

## Infection Prevention & Control Report to Trust Board

Meeting Date – 10<sup>th</sup> September 2020

### 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, the continued development of COVID-19 pathways and processes, in addition to the resetting of services across the Western Trust. The IP&C Team are also required to continue to support Independent Sector care homes in the event of any declared outbreaks. 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.

#### *Pseudomonas aeruginosa*

The IP&C Team have been involved in managing *Pseudomonas aeruginosa* colonisation of the water supply in the South Wing, Altnagelvin Hospital. This was identified through normal routine water testing. Regular Trust Water Safety Group meetings continue and all necessary water safety measures are in place as per the Trust's Water Safety Plan. The potential source of contamination has been identified and remedial works to the water system are ongoing. IP&C independent assurance audits regarding adherence to IP&C practice in augmented care areas continue and these indicate high compliance. There is no evidence at this time of any clinical isolates from patient samples related to this issue.

#### Reduction Targets

The Department of Health for Northern Ireland (DoH NI) has not yet issued new healthcare-associated infection reduction targets for 2020/21. 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*.

#### Current MRSA Bacteraemia Performance

Since the beginning of April 2020 three MRSA bacteraemia cases have been reported. Two are categorised as community-associated as they occurred less than 48 hours after admission to hospital and one is categorised as healthcare-associated as it occurred more than 48 hours after admission to hospital (definition used by the Public Health Agency [PHA]).

#### Current *C. difficile* Performance

So far this year 29 cases of *C. difficile* have been reported. 11 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 PHA). However, this is not always an accurate predictor of being healthcare-associated. The remainder (18) are classified as community-acquired as the patients presented with symptoms within a 72 hour period after admission.

#### Current GNB Performance

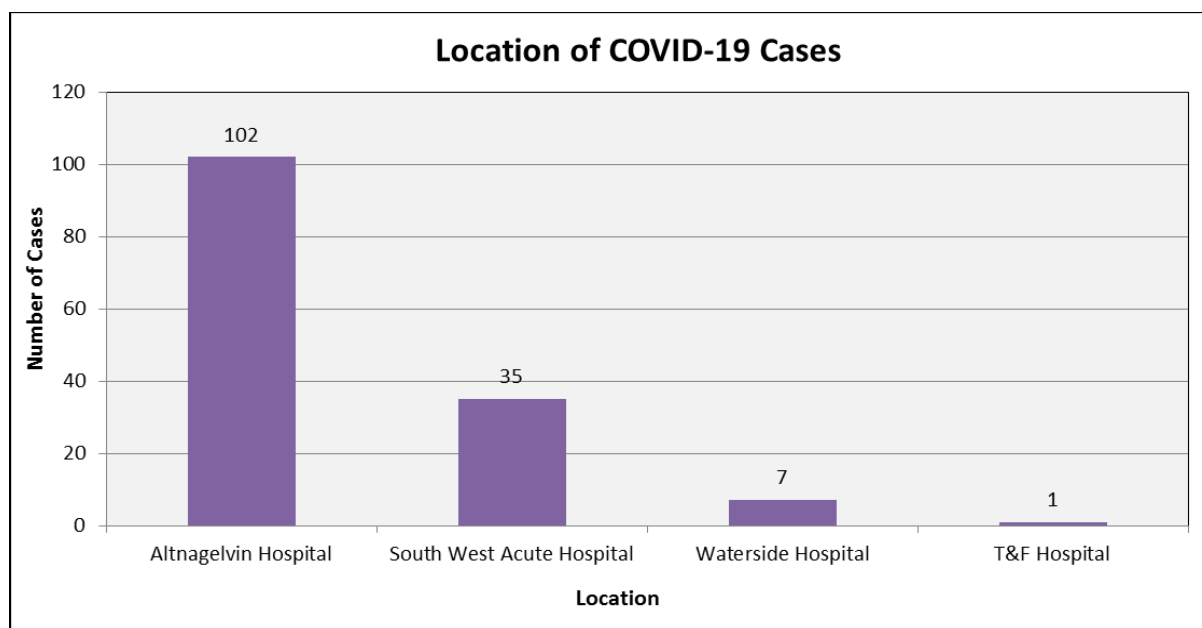
As of 3<sup>rd</sup> September 2020, 14 healthcare-associated GNB cases have been reported.

## 2. Coronavirus (COVID-19)

### COVID-19 Case Statistics

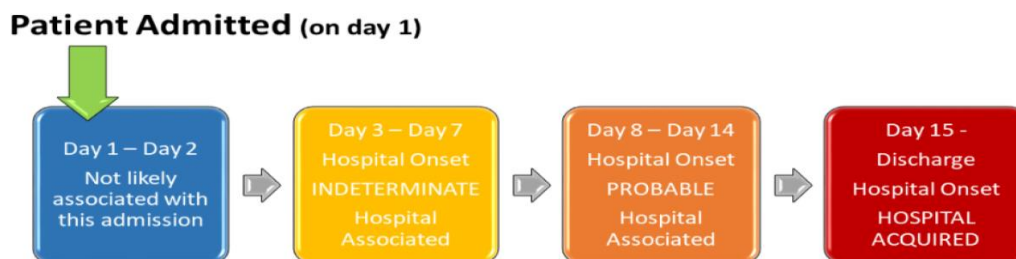
Data on the number of COVID-19 cases was initially collated from the Western Trust Tracker System, which started in March 2020. However, this system was later stopped. Thereafter the IP&C Team has obtained this information by telephoning individual wards/ departments on a daily basis.

From March to 3<sup>rd</sup> September 2020 there have been a total of 145 COVID-19 cases within the Western Trust (*number is only those cases which the IP&C Team have been informed about*). The cases were located at four hospital sites as shown in the chart below.



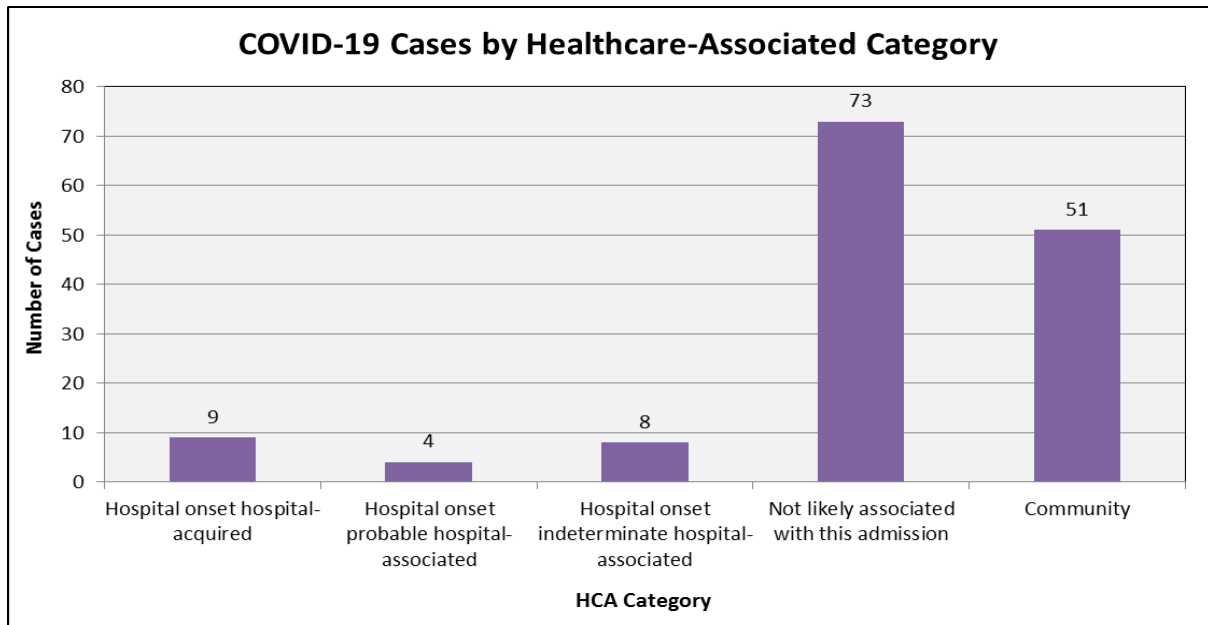
The PHA have introduced a new surveillance programme for healthcare-associated COVID-19 cases in NI. All laboratory-confirmed cases reported to the NI regional data warehouse (via local Health Protection Teams) from 26<sup>th</sup> February 2020 onwards will be included. Duplicates (second positive  $\leq$  42 days after first positive) and second episodes (positive  $>$  42 days after first positive) will be removed. Each positive case will then be linked by health and care number to a hospital admission, extracted from the Patient Administration System (PAS).

Cases will be assigned to one of three healthcare-associated categories according to the number of days between the patient's test date and the admission date, where the date of admission is defined as Day 1.



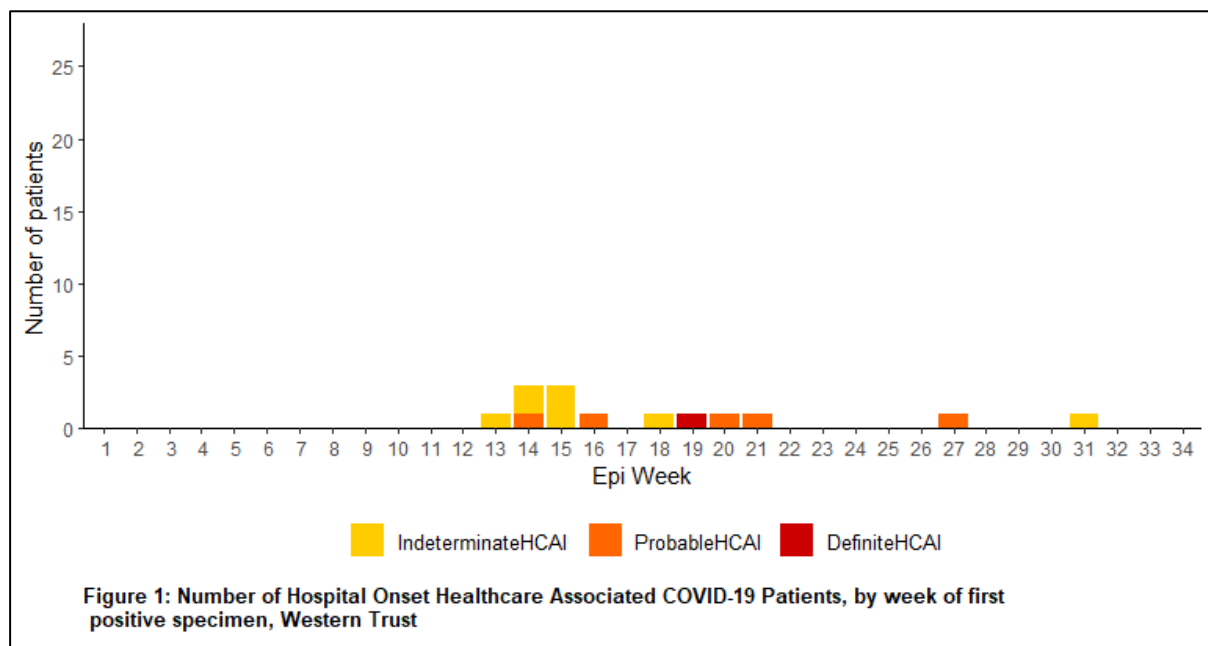
The IP&C Team have coded the 145 COVID-19 cases reported in the Western Trust according to the PHA healthcare-associated categorisation. The breakdown is shown in the

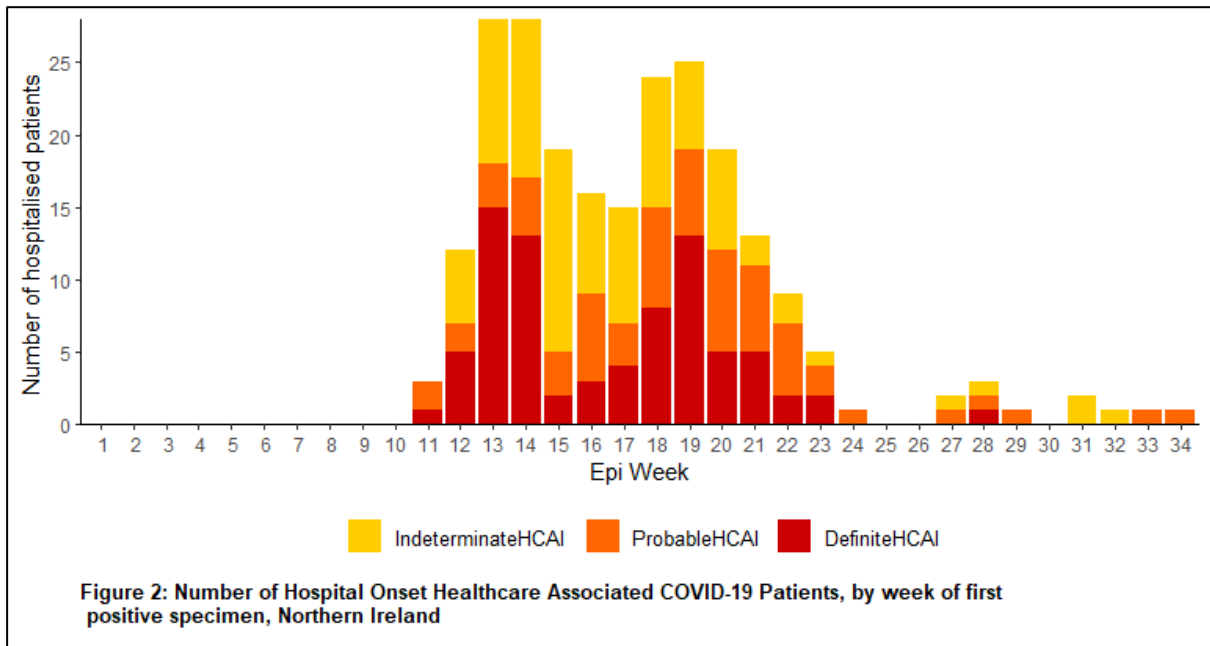
chart below. In this instance the Community category refers to cases where the test date occurred prior to the patient’s admission to hospital.



In mid-August the PHA began issuing a weekly surveillance bulletin to each Trust reporting the number of healthcare-associated COVID-19 cases. The most recent report covered the period up to 23<sup>rd</sup> August 2020. Below are two graphs, taken from this report, which show data at the Trust and NI level.

*NB: The bulletin is based on data routinely collected by the PHA, caveats and definitions, which may change as familiarity with the data improves. Because of this, and also issues related to the recording of admissions for some hospitals on the PARIS system rather than PAS, the PHA data does not currently tally with the Trust’s internal data. The IP&C Team have provided feedback to the PHA about the discrepancies and are awaiting clarification on how this might be rectified.*



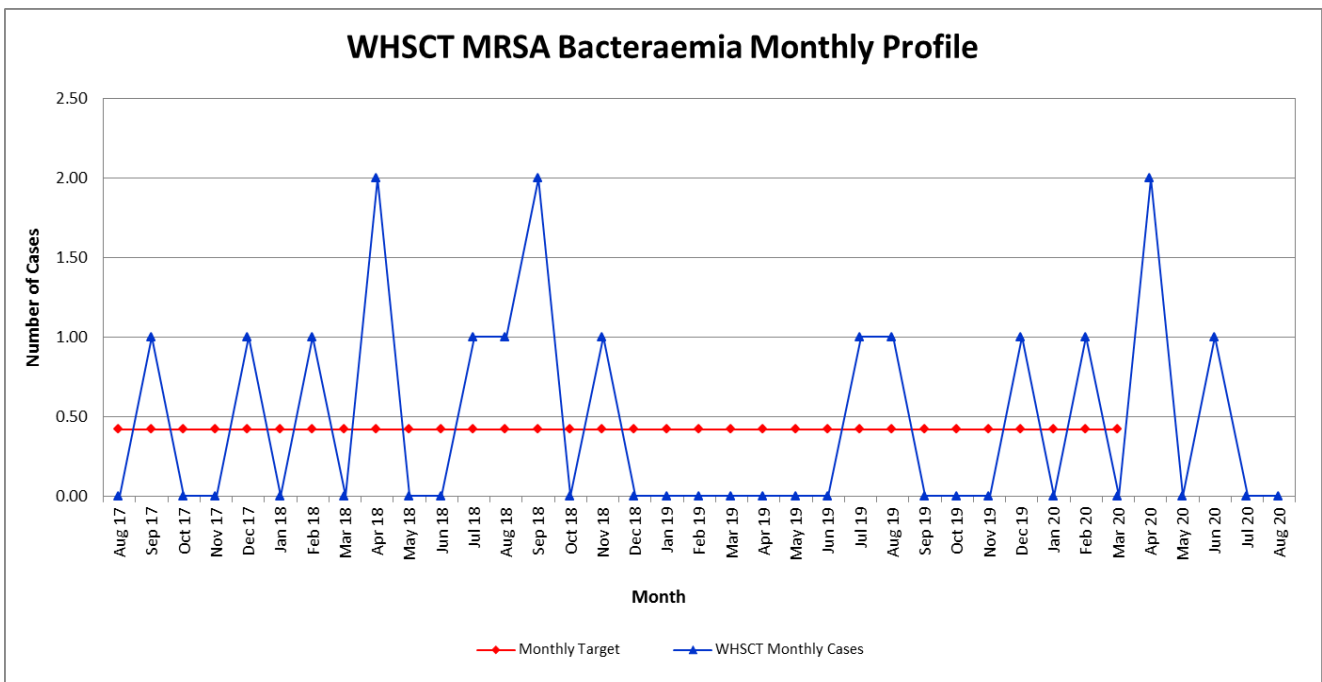


### 3. S. aureus Bacteraemia Performance

#### MRSA Bacteraemia

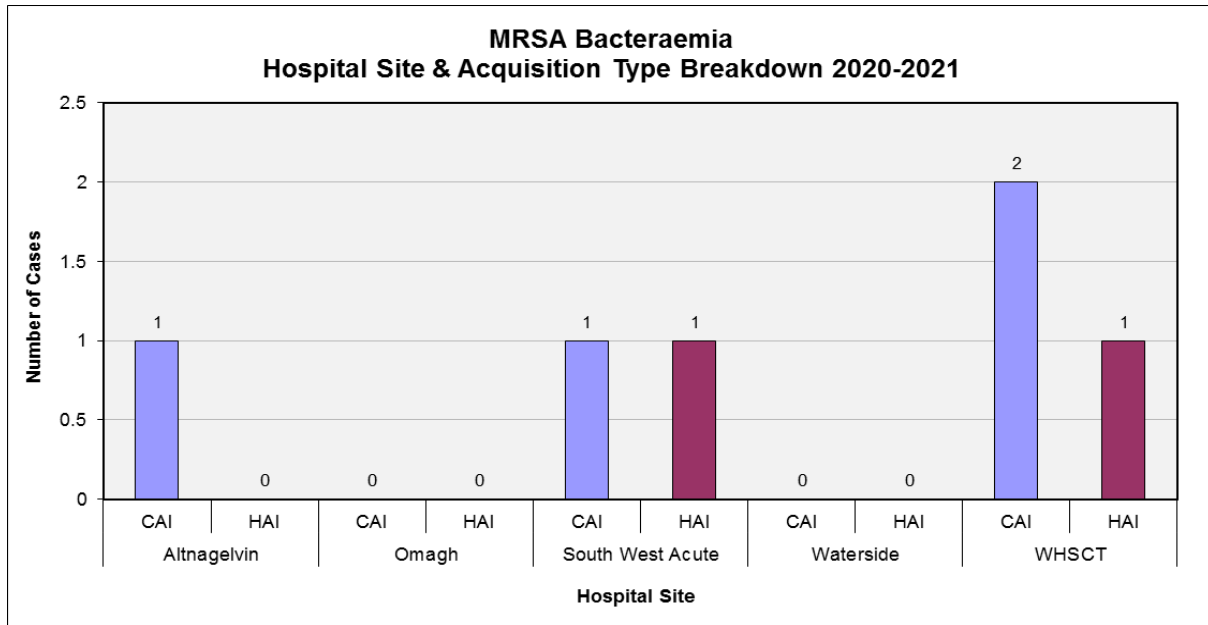
The new MRSA bacteraemia reduction target for 2020/21 has not yet been issued.

Since the beginning of April 2020 three cases have been reported, with one of those being categorised as healthcare-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



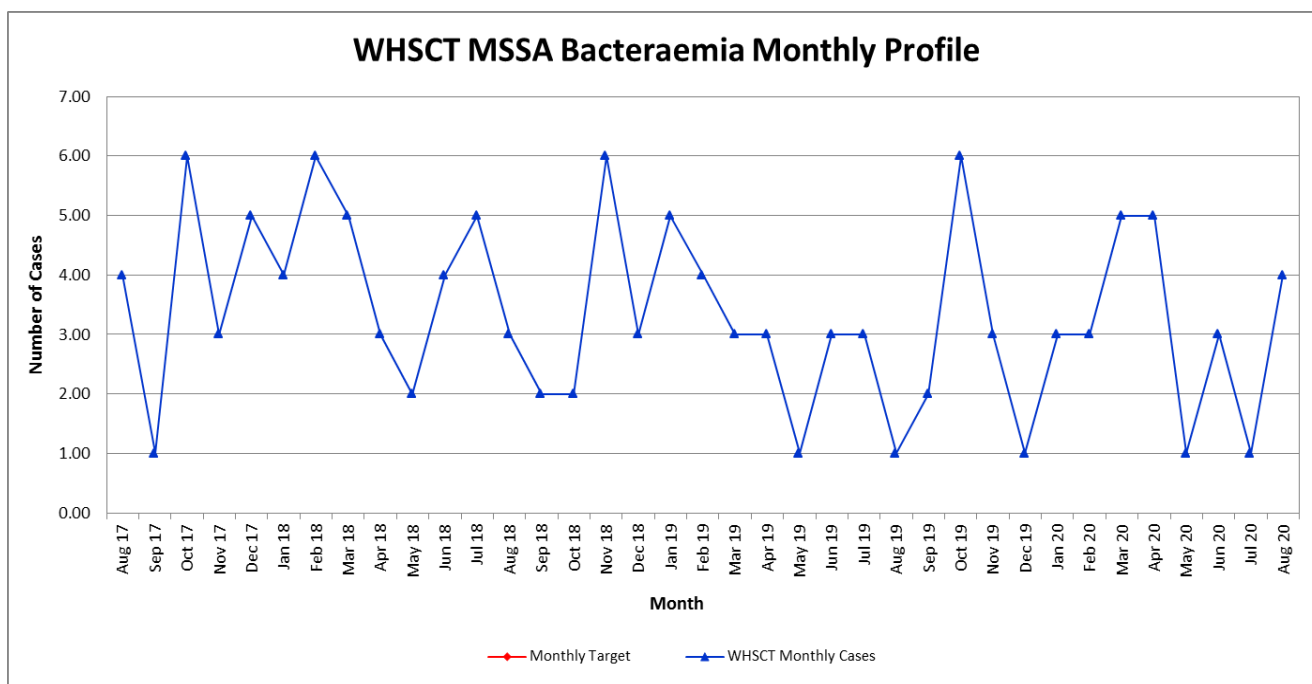
As of 3<sup>rd</sup> September 2020, the total number of days since the last Trust hospital-associated MRSA bacteraemia is:

- Altnagelvin Hospital – 668 days (Last recorded case was in Ward 42)
- South West Acute Hospital (SWAH) – 81 days (Last recorded case was in Ward 8)
- Tyrone County Hospital/ Omagh Hospital & Primary Care Complex (OHPCC) – 2053 days (Last recorded case was in the Rehab Unit)

**Meticillin-Sensitive Staphylococcus aureus (MSSA) Bacteraemia**

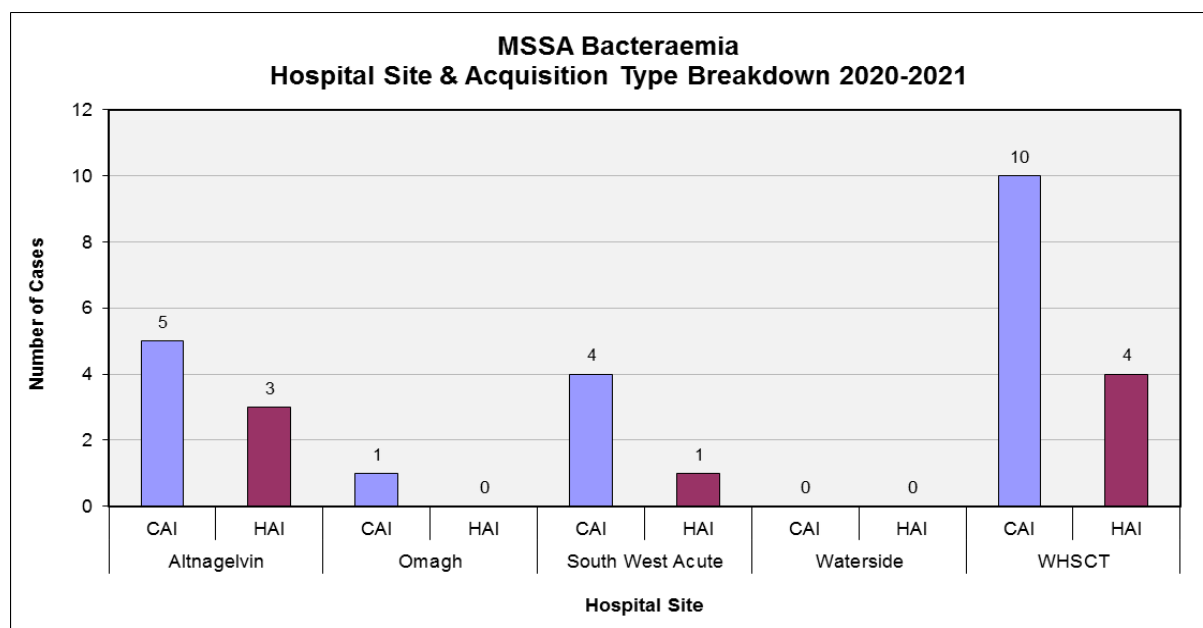
There is no reduction target associated with MSSA bacteraemia for 2020/21, however surveillance remains mandatory. MSSA is part of the skin normal flora of approximately 25-30% of the well population. It is, therefore, more difficult to control endogenous (self) exposure, which is the reason for removing 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 14 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 3<sup>rd</sup> September 2020, the total number of days since the last Trust hospital-associated MSSA bacteraemia is as follows:

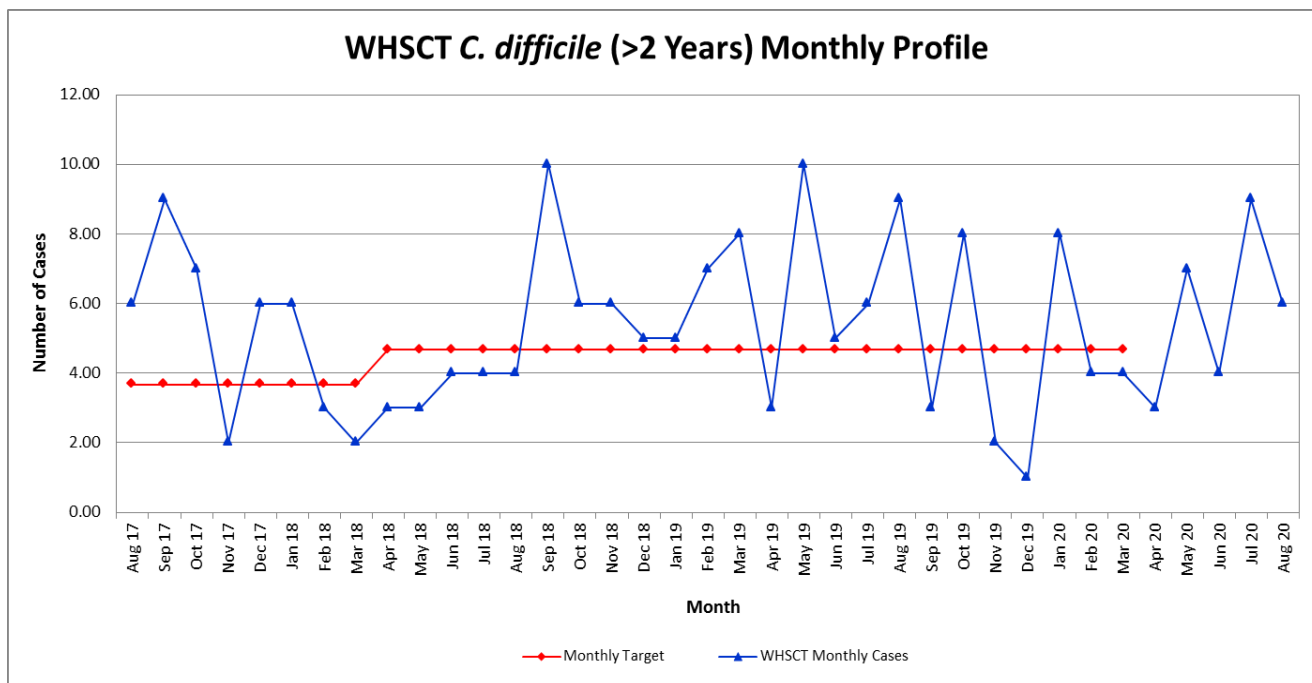
Altnagelvin – 9 days  
SWAH – 150 days  
OHPCC – 1053 days

(Last recorded case was in Ward 25 FOU)  
(Last recorded case was in Ward 8)  
(Last recorded case was in the Rehab Unit)

#### 4. C. difficile Performance

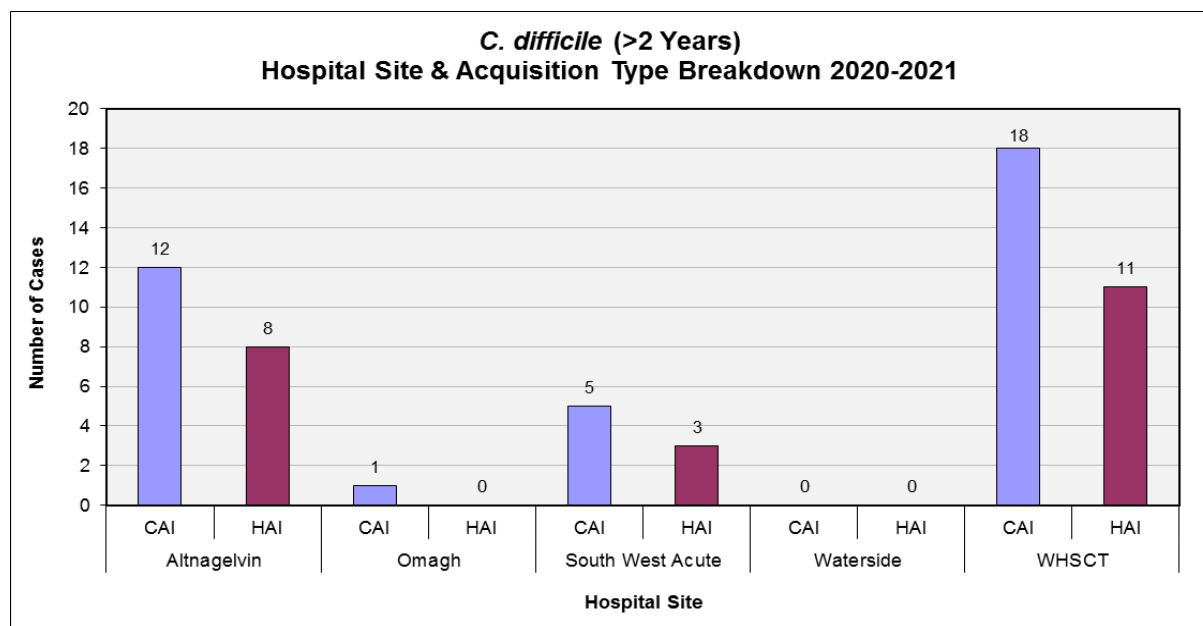
The new 2020/21 reduction target for *C. difficile* ( $\geq 2$  years) has not yet been issued.

Since the beginning of April 2020 29 cases have been reported, with 18 of those being categorised as community-associated.

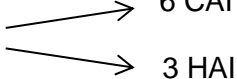


A breakdown of the cases by hospital site and acquisition type is given in the chart below.

**Key:**  
CAI Community-associated infection  
HAI Hospital-associated infection



Since the last Report to Trust Board, which contained figures as at 24<sup>th</sup> July 2020, there have been nine new cases of *C. difficile* (breakdown below). Post infection reviews (PIRs) are required for five of these cases – one has been completed and four are pending.

9 *C. difficile* cases 

#### Preventable/ Non-Preventable

In respect of *C. difficile* cases occurring during 2020/21 a total of nine PIRs have been conducted. These found that none of the cases were preventable, eight were non-preventable and one was difficult to determine.

### **5. Learning from Post Infection Review (PIR) Process**

PIR is a technique that helps answer the question of why an infection occurred in the first place. It seeks to identify the origin of the problem using a specific set of steps and tools to determine why it happened and to develop an action plan to reduce the likelihood of it happening again. Details of the learning from PIRs carried out during quarter two 2020 (April-June) follow.

#### **C. difficile**

Nine *C. difficile* cases met the criteria for and were investigated by PIR within this period. One was completed within the required 30 day timeframe. None were subsequently referred to Mortality & Morbidity (M&M) meetings. None of the patients had a previous history of *C. difficile* or Toxin B Gene (formerly glutamate dehydrogenase [GDH]) and eight were 65 years of age or older.

The main cause of patients developing *C. difficile* associated diarrhoea was the use of antibiotics (four patients). One patient received antibiotics, prescribed in hospital, which were not as per Trust guidelines.

None of the cases were deemed to have been preventable, although one was judged to be difficult to determine. The PIR Group felt this case might have been preventable had the patient received single dose prophylaxis post-surgery instead of a course of antibiotics when clinically well.

#### **MRSA/ MSSA Bacteraemia**

No MRSA or MSSA bacteraemia PIRs took place during this period.

### **6. Antimicrobial Management Team**

The Antimicrobial Management Team met on 3<sup>rd</sup> June 2020. The following items were discussed:

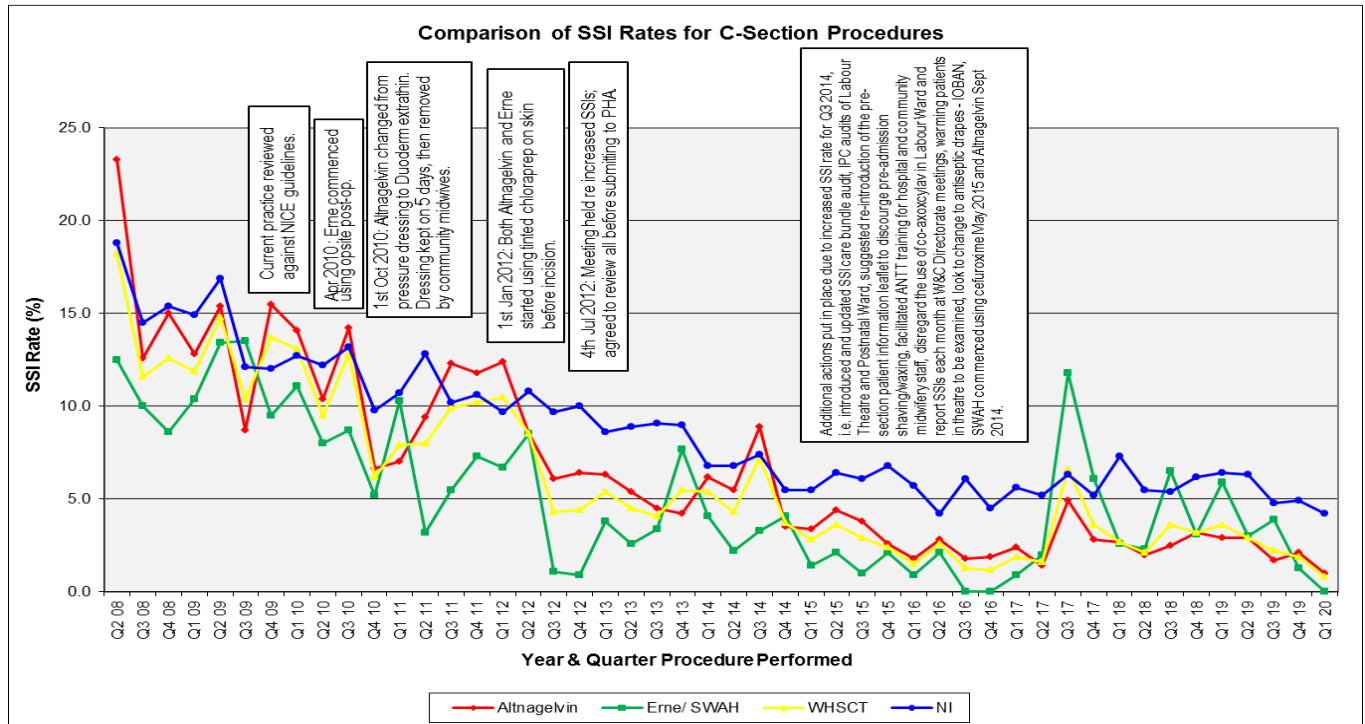
- **Internal Audit of Antimicrobial Stewardship** – Critical Care will review their electronic record and make fields to be completed for antibiotic prescription, i.e. 1) Indication when initiating or continuing an antibiotic, and 2) Duration.
- **Antimicrobial Audit Plan and Roll Out** – The audit was piloted in one area. It was not time consuming. Other areas have now been identified to further pilot the audit tool.
- **Target Monitoring Report (DoH NI Targets)** – No further reports to note since January 2020.



## 7. Caesarean Section Surgical Site Infection (SSI) Surveillance

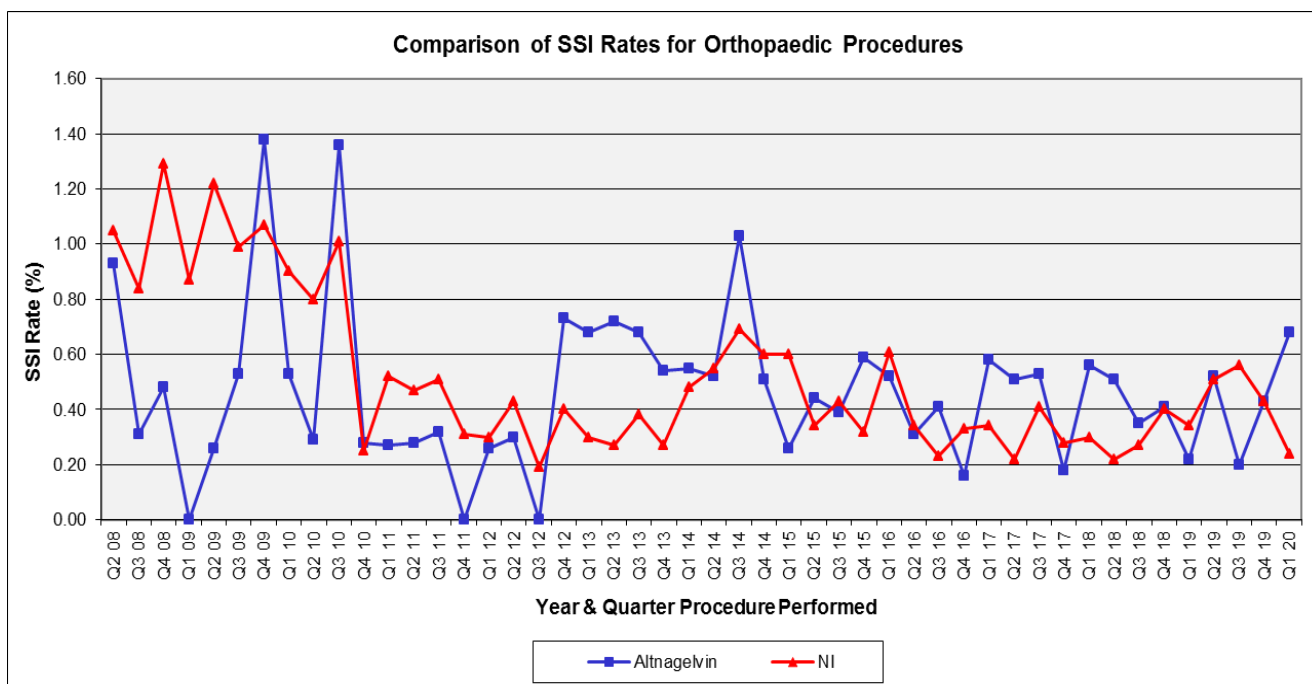
During quarter one of 2020 the Trust achieved 86.7% compliance with surveillance related documentation, compared to an 83.7% average compliance rate in NI as a whole.

The surveillance information below demonstrates an ongoing reduction in infection rates over time and a lower rate for the Trust than the rest of the region; 0.8% and 4.2% respectively.



## 8. Orthopaedic Surgical Site Infection Surveillance

The SSI rate remains less than 1% of all surgery. Evidence based care bundles are in place for orthopaedic surgery.



### 9. 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 almost two years. The most recent infection recorded was a ventilator-associated pneumonia, which occurred in ICU, Altnagelvin, in October 2018.

Results, as of July 2020, 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	
<b>Ventilator-Associated Pneumonia</b>	11/10/2018	21/09/2016	0.00	0.00	0.69
<b>Catheter-Associated Urinary Tract Infection</b>	Zero to date	23/07/2011	0.00	0.00	0.16
<b>Central Line Associated Blood Stream Infection</b>	Zero to date	11/03/2012	0.00	0.00	0.74

### 10. Infection Prevention & Control Mandatory Training E-Learning

On 29<sup>th</sup> June 2020 a new e-learning programme was launched for IP&C Mandatory Training in the Western Trust. This was developed regionally for use by all health and social care organisations in NI and the Western Trust IP&C Team collaborated on the project.

The e-learning programme comprises two tiers – Tier 1 and Tier 2. Each staff member only needs to complete one of the tiers and which tier that is depends on their job role and level of patient/ client contact. A Tier Matrix is available to provide further clarification on this. The e-learning includes a short assessment to test understanding and awareness, with a certificate available to be printed after successful completion.

The e-learning is hosted on the HSC Learning website 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). Completion data will be uploaded to HRPTS on a monthly basis to form part of staff's training records.

Following completion of the e-learning it is recommended that staff ensure they are familiar with the Western Trust IP&C policies and guidelines. These are located on the Staff Infection Prevention & Control SharePoint site and can be accessed via the Trust intranet.