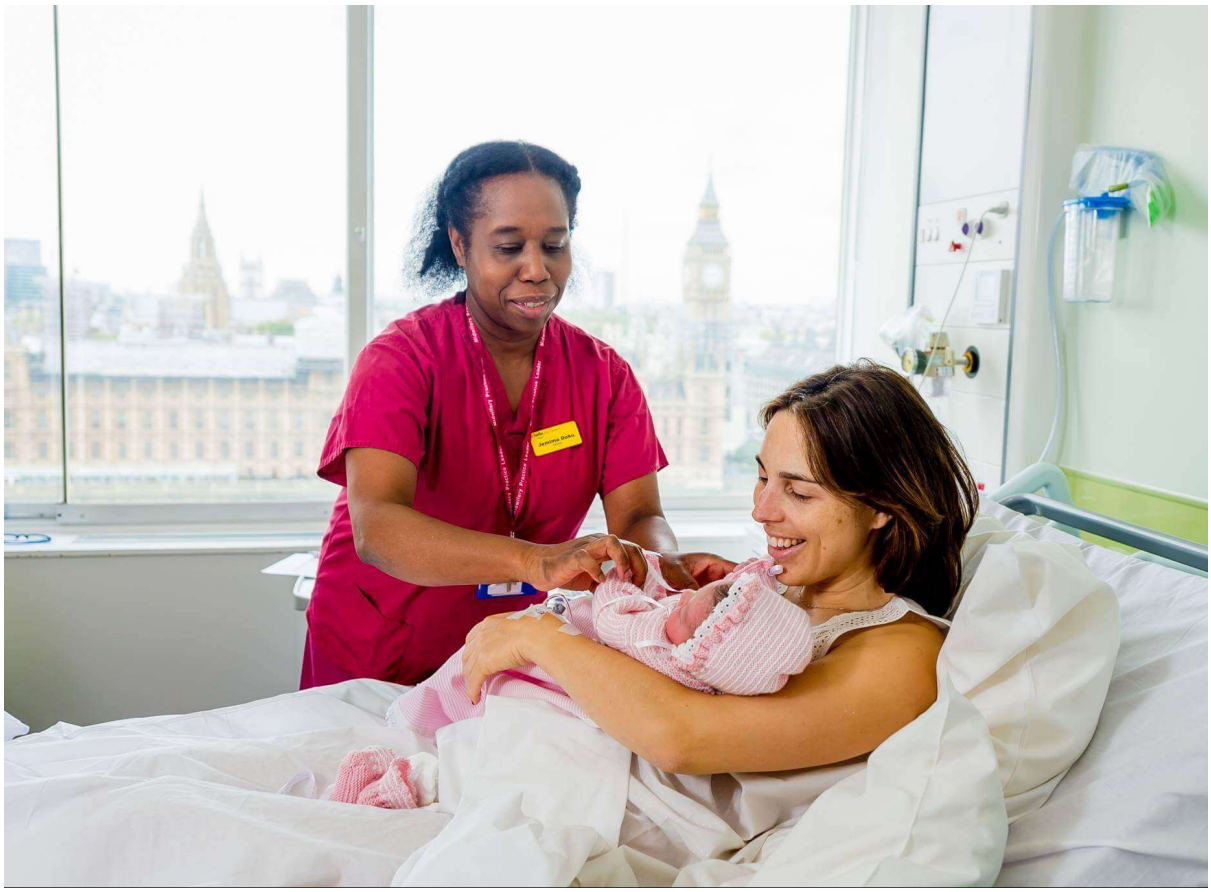
NHS
Guy's and St Thomas'
NHS Foundation Trust



Infection Prevention and Control Annual Report

2024/25

1 Foreword

The 2024/25 year has been one of both challenge and progress for the NHS, and for infection prevention and control (IPC) at Guy's and St Thomas' NHS Foundation Trust. Across the health and care system, we continue to operate under significant financial and operational pressures. Rising demand, workforce constraints, and the ongoing recovery from the COVID-19 pandemic have tested our resilience. Yet, in the face of these challenges, our IPC team has remained committed to its mission: to protect patients, staff, and the wider community from preventable harm from infection.

This report outlines the breadth and depth of our work over the past year. It reflects a data-led, evidence-based approach to infection prevention, underpinned by strong governance and a culture of continuous improvement. From reducing healthcare-associated infections and managing complex outbreaks, to advancing antimicrobial stewardship and leading national research, the team has delivered with professionalism, innovation, and compassion.

The threat of antimicrobial resistance (AMR) continues to grow, both nationally and globally. AMR undermines our ability to treat common infections and perform routine procedures safely. Prevention is our most powerful tool in this fight. Every avoided infection is a small victory, reducing the demand for antibiotics, a hospital bed not occupied, and a patient's life not disrupted. Our antimicrobial stewardship programme, despite data challenges, has met its reduction targets and continues to evolve in response to emerging risks. The work of our Surveillance and Innovation Unit, including the development of AI-enabled analytics, positions us at the forefront of digital infection control.

We are particularly proud of the achievements of our Surgical Site Infection team, whose innovations in remote wound monitoring and national research leadership are shaping the future of post-operative care. Likewise, our response to emerging threats and outbreaks—especially an outbreak of *Candidozyma auris*—has demonstrated the value of preparedness, collaboration, and rapid action.

None of this would be possible without the dedication of our IPC team. Their expertise, adaptability, and commitment to excellence are the foundation of our success. We also extend our sincere thanks to colleagues across the Trust—clinical and non-clinical—who uphold infection prevention and control in their daily practice. It is a shared responsibility, and one that is vital to the safety and sustainability of our services.

As we look ahead to 2025/26, we remain focused on stabilising our digital systems, expanding our analytics capabilities, and delivering national applied research that will inform best practice across the NHS. In doing so, we reaffirm our commitment to safe, equitable, and innovative care for all.

Professor Avey Bhatia, Chief Nurse and Vice President for the Florence Nightingale Foundation
Dr Jon Otter and Dr Nick Price, Joint Directors of Infection Prevention and Control

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2 Glossary

A&E	Accident & Emergency
AI	Artificial Intelligence
AMS	Antimicrobial Stewardship
BAF	Board Assurance Framework
BSIs	Bloodstream infections
CABG	Coronary artery bypass graft
CATS	Cardio Adjustable Thoracic Support
CCQIP	Critical Care Quality Improvement Programme
CITI	Centre for Innovation Transformation and Improvement
CQUIN	Commissioning for Quality and Innovation
DoI	Directorate of Infection
HCAI	Healthcare Associated Infection
HCAI DCS	Healthcare associated infections data capture system
HCID-A	High Consequence Infectious Disease – Airborne
HDU	High Dependency Unit
HEPA	High Efficiency Particulate Air
ICB	Integrated Care Board
IPC	Infection Prevention and Control
ICU	Intensive care unit
iGAS	invasive Group A Streptococcus
IPC	Infection Prevention and Control
LTV	Long Term Ventilation
MDR	Multidrug Resistant
MRSA	Methicillin-resistant *Staphylococcus aureus*
MSSA	Methicillin-susceptible *Staphylococcus aureus*
NIPCM	National Infection Prevention & Control Manual
PPE	Personal protective equipment
RMcH	Ronald MacDonald House
RSV	Respiratory Syncytial Virus
SEL	South East London
SI	Serious Incident
SIAP	Serious Incident Assurance Panel
SIU	Surveillance and Innovation Unit
SSI	Surgical site infection
UKHSA	UK Health Security Agency
UTI	Urinary tract infections
VAD	Vascular Access Device
VRE	Vancomycin-resistant enterococci

3 Executive summary

- During 2024/25 Guy's and St Thomas' NHS Foundation Trust (GSTT) sustained a data-led infection prevention and control (IPC) programme across its five hospitals and community services. Led by two Joint Directors of Infection Prevention and Control and supported by strong governance, the team focused on reducing healthcare-associated infections (HCAIs), delivering antimicrobial stewardship, modernising digital surveillance, and aiming to embed an organisation-wide culture of continuous improvement.
- HCAI performance compared well with peer Trusts, though some national thresholds were exceeded. The Trust recorded 66 healthcare-associated *Clostridioides difficile* infection cases (threshold 60) and 135 healthcare-associated *Escherichia coli* bloodstream infections (threshold 130). The rate of *C. difficile* infection remains the lowest in the Shelford Group of hospitals. Healthcare-associated *Pseudomonas aeruginosa* bloodstream infections fell 33% to 37, and healthcare-associated methicillin-resistant *Staphylococcus aureus* (MRSA) bloodstream infections dropped to six, down from nine in 2023/24, and lower rates than peer Trusts.
- The Surveillance and Innovation Unit (SIU) created live dashboards, undertook epidemiological analysis to support the service, and lay foundations for AI-enabled analytics. These tools provided insight and supported decision-making during *Candidozyma auris* and other outbreaks.
- Surgical Site Infection (SSI) surveillance broadened. Rolling rates remained above national benchmarks in adult orthopaedic, cardiac and some vascular and gastrointestinal specialties, but stayed low or fell in paediatric cardiac, paediatric spinal and women's gynaecology. The award-nominated SSI team extended its Central Digital Wound Hub to seven new specialties and won a £10 m NIHR grant for the 26,000-patient ROSSINI Platform Study.
- Despite Epic-related data gaps, the antimicrobial stewardship programme met 2024/25 reduction targets: broad-spectrum agent use fell, and observational audits of practice identified generally good guideline adherence. Labour-intensive point-prevalence surveys produced granular consumption data to guide interventions.
- The Vascular Access Service logged 9,021 encounters—a three-fold rise. Weekend cover and an Evelina London expansion were delivered. Audits showed high procedural compliance but documentation gaps that will be tackled by the "Every Device Journey Matters" improvement campaign.
- Environmental work advanced, with theatre ventilation refurbishments nearing completion and sterile services plant replacement on track. The water safety risk escalated after a further healthcare-associated Legionella case. Essentia have put in place steps to improve the operational management of water hygiene in the Trust.
- Several outbreaks were managed, including an outbreak of *C. auris* mainly affecting the East Wing of St Thomas' and involving 176 patients, an outbreak of VRE at Harefield affecting 51 patients, 18 COVID-19 clusters, and activation of the High Consequence Infectious Diseases unit for Mpox.
- Education, training, and audit underpins our service: 96 % of all staff completed and 80% of clinical staff completed IPC training. Hand-hygiene audits are undertaken across the Trust, supported by the IPC team and a network of link practitioners.
- The team published peer-reviewed research on environmental microbiology, digital SSI surveillance and antimicrobial resistance, reinforcing the Trust's role as an Academic Health Science Centre.
- For 2025/26 the IPC team will stabilise Epic reporting, extend antimicrobial analytics, launch vascular and urinary catheter-care improvements, aim to control persistent outbreaks, and deliver national SSI research - ensuring GSTT remains a leader in safe, sustainable and innovative infection prevention and control.

4 About Guy's and St Thomas' NHS Foundation Trust

- From our five main hospitals, and in the community, we provide a full range of lifelong, general and specialist care, as well as clinical research, innovation, education and training.
- We are a diverse and welcoming organisation and are incredibly proud of our around 23,700 staff and the dedication they show to our patients and each other.
- We aim to be outstanding in everything we do and to provide high quality and compassionate care and experience to all of our patients and families.
- As a leading centre of clinical research with a long history of innovation and medical firsts, we are able to provide the latest and most advanced treatments. We're ranked top in England for the number of trials open to patients and in the top 10 for the number of patients recruited to help us in our research.
- Together with our partners in King's Health Partners, we form one of the UK's eight Academic Health Science Centres.
- Our world-famous teaching hospitals train the doctors, nurses and healthcare professionals of the future. GKT School of Medical Education is our medical school, run jointly with King's College London and King's College Hospital.
- We are guided by our values in everything we do and, as one of the largest employers in London, we reflect the diversity, opportunity and ambition of our communities and the people we serve.

5 Healthcare-associated infection (HCAI) surveillance

The Surveillance and Innovation Unit (SIU), established in 2022/23, continues to provide improved insight into the epidemiology of infections to inform IPC activity. Accessibility of information about mandatory reportable and other organism surveillance programmes continues to improve within and outside the IPC team.

6.1 Summary of mandatory organism surveillance

- *Minimising Clostridioides difficile and Gram-negative Bloodstream Infections* (NHS, 2024/25) sets out annual thresholds for healthcare-associated *C. difficile* infections and Gram-negative bloodstream infections (BSIs) attributable to *Escherichia coli*, *Klebsiella sp.*, and *Pseudomonas aeruginosa*.
- We ended 2024/25 exceeding the thresholds for all organisms except *Pseudomonas aeruginosa* BSIs (Figure 2).

5.1.1 *Clostridioides difficile* infection

- In 2024/25, there were 66 healthcare-associated *Clostridioides difficile* (*C. difficile* toxin-positive (reportable) cases), against the NHS threshold of 60.
- There has been a 6% increase in cases since 2023/24, and a 61% increase in cases over the last five financial years. When compared with the Shelford Group, as of March 2025, we had the lowest rates of *C. difficile* per 100,000 bed days and have maintained this position throughout 2024/25 (Figure 3).
- A post-infection review is undertaken for each *C. difficile* infection; one lapse in care due to antibiotic choices was identified and fed back to clinical teams during 2024/25; no lapses in care due to cross-transmission were identified.

5.1.2 MRSA bloodstream infections

- In 2024/25, there were six healthcare-associated MRSA BSIs; there is a zero tolerance for MRSA BSIs nationally.
- There has been a 33% decrease in cases since 2023/24 (6 vs 9).
- When compared with the Shelford Group, as of March 2025, we had the fifth highest rate of healthcare-associated MRSA BSIs per 100,000 bed days.
- A post-infection review is undertaken for each healthcare-associated MRSA BSI. Key messages from these reviews include: one case with a missed screening opportunity (which was not assessed to have contributed to the development of the BSI); one case was associated with a PICC line, although no specific issues with line care were identified; in three of the cases, there was a lack of

documentation around vascular access devices, but this was not assessed to have contributed directed to the development of the infections.

5.1.3 MSSA bloodstream infections

- In 2024/25, there were 55 healthcare-associated MSSA BSIs; no national threshold is provided.
- There has been a 28.6% decrease in cases since 2023/24, and a 15.4% decrease in cases over the last five financial years. When compared with the Shelford Group, as of March 2025, we had the third lowest rate of healthcare-associated MSSA bacteraemia per 100,000 bed days.
- Investigations of these cases have identified recurring themes related to peripheral line care practices and record keeping. Key messages to promote best practice have been shared with clinical leaders in the organisation and frontline clinical teams.

5.1.4 Gram-negative bloodstream infections

- Each Gram-negative BSI is clinically reviewed to identify sources, risk factors and determine which cases were potentially avoidable.

5.1.4.1 *Escherichia coli* bloodstream infections

- In 2024/25, there were 135 healthcare-associated *E. coli* BSIs, against the NHS threshold of 130.
- There has been a 23.3% decrease in cases since 2023/24, and a 2.3% increase in cases over the last five financial years (135 vs 132). When compared with the Shelford Group, as of March 2025, the Trust had the second lowest rate of healthcare-associated *E. coli* BSI per 100,000 bed days.

5.1.4.2 *Klebsiella sp.* bloodstream infections

- In 2024/25, there were 114 healthcare-associated *Klebsiella sp.* BSIs, against the NHS threshold of 97. There has been a 4.2% decrease in cases since 2023/24, and a 10.7% increase in cases over the last five financial years (114 vs 103). When compared with the Shelford Group, as of March 2025, we had the fifth lowest rate of *Klebsiella sp.* bacteraemia per 100,000 bed days.

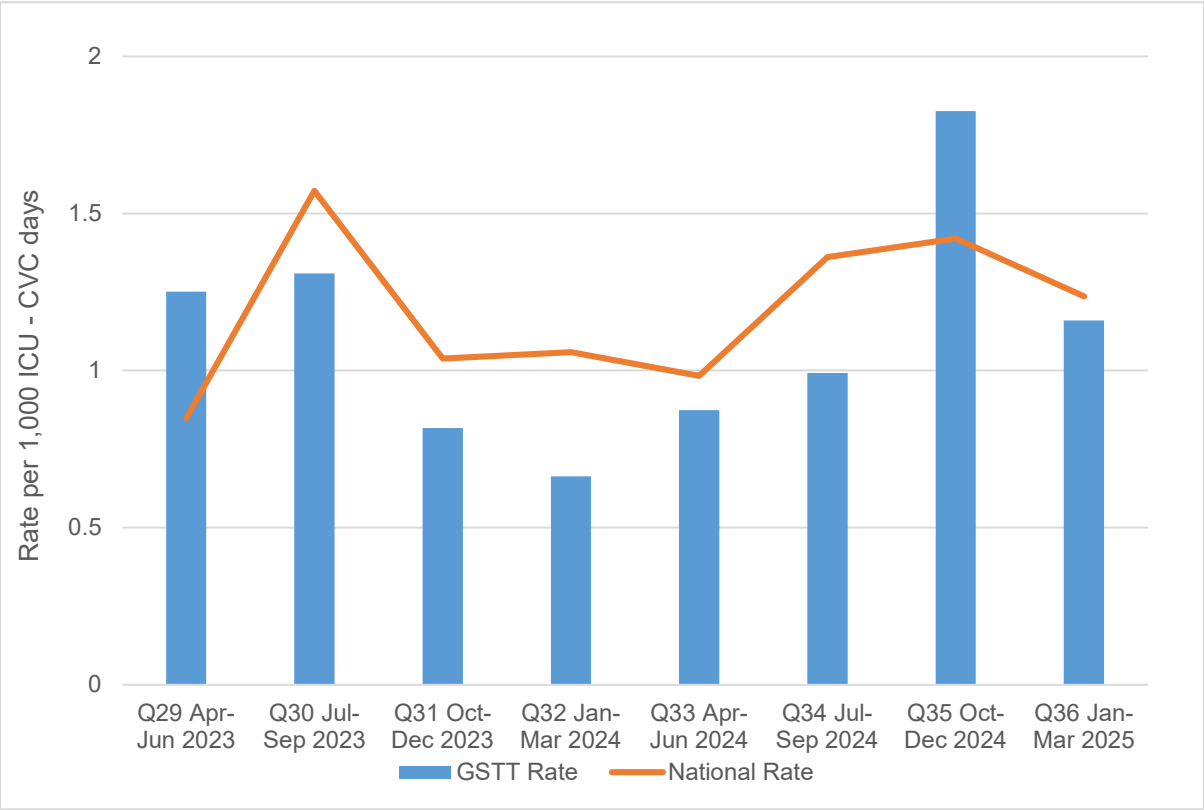
5.1.4.3 *Pseudomonas aeruginosa* bloodstream infections

- In 2024/25, there were 37 healthcare-associated *Pseudomonas aeruginosa* BSIs, against the NHS threshold of 51. There has been a 32.7% decrease in cases since 2023/24, and a 33.9% decrease in cases over the last five financial years (37 vs 56). When compared with the Shelford Group, as of March 2025, we have the fourth lowest rate of *P. aeruginosa* bacteraemia per 100,000 bed days.

5.2 ICU-associated central venous catheter-associated bloodstream infections

The UKHSA Infection in Critical Care Quality Improvement Programme (ICCQIP) surveillance programme provides data on the rate of BSI and central-venous catheter-associated BSIs in participating adult ICUs. For 2024/25, we remained below the national rate in all but two of the reporting quarters, including the most recent (Figure 1).

Figure 1: ICU-associated central venous catheter (CVC)-associated BSI data from ICCQIP (April 2023 – March 2025, the latest available data).



5.3 Respiratory virus infections

The respiratory infections dashboard monitors Trust-wide trends in respiratory illnesses. Figure 4 displays rates of COVID-19, Influenza A, Respiratory Syncytial Virus (RSV), and parainfluenza between October 2024 and March 2025. COVID-19 cases initially increased before stabilising in December, with numbers remaining relatively steady through to March. RSV and Influenza A both exhibited a sharp rise from October, peaking between December and January before declining. In contrast, parainfluenza cases fluctuated throughout the period, showing intermittent peaks and troughs. The data reveals distinct seasonal patterns, with Influenza A and RSV demonstrating the most notable surges during the winter months.

5.4 Digital and epidemiological development in the Surveillance and Innovation Unit

- In line with the digital transformation goals of the wider NHS, the SIU has adopted using SharePoint sites, available to all members of the Directorate of Infection to host dashboards for data access, reports for collaborative editing, training and educational materials for continued development and applied research projects.
- Interactive dashboards have been created for Clinical Group stakeholders to provide an overview of IPC data and reports accurate to the previous reporting month. This includes dashboards presenting mandatory reported organisms at a Trust and Clinical Group level, dating back to 2017.
- A HCAI DCS case register has been established to improve the process efficiency and oversight of data that we report nationally – these data feed into reports and dashboards.
- Other registers are available for non-reportable organisms (non-toxin positive *C. difficile,* MRSA acquisitions, and respiratory cases in children, *Mycobacterium tuberculosis* complex, rotavirus and norovirus).
- The SIU is a centre of expertise to use applied epidemiology to support and extend clinical teams within the Directorate of Infection.
- The SIU has worked closely with the EPIC teams to tailor the Bugsy (IPC) application within Epic for best IPC utilisation.

- The SIU led the data transformation from our legacy IPC system (ICNet) to Epic, ensuring the extraction of microbiologically relevant cases to Bugsy, ensuring patient reports are historically robust.
- The implementation of EPIC unifies a variety of data sources, which the SIU plans to utilise with advanced data analytical tools to gain further epidemiological insight surrounding HCAI.

Figure 2: Trust-wide mandatory healthcare-associated HCAI surveillance case numbers over the last five financial years

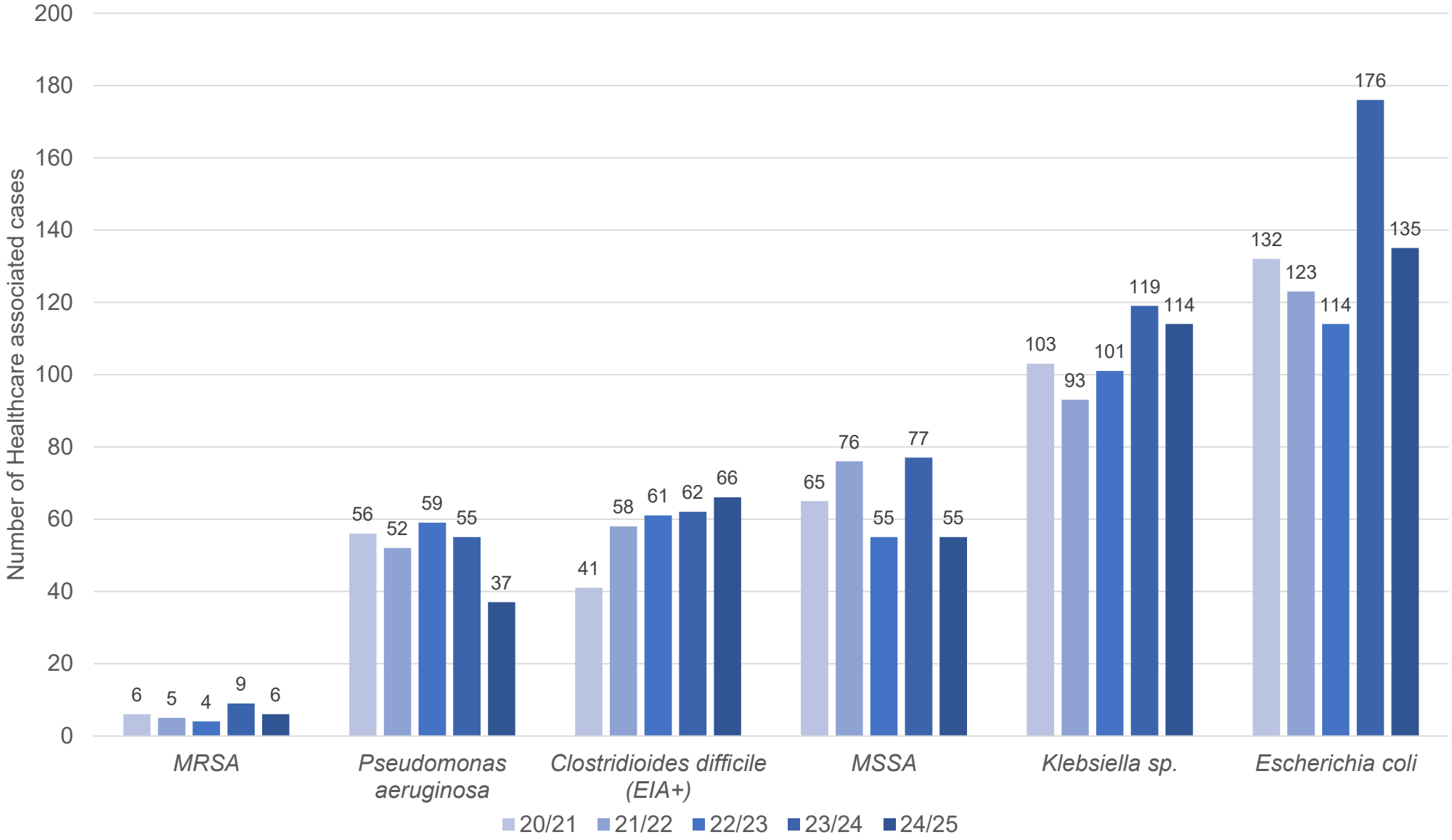


Figure 3: Healthcare-associated HCAI surveillance rates in the Shelford Group (April 2024–March 2025)

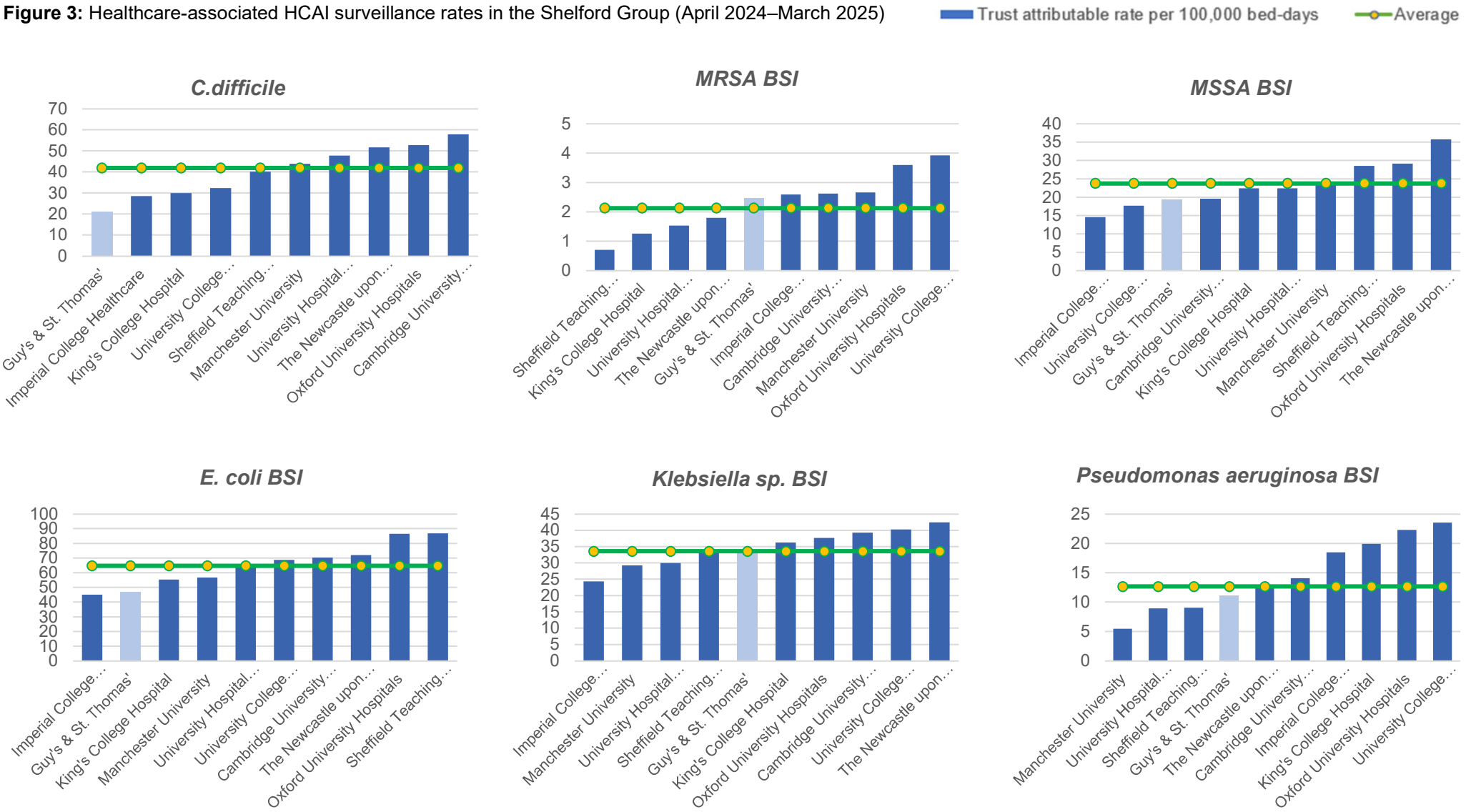
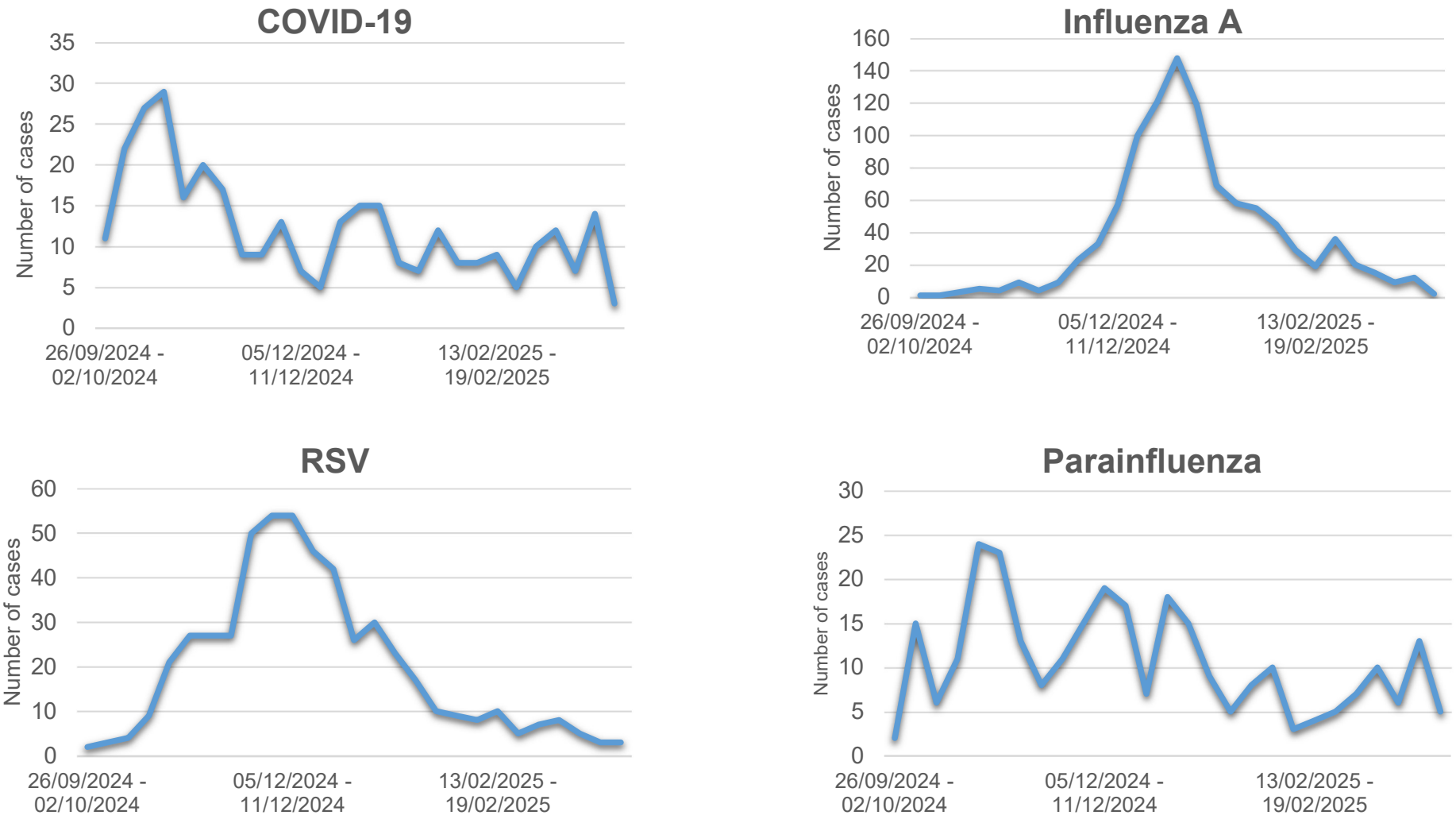


Figure 4: Respiratory virus trends (October 2024–March 2025)



5.5 Surgical site infection surveillance

5.5.1 Surgical site infection rates, impact, and prevention

- Rates of surgical site infection (SSI) are monitored by the SSI team in most surgical specialities across the Trust. The SSI team are delighted to be shortlisted for the Nursing Times 'Team of the Year' in the 2025 Awards. The 12-month rolling rate of SSI in the following specialities are identified as higher when compared with national data: Adult Orthopaedic (Hip and Knee), Adult Cardiac (CABG and Non-CABG at RBH), Adult Vascular, Gynaecology (oncology) and Adult Gastrointestinal (Large Bowel).
- Consistently low SSI rates were observed in the following specialties: paediatric cardiac, paediatric spinal, adult gastrointestinal (small bowel), and gynaecology (women's). Notably, the SSI rate for gynaecology (women's) decreased from 0.6% in the 2023/24 financial year to 0.0% in 2024/25. Paediatric cardiac also saw a reduction from 2.1% to 0.0%.

5.5.1.1 Impact

- Overall, SSIs across monitored specialisms contributed to an estimated 1,125 excess bed days and over 180 allocated theatre slots.
- Between May 2024 and April 2025, the most significant impact in terms of excess bed days and theatre slot utilisation was observed in cardiac specialisms—particularly Royal Brompton CABG (309 bed days, 73 theatre slots) and Royal Brompton Non-CABG (268 bed days, 40 slots). Gynaecology Oncology and Paediatric Orthopaedics also demonstrated notable excess bed days despite smaller SSI case volumes. Several specialisms, including Gynaecology (Women's), NOF repair, and Evelina Paediatric Cardiac, reported no SSIs or associated impact on bed days or theatre slots.
- Slow progress with Epic has disrupted our ability to report our SSI rates to UKHSA, limiting our contribution to the national SSI surveillance scheme. Despite ongoing development of the electronic reporting process in EPIC, quarterly rate data for adult orthopaedic procedures (hip, knee, and repair of neck of femur) was submitted for the period January to March 2025. We plan to re-establish SSI reporting to UKHSI during 2025/26.

5.5.1.2 Prevention

- The systems established for automated monitoring of compliance with the SSI prevention measures outlined by NICE, which were in place at Royal Brompton and Harefield sites, have not been available since Epic was launched.
- Recommencing our national reporting of SSI rates to UKHSA, integrating Isla into EPIC, and establishing automated monitoring of compliance with SSI prevention measures will be priorities for 2025/26.

5.5.2 Surgical site infection team innovation

5.5.2.1 Central Digital Wound Hub (CDWH)

- The Central Digital Wound Hub (CDWH) supports post-discharge remote wound monitoring to enable enhanced recovery pathways, facilitate day case surgery, reduce pressure on clinical services, improve surgical throughput, and help address the elective care backlog. The drive for day case surgery and Enhanced Recovery Programmes increases the need for safety netting, ensuring ongoing patient safety after initial care, particularly when patients are managing their own recovery at home. It acts as a "backup plan" to catch problems early and avoid harm.
- Over the past two years, with funding from GSTT Charity and support from CITI's Remote Care Programme, the CDWH has been embedded into clinical and operational workflows. This has allowed us to extend access to all eligible patients and establish digital wound monitoring as a core element of the Trust's future care model. Within the 2024/25 financial year, post-discharge surveillance was expanded to include additional specialisms beyond CABG, non-CABG, and C-section procedures. These newly included areas are: thoracic surgery at Harefield, vascular surgery at St Thomas', upper gastrointestinal (GI) surgery at St Thomas', general surgery at St Thomas',

and breast surgery. The surveillance programme monitors patient-reported SSI, antibiotic usage, and patient-reported surgical wound dehiscence.
- This service includes a tech-enabled approach to self-management, including the targeted provision of 'SSI prevention kits' to patients with early signs of wound breakdown, to reduce SSI rates and antibiotic consumption. This novel approach will move SSI prevention from the clinical setting, to the community setting with patient involvement as central to prevention, leading the way for national and international studies on this under-researched area.

5.5.2.2 Revenue-generating innovations

- Products developed by the SSI team continue to sell well, including the CATS vest, BHIS bra and Isla SSI module. The Trust receives a portion of royalties for these innovations, and the remainder go to the SSI innovation budget.
- CATS vest sales are significantly outperforming 2024 so far in 2025. Export sales (Kuwait, Ireland, Australia/New Zealand) have overtaken sales in the UK market. If current trends hold, 2025 could see a more than 4-fold increase in total sales. The patent is being prosecuted in Europe and the United States, two of the most significant markets for the product.

5.5.3 SSI team research

- **ROSSINI Platform Study** (Status: commenced January 2025, NIHR HTA funded, £10 million). The Central Digital Wound Hub will provide remote wound monitoring for the UK's largest ever surgical trial. We will support 26,000 participants across 100 hospitals over the next five years. GSTT will be a vanguard site for participation in the obstetrics and cardiac pillars. Vascular (groin) and major lower limb amputation participation is to be confirmed. Breast participation is pending.
- **TREASURE Study** (Status: commenced April 2025, NIHR RfPB funded, £241K). A feasibility study exploring the safety, acceptability, and practicality of patients swabbing their surgical wounds at home.
- **WISDOM** (Status: closing December 2025, NIHR i4i funded, £1 million). A study to develop and clinically evaluate AI to assist clinicians in reviewing and prioritising wound images.
- **WISDOM 1.1** (Status: starting September 2025, NIHR Connect funded, £150K). A study aimed at refining the AI model for use on darker skin tones.
- **LIGHT Study** (Status: commenced June 2025, internally funded). The SSI team is currently collaborating with the Ear, Nose and Throat (ENT) team on a study involving nasal photodisinfection.

6 Antimicrobial stewardship programme

6.1 Challenges

- Epic – although we now have organisational-level data on antimicrobial consumption, due to interfacing with a third-party vendor, we continue to lack adequate reporting systems within or from Epic to be able to monitor antimicrobial consumption in organisational sub-units, such as Trust sites, Clinical Groups or Directorates. This limited intelligence on our consumption patterns means that adverse trends or performance levels are extremely difficult to identify, and opportunities to drive improvement are missing
- External metrics – the Trust continues to face exceptionally challenging external antimicrobial consumption metrics, based on pre-pandemic and pre-merger performance.
- Staffing resource – the antimicrobial stewardship programme has lost further members of staff over the year, and due to the additional funding constraints around the South East London Vaccination & Intervention Service these staff have not been replaced. Increasing workload, especially at the Royal Brompton and Harefield sites, has put significant pressure on the antimicrobial stewardship team, and the recent VRE outbreak at Harefield Hospital illustrates the fragility of the AMS service across Royal Brompton and Harefield sites.
- Antimicrobial shortages – this is not a new challenge but the extent and frequency of such shortages is unprecedented and continues. The work involved in managing each one is significant and can have major implications for patient care.

6.2 Successes

- The organisation antibacterial consumption data showed that the Trust has reduced antibacterial consumption across all three major categorisations from 2023/24 to 2024/25 (Table 1).
- This dataset also shows that carbapenem usage across the Trust continues to fall, and has now reached the lowest levels since the pandemic (Figure 5).
- The team and service continue to support the implementation and optimisation of Epic ensuring safety and efficacy for optimal patient care. We continue to lead on improvements in Epic configuration for antimicrobial agents bringing about safer prescribing and usage, and have led on a switch from previously used AmBisome liposomal amphotericin to a significantly less expensive alternative product, with predicted full-year savings for £250,000. Our ongoing partnership working with colleagues at King's College Hospital continues to benefit both organisations, and we are now extending this partnership working to include other Epic-using sites around the UK, in order to learn and adopt best practice for patient benefit.
- The team and service continue to lead on and support antimicrobial stewardship initiatives across south east London, working closely with primary and secondary care partners to share best practice and harmonise guidance where possible, with the new EOLAS guidelines platform now being used across the whole of south east London

6.3 Future plans

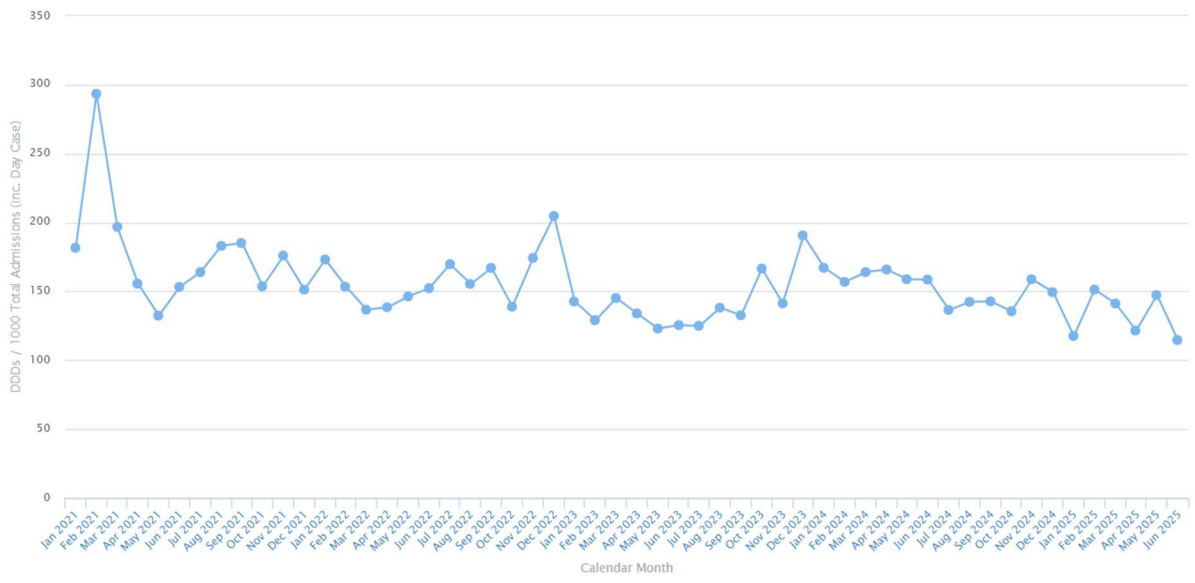
- We await the fuller detail on the new antimicrobial resistance national action plan targets and will incorporate these into our workplan once clarity is available.
- We continue to work with colleagues within the Benefits Realisation team, and Epic, on developing systems within Epic to generate usable and timely data on antimicrobial consumption.
- When such data becomes available we will develop a programme of work to interrogate the data, identify areas for improvement and generate joint plans with relevant clinical areas in order to optimise our usage of antimicrobials.
- Using this data we will be able to also further drive programmes of work around reducing consumption of broad-spectrum antibacterials, shortening duration of antimicrobial therapy and improving switch from IV to oral therapy.

Table 1 – Antibacterial Consumption Variance

Year	Total	Access	Watch	Reserve
2019 v 2024-25	14.4%	27.6%	1.9%	
22-23 v 23-24	4.0%	4.1%	5.5%	3.9%
23-24 v 24-25	1.2%	1.2%	0.5%	5.3%

Red = Increase in consumption; Green = Decrease in consumption

Figure 5. Antibacterial Defined Daily Doses per 1000 Admissions for GSTT for January 2021 to June 2025: Carbapenems - taken from Rx-Info Define.



7 Vascular access team

- **Strategic expansion.** Planning is underway to extend the Vascular Access Service to the Royal Brompton and Harefield sites, aligning with our commitment to equitable access and service excellence across all Trust locations.
- **Workforce development.** Substantial progress has been achieved in enhancing team capability, with all members upskilled in advanced peripheral cannulation techniques.
- Investment in training and capacity has resulted in a significant increase in the number of clinicians proficient in midline and peripherally inserted central catheter (PICC) insertion.
- **Quality assurance.** Monthly point prevalence audits of intravascular access devices continue across Guy's, St Thomas', and Evelina London sites.
- High compliance has been recorded across most audited domains, reflecting a strong culture of safety and adherence to best practice. However, consistent areas for improvement identified through the audits include the need to complete documentation related to vascular access devices.
- **Education & continuous improvement.** The 'Vascular Access Masterclass' study days have been increased to a bi-monthly schedule, fostering a continuous learning environment.
- Regular educational updates support the ongoing professional development of staff Trust-wide.
- **Service demand & activity.** Clinical acuity and service activity have *tripled* compared to the previous year, with a total of *9,021 clinical encounters* recorded in 2024/25, demonstrating the team's agility and responsiveness to rising demand.
- In August 2024, the Evelina service expansion was launched, establishing a dedicated team and enhanced onsite presence, significantly improving accessibility of care.
- A weekend service was introduced in September 2024, further boosting service capacity and enabling team to meet increasing demand.
- **Patient Experience.** Patient satisfaction remains consistently high, as evidenced by ongoing survey feedback, affirming the team's patient-centred approach and clinical excellence.
- **Innovation & resources.** The launch of the dedicated *Vascular Access Webpage* marks a significant step in centralising education and training resources. This digital platform streamlines communication and promotes easy access to best-practice guidance.

8 Decontamination, water, ventilation, and environmental hygiene

8.1 Decontamination

- An issue with the pre-cleaning (before use) of non-channelled nasoendoscopes used by the Community Head and Neck Cancer Team was identified. This was caused by user error and updated training has been provided followed by an audit visit. This did not result in any patient harm.
- An investigation into a small cluster of 3 patients who had *Candida tropicalis* isolated from urine samples following cystoscopy/ureteroscopy was undertaken. No common links were identified and no evidence of any poor practice uncovered.
- Dental services have rationalised the use of barrier wrap in some situations/patient groups, with the support of the decontamination committee, which should result in cost savings as well as contributing to the Trust environmental sustainability goals.
- Both Sterile Services Departments are nearing the completion of a full refurbishment project which will see the replacement of machines and plant.
- The regular rolling programme of audits to areas where critical/semi-critical devices are decontaminated continues, with generally good compliance. Most deficiencies relate to poor environment / lack of storage.

8.2 Water

- The challenges around water safety across the majority of the estate continue. The water safety risk on the corporate risk register was raised to a rating of 16 in March 2025. This reflects the ongoing significant issues related to the poor estate and management of risks associated with water supply across the Trust.
- In October 2024 a patient contracted Legionnaires disease whilst under the Trust's care in North Wing at St Thomas'. This was classed as healthcare-associated as the onset of symptoms was around 20 days following admission. Sampling of the water from outlets on the two wards that the patient had contact with both isolated Legionella. Temperature profiling of the hot water supply

identified deficiencies with 18 of the 44 risers to the building, evidence of non-compliance with a large number of thermostatic mixing valves as well as evidence of insufficient and inconsistent dosing with chlorine. This is the 6th case of healthcare-associated legionnaires disease in the past 5 years.

- The Trust is continuing to receive targeted support from South London Health Protection Team at UKHSA to monitor our improvement plan, with regular bi-monthly meetings with the Chief Nurse and Managing Director of Essentia. An improvement plan has been developed, however progress to date has been very limited.
- An interim Director of Water Safety has been appointed (January 2025) to further develop and manage the improvement plan and a further two assurance and compliance appointments have been made.
- To mitigate the water safety risk, a large number of point of use filters are currently deployed, particularly in North Wing, Borough Wing and Nuffield House.
- There are ongoing issues with access to critical water safety data in properties owned/manged by Community Health Partners. This results from the complex relationships between the multiple partners involved. The Essentia Director of Operations and the Trust legal team are both involved.

8.3 Ventilation

- The refurbishment of theatres 3 and 4 at Guy's is nearing completion, with an anticipated handover in June 2025 at which point work will begin on theatres 1 and 2. Planning for the wider theatres, interventional radiology and catheter labs continue taking a phased approached over several years. In the interim there is ongoing risk of failure of the Air Handling Units that are well beyond their useful working life.

9 High consequence infectious diseases – airborne (HCID)

- We host one of the seven specialist HCID-airborne centres in the UK.
- We have been involved in the ongoing response to the Mpox challenges in the UK.
- We continue to provide ongoing training to ensure preparedness for HCID-A cases.
- Our HCID clinical lead sits on the steering committee for the UKHSA Avian Influenza research project.
- We continue to provide extensive technical support to new HCID-A units opening in both Oxford and Bristol, sharing practical resources, hosting visits, and visiting proposed facilities on sites.
- As a Trust we continue to support the HCID network centres and our HCID Clinical Nurse Specialist group share learned experiences and best practice.

10 Hand hygiene, PPE, audit

- Hand hygiene compliance is monitored through audits regularly undertaken in all clinical areas across the Trust.
- 'Action Compliance' is measured against the WHO 5 moments e.g., hand hygiene before and after patient contact, before sterile procedures, after body fluid exposure, and after contact with the patient environment, and 'Barrier Compliance' is any physical barrier to hand hygiene such as long sleeves, watches, and false nails.
- We now use 'Action Compliance' to measure overall compliance, because it gives a more accurate picture of hand hygiene compliance.
- Overall Action Compliance for hand hygiene was 80% (44,377 observations) and 96% (44,377) for Barrier Compliance.
- Audits undertaken by the IPC team were lower overall with 61% Action Compliance (12,900 observations) and 95% Barrier Compliance.
- Overall compliance score from PPE audits undertaken by both the IPC team and link practitioners was 91% (11,095 observations). The compliance rate for donning was 91%, while compliance rate for doffing was 92%.
- Currently, our 5 main hospital sites have different audit structures, so a Trust-wide combined audit programme is in development.
- There are multiple forms in testing now, including a new bespoke equipment cleaning audit and a combined PPE and isolation audit form that merges both existing forms enabling all sites to audit as one.

- We will be moving away from the previous environmental audit forms to area-specific Standard Infection Control Precautions (SICPs) forms. The new forms were developed following constructive feedback from the current form in use.

11 Clinical activity and Incidents

11.1 *Candidozyma auris*

- An outbreak of *C. auris* was first identified in 2023 and has continued throughout 2024/25, mainly affecting patients in the East Wing of St Thomas' in vascular, cardiovascular, and critical care units.
- A total of 176 patients were affected by the end of 2024/25. Most patients have been colonised without signs or symptoms of infection due to *C. auris*; there has been two cases of candidaemia and no attributable deaths. 159/176 (90.3%) of cases were first identified through screening swabs.
- A point prevalence screen undertaken during Q2 identified a 6% rate of unidentified colonisation in the East Wing wards. A further point prevalence screen undertaken during Q4 identified no unidentified *C. auris* colonisation outside of the East Wing.
- We have identified small transmission clusters at Guy's, Royal Brompton, in the North Wing of St Thomas', and in the Amputee Rehabilitation Unit.
- During Q1 2025/26, we plan to implement rapid molecular point of care testing for *C. auris* in the East Wing of St Thomas'.
- Our response to the ongoing outbreak has followed the approach outlined in UKHSA guidance for the prevention and control of *C. auris*.
- We have invited external reviews from both experts at UKHSA and at Oxford University Hospitals NHS Foundation Trust. Both external reviews have concluded that our response to date has been appropriate and proportionate.

11.2 Mpox

An outbreak of mpox (previously monkeypox) is ongoing in parts of Africa centred in the Democratic Republic of Congo. The Trust's High Consequence Infectious Diseases (HCID) facility was activated to care for a family with mpox Clade Ib.

11.3 VRE outbreak

An outbreak of VRE was identified in November 2024, which now involves 51 patients. Enhanced patient screening was put in place which included a one off screen of all patients across the critical care pathway and the introduction of admission, weekly and discharge screening. 24 patients were identified to have VRE in clinical samples, 12 were identified to be colonised with VRE through the one-off screens, and 15 patients have been identified to have VRE through the enhanced screening process. The outbreak is being managed currently with an emphasis on antimicrobial stewardship, cleaning and enhanced screening.

11.4 Bugsy incident

An incident occurred related to Bugsy, the IPC module within EPIC, meaning that contact tracing letters were not physically sent when order electronically in EPIC. We retrospectively sent letters to a small number of contacts of patients exposed to *Mycobacterium tuberculosis.*

11.5 Norovirus outbreaks

Ten outbreaks of norovirus occurred across the Trust in 2024/25. Two occurred in Q1 and affected paediatric wards, three occurred in Q3 on paediatric, older persons and medical wards and the remaining five occurred on paediatric and acute medicine wards in Q4. In total, 9 children and 23 adults were affected. Outbreak management measures included closing bays temporarily to admissions and transfers, enhanced cleaning and disinfection, and a review of IPC practices. Learning focussed on reinforcing occupational health advice to staff health and not attending work whilst symptomatic with diarrhoea and/or vomiting. No additional treatment was required and all patients recovered.

11.6 COVID-19

Eighteen outbreaks of COVID-19 occurred across the Trust in 2024/25. Ten occurred in Q1 and affected paediatric, acute medicine, cardiology and cardiovascular wards. Four occurred in Q2 on cardiology, medical, cardiovascular and oncology wards and three occurred in cardiology, cardiovascular and respiratory wards in Q3. In Q4 there were two outbreaks affecting cardiac wards. In total, 125 adults were affected. Outbreak management measures included closing bays temporarily to admissions and transfers, enhanced cleaning and disinfection, and a review of IPC practices. Learning focussed on reinforcing early isolation when symptoms are recognised, and prompt notification to IPC to assist with outbreak management measures.

11.7 Influenza

Nine outbreaks of Influenza occurred across the Trust in 2024/25. One occurred in Q1 affecting an acute medicine ward and four occurred in Q3 on cardiology, private patients and paediatric wards In Q4 there were four outbreaks affecting cardiology and acute medicine wards. In total, 28 adults and 2 children were affected. Outbreak management measures included closing bays temporarily to admissions and transfers, enhanced cleaning and disinfection, and a review of IPC practices. Learning focussed on reinforcing the importance of timely prophylaxis for contact patients, early isolation when symptoms are recognised, and prompt notification to IPC to assist with outbreak management measures.

11.8 Measles/pertussis

In line with the London region and across the UK, we have seen an increase in suspected and confirmed measles and *Bordetella pertussis* across both adult and paediatric areas. This has resulted in a significant increase in contact tracing of patients and staff who may have been inadvertently exposed. We have worked closely with the Emergency Department to manage this process.

12 Training and education

- Mandatory IPC training continues to be delivered online to all new starters as well as return to monthly face to face updates for some staff. Overall, Trust compliance (including hand hygiene) training for all staff is 96%, and for clinical staff is 80%, which is above the lower level Trust target of 75% but below the upper level target of 95%. Plans are in place to improve compliance with mandatory training across the Trust.
- Active IPC link practitioner programmes are in place across the Trust.
- The Trust Annual IPC Conference was held in September 2024 involving 10 speakers and more than 200 delegates coming from across the Trust and some external partners.
- At the Trust, bespoke education sessions are delivered regularly by IPC, often in clinical settings.

13 Governance, policy, risk, and improvement

13.1 Team structure

The IPC team is a multi-professional team comprising nurses, doctors, scientists, pharmacists, and others to support the Trust in meeting its obligations under the *Health and Social Care Act 2008 code of practice for prevention and control of infections and related guidance* and other relevant legislation and guidance from, for example, the Department of Health and Social Care, UKHSA, and the Care Quality Commission. The service is led by two Joint Directors of Infection Prevention and Control, with the Chief Nurse as executive lead.

13.2 Governance and assurance arrangements

- A quarterly Trust Infection Control Assurance Committee is chaired by the Chief Nurse and reports to the Trust board.
- It receives regular reports and updates from each Clinical Group and the following various sub-committees:
    - Trust Infection Control Committee

    - Clinical Group specific Infection Control Committees
    - Surgical Site Infection (SSI) Committee
    - Water and Ventilation Safety Committee
    - Decontamination Committee
    - Antimicrobial Stewardship Committee
    - Intravenous Line Governance Committee.
- The Trust Infection Control Committee Assurance Committee also receives reports or updates from our UKHSA Consultant in Communicable Disease Control, Clinical Commissioning Group and/or Integrated Care Board IPC lead, Essentia (estates and facilities), Occupational Health, and Health and Safety.
- IPC also publishes a bi-annual and annual report. Any interim exceptional reporting to the Trust board is undertaken via existing reports from the Chief Nurse's Office.
- Occupational Health continue to record information on infectious diseases in staff, occupational exposure of staff to body fluids (including sharps injuries), fit testing for respiratory PPE, and any issues with processes for occupational healthcare work clearance related to infectious diseases.
- The Trust Infection Control Assurance Committee includes a representative from the pathology laboratory, to ensure that appropriate laboratory support is in place for our services.
- IPC policies are agreed via either the quarterly Trust Infection Control and Decontamination Assurance Committee or the monthly Infection Control Committee. During 2024/25, work on merging the key IPC policies to cover all sites continued. For example, new "Standard and Transmission-Based Precautions" policies were launched, in line with the *National Infection Prevention and Control Manual for England*.

13.3 Risk management

- IPC risks are included on a risk register, which is reviewed quarterly at the Trust Infection Control Assurance Committee.
- The risk related to the management of *C. auris* has been upgraded to reflect the ongoing outbreak.
- The risk related to water hygiene continues to reflect the challenges around assuring water hygiene safety across the Trust. This risk is on the corporate risk register.
- The IPC Board Assurance Framework (BAF) has been updated throughout 2024/25. Actions arising from the BAF are being monitored via the Infection Control Committee.

13.4 Improvement

- A multi-professional group is in place to develop a lead a Trust-wide intervention to improve the management of vascular and urinary catheters, aiming to reduce the risk of BSI. This campaign is title "Every Device Journey Matters" and will be launched in Q1 2025/26 following a successful pilot on wards at each of our hospital sites.
- We have relaunched our campaign to reduce the unnecessary use of gloves ('Gloves Off') during 2024/25, in collaboration with Trust communications and the sustainability team.
- We are reviewing our PIR process to streamline it and bring it into line with the new Patient Safety Incident Response Framework (PSIRF) framework.

14 Applied research

The IPC team is committed to the goals of the Trust as an Academic Health Science Centre in undertaking and implementing the findings of applied research. The Department of Infection hosts the Kings College London Centre for Clinical Infection and Diagnostics Research, which is focussed on applied research in healthcare-associated infection and antimicrobial resistance. During 2024/25 the IPC team contributed to several applied research projects resulting in peer-reviewed papers on topics including:

- Air and surface contamination with Mpox.
- Metagenomic characterisation of wastewater from hospital sinks to evaluate the prevalence and distribution of potential pathogens and antimicrobial-resistant organisms.
- The potential for remote digital surgical wound monitoring and surveillance using smartphones to enhance surveillance and deliver clinical benefits.
- A review of risk factors for SSI following cardiac surgery.

- The use of faecal microbiota transplantation to aim to eradicate gastrointestinal carriage with antibiotic-resistant organism.
- The use of respiratory metagenomics to detect pathogens in the ICU setting.

15 Annual plan

Table 2. IPC team objectives for 2024/25.

Objective	Lead team
Delivering healthcare excellence	
Finalise business case for a vascular access service for our Royal Brompton and Harfield sites.	Vascular access
Review and update our Post Infection Review process across our sites in line with the new PSIRF framework.	IPC nursing
Complete the alignment of our policies and clinical procedures across our sites.	All
Implement a Trust wide improvement project, “Every Device Journey Matters”, to improve our care of vascular access devices and urinary catheters to reduce the risk of infection and other complications.	All
Actively promote our remote wound service which supports earlier discharges, optimised bed use, and reduced demand on clinical teams, to improve elective throughput.	SSI
Improving the health of our populations	
Continue to support sustainability initiatives (including the “Gloves Off” campaign, a transition to reusable sharps bins, and remote wound monitoring to reduce patient travel).	All
Implement systematic measurement of compliance with our admission screening programme (e.g. for MRSA, C. auris, CPO), and improve compliance.	SIU
Bring ongoing outbreaks of *C. auris,* MRSA, and VRE under control.	IPC nursing
Continue to embed equality and diversity monitoring in our SSI service, and deliver solutions to improve health equity and fairness.	SSI
Valuing all of our people	
Ensure that training and development opportunities are available and integrated into PDRs, including developing applied research skills.	Managers
Embed the learning from our civility training, the People Manager Programme, and discussions on anti-racism to improve our team performance.	All
Implement a regular education session aimed at our clinical teams.	All
Innovating for a better future	
Develop the functionality of Epic to report on antimicrobial stewardship indicators.	SIU
Undertake an epidemiological evaluation of the ongoing *C. auris* and CPE outbreaks.	SIU
Review and evaluated innovate training support systems (e.g. virtual reality).	All
Strength links with the ACORN programme to provide applied research opportunities for the team.	All
Review opportunities for income generation from the services we provide.	All
Expand on the successful commercialisation of the Central Wound Hub model, establishing service level agreements with additional partner organisations.	SSI
Promote revenue-generating innovations developed by the SSI team, including the BHIS bra, the Isla SSI pathway, and CATS vests.	SSI
Deliver the ambitious SSI national research programme, which includes remote wound swabbing, interventions to reduce SSI, antibiotic-sparing innovations, and applications of AI.	SSI
Modernising our infrastructure	
Ensure that Bugsy, the IPC module in Epic, is optimised and its use is standardised across our sites.	SIU
Begin to implement AI-enabled solutions to improve our surveillance systems for SSI and other HCAI.	SIU

Table 3. Strategic aims for the service over: 2021-2025.

Patients

- Involve patients in the prevention and management of infection, including the involvement of patient representatives in Trust committees and service development
- Move from 'control' to 'prevention' of healthcare-associated infection, with a focus on optimizing the use of antimicrobial agents, improving patient safety around the use of vascular lines, reducing the risk of infection from the environment (especially water, air, and medical devices), and reducing the risk of surgical site infection

People

- Invest in training and education to remain an expert advisory clinical academic service
- Maintain a reputation that will attract a world class, diverse, multi-disciplinary team
- Implement a service model that meets the needs of our organisation / ICS

Partnerships

- Work more closely across the Integrated Care System to reduce infection risk
- Become an established centre for hospital epidemiology and implementing technology and innovation to reduce healthcare-associated infection and antimicrobial resistance and improve patient outcomes
- Develop equitable services across all sites, including community, which are well integrated with the new clinical groups.