

Infection Prevention & Control Report to Trust Board

Meeting Date – 5th March 2020

1. Executive Summary

Reduction Targets

The Department of Health for Northern Ireland (DoH NI) has issued healthcare-associated infection (HCAI) reduction targets for 2019/20.

For Meticillin-Resistant *Staphylococcus aureus* (MRSA) bacteraemia, the Trust's target is five cases. That is a reduction of two cases or 28.57% compared to 2018/19 (seven cases).

The Trust's reduction target for *Clostridium difficile* (*C. difficile*) associated disease is 56; a reduction of nine cases or 13.85% compared to last year (65 cases).

With regard to healthcare-associated gram-negative bacteraemia (GNB), specifically *Escherichia coli*, *Klebsiella species* and *Pseudomonas aeruginosa*, the Trust is expected to maintain the reduction achieved in 2018/19 – a maximum of 49 cases.

Current *C. difficile* Performance

So far this year 58 cases of *C. difficile* have been reported. 35 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 (23) are classified as community-acquired as the patients presented with symptoms within a 72 hour period after admission.

Current MRSA Bacteraemia Performance

Since the beginning of April 2019 three MRSA bacteraemia cases have been reported. They are all categorised as community-associated as they occurred less than 48 hours after admission to hospital (definition used by the PHA).

As of 27th February 2020, the total number of days since the last Trust hospital-associated MRSA bacteraemia is:

Altnagelvin Hospital – 479 days	(Last recorded case was in Ward 42)
South West Acute Hospital (SWAH) – 1475 days	(Last recorded case was in Ward 8)
Tyrone County Hospital/ Omagh Hospital & Primary Care Complex (OHPCC) – 1864 days	(Last recorded case was in the Rehab Unit)

Current GNB Performance

As of 27th February 2020, 55 healthcare-associated GNB cases have been reported. As such, the reduction target set has been exceeded, with an increase of 22.44% compared to last year, and cannot now be achieved.

COVID-19

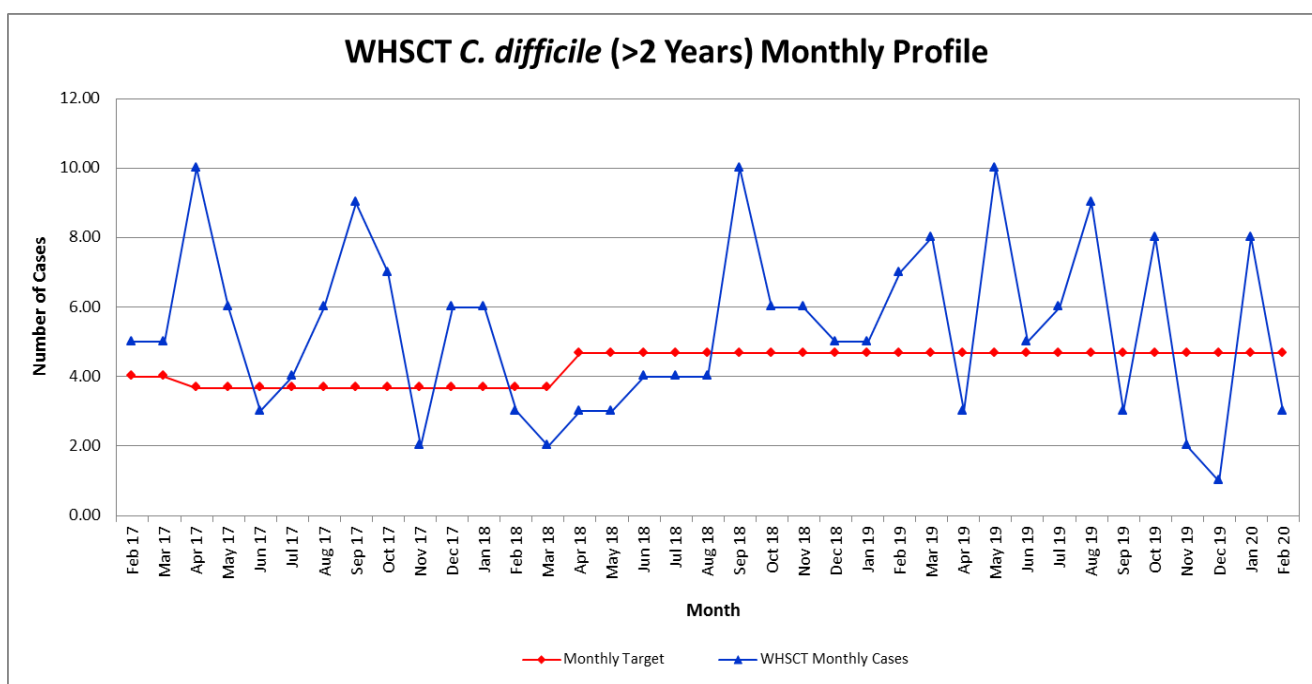
The Infection Prevention & Control (IP&C) Team continue to be engaged in the development of patient pathways, staff training and emergency preparedness to ensure the appropriate

management of any suspected or confirmed cases of COVID-19 which may occur within the Western Trust. Given the extent and priority of this work, some previously planned ward-based support and Mandatory IP&C Training continues to be postponed until it is completed.

2. C. difficile Performance

The 2019/20 target for *C. difficile* (\geq two years) is 56 cases, which equates to a reduction of 13.85% on the baseline figure of 2018/19 (65 cases).

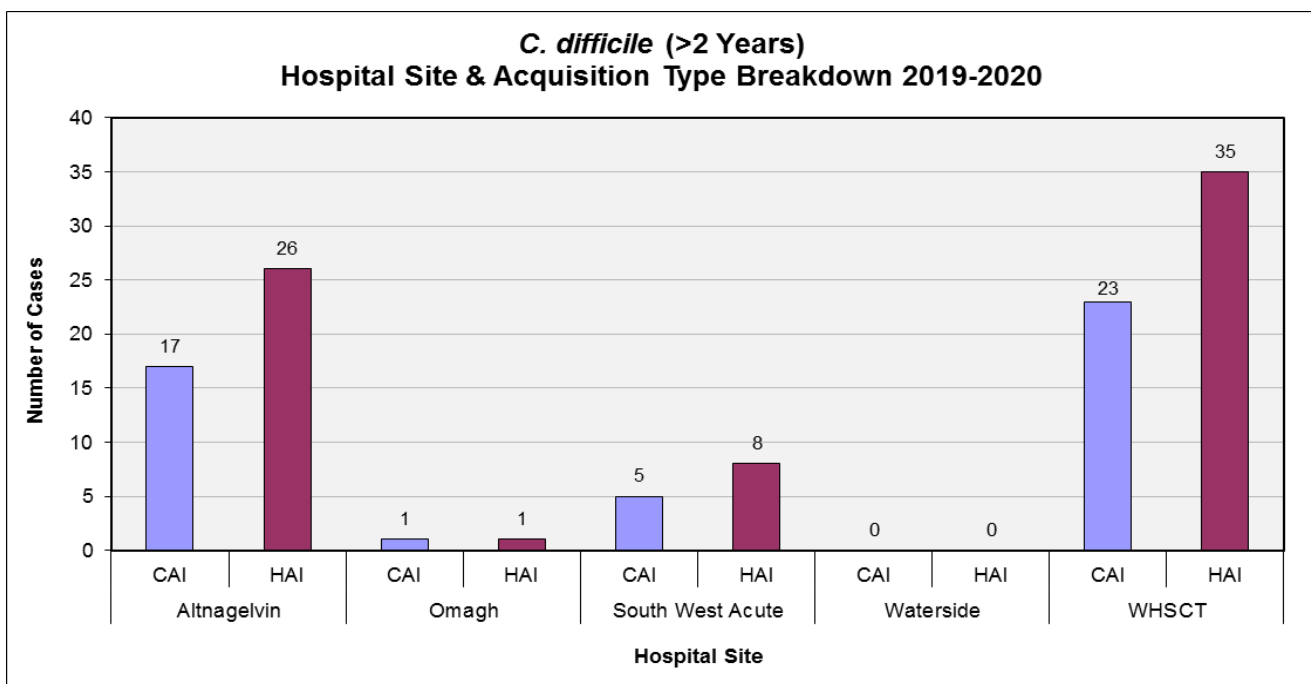
As of 27th February 2020, 58 cases have been reported, with 23 of those being categorised as community-associated. Although the Trust is currently recording a cumulative decrease of 2.65% compared to 2018/19 (comprising an increase in healthcare-associated infection cases of 9.10% versus a decrease in community-acquired infection cases of 16.36%), the reduction target set has been exceeded and cannot now be achieved.



* The value for Feb 20 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



Since the last Report to Trust Board, which contained figures as at 29th January 2020, there have been four new cases of *C. difficile* (breakdown below). A root cause analysis (RCA) has been conducted in relation to one of the cases and post infection reviews (PIRs) are pending for the other three.

4 *C. difficile* cases → 0 CAI
 → 4 HAI

Preventable/ Non-Preventable

In respect of *C. difficile* cases occurring during 2019/20 a total of 34 PIRs/ RCAs have been conducted. These found that five of the cases were preventable, 24 were non-preventable and five were difficult to determine.

3. 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 Interserve 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.

Nucleus Building, Altnagelvin

Although some progress has been made on the number of positive Legionella water sampling in the Nucleus Building, Altnagelvin, it continues to be a challenge to manage by normal water safety measures. Work was completed on the new cold water storage tanks in February and decentralisation of the hot water supply is 85% complete. This has had led to

an improvement in water temperatures. Re-sampling and normal water safety measures will continue.

Tower Block, Altnagelvin

Despite significant improvement installation works, completed in the year 2018/19, the reconfiguration of the Tower Block has now led to issues regarding adequate circulation of the water supply and balancing issues. This may have an impact on the number of Legionella positive water outlets on the remaining ward floors. Water sampling continues and outlets testing positive for Legionella are managed as per the Trust's Water Safety Plan.

Community Facilities

Greenfield Residential Home – Further remedial works are planned with the replacement of the cold water storage tank by the end of March 2020. Alterations carried out to the hot water system, installation of a supplementary biocide system and a daily flushing regime have made significant improvements in the levels of Legionella positive samples.

Avoca Lodge & Carnhill Hostel – Replacement of the plumbing installation in Avoca Lodge and Carnhill Hostel due to Legionella positives commenced on 3rd February 2020 and is expected to be completed by the end of March 2020.

William Street Residential Home – The cold water storage tank is being replaced and will be completed at the end of March 2020.

Reconfiguration of Services and Buildings

This has led to issues regarding vacant areas and buildings, which is causing issues with the circulation of the water supply and increasing the demand for water flushing.

Corporate Risk ID235: Risk Associated with Water Borne Pathogens

The Trust WSG has reviewed this risk and a decision has been taken to amend the current details. It is proposed that the risk associated with *Pseudomonas aeruginosa* will now be a directorate risk given the high levels of assurance regarding trend analysis and evidence of efficacy of control measures in place. The risk associated with Legionella will remain a corporate risk based on the continuing challenges in managing this by normal water safety measures.

Increasing Compliance

The Trust 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.

4. Hand Hygiene Compliance

The Trust's overall self-reported hand hygiene scores are 78% when non-submission areas are included. These areas score an automatic 0%. 48 areas out of 194 applicable areas failed to submit scores for January 2020. They are as follows:

Altnagelvin – Ward 41 AMU, Ward 42, Emergency Department, OPALS South Wing Clinics, Main Theatre 1, Main Theatre 2, Main Theatre 3, Main Theatre 4, Main Theatre 7, DCU Recovery, DCU Ophthalmic Theatre, DCU Theatre, Endoscopy, DESU Recovery, DESU

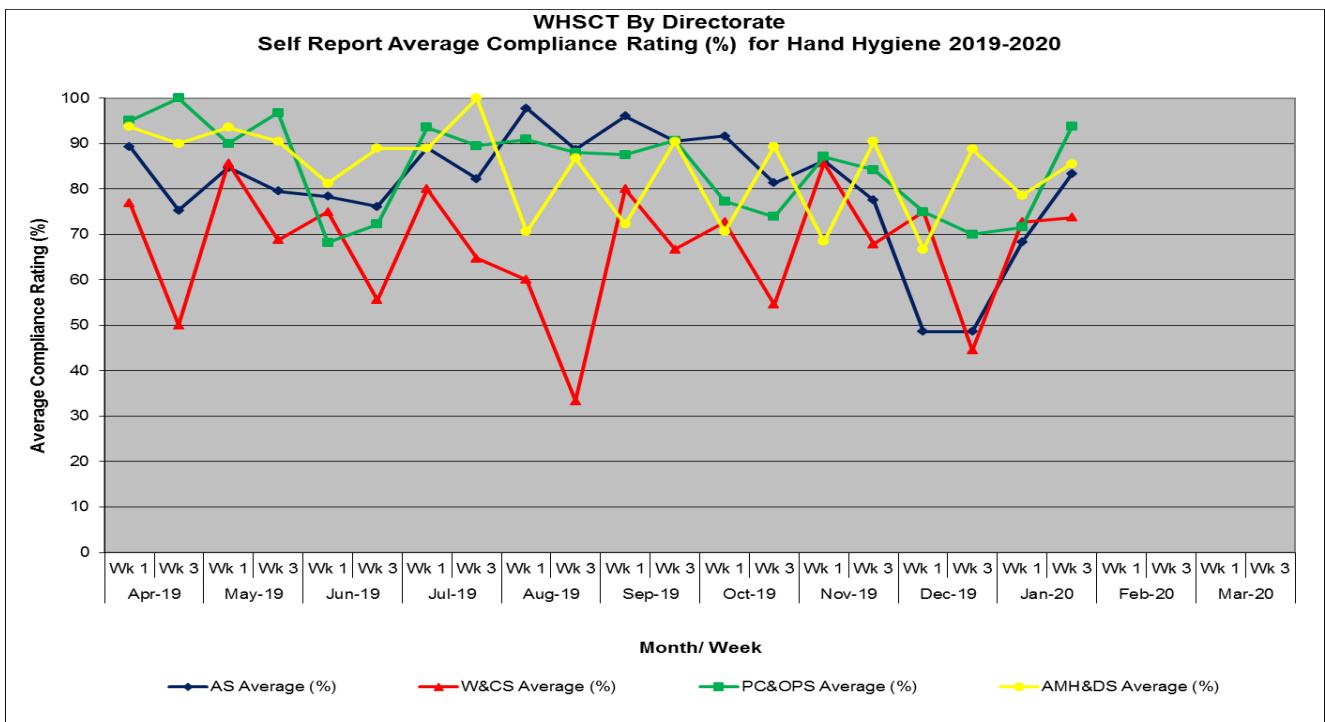
Theatre 1, DESU Theatre 3, DESU Theatre 4, Outpatients Department, Antenatal Clinic, Anderson House/ Dermatology, GUM Clinic and Roe Valley Outpatients Department
SWAH – Ward 1 MSAU, Ward 2, Ward 5, Ward 6, Ward 7 and ICU
OHPCC – Cardiac Assessment Unit, Cardiac Investigations, Women’s Centre, Rehab Unit and Outpatients Department
Tyrone & Fermanagh (T&F) Hospital – Elm Villa
Waterside Hospital – Ward 4
Grangewood – Carrick
Residential Homes – Thackeray Place Residential Home
Day Care – Evergreen Centre, Glen Oaks, Drumcoo Day Centre, Dromore Day Centre, Creggan Day Centre, Gortin Day Centre, Beragh Day Centre and Newtownstewart Day Centre
Other Community – The Cottages Children’s Respite, Avalon House and Crannog Intensive Treatment Team

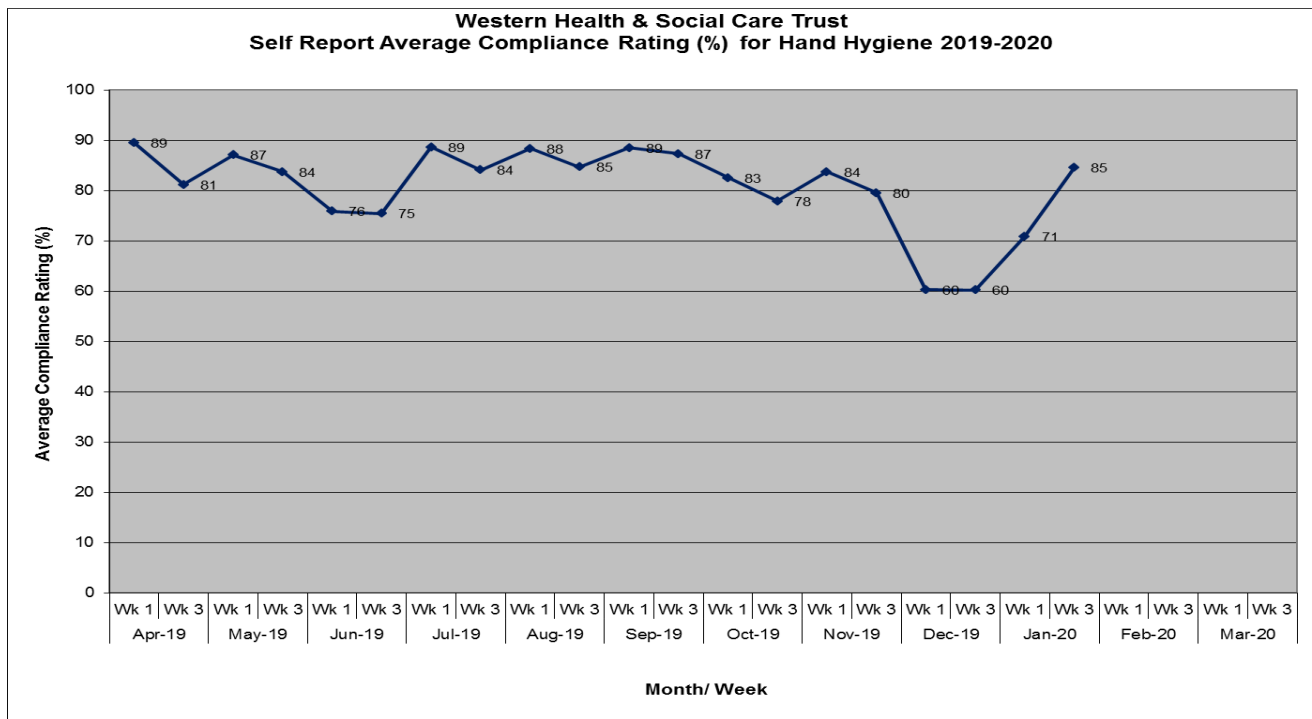
Emergency Department, Main Theatre 1, Main Theatre 2, Main Theatre 3, Main Theatre 4, Main Theatre 7, DCU Recovery, DCU Ophthalmic Theatre, DCU Theatre, DESU Recovery, DESU Theatre 1, DESU Theatre 3, DESU Theatre 4, Altnagelvin Outpatients Department, GUM Clinic, Ward 6, ICU, SWAH Outpatients Department, Elm Villa, Carrick, Thackeray Place Residential Home, Glen Oaks, Drumcoo Day Centre, Gortin Day Centre, The Cottages Children’s Respite, Avalon House and Crannog Intensive Treatment Team also did not submit scores for the previous month.

Furthermore, a number of areas submitted scores for January 2020 which are not mathematically possible to achieve if using the hand hygiene audit tool correctly. These areas are as follows:

Altnagelvin – Rheumatology and Spruce House
T&F – Asha Centre

Rheumatology and Asha Centre also submitted incorrect 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. Antimicrobial Management Team

The Antimicrobial Management Team met on 12th February 2020. The following items were discussed:

- **Terms of Reference and Structure** – This was last reviewed in 2014. This will be reviewed and updated.
- **Antimicrobial Stewardship Policy** – This will need reviewed in line with the Internal Audit of antimicrobial stewardship.
- **Antimicrobial Audit Plan and Roll Out** – An audit tool was tabled. It meets six of nine recommendations of Start Smart Then Focus audits. Pilot areas have been identified who will pilot and feedback.
- **Target Monitoring Report (DoH NI Targets)** – To date, per 1000 admissions, the Western Trust is not meeting the reduction targets for total antimicrobial consumption or piperacillin-tazobactam consumption. The Western Trust is currently meeting the targets for carbapenem reduction and World Health Organization Access Aware category consumption.

6. 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.

WARD 22 TOU, ALTNAGELVIN												
Audit Type	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20
Hand Hygiene												
<i>C. difficile</i>			100%		50%	0%		100%	100%		17% (A)	
<i>C. difficile</i> Care Pathway			Fail		Pass	Fail		Pass	Fail		Pass x 2	
Peripheral Line Ongoing Care												
Urinary Catheter Ongoing Care												
ANNT: Peripheral Venepuncture												
QIT: Isolation Precautions												
Cleaning & Decontamination												
Commode												
Mattress												
Organism Type												Total
MRSA Colonisation (HCAI only)												0
MRSA Bacteraemia (HCAI only)												0
<i>C. difficile</i> (HCAI only)			1		1		1	1		2		6

WARD 22 SPECIALIST MEDICINE, ALTNAGELVIN												
Audit Type	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20
Hand Hygiene	50%				100%							
<i>C. difficile</i>	0%	100%	100%	67% (A)		0%			100%	100%		
<i>C. difficile</i> Care Pathway	Pass	Fail	Pass	Pass x 2		Pass			Pass	Pass		
Peripheral Line Ongoing Care					30%							
Urinary Catheter Ongoing Care												
ANNT: Peripheral Venepuncture												
QIT: Isolation Precautions												
Cleaning & Decontamination												
Commode	67%											
Mattress												
Organism Type												Total
MRSA Colonisation (HCAI only)	1											1
MRSA Bacteraemia (HCAI only)												0
<i>C. difficile</i> (HCAI only)				1				1				2

WARD 24 GENERAL MEDICINE, ALTNAGELVIN

Audit Type	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	
Hand Hygiene					67%		100%			77% (A)			
<i>C. difficile</i>		50%		100%		0%	100%	0%		0% (A)			
<i>C. difficile</i> Care Pathway		Fail		Pass		Pass	Pass	Pass		Pass x 2			
Peripheral Line Ongoing Care		25%			22%	75%							
Peripheral Line Insertion					0%								
Urinary Catheter Ongoing Care													
ANTT: Peripheral Venepuncture													
ANTT: Peripheral & Central IV Therapy													
QIT: Isolation Precautions							100%			68% (A)			
QIT: Standard Precautions													
Cleaning & Decontamination										80%			
Commode							100%			100% (A)			
Organism Type													Total
MRSA Colonisation (HCAI only)					2								2
MRSA Bacteraemia (HCAI only)													0
<i>C. difficile</i> (HCAI only)							1			3			4

WARD 31, ALTNAGELVIN

Audit Type	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	
Hand Hygiene													
<i>C. difficile</i>		0%	0%		100%					33%			
<i>C. difficile</i> Care Pathway		Fail			Pass					Pass			
Peripheral Line Ongoing Care													
Urinary Catheter Ongoing Care													
ANTT: Peripheral Cannulation													
ANTT: Peripheral Venepuncture													
ANTT: Peripheral & Central IV Therapy													
QIT: Isolation Precautions													
QIT: Standard Precautions													
Commode													
Organism Type													Total
MRSA Colonisation (HCAI only)													0
MRSA Bacteraemia (HCAI only)													0
<i>C. difficile</i> (HCAI only)							1			1			2

WARD 49 NNICU, ALTNAGELVIN													
Audit Type	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	
Hand Hygiene	100% (A)	100% (A)		100% (A)	100%	100%			100%				
Peripheral Line Ongoing Care													
Urinary Catheter Ongoing Care													
QIT: Isolation Precautions	100% (A)	100% (A)		100% (A)									
Cleaning & Decontamination		100%											
Organism Type												Total	
MRSA Colonisation (HCAI only)	3			1	1								5
MRSA Bacteraemia (HCAI only)													0
<i>C. difficile</i> (HCAI only)													0

WARD 50 SPERRIN, ALTNAGELVIN													
Audit Type	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	
Hand Hygiene				100%			100%						
<i>C. difficile</i>		75% (A)							0%				
<i>C. difficile</i> Care Pathway		Pass x 1 Fail x 1							Pass				
Peripheral Line Ongoing Care													
ANTT: Peripheral & Central IV Therapy				100%									
QIT: Isolation Precautions							60%						
Cleaning & Decontamination													
Commode							100%						
Organism Type												Total	
MRSA Colonisation (HCAI only)													0
MRSA Bacteraemia (HCAI only)													0
<i>C. difficile</i> (HCAI only)		1		1					1				3

WARD 1 MSAU, SWAH

Audit Type	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	
Hand Hygiene			100%										
<i>C. difficile</i>										0%			
<i>C. difficile</i> Care Pathway										Fail			
Peripheral Line Ongoing Care	0%	13%	36%	63%									
QIT: Isolation Precautions													
Cleaning & Decontamination			100%										
Commode													
Organism Type													Total
MRSA Colonisation (HCAI only)		1											1
MRSA Bacteraemia (HCAI only)													0
<i>C. difficile</i> (HCAI only)													0

WARD 8, SWAH

Audit Type	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	
Hand Hygiene													
<i>C. difficile</i>					0%	50%				25% (A)			
<i>C. difficile</i> Care Pathway					Fail	Fail				Pass x 2			
Peripheral Line Ongoing Care													
Peripheral Line Insertion													
Urinary Catheter Ongoing Care													
ANTT: Peripheral Venepuncture													
QIT: Isolation Precautions													
Commode													
Organism Type													Total
MRSA Colonisation (HCAI only)													0
MRSA Bacteraemia (HCAI only)													0
<i>C. difficile</i> (HCAI only)			1			1	1						3