

**Infection Prevention and Control (IPC) Annual Report
Covering the period 1st April 2021 to 31st March 2022**

**Public Board
26 May 2022**

Presented for:	Information
Presented by:	Lisa Grant, Chief Nurse and Director of Infection Prevention & Control
Author:	Dr Nicola Young, Consultant Microbiologist and Lead Infection Control Doctor
Previous Committees:	Infection Prevention & Control Sub-Committee 25 April 2022 Quality Assurance Committee 28 April 2022

Trust Goals	
The best for patient safety, quality and experience	✓
The best place to work	
A centre for excellence for research, education and innovation	
Seamless integrated care across organisational boundaries	
Financial sustainability	

Risk Appetite Framework				
Level 1 Risk	(✓)	Level 2 Risks	(Risk Appetite Scale)	Risk
Workforce Risk		Choose an item.	Choose an item	Choose an item.
Operational Risk		Choose an item.	Choose an item	Choose an item.
Clinical Risk	✓	Infection Prevention & Control Risk - We will manage the risks related to infection prevention and control to reduce the transmission of infection in our hospitals.	Minimal	↔ (same)
Financial Risk		Choose an item.	Choose an item	Choose an item.
External Risk		Choose an item.	Choose an item	Choose an item.

Key points	
1. To inform the Quality Assurance Committee of the achievements in 2021-22 and the forthcoming challenges for 2022-23	Information
2. To comply with the Health and Social Care Act 2008: Code of Practice on the prevention and control of infections and related guidance.	Governance

1. Summary

The purpose of this paper is to inform the Board of how the Trust's Infection Prevention and Control team (IPCT) has engaged in Health Care Associated Infection (HCAI) Prevention and Control during the period 2021-2022.

The Annual Report seeks to provide assurance to the Board on our progress against the annual programme which is set against the 10 criteria of the Health and Social Care Act 2008: Code of Practice on the prevention and control of infections and the COVID 19 Board Assurance Framework (BAF) released by NHS England/Improvement (NHSE/I) on the 4th of May 2020

The 2021-22 Annual Report is provided as a supplementary paper to this document.

2. Background

To comply with the Health and Social Care Act 2008: Code of Practice on the prevention and control of infections, the IPCT assist the organisation in the development of an annual programme. In addition on the 4th of May 2020 NHSE/I also devised and released a Board Assurance Framework (BAF) for the management of COVID 19 in NHS hospitals to complement the already established assurance and governance processes for HCAI.

The content of the Annual Report highlights the organisation's progress against both national legislative assurance tools and related infection prevention guidance from other national bodies. The Annual Report also identifies areas of focus for the financial year 2022-23.

3. Proposal

It is proposed that the Annual Report is accepted by the Committee as robust assurance of the Trust's performance in the financial year 2021-22 and that the Committee supports the areas of focus highlighted within the body of the report for financial year 2022-23.

4. Financial Implications

Whilst it is widely accepted that Hospital acquired infection carries both a human and financial cost there are no financial implications resulting from this paper.

5. Risk

The Infection Prevention and Control (IPC) Sub Committee provides executive oversight of the Trust's IPC programme, reporting to the Quality Assurance Committee. There was no material change to the risk appetite statement related to the level 2 risk category (Healthcare Associated Infection) and the Trust continues to

operate within the risk appetite for the level 1 risk category (clinical risk) set by the Board.

6. Communication and Involvement

This report is developed by the Infection Prevention and Control Team. Review, assurance and actions where agreed are undertaken at Trust and CSU level where required and monitored through the various Boards and Committees outlined above.

7. Equality Analysis

This is not a new proposal as such and the paper documents process in line with the UKHSA (formerly Public Health England), NHSE and Trust HR guidance

8. Publication Under Freedom of Information Act

This paper has been made available under the Freedom of Information Act 2000

9. Recommendation

The Quality Assurance Committee is asked to:

- Receive the IPC Annual Report 2021-22 and note the key successes in regard to Infection prevention at LTHT
- Be assured that the IPC team are striving to keep reducing the rates of *Clostridioides difficile*, MSSA, MRSA and Gram negative blood stream infections.
- Be assured on the progress related to lowering LTHT nosocomial SARS-CoV-2 rate

10. Supporting Information

The following papers make up this report:

Supplementary paper: Infection Prevention and Control (IPC) Annual Report
Covering the period 1 April 2021 to 31 March 2022
Author: Infection Prevention and Control Team.

Adele Dyche
Matron, Infection Prevention & Control
22 April 2022

**The Leeds Teaching Hospitals NHS Trust (LTHT)
Infection Prevention and Control (IPC) Annual Report
Covering the period 1st April 2021 to 31st March 2022**

1. INTRODUCTION

This report demonstrates how the Trust Infection Prevention and Control (IPC) team has engaged in Health Care Associated Infection (HCAI) Prevention and Control during the period 2021-2022.

This year has continued to pose a challenge to our team and the wider organisation in respect of its management of the SARS-CoV-2 pandemic. The team continue to embody and embrace the Leeds way values, working hard to keep the patient at the centre of everything it has achieved.

2. EXECUTIVE SUMMARY

Once again, the Infection Prevention and Control team at Leeds Teaching Hospitals Trust (LTHT) has been kept fully occupied keeping patients and staff safe during the second year of the SARS-CoV-2 pandemic, 2021-2022. It would be fair to say that whilst there has been some return to normal Infection Prevention and Control (IPC) activities, the pressures of the pandemic both on our team and the Trust in general, with IPC work load and continued staff absences through the on-going waves, have meant that overall our healthcare associated performance has not been where we would have preferred it to be compared to our local and national peers. Wherever possible and as requested, we have continued to help with planning and managing elective activity to try to reduce the backlog created by the pandemic.

We are delighted that the latest version of ICNET has now been installed. Training has been provided for IPC staff as well as the Consultant Microbiologists which will help improve access to surveillance data for those organisms traditionally targeted for HCAI, compared to the older version of ICNET. The IPT are very grateful that the Trust has upgraded to the new version and the team are continuing to work together to maximise the output from the new system.

Implementation of the new UK Health Security Agency (UKHSA) CPE policy is underway. Two test of change areas initially helped with a risk assessment tool and further work is now being done in two other Clinical Service Unit (CSU) areas. This is in conjunction with the Microbiology laboratory to be sure that there is adequate capacity for testing and to be sure the laboratory is fully equipped and staffed and therefore ready to deal with the projected increase in samples being received.

We have worked incredibly closely with Estates and Facilities in the past year. A ventilation subgroup meeting has been established as per the Health Technical Memorandum (HTM 03-01) which is a multidisciplinary group meeting held monthly to look at ventilation in different areas of the trust with particular focus on COVID-19. A heater cooler unit subgroup of the Water Safety Group has also been established to review disinfection of the heater cooler units in a multi-disciplinary setting including collaboration with our local independent healthcare providers who perform some Trust heart surgery activity for us. On-going Estates work with our PFI partner has been successful in refurbishing two full ward en-suite facilities as part of a protracted multi-drug resistant *Pseudomonas aeruginosa* outbreak.

The Infection COVID-19 Recovery Meeting (ICRM) continued this year on a weekly basis, to help the Trust with speciality specific guidance and advice and included representation from Infection Control Nursing staff, Microbiology, Virology, Infectious Diseases, UKHSA, Pharmacy and Occupational Health. At various points in the year, IPC step downs, testing

strategies, COVID-19 treatments, ventilation and personal protective equipment (PPE) were variously discussed in the multi-disciplinary setting with other invitees co-opted as required. Often queries were sent to the group from the COVID-19 Operational IPC meeting and the COVID-19 Clinical Advisory Group.

We have worked closely with local partners including the University of Leeds, formulating a wheelchair cleaning protocol to enable a disabled student to take full part in an operating theatre environment. We also created a standard operating procedure to ensure staff were able to cover the arms with disposable sleeves if they felt unable to work bare below the elbows for cultural or religious reasons.

Building the Leeds way has invited much collaboration between different areas of LTHT including monitoring spore counts during the demolition process at the Leeds General Infirmary (LGI) in order to keep patients safe from fungal infection as well as actively engaging with planning of the new build.

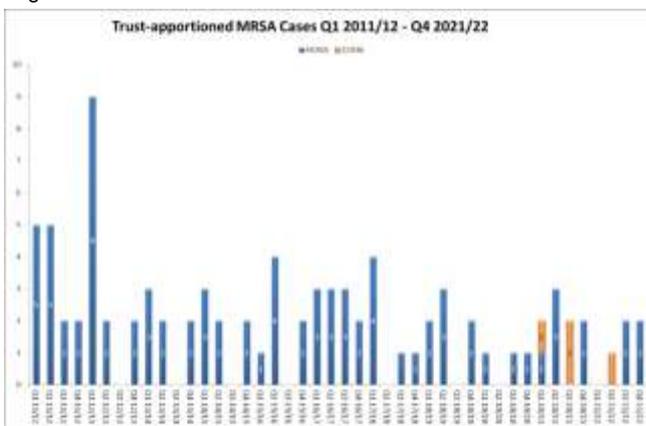
3. PERFORMANCE IN 2021-2022

The Trust HCAI objectives for *Clostridioides difficile* infection (CDI), meticillin resistant *Staphylococcus aureus* (MRSA) and Gram-negative bloodstream infections (GNBSI) are determined nationally and usually received from NHSEI prior to the start of the financial year to plan and inform a Trust wide response. Due to the national pandemic, national objectives for 2020-21 were suspended and objectives for 2021-22 were not issued until July 2021. As part of our quality improvement commitment to patients, staff and stakeholders, we reviewed our performance for the period 2019-20 and set internal quality improvement objectives for 2021-22 based on our outturn for 2019-20. Once the national objectives were received from NHSEI we then applied these to run alongside our own internal quality improvement objectives.

In December of 2021-22, we noted a discrepancy with the performance data published by LTHT and that reported nationally by UKHSA. A look back exercise in conjunction with UKHSA identified that the data discrepancies related to a change in the reporting criteria. This change in categorization had previously been applied to *Clostridioides difficile* infection in 2019-20 and the remainder of our mandatory reported infections are now categorized as Hospital Onset Healthcare Associated (HOHA) and Community Onset Healthcare Associated (COHA). UKHSA confirmed that this change had not been clearly communicated through their normal communication channels at the time

MRSA bacteraemia

Figure 1

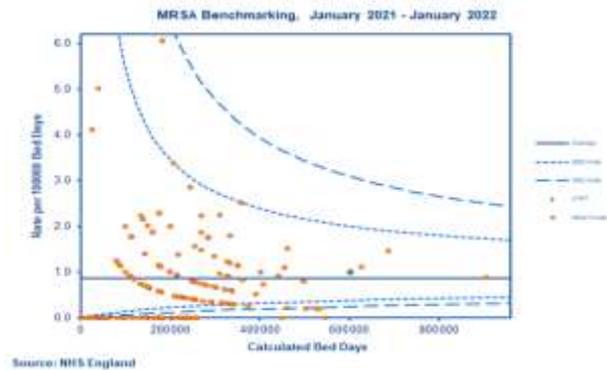


Mandatory MRSA bacteraemia (BSI) surveillance has been undertaken since April 2001 by all NHS Trusts in England. As an organisation we have a zero-tolerance approach to avoidable healthcare associated infections (HCAI). LTHT data for each quarter since Q1 2010-11 is shown in Figure 1. In 2021-22, we recorded five cases which is a 44% reduction on the number of cases recorded in 2020-21. Of the five cases recorded, four were Hospital Onset Healthcare Associated (HOHA) and one

was Community Onset Healthcare Associated (COHA).

We continued to investigate each case of MRSA bloodstream infection via Root Cause Analysis (RCA) followed by a Post Infection Review (PIR) with our commissioners. The PIR process helps to identify any lessons learned for sharing across the organisation and provides opportunities for targeted education sessions. During 2021-22 we took the opportunity to resume the work of our HCAI Quality Improvement Group, which was paused during the pandemic, to focus on improvements that will enable us to reduce our numbers of bloodstream infections.

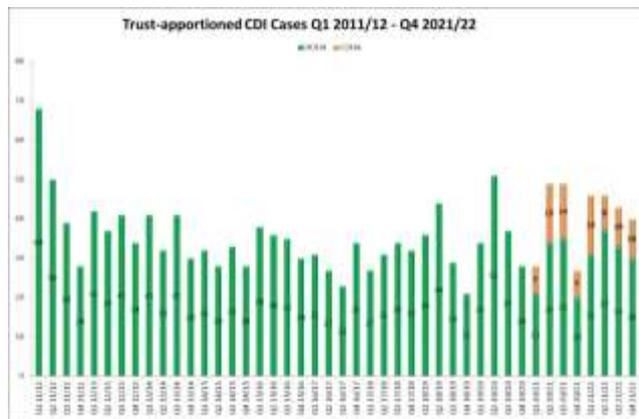
Figure 2



Our position against our peer group, as recorded nationally, is just above the average amongst acute trusts as shown in Figure 2. Although we have seen a reduction in the number of cases this year compared to the last, there is still work to do to reduce the incidences of MRSA bloodstream infection in our patient population.

Clostridioides difficile infection

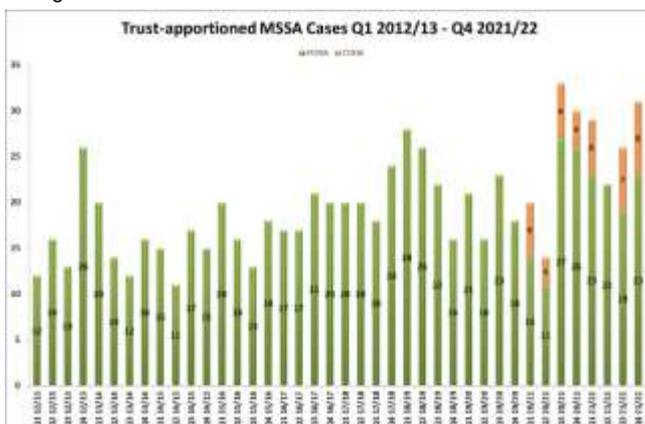
Figure 3



The total number of *C. difficile* cases recorded at LTHT during 2021-2022 was 175 against an objective of no more than 158 cases. Of these 175 cases, 44 were classified as COHA. Performance per quarter is as shown in Figure 3. It has been acknowledged nationally that there has been an increase in the number of CDI cases and, as a result, NHSEI will be holding national workshops to share lessons learnt and ideas for improvement.

MSSA bacteraemia

Figure 4



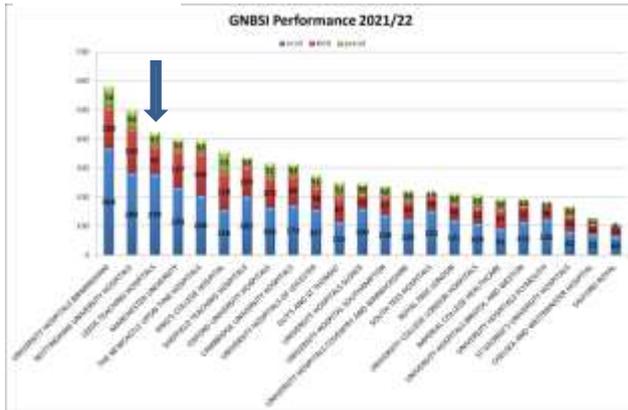
Methicillin-susceptible *S. aureus* (MSSA) bacteraemia are nationally reported but in contrast to MRSA BSI there is currently no specific annual objective for individual acute hospital trusts. We do, however, as part of our quality ambition, set an internal quality improvement (QI) objective. For 2021-22 we applied a 5% reduction on our outturn for 2019-20 which was 78 cases, thus giving an internal QI objective for 2021-22 of 74 cases. In July 2021 due to our escalating position as noted by NHSEI,

we agreed to put in place a revised internal objective of a 15% reduction thus giving an objective of 66 cases.

Unfortunately, we recorded 108 cases of which 21 were attributed as COHA. As stated above, we are increasing our focus on the work of the HCAI QI Group to drive improvements.

Gram-negative blood stream infections (GNBSI)

Figure 5



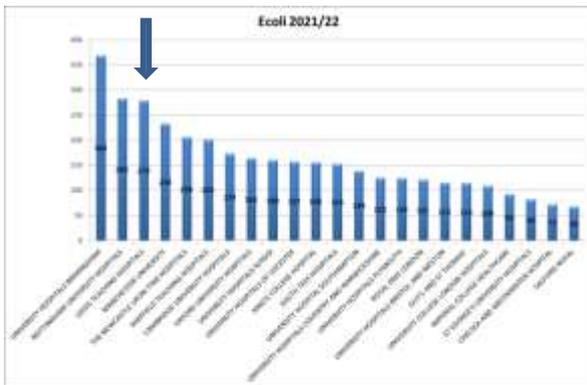
The national ambition to reduce by half the number of healthcare associated Gram-negative bloodstream infections (GNBSIs) by 2024 remains in place. In 2021-2022 we recorded a total of 423 LTHT-attributable GNBSIs; of those there were 248 *E. coli* BSIs, 97 BSIs with *Klebsiella spp.* and 47 with *Pseudomonas aeruginosa*. Figure 5 shows LTHT's performance compared against our peers.

National objectives for GNBSI were introduced for the first time in 2021-22 for

E. coli, *Pseudomonas aeruginosa* and *Klebsiella spp.* and performance against these is noted below

E. coli

Figure 6

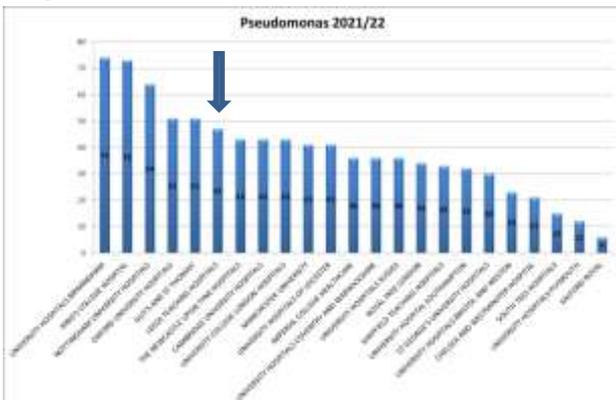


In 2021-22 we recorded 279 cases of *E. coli* against a national objective of no more than 314 with 89 of these (32%) categorized as COHA. Figure 6 shows performance against our peers and it can be seen, as indicated by the arrow, that we are amongst the worst performing Trusts amongst our peers. It is also relevant to note that *E. coli* remains the most frequent cause of bloodstream infection in the UK and we will continue with our work to identify the themes and trends to prevent avoidable infections and to improve our

position nationally.

Pseudomonas aeruginosa

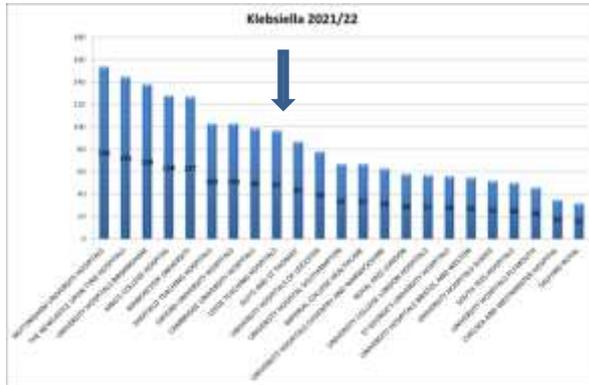
Figure 7



In 2021-22 we recorded 47 cases against a national objective of no more than 48 cases; with 14 of these (30%) categorized as COHA. Figure 7 shows performance against our peers for the reporting period with the arrow indicating how we compare.

Klebsiella spp.

Figure 8



In 2021-22 we recorded 97 cases against a national objective of no more than 94 cases; with 18 of these (19%) categorized as COHA.

Figure 8 shows performance against our peers for the reporting period with the arrow indicating how we compare. It is recognised that the outbreak of an ESBL-producing strain of *Klebsiella pneumoniae* related to our Neonatal Units at both main hospital sites will have contributed in total two cases to the

overall bacteraemia numbers.

4. OUTBREAKS AND OTHER COMMUNICABLE DISEASE INCIDENTS

Multi-resistant *Pseudomonas aeruginosa major* outbreak in the adult Haematology unit LTHT.

This outbreak was opened in December 2020 following the identification of matched isolates of multi-resistant *Pseudomonas aeruginosa* (MRPA) in haematology patients. Between 1/4/2021 and 31/3/2022, a further eight cases were identified (taking the cumulative total to 25). Two of these cases were identified as carrying a carbapenemase gene (VIM) this carried risk of further dissemination but had not been detected at LTHT to date. Two of the cases died with sepsis within 28 days of diagnosis; three patients received targeted MRPA antibiotic treatment, the remaining patients were colonised with the organism but had no clinical symptoms or treatment. The most recent case occurred on 11 October 2021.

In May 2021, following the death of case 18, the outbreak was escalated to a Major Outbreak Control Group (MOCG), chaired by the deputy DIPC and attended by the Chief Medical Officer, Chief Nurse and other senior colleagues relevant to rapidly resolving the agreed actions. Extensive water outlet sampling and environmental sampling were performed repeatedly since the outbreak was opened to seek the origin of the organism. These revealed two positive water outlets in shower rooms on J88 in May 2021 and the en-suite facilities were taken out of use pending interim remedial estates work. They were reinstated after works but the rooms were taken out of use again in October 2021 when further cases were detected (i.e. after a four month gap with no new cases). Comprehensive remedial works have now been completed in 32 of the 40 en-suite rooms, along with other modifications to the patient environment. A task and finish group, distinct from the MOCG, provides assurance for this process.

Patient screening continued weekly on J88/89; during 2021-22 and revealed just one new asymptomatic case. Regular review and support of IPC practices took place, including multiple ward visits by the IPC team, Matrons and Consultant Microbiologist. An additional review of the ward environment was carried out by an external expert (Dr Lee) in October 2021; multiple findings in this report are being addressed by a multi-disciplinary team task and finish group.

The UKHSA field epidemiology team supported the outbreak investigation from the outset and led a case-control (1:3) study of the first 17 cases. A preliminary report in September 2021 supported the hypothesis that an environmental niche(s) related to pipework was the

most likely source of MRPA acquisition. Independent variables increasing risk of MRPA included prior use of antibiotics, specifically quinolones, and being a patient from outside Leeds. This report led to a clinically led review and reduction in quinolone use on the unit. Antibiotic stewardship is supported by a Consultant Microbiologist and Pharmacy team. During 2021, both the neutropenic sepsis guidance and amikacin guidance have been revised in light of the outbreak.

In summary, this outbreak was characterised by a picture of long-term low level incidence consistent with an organism from an environmental niche. The risks from the environment were assessed and extensive remedial works were nearing completion by the end of the year. A comprehensive approach to long term water-safe IPC practice is in development and will be relevant to all staff groups who attend the wards. Long term antimicrobial stewardship will also be essential. The criteria for closing this outbreak will be the absence of new MRPA cases in haematology patients for a period of 12 months from 11 October 2021.

Neonatal *Serratia marcescens* outbreak

Two cases of *Serratia marcescens* infection or colonisation were identified in patients admitted to L43 NICU from 5th July 2021 (1 sputum and 1 blood culture). An incident meeting was called on 16 July 2021 to review the situation and screening of all the babies was done on cross city neonatal units. It identified seven further babies colonised with *Serratia marcescens*. Eight of these patient isolates were found to match the PFGE profile (LEEDSPSE-3) and an outbreak control group was set up to review the infection prevention practices. Weekly meetings were set up with environmental walk around and IPC audits. The action plan included asepsis and vascular care bundle review, assurance of terminal cleaning & incubator changes, hand hygiene and antimicrobial audits along with review of staffing support on the unit. The outbreak was closed on 23 August 2021 following IPC assurance and three negative consecutive *Serratia* screens on the unit.

Klebsiella pneumoniae major outbreak NNU

On 16 November 2021, a baby on ward L43 (NICU) of Leeds Children's Hospital was found to be infected with an ESBL-producing strain of *Klebsiella pneumoniae*. Screening was set up in response and twenty further cases were identified, including three more from clinical specimens. It was declared as a major outbreak on 16 December 2021 and weekly meetings were set up in response. While initially the cases were clustered on L43 (NICU) at Leeds General Infirmary, screening of babies on J01 at the neonatal at St James's Hospital also found seven further colonised babies, who had been exposed to a case that had transferred to the unit from L43. Two colonised cases have died, but their deaths were not related to their *K. pneumoniae* positive screen.

All isolates were sent to the reference laboratory at Colindale for further typing. As of the 2nd of March 2022, typing was available for all isolates; all were found to share the same VNTR-type. The epidemiological curve, timeline data and information about interventions as analysed by UKHSA indicated a common source, likely propagated by person-to-person spread and not a point source outbreak. The unit was closed to admissions apart from critical and urgent surgical cases. An intensive programme of measures were put in place to control this outbreak which included enhanced environmental decontamination, hand hygiene and source isolation competencies, spot antibiotic audits, shared equipment cleaning, review of estates, cot spacing and nursing staffing as per national recommendations. The group agreed that the four consecutive weeks' negative screens had been reached on 16 March 2022 with assurance on other practices on the unit, and formally closed the Major Outbreak Control Group. An on-going programme of screening, environmental cleaning and cot utilisation has been put in place for Leeds Neonatal service.

Carbapenemase producing Enterobacteriaceae/Enterobacterales (CPE) outbreaks in Abdominal Medicine and Surgery

Two concurrent outbreaks were identified within J83, with the first having cases also identified on J91 and J92, involving patients under the care of Hepatology, Gastroenterology and the Liver Transplant team. Common themes were identified and so the outbreak meetings were combined.

Outbreak 1 consisted of five cases of IMP producing *Klebsiella oxytoca* (LEEDSPKL-4) across all three wards. Outbreak 2 consisted of two cases of KPC producing *Citrobacter freundii*, strain (LEEDPCB-3.) This strain was previously isolated from a patient on J83 in 2019.

COVID-19 related changes to clinical pathways meant that acute admissions to the liver transplant team were initially admitted to J91/J92 (AMBER wards) side rooms pending PCR results, before being moved to J83, which was designated as a GREEN ward. Normally these patients would have been directly admitted to J83.

Monitoring and control measures were implemented including adherence to IPC guidelines, cleaning standards and frequent decontamination of equipment and the environment, including any concerns around drainage issues and sink usage. Where issues were identified (such as hand hygiene around glove use) additional training and education sessions were provided. Antimicrobial stewardship is supported by e-meds protocols, guidelines and adherence to these was promoted. However, it was acknowledged that many of the patients were complex and required on-going direct support from Microbiology.

The final case from either outbreak was identified on the 22 September 2022, 52 days after the first positive case, with the outbreak concluded 6 weeks later on the 30 of November 2021. On-going screening was continued following the closure of the outbreak due to the high risk nature of many of the patients admitted to these wards, with a plan for review with the outcome of the 2022 CPE screening trial.

SARS COV-2 Outbreaks

There were a total number of 397 nosocomial cases recorded at LTHT during 2021-22, with a total of 63 outbreaks over the same reporting period.

It is widely acknowledged that Delta, Omicron and BA.2 are highly transmissible variants which contributed to the increase in cases. Whilst LTHT has a robust testing programme and assurance process findings from outbreak meetings included missed testing, results not accessed in a timely manner and patient placement. Of particular note, many patients who tested positive had no respiratory symptoms.

In November the publication of The Infection Prevention and Control for Seasonal Respiratory Infections in Health and Care Settings (including SARS-CoV-2) for winter 2021 to 2022, advised that the requirement for care pathways could be defined locally. Given the continued high community prevalence and the emergence of Delta, Omicron and a new variant of concern - BA.2, LTHT has continued to implement the three COVID-19 specific care pathways (high, medium and low) as decided through tactical and the command and control structure to support patient and staff safety. In addition the LTHT guiding set of IPC principles to reduce avoidable onset cases and support service delivery was updated and shared with the CSU's.

LTHT continues to participate in a weekly integrated care system DIPC meeting where national updates are shared and each trust describes their current position and learning from outbreaks.

HCAI investigations

Patients at LTHT who develop a bloodstream infection in any of the mandatory reportable healthcare associated infection categories (MRSA, MSSA and GNBSI) or develop *Clostridioides difficile* infection will have a root cause analysis (RCA) or stop the line (STL) investigation undertaken. This is to try and determine what happened, how we can improve and how, as an organisation, we can grow and learn.

Meetings are managed as a multi-disciplinary collaborative process with input from relevant stakeholders including a Consultant Microbiologist; this ensures that lessons learnt can be disseminated rapidly trust wide to ensure our patients remain safe. Despite the continued pressures on the organisation during the pandemic a total of 790 HCAI (including COVID 19) RCA's were undertaken. The distribution per organism can be seen in figure 9

Figure 9

Organism Name	Total
<i>Escherichia coli</i>	279
<i>Clostridium difficile</i> toxin	175
Covid19	79
<i>Staphylococcus aureus</i> - MSSA	108
<i>Klebsiella</i>	97
<i>Pseudomonas</i>	47
<i>Staphylococcus aureus</i> - MRSA	5
Total	790

HCAI learning event

On 30 March 2022 the IPCT held a learning event with the CSU'S to review the findings from both MRSA bacteraemia post infection reviews and the outcomes of the targeted internal CSU review process or RCA investigation process initiated as a result of the change to the reporting criteria, actions from the event include:

- Quality and Safety Matters Bulletin sharing the lessons learnt from the MRSA Investigations.
- A learning event newsletter to share good practice for all bloodstream infections
- Formation of a subgroup to review actions from the GNBSI reviews to include management of vascular access devices VAD and urinary tract infections.
- Duty of candour process for COHA cases to be agreed at the Quality Governance forum

SARS CoV-2

In 2021-22 the Infection Prevention Team has continued to support the root cause analysis process for COVID-19. In the period between the 1 April 2021 and 31 March 2022, 79 root cause analysis investigations were undertaken 39 of which were in patients who had developed COVID-19 in days 8-14 after admission, and 40 who had developed COVID-19 after 15 days of admission. The table excludes cases identified within ward outbreaks as these are captured within outbreak reports generated by the CSU's and monitored through the CSU governance structures.

Figure 10

Criteria	Number of RCA's Excluding Outbreaks
Hospital-Onset Probable Healthcare-Associated - First positive specimen date 8-14 days after admission to trust	39
Hospital-Onset Definite Healthcare-Associated – First positive specimen date 15 or more days after admission to trust	40
Total	79

Virology testing

Influenza

During the period 1st December 2021 to 31st March 2022 1,393 LTHT patients were tested for Influenza including other respiratory viruses on the Panther instrument in the laboratory. The overall influenza positivity rate during this period was 4% but this varied significantly during periods of high and low prevalence. At a maximum 5 (27%) LTHT patients tested positive for influenza on 24th March 2022.

In addition from 1st September 2021 to 31st March 2022 16,317 patient samples were tested on the Roche Liat point of care testing (POCT) platform at LTHT Emergency Departments.

SARS-CoV-2

Since 1st April 2022 the Virology laboratory at Leeds General Infirmary have performed an average of 1,425 tests per day (range 720 - 2659) with a turnaround time of 12 to 24 hours. Samples have been tested on 5 different platforms; of these three are for high volume throughput (Panther, Alinity and NeuMoDx) and two for urgent rapid testing with low volume throughput only (Cepheid and Biofire). During the period 1st April 2021 to 31st March 2022 443,362 LTHT patients were tested for SARS-CoV-2. The overall positivity rate during this period was 1.51% but this varied significantly during periods of high and low prevalence. At a maximum 8% LTHT patients tested positive on 28th December 2021, 3rd January 2022 and 4th January 2022.

The Abbott ID Now and Roche Liat are two POCT platforms; both provide testing for SARS-CoV-2 at LTHT Emergency Departments alongside a few other locations. From a period of 1st April 2021 to 31st March 2022 69,169 LTHT patient samples were tested on Abbott ID Now; the overall positivity rate during this period was 5.9%. In addition, 26,262 patient samples have been tested on Roche Liat POCT; the overall positivity rate during this period was 5% which is lower compared to 12% in the previous year.

Tuberculosis (TB)

Patients with active TB are predominantly managed as out-patients. 58 cases of TB were notified in the Leeds area in 2021, 35 of which were pulmonary disease. The IPCT continue to be involved in contact tracing exercises following the diagnosis in both patient and health care workers. No onward transmission within LTHT has been identified to date. The trust guidance was reviewed and updated in August 2021.

Despite COVID, the TB clinic has continued to function and the team have shown great adaptability in continuing to see patients throughout the pandemic.

LTHT personnel continue to contribute to improving the diagnosis, management, and control of TB within Yorkshire and beyond.

5. SURVEILLANCE

LTHT participates in the mandatory UKHSA (formally Public Health England) Surgical Site Infection Surveillance scheme. Between April 2021 and March 2022, repair of neck of femur surveillance was completed each quarter by the Orthopaedic/Trauma team with infection rates ranging from 0.5 to 1.6%. This is within the benchmarked rates for other trusts nationally. The results were fed back locally to the Trauma and Orthopaedic teams.

There was no additional surveillance carried out by the Infection Prevention and Control team as the team continue to carry vacancies and also the workload relating to the control of patients with COVID-19 has remained at a significant level. These two factors resulted in the Infection Prevention team not having capacity to carry out any additional surveillance categories.

The programme of surveillance of catheter-related bloodstream infections (CRBSI) also remains on hold due to the continued vacancies and additional workload generated by the COVID-19 pandemic.

In 2020-21 we reported success in our bid to procure an updated IT IPC surveillance package and we are pleased to report that the system has been implemented and is being utilised by the team. Phase 3 of the project will be to install the surgical site surveillance module and this is scheduled to commence during spring 2022.

6. ANTIMICROBIAL STEWARDSHIP

Antimicrobial stewardship (AMS) is ensuring the best outcomes for patients with infections whilst minimising patient harm (e.g. *C.difficile* infection) and antimicrobial resistance. The SARS-CoV-2 pandemic from March 2020 significantly impacted on the AMS programme. Staffing levels in Microbiology and the Pharmacy Infection Team have also had an impact this financial year.

Antimicrobial Stewardship CQUINs and NHS Standard Contract

All quality improvement targets set with the NHS Contract and CQUINs have been suspended since March 2020. They are set to resume in April 2022. The proposed targets, although suspended, were still considered and discussed by the stewardship Committee (IAPG - Improving Antimicrobial Prescribing Group).

A target of a 3% reduction in total antibiotic usage would have been in the NHS contract target. At the time of writing this report, LTHT has an 8% increase in total antibiotics (DDD's) per admission for this financial year when compared to the baseline year 2018/2019. This is a reduction in comparison to 2020-21 which saw an 11.0% increase.

The two CQUINs relevant to AMS for 2021-22 related to Community Acquired Pneumonia (CAP) and Urinary Tract Infections (UTIs) in adults aged 16+ years. These have been rolled over to the coming financial year. The LTHT guidelines relating to these infections have been reviewed and updated to a new format, along with updates to the relevant prescribing protocols in eMEDs. These 2 actions should help promote some elements of the CQUINs.

Reduction in broad spectrum antibiotic use

The UK AMR national action plan has set targets to use less broad spectrum antibiotics in hospitals over a 5 year plan. The AWARE Classification of antibiotics was developed in 2017 by the WHO as a tool to support antibiotic stewardship efforts at local, national and global

levels. Antibiotics are classified into three groups, Access (generally narrow spectrum, recommended as 1st and 2nd line choices for most common infections), Watch (generally broader spectrum) and Reserve (last-resort antibiotics for targeted use in multidrug-resistant infections). The WHO 13th General Programme of Work 2019-2023 suggests a country-level target of at least 60% of total antibiotic consumption being Access group antibiotics.

LTHT saw its proportion of Access antibiotics reduce by 2.1% (45.9% in 2021-22 vs. 48% in 2020-21); and saw a slight increase in both the Watch (34.5% in 2021-22 vs. 34.7% in 2020-21) and Reserve (3.5% in 2021-22 vs. 3.3% in 2020-21). Note: not all antibiotics are included in the classifications; hence values do not total 100%.

Infection Treatment and Prophylaxis Guidelines

These are the mainstay of our stewardship programme and provide evidence based “pathways” covering diagnostics, investigations and treatment. These remain the most frequently visited guidelines on Leeds Health Pathways (LHP) with 197,367 views in total from April 2021 to the time of the report. There are 207 antimicrobial guidelines on LHP, with 159 specifically written for LTHT.

The template for antimicrobial guidelines has been updated to support good antimicrobial stewardship. It is anticipated that it will take at least 3 more years to complete transferring all guidelines to the new format this work based on current staffing.

Antimicrobial stewardship rounds

During 2021-22, advice has continued to be given remotely with some ward based reviews being re-started. Whilst there are established specialist infection ward rounds (e.g. endocarditis, ICU wards) there is currently a gap for a wider stewardship ward round. This has been raised but due to staffing issues within Microbiology and the Pharmacy Infection Team it has been hard to implement. The NICE guidance NG15 summarises the expectations of organisations and how to implement antimicrobial stewardship teams and interventions. These will be used to model how proposed services are implemented going forwards.

Report identifying patients currently on antimicrobials

The report of patients currently prescribed antibiotics continues to be used. It lists all patients on antimicrobials, the type of infection they are being treated for and the duration of therapy to date. This allows better targeting of patients for review on Board and wards rounds.

Home IV antibiotics service

The adult OPAT/CIVAS programme targets patients who would be appropriate for treatment with IV antibiotics at home. In 2021-22, there were 307 referrals and 181 patients accepted and treated (23 and 7 more than last year respectively) at home avoiding 16.6 days in hospital per patient. Overall, 3012 bed days (312 less than 2020-21) were saved (equivalent to 9 beds per day).

Audit and feedback

Antimicrobial prescribing standards are audited each month using data from the electronic prescribing system. This is reported on the Infection page on Leeds Health Pathways (LHP) and shows how many patients are on antibiotics, how antibiotics are prescribed (since August 2021) and day 3 review data (re-introduced from August 2021 after amending method of data collection).

There are approximately a third of patients on antibiotics at any one time, with ~60% receiving antibiotics intravenously (as opposed to oral). Of those antibiotics initiated intravenously, ~60% (range 48-66%) remain this route at 48 hours, reducing to ~40% at 72 hours.

From August 2021, the method of prescribing was reported. It has consistently shown that at least 90% of antibiotic prescriptions are prescribed by protocol or through quicklists.

The methodology of collecting 48-72 hour review data was reviewed and changed to one which could be collated electronically using the clinical review functionality on eMEDs. This has had a mixed response from users but is proposed as the easiest way with current tools available. This began to be reported from August 2021 and will continue to be promoted to improve uptake.

Antibiotic awareness events (European Day and World Antibiotic Awareness Week)

As per 2021, COVID-19 restrictions meant a digital response remained the most appropriate medium to deliver the key messages for the campaign this year. This was again co-ordinated by the Pharmacy Infection Team. As well as following national messages, it was decided to use this opportunity to re-launch good antimicrobial stewardship practice at LTH.

Start the week (with Dr Phil Wood providing executive team support), LTHT Facebook page, and twitter were used over the week. An MS Teams backdrop was created for WAAW and used within meetings and as profile pictures. The education section on the Infection page on LHP was updated, including promotional materials that could be used on wards.

Antimicrobial Stewardship Committee

This group has continued to meet virtually on a monthly basis for a 1 hour meeting with a three month rolling agenda to cover: operational needs, strategic needs and a quarterly review against the annual program for antimicrobial resistance and stewardship.

Working with other partners

LTHT continued working virtually with others throughout the year with other providers, commissioners and Leeds City Council on AMS to implement the NICE AMS guideline for changing patient and public behaviour. LTHT continues to work with other trusts in our ICS area and West Yorkshire to share best practice on improving antibiotic prescribing. We continue to support the AMR@Leeds campaign and the University of Leeds.

7. ENVIRONMENT



Despite a challenging couple of years with the SARS-CoV-2 COVID-19 pandemic, the Facilities Team continues to progress the cleaning strategy to ensure that the Trust achieves full compliance with the new National Standards of Healthcare Cleanliness (NSoHC), before the 1 May 2022 deadline.

Most of the NSoHC migration and mandated work has been completed and is now firmly embedded.

The Facilities Team has introduced Commitment to Cleanliness Charters (CtCC) in all patient and public facing areas. There are 7 mandated elements of the new standards to achieve, by the cited deadline. CtCC illustration below:

Cleanliness star ratings are also a new feature of the NSoHC. The star rating score enables greater transparency for the patients and public; allowing them to see the most recent cleanliness score of the area they are being treated or residing in. In addition, the cleanliness technical auditing approach has also seen significant change, which involves those responsible for the direct cleaning provision, to work collaboratively to audit cleaning in their own environment, within the Trusts Monitoring Framework and national guidance. As a

means of assurance, any area that scores below 3 stars cleanliness rating must complete a formal cleaning improvement plan.

Similarly to last year, a number of assurance recording systems have been retained, which continue to support the reduction in the spread of COVID-19. The recording systems include; scheduled daily high frequency cleaning touch points, the wiping of plastic clear screen curtains (between patient beds) and the cleaning of communal ward toilets in between patient use on areas that have requested additional enhanced cleaning, as directed by Infection Prevention and Control colleagues, referred to locally as 'pop up cleaning teams'.

The environmental decontamination methods continue and the use of hydrogen peroxide vaporisation technology (HPV) remains available and deployed aligned to the criteria of a defined Red Clean or in a specific outbreak scenario. One of the on-going challenges continues to be supporting the conversion of wards from 'red to 'amber' or 'amber to red', status, to create capacity for the relevant patient group, as COVID peaked or declined throughout the year. This required significant cleaning, a rapid response from the portering teams and the required workforce available to enact. Over the year, the conversion of wards became a routine feature to keep patients safe and to create the required capacity.

At the start of the year, a dedicated Patient Shared Equipment (PSE) assurance system was developed and implemented. The system supports nursing and clinical teams, to formally record the weekly deep cleaning of their PSE and the identification of PSE, which requires a weekly scheduled deep clean. The weekly deep cleaning assurance system has been universally embedded across all LTHT wards in 2021-22.

Finally, the Facilities team continues to support the joint Estates and Facilities environmental upgrades at SJH and LGI. This enabled the programmed cleaning of vents and radiators and environmental improvements to make the wards easier to clean.

8. DECONTAMINATION

Strategy & Policy

In 2021 the Trust's Decontamination Strategy and Policy were reviewed to ensure they remain relevant to current statutory requirements and any proposed changes to decontamination guidance. It is essential that such a policy exists in order to demonstrate compliance and to maximise the benefits and minimise the risks associated with the use and management of all reusable and single use medical devices, equipment and environments.

The Strategy includes a management structure with the Director of Estates & Facilities as Decontamination Lead for the Trust supported by the Senior Decontamination Manager. Decontamination management and mitigation of risk is also achieved through the Health Care Associated Infections (HCAI) Group and IPC Sub Committee with reporting to the Trust Board via the Chief Nurse.

Strategic & User Groups

Supporting the Senior Team is the well-established Decontamination Management Group (DMG) and Decontamination Operational Group (DOG). These Groups continue to meet on a quarterly basis and are chaired by the Senior Decontamination Manager.

The purpose of the DMG is to provide a governance arrangement for the organisation that ensures effective and safe delivery of decontamination management and mitigation of risk through both internal and external review. The DOG is responsible for providing assurance to the DMG on the implementation within operational areas of decontamination policy,

procedures and processes to ensure safe, properly managed and effective practices are adopted for all re-usable medical devices, equipment and environments.

External Support (Authorising Engineer)

Additionally, the Trust employs an independent Authorising Engineer (Decontamination) to provide independent auditing and technical advice on decontamination procedures and equipment and to review and witness documentation on validation.

The 2021/22 IHEEM audits carried out by the AE (D) have resulted in green ratings for the Endoscope Decontamination Units (EDUs) at LGI and SJUH. These units continue to work towards the implementation of a quality management system ISO13485. Accreditation was expected in 2021-22, but has been delayed due to COVID 19 restrictions.

Compliant Facilities

All automated decontamination processes take place within centralised facilities compliant with current legislation, standards and best practice. The compliant facilities at LTHT are:

- The offsite B Braun Sterile Services Department (SSD) which complies with the requirements of Health Building Note (HBN) 13, ISO 13485 2016 Quality Management Systems, the European Medical Device Regulation (MDD) 93/42/EEC and Health Technical Memorandum (HTM) 01-01.
- The Endoscope Decontamination Units (EDUs) at LGI, SJUH and WGH which comply with the requirements of the Joint Advisory Group on Gastrointestinal Endoscopy (JAG) and Health Technical Memorandum (HTM) 01-06.

Internal Audit

The HCAI Group and in turn, the DMG are responsible for ensuring that annual Infection Prevention Society (IPS) audits of local decontamination areas are performed. These audits are a key part of the management and mitigation of risk through internal review.

Although delayed due to COVID-19 restrictions the key/higher risk areas have all been assessed in 2021-22 with action plans in development. This included a full audit of the management of Cardiac Theatre Heater Cooler Units (HCU) which through joint working with the Clinical Perfusion Team is leading to improvements in decontamination processes and a reduction in associated risk. A HCU User Group (multi-disciplinary sub-group of the Water Safety Group) was established in November 2021 and meets bi-monthly.

Risks & Incidents

Decontamination related Incident reports and action plans are reviewed as appropriate by the, DMG and HCAI Group to identify and manage risk trends. The responsibility for managing these incidents sits with CSU's. Other than a risk associated with the negotiation of a contract extension for sterile services (see below) no other significant risks or incidents have been reported in the last 12 months.

Sterile Services - B Braun Sterilog

The Trust works collaboratively with Bradford Teaching Hospitals and Calderdale and Huddersfield Foundation Trusts in procuring an outsourced service for the decontamination of surgical instruments from B. Braun Sterilog. The three organisations continue to monitor the service that is being provided to ensure that it complies with current standards relating to surgical instrument decontamination.

To support the monitoring of the Service provided and to act as a link between B. Braun and the clinical teams the collaboration employs the services of a Contract Manager who actively manages the contract on behalf of the Trust. In 2021-22 the quality performance measure of

defect free product return from B. Braun Sterilog was consistently met with a very limited number of defects reported.

In October 2021, B Braun outlined the financial difficulties being faced post COVID and in advance of a contract extension in May 2022. B Braun are committed to the partnership, but seeking a review of the terms and conditions to make the service economically viable and more in line with newer contracts of this type. A commercial review group (with representation from each of the partner Trusts) is being led by the Associate Director Commercial & Procurement and the Joint Management Board continues to meet monthly to monitor progress.

There is a risk of losing sterile services due to there currently being no agreement on contract terms and conditions for a 5 year extension period. Loss of service would prevent in-patient surgery and out-patient procedures requiring reusable surgical instrumentation/specialist devices. Currently rated 12, the risk was presented at the November 2021 E&F Risk Management Group Meeting. Discussions so far have been positive and it is hoped agreement on T&Cs will be reached by May 2022.

Performance Data

Figure 11 *B Braun Sterilog*

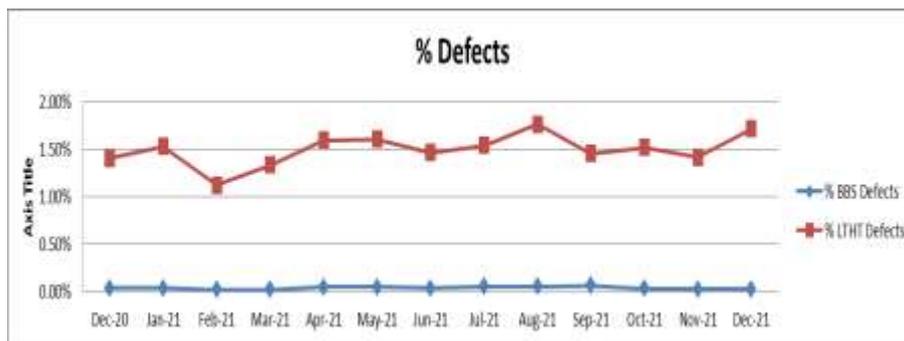
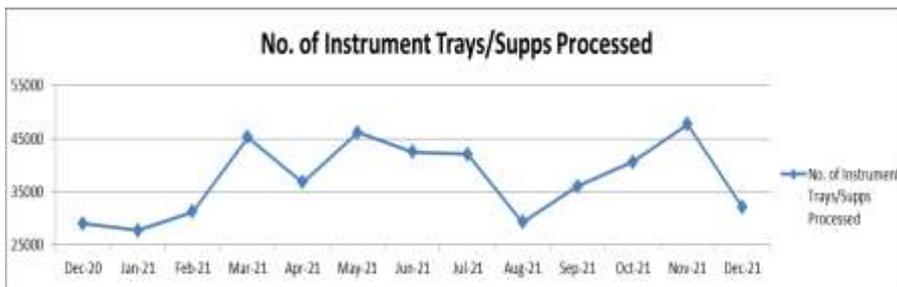
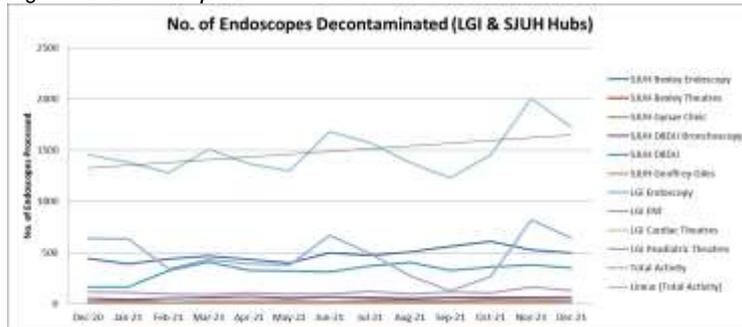


Figure 12 *Endoscope Decontamination Units*

9. Estates

Water safety

The Water Safety Group continues to provide assurance to the IPC Sub-Committee that Estates and Facilities are managing and reducing the risk of harm to all users by creating, implementing and driving the Trust's Water Safety Policies. Identifying risks and mitigating those risks through testing, action and adherence to Statutory Regulations, HTM's and other respective guidance.

E&F undertakes routine testing of water samples for pathogens likely to cause harm: *Legionella spp.*, *Pseudomonas aeruginosa* and follows the IPC approved process for remedial works and retesting, until outlets return negative samples. All records are shared through the Water Safety Group for review/discussion and provide an assurance through a detailed audit trail of good practice and compliance with the 2021 LTHT Water Safety Policy/Plan.

There is a risk to every patient, staff member and visitor to our site of exposure to *Legionella spp.* or *Pseudomonas aeruginosa* and E&F are taking all reasonable and practical steps to mitigate the risks to the Trust that are inherent in the safe use and delivery of the water used in all our day to day activities. To ensure that the water itself is not the source of HCAI regardless of its use and that the correct and appropriate use of water is not the agent by which HCAI's are spread and proliferated.

This risk is taken very seriously by the Trust and is managed accordingly (resourced/funded); the Water Safety Policy details the following key control measures which are adopted within our water management procedures and specialist contracts:

Temperature Control - by keeping hot water hot and well circulated throughout the system, by keeping cold water cold by consumption.

- Turnover - the avoidance of stagnation through usage, ensured by documented flushing.
- Chemical Treatment - by dosing the water supply with a WRAS approved biocide.
- Testing - by taking strategic water samples frequently and having them laboratory analysed.
- Reactive Action - by pre-defined reaction to laboratory testing trigger points.

Engagement at the Water Safety Group, a forum of multidisciplinary stakeholders, is key to the holistic approach recommended to improve water safety. The function of the group is to share information with regards to laboratory results, Operational Estates remedial works, Capital Estates upgrade and alteration works and HCAI's possibly attributable to the water system. To both give and receive advice in regard to issues raised & drive continuous improvement.

An example of the success of the multidisciplinary approach has been the response to the MDR *Pseudomonas aeruginosa* outbreak on J88/89, where 40 patient en suite wet rooms have undergone a major refurbishment on live wards, with a host of other environmental improvements to E&F / IPC & clinical practices, over a challenging timeframe. This has only been made possible by having the right people & specialisms involved. The learning that has been shared from what has been a difficult situation will support improvements across all augmented care areas.

E&F will continue to comply with the Department of Health requirements in relation to water safety and of those within the 2021 Water Safety Policy/Plan and looks forward to strengthening the relationship it has with IPC to continuously improve our control measures and mitigate any risks in relation to HCAI's & Patient Safety.

Ventilation

Ventilation is one of much mitigation against COVID-19 and is part of a package of infection prevention and control measures. The ventilation rates recommended in HTM 03-01 are likely to provide a lower risk environment for COVID-19 airborne transmission. The Ventilation Safety Group (VSG) supports the Trust response to emerging evidence and with a specialist multidisciplinary platform, continues to review and make well-informed strategic decisions, based on comprehensive advice and guidance on ventilation systems used in the delivery of healthcare.

The VSG brings into focus the requirements of the HTM guidance for healthcare-specific elements of standards, policies and up-to-date established best practice. They are applicable to new and existing sites, and are for use at various stages during the whole building lifecycle.

Ventilation is used extensively in all types of healthcare premises to provide a safe and comfortable environment for patients and staff and control odours. More specialised ventilation is provided to help reduce airborne infection risks in areas such as operating departments, critical care facilities, isolation rooms and primary patient treatment areas.

The VSG was formed in 2021 and has now established itself as a multidisciplinary group of specialist, whose remit is to assess all aspects of ventilation safety and resilience required for the safe development and operation of our Trust premises. E&F will continue to ensure all aspects of good practice for ventilation management in the healthcare setting are implemented & provide assurance to the IPCSC, on risk management, compliance with the Department of Health requirements in relation to ventilation safety. This will be captured within the proposed Ventilation Policy/Plan (currently in draft) due for issue / approval this year.

10. RIDDOR and COVID-19

RIDDOR: Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013

RIDDOR places duties on employers, the self-employed and people in control of work premises (the Responsible Person) to report certain serious workplace accidents, occupational diseases and specified dangerous occurrences (near misses).

Reporting under RIDDOR

The process for making a report under RIDDOR is fairly straightforward and the responsible person/ line manager will be responsible for the gathering of information and liaising with the Trust's Health and Safety team.

There are specific scenarios that the HSE has outlined where a report will need to be made under RIDDOR with regard to employees carrying out work related activities and Covid-19. This has been subject to debate at local, regional and national level and has resulted in revisions to the guidance during the course of the pandemic.

In LTHT it is the Health and Safety team that submit the RIDDOR report to the HSE. The management role is to obtain the required information from the staff member and make contact with the Health and Safety team if they believe from the information gathered from the employee and their own knowledge that a RIDDOR report may be applicable.

Cases of Occupational disease: Exposure to a Biological Agent: SARS-CoV-2, COVID- 19.

The circumstance that requires a report under RIDDOR would be a diagnosis of Covid-19 in a staff member attributed to an occupational exposure to a biological agent, as set out in the RIDDOR guidance that was published during the early stages of the pandemic and subsequent revisions.

The debate related to RIDDOR reporting has centred on the identification of workplace exposure with certainty, within the context of a global pandemic where community prevalence is high. For example, an employee who has a history of residing in the same household as a confirmed case of Covid-19 or contact outside of work with a confirmed case and they have been within 2 metres of that contact 14 days before developing their own symptoms would not require reporting. An employee who has travelled abroad to an identified country/area that requires quarantine on return and develops symptoms during the quarantine period would also not require RIDDOR reporting.

It can be very difficult to establish whether an exposure occurred within work, particularly when the disease is so prevalent within the general population. Some of the factors that need to be considered when determining whether a report is necessary will include:

- Whether the employee's work activities increased their risk to exposure?
- Whether or not the person was given the necessary personal protective equipment?
- Whether other control measures in line with national and local guidance were in place to keep employees safe?

The HSE are looking for evidence of the person's work activities increasing the risk of them becoming exposed to coronavirus, as opposed to someone not in the workplace and general societal exposure. This includes whether or not the person's work brought them directly into contact with positive Covid-19 patients without effective control measures. If this is not the case then a RIDDOR report is not required.

For an incident to be reportable there must be a clear and reasonable evidence to confirm the link between the exposure and the work- related activity. It would not be enough, for instance, for a person to simply be exposed to Covid-19 whilst at work. Rather, there must be a specific work-related activity that results directly in infection.

There have been no cases to date of occupational disease being submitted by Leeds Teaching Hospitals Trust to the HSE, which is consistent with a number of partner organisations following communication through regional network health and safety leads.

A Dangerous Occurrence

An accident or incident at work that causes or could cause the release of SARS-CoV-2, COVID 19 must be reported as a Dangerous Occurrence. This will only be applicable if a

specific event led to exposure or the possible exposure of Covid-19. Employers must make a reasonable judgement as to whether the specific circumstances of the event gave rise to such a risk.

An example of a reportable Dangerous Occurrence might be a sample from a patient who has tested positive for Covid-19 breaking in transit leading to spillage or a laboratory worker accidentally smashes a vial containing coronavirus on the floor (i.e. outside of a microbiological safety cabinet), leading to people being exposed. There have been no reported cases of an incident of this nature in LTHT to date.

Work related deaths

The death of an employee as a result of occupational exposure to a biological agent is reportable under RIDDOR.

For a death to be reportable there must be reasonable evidence that the death was caused by an occupational exposure to Covid-19. Not only must the person have had Covid-19 at the time of their death, but it must have also been a significant cause of death, e.g. listed on line 1 or 2 on the death certificate. RIDDOR reporting only applies to employees rather than patients or service users. There have been no cases to date of a work-related death involving LTHT employees that meet the criteria for reporting to HSE via RIDDOR.

Blood & bodily fluid contamination via inoculation injuries

During the period 1 April 2021 to 28 February 2022 there were four staff-related high risk sharps injuries reported via RIDDOR to the HSE (there were seven of these cases identified in the previous 12 month period).

The Health and Safety team continue to support those responsible for the completion of RCAs with the aim of understanding how incidents are occurring and implementation of any remedial actions as a result. The findings of the RCA.s continue to be an agenda item at the Trust Inoculation Injury and Safer Sharps Group meeting (II&SS). These types of injuries have shown a decrease during the pandemic, which is possibly attributed to reduced ED attendances and reduced elective surgeries where these types of injuries would typically be sustained.

No HIV, Hepatitis B or Hepatitis C infections have been reported by those staff sustaining high risk inoculation injuries

'Working Safely with Covid-19 Assessment'

This assessment was devised by the Trust 'Social Distancing Group' and supports the 'Board Assurance Framework' document by providing a means to assess and provide assurance that IPC controls are in place for the non-clinical areas of our hospitals. There have been 4 iterations of this document across the pandemic with the latest version dated November 2021. The Health and Safety Team are currently engaged in seeking assurances from the 620 areas that make up the Trust that this latest iteration of the assessment has been completed as required.

11. EMERGING KEY ISSUES

The rapid changes to UKHSA guidance regarding COVID 19 have continued over the course of 2021-22 with significant changes being noted both nationally and locally. The team have continued to react quickly reviewing and advising the organisation on any operational changes required. These are managed through the Operational Infection Prevention and Control group meetings, weekly tactical meetings and weekly Operational bulletins. In

parallel the team have had to react to an escalating position for our other mandatory reportable HCAI's.

12. IPC ORGANISATION AND MANAGEMENT

Recruitment

The IPCT continues to face challenges in recruiting to its current establishment with particular difficulty attracting senior specialist IPCNs. Nationally there continues to be a shortage of experienced Infection Prevention Nurses. The difficulties in recruitment at this level have led to two appointments at Band 6; the team are currently working through a competency led process to ensure succession planning to Band 7 level. In addition the Job descriptions for both Band 6 and Band 7 have been expanded to attract Allied Health Care professions to the role as traditionally this has always required a qualified nurse. A further recruitment drive is planned for early 2022-23.

In parallel a focused work stream regarding recruitment of a new Medical Microbiologists has also been undertaken as again this has proven difficult due to recognised national shortages.

Professional Development

Three members of our team are currently pursuing postgraduate study in Infection Prevention and Control via the University of Dundee, two at Masters and one at Degree level.

Health and Wellbeing

Supporting the health and wellbeing of the team is essential due to the sustained pandemic pressures. Clinical psychology sessions allowed our staff the safe space to fully debrief and an IPC nurse secured a place on the Professional Nurse Advocate Course, which is designed to deliver reciprocal mentoring to colleagues and teams

Policies and Guidelines

The IPCT continued to review and revise the trusts 37 IPC policies/clinical guidelines during 2021-22. Due to the on-going response to the COVID -19 pandemic extensions were granted to the clinical guideline review dates. This includes but is not limited to changes to national publications on COVID-19; 2021-22 saw a significant number of step changes over the course of the year.

Nightingale Surge Hub

In January 2022 the government released plans for eight Nightingale Surge hubs to be erected in various sites across the country to help support a COVID-19 surge linked to the new variant Omicron. The Infection Prevention team were asked to support the build at St James's University Hospital. The hub was officially stood down on the 28th of January as it was no longer required.

Staff testing

During 21/22 The Leeds Dental Institute and The Leeds Children's Hospital continued to support a seven day staff testing service; over the course of two years the service tested in excess of 10,000 staff. Both this service and the staff track and trace programme were formally stepped down at the end of March 2022 to reflect national changes.

13. TRAINING AND EDUCATION

Despite the IPC team having to continue to support the organisation’s pandemic response we have maintained and protected its commitment to delivering the trusts mandatory training programme during 2021-22. This has included additional bespoke sessions for undergraduate and postgraduate nursing students through the respective Leeds based universities. The team have also contributed to additional sessions for the infection prevention society (IPS); all of our sessions have remained virtual due to local and national restrictions. Figures 13 and 14 show that as an organisation we for the first time in 5 years dropped below a compliance rate of 90%. The reasons for this are unclear however it is likely that this is a multifactorial issue with continued COVID-19 organisational pressures and staff sickness being contributory factors.

Figure 13

IPC	Mar-14	Mar-15	Mar-16	Mar-17	Mar-18	Mar-19	Mar-20	Mar-21	Mar-22
IPC Clinical	79.69%	89.90%	94.50%	92.50%	94.00%	93.00%	90.69%	91%	80%
IPC Non Clinical	85.17%	93.40%	90.10%	95.30%	96.00%	94.00%	94.21%	89%	83%

Figure 14



14. CAMPAIGNS AND FURTHER ACHIEVEMENTS



In previous years the IPCT have been involved in a number of innovative campaigns to prevent infection and reduce patient harm, as the IPCT focus has continued to centre predominately around the pandemic response campaigns and other non-essential business have largely remained on hold. The team have however continued to be involved in a number of educational campaigns to support our organisation through the pandemic; this has included the design development and implementation of PPE sani-stations (pictured below), development of COVID-19 educational posters and the HCAI Faculty has continued to provide a quality improvement focus on reducing avoidable blood stream infection (BSI). A poster competition was launched to act as a signpost for prompt cannula removal with a number of entries submitted from many clinical areas. The winning entry was featured in the 'Start the Week' bulletin and a parallel implementation trial continues

to provide a quality improvement focus on reducing avoidable blood stream infection (BSI). A poster competition was launched to act as a signpost for prompt cannula removal with a number of entries submitted from many clinical areas. The winning entry was featured in the 'Start the Week' bulletin and a parallel implementation trial continues



Wards in Abdominal Medicine and Surgery receiving their banners and Sani-stations

IPS Conference Award



In 2020 UKHSA issued an alert regarding a national outbreak of *Burkholderia aenigmatica/contaminans*, LTHT were instrumental in assisting UKHSA in identifying the source which was attributed to multi-use ultrasound gel.

The team applied to the Infection Prevention Society to present at their annual national conference in September 21 regarding our findings. One of our team members was put forward to present and subsequently won the annual awards category for best oral presentation (pictured above.)

BBC Hospital documentary

In February 2022 the Infection Prevention Team were invited to provide support to the BBC's Hospital production team prior to filming their documentary on site. All of the production team received IPC basic training including Hand Hygiene and how to put on the appropriate PPE. The production crew were also fit tested to further ensure their safety whilst out in environments that may be undertaking aerosol generating procedures.

Head of Nursing 'Great Partner' award.



In February one of our Consultant Microbiologists was recognised in the Head of Nursing 'Great Partner' Awards for effective collaboration and support to The Leeds Children's Hospital, particularly throughout the two recent Neonatal outbreaks.

15. CHALLENGES AND OPPORUNITIES FOR 2022-23

The wider IPC team will be working in a more multi-disciplinary way to further understand and improve the learning from the HCAI root cause analysis meetings with the aim of disseminating messages Trust wide. A plan for these groups has already been made.

In addition the team will re invigorate its focus on infection prevention mandatory training for all grades of staff at LTHT.

The IPCT are fully involved in working with the executive team to provide necessary HCAI data and to help with the national Public Enquiry into COVID-19.

The surgical site surveillance arm of the ICNet programme is expected to roll out in the latter half of 2022 and hopes to bring surgical colleagues on Board so that they can have ownership of their own data.

Candida auris is an emerging fungal pathogen with potential to create a challenge for infection prevention and control. There have been extensive discussions about how to approach the issue. Due to the fact that this fungus has so far not been seen at LTHT, or extensively in other local Trusts, it was decided not to screen for it routinely, but to initiate a screening exercise using specific culture media on 200 samples from ICU in order to train staff and develop systems in readiness for if this pathogen is isolated from an LTHT patient. At the current moment, staffing levels in microbiology are not permitting the start of this exercise, but we hope this might happen later in 2022.

Further work on the CPE policy roll out is expected and there will be implications for the Microbiology laboratory, due to expected larger quantities of specimens expected. The laboratory may decide to move forwards to PCR testing instead of traditional culture based detection of these organisms. This will be work in progress.

I will be standing down from the post of Lead Infection Control Doctor (LICD) on 31st March 2022 and I would like to record my thanks to the full Infection Prevention Team, the wider team including my Consultant Medical Microbiology and Virology colleagues, Pharmacy as well as Estates and Facilities staff and of course our ward colleagues who we have worked collaboratively with prior to and during the pandemic. In view of the current vacancies further focused work in respect of on-going recruitment to the IPCT for both Nursing and Medical staff will continue.

16. RECOMMENDATIONS

The Quality Assurance Committee is asked to

1. Receive the Annual Report for 2021-22
2. Be assured of the progress related to managing to keep nosocomial SARS CoV-2 rates at low levels.
3. Be assured the IPC team are striving to keep reducing the rates of *Clostridioides difficile*, MSSA, MRSA and Gram-negative blood stream infections.

This report has been compiled with contributions gratefully received from the IPC Team (Nursing and Administration) plus colleagues from Microbiology, Virology, Pharmacy, Estates and Facilities, Decontamination and Health and Safety