

Infection Prevention & Control Report to Trust Board

Meeting Date – 3rd November 2022

1. Executive Summary

COVID-19

The Infection Prevention & Control (IP&C) Team continue to be significantly involved with the management of any suspected or confirmed cases of COVID-19, contact tracing and processes, and outbreak management, in conjunction with supporting the redesign and resumption of services. The IP&C Team also has workforce challenges with the recent retirements of two out of three Senior IP&C Nurses, vacant IP&C nursing and administration posts and other absence in the Team. 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 50 cases of *C. difficile* have been reported. 29 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 (21) are classified as community-acquired as the patients presented with symptoms within a 72-hour period after admission.

Compared to 2019/20, this year's performance is currently showing an increase in *C. difficile* cases.

Current MRSA Bacteraemia Performance

Since the beginning of April 2022 five MRSA bacteraemia cases have been reported. Three are categorised as community-associated as they occurred less than 48 hours after admission to hospital and two 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 21st October 2022, 16 healthcare-associated GNB cases have been reported.

In 2019/20 a total of 59 cases were recorded. 43 of those cases had occurred by the end of

October 2019 and, by comparison, this year's performance is currently showing a reduction of 62.79% against that figure.

2. Coronavirus (COVID-19)

Outbreak Management

COVID-19 outbreaks continue to be declared in Trust wards, departments and facilities. Between September and late October 2022, a total of 21 outbreaks occurred. The IP&C Team, in conjunction with Occupational Health and/ or until recently Contact Tracing, are supporting the management of these incidents as applicable. Incident meetings are taking place and all IP&C measures have been instigated.

COVID-19 Training

The IP&C Team conducted a programme of COVID-19 Training sessions between September 2020 and November 2021. The training was delivered virtually using Zoom. 72 sessions took place and 1973 staff attended.

There was then a pause on the delivery of training for several months due to capacity issues and whilst new national IP&C guidance was awaited.

In June and July 2022 the IP&C Team delivered a series of training sessions on Respiratory Infections in Health and Care Settings (including COVID-19). This was in line with the PHA's NI Regional IP&C Manual update on IP&C Measures for SARS-CoV-2 (COVID-19) in Health and Care Settings. The training provided an update on changes to the safe management of patients and their environment when suspected or confirmed of COVID-19 or any other respiratory illness. It was aimed at healthcare staff in patient facing roles involved with the care of patients who may present with respiratory illness, both in the community and in hospital settings. Nine sessions went ahead and 141 staff attended.

Further COVID-19 Training was delivered during September and October 2022. Four sessions took place and 111 staff attended.

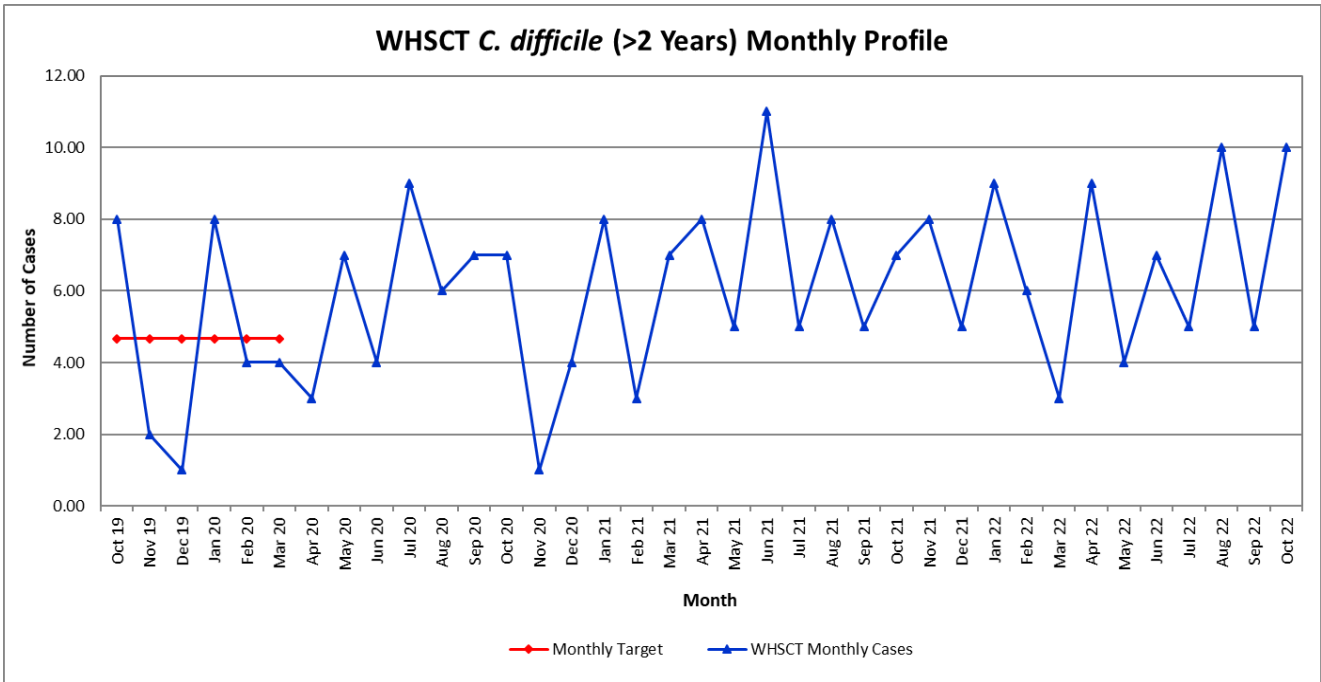
To date, across the three tranches, a total of 2225 staff have received training.

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 50 cases have been reported, with 29 of those being categorised as healthcare-associated.

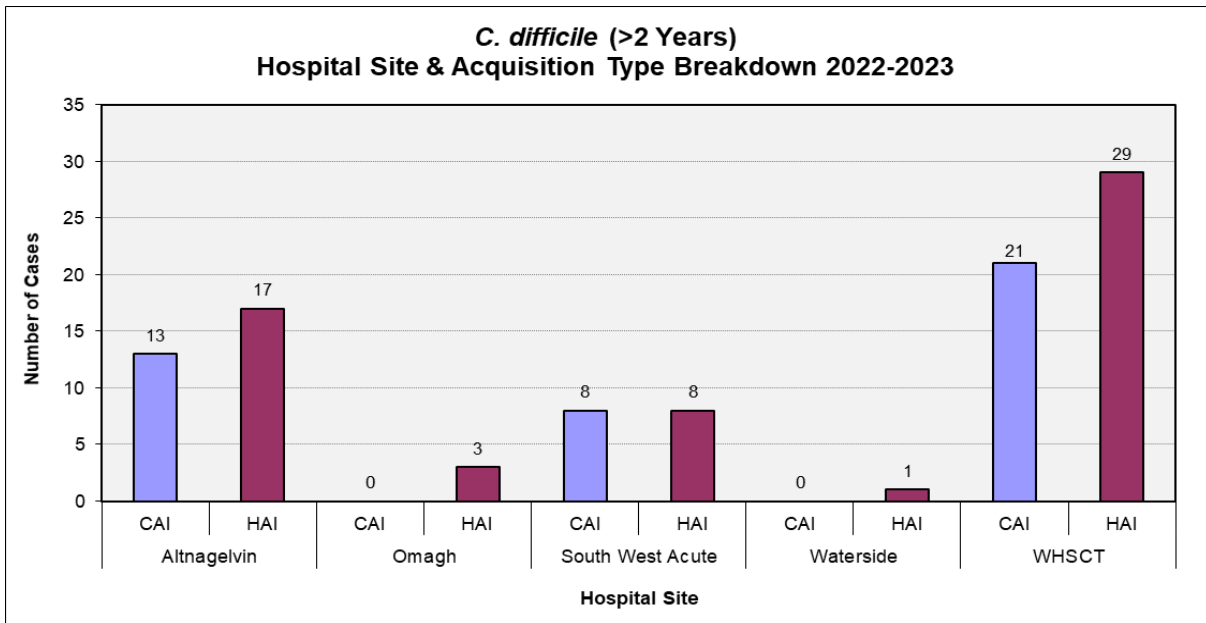
As a point of comparison, the total number of cases recorded in 2019/20 was 63. 44 of those cases had occurred by the end of October 2019. This year's performance is currently in excess of that figure; an increase of 13.64% (comprising an increase in healthcare-associated infection cases of 20.83% and an increase in community-acquired infection cases of 5%).



* The value for Oct 22 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

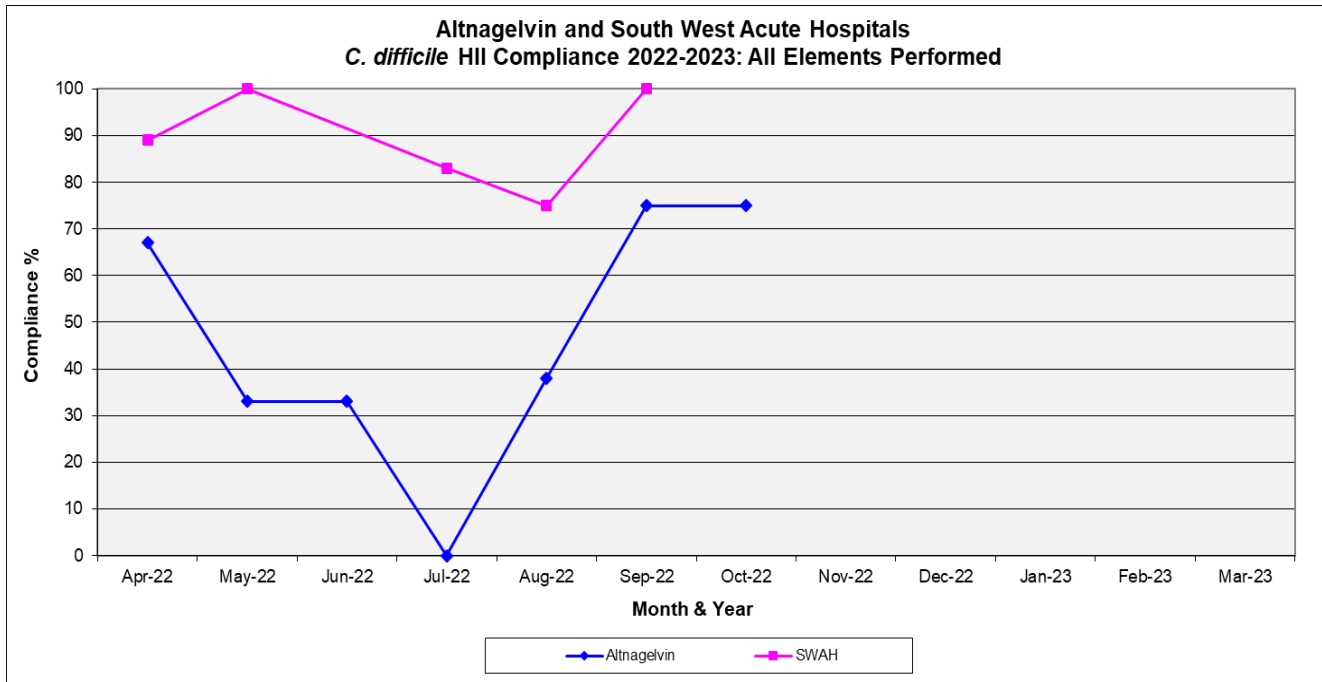
In respect of *C. difficile* cases occurring during 2022/23 a total of nine post-infection reviews (PIRs) have been conducted. These found that one of the cases was preventable and eight were non-preventable.

PIRs are pending for a further 31 cases. Work is ongoing regarding the PIR process to streamline the current review system.

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).



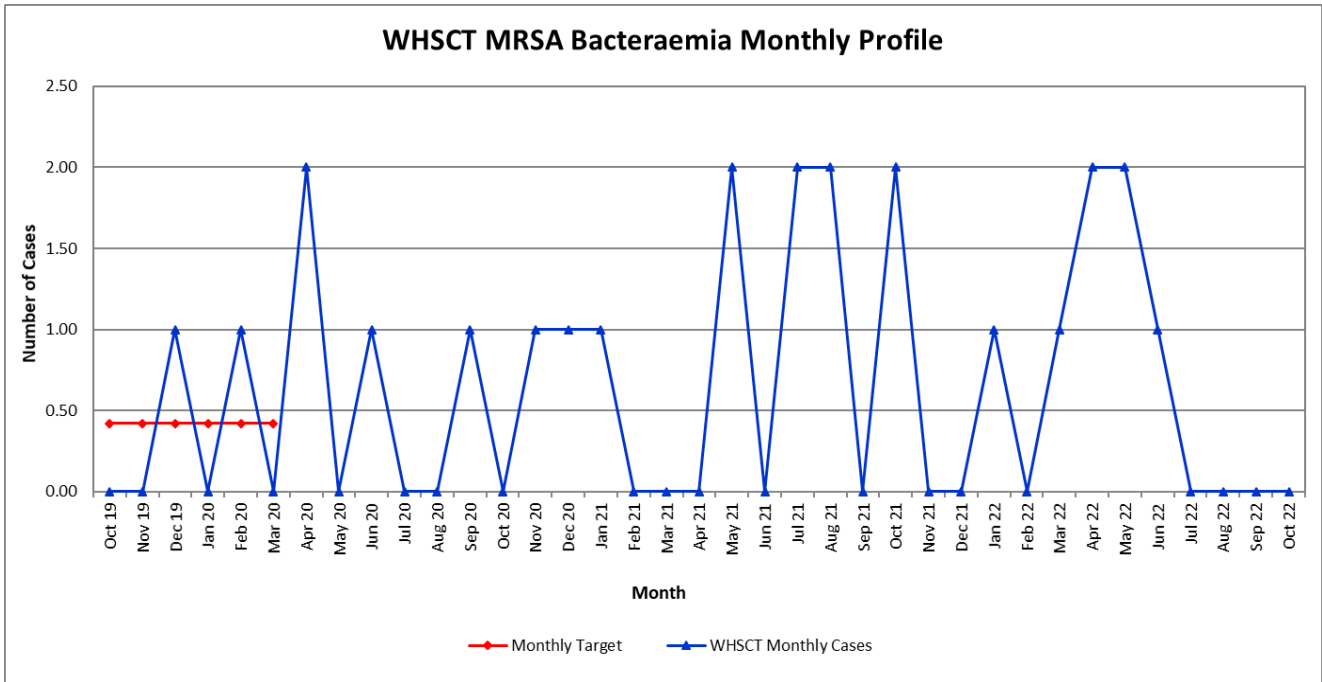
4. S. aureus Bacteraemia Performance

MRSA Bacteraemia

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

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

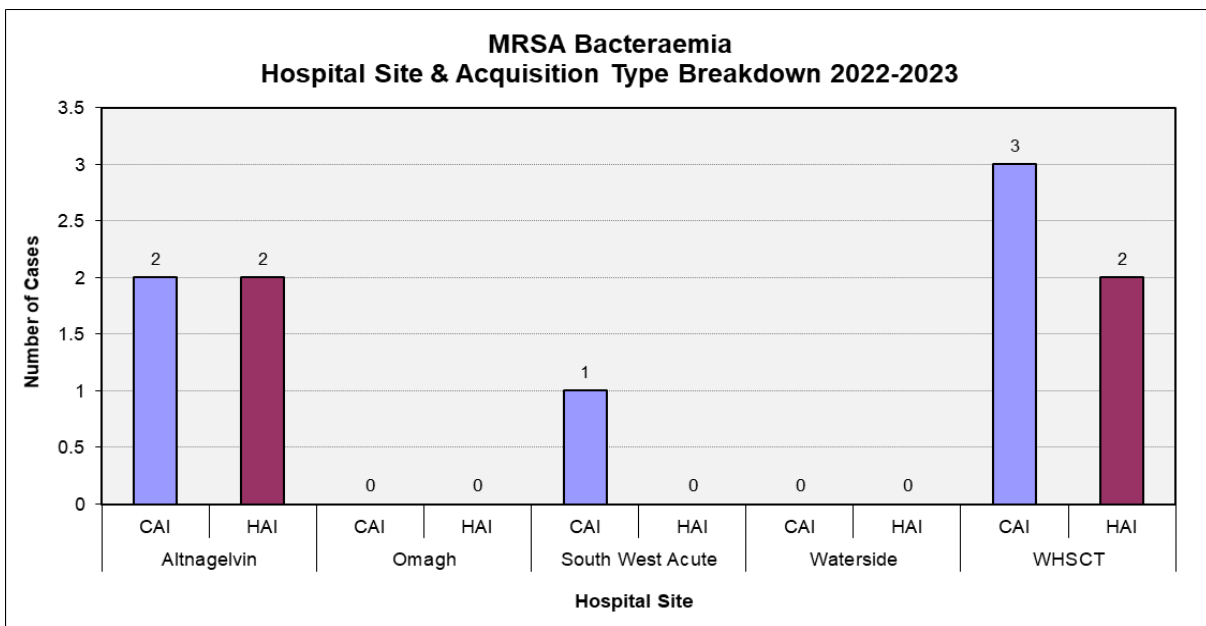
In 2019/20 a total of four cases were recorded. Two of those cases had occurred by the end of October 2019. By contrast, this year’s performance is showing an increase of 150% against the October figure and an increase of 25% against the whole year figure.



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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



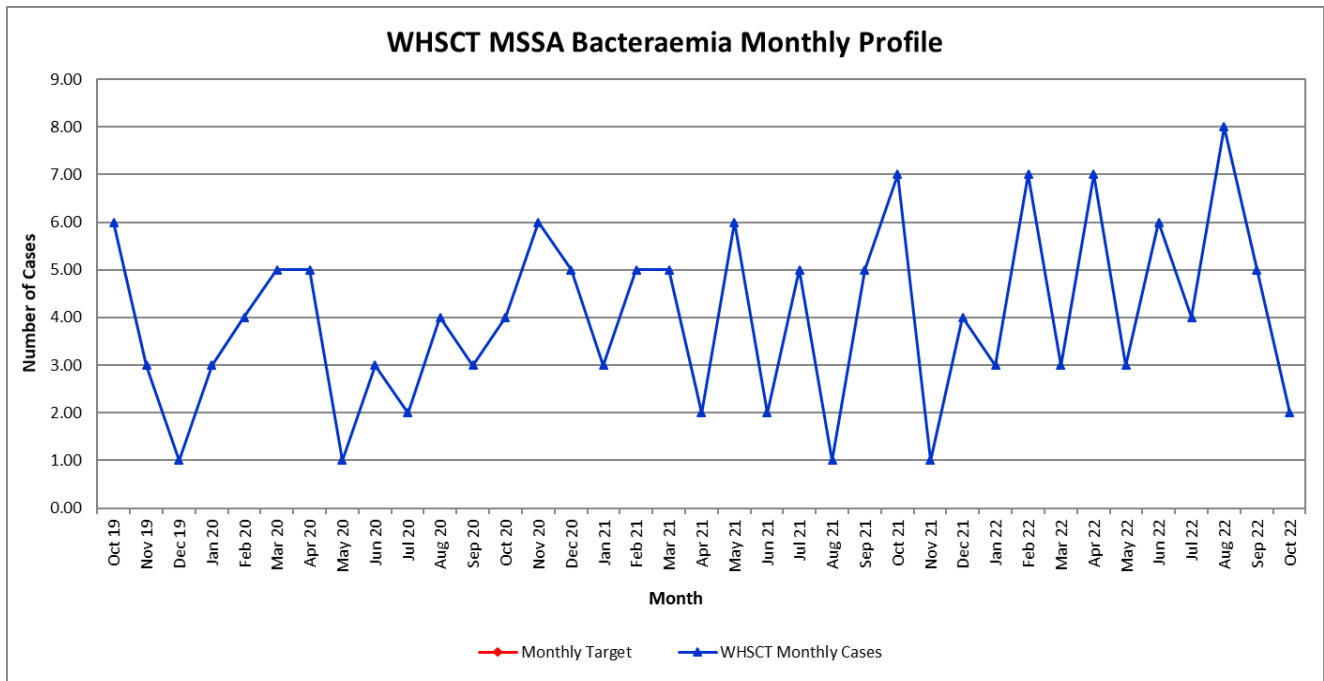
As of 21st October 2022, the total number of days since the last Trust hospital-associated MRSA bacteraemia is:

Altnagelvin – 121 days	(Last recorded case was in Ward 22 ASM)
SWAH – 858 days	(Last recorded case was in Ward 8)
Tyrone County Hospital/ Omagh Hospital & Primary care Complex (OHPCC) – 2830 days	(Last recorded case was in the Rehab Unit)

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.

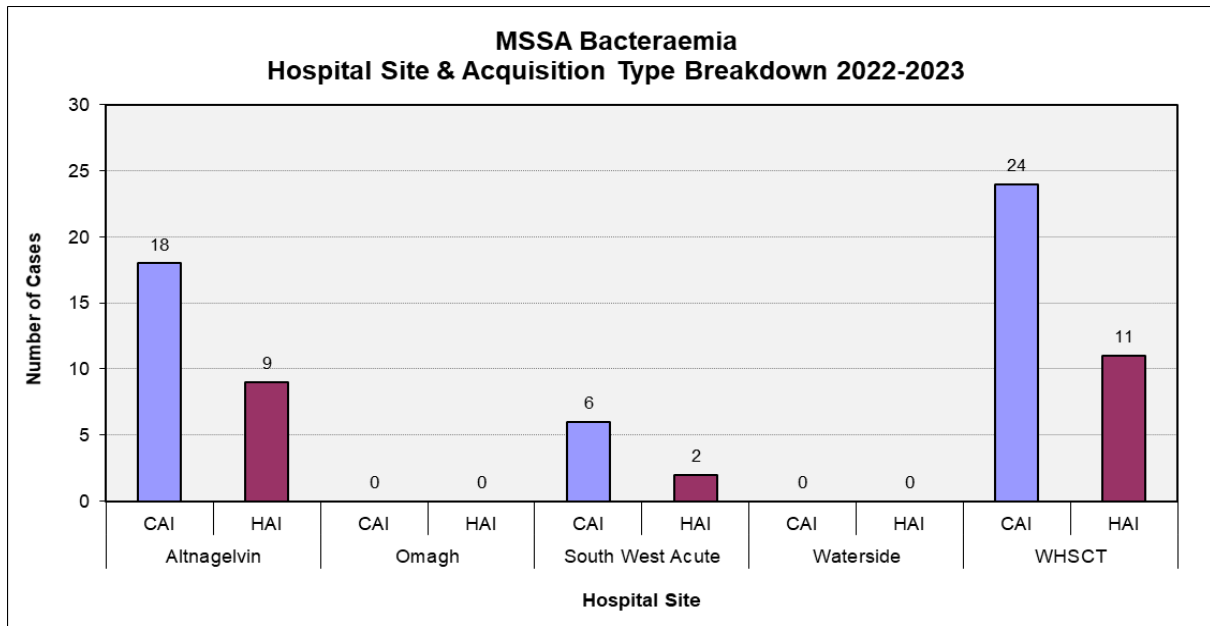
So far this year the Trust has reported 35 cases.



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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 21st October 2022, the total number of days since the last Trust hospital-associated MSSA bacteraemia is as follows:

Altnagelvin – 45 days
SWAH – 2 days
OHPCC – 1831 days

(Last recorded case was in Ward 50 Sperrin)
(Last recorded case was in Ward 2)
(Last recorded case was in the Rehab Unit)

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 [†]						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 2022 two *Pseudomonas* cases have been reported. Both are categorised as healthcare-associated.

The most recent healthcare-associated positive blood culture in an augmented care area pertains to an inpatient admission in Ward 50, Altnagelvin, in May 2022. This was a repeat positive of the case which occurred the previous month. 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 IP&C Team liaised with the Belfast Trust, from where the patient was transferred, to investigate if there were any potential connections there.

Prior to this, there had been no healthcare-associated positive blood cultures in augmented care areas since December 2020.

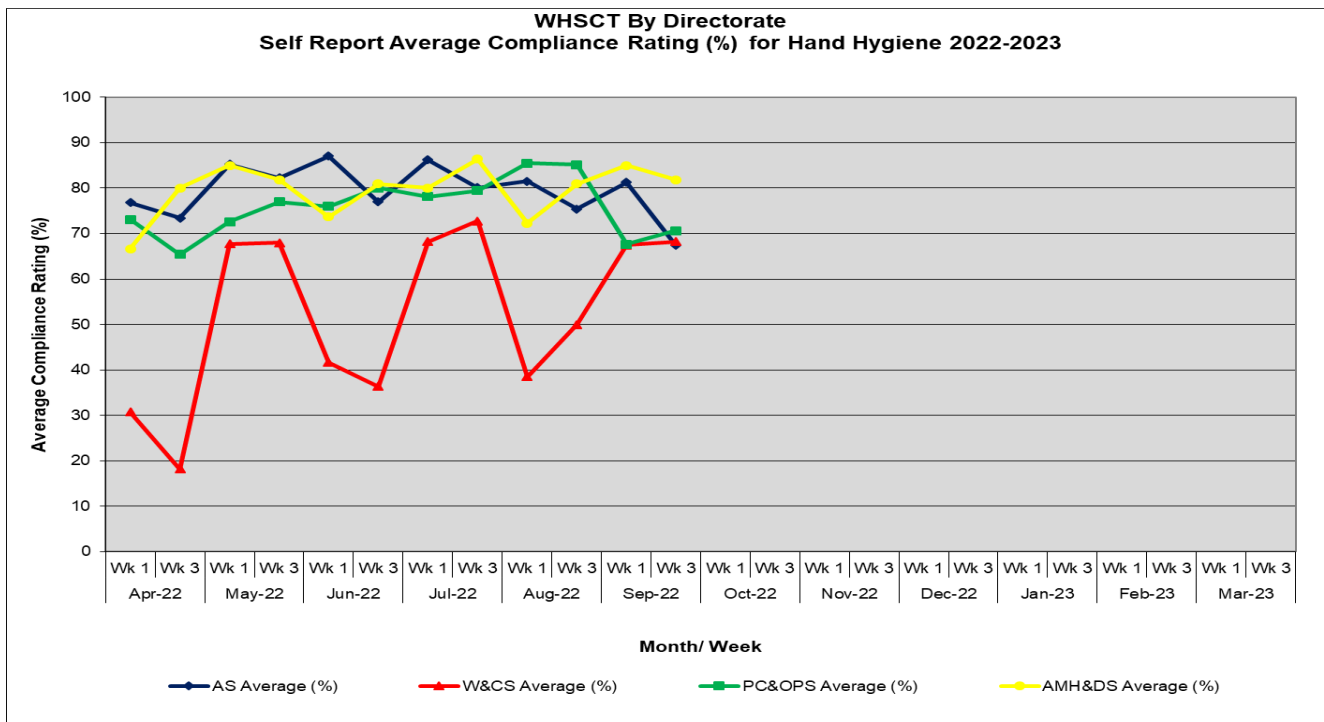
6. Hand Hygiene Compliance

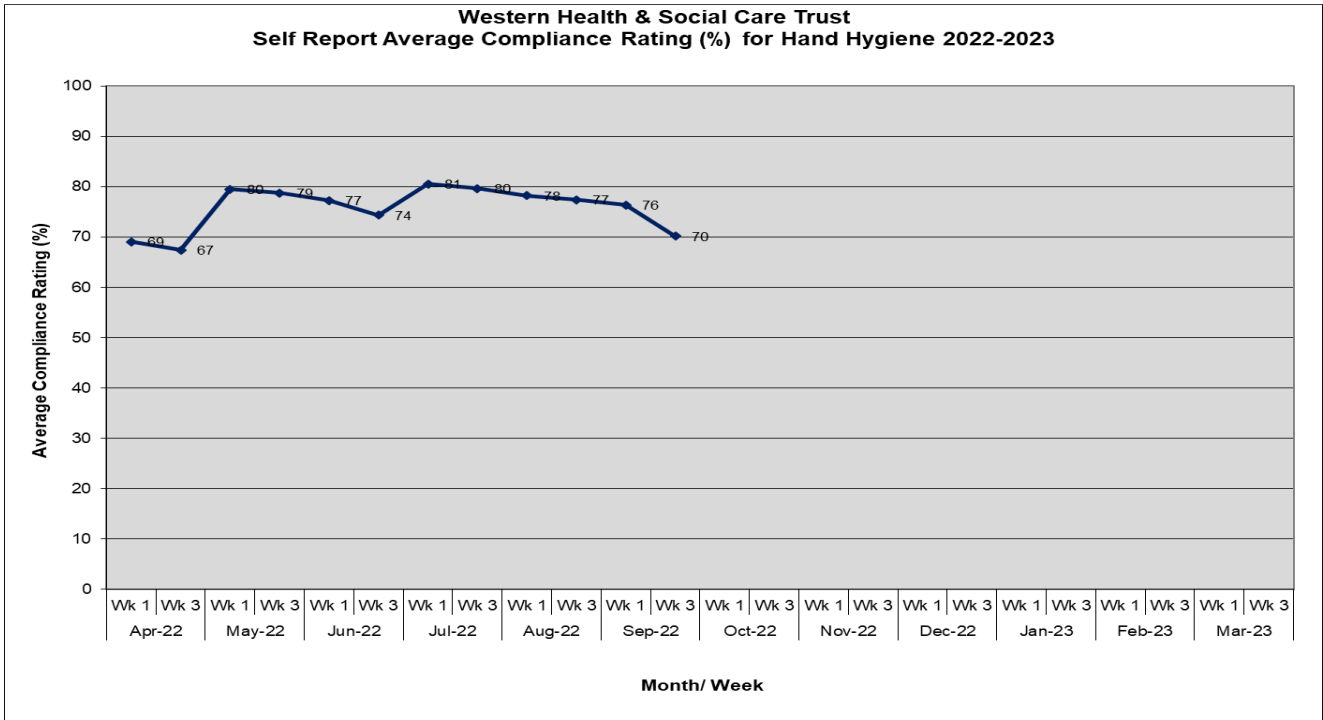
The Trust's overall average self-reported hand hygiene score is 73% when non-submission areas are included. These areas score an automatic 0%. 51 areas out of 196 applicable areas failed to submit scores for September 2022. They are as follows:

Site	Ward/ Department/ Facility
Altnagelvin	Ward 3 Ward 22 ASM Ward 24 AMU Ward 25C Ward 40 Ward 42 Anderson House/ Dermatology Antenatal Clinic Breast Screening Unit Emergency Department Fracture Clinic GUM Clinic Main Theatre 3 Main Theatre 4 Main Theatres Paediatrics Recovery OPALS South Wing Clinics Pre-Operative Assessment
SWAH	Ward 1 MSAU Ward 2 Ward 5 Ward 7 Ward 9 Cardiac Unit Emergency Department Pre-Operative Assessment Radiology Department Women's Health Centre
OHPCC	Cardiac Assessment Unit Cardiac Investigations Outpatients Department Pre-Operative Assessment Radiology Department Urgent Care & Treatment Centre Women's Centre
Tyrone & Fermanagh Hospital	Ash Villa Lime Villa Oak A & B Villa

Lakeview Hospital	Berryburn Centre Melvin Lodge
Residential Homes	Thackeray Place Residential Home
Day Care	Dromore Day Centre Drumcoo Day Centre Drumhaw Day Centre Foyleville Day Centre Gortin Day Centre Newtownstewart 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 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. IP&C Nurse Independent Audits

The tables below show compliance on a number of IP&C key performance indicators for wards/ departments where audits have been completed most recently by the IP&C Team. Some scores are marked with (A), indicating that a number of audits took place during that month and an average score has been recorded. These audits are discussed through the normal governance arrangements, as well as at Safe & Effective Meetings and the Chief Executive HCAI Accountability Forum.

WARD 6 CHILDREN'S, ALTNAGELVIN												
Audit Type	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
Hand Hygiene							50%					
PPE							50%					
Organism Type												Total
MRSA Colonisation (HCAI only)												0
MRSA Bacteraemia (HCAI only)												0
<i>C. difficile</i> (HCAI only)												0

WARD 22 SPECIALIST MEDICINE, ALTNAGELVIN												
Audit Type	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
Hand Hygiene	70%			75%			100%					
PPE	80%			75%								
<i>C. difficile</i>					100%		100% (A)					
<i>C. difficile</i> Care Pathway					Pass		Pass x 3					
Peripheral Line Ongoing Care	67%											
ANTT: Peripheral & Central IV Therapy	100%											
Organism Type												Total
MRSA Colonisation (HCAI only)												0
MRSA Bacteraemia (HCAI only)			1									1
<i>C. difficile</i> (HCAI only)					1							1

WARD 26 RESPIRATORY MEDICINE, ALTNAGELVIN												
Audit Type	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
Hand Hygiene							100%					
PPE							100%					
Organism Type												Total
MRSA Colonisation (HCAI only)												0
MRSA Bacteraemia (HCAI only)												0
<i>C. difficile</i> (HCAI only)						1						1

WARD 32 ESU, ALTNAGELVIN

Audit Type	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	
Hand Hygiene	90% (P)(A)			89% (A)									
PPE	82% (A)			71% (A)									
<i>C. difficile</i>		50%	0%		0%		0%						
<i>C. difficile</i> Care Pathway		Pass	Pass		Pass		Pass						
Peripheral Line Ongoing Care						57%							
Peripheral Line Insertion						100%							
Cleaning & Decontamination	67%												
Commode	33%												
Organism Type													Total
MRSA Colonisation (HCAI only)													0
MRSA Bacteraemia (HCAI only)													0
<i>C. difficile</i> (HCAI only)			1		1								2

AMBULATORY CARE UNIT, ALTNAGELVIN

Audit Type	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	
Hand Hygiene	60% (A)	89% (P)					100%						
PPE	61% (A)	89%					100%						
ANTT: Peripheral Cannulation	100%												
Organism Type													Total
MRSA Colonisation (HCAI only)													0
MRSA Bacteraemia (HCAI only)													0
<i>C. difficile</i> (HCAI only)													0

WARD 1 MSAU, SWAH												
Audit Type	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
Hand Hygiene	67%						80%					
PPE	0%						90%					
<i>C. difficile</i>				100%								
<i>C. difficile</i> Care Pathway				Pass								
Organism Type												Total
MRSA Colonisation (HCAI only)						1						1
MRSA Bacteraemia (HCAI only)												0
<i>C. difficile</i> (HCAI only)		1										1

WARD 8 MEDICAL, SWAH												
Audit Type	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
Hand Hygiene							58%					
PPE							86%					
<i>C. difficile</i>	100%											
<i>C. difficile</i> Care Pathway	Pass											
Peripheral Line Ongoing Care							33%					
Organism Type												Total
MRSA Colonisation (HCAI only)												0
MRSA Bacteraemia (HCAI only)												0
<i>C. difficile</i> (HCAI only)	1											1

WARD 9, SWAH												
Audit Type	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
Hand Hygiene		84% (A)					75%					
PPE		74% (A)					73%					
<i>C. difficile</i>					50%							
<i>C. difficile</i> Care Pathway					Pass							
Organism Type												Total
MRSA Colonisation (HCAI only)												0
MRSA Bacteraemia (HCAI only)												0
<i>C. difficile</i> (HCAI only)	1			1								2

WARD 3, WATERSIDE												
Audit Type	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
Hand Hygiene							100%					
PPE							100%					
<i>C. difficile</i>						0%						
<i>C. difficile</i> Care Pathway						Fail						
Commode							0%					
Organism Type												Total
MRSA Colonisation (HCAI only)												0
MRSA Bacteraemia (HCAI only)												0
<i>C. difficile</i> (HCAI only)						1	1					2