ITEM 16



INFECTION PREVENTION & CONTROL

ANNUAL REPORT

1 April 2019 – 31 March 2020

Contents

Infection Prevention and Control Team	3
The Team	3
Escherichia coli bacteraemia (ECB)	8
Staphylococcus aureus bacteraemia (SAB)	11
Clostridioides difficile Infection (CDI)	13
MRSA Acute Inpatient Admission Screening	14
Carbapenemase producing Enterobacteriaceae	16
Hand Hygiene	17
Surgical Site Infection	18
Outbreak Management	20
Monitoring Programme	24
Infection Related Intelligence Service	25
Healthcare Improvement Scotland (HIS) Inspections	27
Decontamination	27
Training and Education	28
LICC Sub-Groups	30
Celebrating Success 2019-2020	36
Looking forward 2020-2021	37
Glossary of Terms	39

Infection Prevention and Control Team

The Team

IPC Nursing Team

- Linda Thomas, IPC Clinical Nurse Specialist
- Carol Whitefield, IPC Clinical Nurse Specialist
- Sandra Burke, IPC Clinical Nurse Specialist
- Kaileigh Begley, IPC Clinical Nurse Specialist
- Julie Burns, IPC Clinical Nurse Specialist
- Lee Macready, IPC Clinical Nurse Specialist (April 2019-February 2020)
- Jennifer MacVicar, IPC Nurse
- Lyndsay Quarrell, IPC Nurse
- Nicola Miller, IPC Nurse
- Alison Gold, IPC Nurse

Administrative Team

- Pauline Ferula, Administrative Lead
- Letitia Mccafferty, IPC Secretary
- Clare Penrice, IPC, Data Coordinator



Surveillance Team

- Liz Young, Lead Surveillance Nurse
- Kelly McGee, Surveillance Nurse

Decontamination

Nurse Specialist

Lorna Barbour, Clinical

Management Team

- Irene Barkby, Executive Director Nursing Midwifery and Allied Health Professionals (NMAHPs)
- Emer Shepherd, Head of Infection Prevention and Control (IPC) (April 2019-June 2019)
- Christina Coulombe, Head of Infection Prevention and Control (October 2019 to present)
- Babs Gemmell, Scrutiny and Assurance Manager (April 2019-August 2019)
- Clare Mitchell, Senior Nurse
- Carlos Varon Lopez, IPC Doctor

Executive Summary

- The Infection Prevention & Control Team (IPCT) continues to work towards improving surveillance, prevention and control of HCAI across Lanarkshire through collaborative joint working;
- During 2018-19, the IPCT was not fully established; a number of staff moved on leaving senior management positions vacant;
- Absence rates were within the organisational target for the majority of the financial year;
- National Hand Hygiene audit reporting discontinued in September 2013, however auditing in Lanarkshire continues and has shown room for improvement across the majority of professions;
- Lanarkshire continues to comply with national mandatory surveillance requirements albeit there was a pause on Caesarean Section, Hip Arthroplasty and Vascular and large Bowel Surgical Site Infection surveillance during the pandemic;
- Surgical Site Infection (SSI) rates fluctuate, but for reported orthopaedic procedures, they remain at a very low level. Rates for Caesarean Section were in line with the national rate in 2019-20. Rates for large bowel procedures remained within the national average;
- *Escherichia coli* bacteraemia (ECB) enhanced surveillance continued during 2019-2020. NHS Lanarkshire has witnessed an increasing trend in the number of cases year on year since surveillance began. The end of March 2020 AOP Standard was not achieved;
- The SAB rate for Lanarkshire has also fluctuated during 2019 -2020. The end of March 2020 AOP Standard was not achieved;
- Clostridioides difficile infection (CDI) rates have varied during this reporting period however the last quarter of 2019-2020 witnessed a reduction below the national average and the NHS Lanarkshire Annual Operating Plan Standard for end of March 2020;
- The winter of 2019-20 was less challenging in terms of norovirus outbreaks. All outbreaks were contained with no spread to other wards and staff demonstrated great commitment and effort;
- A number of wards and bays were temporarily closed to admissions and transfers due to Influenza and other respiratory infections. There was a similar picture in most boards across Scotland;
- Almost twelve thousand IPC related education and training modules were completed by staff during 2019-2020. These modules are over and above mandatory induction and compulsory eLearning;
- Lanarkshire remains GREEN in the National Cleaning Specification monitoring reports;
- The Healthcare Environment Inspectorate inspected University Hospital Monklands during 2019-2020. This inspection resulted in three requirements;

NHS Lanarkshire has:

- Achieved the AOP Standard for *Clostridioides difficile* Infection for another consecutive year;
- Continued to celebrate low rates of surgical site infection in orthopaedic and Caesarean Section categories; and

• Continued to support quality improvements projects across the organisation through collaborative joint working across all of health and care to improve clinical outcomes for patients.

NHS Lanarkshire AOP Standards for HCAI 2019 to 2024

Standards		Benchmarkin	g	2021/2022 Target	2023/2024 Target
		National rate Year-end Mar 2019 (100,000 TOBDs)	NHSL rate Year-end Mar 2019 (100,000 TOBDs)	NHSL rate Year-end Mar 2022 (100,000 TOBDs)	NHSL rate Year end March 2023 (100,000 TOBDs)
Gram-negative bacteraemia standard <i>E. coli</i> Bacteraemia	Reduction of 50% in healthcare associated <i>E. coli</i> bacteraemia by 2023/24, with an initial reduction of 25% by 2021/22. 2018/19 should be used as the baseline for <i>E.</i> <i>coli</i> bacteraemia reduction	38.4	44.7	33.5	22.4
Staphylococcus aureus bacteraemia (SAB) standard	Reduction of 10% in the national rate of healthcare associated SAB from 2019 to 2022, with 2018/19 used as the baseline for the SAB reduction target	16.8	17.9	16.1	
Clostridioides difficile infection (CDI) standard	Reduction of 10% in the national rate of healthcare associated CDI from 2019 to 2022, with 2018/19 used as the baseline for the CDI reduction target	14.7	16.5	14.9	

Escherichia coli bacteraemia (ECB) (Gram-negative bacteraemia Standard)

Measure & Data: Rate of HCAI ECB per 100,000 total occupied bed days. Data published by Health Protection Scotland quarterly, Standard calculated against quarterly rolling year, three month time lag.

Local Trajectory to achieve national standard of 50% reduction over five years from the NHSL end March 2019 baseline (benchmark)

2019/20	44.7 to reduce to 33.5
2020/21	41.0 to reduce to 33.5
2021/22	to reduce to 33.5 (25% reduction)
2022/23	to reduce to 33.5
2023/24	33.5 to reduce to 22.3 (50% reduction from end
	March 2019 baseline rate of 44.7)

Staphylococcus aureus bacteraemia (SAB) Standard

Measure & Data: Rate of HCAI SAB per 100,000 total occupied bed days. Data published by Health Protection Scotland quarterly, Standard calculated against quarterly rolling year, three month time lag.

Local Trajectory to achieve national standard of 10% reduction over three years from the NHSL end March 2019 baseline (benchmark)

2019/20	17.9 to reduce to 16.1
2020/21	to reduce to 16.1
2021/22	to reduce to 16.1

Clostridioides difficile Infection (CDI) Standard

Measure & Data: Rate of HCAI CDI per 100,000 total occupied bed days. Data published by Health Protection Scotland quarterly, Standard calculated against quarterly rolling year, three month time lag.

Local Trajectory to achieve national standard of 10% reduction over three years from the NHSL end March 2019 baseline (benchmark)

2019/20	16.5 to reduce to 14.8
2020/21	to reduce to 14.8
2021/22	to reduce to 14.8

Escherichia coli Bacteraemia (ECBs)

NHSL Performance (April 2019 - March 2020): HCAI

- NHSL ECB HCAI rate of 46.6 per 100,000 TOBDs; 270 HCAI cases;
- National ECB HCAI rate of 39.1 per 100,000 TOBDs;
- NHSL is above the national comparator for 2019/2020 HCAI ECB rates;
- NHSL is above the local AOP Standard rate for 2019/2020 ECB rates.

Staphylococcus aureus Bacteraemia (SAB)

NHSL Performance (April 2019 - March 2020): HCAI

- NHSL SAB HCAI rate of 20.2 per 100,000 TOBDs; 117 HCAI cases;
- National SAB HCAI rate of 16.4 per 100,000 TOBDs;

- NHSL is above the national comparator for 2019/2020 HCAI SAB rates;
- NHSL is above the local AOP Standard rate for 2019/2020 HCAI SAB rates.

Clostridioides difficile Infection (CDI)

NHSL Performance (April 2019 - March 2020): HCAI

- NHSL CDI HCAI rate of 14.8 per 100,000 TOBDs; 86 HCAI cases;
- National CDI HCAI rate of 13.6 per 100,000 TOBDs;
- NHSL is above the national comparator for 2019/2020 HCAI CDI rates;
- NHSL is below the local AOP Standard rate for 2019/2020 HCAI CDI rates.

National Key Performance Indicators

MRSA & CPE CRA Compliance

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

NHSL Performance (April 2019 - March 2020):

- 89% compliance for MRSA acute inpatient admission CRA completion (6% increase in compliance from April 2018 March 2019). (Exclusions: Maternity, Paeds, Mental Health, Psychiatry);
- For this reporting period; MRSA KPI has **not** been met.
- 77% compliance for CPE acute inpatient admission CRA completion (14% increase in compliance from April 2018-March 2019);
- For this reporting period; CPE KPI has not been met.

Local Standards Hand Hygiene

NHSL performance in 2019/2020:

Achieved 86% against a national requirement of 95% (decrease of 2% from 2018/2019). Please note in December 2019 and January 2020 there was only 1 audit carried out on each of these months due to increased activity in IPCT.

Surgical Site Infections (SSIs)

NHSL performance in 2019/2020

Epidemiological data for SSI are not included for the quarter January to March 2020 due to the pausing of surveillance to support the COVID-19 response.

- 1.5% C-Section SSIs (1490 cases/22SSIs)
- 0.8% Hip Arthroplasty SSIs (125 cases/1 SSI)
- 3.4% Colorectal Surgery SSIs (235 cases/8 SSIs)
- 7.7% Vascular Surgery SSIs (300 cases/23 SSIs)

NHSL are now carrying out surveillance on all vascular procedures previously carried out in Ayrshire and Arran. The service has now been transferred to University Hospital Hairmyres.

Outbreak Incidence

- 19 separate outbreak incidents; 3 in University Hospital Monklands (UHM); 14 in University Hospital Wishaw (UHW); 1 in University Hospital Hairmyres (UHH); 1 in the Health & Social Care Partnerships (H&SCPs);
- 7 ward closures; 13 room restrictions 4 room closures led to a full ward closure;
- 86 patients; 42 staff affected; and
- NHSL have not received an exception report where the incidence of SSI is higher than expected based on the national data.

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, inappropriate use of medical devices. Sometimes however, the source of the bacteraemia isn't known.

E.coli is currently the most common cause of bacteraemia in Scotland. As a result, the Scottish Government Health and Social Care Directorate (SGHSCD) requested an in-depth analysis of the epidemiology of *E.coli* bacteraemia.

		Benchmarking		2021/2022	2023/2024
					Target
Standards		National rate	NHSL rate	NHSL rate	NHSL rate
		Year-end Mar 2019	Year-end Mar 2019	Year-end Mar 2022	Year end March 2023
Gram-	Reduction of 50% in healthcare associated E. coli				
negative			44.7 (252 cases)	33.5 (189 cases)	22.4 (126 cases)
bacter denna 202 //22. 2010/13 should be used as the baseline for E. con		5014 (2541 60363)	111 (202 00000)	33.3 (103 60363)	22.4 (120 00303)
standard	bacteraemia reduction				

Escherichia coli bacteraemia Standard

NHSL Performance (April 2019 - March 2020): HCAI

- NHSL ECB HCAI rate of 46.6 per 100,000 TOBDs; 270 HCAI cases;
- National ECB HCAI rate of 39.1 per 100,000 TOBDs;
- NHSL is above the national comparator for 2019/2020 HCAI ECB rates;
- NHSL is above the local AOP Standard rate for 2019/2020 ECB rates.





Quality Improvement and interventions to reduce *ECB* infections:

- Monitoring of compliance with the National Infection Prevention and Control Manual Chapter 1: Standard Infection Control Precautions (SICPs) by the clinical teams;
- Monthly data score cards to clinical teams detailing number of ECB;
- ECB data is now a standard Agenda item on all Hygiene Groups;
- A full review of the ECB data is being undertaken to identify areas for improvement; and
- Antimicrobial stewardship continues to be a priority in the management of patients with lower urinary tract infections.





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 bacteraemia or bloodstream infection.

		Benchmarking		2021/2022 Target
		National rate	NHSL rate	NHSL rate
Standards		Year-end Mar 2019	Year-end Mar 2019	Year-end Mar 2022
		(100,000	(100,000	(100,000
		TOBDs)	TOBDs)	TOBDs)
Staphylococcus aureus	Reduction of 10% in the national rate of healthcare associated SAB from 2019 to 2022, with 2018/19 used as the baseline for the SAB reduction target	16.8 (1026 cases)	17.9 (101 cases)	16.1 (91 cases)

Staphylococcus aureus Bacteraemia Standard

NHSL Performance (April 2019 - March 2020): HCAI

- NHSL SAB HCAI rate of 20.2 per 100,000 TOBDs; 117 HCAI cases;
- National SAB HCAI rate of 16.4 per 100,000 TOBDs;
- NHSL is above the national comparator for 2019/2020 HCAI SAB rates;
- NHSL is above the local AOP Standard rate for 2019/2020 HCAI SAB rates.





Quality Improvement and interventions to reduce S. aureus Bacteraemia (SAB):

- Monitoring of compliance with the National Infection Prevention and Control Manual Chapter 1: Standard Infection Control Precautions (SICPs) by the clinical teams;
- Monitoring of compliance with Meticillin resistant S. aureus Clinical Risk Assessment;
- Monthly data score cards to clinical teams detailing number of SAB and source;
- SAB data is a standard Agenda item on all Hygiene Groups;
- SAB multi-disciplinary reviews for patients with a SAB noted on the death certificate is undertaken. A Datix is then completed and a review undertaken to determine if a SAER is required. All learning is taken through the Hygiene Groups; and
- Part 1 of the Safety Manual for Vascular Access Device Safety (VADS) is nearing completion. This guidance will support staff to safely insert and maintain peripheral vascular devices.





Clostridioides difficile Infection (CDI)

CDI is a significant HCAI, which usually causes diarrhoea and contributes to a significant burden of morbidity and mortality. Prevention of CDI is therefore essential and an important patient safety issue.

		Benchmarking		2021/2022
		Denchinarking		Target
		National rate	NHSL rate	NHSL rate
Standards		Year-end Mar 2019	Year-end Mar 2019	Year-end Mar 2022
		(100,000	(100,000	(100,000
		TOBDs)	TOBDs)	TOBDs)
difficile intection	Reduction of 10% in the national rate of healthcare associated CDI from 2019 to 2022, with 2018/19 used as the baseline for the CDI reduction target	14.7 (895 cases)	16.5 (93 cases)	14.9 (84 cases)

Clostridioides difficile Standard

NHSL Performance (April 2019 - March 2020): HCAI

- NHSL CDI HCAI rate of 14.8 per 100,000 TOBDs; 86 HCAI cases;
- National CDI HCAI rate of 13.6 per 100,000 TOBDs;
- NHSL is above the national comparator for 2019/2020 HCAI CDI rates;
- NHSL is below the local AOP Standard rate for 2019/2020 HCAI CDI rates.



86 HCAI Cases

36 CAI Cases



Quality Improvement and interventions to reduce CDIs:

- Monitoring of compliance with the National Infection Prevention and Control Manual Chapter 1: Standard Infection Control Precautions (SICPs) by the clinical teams;
- Management of Loose Stools information provided to all wards by the IPCT to refresh actions, management and precautions to be taken;
- Prompt recognition of diarrhoeal patients and isolation;
- Monthly data score cards to clinical teams detailing number of CDI;
- CDI data is a standard Agenda item on all Hygiene Groups;
- A Datix is raised for all CDI related deaths and severe cases. A review is then undertaken to determine if a SAER is required; all learning is tabled at the Hygiene groups for improvement; and
- Antimicrobial stewardship continues to be a priority in the management of CDI patients.

ITEM 16



MRSA Acute Inpatient Admission Screening

A national MRSA acute inpatient admission screening policy has been in place in Scotland since March 2012. An MRSA clinical risk assessment (CRA) is completed for all acute inpatient admissions and the screening policy identifies a subset of patients at high risk of MRSA colonisation or infection on admission to hospital. These patients are then screened in line with national guidelines for MRSA screening. This

method of screening reduces the number of patients that require to be laboratory tested for MRSA and allows high risk patients to be pre-emptively isolated in a single room whilst the results of the test are awaited.

Key Performance Indicators (KPI) for Meticillin Resistant *Staphylococcus aureus* (MRSA) for Clinical Risk Assessment (CRA)

- NHSL overall compliance was 89% against a national requirement of 90% or above. This is an increase of 6% from last year's performance; and
- There were a total of 349 patient nursing notes reviewed and 310 had the CRA completed. Of the 310 patients who had a CRA completed, 94 patients required to be swabbed for MRSA which equates to 30%.



Carbapenemase producing *Enterobacteriaceae*

A national Carbapenemase producing *Enterobacteriaceae* (CPE) acute inpatient admission screening policy was fully implemented across NHSL since May 2018. A CPE CRA is completed for all acute inpatient admissions and against the screening policy identifies a subset of patients at high risk of CPE colonisation or infection on admission to hospital. These patients are then screened in line with national guidelines for CPE screening. This method of screening reduces the number of patients that require to be laboratory tested for CPE and allows high risk patients to be pre-emptively isolated in a single room whilst the results of the test are awaited.

Key Performance Indicators (KPI) for Clinical Risk Assessment (CRA) for Carbapenemase-producing *Enterobacteriaceae* (CPE) CRA compliance.

- NHSL overall compliance was 77% against a national requirement of 90% or above. This is an increase of 14% from last year's performance; and
- There were a total of 349 patient nursing notes reviewed and 270 had the CRA completed. Of the 270 patients who had a CRA completed, 0 patients required to be swabbed for CPE.



Local Standards

Hand Hygiene

Hand Hygiene is recognised as being the most effective cornerstone of IPC in healthcare. During the activity year, the Hand Hygiene Policy was refreshed and ratified by the ICC.



NHSL has reached an overall compliance level of 86% during 2019/2020 against the national compliance level of 95% or above. A breakdown of compliance levels by staff group of hand hygiene assurances reviews carried out by the IPCT. Please note the data source is from IPC assurance hand hygiene audits.

- NHS Lanarkshire overall compliance: 88% (1444 of 1642 staff assessed)
- Nursing: 88% (751 of 857 staff were compliant);
- Medical: 81% (160 of 197 staff were compliant);
- Ancillary/Other: 80% (84 of 105 staff were compliant); and
- Allied Health Professionals: 91% (126 of 138 staff were compliant).



Surgical Site Infection

SSI is one of the most common HCAI and can cause increased morbidity and mortality. It is estimated on average to double the cost of treatment, mainly due to the resultant increase in length of stay. SSI can have a serious consequence for patients affected as it can result in increased pain, suffering and in some cases require additional surgical interventions. Epidemiological data for SSI are not included for the quarter January to March 2020 due to the pausing of surveillance to support the COVID-19 response.

Caesarean Section (Apr 2019 – Dec 2019)1490Procedures carried out22SSIs following procedure1.5%Infection Rate			oplasty (Apr 2019 – Dec 2019 Procedures carried out SSIs following procedure Infection Rate
	wel Surgery (Apr 2019-Dec 2019		Surgery (Apr 2019 – Dec 2019)
235	Procedures carried out	300	Procedures carried out

Quality Improvement and interventions to reduce SSIs:

- The IPC Surveillance Nurses (IPCSN) continue to attend the Maternity Clinical Effectiveness Group on a quarterly basis to present SSI data to establish any areas of improvement with clinicians and nursing staff;
- NHSL has access to SSI surveillance reports within NSS Discovery at board level, this method of reporting allows comparison of patients' outcome with Scotland overall and other NHS boards;
- The IPCSN liaises with the relevant clinician responsible for the patient following detection of an SSI to discuss the findings of the review, an electronic copy is also sent to the clinician;
- Quarterly SSI surveillance reports comprising Statistical Process Charts (SPC) are used to provide feedback to clinicians; and
- The IPCSNs provided SSI surveillance information to the Senior Midwife for inclusion in the Best Start Midwives pack.



This chart is in statistical control. The chart has been changed to a more sensitive 'p' chart which takes account of the denominator, i.e. the number of operations, therefore the warning and upper control limits vary.



This chart is in statistical control.

ITEM 16



This chart is in statistical control.



This chart is in statistical control.

Outbreak Management

nfection Preventipe and period the Babyre and solar Mach 2020 and (excluding COVID-19) age 20 of 40

In 2019/2020 there was a decrease in the number of healthcare associated outbreaks of infection

COVID -19 March 2020

There were 154 IPC referrals for March 2020, there is no data available for January and February 2020.

UHH-66 referrals UHM-60 referrals UHW-27 referrals H&SCP Off site beds-1 referral

There was one Problem Assessment Group convened for this reporting period for COVID-19 clusters. The ward was closed to admissions 24-03-2020 and re-opened 03-04-2020. (Ward 7, UHH, 13 patients confirmed with COVID-19 and 5 deaths, a Healthcare Inspection Reporting Template (HIRT) was completed and sent to Health protection Scotland (HPS) and the Scottish Government Health Department (SGHD)

Healthcare Infection Incident Assessment Tool (HIIAT) During April 2019 to March 2020 there were 38 HIIATs in total sent to HPS

RED HIIAT-

UHH, COVID-19 Ward 7, Stroke Unit, 3 red HIIAT, 23-12-2019, 30-03-2020.UHM, Clostridioides difficile Infection (CDI), Ward 12 commenced 14-05-2019, 1 redInfection Prevention and Control/Annual Report April 2019-March 2020/Version2Page 21 of 40UHM, Data Exceedance of Serratia masescens, Renal Unit (ward 1, RDUA, RDUB & RDUC),2 red HIIATs, commencing 24-01-2020.

UHM, Data Exceedance HAI Clostridioides difficle, Ward 10, 1 red HIIAT, 04-02-2020.

ITEM 16



Interventions to support reduction of outbreaks:

- Completion of winter preparedness events across acute and H&SCPs;
- IPCT Attendance at Winter Planning forums to raise awareness;
- Engaging with staff to work proactively in managing patients / isolation / cohort to minimise effect; Infection Revention and Control Annual Report April 2019 March 2020/Versig 2000/Versig 2000/Ve
 - Infection Prevention Update Daily (Safety Brief) as per IPC Winter Plan.

Monitoring Programme

The role of an IPCT in healthcare is to prepare for, prevent, detect and manage outbreaks of infection. In order to achieve this, a key focus on prevention of infection is paramount – the greater the emphasis on prevention, the less time spent controlling.





SEED Topics Completed

- What is a SAB? Video to Wards/ Information-April 2019;
- Commode Reviews- May 2019;
- Patient Equipment- June 2019;
- CVC Insertion and Maintenance Bundle Audit-July 2019;
- Urinary Catheter-August 2019; and
- Norovirus-October 2019

There were no SEEDs carried out for the months of November and December 2019. In January 2020 the onset of the COVID-19 Pandemic commenced and all other education sessions were suspended. The focus from January 2020 was to deliver education and awareness sessions on COVID-19.

Infection Related Intelligence Service

Every NHS Board in Scotland is mandated by the Standards for Healthcare Associated Infection (2015) to have robust and effective surveillance systems of alert organisms and conditions in place. NHSL has had a bespoke surveillance system in place since 2016.

During the winter of 2019/20, the IPCT experienced a drop in the number of patients referred to the service with confirmed or suspected Influenza. The IPCT dealt with 281 positive influenza cases in 2020/2020 in comparison to 622 positive cases in 2018/2019. This year saw the introduction of point of care testing (POCT) for influenza in emergency receiving areas across NHSL. Of the 281 influenza cases, 223 cases (79.4%) originated from POCT samples.

Infection Prevention and Control/Annual Report April 2019-March 2020/Version2

Commencing in February 2020 to 31 March 2020 the IPC service responded to the demand of the COVID-19 Pandemic. There were 803 confirmed cases in NHSL for this period, 3 of these were from non-acute settings (Laboratory data) The IPCT extended working hours to provide advice out of hours and over weekends. The IPCT worked closely with colleagues to provide up to date status reports on the numbers of suspected and confirmed COVID-19 cases. Successful and timely management of these cases allowed safe and effective management of all COVID 19 cases although there were significant challenges with patient placement at times.

The IPC Pink Star alert across NHSL and H&SCPs is now fully embedded with good awareness amongst front line staff in relation to the meaning of the alert and the requirement for effective patient placement.

Throughout 2019-2020, there were a total of 2008 alert organisms (down by 579 from last year) referred via the laboratory to the IPCT to monitor and manage within an acute setting and 428 via General Practitioner (GP) samples and other non-acute areas received. The following chart provides an overview of the alert organism referral number:



This chart is in statistical control. There are out of statistical control episodes indicated (red circles) these were due to numbers of confirmed Influenza cases and COVID in March 2020.

Healthcare Improvement Scotland (HIS) Inspections

HIS Announced/unannounced inspections 2019-2020

During this reporting period there was one Unannounced Hospital Cleanliness Inspection carried out by HIS

UHM -23-25 April 2019, there were 3 requirements following the inspection as follows:

Requirement 1: NHS Lanarkshire must develop a strategy that ensures access to the environment in the emergency department to facilitate domestic cleaning.

Requirement 2: NHS Lanarkshire must ensure that:

a) Patient equipment and the environment is safe and clean, minimising the risk of cross infection, and

b) The built environment is effectively monitored to ensure it is maintained to allow effective cleaning to ensure effective infection prevention and control.

Requirement 3: NHS Lanarkshire must ensure all clinical areas across the NHS board comply with the current national guidance for the use of bladeless fans.

All actions were completed by July 2019

Decontamination

In ection ereversion to another event and the environment. Decontamination is the term used that means cleaning, disinfection and sterilisation

Quality improvement and interventions to implement the decontamination programme:

- Decontamination Environmental Monitoring group continue to meet Bi-Annually to act as a management group and ensure that NHSL operates safely with respect to the management of decontamination and environmental monitoring;
- The DCNS undertakes monitoring on behalf of the DEMG to ensure that decontamination policy/procedures undertaken within NHSL encompass all statutory and regulatory requirements to improve patient outcomes;
- The A-Z for Decontamination of Communal reusable Equipment has been updated and disseminated to staff;
- The Decontamination of Equipment and the Environment Policy has been updated and disseminated to staff;
- The DCNS attends National Decontamination Groups to represent NHSL;
- The DCNS is part of a Short Life working group reviewing the National Framework for the decontamination of Reusable medical Devices;
- The DCNS has continued with a programme of visits to provide assurance of decontamination processes and the environment; and
- Working alongside Infection Prevention and Control team in the first quarter of 2020, the DCNS has supported staff in order to provide assurance to the DEMG of appropriate decontamination processes in place throughout the COVID 19 pandemic.

Training and Education



IPCT Training & Education Sessions

The organisation has 12,600 staff members (clinical and non-clinical roles). Throughout 2019/2020, 83 training and educational sessions were completed by the IPCT. The training topics consisted of:

- Topic specific ward based training
- Hand hygiene
- Corporate Induction
- Medical Induction
- Newly Qualified Nurse Induction
- PPE Don &Doff
- Healthcare Support Worker (HCSW)
 Induction
- COVID 19 Q&A

- Winter Preparedness Roadshows
- Attention to Detail Week Acute Hospital
- CAAS IPC update
- Public Patient Forum Input
- CPE Management update

NHSL Staff LearnPro Modules Completed

ITEM 16



LICC Sub-Groups

Governance Review There have been 4 Governance review Group Meetings held from April 2019

Group (GRG)	and March 2020. The last meeting was held 20 January 2020 then postponed due to the current pandemic.
	 During the reporting period the following policies/guidelines and standard operating procedures were reviewed by the group and ratified by the LICC: The Role of the Occupational Health and Safety Service in the Prevention and Control of Infection guideline and SOP; Investigation, control and management of patients colonised or infected with Panton-Valentine Leukocidin (PVL) - <i>Staphylococcus aureus</i> (MRSA) guideline and SOP; Management of patients with Human Transmissible Spongiform Encephalopathy (TSE) including all forms of Creutzfeldt- Jacob Disease (CJD); Management and treatment of patients with loose stools; Management and Control of Chickenpox (<i>Varicella</i>) & Shingles (<i>HerpesZoster</i>) guideline and SOP; Vancomycin Resistant <i>Enterococci</i> (VRE) Management of a patient in the in-patient area guideline and SOP; Methicillin Resistant <i>Staphylococcus aureus</i> (MRSA) guideline and SOP; Tuberculosis (TB) guideline; Hand Hygiene Policy; and Inductional control of chickenpo
	 Indwelling Urinary Catheter guideline. The following leaflets were reviewed and updated by the group:
	 Carbapenemase Producing Enterobacteriaceae (CPE) Screening patient and Healthcare workers information leaflets; Investigation, control and management of patients colonised or infected with Panton-Valentine Leukocidin (PVL)- Staphylococcus aureus (MSSA) and Meticillin Resistant Staphylococcus aureus (MRSA Patient information leaflet; and Management of Patients with Meningococcal Infection guideline and SOP.
	These supplement the information provided in the National Infection Prevention & Control Manual Chapters 1-3.
	As outlined in the HAI Standards (2015) the GRG provides a systematic review of all IPC policies, guidelines and SOPs at least every two years. This follows a strict consultation process prior to ratification at the ICC.
	Changes and updates are communicated to staff via the Staff Brief, Hygiene Groups and training sessions.
Decontamination	 There have been 3 DEMG meetings between April 2019 and March 2020;
Expert Advisory Group (DEMG)	 The requirement for Electronic Tracking and Traceability in Endoscope Decontamination Units was identified and a SLWG formed to progress this work. The equipment has been purchased and roll out programme now ongoing;
	Review of the Decontamination of Equipment and Environment Policy was

	undertaken and an updated policy prepared for approval by ICC;
	 Review of the Decontamination of Equipment and Environment Policy identified a gap in decontamination governance due to there being no Authorised Person (Decontamination) being appointed by the organisation. PSSD presented a paper on behalf of DEMG to the Statutory Compliance Group. Work ongoing at March 2020 to secure funding for the post;
	• A review of the process for validation of Automated Washer Disinfectors and Local Decontamination Unit Sterilisers across NHS Lanarkshire was undertaken following a paper published by Health Facilities Scotland (HFS). HFS will now undertake all Annual Validations of this equipment to ensure independent assurance of the fitness for purpose of the equipment; and
	• The first planned annual inspection of the STERIS site was undertaken by the Peri-Operative Clinical Nurse Manager, the Authorising Engineer (Decontamination) and the Decontamination Clinical Nurse Specialist. This resulted in an action plan with work progressing prior to the next inspection.
Water Safety Group (WSG)	 An Annual audit of NHSL was undertaken by the Authorising Engineer (AE) for water and the results and actions for improvement are being managed through the WSG. Actions for improvement are few and relatively minor in nature, and the formed action plan was managed through the WSG;
	 ZETA Water Risk Assessments were undertaken from March to August 2019 at NHSL sites. An action plan was provided, and actions populated by PSSD, and managed through the WSG;
	• There were 2 sites where legionella positive samples were reported in 2019/2020: Wester Moffat (Montrose Ward); Udston. Legionella results were highlighted during the re-commissioning of closed wards in these premises as part of the Covid-19 Response. In both cases Microbiology, Infection Control and NHSL's Authoring Engineer were consulted as to the appropriate course of action. Re-sampling gave 3 separate clear results at Wester Moffat and no further action is required. An automatic chemical dosing system was installed in the water tanks at Udston along with PALL filters on every outlet to maintain water safety. Re sampling will be ongoing until 3 successive clear samples can be provided for affected outlets; and
	 NSHL WSG continues to work closely with national groups to ensure lessons learned are reflected in good practise within NHSL.
Antimicrobial Management Committee (AMC)	 2019/20 national level 3 indicator for primary care antibiotic prescribing volume achieved; AMC led sessions at individual GP practice and locality GP forum level meetings signposting validated materials to drive further improvement utilising the wider Prescribing Management Team (PMT) wherever appropriate;
	 Antimicrobial training for new and existing medical, nursing and pharmacy staff at induction and other relevant clinical forums throughout the year to drive staff compliance with policy and optimise antibiotic care delivery;
	NHSL leadership on national steering group for the Hospital Antibiotic Review Programme (HARP) resource developed by SAPG in collaboration

	with NES to support quality improvement around IV antibiotic review and oral treatment duration in Scottish hospitals;
	 Continuing programme of core antibiotic guidance review and development of new guidance for key infections and clinical specialities harnessing digital app based technology whenever possible;
	 Public awareness information and materials on key national antibiotic campaigns delivered during NHSL winter road shows to members of public and healthcare staff across multiple acute and locality locations;
	 Antibiotic Guardian <u>www.antibioticguardian.com</u> KeepAntibioticsWorking <u>https://www.nhsinform.scot/campaigns/keep-antibiotics-working</u> Get a 'GRIP' <u>https://www.sapg.scot/media/4864/get-a-grip.pdf</u>
	• Successful participation in SAPG led antimicrobial stewardship initiative to Ghana during 2019/20 with the aim of championing international collaboration and global improvement in antimicrobial clinical practice; and
	 NHSL participation in national COVID 19 antimicrobial point prevalence study 2020 benchmarking NHSL practice and identifying potential areas of improvement.
UHH Hygiene Group	 Introduction of a temporary clinical cleaning team to focus on cleaning of identified clinical equipment to take the pressure off the ward and department areas at key times. This initiative responded to reports from SCN/TL's about increased stress levels whilst trying to manage/coordinate and prioritise increasing clinical acuity and dependency whilst keeping IPC a top priority for their ward/department. Particular attention this year focussed on supporting wards and departments in UHH with the provision of education and learning opportunities within the IPC field. This was undertaken in a variety of ways. Attention to detail week took place in May 2019 with a focus on Spring clean – Focussing on promoting a safe clean Environment; PVC Education sessions – Drop in café; Model Ward – Journey and Team Work; Urinary Catheter Education – Preventing a CAUTI; Hand Hygiene Learn Pro; Uniform Policy Action Plans – So What? Implementation and education of new hand hygiene products for the site IPC CAAS Study days held in August and November with a focus on Introduction to CAAS; Role & Responsibility of Link Nurse; Cleaning of near patient equipment – ward area set up in Ward 18 for mock inspections; Education MRSA/CPE; PVC Patient Story; and Clinell Product Education.

	Focus on improving Learn Pro training, particular focus on hand hygiene and linen modules.
	Full site trial of MEG an electronic quality management system used to input IPC monitoring to improve information capture and understanding of trends and themes locally and site wide.
	Commencement of daily peer environmental audit by SCN/TL's undertaking Hospital Cover to offer assurance and help identify key issues to allow rapid resolution of these. This was in place for a period of 6 months. All areas were observed approximately twice per month.
UHM Hygiene Group	 There has been an increased presence of Senior Charge Nurses at the local Hygiene meeting. This allows a greater focus on the site to enhance the delivery of the local work plan; All Renal related SABs are reviewed with improvement work taken forward via the Renal Services Group; Hand hygiene compliance is variable across the site. The Infection Prevention and Control Team continue to provide assurance through audits; HEI Senior Charge Nurse mini walk rounds rolled out across the site from July 2019; HEI programme of audit carried out by management team t on a monthly basis. This is a multi-disciplinary team approach to monitoring standards across the site; Education – staff supported to complete LearnPro modules in relation to hand hygiene to improve compliance ; Cleaning schedules reviewed across the site and standardised to support improvement; and Emergency Dept – focus on cleanliness in department and standardisation of processes to support improved compliance.
UHW Hygiene Group	 Styles and Smiles hairdressers and barbers officially opened on 23rd April 2019 within ward 9 UHW. This involved successful collaborative work in conjunction with SERCO/PSSD/IPCT and North Lanarkshire College. This project has subsequently won 2 national awards since opening. Mock HEI inspection took place on 29 April 2019 to provide NHS Lanarkshire and associated Health and Social Care Partnerships with evidence to demonstrate the current position against the findings of the NHS Greater Glasgow and Clyde (NHSGGC) inspection by the Healthcare Environment Inspectorate (HEI) held on 29-31 January 2019. Site action plan completed to support this work. Becton Dickinson (BD) Practice versus Guideline PVC report and action plan presented at senior charge nurse Forum April 2019. This session involved practical teaching session to ensure shared learning from report findings. CAAS event held on the 30 April, excellent interactive session delivered by Carol Whitefield on CPE and importance of screening. Feedback regarding this event and in particular this session was excellent, presentation circulated to teams to allow this information to be cascaded to all team members. Mock Inspection was undertaken on 13 May to gain assurance in relation to specific issues identified through previous HEI inspections. Mock inspection carried out in July 2019 with specific focus on PVC insertion, maintenance and optimal care. Overall positive results, main focus for

improvement remains documentation and completion of insertion and maintenance of PVC bundles via all staff disciplines.

Collaborative work progressed and audit carried out in August 2019 with Robert O'Hara and Alison Jamieson. The aim of this was to progress and assist with laundry site improvement work. West of Scotland Laundry audit was carried out utilising specific template which was populated with audit results. The purpose of the audit was to introduce the audit process which enables the site to focus on the areas that are non-compliant in relation to "bagging & tagging" compliance i.e. < 90%. It also highlights areas with excellent compliance who may be disappointed at being continually informed there is a problem when they are working hard to address the issue. These results were shared with teams to provide feedback of local level laundry audit compliance.

In summary, the overall hospital compliance was 78.4% (AMBER) which was an improvement versus the previous WoS Laundry audit carried out (63.6% RED)

Removal of decontamination sinks within preparation rooms completed December 2019, 24 sinks removed and replaced with new work surface. Picture below to demonstrate "new look" preparation areas.



Commode audit completed, overall positive results with 100% commodes in good state of repair, 89% (25 out of 28) of commodes were visibly clean. Main focus for improvement was in relation to utilisation of Verna care tape only 64% complaint (18 out of 28).

Clinell product education completed across the site, buzz sessions organised and education updates provided via site hospital hygiene and SCN forum to ensure all staff had all the relevant information and education for new cleaning products being implemented.

Changeover of hand hygiene and cleaning products completed on site. Specific IPCT session completed for the newly qualified RN cohort who commenced in October 2019.

IPC CAAS study day held on 13th November 2019 as part of Attention To Detail Week, led by senior nurse and IPCT. Key topics covered via presentations and workshops included, optimal PVC and CVC practice, robust documentation in relation to invasive devices, antimicrobial stewardship, and CPE, CAUTI and catheter passport.

Site fan audit completed January 2020 to ensure compliance with NHSL guidance – 30 non bladed fans identified via this audit, 5 remained in the clinical

	area (x 4 at nursing stations and x 1 in patient room). This was addressed at time of audit and fans removed to store rooms/offices. All fan related procurement information emailed to SCNs, to ensure any fans that require to be purchased are compliant with NHSL guidance. PVC Improvement work continued with focus on robust daily checks, early removal and robust documentation. Last PVC related SAB 1st April 2019 – 365 days since last PVC SAB.
North H&SCP Hygiene Group	 The North H&SCP Hygiene group has continued to mature and this is demonstrated by the improvement with reporting and compliance; Monthly SABs & CDI reports are now included in the report; Local site and ward walk rounds continue with any learning and actions shared; The Safe management of linen compliance has increased following the introduction of the Learn pro module; and Areas of non-compliance of hand hygiene audits are being actively addressed e.g. wearing of long sleeves.
South H&SCP Hygiene Group	 The Hygiene Group continues to meet monthly; Auditing and reporting processes continue to improve. Logging data onto Lan-QIP has been refined to reflect team names held in localities. Risk assessments have been completed for SICP monitoring audit programme which will reflect the rational for some audits being submitted as N/A for some teams. This will give the ability to quality assure the data being submitted; South Hygiene Group action log reflects areas of reflective learning and the sharing of this widely through the membership of the group; and Areas of improvement for the group are highlighted around how we can utilise data and reporting to initiate improvements.
Invasive Devices Expert Advisory Group (IDEAG)	 The IDEAG had planned to launch the IV Manual March 2020, however this was postponed due to the COVID pandemic; and The IDEAG meetings were postponed until the launch of the Manual and the last meeting was held December 2019.
Infection Prevention and Control Team (IPCT)	 The Infection Prevention and Control Team resumed to meetings on a Monthly basis when the new Head of IPC came into post in October 2020; The meeting was stepped down in February 2020 due to the COVID pandemic; The team continued to meet via Microsoft teams on a twice daily basis to complete their Daily Safety Brief; and The IPC Team delivered education sessions to staff on COVID 19
Hand Hygiene Task Force	The ICC identified the requirement for a Hand Hygiene Task Force during this reporting period. The Group was convened with the Associate Medical Director as Chair, however due to other commitments the group never met and no reports were submitted to the ICC.

Celebrating Success 2019-2020

- Completed the implementation of DebMed Hand Hygiene products across the board; this included all clinical, non-clinical areas, public and staff toilets;
- Introduced new processes for the decontamination of reusable near patient equipment which reduces healthcare workers time to clean;
- Continued the work on the NHS Lanarkshire Safety Manual which now hosts guidance and Standing Operating Procedures for insertion and maintenance of Peripheral Vascular Cannulae (PVC) which is due for launch end of August 2020;
- A number of the team attended the "*Water Hygiene Master Class*" in Glasgow in October 2019, hosted by PALL Medical and Armitage Shanks; key topics included water safety management aspects in the healthcare environment, challenges to infection control thinking, water safety planning and water testing in Scotland;
- IPC Winter Roadshows were undertaken across the board during November and December 2019 to provide education and support to staff and the general public on seasonal illness identification, prevention and management i.e. norovirus and influenza;
- The IPC invited Health Facilities Scotland to provide an education session on "Healthcare Associated Infection: System for Controlling Risk in the Built Environment (HAI-SCRIBE)" for

IPCNs and Estates Staff in February 2020. This session was a great success and well attended. A request has been made for further sessions when appropriate (post COVID-19);

- The Infection Control Doctor and the Senior Nurse for IPC attended "*Reducing Risk in the Built Environment*" in Glasgow, February 2020, as a precursor to preparedness work for the newly formed Centre of Excellence (COE) at Health Improvement Scotland, both are key members of the COE consultation groups;
- Established a programme of Supportive Senior Management IPC walk rounds planned for December to March 2020. Due to the mobilisation of the COVID-19 response only one such visit took place at UHH in February 2020. Staff appreciated this supportive approach and key learning was then fed through the site Hygiene Groups and:
- COVID-19 (SARS-CoV-2) preparedness work commenced in January 2020; this work required a full service review for response and mobilisation and drew resource from business as usual work to pandemic response.

National Recognition

- Recognised nationally for PPE guidance on surgical masks: Public Health Scotland and Health Facilities Scotland requested permissions to use NHS Lanarkshire guidance on the use of Tiger Masks for all national boards and;
- Further national recognition by National Procurement: requested permissions to use NHS Lanarkshire guidance on the use of reusable gowns for all national boards.

Looking forward 2020-2021

NHS Lanarkshire will continue to make progress in the prevention and control of infection and the management of HCAI during 2020-2021, and respond quickly and effectively to developments and changes in national strategy. This will form a strong base from which to move forward on the challenges of the next twelve months as set out in the IPC Annual Work Programme 2020-2021.

The team will continue to develop the Infection Prevention and Control Service to

- ✓ focus more on prevention than control
- ✓ sustain and build on achievements and strengths to date
- ✓ ensure that what works is implemented across the healthcare system
- ✓ support greater integration and partnership across the healthcare system
- ✓ ensure we prepare for the future and respond to emerging threats
- ✓ demonstrate our commitment to sustainable improvement
- ✓ promote a culture of zero tolerance of avoidable infections

The board recognises our collective responsibility towards Healthcare Associated Infection (HCAI) risk and continuously supports our implementation of new initiatives to control these risks. Development, implementation and review of policies alongside surveillance and education are key components of the Infection Prevention and Control Team's proactive approach to addressing the HCAI agenda.

Glossary of Terms

Clossaly	
ABHR	Alcohol Based Hand Rub
AMC	Antimicrobial Management Committee
AMR	Antimicrobial Resistant
BD	Beckton Dickinson
AOP	Annual Operating Plan
BSI	Blood Stream Infection
AE	Authorising Engineer
ENT	Ear, Nose, Throat
VADs	Vascular Access Device Safety
PFI	Private Finance Initiative
GRG	Governance Review Group
HFS	Health Facilities Scotland
POCT	Point of Care Testing
CAAS	Care Assurance Accredited Scheme
CAI	Community Associated Infection
CDI	Clostridioides difficile Infection (CDI)
CMT	Corporate Management Team
CPE	
	Carbapenemase Producing Enterobacteriaceae
CRA	Clinical Risk Assessment
CVC	Central Venous Cannula
DCNS	Decontamination Clinical Nurse Specialist
DEMG	Decontamination Environmental Monitoring Group
ECB	Escherichia coli Bacteraemia
ECDC	European Centre for Disease Control
Ecoli	Escherichia coli
ERAS	Enhanced Recovery After Surgery
FAPPC	Feedback of Antibiotic Prescribing to Primary Care
GP	General Practitioner
H&SCPs	
	Health and Social Care Partnerships
HAI	Healthcare Associated Infection
HCAI	Healthcare Associated Infection
HCSW	Healthcare Support Worker
HIS	Health Improvement Scotland
HPC	Health Protection Committee
HPS	Health Protection Scotland
IDEAG	Invasive Device Expert Advisory Group
IMT	Incident Management Team
IPC	Infection Prevention and Control
IPCSN	Infection Prevention and Control Surveillance Nurses
IPCT	Infection Prevention and Control Team
IPS	Infection Prevention Society
IRIS	Infection related intelligence service
LDP	· · · · · · · · · · · · · · · · · · ·
	Local Delivery Plan
ICC	Infection Control Committee
MRSA	Meticillin resistant staphylococcus aureus
MSSA	Meticillin sensitive staphylococcus aureus
NES	National Education for Scotland
NHS	National Health Service
NHSL	NHS Lanarkshire
NMAHPS	Nursing, Midwifery and Allied Health Professionals
NPPS	National Point Prevalence Survey
NSS	National Services Scotland
OBDs	Occupied Bed Days
PDP	Personal Development Plan
PMS	Patient Management System
	Fationt Management Oystern

Policy Review Group
Peripheral Venous Cannula
Panton-Valentine Leukocidin
Staphylococcus aureus bacteraemia
Scottish Antimicrobial Pharmacy Group
Surveillance, Education, Engagement, Devices
Standard Infection Control Precautions
Standard Infection Prevention and Control Education Pathway
Standard Operating Procedure
Statistical Process Chart
Scottish Patient Safety Programme
Surveillance Prevalence Update Daily
Surgical Site Infections
Transmission Based Precautions
University Hospital Hairmyres
University Hospital Monklands
University Hospital Wishaw
Urinary Tract Infection
Vancomycin resistant enterococci
World Health Organisation
Water Safety Group