

Infection Prevention & Control Report to Trust Board

Meeting Date – 14th June 2018

1. Executive Summary

The Department of Health for Northern Ireland (NI) has not yet issued new *Clostridium difficile* (*C. difficile*) associated disease and Meticillin-Resistant *Staphylococcus aureus* (MRSA) bacteraemia reduction targets for 2018/19.

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

Since the beginning of April 2018 two MRSA bacteraemia cases have been reported. Both are categorised as community-associated. As of 6th June 2018, the total number of days since the last Trust hospital-associated MRSA bacteraemia is:

| | |
|--|--|
| Altnagelvin Hospital – 1008 days | (Last recorded case was in Ward 4) |
| South West Acute Hospital (SWAH) – 844 days | (Last recorded case was in Ward 8) |
| Tyrone County Hospital/ Omagh Hospital & Primary Care Complex – 1233 days | (Last recorded case was in the Rehab Unit) |

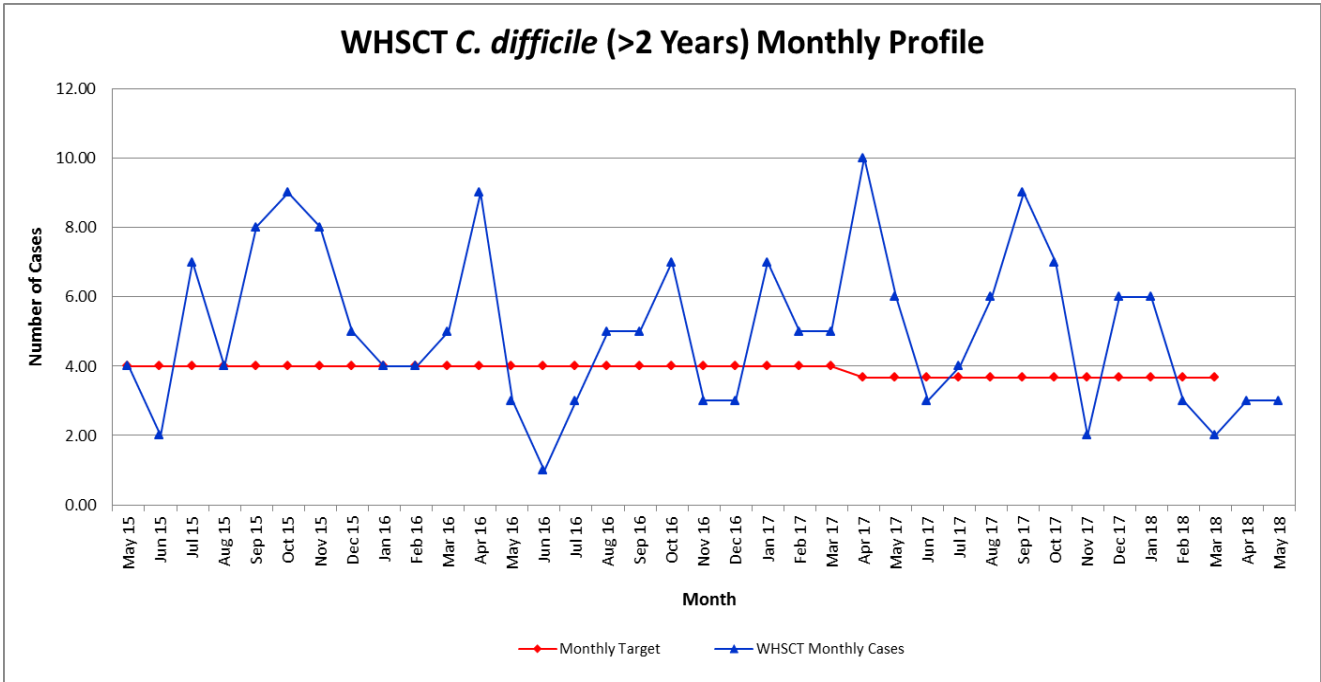
Ward 5 EOU, Altnagelvin, was closed to admissions for six days due to an outbreak of confirmed Norovirus. 11 patients and eight staff experienced symptoms. There was prompt recognition of a possible outbreak by the ward staff and elective surgery was rescheduled during this closure. The Infection Prevention & Control (IP&C) Team provided support to the ward team and education and enforcement of appropriate hand hygiene practice with members of the medical team was required.

Ward 3, Altnagelvin, had a number of beds closed as a result of an increase in vomiting and/or diarrhoea. Four patients met the criteria for Norovirus and there was one positive Norovirus laboratory result. Despite the one Norovirus positive result, however, this increased incident did not behave like an outbreak and was, therefore, not declared as such. Three staff members also reported symptoms.

Ward 41 AMU, Altnagelvin, was closed to admissions on 4th June 2018 due to a possible outbreak of Norovirus, with 10 patients and five staff reporting symptoms. Testing results are awaited from the Belfast Virology Laboratory. The IP&C Team continue to provide support with all IP&C measures in place.

2. C. difficile Performance

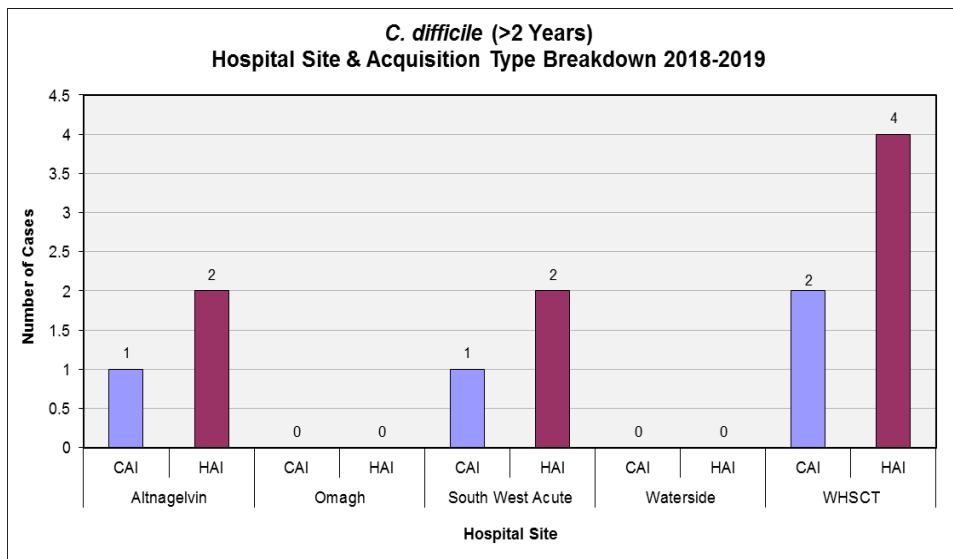
The new 2018/19 reduction target for *C. difficile* (≥ 2 years) has not yet been issued. To date the Trust has reported six cases.



* The value for May 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



Since the last Report to Trust Board, which contained figures as at 24th April 2018, there have been four new cases of *C. difficile* (breakdown below).

4 *C. difficile* cases → 1 CAI
 → 3 HAI

Root cause analyses (RCA) are pending for the three healthcare-associated cases.

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%). There is no differentiation between those achieving a very low score and those achieving 95%. This is done deliberately to highlight the importance of 100% compliance with the bundle as a whole.

Five main elements of care have been identified as being necessary to reduce the incidence of *C. difficile* infection (CDI). They are prudent antibiotic prescribing, hand hygiene, environmental decontamination, use of personal protective equipment and isolation/ cohort nursing. The risk of infection reduces when all of the elements within the clinical process are performed every time for every patient. The risk of infection increases when one or more elements of a procedure are excluded or not performed appropriately. Monitoring of the elements outlined in the care bundle ensures that all necessary aspects of the clinical process are appropriately performed (as required by the particular situation). The care bundle should be used when cases of CDI are either suspected or proven.

The *C. difficile* care pathway has been revised and is now a more concise, user friendly document. It was piloted on a number of wards and the feedback was very positive. It has also been reviewed by the Trust Nursing Record Keeping Group and it was approved by the Chief Executive HCAI Accountability Forum in May 2018. It has now been disseminated to staff for use.

The dashboard below summarises the performance of wards/ departments audited by the IP&C Team since May 2017. On occasion more than one audit may be completed during the month for a particular ward/ department. In such instances an average score is shown on the dashboards. These scores are marked (A).

Consistent compliance with the *C. difficile* care bundle remains a challenge. The findings indicate issues around antibiotic prescribing, environmental decontamination and isolation/ cohort nursing.

| | | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Jan-18 | Feb-18 | Mar-18 | Apr-18 |
|----------------------|--------------|----------|--------|--------|--------|--------|----------|----------|--------|--------|--------|--------|--------|
| Ward 1, Alt | Care Bundle | | 100% | 100% | | 100% | | 100% | | | | 50% | |
| | Care Pathway | | Pass | Fail | | Pass | | Pass | | | | Pass | |
| Ward 2 TOU, Alt | Care Bundle | | | | | | | 100% | | | | | |
| | Care Pathway | | | | | | | Pass | | | | | |
| Ward 3, Alt | Care Bundle | | | | | 100% | 50% | | | | | | |
| | Care Pathway | | | | | Pass | Pass | | | | | | |
| Ward 8 AHAN, Alt | Care Bundle | | | | | 100% | | | | | | | |
| | Care Pathway | | | | | Pass | | | | | | | |
| Ward 20, Alt | Care Bundle | 100% (A) | | | 80% | 100% | | | | | | | |
| | Care Pathway | Pass x 2 | | | Pass | Pass | | | | | | | |
| Ward 31, Alt | Care Bundle | | | | | 50% | | | 67% | | 33% | | |
| | Care Pathway | | | | | Pass | | | Fail | | Fail | | |
| Ward 32 ESU, Alt | Care Bundle | 100% | | 100% | | 100% | | 100% (A) | | | | | 0% |
| | Care Pathway | Pass | | Pass | | Fail | | Fail x 2 | | | | | Pass |
| Ward 40, Alt | Care Bundle | | | | | | | | | 75% | | | |
| | Care Pathway | | | | | | | | | Fail | | | |
| Ward 41 AMU, Alt | Care Bundle | | | | | | | | 0% | | 67% | 100% | |
| | Care Pathway | | | | | | | | Pass | | Fail | Pass | |
| Ward 42, Alt | Care Bundle | 67% | | 100% | | | | 100% | | | | | |
| | Care Pathway | Pass | | Pass | | | | Pass | | | | | |
| Ward 43 Gynae, Alt | Care Bundle | | | | | | | | | 33% | | | |
| | Care Pathway | | | | | | | | | Fail | | | |
| Ward 50 Sperrin, Alt | Care Bundle | 50% | 0% | | | | 84% (A) | | | 100% | | | |
| | Care Pathway | Fail | Pass | | | | Pass x 2 | | | Pass | | | |
| CCU, Alt | Care Bundle | 50% | | | | | | | | | 100% | | |
| | Care Pathway | Pass | | | | | | | | | Fail | | |
| Ward 1 MSAU, SWAH | Care Bundle | 100% | | | 100% | | 100% | | 100% | | | | |
| | Care Pathway | Pass | | | Pass | | Pass | | Pass | | | | |
| Ward 2, SWAH | Care Bundle | | | | | | | | | | | | 100% |
| | Care Pathway | | | | | | | | | | | | Pass |
| Ward 3, SWAH | Care Bundle | 75% | | | | | 100% | | 100% | | | | |

| | | | | | | | | | | | | | |
|-----------------------|--------------|------|--|--|----------|----------|------|--|------|------|----------|------|------|
| | Care Pathway | Pass | | | | | Pass | | Pass | | | | |
| Ward 5, SWAH | Care Bundle | | | | | | | | | 67% | | | |
| | Care Pathway | | | | | | | | | Fail | | | |
| Ward 6, SWAH | Care Bundle | | | | 100% | | | | | | | | |
| | Care Pathway | | | | Pass | | | | | | | | |
| Ward 7, SWAH | Care Bundle | 100% | | | | 100% (A) | | | | | | | |
| | Care Pathway | Pass | | | | Pass x 2 | | | | | | | |
| Ward 8, SWAH | Care Bundle | | | | 100% (A) | | 100% | | | | | | |
| | Care Pathway | | | | Pass x 2 | | Pass | | | | | | |
| Ward 9, SWAH | Care Bundle | 50% | | | | | | | | | | | |
| | Care Pathway | Fail | | | | | | | | | | | |
| Children's Ward, SWAH | Care Bundle | | | | | | | | | 33% | | | |
| | Care Pathway | | | | | | | | | Fail | | | |
| Critical Care, SWAH | Care Bundle | | | | | | | | | 0% | | | |
| | Care Pathway | | | | | | | | | Pass | | | |
| Ward 3, Waterside | Care Bundle | | | | 100% | | | | | | 34% (A) | | 50% |
| | Care Pathway | | | | Pass | | | | | | Pass x 2 | | Pass |
| Ward 4, Waterside | Care Bundle | | | | | | | | | | | 50% | |
| | Care Pathway | | | | | | | | | | | Pass | |

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 [†] | | | | | | | | | | | 0 [†] |

* 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.

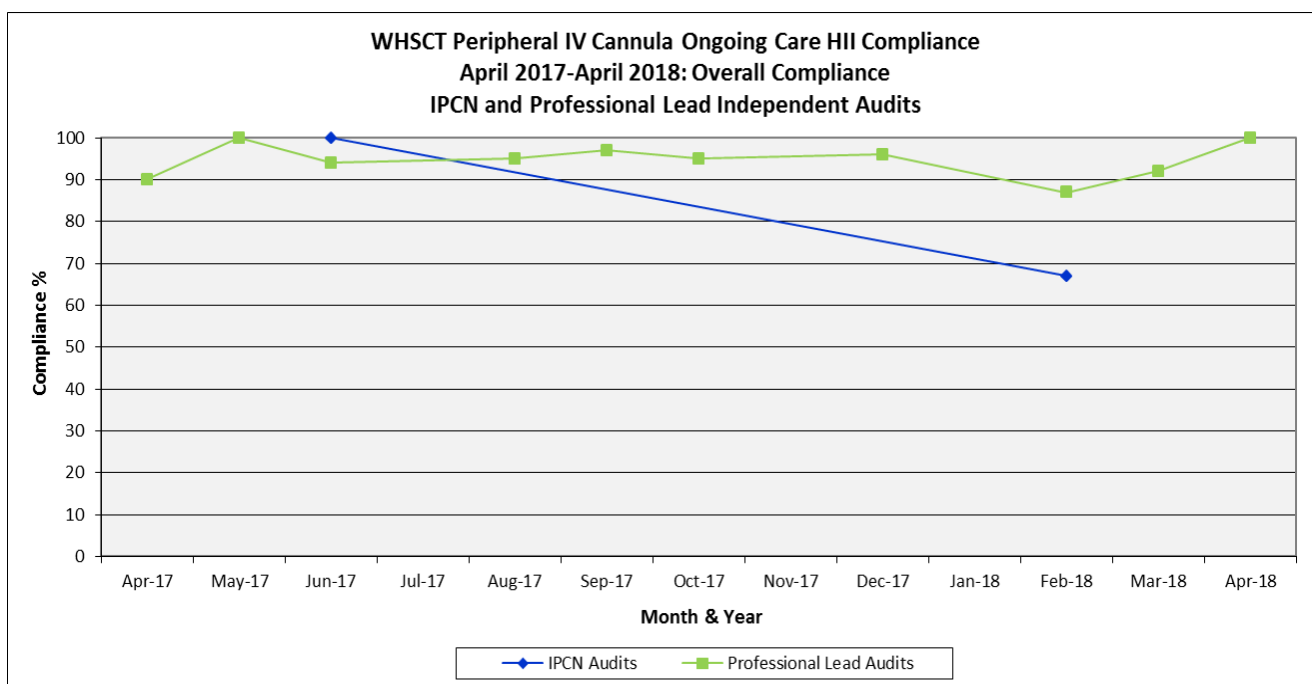
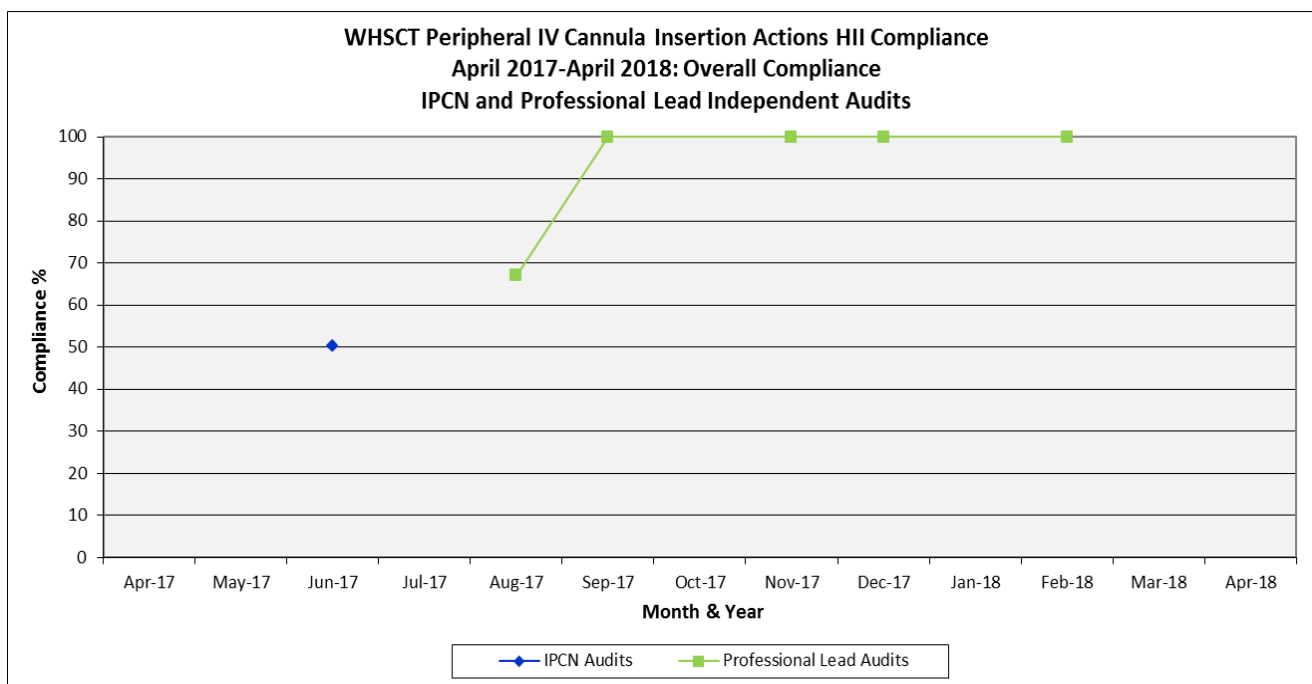
Since the beginning of April 2018 no *Pseudomonas* cases have been reported. There have been no healthcare-associated positive blood cultures in augmented care areas since November 2017.

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

The graphs below show average independent audit scores from April 2017 to April 2018 in both Altnagelvin and the SWAH for peripheral intravenous cannula insertion and ongoing care. From May 2016 the IP&C Team have not undertaken routine independent audit of peripheral line insertion and 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.

Assurance regarding practice of peripheral intravenous cannula insertion and ongoing care is carried out by the IP&C Team as part of the RCA of healthcare-associated bacteraemias.

Enhanced support by the IP&C Team regarding improving aseptic non-touch technique (ANTT) practice is to commence in June 2018 in the Emergency Department and AMU, Altnagelvin, and the Emergency Department and Ward 1 MSAU, SWAH.

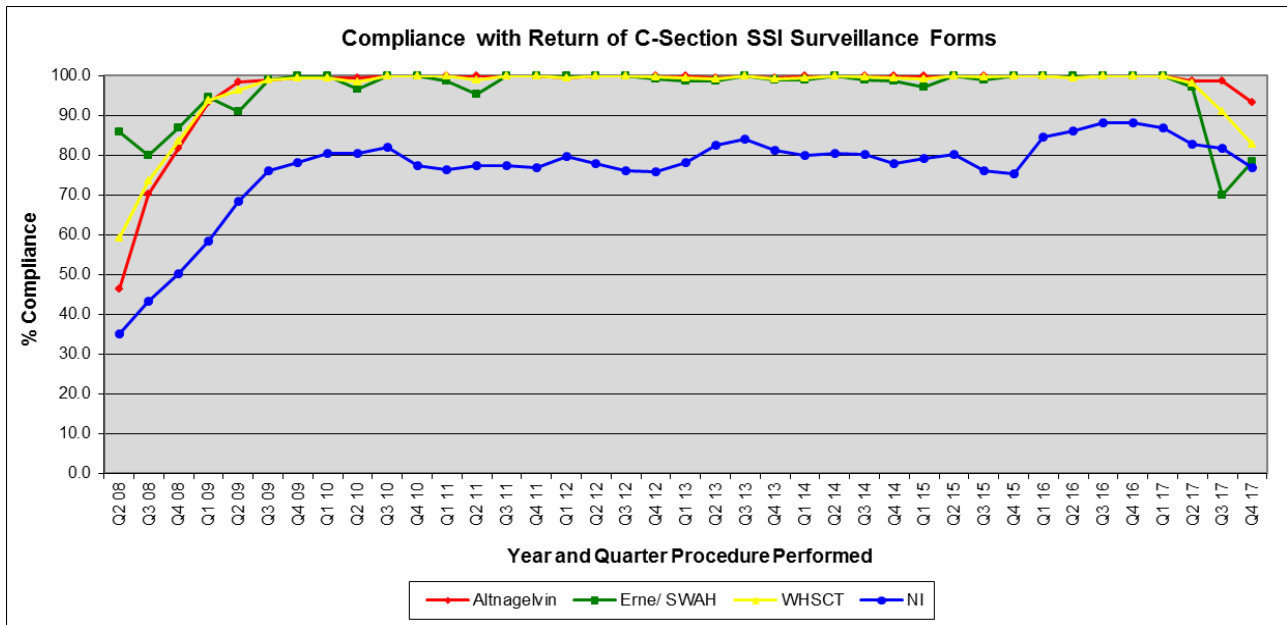


5. New and Updated Infection Prevention & Control Guidance

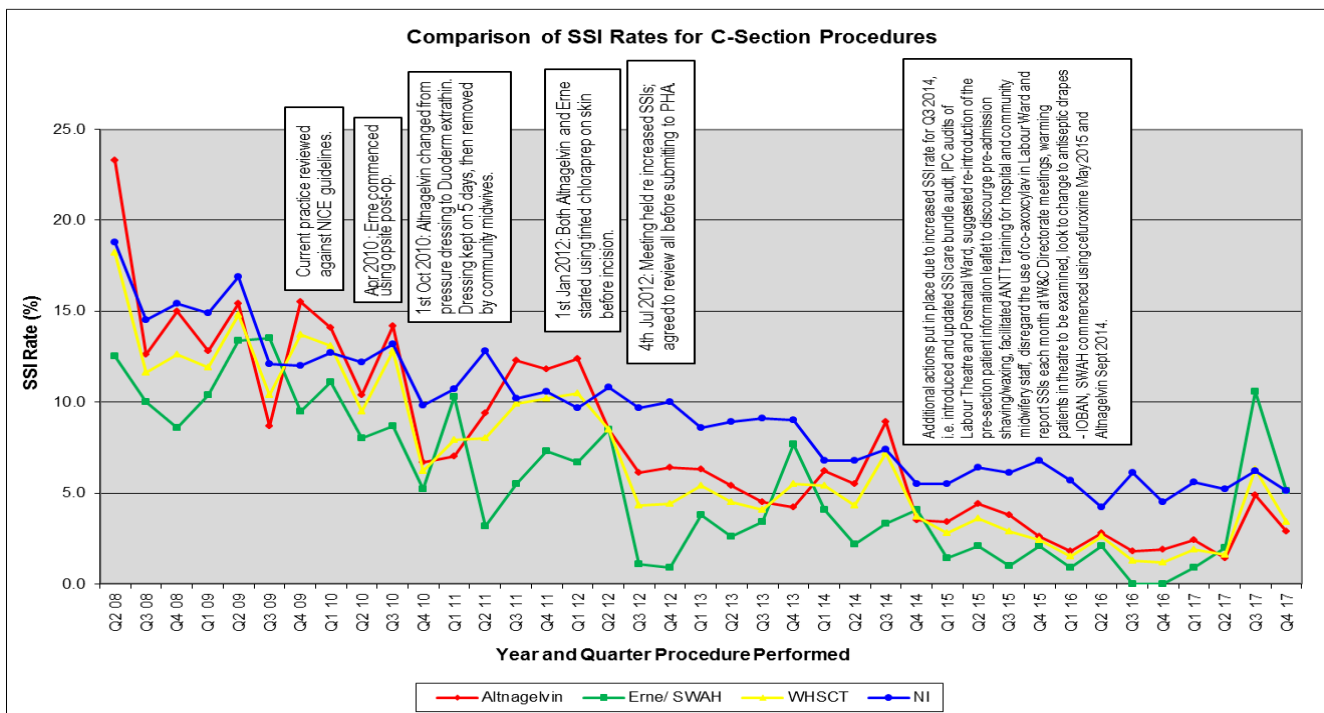
The following guidance was approved by the Chief Executive HCAI Accountability Forum in May 2018. These were all updates of existing documents.

- Guidelines for Prevention and Control of Tuberculosis
- Root Cause Analysis (RCA) Guidelines for Healthcare-Associated *Clostridium difficile*, Meticillin Resistant/ Sensitive *Staphylococcus aureus* (MRSA/ MSSA) Infections and Other Infection Related Incidents
- Infectious Incident/ Outbreak Control Plan
- Care Bundle Documentation for *Clostridium difficile*/ GDH
- Dress Code Policy [now pending approval by Trust Board]

6. Caesarean Section Surgical Site Infection (SSI) Surveillance

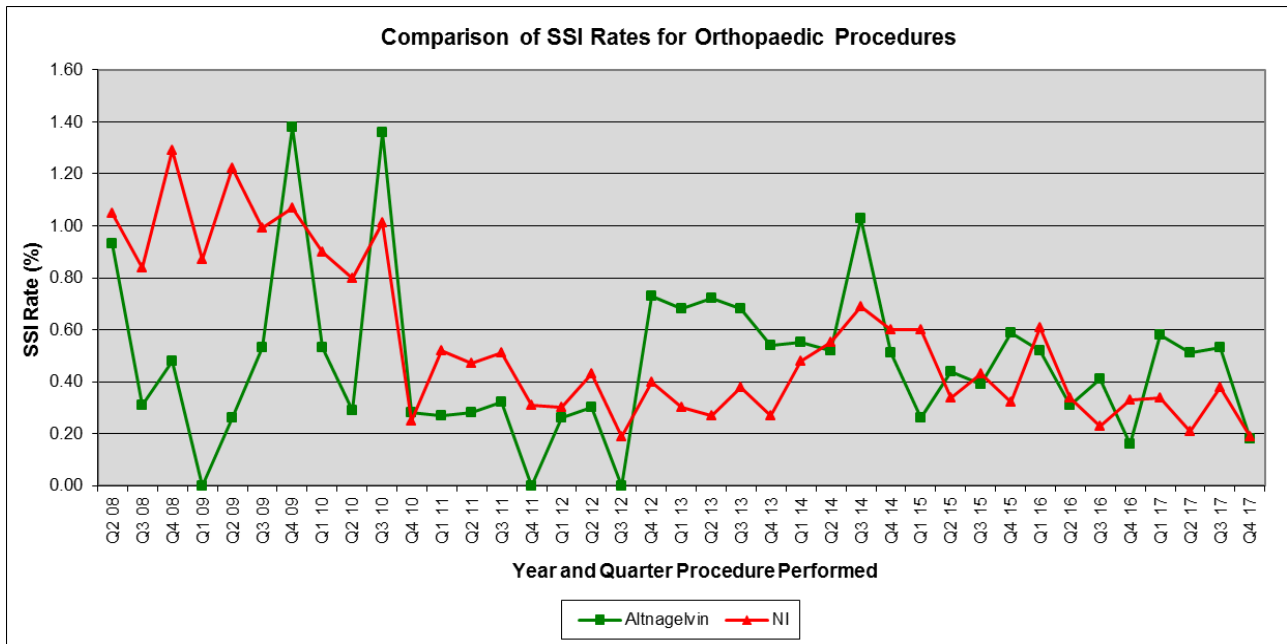


The Trust continues to achieve high compliance with surveillance related documentation (82.7%), compared to a 76.8% average compliance rate in NI as a whole.



The surveillance demonstrates an ongoing reduction in infection rates over time and a lower rate for the Trust than the rest of the region; 3.4% and 5.1% respectively.

7. 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.