

Meeting of Lanarkshire
NHS Board: 28 October 2020

Lanarkshire NHS Board
Kirklands
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SUBJECT: Healthcare Associated Infection (HCAI) Reporting Template

1. PURPOSE

This paper is coming to the NHS Lanarkshire (NHSL) Board:

For approval	<input type="checkbox"/>	For endorsement	<input checked="" type="checkbox"/>	To note	<input type="checkbox"/>
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The purpose of this paper is to update NHSL Board members on the current position against;

- *CNO (2019) October 2019: Standards on Healthcare Associated Infection and Indicators for Antibiotic Use.*

2. ROUTE TO THE BOARD

This paper has been:

Prepared	<input checked="" type="checkbox"/>	Reviewed	<input type="checkbox"/>	Endorsed	<input checked="" type="checkbox"/>
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By the Head of Infection Prevention and Control (IPC) and approved by the Lanarkshire Infection Control Committee (LICC).

3. SUMMARY OF KEY ISSUES

The key performance headlines and improvement activity are noted in the Executive Summary on pages 4 – 5. Please note that performance data contained within the report has been validated nationally by Health Protection Scotland (HPS). The new *Standards on Healthcare Associated Infections and Indicators on Antibiotic Use for Scotland* were released on 10 October 2019. NHS Lanarkshire has developed local AOP standards which took effect retrospectively from April 2019.

4. STRATEGIC CONTEXT

This paper links to the following:

Corporate Objectives	<input checked="" type="checkbox"/>	Annual Operating Plan	<input checked="" type="checkbox"/>	Government Policy	<input type="checkbox"/>
Government Directive	<input checked="" type="checkbox"/>	Statutory Requirement	<input checked="" type="checkbox"/>	AHF/Local Policy	<input type="checkbox"/>
Urgent Operational Issue	<input type="checkbox"/>	Other	<input type="checkbox"/>		

There is a national mandatory requirement for a report relating to Infection Prevention and Control (IPC) to be presented to the NHS Board using the Scottish Government Reporting Template (in Appendix 1).

5. CONTRIBUTION TO QUALITY

This paper aligns to the following elements of safety and quality improvement:

Three Quality Ambitions:

Safe	<input checked="" type="checkbox"/>	Effective	<input checked="" type="checkbox"/>	Person Centred	<input checked="" type="checkbox"/>
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Six Quality Outcomes:

Everyone has the best start in life and is able to live longer healthier lives; (Effective)	<input type="checkbox"/>
People are able to live well at home or in the community; (Person Centred)	<input checked="" type="checkbox"/>
Everyone has a positive experience of healthcare; (Person Centred)	<input checked="" type="checkbox"/>
Staff feel supported and engaged; (Effective)	<input checked="" type="checkbox"/>
Healthcare is safe for every person, every time; (Safe)	<input checked="" type="checkbox"/>
Best use is made of available resources. (Effective)	<input checked="" type="checkbox"/>

6. MEASURES FOR IMPROVEMENT

- Annual Operating Plan (AOP) targets for *Staphylococcus aureus* bacteraemia (SAB) and *Clostridioides difficile* Infection (CDI) standards for 2019 to 2022 and *Escherichia coli* bacteraemia (ECB) standard for 2019 to 2024.
- Key Performance Indicators (KPI) for Meticillin Resistant *Staphylococcus aureus* (MRSA) Clinical Risk Assessment (CRA) and Carbapenemase-producing *Enterobacteriaceae* (CPE) CRA compliance.
- Local Performance Indicator for Hand Hygiene.

7. FINANCIAL IMPLICATIONS

The organisation carries financial pressures as a direct result of HCAI. The severity of these pressures are dependent on a number of variables including length of stay, associated treatment required etc.

8. RISK ASSESSMENT/MANAGEMENT IMPLICATIONS

- MRSA CRA Compliance: To achieve 90% or above.
- CPE CRA Compliance: To achieve 90% or above.
- Hand hygiene: To achieve 95% or above.

9. FIT WITH BEST VALUE CRITERIA

This paper aligns to the following best value criteria:

Vision & leadership	<input type="checkbox"/>	Effective partnerships	<input type="checkbox"/>	Governance & accountability	<input checked="" type="checkbox"/>
Use of resources	<input checked="" type="checkbox"/>	Performance management	<input type="checkbox"/>	Equality	
Sustainability	<input type="checkbox"/>				

10. EQUALITY AND DIVERSITY IMPACT ASSESSMENT

An Equality and Diversity Impact Assessment (EDIA) has been completed

Yes Please say where a copy can be obtained No Please say why not

There has been no requirement to date to complete an EDIA.

11. CONSULTATION AND ENGAGEMENT

Consultation and contributions have been devised from the following departments/personnel across acute and partnership services:

- Infection Prevention and Control Team (IPCT)
- Property and Support Services Division (PSSD)
- Antimicrobial Management Team (AMT)
- Lanarkshire Infection Control Committee (ICC) and Sub-groups

12. ACTIONS FOR THE BOARD

The NHS Board is asked to:

Approval	<input type="checkbox"/>	Endorsement	<input type="checkbox"/>	Identify further actions	<input type="checkbox"/>
Note	<input checked="" type="checkbox"/>	Accept the risk identified	<input type="checkbox"/>		

The NHS Board is asked to note this report and highlight any areas where further clarification or assurance is required.

The NHS Board is also asked to confirm whether the report provides sufficient assurance around NHSL performance on HCAI, and the arrangements in place for managing and monitoring HCAI.

13. FURTHER INFORMATION

For further more detailed information or clarification of any issues in this paper please contact:

- Eddie Docherty, Executive Director of Nursing, Midwifery and Allied Health Professionals (NMAHPs) (Telephone number: 01698 858089)
- Christina Coulombe, Head of Infection Prevention and Control (Telephone number: 01698 366309)

Presented by Eddie Docherty, Executive Director of NMAHPs

Prepared by Infection Prevention and Control Team

Infection Prevention and Control (IPC) key successes and challenges
Executive Summary
August to September 2020

Key Successes

NHSL is below the national comparative rate for Quarter 2 (April to June 2020) HCAI SAB and in line with the local AOP Standard rate for Q2 SAB rates

Breakthrough Series Collaborative to support the Annual Operating Plan Standards and Local Standards for Hand Hygiene

An initial steering group meeting took place in August which brought together key leaders to discuss the purpose of this collaborative work programme. The aim of this programme is to reduce avoidable harms related to SAB, ECB and hand hygiene compliance and improve clinical outcomes for patients and service user. Progress will be reported through Hygiene Groups and the Infection Control Committee.

Standard Operating Procedure (SOP) Manual for Invasive Devices Chapter 1 – Peripheral Venous Cannula (PVC) and associated practices

On 7 September 2020, the Invasive Devices Expert Advisory Group successfully launched the Standard Operating Procedure (SOP) Manual for Invasive Devices Chapter 1 – Peripheral Venous Cannula (PVC) and associated practices. A Manual such as this has never been available in NHS Lanarkshire until now and chapter 1 contains research based guidance on the insertion, care and maintenance of Peripheral Vascular Cannulae (PVC).

The purpose of the manual includes:

- Encourage good practice to reduce vascular access device related infections including SAB;
- Standardised guidance for PVC related care including for example step by step measures for inserting a PVC;
- Promotion of good aseptic technique including standardisation of antiseptics for PVC and related hub care e.g. scrub the hub; and
- A dedicated Firstport page hosting the manual and the associated SOPs has been developed.

Children Returning to School in Lanarkshire during the COVID-19 Pandemic

There is currently seven children who attend school who either require ventilator assistance or have a temporary or permanent tracheostomy. As a result, suction is a normal procedure undertaken throughout their school day. The Infection Prevention & Control Team (IPCT) were asked to undertake individual situational reviews and provide guidance to colleagues in education to support and enable children who require additional respiratory support back into education. To date, there is no national or 4 Nations IPC COVID-19 guidance to support children returning to school who either require ventilator assistance or have a temporary or permanent tracheostomy. Following a collaborative approach including health, health and safety, IPC and education, three children have now safely returned to education. The review process is underway for a fourth child to resume. This work has emphasised the importance of parent and child involvement in decision making and cross sector collaboration. Linda Thomas Senior Nurse IPC, the Paediatric Respiratory Specialist Nurse and Education have been nominated for the Scottish Health Awards for bringing children with complex needs back to education and to their friends.

HIS Care of Care of Older People in Hospital and Safety and Cleanliness unannounced inspection at Udston community hospital on 29 September to 30 September 2020

Health Improvement Scotland undertook an unannounced Care of Older People in Hospital and Safety and Cleanliness unannounced inspection at Udston community hospital on 29 September to 30 September 2020.

High-level summary of inspection findings relating to IPC:

- Standard infection control precautions, hand hygiene facilities and hand hygiene compliance was good;
- The cleanliness of the environment was reported as very good; and
- The ward environment was well maintained and patient equipment was found to be clean.

The final report will be published 8 December 2020.

Monklands Replacement Project

The IPCT continue to support the Monklands Replacement Project as key members of the Infection Prevention and Control Sub-Group and the MRP Key Decisions Group.

Remobilisation

The IPCT continue to direct specialist technical expertise to Remobilisation across all of health and care. Particular focus has been given to elective surgical work remobilisation, ventilation in endoscopy in response to commencing scheduled activity, critical care pathways, treatment room and health centre recovery plans.

Key Challenges

- NHSL is above the national comparator for Q2 CDI rates;
- NHSL is above the local AOP Standard rate for Q2 CDI rates;
- NHSL is above the national comparator for Q2 ECB rates;
- NHSL is above the local AOP Standard rate for Q2 ECB rates;
- MRSA KPI has **not** been met;
- CPE KPI has **not** been met;
- Hand Hygiene Local Performance Indicator has **not** been met;
- Care Home IPC technical support response and mobilisation resource;
- Continuing COVID-19 (SARS-CoV-2) Response, Mobilisation and Recovery work; and
- Test and Protect responsibilities in complex settings: there is and will continue to be a substantial resource implication for IPC to undertake all of Track and Trace in all complex settings. IPC is not currently resourced to carry out this role. A bid to request support from the newly established Test and Protect Team within Health Protection has been raised.

NHSL Performance

Staphylococcus aureus bacteraemia (SAB)

When *Staphylococcus aureus* (*S. aureus*) breaches the body's defence mechanisms it can cause a wide range of illness from minor skin infections to serious infections such as bloodstream infections.

Staphylococcus aureus Bacteraemia (SAB) Standard

NHSL Performance (Q2 Apr-Jun 2020): HCAI

- NHSL SAB HCAI rate of 16.0 per 100,000 TOBDs; 16 HCAI cases;
- National SAB HCAI rate of 20.3 per 100,000 TOBDs;
- NHSL is below the national comparator for Q2 SAB rates;
- NHSL is in line the local AOP Standard rate for Q2 SAB rates.

Staphylococcus aureus bacteraemia (SAB)

- The new AOP target is for HCAI cases only;
- During April to June 2020, there were 32 SAB cases; 16 HCAI cases and 16 community associated infection (CAI) cases;
- This is a decrease of 13 HCAI SAB cases in total from the previous quarter;
- NHSL will be expected to achieve a target of ≤ 91 HCAI SAB cases (a rate of 16.1 per 100,000 TOBDs by end of March 2022);
- NHSL will also be expected to achieve a target of ≤ 68 HCAI SAB cases by Q4 Oct-Dec 2020, NHSL currently have 16 cases, 52 cases below the target.

Chart 1 – HCAI SAB cases (Jan 2018 – Jun 2020)

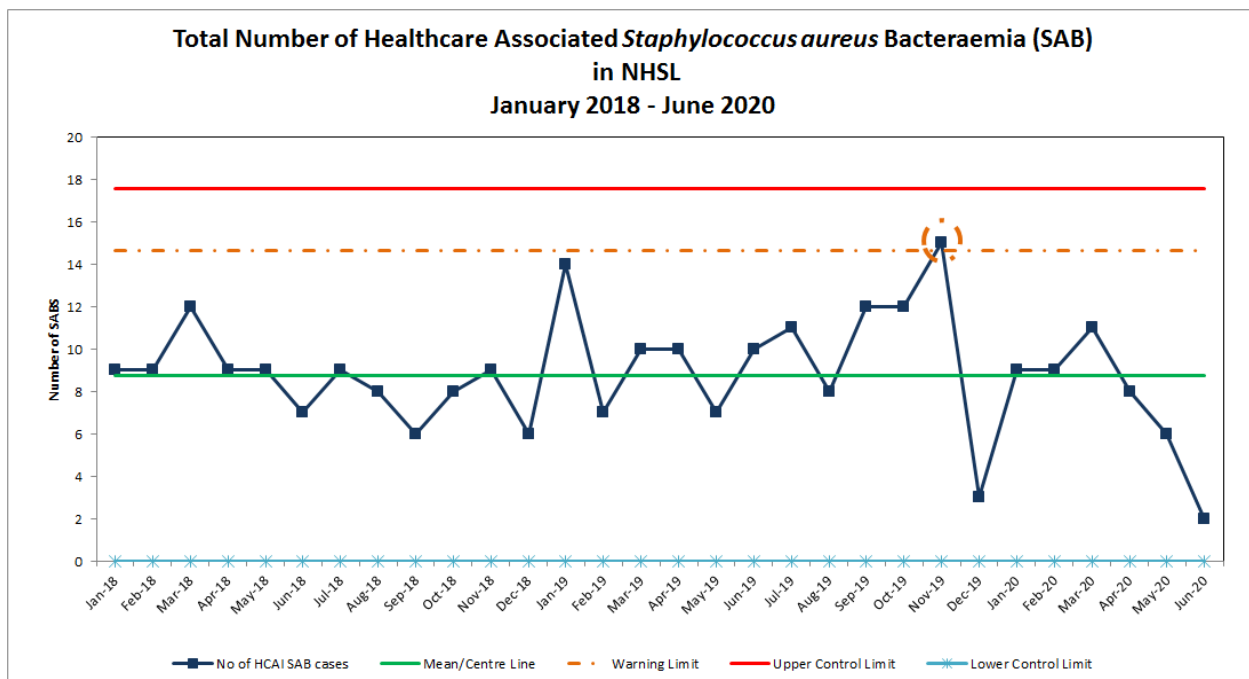


Chart 1 shows that NHS Lanarkshire has witnessed a decrease in the number of cases of SAB from April to June 2020. This was during the first peak of the COVID-19 pandemic when capacity was lower than expected levels across UHM and UHH i.e. less non-COVID-19 admissions were reported across the system and elective work paused. Over this quarter there has been six device related infections; two dialysis line infections, one PICC, one arterial line, one urinary catheter, and one Hickman line infection.

Figure 1: Funnel plot of SAB incidence rates (per 100,000 TOBD) in healthcare associated infection cases for all NHS boards in Scotland in (Q2) Apr- Jun 2020.

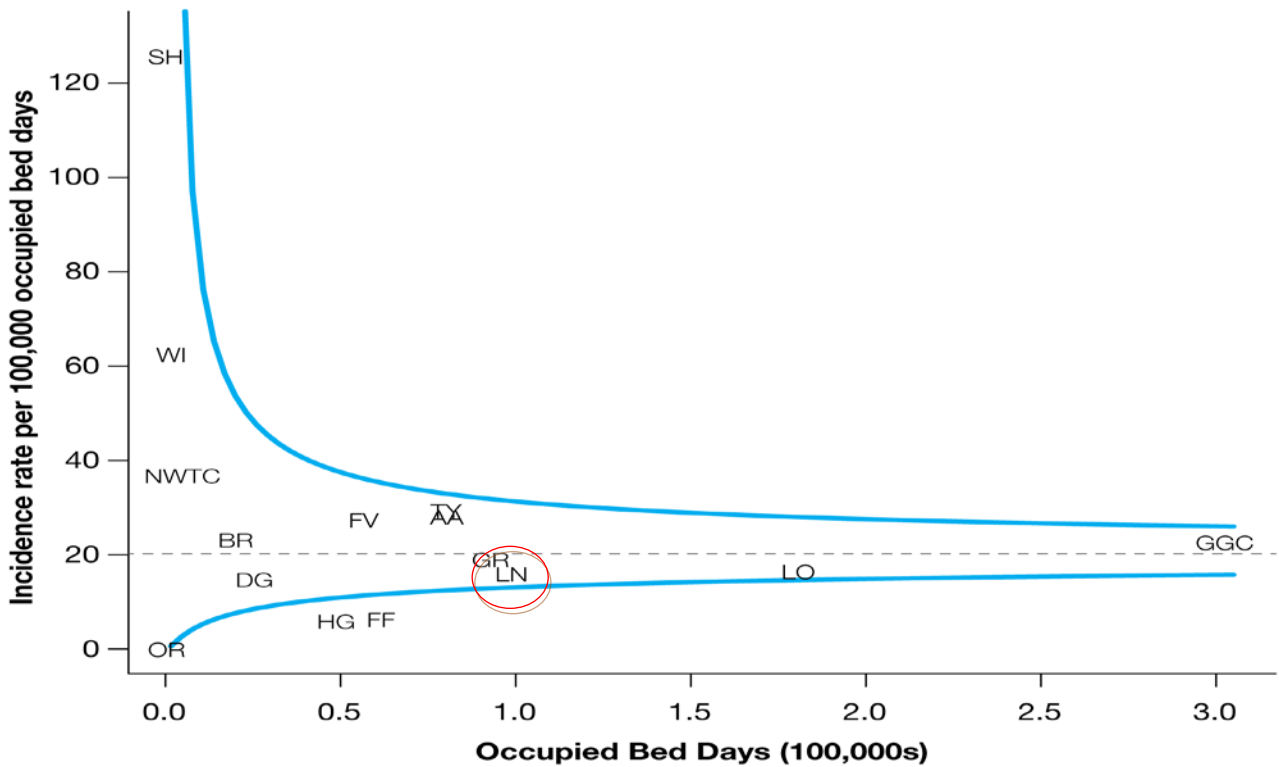
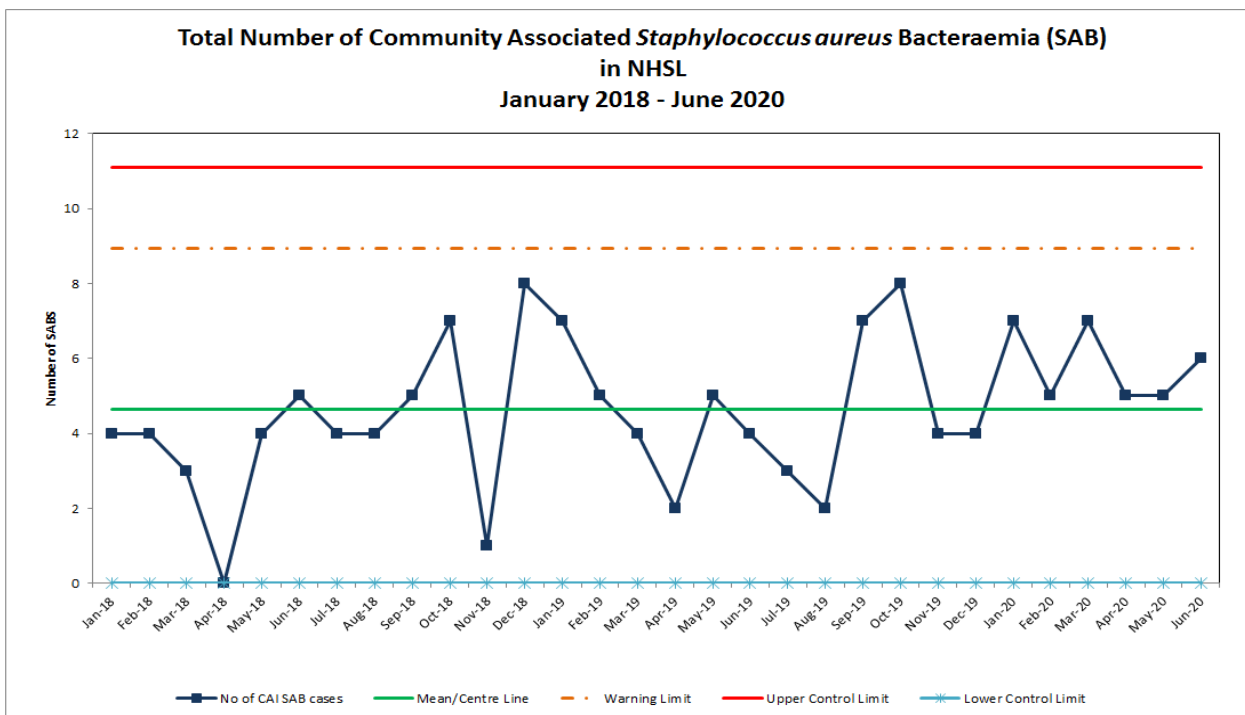


Figure 1 demonstrates that NHSL remains within the 95% confidence interval for incidence rates for Q2.

Chart 2 – CAI SAB cases (Jan 2018 – Jun 2020)



This chart is out of statistical control for community associated SABs. This is currently being investigation.

Quality improvement and interventions in place to reduce SAB:

- On 7 September 2020, the Invasive Devices Expert Advisory Group successfully launched the Standard Operating Procedure (SOP) Manual for Invasive Devices Chapter 1 – Peripheral Venous Cannula (PVC) and associated practices. A Manual such as this has never been available in NHS Lanarkshire until now and chapter 1 contains research based guidance on the insertion, care and maintenance of Peripheral Vascular Cannulae (PVC);
- SAB rates and sources are discussed at Hygiene and Clinical Governance meetings with clinical staff; and
- A Breakthrough Series Collaborative to support improvement against the AOP Standards is currently being developed. This work will be undertaken over a 12-18 month period and led by the clinical teams. Progress will be reported via the ICC.

Risk Management:

There were < 5 related SAB deaths between April and June 2020. No Datix resulted in a SAER.

[Clostridioides difficile Infection \(CDI\)](#)

CDI can be a severe and life-threatening infection which causes diarrhoea. Prevention of CDI is therefore essential and an important patient safety issue.

[Clostridioides difficile Infection \(CDI\) Standard](#)

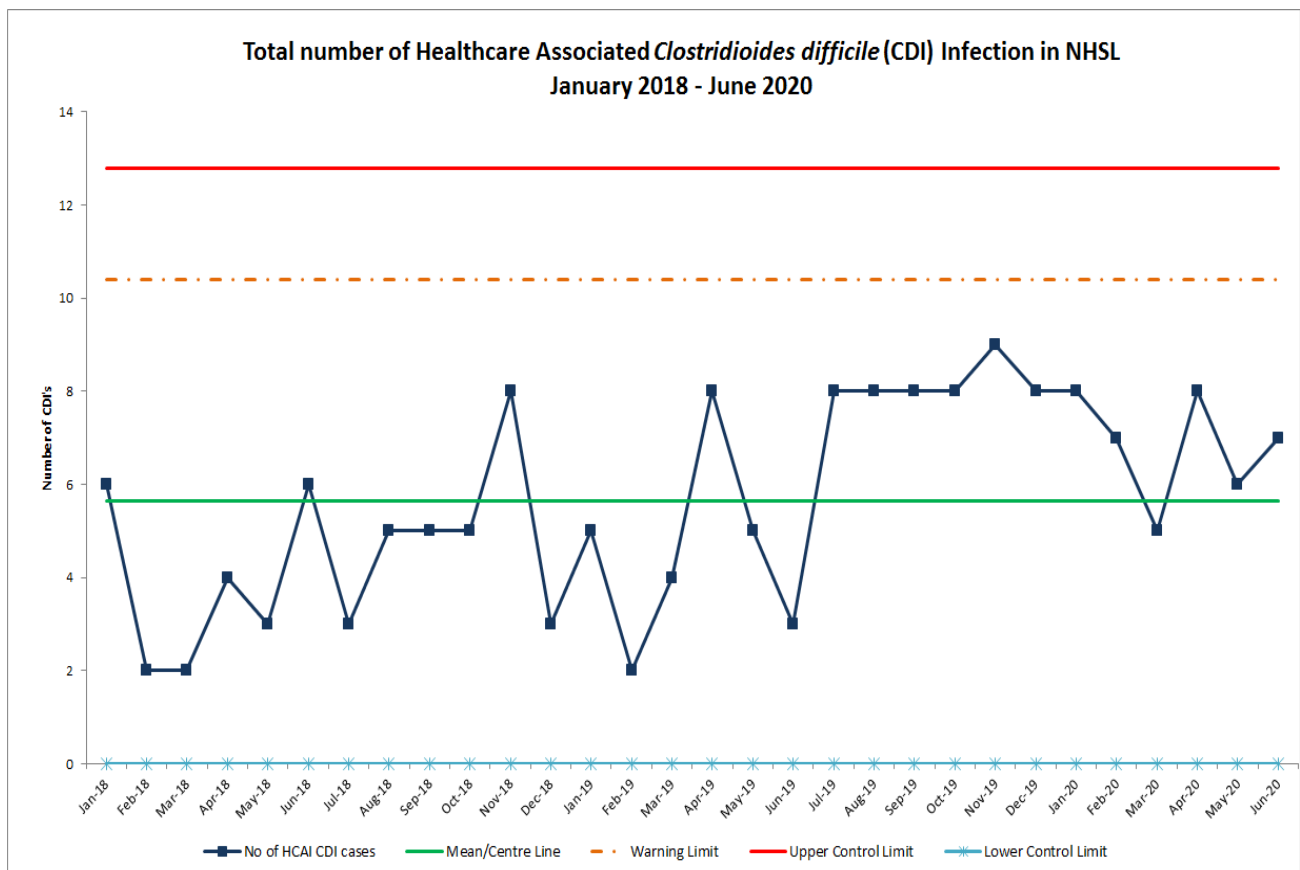
NHSL Performance (Q2 Apr-Jun 2020): HCAI

- NHSL CDI HCAI rate of 21.0 per 100,000 TOBDs; 21 HCAI cases;
- National CDI HCAI rate of 15.4 per 100,000 TOBDs;
- NHSL is above the national comparator for Q2 CDI rates;
- NHSL is above the local AOP Standard rate for Q2 CDI rates.

***Clostridioides difficile* Infection (CDI)**

- During April – June 2020, there were 35 CDI cases; 21 HCAI cases and 14 CAI cases;
- NHSL will be expected to achieve a target of ≤ 84 HCAI CDI cases (a rate of 14.8 per 100,000 TOBDs by end of March 2022);
- NHSL will be expected to achieve a target of ≤ 76 HCAI CDI cases by Q4 Oct-Dec 2020, NHSL currently have 21 cases, 55 cases below the target.

Chart 4 – HCAI CDI cases (Jan 2018 – Jun 2020)



This chart is in statistical control.

Figure 2: Funnel plot of CDI incidence rates (per 100,000 TOBD) in healthcare associated infection cases for all NHS boards in Scotland in (Q2) Apr- Jun 2020.

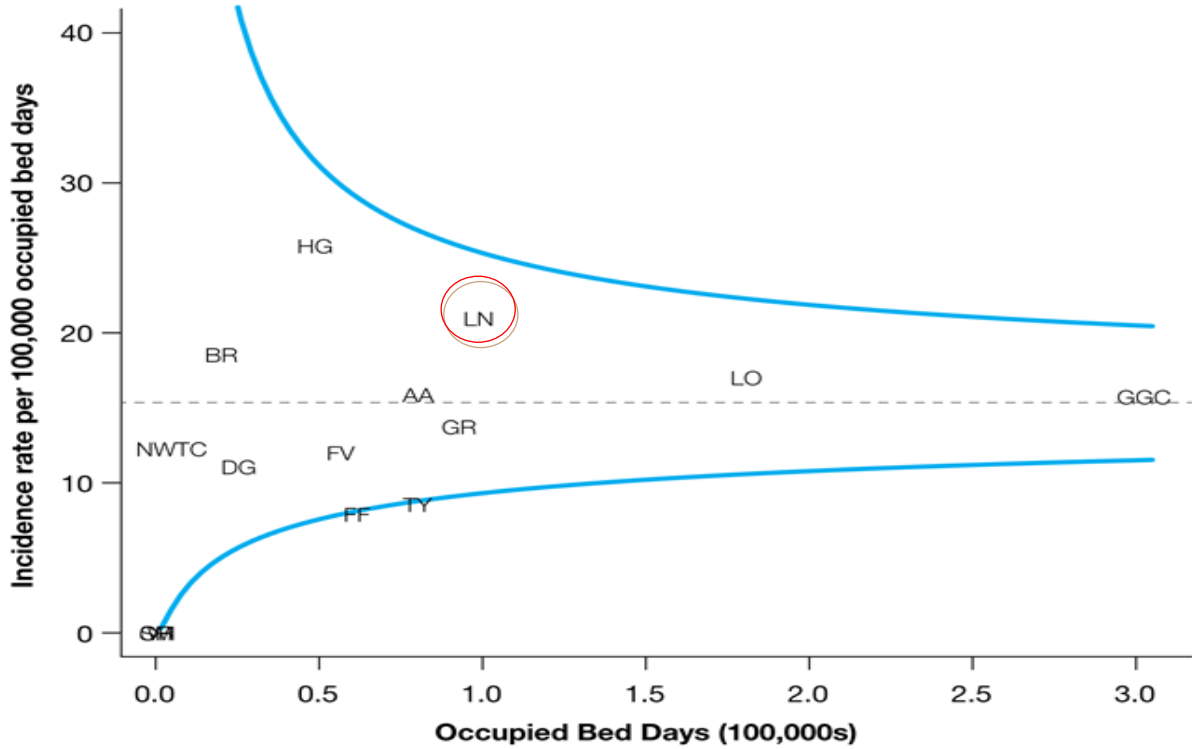
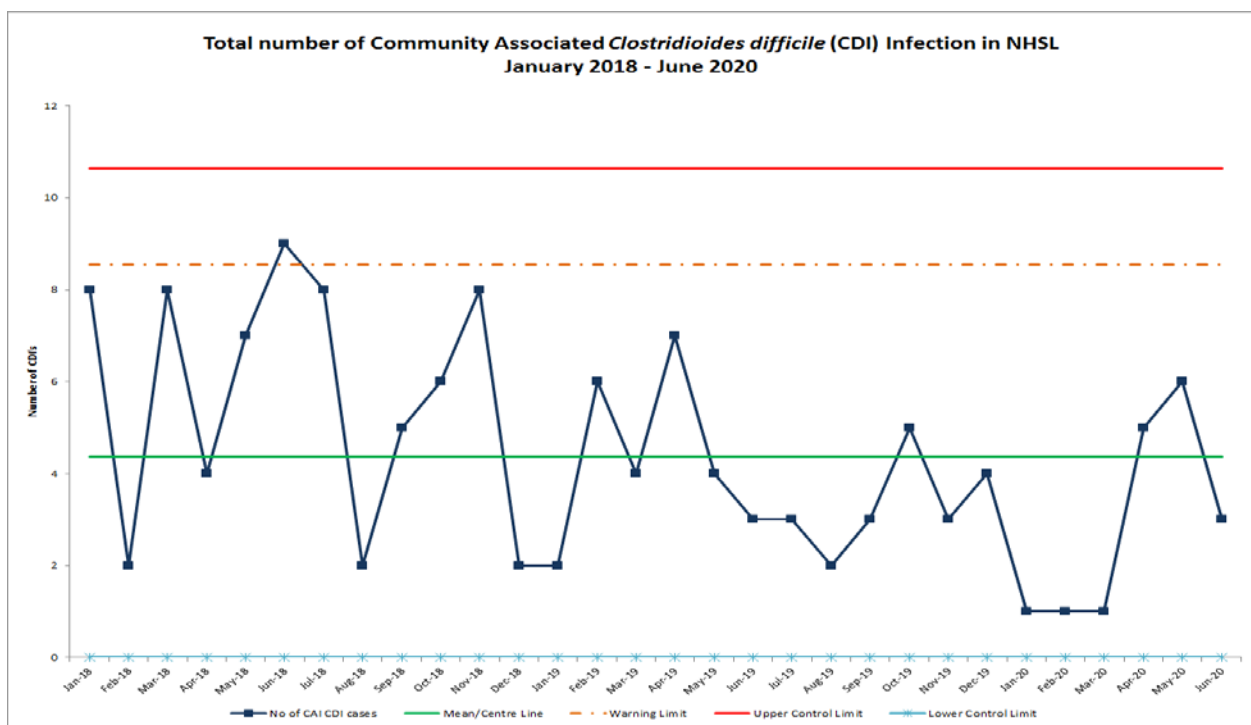


Figure 2 indicates that NHSL remains within the 95% confidence interval for incidence rates for Q2.

Chart 5 – CAI CDI cases (Jan 2018 – Jun 2020)



This chart is in statistical control.

Quality improvement and interventions in place to reduce CDI:

- Antimicrobial stewardship continues to be a priority in the management of CDI patients. IPCT and the antimicrobial team work closely during severe CDI multidisciplinary case reviews; and
- Information is given to wards to advise of the requirement for prompt and clear identification of patients with loose stools and appropriate action to be taken.

Risk Management:

There were < 5 related CDI deaths between April and June 2020. No Datix resulted in a SAER.

Escherichia coli Bacteraemia (ECB)

Escherichia coli (*E. coli*) is a bacterium that forms part of the normal gut flora that helps human digestion. Although most types of *E. coli* live harmlessly in your gut, some types can make you unwell.

When it gets into your blood stream, *E. coli* can cause a bacteraemia. This can be as a result of an infection such as:

- urinary tract;
- surgery; and
- inappropriate use of medical devices.

Escherichia coli Bacteraemia (ECB) Standard

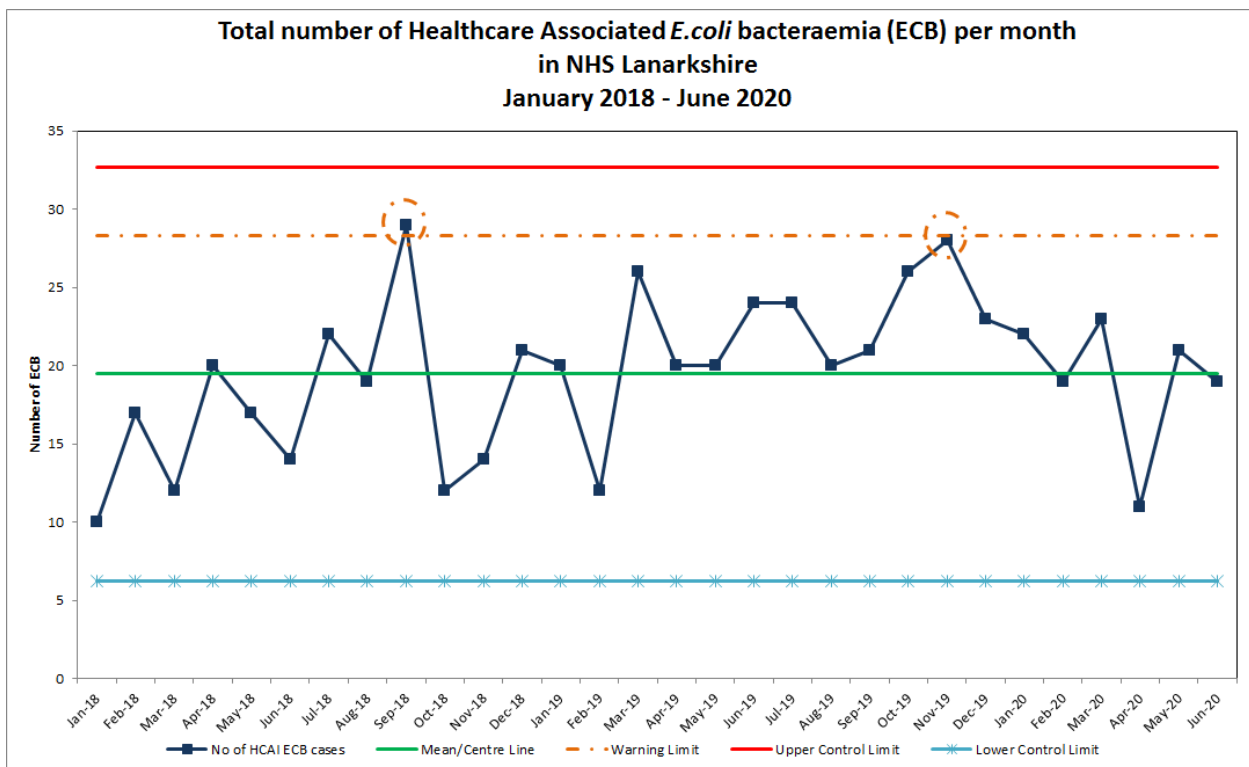
NHSL Performance (Q2 Apr-Jun 2020): HCAI

- NHSL ECB HCAI rate of 50.9 per 100,000 BDs; 51 HCAI cases;
- National ECB HCAI rate of 39.7 per 100,000 TOBDs;
- NHSL is above the national comparator for Q2 ECB rates;
- NHSL is above the local AOP Standard rate for Q2 ECB rates.

Escherichia coli Bacteraemia (ECB)

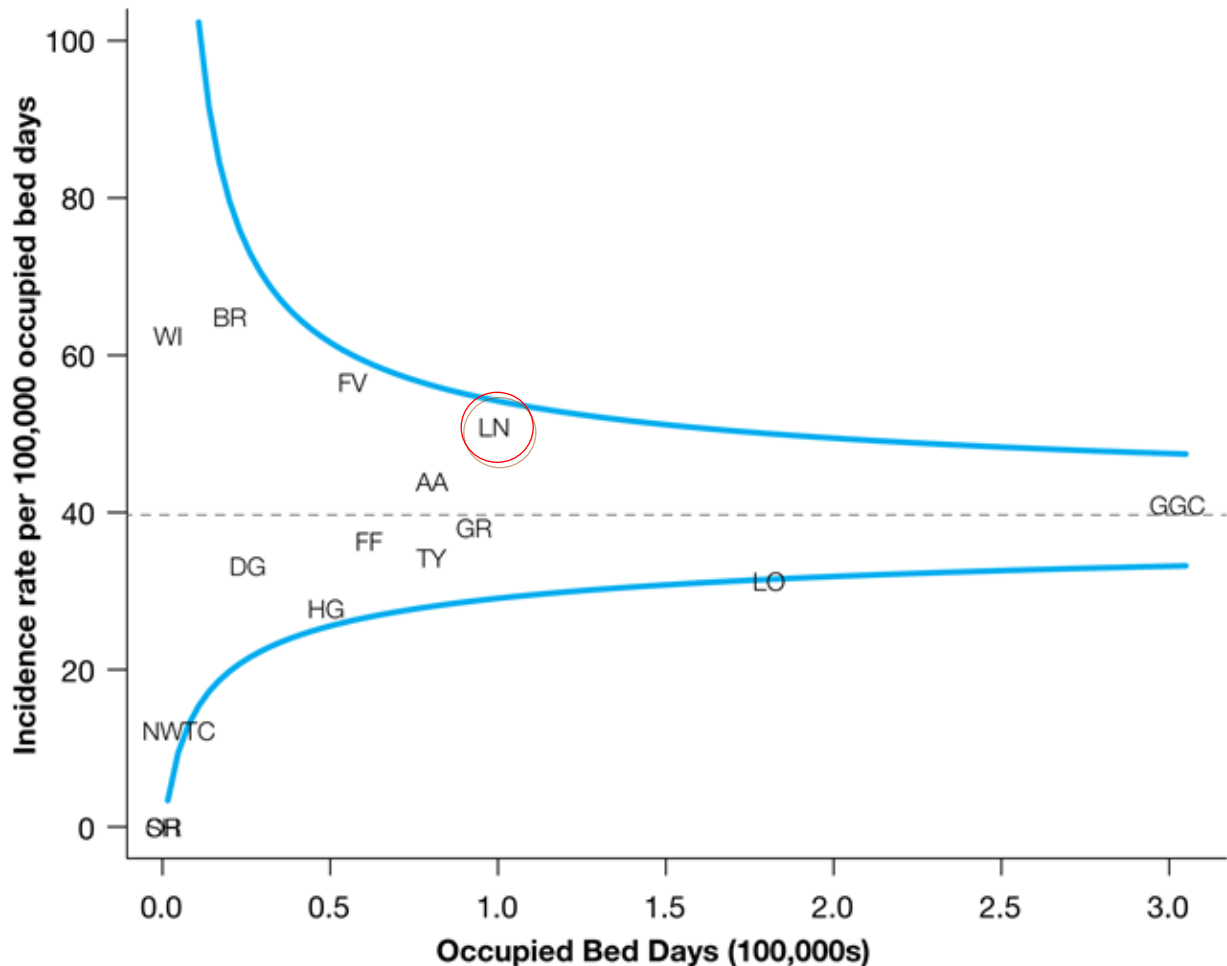
- During April – June 2020, there were 121 cases; 51 HCAI cases and 70 CAI cases.
- NHSL will be expected to achieve a target of ≤ 189 HCAI ECB cases (a rate of 33.5 per 100,000 TOBDs by end of March 2022).
- NHSL will be expected to achieve a target of ≤ 189 HCAI ECB cases by Q4 Oct-Dec 2020, NHSL currently have 51 cases, 138 cases below the target.

Chart 6 – HCAI ECB cases (Jan 2018 – Jun 2020)



This chart is in statistical control; however this must be interpreted with caution as cases are well above the national average and local AOP standard.

Figure 3: Funnel plot of ECB incidence rates (per 100,000 TOBD) in healthcare associated infection cases for all NHS boards in Scotland in (Q2) Apr- Jun 2020.



Even though NHS Lanarshire is above the expected standard for HCAI ECB for Q2, Figure 3 demonstrates that NHSL remains within the 95% confidence interval for incidence rates for Q2.

Surgical Site Infection Surveillance

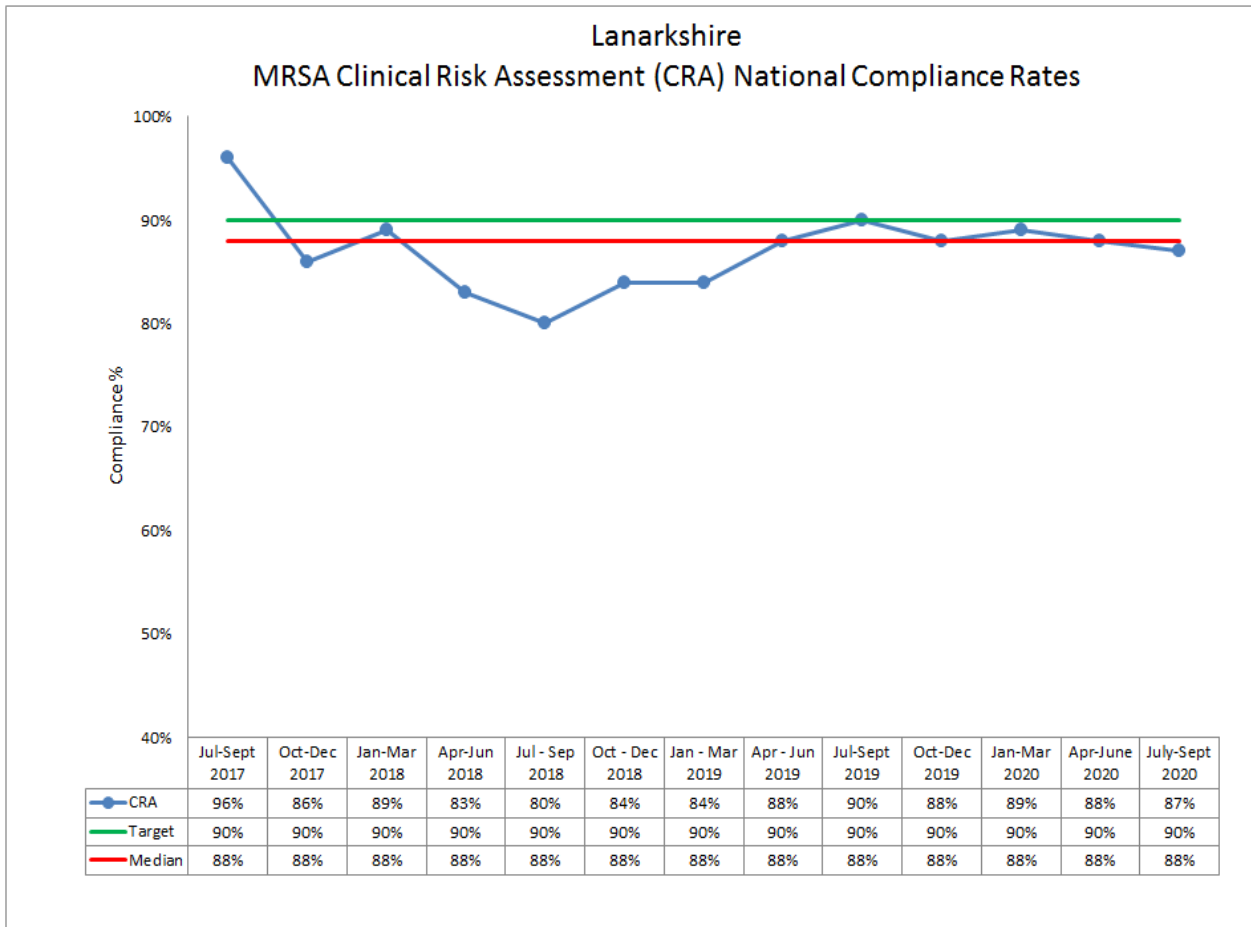
Epidemiological data for SSI are not included for this quarter due to the pausing of surveillance to support the COVID-19 response.

MRSA & CPE CRA Compliance

Key Performance Indicator (KPI): To achieve 90% compliance or above. Quarterly reports submitted to HPS.

NHSL Performance (Jul - Sept 2020):

- 87% compliance for MRSA acute inpatient admission CRA completion (1.1% decrease in compliance from Apr-Jun 2020). (Exclusions: Maternity, Paeds, Mental Health, Psychiatry); For this reporting period; MRSA KPI has **not** been met
- 78% compliance for CPE acute inpatient admission CRA completion (9% increase in compliance from Apr-Jun 2020). For this reporting period; CPE KPI has **not** been met



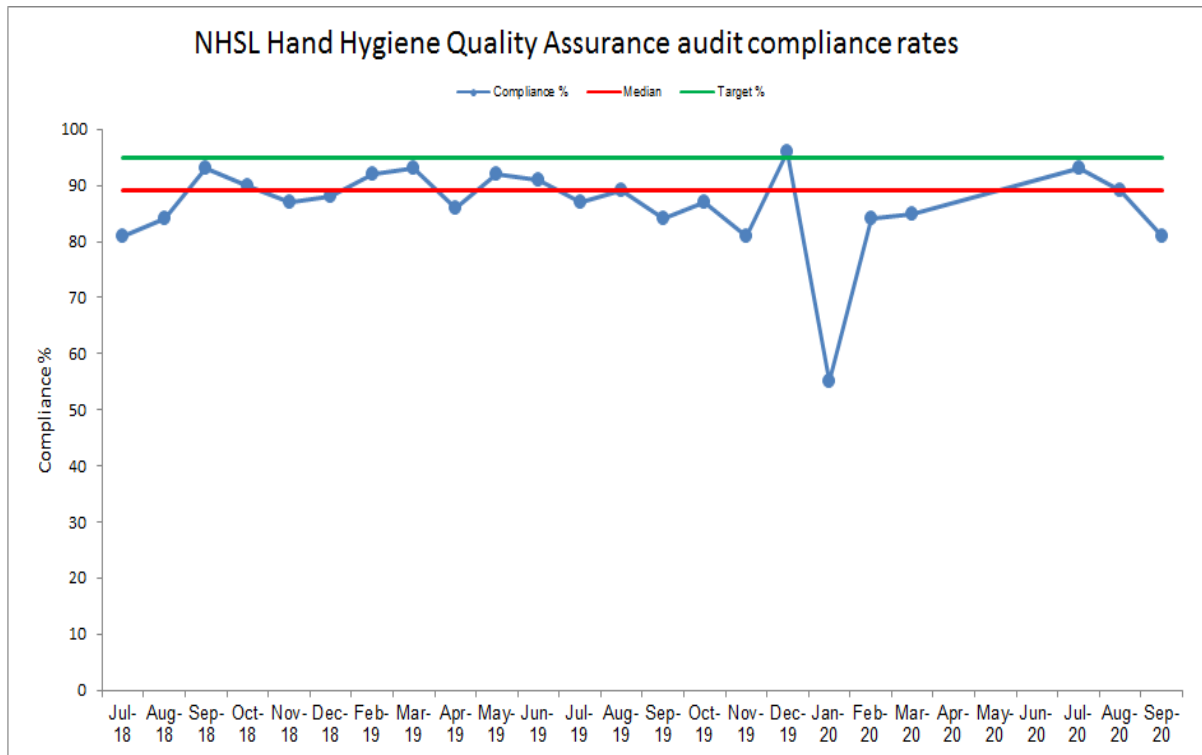
Hand Hygiene

Hand Hygiene is a term used to describe the decontamination of hands by various methods including routine hand washing and/or hand disinfection which includes the use of alcohol gels and rubs. Hand Hygiene is recognised as being the single most important factor in the prevention of infection wherever care is delivered.

Local Performance Indicator: To achieve 95% compliance or above.

NHSL Performance (Jul - Sept 2020): IPC Quality Assurance HH Audits. (14 audits completed)

- 86% compliance achieved.
- For this reporting period the Local Performance Indicator has **not** been met.

Chart 8 – Hand Hygiene Compliance rate July 2018 to Sept 2020**Staff Group Compliance: Jul - Sept 2020**

A breakdown of the staff group compliance levels from IPCT audits completed during July to September 2020 is:

Nursing: 77 nursing staff compliant from 84 observations (92%)

Doctors: 15 medical staff compliant from 16 observations (94%)

Ancillary/Other: 27 ancillary/other staff compliant from 34 observations (79%)

Allied Health Professionals (AHPs): 5 AHPs compliant from 6 observations (83%)