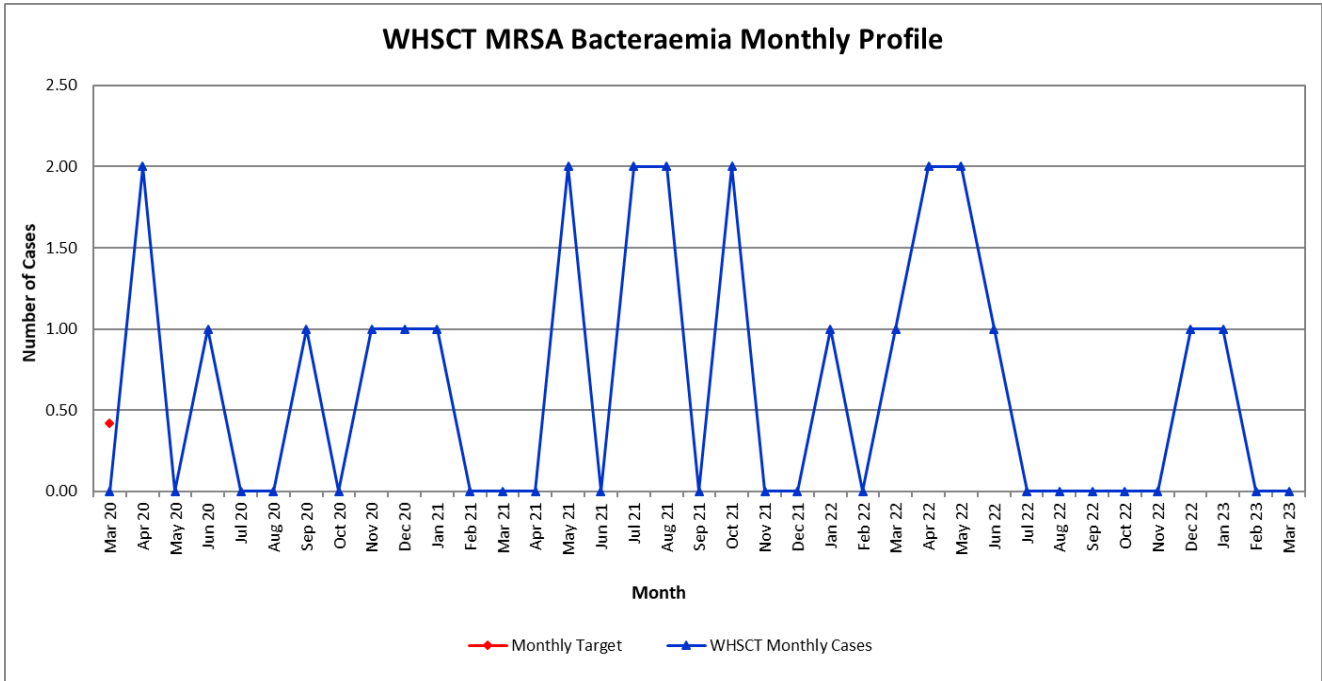
4. S. aureus Bacteraemia Performance

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.

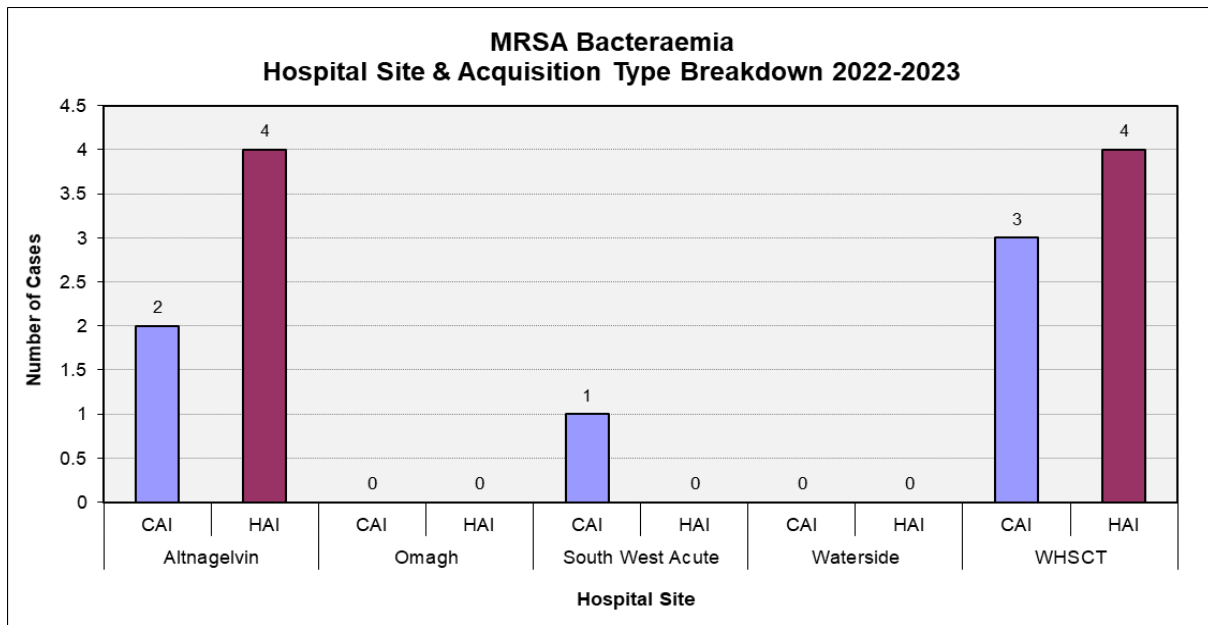
In 2019/20 a total of four cases were recorded. All four of those cases had occurred by mid-March 2020. By contrast, this year’s performance is showing an increase of 75% against both the mid-March figure and the whole year figure.



* The value for Mar 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



As of 28th March 2023, the total number of days since the last Trust hospital-associated MRSA bacteraemia is:

Altnagelvin – 72 days	(Last recorded case was in Ward 50 Sperrin)
SWAH – 1016 days	(Last recorded case was in Ward 8)
Tyrone County Hospital/ Omagh Hospital & Primary Care Complex (OHPCC) – 2988 days	(Last recorded case was in the Rehab Unit)

Comparison with Other Trusts

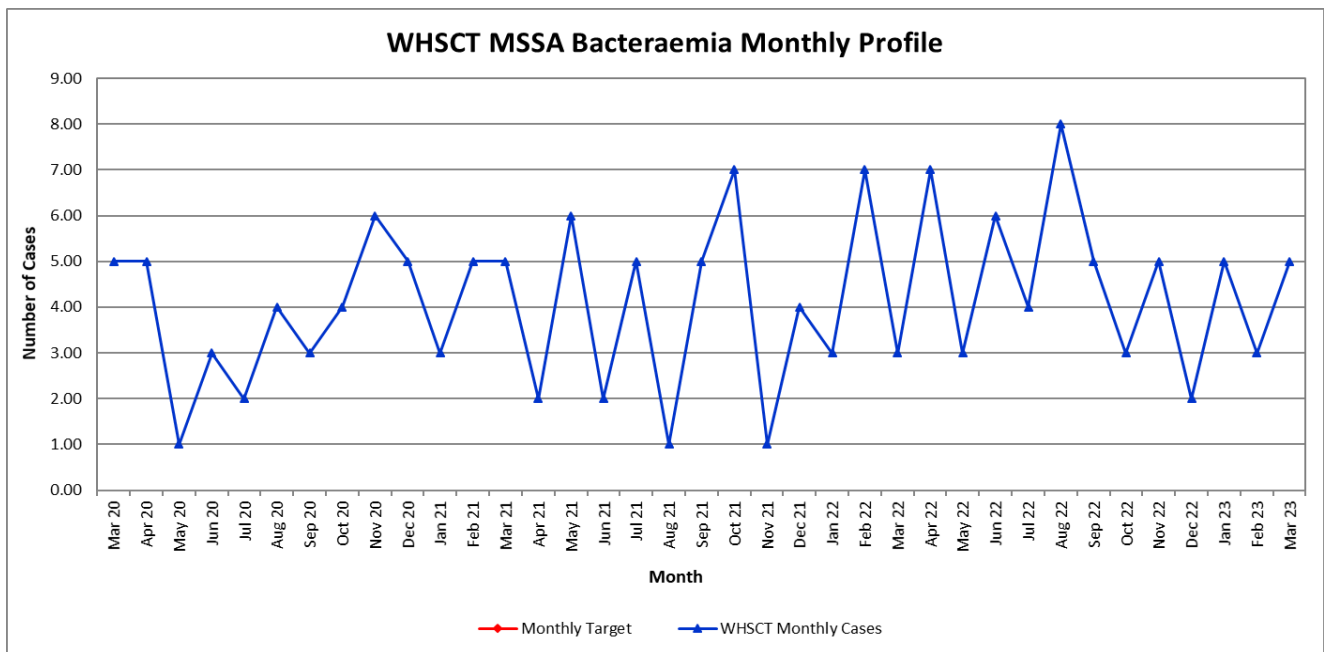
The PHA releases regional comparator information on a quarterly basis. The most recent data available covers up to the end of December 2022. The table below summaries the number of MRSA bacteraemia cases and the rate per 1000 bed days for each Trust, plus NI averages, for the first three quarters of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

	April-June 2022		July-September 2022		October-December 2022	
	Number of Cases	Rate	Number of Cases	Rate	Number of Cases	Rate
Western Trust	5	0.082	0	0.000	1	0.016
Southern Trust	5	0.081	2	0.030	0	0.000
South Eastern Trust	1	0.015	3	0.044	0	0.000
Northern Trust	0	0.000	2	0.029	4	0.056
Belfast Trust	4	0.032	4	0.031	1	0.007
Northern Ireland	15	0.039	11	0.028	6	0.015

Meticillin-Sensitive Staphylococcus aureus (MSSA) Bacteraemia

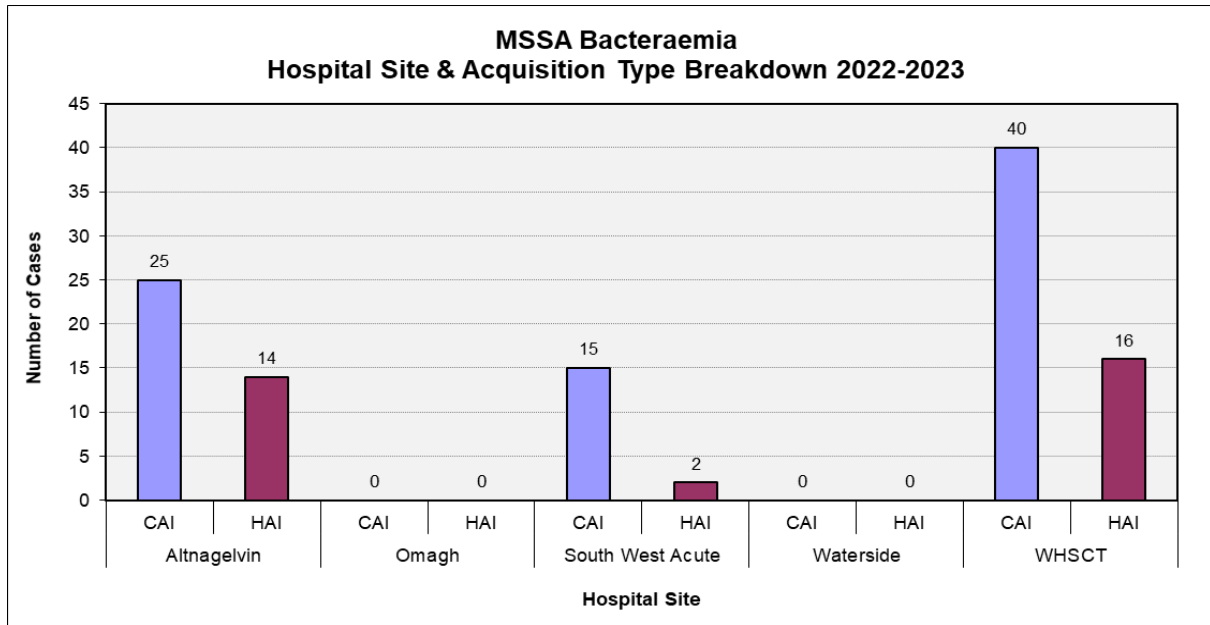
There is no reduction target associated with MSSA bacteraemia for 2022/23, however surveillance remains mandatory. MSSA is part of the skin normal flora of approximately 25-30% of the well population. It is, therefore, more difficult to control endogenous (self) exposure, which is the reason for removing 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 56 cases.



* The value for Mar 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



As of 28th March 2023, the total number of days since the last Trust hospital-associated MSSA bacteraemia is as follows:

Altnagelvin – 9 days (Last recorded case was in Ward 32 ESU)
SWAH – 160 days (Last recorded case was in Ward 2)
OHPCC – 1989 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 December 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 three quarters of 2022/23.

	April-June 2022		July-September 2022		October-December 2022	
	Number of Cases	Rate	Number of Cases	Rate	Number of Cases	Rate
Western Trust	16	0.263	17	0.272	10	0.156
Southern Trust	15	0.242	14	0.211	17	0.240
South Eastern Trust	15	0.222	17	0.247	14	0.196
Northern Trust	21	0.314	19	0.279	15	0.210
Belfast Trust	35	0.279	39	0.306	64	0.473
Northern Ireland	102	0.267	106	0.270	120	0.291

5. 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
2019/20	0	0	0	2	0	0	0	1	0	0	0	0	3
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 [†]

* 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 2022 six *Pseudomonas* cases have been reported. Five are categorised as healthcare-associated and one as community-associated.

The most recent healthcare-associated positive blood culture in an augmented care area pertains to an inpatient admission in ICU, SWAH, in February 2023. All IP&C measures were put in place. There have been no other positive patients in this area for over a year, nor have any recent water samples identified the presence of *Pseudomonas aeruginosa*. The water supply in the patient's room was tested and the result was negative. The patient had been transferred to Altnagelvin for a short period of time so the water supply there was also tested. It too was negative.

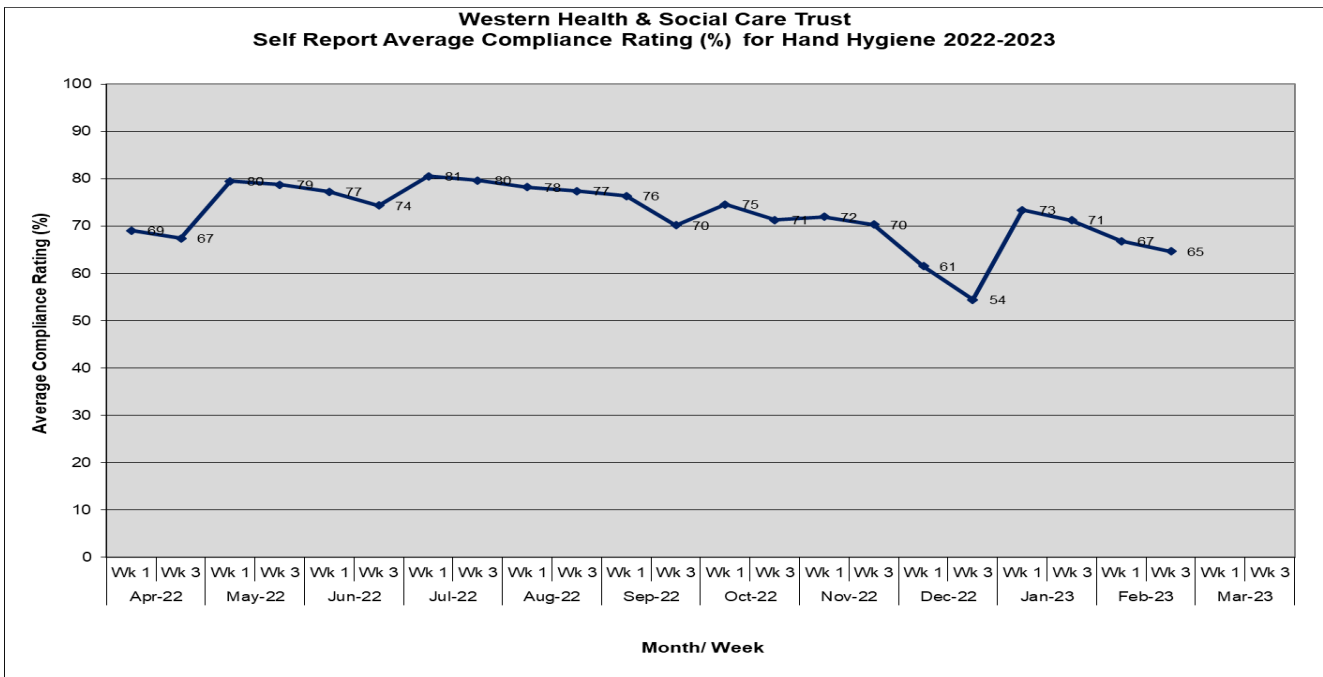
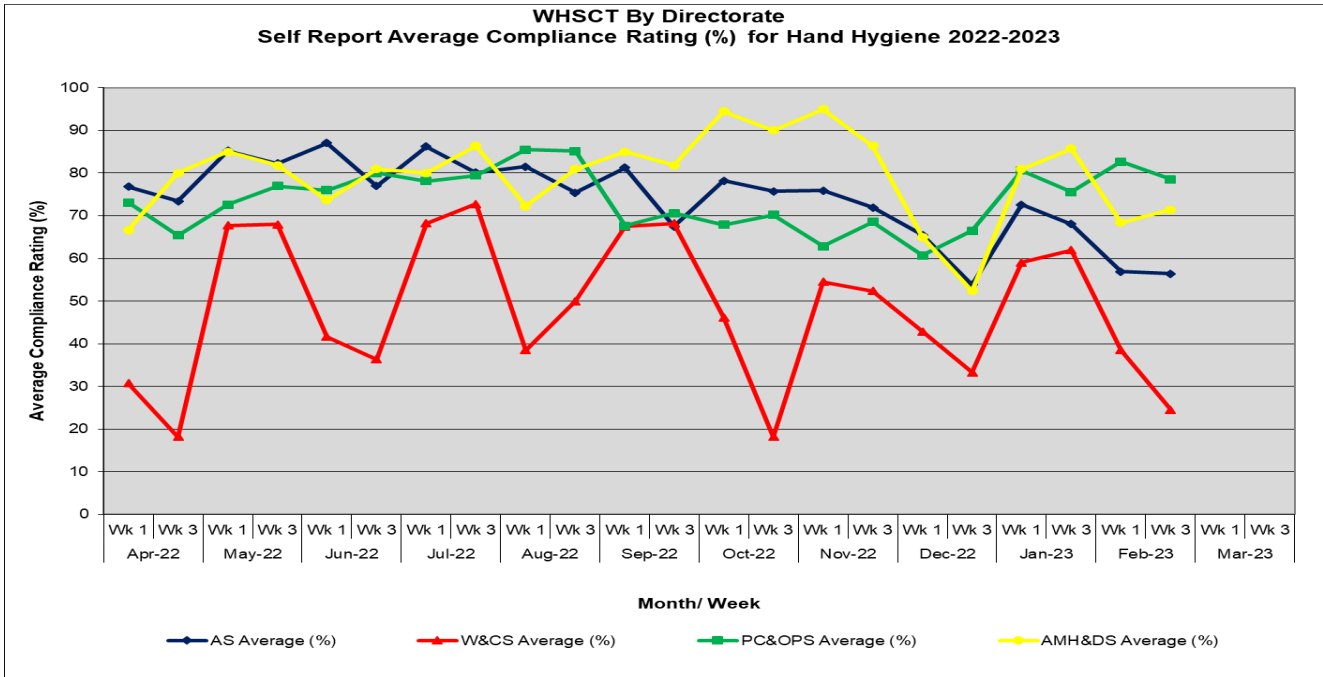
6. Hand Hygiene Compliance

The Trust's overall average self-reported hand hygiene score is 66% when non-submission areas are included. These areas score an automatic 0%. 53 areas out of 196 applicable areas failed to submit scores for February 2023. They are as follows:

Site	Ward/ Department/ Facility
Altnagelvin	Ward 9 Rheumatology Ward 25C Ward 25 FOU Ward 42 ACU Antenatal Clinic Cardiac Investigations Cath Lab Emergency Department Endoscopy GUM Clinic

	Main Theatre 3 Main Theatres Paediatrics Recovery OPALS South Wing Clinics Outpatients Department Roe Valley Outpatients Department
SWAH	Ward 6 Ward 7 Ward 9 Cardiac Investigations Cardiac Unit Day Procedure Unit Theatre Emergency Department Labour Ward Radiology Department Theatre 3 Theatre 4 Women's Health Centre
OHPCC	Cardiac Assessment Unit Cardiac Investigations Radiology Department Renal Unit Urgent Care & Treatment Centre Women's Centre
Tyrone & Fermanagh Hospital	Ash Villa Elm Villa
Lakeview Hospital	Melvin Lodge
Grangewood Hospital	Carrick Ward
Residential Homes	Thackeray Place Residential Home
Day Care	Beragh Day Centre Dromore Day Centre Drumcoo Day Centre Foyleville Day Centre Glen Oaks Day Centre Gortin Day Centre Maybrook Adult Training Centre
Other Community	Avalon House Children's Community Nursing Team The Cottages Children's Respite Crannog Intensive Treatment Team Rapid Response Team Derry Rapid Response Team OHPCC Rapid Response Team SWAH

A number of 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 scores improve 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.

7. New and Updated Infection Prevention & Control Guidance

The following guidance was approved by the IP&C Committee in March 2023. All three were updates of existing documents.

- Infection Control Precautions for Respiratory Viral Infections, including Influenza and Respiratory Syncytial Virus (RSV), in Healthcare Settings
- Post-Infection Review (PIR) Guidelines for Healthcare-Associated *Clostridium difficile*, Meticillin Resistant/ Sensitive *Staphylococcus aureus* (MRSA/ MSSA) Infections, COVID-19 and Other Infection Related Incidents
- Guidelines for Staff With or Suspected of Having an Infectious Disease