

## Infection Prevention & Control Report to Trust Board

Meeting Date – 10<sup>th</sup> January 2019

### 1. Executive Summary

#### Reduction Targets

The Department of Health (DoH) for Northern Ireland (NI) has issued healthcare-associated infection (HCAI) reduction targets for 2018/19.

For Meticillin-Resistant *Staphylococcus aureus* (MRSA) bacteraemia, the Trust's target is five cases. That is the same target as was required last year and one case more than the number actually reported in 2017/18 (four).

The Trust's reduction target for *Clostridium difficile* (*C. difficile*) associated disease is 56; a reduction of eight cases or 12.5% compared to last year.

In response to the O'Neill Review on Antimicrobial Resistance, the United Kingdom has adopted two ambitions in relation to human health, i.e. to improve antibiotic prescribing and to reduce gram-negative bacteraemias (GNBs).

As of 2018/19 the DoH NI has introduced targets for reducing healthcare-associated GNBs, specifically *Escherichia coli*, *Klebsiella species* and *Pseudomonas aeruginosa*. The Western Trust is expected to achieve one fewer case in 2018/19 (49 cases) compared to the baseline figure of 2017/18 (50 cases), which equates to a reduction of 2%.

#### Current MRSA Bacteraemia Performance

Since the beginning of April 2018 seven MRSA bacteraemia cases have been reported. Six are categorised as community-associated as they occurred less than 48 hours after admission to hospital (definition used by the Public Health Agency [PHA]) and one case is classified as healthcare-associated as it occurred more than 48 hours after admission. As such, the reduction target set has been exceeded and cannot now be achieved.

As of 28<sup>th</sup> December 2018, the total number of days since the last Trust hospital-associated MRSA bacteraemia is:

Altnagelvin Hospital – 53 days	(Last recorded case was in Ward 42)
South West Acute Hospital (SWAH) – 1049 days	(Last recorded case was in Ward 8)
Tyrone County Hospital/ Omagh Hospital & Primary Care Complex (OHPCC) – 1438 days	(Last recorded case was in the Rehab Unit)

#### Current *C. difficile* Performance

So far this year 44 cases of *C. difficile* have been reported. 26 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 categorised as community-acquired as the patients presented with symptoms within a 72 hour period after admission.

Current GNB Performance

So far this year as of 28<sup>th</sup> December 2018, 34 healthcare-associated GNB cases have been reported. Therefore, the Trust is currently on track to meet the target, with a cumulative reduction of 9.33%.

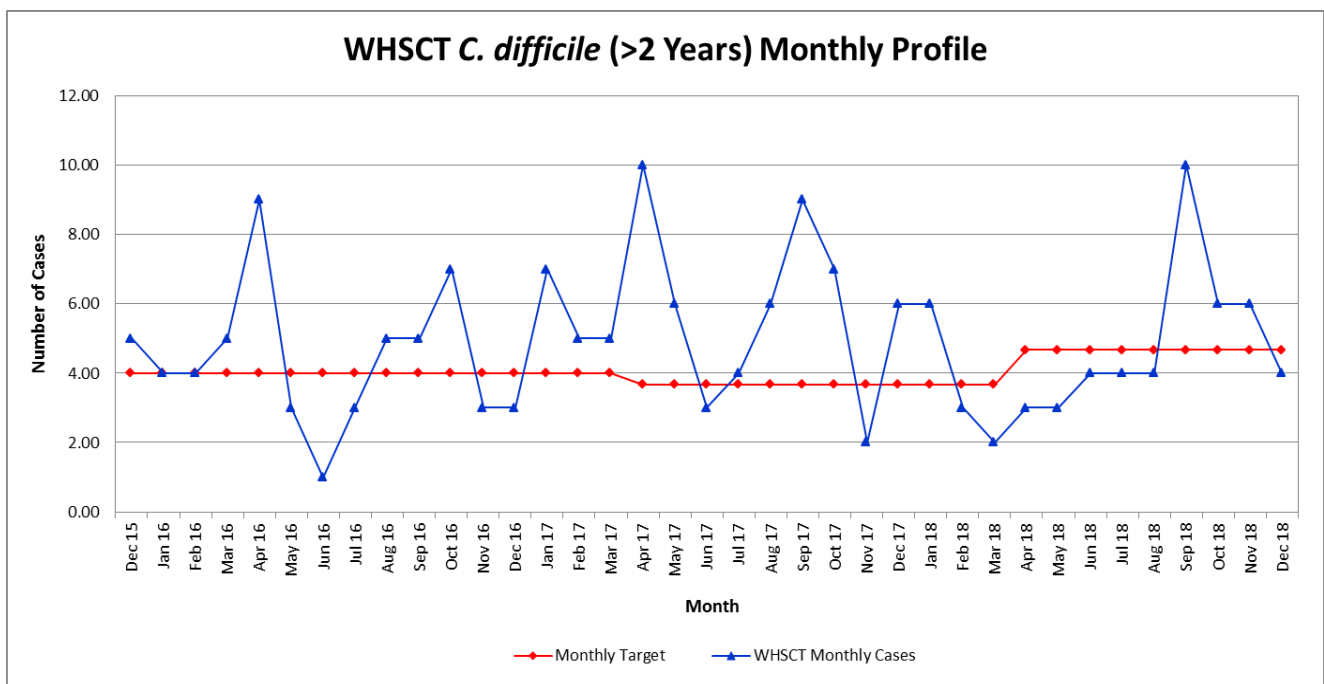
Increased Incidence of Vomiting and Diarrhoea in Ward 3, Altnagelvin

Ward 3, Altnagelvin, was closed for two days to new admissions due to an increased incidence of vomiting and diarrhoea. Norovirus testing was negative and the cause was not identified.

**2. C. difficile Performance**

The 2018/19 target for *C. difficile* ( $\geq$  two years) is 56 cases, which equates to a reduction of 12.5% on the baseline figure of 2017/18 (64 cases).

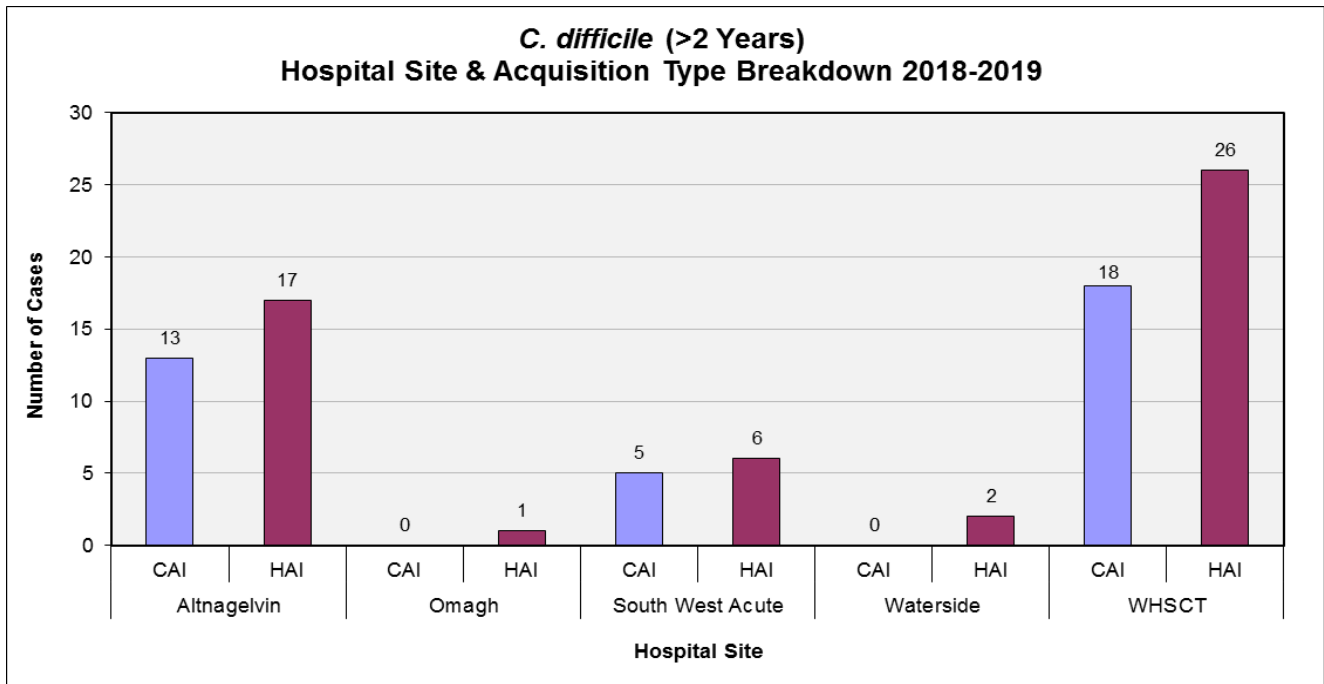
As of 28<sup>th</sup> December 2018, 44 cases have been reported, with 18 of those being categorised as community-associated. Therefore, the Trust is currently off profile, with a cumulative decrease of just 8.33% compared to 2017/18. This comprises a decrease in healthcare-associated infection cases of 3.70% versus a decrease in community-acquired infection cases of 14.29%.



\* The value for Dec 18 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.

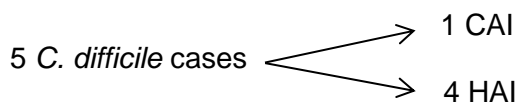
**Key:**  
CAI Community-associated infection  
HAI Hospital-associated infection



A breakdown of the healthcare-associated cases by ward is given in the table below.

Hospital	Ward/ Department	Number of Cases
Altnagelvin	Ward 1	2
	Ward 2 TOU	2
	Ward 3	1
	Ward 5 EOU	1
	Ward 8 AHAN	1
	Ward 20	3
	Ward 31	1
	Ward 32 ESU	2
	Ward 42	1
	Ward 50	2
	ICU	1
SWAH	Ward 2	3
	Ward 6	2
	Ward 9	1
OHPCC	Palliative Care	1
Waterside	Ward 1	1
	Ward 4	1

Since the last Report to Trust Board, which contained figures as at 28<sup>th</sup> November 2018, there have been five new cases of *C. difficile* (breakdown below). RCAs are pending for all five cases.



Preventable/ Non-Preventable

Since the beginning of April 2018 a total of 27 RCAs have been conducted regarding *C. difficile*. The RCAs determined that five of the cases were preventable and 22 were non-preventable.

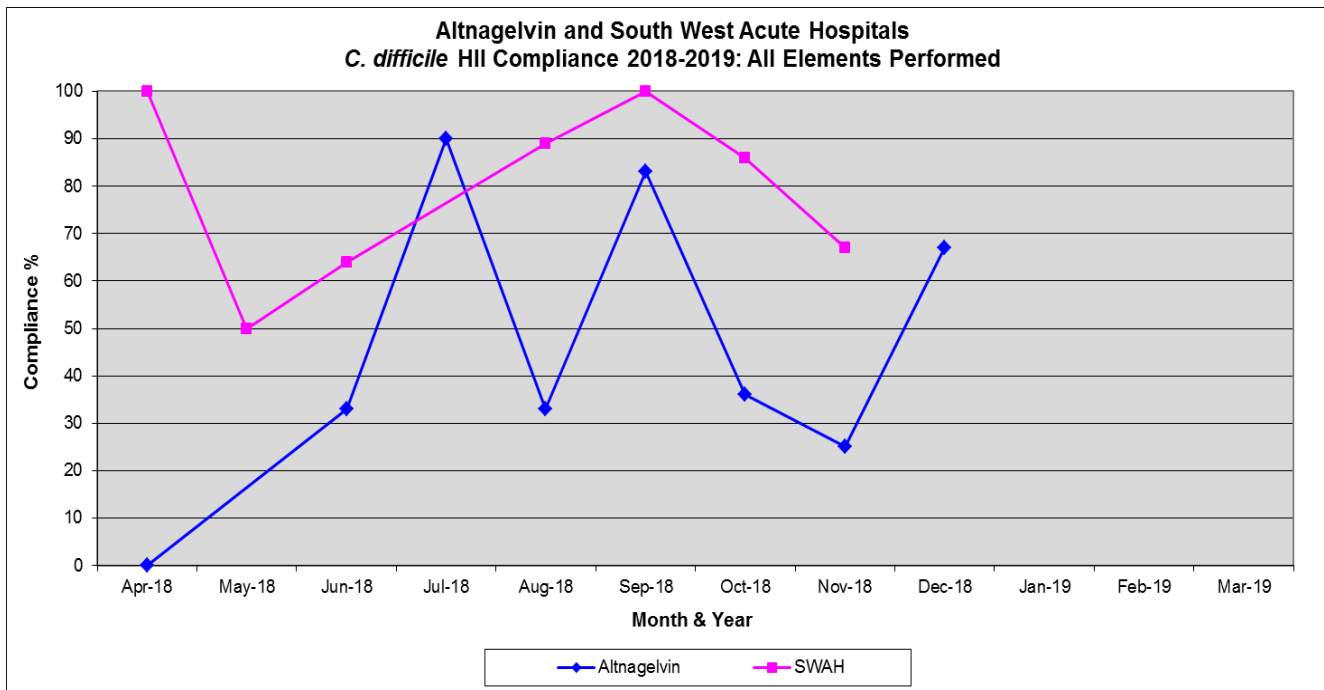
### C. difficile Care Bundle and Care Pathway Audits

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. The findings indicate issues around environmental decontamination, use of personal protective equipment and isolation/ cohort nursing.

The dashboard below summarises the performance of wards/ departments audited by the Infection Prevention & Control (IP&C) Team since April 2018. On occasion more than one audit may be completed during the month for a particular ward/ department and an average score is shown below, marked (A).

		Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18
Ward 1, Alt	Care Bundle			50%	50%		50%	100%		
	Care Pathway						Pass	Pass		
Ward 2 TOU, Alt	Care Bundle								50%	
	Care Pathway								Pass	
Ward 3, Alt	Care Bundle			50%						
	Care Pathway									
Ward 5 EOU, Alt	Care Bundle							67%		
	Care Pathway							Fail		
Ward 8 AHAN, Alt	Care Bundle							33%		
	Care Pathway							Pass		
Ward 20, Alt	Care Bundle					0%				100%
	Care Pathway					Pass				Pass
Ward 31, Alt	Care Bundle			0%		100%		50%		
	Care Pathway					Pass		Fail		
Ward 32 ESU, Alt	Care Bundle	0%				33%		0%	0%	0%
	Care Pathway	Pass			Fail			Pass	Fail	Pass
Ward 41 AMU, Alt	Care Bundle				100%		100%			
	Care Pathway									
Ward 42, Alt	Care Bundle					0%				100%
	Care Pathway									Pass
ICU/ HDU, Alt	Care Bundle				100% (A)		100%	0% (A)		
	Care Pathway						Pass	Pass x 2		
Ward 1 MSAU, SWAH	Care Bundle			0%				100%		
	Care Pathway			Pass				Pass		
Ward 2, SWAH	Care Bundle	100%		80%			100%		33%	
	Care Pathway	Pass		Pass			Pass		Pass	
Ward 5, SWAH	Care Bundle			100%						
	Care Pathway			Pass						
Ward 6, SWAH	Care Bundle			75%		67%		71% (A)	100%	
	Care Pathway			Fail		Pass		Pass x 2	Pass	
Ward 7, SWAH	Care Bundle					100%				
	Care Pathway					Pass				
Ward 8, SWAH	Care Bundle					100%				
	Care Pathway					Pass				
Ward 9, SWAH	Care Bundle		50% (A)					100%		
	Care Pathway		Pass x 2					Pass		
Rehabilitation Unit, OHPCC	Care Bundle						75%			
	Care Pathway						Pass			
Ward 3, Waterside	Care Bundle	50%								
	Care Pathway	Pass								

The graph below illustrates the overall compliance with all of the elements of the *C. difficile* high impact intervention (HII) care bundle for Altnagelvin and the SWAH.



### 3. *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
2015/16	0	0	0	0	0	0	0	0	0	1	0	0	1
2016/17	0	0	0	0	0	0	0	1	1	1	0	0	3
2017/18	0	1	0	0	1	0	0	1	0	0	0	0	3
2018/19	0	0	1	1	0	0	0	0	1 <sup>†</sup>				3 <sup>†</sup>

\* The PHA defines augmented care as NNICU, Adult ICU/ HDU, Renal, Oncology/ Haematology.

<sup>†</sup> These values are subject to change as the report was compiled prior to the end of the month/ year.

Since the beginning of April 2018 three *Pseudomonas* cases have been reported. All are categorised as healthcare-associated. The most recent case in December 2018 occurred in the NNICU, Altnagelvin. An infant tested positive for *Pseudomonas aeruginosa* colonisation as part of a weekly screen. The baby is well and all other babies in the unit who were in

contact have been screened and are negative. Water (including a room in the Labour Ward), plus environmental samples, have been taken and a water sample from the en-suite bath and shower in the Labour Ward has tested positive for *Pseudomonas aeruginosa* (the mum did not use this shower during her stay in the Labour Ward). This positive water sample and the clinical isolate in NNICU have both been typed and they are both different and thus there is no evidence of transmission.

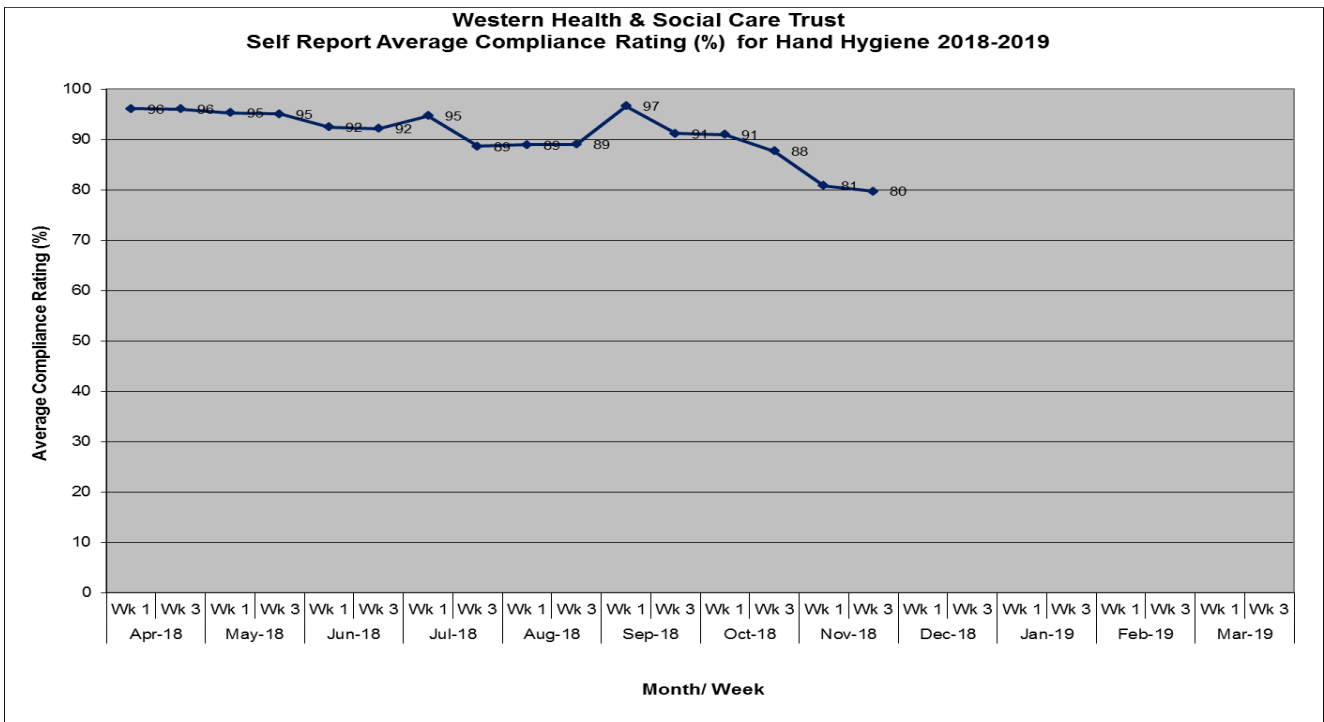
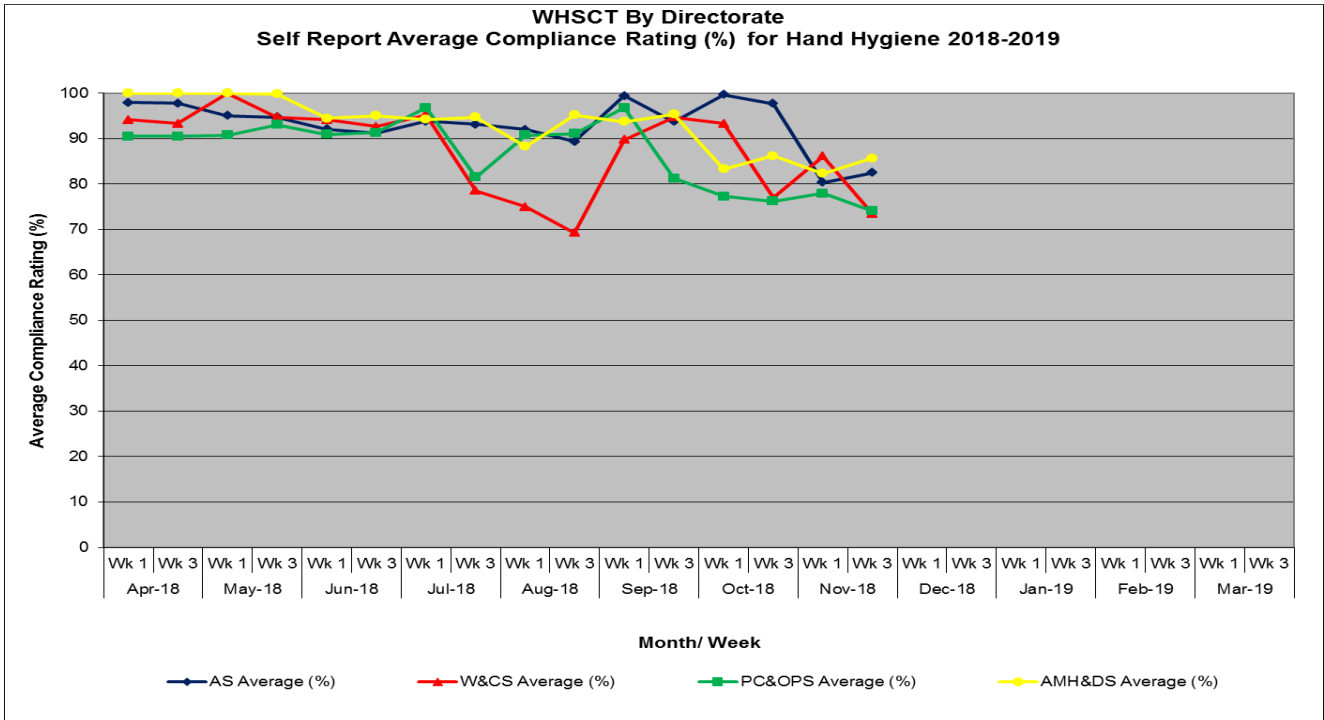
There have been no healthcare-associated positive blood cultures in augmented care areas since November 2017.

#### **4. Hand Hygiene Compliance**

The Trust's overall self-reported hand hygiene scores are 81% when non-submission areas are included. These areas score an automatic 0%. 35 areas out of 194 applicable areas failed to submit scores for November 2018. They are as follows:

Altnagelvin – Ward 7, Ward 21 Rheumatology, Ward 41 AMU, Ward 42, Emergency Department, Pre-Op Assessment, Main Theatres Paediatric Recovery, Cardiac Investigations, Cath Lab, Fracture Clinic and GUM Clinic  
SWAH – Ward 1 MSAU, Ward 2, Ward 3, Neonatal Unit, Emergency Department and Pre-Op Assessment  
OHPCC – Cardiac Assessment Unit, Cardiac Investigations and Pre-Op Assessment  
Tyrone & Fermanagh Hospital – Asha Centre  
Waterside Hospital – Ward 1, Ward 2, Ward 3 and Ward 4  
Grangewood – Carrick and Evis  
Residential Homes – Thackeray Place Residential Home  
Day Care – Newtown Stewart Day Centre, Tempo Road Day Centre, Drumhew Day Centre and Foyleville Day Centre  
Other Community – The Cottages Children's Respite, Avalon House and Crannog Intensive Treatment Team

Ward 42, Altnagelvin Emergency Department, Waterside Ward 2, Carrick, Evis, Thackeray Place Residential Home, Tempo Road Day Centre, Foyleville Day Centre, The Cottages Children's Respite, Avalon House and Crannog Intensive Treatment Team also did not submit scores for the previous month.



However, when adjusted for non-submission areas, the Trust's overall self-reported hand hygiene scores improve to 100%.

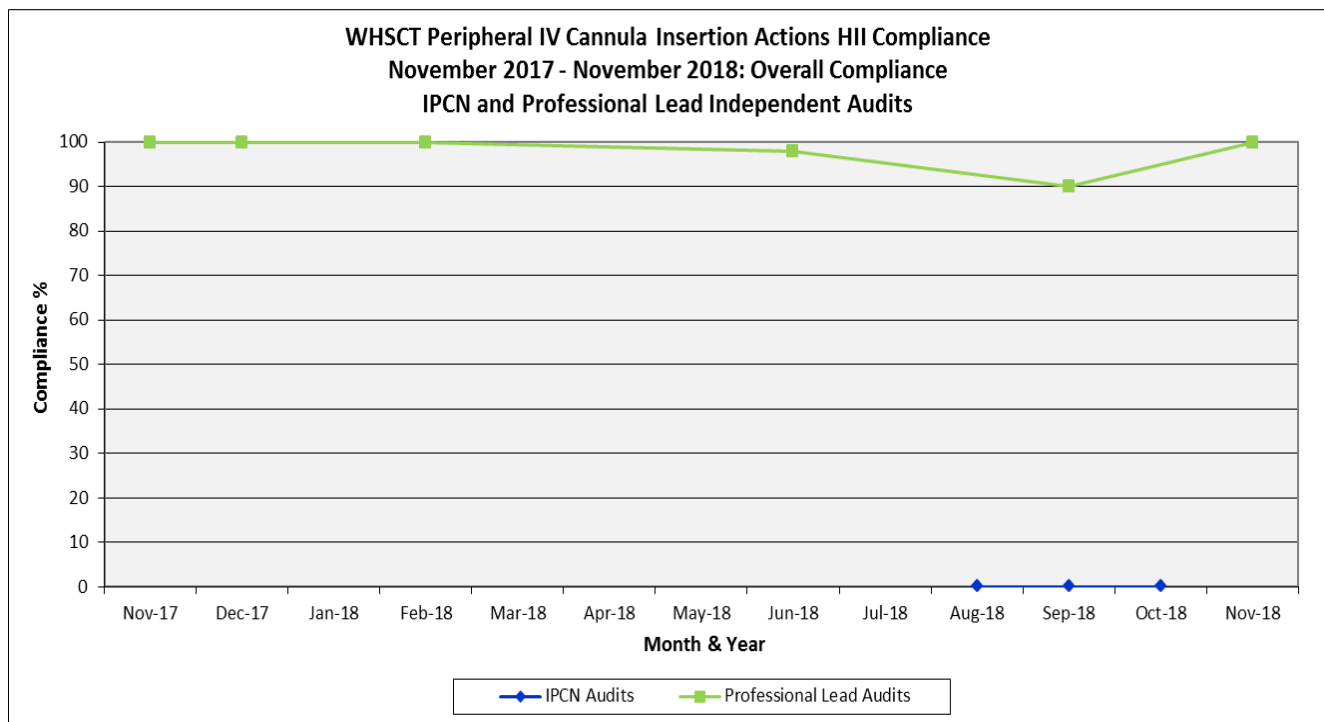
The hand hygiene dashboard has been circulated to Directors for action through their governance arrangements.

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.

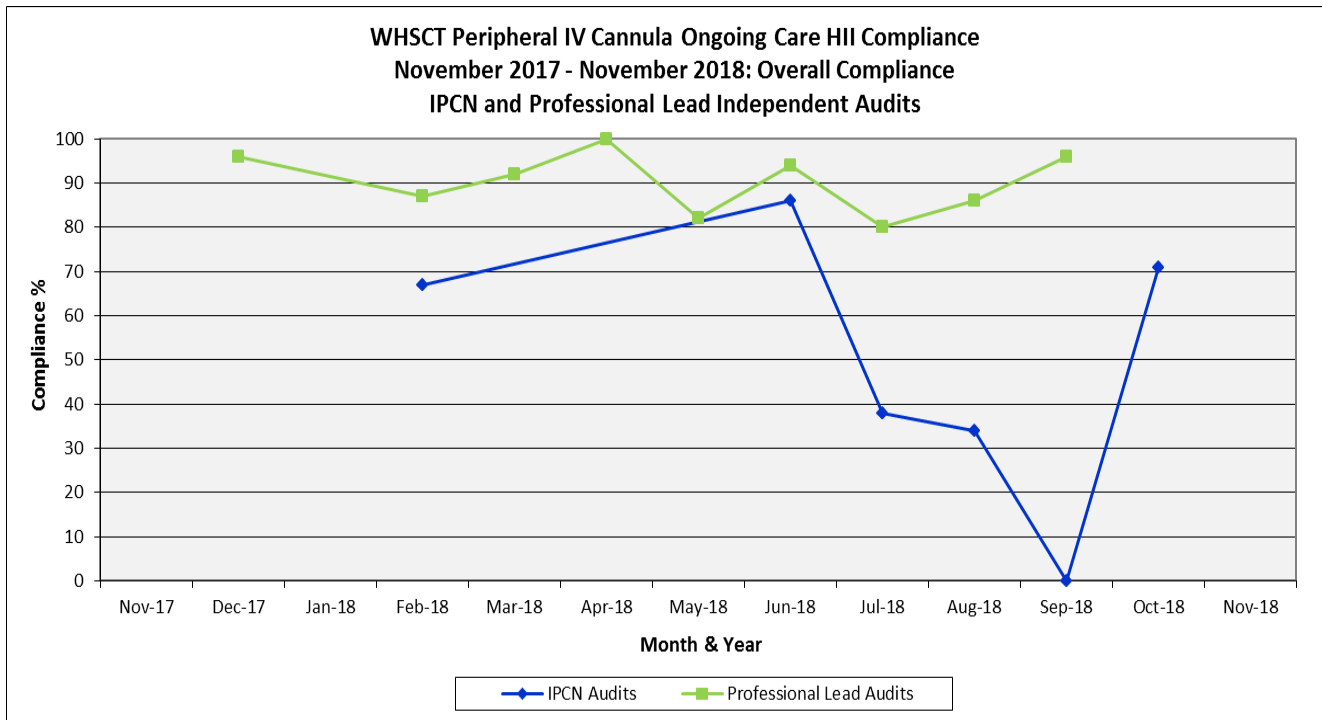
**5. Evidence Based Care Bundle Compliance – Peripheral Intravenous Cannula Insertion Actions/ Ongoing Care**

The graphs below show average independent audit scores from November 2017 to November 2018 in both Altnagelvin and the SWAH for peripheral intravenous cannula insertion actions and ongoing care. From May 2016 the IP&C Team have not undertaken routine independent audit of peripheral line ongoing care due to a range of other enhanced improvement work at ward level. The burden to oversee improvement and compliance with standards rests with the Ward Managers and Professional Leads in each area, as a wide range of education and enhanced support has been provided. The IP&C continue to work with ward based teams on ANTT as part of ward based support.

Assurance regarding practice of peripheral intravenous (IV) cannula insertion and/ or ongoing care is carried out by the IP&C Team as part of the RCA of healthcare-associated bacteraemias. Compliance and improvement plans are discussed at the Assistant Director of Nursing’s Safe & Effective Care Meetings. Consistent compliance with the peripheral IV cannula HII care bundle remains a challenge.







## 6. Aseptic Non-Touch Technique (ANTT)

The concept of ANTT for clinical procedures is now much more readily understood by staff and practice has improved, although audits carried out by the IP&C Team are not yet at the stage of showing consistent compliance.

Core Trainers for ANTT are in place across many areas of the Trust. It is the responsibility of these staff to cascade the training received to colleagues in their wards/ departments. In order to build further capacity into the system, training sessions took place for new staff nurse registrants at Altnagelvin in October 2018 and refresher training, open to new Core Trainers as well as any existing staff performing ANTT, was held in Omagh in November 2018.

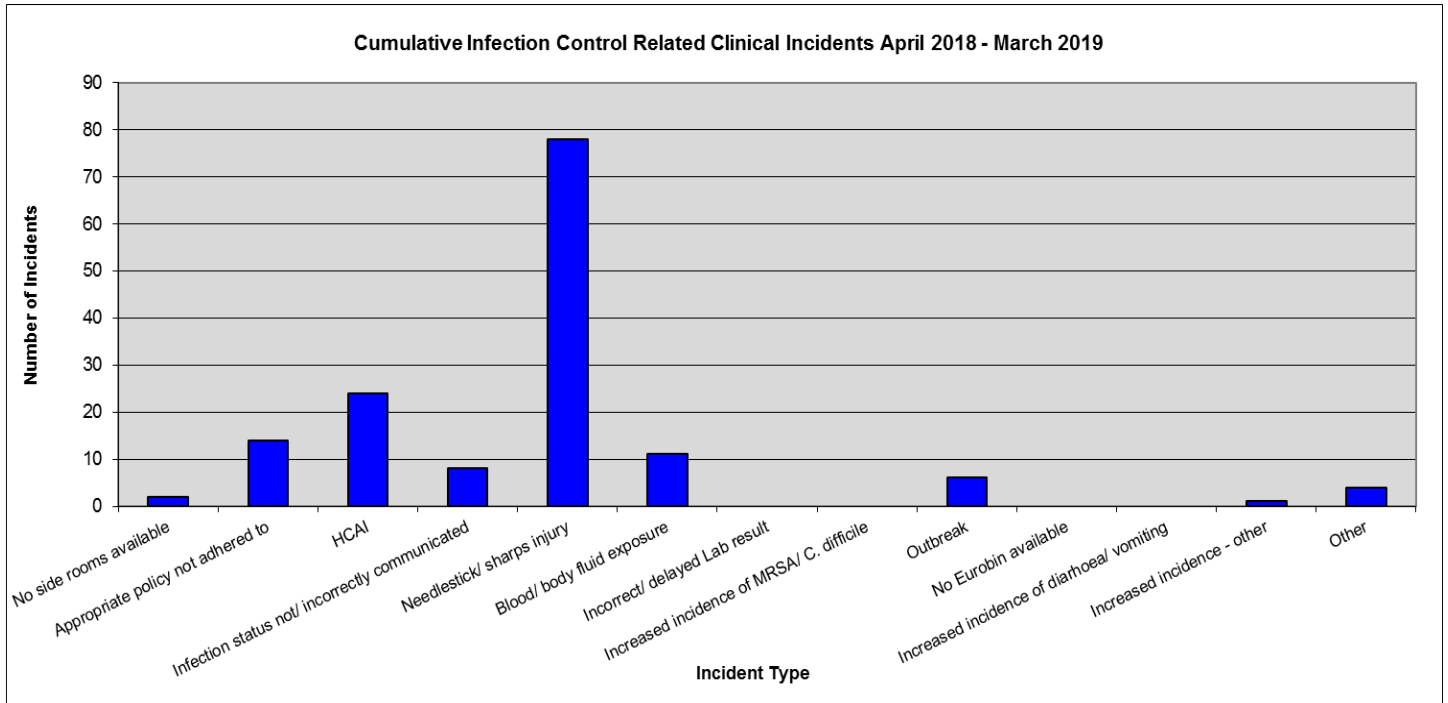
The training of medical staff remains a challenge. The IP&C Team currently input to the FY0 Assistantship Programme in March/ April each year and FY1 Workshadowing in July. Five such sessions took place during 2018. A specific session also took place in June 2018 for paediatric doctors in the SWAH.

The number of staff who received ANTT training in 2018 is 143.

The IP&C Team are currently involved regionally in the development of a training programme to support the learning of junior doctors in aseptic principles and device management. This will create a standardised approach to training; combining e-learning with observations of practice. The e-learning set could also be used by a wide range of other disciplines across the region to help develop competence in such procedures and the management of devices.

## 7. Clinical Incidents Relating to Infection Control

The table below demonstrates the cumulative infection control related clinical incidents reported from April 2018 to date. These clinical incidents are reported and managed by the ward/ department clinical teams.



## 8. Antimicrobial Management Team

The Antimicrobial Management Team met on 21<sup>st</sup> November 2018. The following items were discussed:

- **Outpatient Parenteral Antibiotic Therapy (OPAT)** – The Health & Social Care Board have given some money until the end of March 2020. A business case for OPAT has been developed. The Trust will get some pharmacist time and these pharmacists will lead on the management of this in Altnagelvin and in the SWAH.
- **Antibiotic Review Kit (ARK)** – Commenced on 5<sup>th</sup> November 2018. Currently awaiting new kardex to fully implement.
- **HI-Surv** – This is a web-based dashboard for antimicrobial usage broken down to ward level. It can be made available to appropriate people within the Trust. The Emergency Departments (ED) were the highest antibiotic consumers in September 2018. An audit with feedback has been carried out in the ED, Altnagelvin, and is to be repeated in the ED, SWAH.
- **NICE Guidelines** – Several antimicrobial updates have been released regarding urinary tract infections. The Trust's Secondary Care Antimicrobial Therapy Guidelines are being reviewed.