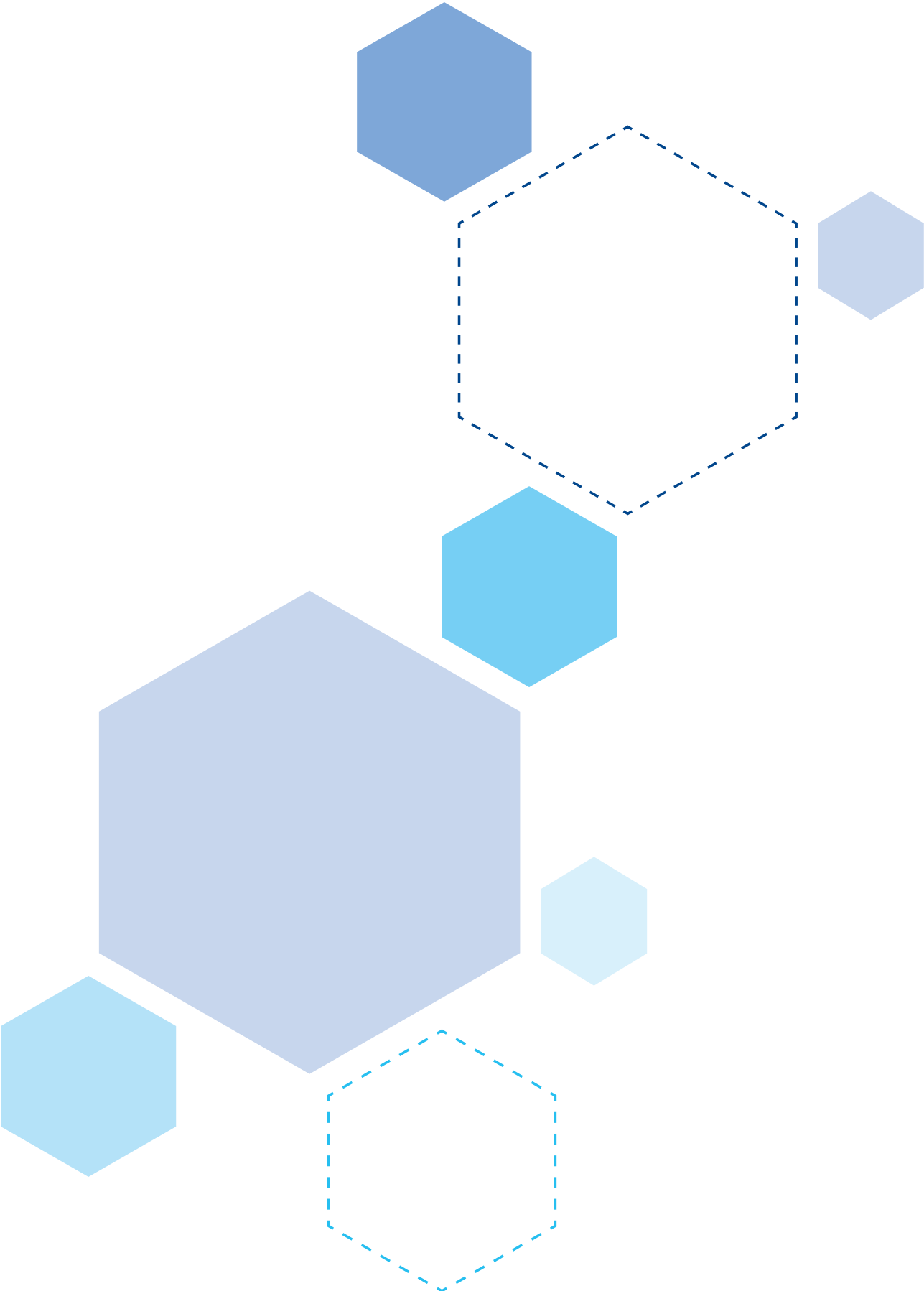


Infection Prevention and Control (IPC) Annual Report

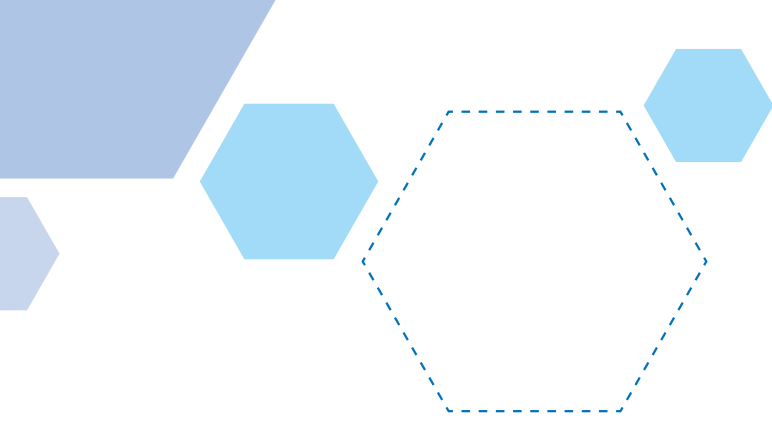
1st April 2022 - 31st March 2023





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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 2022-2023.

This year has continued to pose a challenge to our team and the wider organisation in respect of its collaborative management of SARS-CoV-2. It has also seen a significant increase of nosocomial blood stream infection in 5 out of the 6 mandatorily reportable HCAI objectives.

The team continue to embody and embrace the Leeds way values, working hard to keep the patient at the centre of everything we do.

2. Executive Summary

LTHT has experienced intense pressures during 2022-23 including high bed occupancy, repeated peaks of COVID-19 infection, a security incident and industrial action. These factors have all increased the risk of the nosocomial transmission of infection, albeit for a variety of reasons. The organisation has responded effectively with close working between teams to provide the safest possible care, the IPC team has been an integral part of this response and we are proud of the service we have provided over the past 12 months.

The high incidence of influenza and COVID-19 infections through winter has been a demanding aspect of IPC work this year, with support required daily to provide IPC risk assessment, implementation of IPC guidance and outbreak management. There is no doubt that providing this level of input has been detrimental to our ability to deliver the more reflective and proactive aspects of our work and this is reflected in our HCAI figures. More recently, the attention of the IPC team has increasingly been focused on reducing nosocomial bacterial infection. We have resumed *C. difficile* ward rounds after a pause due to pandemic management, this has been beneficial from both a clinical and IPC point of view. Unfortunately, we have had an increase in MRSA bacteraemia's in LTHT and, in response, we have led detailed review of cases and shared learning at all levels of the organisation. This year, there has also been a significant threat from carbapenemase-producing Enterobacterales (CPE) at LTHT. In the past 12 months outbreaks of CPE infection have occurred in a number of CSUs; Adult Critical Care, Abdominal Medicine and Surgery (AMS) and Specialty Integrated Medicine (SIM). Although these incidents have all been controlled effectively, we continue to put IPC measures in place with urgency to prevent continued harm to our patients.

In October 2020, the UKHSA published a framework to contain CPE. The IPC team have now implemented various aspects of this guidance including the launch of a CPE screening tool for all adult admissions in October 2022. Colleagues across the organisation have embedded this successfully and the implementation of the paediatric CPE screening tool is planned for 2023/24. In addition to the trust-wide screening tools, enhanced IPC surveillance for CPE has been developed and there have been some important changes to laboratory testing. We will continue to use the learning from recent outbreaks and community-acquired CPE infections to design effective control measures for all resistant Gram-negative organisms. For example, we have found that many staff members are unfamiliar with the way CPE is transmitted and what being 'CPE positive' means for patients. We have developed educational tools, including a CPE video, to improve knowledge and support teams to communicate effectively with patients.

We were delighted to close the adult haematology *Pseudomonas aeruginosa* outbreak in October 2022 which was detailed in our last report; at the time of writing there has been an 18-month period without a new case. This was a complex low-level outbreak originating in 2016 with lots of system-wide learning, especially around water safety in augmented care. One outcome of this outbreak has been the development of LTHT water safety risk assessment and assurance rounds. A multi-disciplinary team has been assessing all augmented care areas on a rotational basis and identifying areas to improve water safety as well as sharing educational materials. This is pioneering work and our approach was shared with colleagues around the region at an NHS England Northeast and Yorkshire event on 29th March 2023. Several NHS organisations have approached our IPC team to seek advice and resources around water safety.

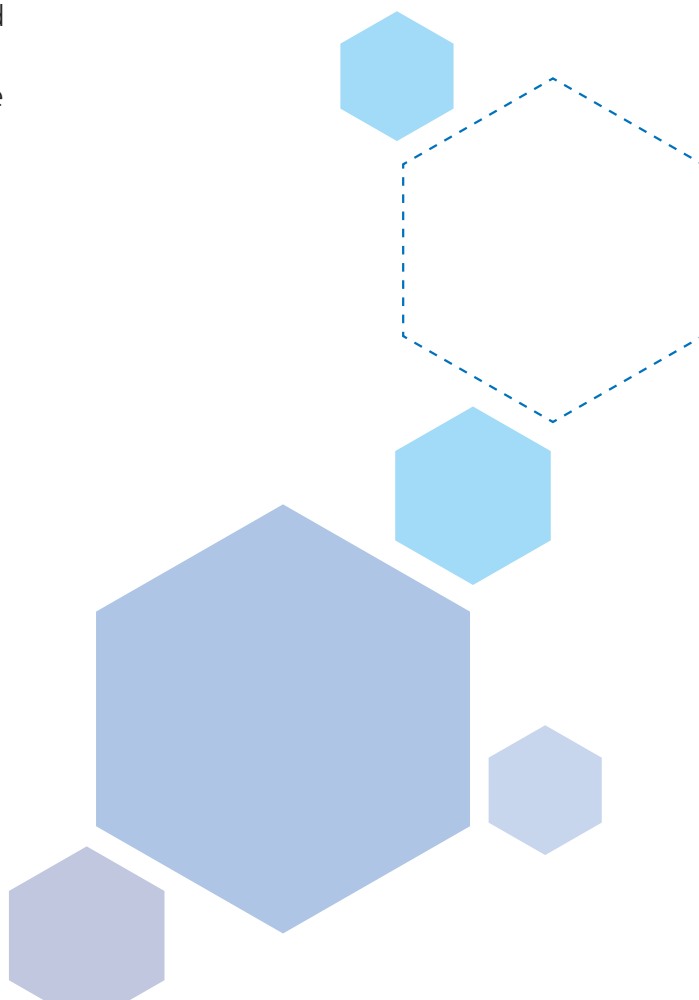
In the past 12 months, numerous documents have been published providing new guidance and evidence with respect to HCAI testing and control. The Infection Control Leadership Meeting (ICLM) continues to meet regularly and is attended by leaders including IPC Matrons, Deputy Director of infection Prevention and Control (DDIPC) as well as Infectious Diseases, Microbiology, and Virology Consultants. These meetings are an opportunity to review local practice and assess how best to implement guidance safely. The clinical impact of IPC practices is discussed and recommendations from this expert group are referred to senior decision makers in the trust. A clear IPC governance structure pivots around the IPCT meeting and the Healthcare Associated Infection (HCAI) group monthly meetings where Clinical Service Units (CSU) colleagues are invited to attend to present their IPC challenges and successes.

We have enjoyed working closely with our West Yorkshire Association of Acute Trusts (WYAAT) and community partners through the pandemic and we are keen to develop this joint working across our Integrated Care Board (ICB) to tackle IPC challenges over the coming year. We are delighted that the LTH executive team has agreed that HCAI reduction will be one of the seven annual commitments for all staff, and we are looking forward to supporting the organisation to deliver on this.

New Medical Lead for IPC role

We were extremely pleased in September to appoint a New Medical lead for IPC. The remit of the new role is to deliver the trust's legal and mandatory commitments for IPC working alongside the Director of Infection Prevention and Control (DIPC) and Deputy DIPC, with a focus on working with senior clinicians to lead best practice. Unlike previous IPC leadership roles, the Medical Lead for IPC will also oversee the trust's planning, investigation, and response to the threat of antimicrobial resistance (AMR).

The Medical Lead for IPC will be supported by a small team of deputy IPC doctors who will focus on specific areas such as preventing infection in surgical pathways, antibiotic stewardship and tackling C difficile rates.



3. Performance in 2022-2023

Meticillin Resistant Staphylococcus aureus (MRSA)

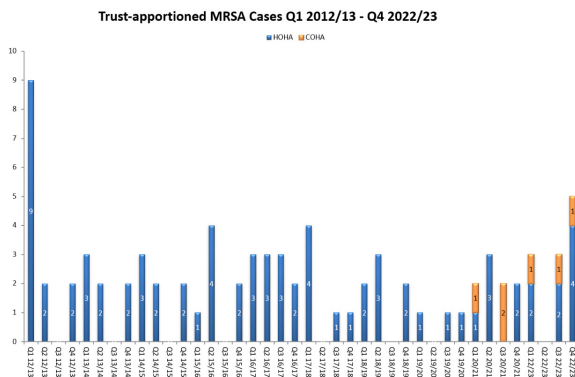


Figure 1

Mandatory MRSA Blood Stream Infection (BSI) surveillance has been undertaken since April 2001 by all NHS Trusts in England. At the time of writing, 11 MRSA bacteraemia's had occurred in LTHT in 2022-23 against a trajectory of zero. This is a significant increase in cases as compared to our position in 2021-2022 (n=5)

All MRSA bacteraemia cases have been reviewed in detail by CSUs, not only at Root Cause Analysis (RCA) meetings but also with presentations at the Operational IPC Team meeting which is chaired by the Director of Operations (Transformation). An exception report collating information about 8 of the 11 cases was submitted to the HCAI Group in February 2023 describing the themes identified from MRSA reviews. (Cases 9,10 and 11 had not yet occurred) The themes included best-practice around prosthetic devices and the critical need to follow guidance on MRSA screening, decolonisation and source isolation. It was identified that there were educational gaps around MRSA at LTHT, as many staff members have not

worked in an era where MRSA posed a significant clinical threat. In response, the IPC team sent out trust wide communications to provide information to all staff.

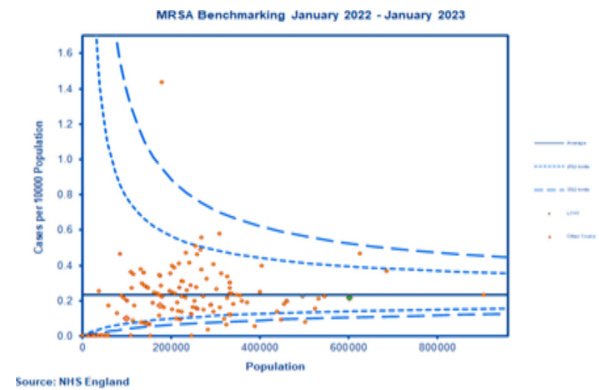


Figure 2

Key work streams to improve this metric next year will be a quality improvement project to reduce A&E blood culture contamination, focused review and advice on MRSA screening and decolonisation, interventions to improve early removal of cannulas, a task and finish group to improve IPC in theatres and continued reduction of risk related to prosthetic devices. The latter action will be led through the established Invasive Devices Group.

Clostridioides difficile infection (CDI)

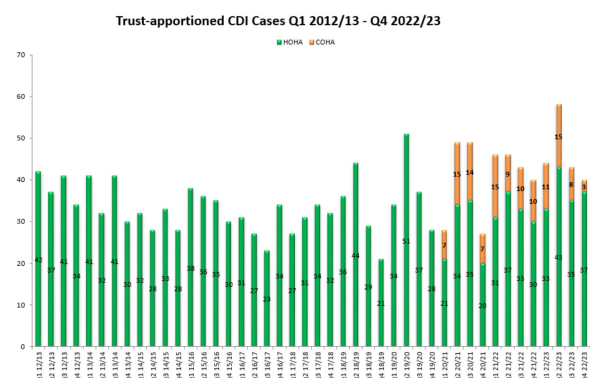


Figure 3

The number of CDI cases exceeded the nationally set LTHT objective, with 185 cases

against an objective of 164 for 2022-23. Of these cases, 37 were classified as community-onset-hospital-acquired. Rates increased in the first six months of the year, becoming more consistent in the second half of the year to March 2023. This increase has been mirrored in the national reporting data for CDI.

Most LTHT CDI cases were hospital-onset hospital-acquired, with many patients having typical risk factors such as older age, recent antimicrobial use and immunosuppression. There have only been a small number of outbreaks with the same type-linked cases. This suggests that patient-to-patient transmission between symptomatic cases has not been a strong theme. Importantly, high bed occupancy (>100%) has been a challenge throughout the year, and it has not been possible to use a ward area for decant to allow a proactive Hydrogen Peroxide Vapour (HPV) disinfection campaign. This meant it was difficult to reduce the risk from environmental spore contamination which can arise from *C. difficile* shedding by asymptomatic patients. This risk may have been exacerbated by such high bed usage. However, the Trust has implemented the National Standard for Healthcare Cleanliness 2021 to all clinical areas which will have helped reduce environmental risk and we continue to work with operational and facilities teams to look at providing Trust-wide HPV.

All CDI infections at LTHT are investigated with Root Cause Analysis (RCA) meetings attended by nursing, clinical, IPC and microbiology colleagues. Themes are shared to identify areas for improvement. Identification of poor communication around CDI results led to changes in microbiology working in 2021, and the introduction of a weekly *C. difficile* ward round in December 2022. This is now a multi-disciplinary ward round with IPC, Pharmacy, Microbiology, and Infectious Diseases colleagues. Learning from the round is shared with the wider team in a weekly

IPC newsletter. CSUs share learning from RCAs through perfect ward presentations and CSU quality meetings. Additionally, to help reduce CDI, work to refresh Antimicrobial Stewardship (AMS) at LTHT is progressing with a new Improving Antimicrobial Prescribing Group (IAPG) chair and a new AMS strategy being agreed in February 2023. Close working between IPC and the AMS team has been a key area of progress this year and we look forward to collaborating further to escalate the changes in clinical practice needed to improve antibiotic prescribing at LTHT over the next 12 months.

Meticillin Susceptible *Staphylococcus aureus* (MSSA)

Meticillin-Susceptible *S. aureus* (MSSA) BSI s 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.

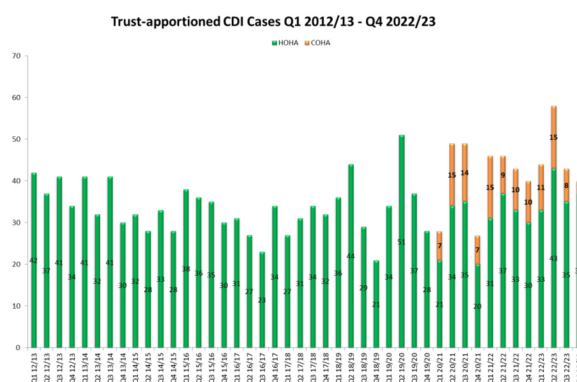


Figure 4

In 2022-23 we recorded 94 cases against a local objective of 74 cases. The increased incidence of MSSA bacteraemia has been noticeable over at least the past 2 years. The Invasive Devices group was established last year and met in September and November 2022. This multi-disciplinary group will analyse the clinical pathways related to intra-vascular

devices and urinary catheters and implement change to reduce risk. Clinical leadership is essential for minimising risk from invasive devices; a proposal for IPC deputy roles is on-going to create a team to support this work. Finally, it is likely that interventions planned to reduce the risk of MRSA infection will also improve rates of MSSA infection.

Gram Negative Bloodstream Infection (GNBSI)

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 summarised in figure 5:

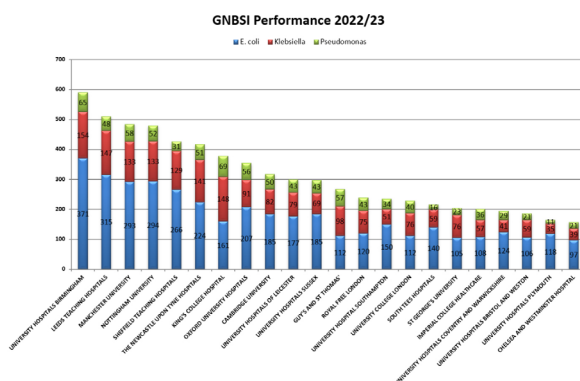


Figure 5

Escherichia Coli (E.coli)

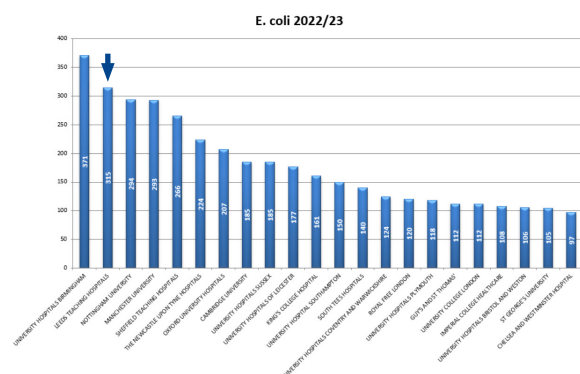


Figure 6

In 2022-23 we recorded 315 cases against a national objective of no more than 267 cases.

The figure shows performance against our peers for the reporting period with the arrow indicating how we compare. A paper on tackling GNBSI with actions and timelines was submitted to HCAI group outlining the ten work streams involved in tackling E coli. The IPC team continues to work collaboratively on implementation of this action plan; this will be a core component of the annual commitment on HCAI from April 2023 to March 2024.

Klebsiella species

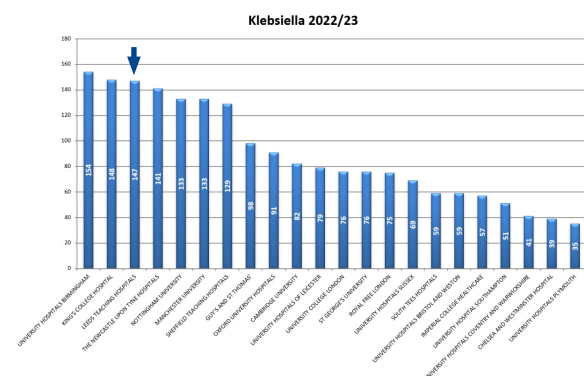


Figure 7

In 2022-23 we recorded 147 cases against a national objective of no more than 91 cases. Figure 7 shows performance against our peers for the reporting period with the arrow indicating how we compare. All CSUs continue to provide HCAI assurance through the Infection Prevention governance structure. Investigation analysis of Gram-negative bacteraemia includes evidence that device related infection; urinary catheters and intra-vascular access devices are a concern. These work streams are being picked up in the IPC Invasive Devices Group.

Pseudomonas aeruginosa

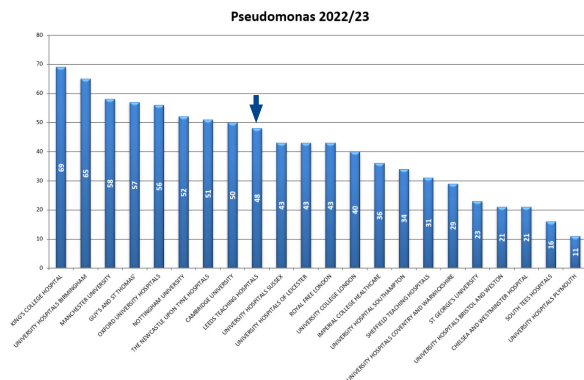


Figure 8

In 2022-23 we recorded 48 cases against a national objective of no more than 52 cases. Figure 8 shows performance against our peers for the reporting period with the arrow indicating how we compare. The IPC team has launched a Trust-wide water safety strategy which includes a *Pseudomonas aeruginosa* risk assessment to be carried out on all augmented care units, these commenced on 25th November with a multi-disciplinary team involving clinical representatives, IPC and Estates and Facilities colleagues. These reviews are in alignment with new national recommendations (Building Standard BS8580-2). The future water safety strategy will include a one-off inspection of each augmented care unit per year and ongoing support for each ward team to develop their own water assurance processes monthly. Support to provide water safety training for all staff working on augmented care will be a core part of this improvement work and an educational video has been made. This work will be reported back to the Water Safety group in the first instance but also to the IPCT and HCAI Group meetings.

4. Outbreaks and other communicable disease incidents

Specialty and Integrated Medicine (SIM)
Klebsiella Producing Carbapenemase (KPC)
outbreak July 22 - Feb 23

The outbreak was opened in July 2022 following identification of a KPC positive (KPC+) organism in a clinical specimen of a patient on one of the SIM wards; screening of contacts on that ward identified 2 further patients colonised with KPC positive organisms. Subsequently a further KPC+ organism was isolated from a clinical specimen of a patient on a different SIM ward with positive screens from contacts on the second ward; patient movements showed there had been contacts between both wards. The outbreak was escalated to a major outbreak in mid-August 2022 following identification of increasing numbers of colonised contacts on screening and weekly meetings were held, chaired by the Deputy DIPC/Medical Lead for IPC, with representation from multiple organisations including community IPC and United Kingdom Health Security Agency (UKHSA) field epidemiology team. The outbreak was likely due to person-to-person spread and not from a point source outbreak.

Several actions were implemented to control the outbreak, including weekly screening of patients in wards where positives had been identified, point prevalence screening across SIM and some urgent care wards in an attempt to identify the extent of the outbreak, environmental reviews, IPC audits, ward visits by IPC, Matrons and Consultant Microbiologist, increased cleaning, HPV terminal cleans, dedicated ward for CPE positive patients, provision of educational and training sessions and materials and antimicrobial pharmacist reviews. It was acknowledged that the situation

was exacerbated due to the nature of the patients, including some who were mobile on the ward, multiple ward moves and re-admissions, and the importance of identifying previously exposed patients when re-admitted was recognised, with a revision to CPE risk assessment policy to include screening of patients who have recently been on SIM wards.

All KPC+ samples from SIM areas were referred to Colindale reference laboratory for typing of the organisms. In total, 41 patients were identified as part of this outbreak, based on typing and patient timelines/contacts. Four patients with KPC positive samples were excluded on typing results and timeline reviews.

Forty of the 41 patients had *Klebsiella oxytoca*, (KOXY) 1 of whom also isolated a KPC+ *E. coli* (case 1). Of these 40 KOXY patients, 24 patients had LEEDPKL-8, 15 patients had LEEDPKL-7 and 1 patient had LEEDPKL-7' (closely related to LEEDPKL-7) on typing. Also included in the outbreak numbers was 1 patient (case 8) who isolated a *Klebsiella pneumoniae*, included because of close time & place to other cases.

The outbreak was closed on 23.2.23. The last case identified before the outbreak was closed was from a screen taken 2.2.23. No positive contacts were identified from this case. No further cases have been identified for 6 weeks' weekly screening of wards identified as high-risk areas, or in any area since outbreak closure.

At the time of the closure of the outbreak in February 2023, 23 of the 41 outbreak patients had died, some after discharge, not all causes of death are known as some occurred in the community; where cause of death was known, a few died with infection-related causes but none identified being treated for CPE infection at time of death, often reflecting co-morbidities and decisions that treatment of any infection was not appropriate. Most of the CPEs were picked up from rectal screens, 4 were identified from clinical specimens; 3

of these patients died on end-of-life care and were not treated for KPC+ KOXY infection, the other patient did not require antibiotics to treat a KPC+Koxy infection (isolated in a urine sample and was asymptomatic).

A minority of patients did receive antibiotics during their inpatient stays directed to include the KPC+ organism cover. A significant number of cases were care or retirement home residents and the community IPC team were involved with Trust IPC/microbiology/SIM colleagues in providing a collaborative system approach to advice and education to care homes. Following the closure of the outbreak, there are on-going audits on 2 elderly admissions wards (J19 and J21) of compliance with the revised CPE policy (risk assessment and screening policy).

Adult Critical Care Difficult to Treat Extensively Drug Resistant Pseudomonas outbreak (DTR-PA)

An outbreak on Critical Care was opened in April 2022 following identification of a case of difficult-to-treat resistant *Pseudomonas aeruginosa* (DTR-PA) infection in a patient occupying a side-room on L07 which had previously been occupied by a patient also known to have this organism. The DTR-PA was carrying an imipenem (IMP) carbapenemase, this is a type of resistant bacteria rarely seen in Leeds. The index case had been admitted earlier in April 22 after receiving care in Pakistan and was found to have 3 carbapenemase-producing organisms (CPOs) on arrival in the UK. The index patient sadly passed away from extensive infection and injuries. In total, 4 patients with DTR-PA were identified in this outbreak (i.e., the index case and 3 subsequent cases), and some suffered significant harm from DTR PA infection; one with limb loss and two died. The first 3 patients were in the same side-room, the 4th was found to have DTR-PA in a wound in late July 22. The last patient was cared for

elsewhere on the ward and was admitted after a gap of several months after the previous patients were discharged. This patient did not come to harm from the DTR-PA.

The gap of many weeks between infection cases raises concerns around an environmental niche of DTR-PA and a detailed infection prevention and control review revealed that the most likely mechanism of transmission of the bacteria related to our sinks and water practices around patients. A detailed outbreak investigation was led by the CSU outbreak team over several months. Environmental sampling and water sampling did not identify DTR PA though this is not unusual in this kind of low-level longer-term outbreak. Once a point source was excluded, interventions targeted environmental improvements and improved IPC practices for all staff teams.

The management of the outbreak was an excellent example of collaborative working involving Adult Critical Care, Microbiology and Infection Prevention, Estates and Facilities and many more. Actions included patient screening, enhanced cleaning, multiple environmental reviews, a water safety review, water safety education, adjustments to the fabric of the ward, removal of sinks (including in the side-room of the index case) and careful antimicrobial stewardship. Modifications to L06 were made simultaneously to make sure the high IPC standards were consistent across both adjoining wards. Patients are regularly transferred between them. The actions were successful in bringing the outbreak swiftly to a close and ongoing assurance measures are in place to minimise the risk from the environment to prevent a recurrence. The outbreak was closed in October 2022.

Neonatal MRSA outbreak June 2022

Transmission of MRSA between 2 neonates at LGI L43 and transmission of MRSA between

2 neonates at SJUH J01 was identified due to failure to isolate appropriately and source isolate effectively, this was managed as Level 2 outbreak, the first meeting was held on the 24.6.2022. Enhanced cleaning, environmental review, source isolation competency training and hand hygiene reinforcement were implemented as part of the outbreak control measures. The outbreak was confirmed by molecular typing and an escalation pathway has been agreed on the unit on occasions when there is inability to isolate. The outbreak was closed on the 17th of August 2022 after weekly consecutive screens were reported negative.

Neonatal *Serratia marcescens* outbreak December 2022

On the 23rd of December 2022, a major outbreak of *Serratia marcescens* (LEEDPSE-4 outbreak strain). was declared on L43 and J01, both neonatal units have been affected by the outbreak due to the movement of neonates and staff between the two sites. A total of 15 neonates have tested positive for *Serratia* (1 presumed index case which was transferred from another facility, plus 14 further positives). One positive neonate with positive blood culture had signs of severe sepsis and unfortunately died. Gram-negative sepsis was recorded as the cause of death. Criteria to close the outbreak was set at four consecutive weeks of negative screens across the speciality. An intensive programme of measures was put in place to control this outbreak which included hand hygiene daily audits, environment and equipment decontamination, task & finish group for milk kitchen and water safety walk around and antimicrobial reviews. The outbreak was closed on 1st March 2023; however, it was agreed weekly screens will continue until all the positive babies have been discharged. Oversight and review of the actions will be reviewed through the weekly neonatal IPC meeting. The CSU has been asked to put forward options appraisal to reduce the risk of further outbreaks

across neonatal services by adapting the current estate/process within the L43 ward area and seek Senior Executive support to make changes within the L43 footprint.

***Pseudomonas aeruginosa* - Paediatric Oncology**

In June 22 the Paediatric Oncology unit declared an outbreak of *Pseudomonas aeruginosa* (PA) following detection of 3 blood stream infections with this organism. PA infection occurs more frequently in patients with immunosuppression and all blood stream infections with this organism are investigated as part of routine IPC practice. The CSU microbiologist and IPC team monitor incidence rates of PA infection and there is a low threshold for opening PA outbreaks in any augmented care units in Leeds. This is so that interventions can be put in place to control any risk of environmental acquisition of PA in these high-risk patient populations.

The outbreak case definition was any patient who has a PA bacteraemia with a Variable-Number Tandem Repeat (VNTR) strain matching, or extremely closely related to, another patient's result. Cases also include anywhere a patient's VNTR strain matched an environmental PA strain. In total, 5 patients met this case definition including cases identified as part of a lookback exercise to early 2021.

One of the initial 2022 PA cases was closely linked (by VNTR) to two patients who had PA infections in the previous year (2021). However, this strain is a 'common' strain, i.e., frequently seen at the national reference laboratory. This means transmission in Leeds could not be confirmed or ruled out based on the typing result. Several environmental reviews, including detailed analysis of water use, took place on the unit with collaboration between Infection Control, Paediatric Oncology, Adult Haematology, Estates and Facilities teams. As part of the reviews, water

and drain sampling was carried out which revealed positive PA drain samples in a bay on L31. These samples recovered an identical strain to the two 2021 patients, suggesting an environmental reservoir of this organism. Drains are not sterile, and PA colonisation is frequently identified when they are sampled. However, it is possible to introduce measures to reduce risk to patients from environmental sources and this was a core element of outbreak control in this unit.

During the outbreak, 2 further bacteraemia's were identified between June and August 2022. One patient's strain matched environmental strains on L33 (side room 5 and 6 shower mixers) and a L31 visitor shower outlet. Remedial work was performed on all positive water outlets as part of outbreak management. Two other PA bacteraemia's were detected during the outbreak, but these cases were later excluded as they were unique according to strain typing (VNTR), and therefore may not have been acquired in the unit.

Since the start of 2021 there were 5 bacteraemia's meeting the outbreak definition - either being identical strains to another patient or to environmental isolates. The last case was detected on 30/8/22, detailed actions were completed, and the outbreak was closed in November 2022. Since the outbreak closed, monthly visits to the wards for proactive water safety review have been set up by the local teams to help prevent future outbreaks.

Hepatitis B in renal dialysis SJUH and Seacroft

A case of Hepatitis B was detected on routine testing in a patient receiving dialysis from 3rd October 2022. The patient was negative on testing pre-dialysis; they were cared for in both J48 and Seacroft dialysis units. An incident was called on 1st February and it was not possible to be assured that exposure had not occurred, though overall

risk of transmission is very low. 464 patients have been identified as receiving dialysis in units at the same time as the index case. All patients and staff have been informed of the incident and provided with support. Occupational Health colleagues have been closely involved to review hepatitis B immunity in renal staff and offer booster vaccination or consultation as required. An algorithm is being used to assess patient's immunity, test for Hepatitis B infection and provide booster vaccinations. A fortnightly incident group continues to monitor progress through a phased approach to complete this assessment as well as completion of actions related to the environment. The incident continues to meet to allow time for the testing algorithm to be completed, the process is due to complete in May 2023. There is no evidence that hepatitis B acquisition has occurred.

Virology

Influenza

During the influenza season 9th September 2022 to 30th March 2023 the laboratory at LTH tested 4,694 samples. This reached a peak with 327 tests performed in the week commencing 23rd December 2022. As predicted by the influenza seasons in the Southern Hemisphere the season started earlier than usual and peaked the week commencing the 2nd of December when 65.8% of samples tested for influenza A in the laboratory were positive. There followed a sharp drop off in influenza A, with the season coming to an end mid-January 2023.

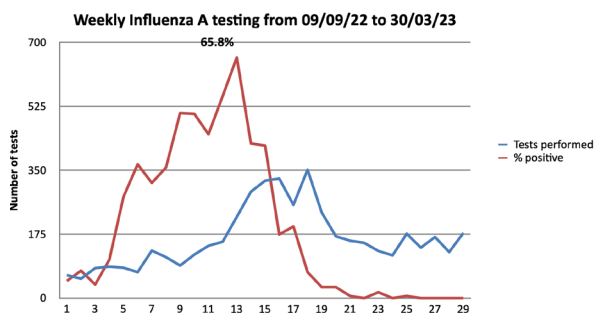


Figure 9

SARS-CoV-2

During the period 1st April 2022 to 31st March 2023 243,865 LTHT patients were tested for SARS-CoV-2 PCR in the laboratory with an overall positivity rate during this time of 4%. This compares to 2020/2021 and 2021/2022 when 242,574 tests (3% positive) and 443,362 (1.5% positive) were performed respectively. The difference in numbers and positivity rates reflects national requirements for testing which changed over time, becoming more targeted, and continued to do so during the last 12 months. In the first 4 weeks of the year, we tested on average 8373 per week and in the last 4 weeks 3106 per week. Over the last 12 months the positivity rate has varied significantly as we have continued to experience 'waves' of infection throughout the year (Figure 10).

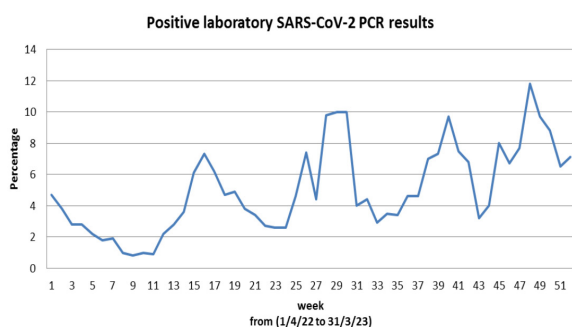


Figure 10

Tuberculosis (TB)

Patients with active TB are predominantly managed as out-patients. 62 cases of TB were notified in the Leeds area in 2022-2023. 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 19, the TB service has continued to function, and the team have shown great adaptability in continuing to see patients throughout the frequent surges in COVID 19 and Influenza regionally.

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

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 an RCA or stop the line (STL) investigation undertaken. This is to 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 a total of 800 Investigations have been undertaken during 22-23.

| Organism Name | Total |
|------------------------------|------------|
| Escherichia coli | 315 |
| Clostridium difficile toxin | 185 |
| Klebsiella | 147 |
| Staphylococcus aureus | 94 |
| Pseudomonas aeruginosa | 48 |
| Staphylococcus aureus - MRSA | 11 |
| Grand Total | 800 |

Figure 11

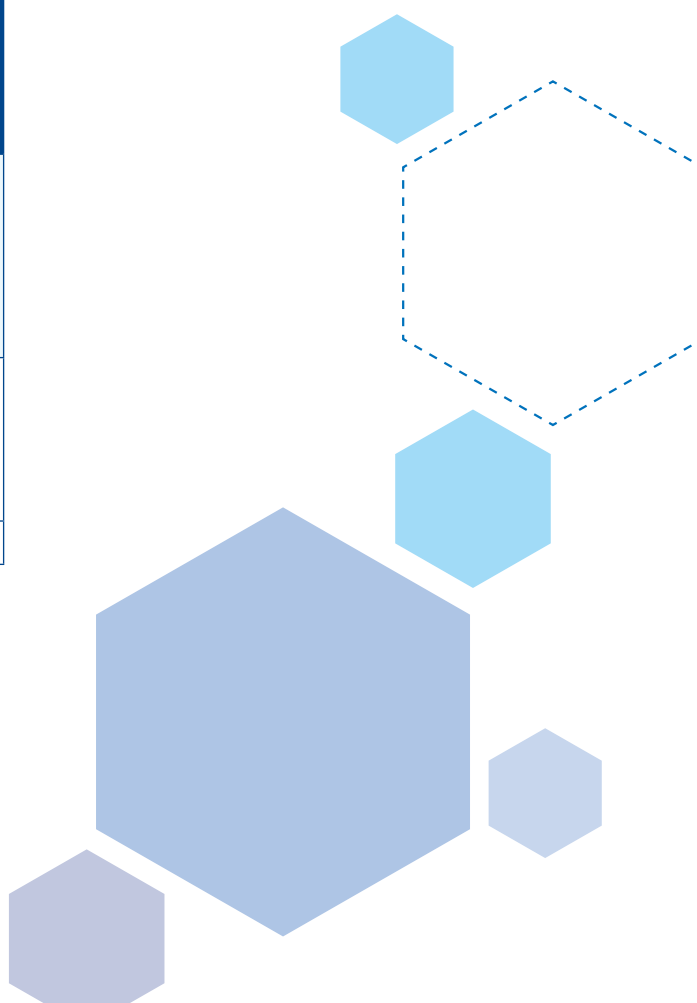
COVID 19 data is excluded from figure 11 as a Clinical Service Unit (CSU) led Stop the line process was implemented for all single cases which supplemented a process of robust outbreak investigation for two or more cases. Figure 12 identifies the number of COVID 19 single Case STL investigations carried out during the year. With the national changes to the Patient Safety Incidence Response Framework (PSIRF) the Infection Prevention and Control team continues to work through new and innovative ways of embedding the process for HCAI.

| Criteria | Number of STL's Excluding Outbreaks |
|---|-------------------------------------|
| Hospital-Onset Definite Healthcare-Associated – First positive specimen date 15 or more days after admission to trust | 123 |
| Hospital-Onset Probable Healthcare-Associated - First positive specimen date 8-14 days after admission to trust | 85 |
| Total | 208 |

Figure 12

A deep dive in respect of the learning identified from the 11 MRSA bacteraemia's has been undertaken and the respective

CSU's have shared learning at the Operational Infection Prevention and Control Group (OIPC) to describe improvements taken to prevent further cases. A trust wide communication strategy has also supported this process with the completion of MRSA screen savers and the dissemination of learning through the Quality and Safety Alert Bulletin.



5. Surveillance

LTHT participates in the mandatory UKHSA (Surgical Site infection Surveillance scheme. Between January 2022 and September 2022, repair of neck of femur surveillance was completed each quarter by the Orthopaedic/Trauma team with infection rates ranging from 0.6% to 1.7%. This is within the benchmarked rates for other trusts nationally. The results were fed back locally to the Trauma and Orthopaedic teams.

Percentage operations infected (inpatient & readmission SSIs)

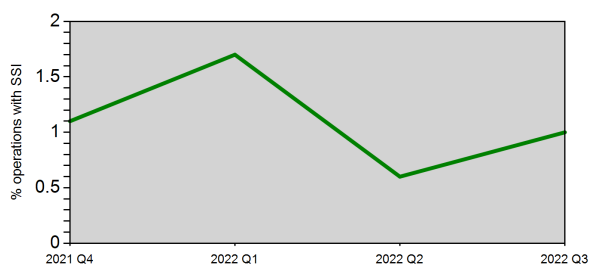


Figure 13

There was no additional surveillance carried out by the Infection Prevention and Control team as the team continued to carry vacancies and prioritised the response to COVID-19 which remained at a significant level.

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.

Phase 3 of the updated ICNET HCAI surveillance programme is ongoing, this includes a surgical site surveillance programme module which will provide clinically led improvements this has seen a slight delay however is scheduled to be in place later in 23/24.

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. Staffing levels in Microbiology and the Pharmacy Infection Team have continued to have an impact on dedicated time to AMS this financial year.

Antimicrobial Stewardship CQUINs and NHS Standard Contract

Quality improvement targets set through the NHS Contracts and Commission for Quality Innovation (CQUIN) resumed in April 2022 after 2 years of suspension due to the pandemic.

There was no target set for a reduction in total consumption, however this is still a national expectation based on the 20-year AMR plan. At the time of writing this report, the data from March 2023 showed that LTHT had a 15.8% increase of total antibiotics per 1000 admissions when compared to the baseline year of 2018. The previous 2 financial years were previously reported as showing increases of 8% increase and 11%. However, the method of calculating has been amended this year and the comparators are increases of 11.2% (Financial year 21/22) and 19.8% (Financial year 20/21). Unfortunately, there is still a significant increase of antibiotics within the trust which needs to be addressed.

A target of a 4.5% reduction in antibiotics classified as Watch and Reserve was set. LTHT (up until February 2023) has not achieved this, and instead shown an increase of use in these categories of 10.8% (compared to 2018 baseline).

It is to be noted, the baseline year will be changing to 2017 from financial year 23/24. This year saw a smaller usage than 2018, therefore the figures quoted above will increase.

There were two CQUINs relevant to AMS relating to compliance with guidelines for Community Acquired Pneumonia (CAP) and Urinary Tract Infections (UTIs) in adults aged 16+ years. Whilst these were not chosen for financial incentive, LTHT was still expected to submit data. LTHT exceeded the upper target for the UTI CQUIN in Q1-3 and was within the required ranges for Q4. There was no submission in Q1 for the CAP CQUIN, and 0% compliance in Q2. The two main reasons for non-compliance were not documenting the CURB-65 score and using intravenous antibiotics when oral was suitable. The results for Quarter 3 and Quarter 4 had not yet been shared with the AMS group at the time of writing this report.

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).

The templates for antimicrobial guidelines were reviewed and amended in 2020 to support good antimicrobial stewardship. Approximately 30% of guideline have been updated to the new formats. This has taken almost 3 years to achieve, mainly due to relying on a small group of people to implement this. The trust AMS group (IAPG - Improving Antimicrobial Prescribing Group) will be reviewing the format further in the next financial year with the aim of implementing an Application (App) based product to support AMS in clinical areas.

Antimicrobial stewardship rounds

Advice has continued to be given remotely with some ward-based reviews also occurring. Whilst there are established specialist infection ward rounds (e.g., endocarditis, ICU wards) there remains a gap for a wider stewardship ward round. Staffing limitations within Microbiology and the Pharmacy Infection Team remains at a level where this has been hard to implement, however a Clostridium difficile ward round has commenced this year.

The National Institute of Clinical Excellence (NICE) guidance NG15 summarises the expectations of organisations and how to implement antimicrobial stewardship teams and interventions. The intention is still to review and implement further stewardship ward rounds which will be specific to an organism, antimicrobial (e.g., aztreonam, piperacillin-tazobactam) or duration (e.g. IV longer than 7 days). There will also be the option to start other stewardship ward rounds relating to outbreaks, support areas with concerns, or shortages as appropriate. This was utilised in December during a shortage to enable appropriate reviews of guidance.

Report identifying patients currently on antimicrobials

The report of patients currently prescribed antibiotics continues to be available. It lists all patients on antimicrobials, the type of infection they are being treated for and the duration of therapy to date and allows better targeting of patients for review on Board and wards rounds. This is an underused resource for several reasons. Access can be restricted for key staffing groups (it is not automatically given to all relevant staff), the location of the report has moved and we are waiting for the links to be updated, and more crucially it is often run too late in the morning to benefit immediate patient care especially in areas such as surgery, where ward rounds are completed earlier in the

day. It does however serve a crucial role in audit data for the trust. Local quality improvement initiatives are planned for 2023/24 to support AMS continuous improvement.

Home IV antibiotics service

The adult Outpatient Parental Antimicrobial Therapy (OPAT) and Community Intra Vascular Antibiotic Service (CIVAS) programme targets patients who would be appropriate for treatment with intravenous antimicrobials at home. In 2022-23, there were 361 referrals (54 more than last year respectively.) The total number of bed days saved amount to 4375. Overall, 1363 more bed days were saved than last year respectively.

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 (e.g., protocol, quick list, or longhand), day 3 review data, and details of allergy status (from September 22).

There are approximately a third of patients on antibiotics at any one time with approximately 60% of these being given IV - this has remained consistent for a number of years. Of those antibiotics initiated intravenously, around 50% (range 48-54%) remain this route at 48 hours. Around 70% of allergy statuses include all the required information

Data collected through this route to show day 3 review results has not improved in uptake. The CQUIN for IV to PO switches has been chosen by the trust for financial incentivisation for the following financial year and this will be used as an opportunity to explore standardised documentation relating to antimicrobial prescribing.

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

This was co-ordinated by the Pharmacy Infection Team. LTHT used national messages as a guide, as well as showcasing work done at LTHT that related to the themes. Start the week (with Dr Phil Wood providing executive team support), LTHT Facebook page, LTHT Pharmacy page and twitter were used over the week.

Antimicrobial Stewardship Committee

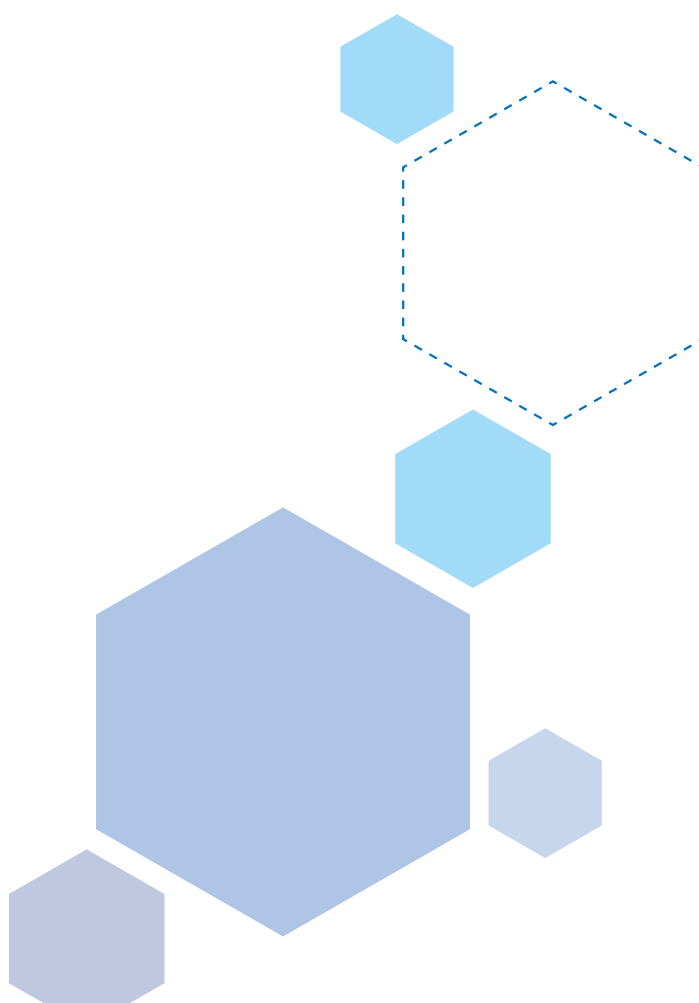
This group has continued to meet virtually monthly for a 1-hour meeting with a three-month rolling agenda to cover: operational needs, strategic needs and a quarterly review against the annual program for antimicrobial resistance and stewardship.

There has been a new Chair and Deputy Chair as of January 2023. The aims for the coming year are to update the Terms of Reference to enable effective change relating to AMS throughout the trust and to support the CQUIN for IV to PO switch which has been selected for financial incentive. An AMS timeout was held in December 2022 which has helped to shape priorities for the group with some short and long term aims. A letter was sent to the Executive team outlining the help required to support these aims. The introduction of a Trust wide Annual Commitment to reduce HCAI for 2023/24 is one method that will support this.

Working with other partners

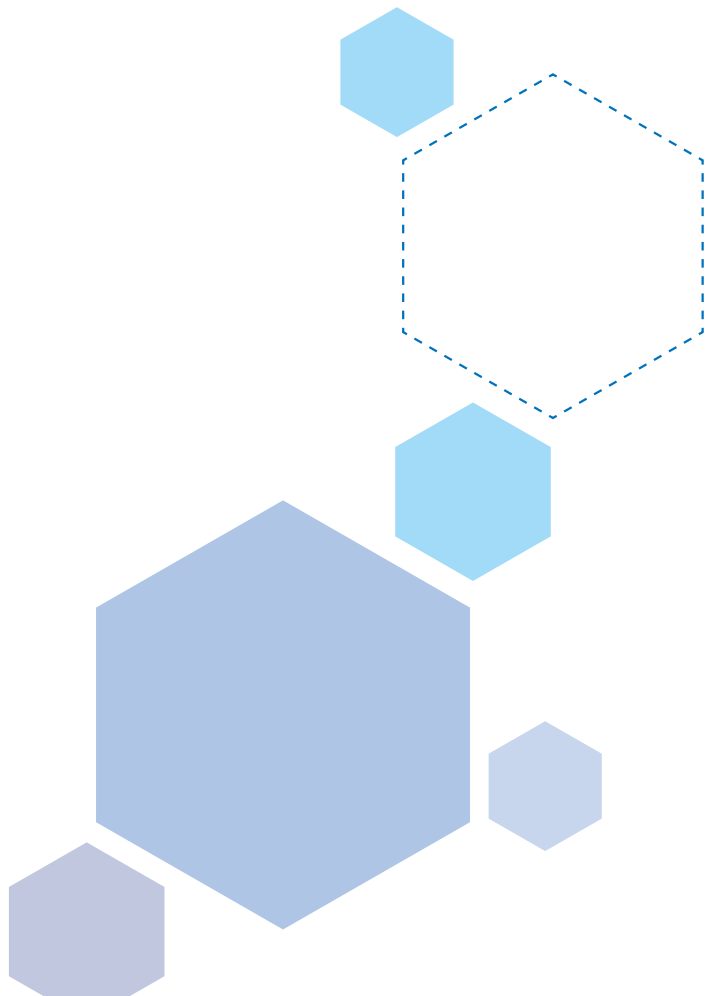
LTHT continued working virtually with others throughout the year with providers, commissioners, and Leeds City Council on AMS to implement the NICE AMS guideline for changing patient and public behaviour. LTHT is represented at the Integrated Care System (ICS) and Integrated Care Board (ICB) meetings

for AMS and AMR and continues to work with other trusts in our area to share best practice on improving antibiotic prescribing.



At the close of the year, Facilities have invested in the latest cleaning technology, which includes automated floor cleaning equipment and the latest HPV decontamination system, which is the next generation of HPV and provides validated results, following each HPV process. In addition, the new model HPV process is completed in a quicker timeframe.

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, this will continue in 2023-24.



8. Decontamination

Strategy & Policy

The Trust's Decontamination Strategy and Policy remain relevant to current statutory requirements and any proposed changes to decontamination guidance. It is essential that such a policy exists 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.

A Heater Cooler Unit (HCU) User Group (multi-disciplinary sub-group of the Water Safety Group) was established in November 2021 and meets quarterly. The HCU User Group is responsible for providing assurance to the WSG that HCUs are being safely managed about water and that related procedures and processes ensure compliant, properly managed and effective practices are adopted for all HCUs. The purpose is mitigation of the risk of severe infection from contaminated aerosols generated by heater cooler units used in cardiopulmonary bypass and extracorporeal membrane oxygenation (ECMO).

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 2021/22/23 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, but as this is not an essential requirement formal registration with a Notified Body is currently on hold for financial reasons.

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 and SJUH 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.

During COVID-19 2021/22 key/higher risk areas were assessed and action plans developed. Operational pressures within the Endoscope Decontamination Units and the wider Trust have delayed the 2022/23 assessments. A process of exception reporting will now be used to prioritise the next set of audits.

IPS audits include the management of Cardiac Heater Cooler Units (HCUs) which through joint working with the Clinical Perfusion Team in 2021/22 led to improvements in decontamination processes and a reduction in associated risk. In 2022/23 and in response to a persistent issue with a Non-tuberculous Mycobacteria, *M. gordonnae* contamination of HCU water tanks (currently considered low risk) Tobyjen (a specialist water contractor) have been asked to carry out their own assessment of current practice.

Risks & Incidents

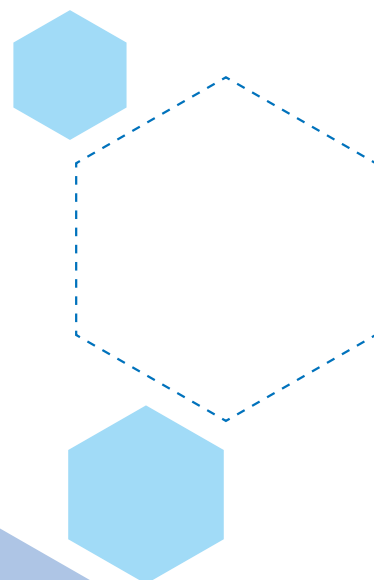
Decontamination related Incident reports and action plans are reviewed as appropriate by the, DMG and HCAI Group to identify and manage risk trends. The responsibility for managing these incidents sits with CSU's.

There is an operational risk associated with high turnover of staff within the Endoscope Decontamination Units. The Hub Management Team are supported by senior HR and E&F Managers and actions have been agreed to mitigate the risk over the coming months.

In 2022 the company STERIS took over CANTEL Medical the manufacturer of most of the decontamination equipment used in the Endoscope Decontamination Units, following initial delays in testing and validation the testing schedule is now back on track (February 2023).

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 provide monitoring and oversight To support the monitoring of the Service provided and to act as a link between B. Braun and the clinical teams the collaboration employed a Contract Manager due to vacancy this role is temporarily being covered by the LTHT Senior Decontamination Manager. In 2022/23 the quality performance measure of defect free product return from B. Braun Sterilog was consistently met with a limited number of defects reported. agreement was reached in 2022 on a 5-year extension to the B Braun Sterilog contract which will now expire in May 2027. A re-tender working group has been established and is chaired by the LTHT Director Commercial & Procurement.



9. Estates

Water Safety

The Water Safety Group continues to provide assurance to the IPC Sub-Committee that Estates and Facilities (E+F) 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, Health Technical Memorandum (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.

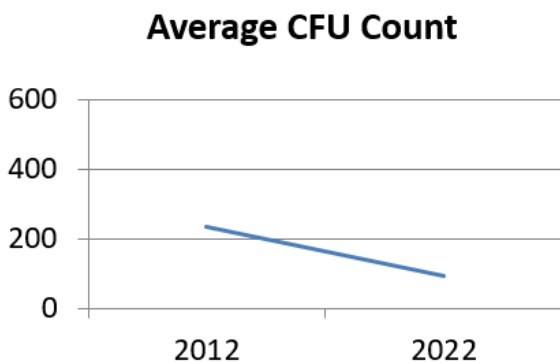


Figure 14

There is a potential risk to every patient, staff member and visitor to our site of exposure to Legionella spp. or Pseudomonas aeruginosa and this risk is taken very seriously by the Trust and is managed accordingly. E&F provide 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.

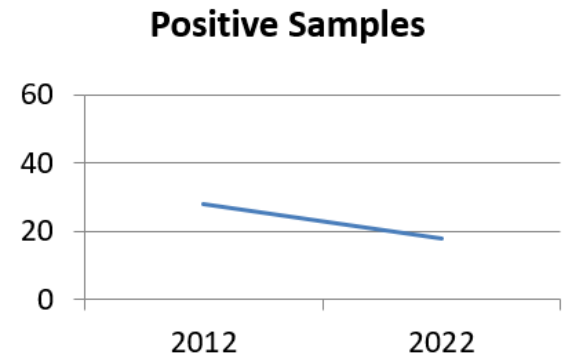


Figure 15

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. The measures we have taken over the last decade have proven results. In Dec 2012, 28 of the 240 outlets sampled gave positive legionella results with an average count of 235 cfu/l. Today from 240 outlets we have only 18 positive results with an average count of 94 cfu/l.

The measures we have taken to control Pseudomonas over the few years have had proven results. In Dec 2019, 56 filters were in place due to positive outlets. With the with an average count more than 300 cfu/l. In Dec 2022, only 3 filters were in place due to positive outlets. With the with an average count of less than 150 cfu/l.

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 HACI’s possibly attributable to the water system. To both give

and receive advice regarding issues raised & drive continuous improvement.

An example of the success of the multidisciplinary approach has been the implementation of Pseudomonas Risk Assessments of Acute Care Areas & shared learning following the examination/ appraisal of the Dr Lee report recommendations (J88/89 MOCG), which has helped focus attention not just on the water infrastructure & it's assets, but on a host of other environmental/ behavioural improvements to E&F, IPC & clinical practices. This has only been made possible by having the right people & specialisms involved. The learning that has been shared from ward outbreaks has supported improvements/ increased awareness across all augmented care areas, a positive step change in our approach to water safety supported by a newly developed 'all staff' training video to support awareness is now complete and with E-Learning.

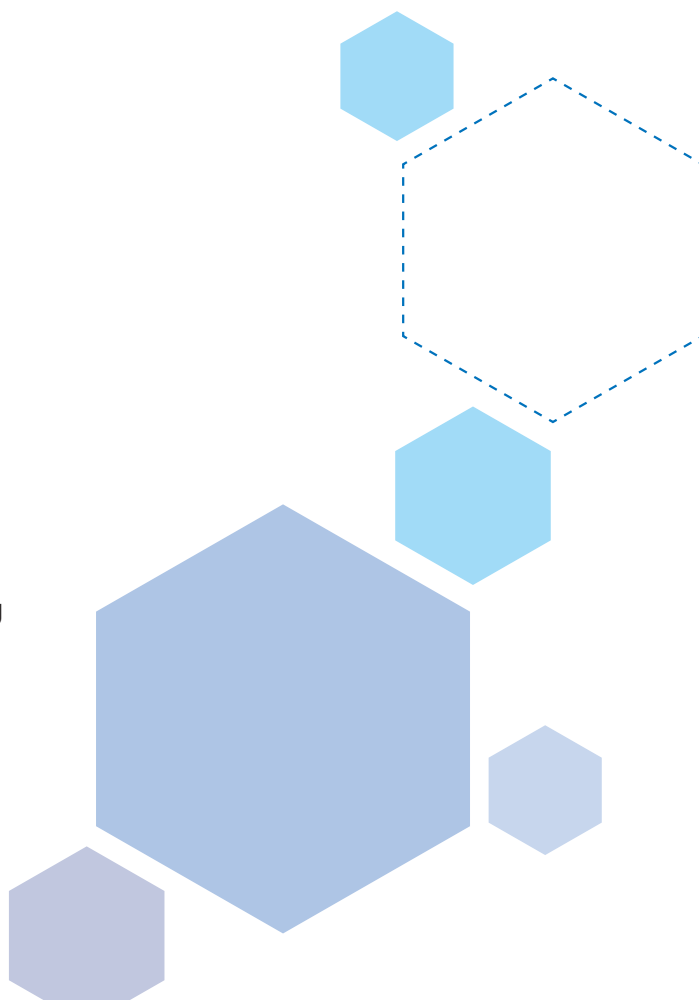
E&F will continue to comply with the Department of Health requirements in relation to water safety and of those within the 2021 Water Safety Policy/Plan and looks forward to strengthening the relationship it has with IPC/ Clinical to continuously improve our control measures and mitigate any risks in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

Ventilation

Ventilation is one of many risk mitigations 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. 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 Trust VSG was formed in 2021 and has now established itself as a multidisciplinary group of specialists, whose remit is to assess all aspects of ventilation safety and resilience required for the safe development and operation of our Trust premises. Estates 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

There are specific scenarios that the HSE has outlined where a report will need to be made under RIDDOR regarding 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 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 contact 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. The excellent collaborative approach in Leeds ensures that all reports are thoroughly reviewed by the appropriate key individuals. There have been no cases to date of occupational disease being submitted by Leeds Teaching Hospitals Trust to the HSE, which is consistent with several partner organisations following benchmarking 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. There have been no reported cases of an incident of this nature in LTHT to date.

Work related deaths

The death of an employee because 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.

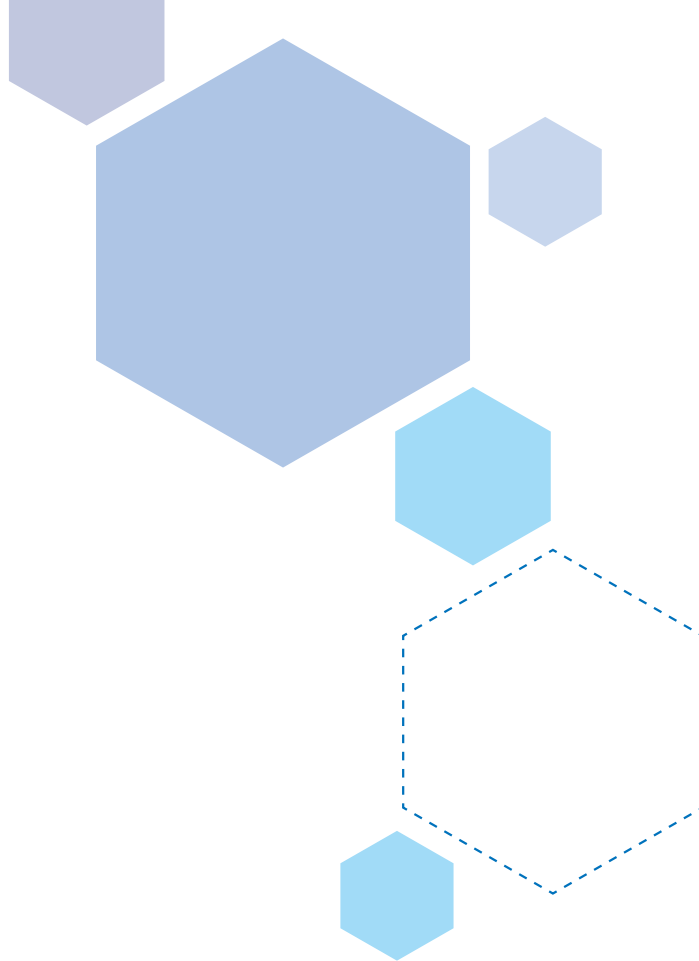
Blood & bodily fluid contamination via inoculation injuries

During the period 1 April 2022 to 28 February 2023 there were seven staff-related high risk sharps injuries reported via RIDDOR to the HSE (there were four 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 RCAs continue to be an agenda item at the Trust Inoculation Injury and Safer Sharps Group meeting (II&SS). 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 originally devised by the Trust 'Social Distancing Group' and provides a means to assess and provide assurance that IPC controls are in place for the non-clinical areas of our hospitals. There have been 6 iterations of this document across the pandemic with the latest version dated August 22. The Health and Safety Team are still engaged in seeking assurances from the approximately 630 areas that make up the Trust that this latest iteration of the assessment has been completed as required and will support the transition to standard IPC precautions as we move through 2023/24.

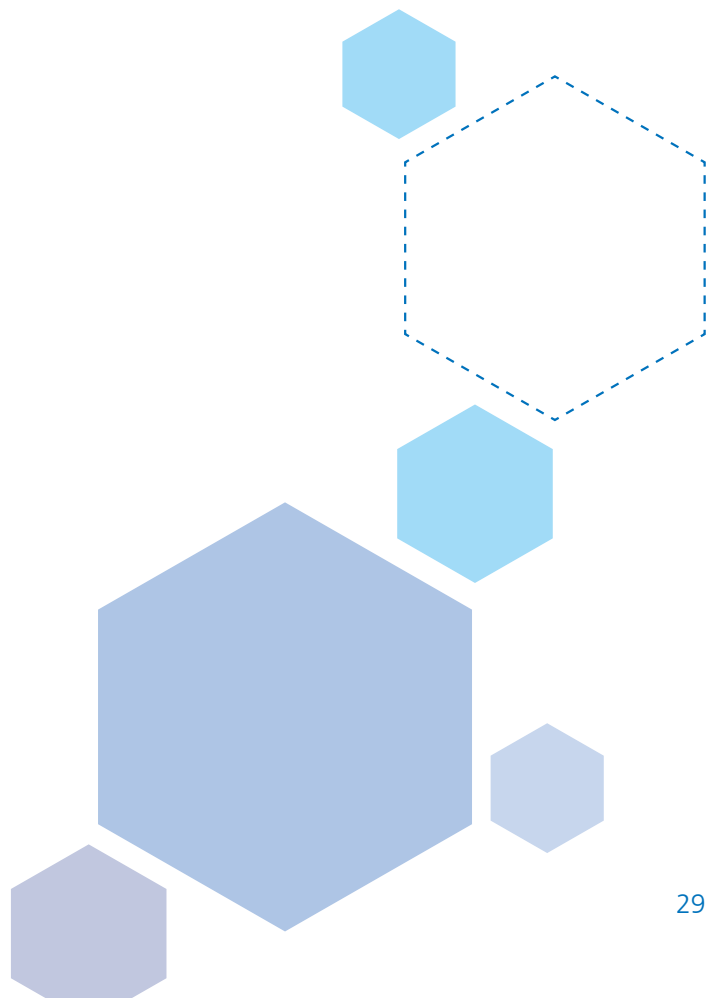


11. Emerging key issues

The IPCT continued to respond to and support the organisation with implementing national guidance ensuring patients, visitors and staff remained at the heart of everything we do.

The changes to UKHSA guidance regarding COVID 19 have continued over the course of 2022-23 with changes being noted both nationally and locally as we move to living safely with Covid. This supported the IPC team to refocus the direction of the IPC service.

The team have had to react to an escalating position for our other mandatory reportable HCAI's - December 2022 saw an increase in other seasonal respiratory Infections in particularly Influenza which placed further challenges with operational flow. The IPCT worked collaboratively with SIM CSU daily to ensure all patients with infections were safely placed.



12. IPC Organisation and management



In March 2023 we said goodbye to Lisa Grant Chief Nurse and Director of Infection Prevention and Control and thanked Lisa for her outstanding executive leadership throughout the pandemic. We are pleased to welcome the Interim Chief Nurse Helen Christodoulides as the incoming Director of Infection Prevention



and Control (DIPC) and look forward to supporting the innovative approach to reducing HCAIs with the development of the Trust HCAI Annual Commitment.

In 2022/23 we welcomed the new role of Medical Lead for IPC, the remit of the Medical Lead is to deliver the trust's legal and mandatory commitments for IPC working alongside the DIPC and DDIPC, with a focus on working with senior clinicians to lead best practice. Unlike previous IPC leadership roles, the Medical Lead for IPC will also oversee the trust's planning, investigation, and response to the threat of antimicrobial resistance (AMR). The Medical Lead for IPC will be supported by a small team of Deputy IPC doctors who will focus on specific areas such as preventing infection in surgical pathways, antibiotic stewardship and tackling C difficile rates.

Acting Deputy Head of Nursing

In November of this year, we welcomed the opportunity to test a new role of IPC Deputy Head of Nursing with each of the IPC Matrons undertaking a rotational 6-month secondment. The developmental post supports both the already established Director and Deputy Director IPC roles.

IPN recruitment

Recruitment of experienced Infection prevention specialists continues to be a challenge within infection prevention and control teams nationally, this has been no different for LTHT and has resulted in continued vacancies. Development programmes and diversification of our recruitment programme to include Allied Healthcare practitioners (AHP) has seen successful. In November we welcomed the appointment of a band 7 and we were delighted in January 23 to appoint our first AHP to the role of IPC practitioner.

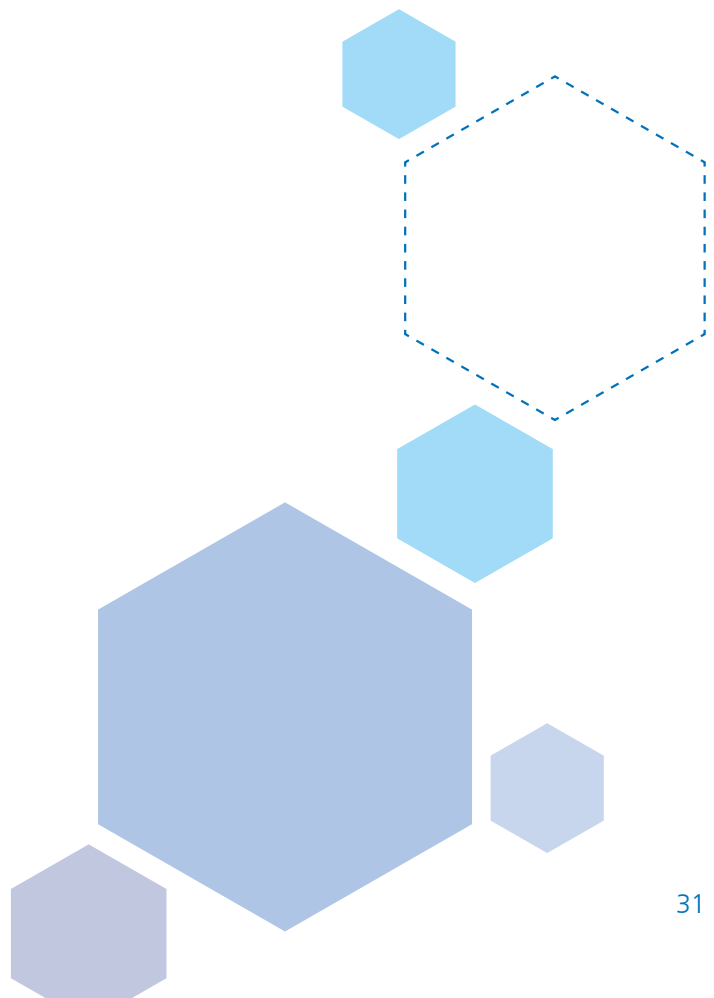
Health and Wellbeing and Professional Development

Supporting the health and wellbeing of the IPCT remains a priority, staff have and are being supported to seek sessions to allow a safe space to fully debrief due to the continued pressures within IPC.

We have continued to support and invest in the professional development of our team, with 4 further members completing Excellence in Practice, 2 team members completing the Mary Seacole Leadership programme. In addition, our administrative team have undertaken the Affina programme, and we continue to support a team member through their master's degree in Infection prevention practice.

Policies and guidelines

We continue to review the 37 Trust IPC clinical guidelines and policies to ensure the latest evidence is incorporated. These will continue to be reviewed and aligned with the recently published National Infection Control Manual for England (NICM) to support clinical teams with a single point of access.



13. Training and education

The IPC team continued to maintain and protect its commitment to delivering the trusts mandatory training programme during 2022-23 whilst supporting the organisation's response to COVID 19. This has included additional bespoke sessions for undergraduate and postgraduate nursing students through the respective Leeds based universities and the relaunch of our Key Worker Programme. Figures 15 and 16 show that compliance for our IPC clinical training has dropped to 76% which is our lowest recorded position since 2014 this reflects the capacity pressures that our teams are experiencing and the multifactorial issues with continued COVID-19 organisational pressures and staff sickness.

We are pleased to report that we continue to remain compliant with IPC Non-clinical training at 89%.

| IPC | Mar-14 | Mar-15 | Mar-16 | Mar-17 | Mar-18 | Mar-19 | Mar-20 | Mar-21 | Mar-22 | Mar-23 |
|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| IPC Clinical | 79.69% | 89.90% | 94.50% | 92.50% | 94.00% | 93.00% | 90.69% | 91% | 80% | 76% |
| IPC Non-Clinical | 85.17% | 93.40% | 90.10% | 95.30% | 96.00% | 94.00% | 94.21% | 89% | 83% | 89% |

Figure 16

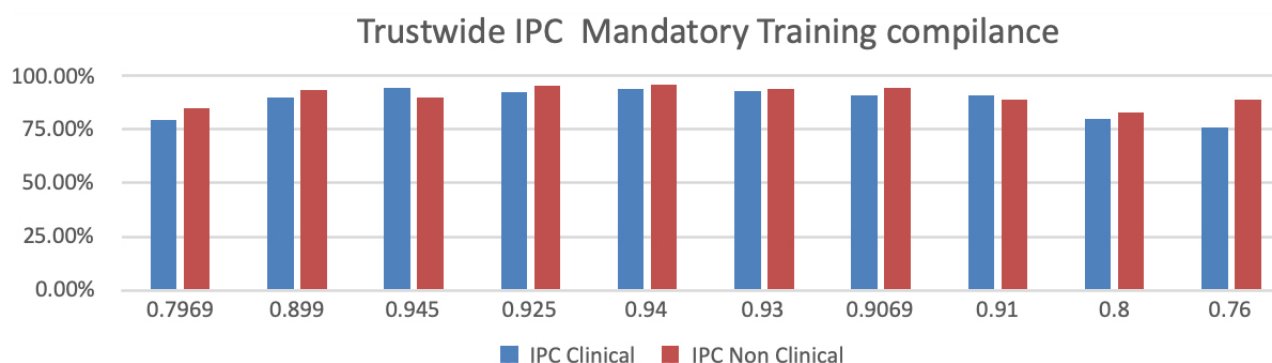


Figure 17

14. Campaigns and further achievements

In April 2022 NHS Improvement issued the National Infection Prevention and Control Manual -which provides evidence-based practice for use in all care settings. The team continues to support its implementation and are currently working with the CSUs to embed into clinical practice.

Deputy Director of IPC receives the Chief Nursing Officer for England award



April also saw our Deputy Director Gillian Hodgson receive the Silver Chief Nursing Officer for England (Ruth May) award for outstanding contribution to IPC. Gillian had been nominated by LTHT's Chief Nurse Team for her contribution to the trust's pandemic response. The award was presented to Gillian by Duncan Barton, Deputy Chief Nursing Officer for England.

World Hand Hygiene Day 5th of May



Annually all healthcare environments are encouraged to support world hand hygiene day, which occurs every May. The theme this year was for us to unite, talk and work together on hand hygiene for high quality safe care everywhere. Two of our team members met our outgoing Chief Executive Sir Julian Hartley to put his hand hygiene technique to the test on our Surewash machine. Julian passed the test at a 100%

CDI Quality Improvement Project

In May 22 several the IPC team attended a regional NHS England Improvement workshop on Clostridioides difficile. Following this an internal (LTHT) quality improvement group was set up which included several CSU's and the Kaizen improvement office team at LTHT. A staff survey was developed which ran in the trust bulletin over a number of weeks. Each of the CSU's involved held multidisciplinary staff focus groups to try and gain an understanding of the knowledge behaviours and management of CDI in the clinical setting. Several key learning points were identified, work will continue into 23/24 to develop a back-to-basics approach to CDI management.

IPC Patient Survey

In July 22 we were proud to have completed the first IPC staff & patient experience survey to shape and inform our IPC strategy, the team received support from the patient experience team to develop a series of questionnaires to ascertain what good IPC care looks like across our organisation.

Time to Shine Award 2022



We were proud to have been nominated by our outgoing Director of Infection Prevention Lisa Grant for the Trust's Executive Team Special Recognition Award 2022. The team were chosen along with the Capital Planning Team for their outstanding and unwavering support to the organisation through the pandemic. The award was presented by the outgoing Chief Executive, Sir Julian Hartley.

Glove Awareness Campaign

A poster titled 'To glove or not to glove that is the question!'. It is divided into two main sections: 'Gloves on?' and 'Gloves off?'. The 'Gloves on?' section is blue and lists four bullet points: 'When in contact with blood/body fluid, non-intact skin, or mucous membranes.', 'When in contact with chemical hazards such as disinfectants, preserving agents or cytotoxic drugs.', 'Only when hands are thoroughly dry (post-hand washing or alcohol rub) to reduce risk of dermatitis.', and 'When in an operating theatre, or carrying out a high risk procedure, it is recommended to double glove.' The 'Gloves off?' section is red and lists four bullet points: 'As soon as gloves are suspected to be damaged.', 'When no longer in contact with blood/body fluids, non-intact skin or mucous membranes.', 'When a single aspect of patient care/treatment has ended (e.g. gloves may be required to empty a urinary catheter before providing mouth care).', and 'When it's necessary to carry out hand hygiene.' and 'When contact with chemicals has ended.' To the right of these sections is a blue box with white text that reads: 'The Infection Prevention Team will be visiting clinical areas from 31/10/2022 with information, posters, leaflets and goodies – look out for us!!'. In the center, there is an illustration of a hand putting a glove on and another hand taking a glove off.

In October 22 the IPCT embarked on a 3-month long Glove Awareness Campaign with the help and support of SC Johnson. The campaign focussed heavily on the reduction of glove usage in the clinical area and the promotion of good hand hygiene all ward and department areas were visited across the trust and were provided with an education pack containing posters and leaflets. A post implementation audit to evaluate the success of the campaign is being developed for 23/24

CPE Guidelines launch

October 2022 also saw the IPCT successfully support the organisation to implement the Framework of actions for CPE for Adults at LTHT. The changes to the guidance and tools and education packages were shared through a variety of platforms and the Medical Lead for IPC and an IPC Nursing representative met with the CSU 's where the biggest impact of the changes would be felt. This was a huge success and local guidance was issued were needed. The Leeds Children hospital is scheduled to implement the framework in April 2023. An educational CPE video has also been developed to support this workstream and will be launched trust wide in May 2023.

LTHT Mask Video

The IPCT team during November launched a video to help educate staff on the correct use of masks within the organisation due to the changes in national guidance surrounding Covid 19. The video was collaboratively filmed with volunteers from the Estates and Facilities teams , Physiotherapy, Nursing and Infection Prevention and Control, this captured the correct practice in both clinical and non clinical areas across the trust . Further videos are being filmed to support the continued implementation of the National Infection Prevention Control Manual and the 10 standard Infection Prevention Precautions.

Celebrating success with HCAI

In March we attended Wards L12, L19, L24 and L41 at the LGI to award them all with certificates of achievement. All the teams have achieved over 6 years since any patient in their care has acquired an MRSA blood stream infection. All these areas care for patients with complex conditions that require numerous interventions, and it is wonderful to showcase their amazing achievements. When asked how they have managed to accomplish this, each area came up with the same key attributes, good hand hygiene and great teamwork



15. Challenges and opportunities for 2023-24

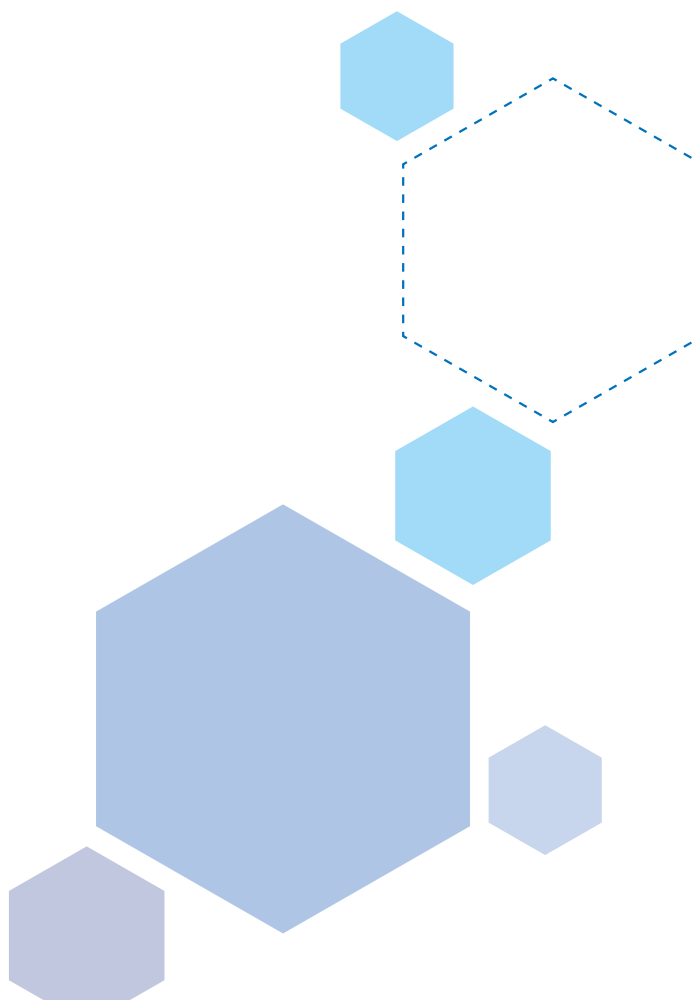
We have a robust approach to root cause analysis for all HCAI but historically there have been some challenges realising the learning from these investigations and sharing it widely. We look forward to refreshing our approach over the next 12 months using the opportunities provided by PSIRF. Using the Leeds improvement method, we will put the patient at the centre and include value added activity to provide efficiency and quality optimising IPC and clinical time, instigate investigations proportionate to the risk and develop key IPC themes for CSUs to focus on. There is also an opportunity to move away from the concept of 'root cause' of harm which supports our established culture of being a learning organisation focused on local data, clinical experience, and continuous reflection.

On this note, we have experienced several CPE outbreaks this year and we are working hard to use the learning and data created by the CPE risk assessment tool to minimise risk from AMR. Close working across traditional boundaries, and especially with our pharmacy infection colleagues, will be a key aspect over the coming months to prevent overuse of antibiotics. This is an essential component to the control of CPE, as well as interrupting patient to patient transmission. Enhanced CPE surveillance will also be essential so that any issues are picked up early to minimise the impact on our patients and our service delivery.

A back-to-basics approach to IPC for all staff is urgently required as the focus on controlling respiratory infection through the pandemic has detracted from other core aspects of infection control. This campaign will be delivered with the introduction of the national IPC manual. In addition, it is recognised that, in LTHT, we provide highly specialised services in all CSUs

and that we need to use local data and clinical learning to develop a bespoke approach to control infection effectively in these areas. The Medical Lead for IPC will work closely with CSU Microbiologists and CSU tri-teams to develop a model where knowledge can be used by experts in the field to minimise the risk of HCAI for all patients in our care.

Nationally and internationally, there continues to be a threat of emerging viral and bacterial pathogens. The IPC team works closely with Microbiology, Virology, UKHSA and Infectious Diseases colleagues and follows updates to national guidance to make sure measures are in place to protect patients in LTHT. This year, the team focus will be on developing a robust clinical leadership model, with defined roles and responsibilities, and improving communication with LTHT and community partners to reduce infection risk for all our patients.



16. Recommendations

The Infection Prevention and Control Sub-committee are asked to:

- Receive the annual report as an accurate summary of IPC work in 2022-23
- Celebrate the achievements of the infection prevention team over the course of 22/23
- Be assured that the team are focusing on refreshing proactive infection prevention work and we are ready to support the trust to deliver on the annual commitment to reduce HCAI
- The IPC team recognise the future risk of antimicrobial resistant infection and the burden this may place on LTHT, and that a leadership and delivery model is being developed to meet this challenge proactively using the Leeds Way values.

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

