

Infection Prevention and Control Annual Report

2024/25

Table of Contents

Abbreviation list	4
Introduction	5
Organisation of our service	6
Key activities of the IPC team	<i>7</i>
Governance	8
Healthcare associated infections (HCAIs)	12
Outbreaks	34
Surgical site infection (SSI)	36
Antimicrobial stewardship	41
Hand hygiene	47
Education	51
Vascular access	52
IPC in the built environment (water, ventilation, and decontamination)	54
Cleaning services	59

Foreword

The director of infection prevention and control (DIPC) is required to produce an annual report on the state of healthcare associated infections in the organisation. The Health and Social Care Act 2008: 'Code of Practice on the prevention and control of infections and related guidance' requires the report to be released and made publicly available.

This annual report shares the important work that we have done over the past year (April 2024 to March 2025) to keep our patients safe from infection and to use antibiotics in the most responsible way.

Infection prevention and control (IPC) and antimicrobial stewardship (AMS) are at the heart of safe, high-quality care. They help to stop the spread of harmful microorganisms and make sure antibiotics continue to work when people need them most. Over the past year, our teams have worked hard to strengthen the basics, like hand hygiene, safe use of invasive devices, and regular cleaning, all of which make a real difference to patient safety.

One of our proudest achievements has been the improvement in hand hygiene across the Trust. Staff from all areas have come together to support this work, helping to create a safer environment for everyone. We have also advanced in how we check and care for lines and medical devices used in treatment, after spotting areas where we could do better. These improvements are already making a difference.

Throughout the year, we have also responded to infections like measles, whooping cough, flu and norovirus, as well as some of the rarer infections such as Mpox, hepatitis and tuberculosis. Our teams have worked closely with local and national partners to make sure we were ready to act quickly and keep patients safe.

We have made our information clearer and more accessible too. New digital tools help staff to see where things are going well and where extra support is needed. We also launched a new app to help doctors and nurses choose the right antibiotics for their patients, which helps fight antimicrobial resistance.

Of course, we still have challenges. Some infections are proving harder to reduce, and some surgeries result in more infections than we would like. But we are tackling these head-on with clear plans, careful review of data, and strong teamwork.

I want to say a heartfelt thank you to our incredible IPC and AMS teams, and to every member of staff who plays a role in keeping patients safe through good IPC and AMS practice. By working together, we are making a real difference and continuing to improve the care we provide for every patient, every day.

Mr Tom Jacques
Director of Infection Prevention and Control
June 2025

Abbreviation list

Abbreviation	Meaning	Abbreviation	Meaning
AMR	Antimicrobial Resistance	IPH	Imperial Private Health
AMS	Antimicrobial Stewardship	IV	Intra Venous
ANTT	Aseptic Non-Touch Technique	IVOS	Intravenous to Oral Switch
ARG	Antimicrobial Review Group	MHRA	Medicines and Healthcare Regulatory Agency
BSI	Blood Stream Infection	MRSA	Methicillin-resistant Staphylococcus aureus
CABG	Coronary Artery Bypass Graft	MSRG	Medicines Safety Review Group
СОНА	Community Onset Healthcare Associated	MSSA	Methicillin-sensitive Staphylococcus aureus
COIA	Community-onset, indeterminate association	NHS	National Health Service
CPE	Carbapenemase-producing Enterobacterales	NHSE	NHS England
CQC	Care Quality Commission	NHSI	NHS Improvement
СХН	Charing Cross Hospital	NHSPS	National Health Service Property Service
DHSC	Department of Health and Social Care	NIPCM	National Infection Prevention and Control Manual
DIPC	Direction of Infection Prevention & Control	OPAT	Outpatient Antibiotic Therapy
EFM	Estates and Facilities Management	PICC	Peripherally Inserted Central Catheters
EMB	Executive Management Board	PLACE	Patient Led Assessment of the Care Environment
EMB-Q	Executive Management Board - Quality	PPS	Point Prevalence Survey
FOI	Freedom of Information	PSIRP	Patient Safety Incident Response Plan
FR	Functional Risk	QCCH	Queen Charlotte and Chelsea Hospital
FY	Financial Year	QRM	Quality Review Meeting
GP	General Practitioner	SMH	St Marys Hospital
HCAI	Healthcare Associated Infection	SSI	Surgical Site Infection
нн	Hammersmith Hospital	TTA	To Take Away
НОНА	Healthcare Onset Healthcare Associated	TIPCC	Trust Infection Prevention & Control Committee
HSE	Health Service Executive	UK	United Kingdom
нтм	Health Technical Memorandum	UKHSA	United Kingdom Health Security Agency
ID	Infectious Diseases	WEH	Western Eye Hospital
ICS	Integrated Care System	WHO	World Health Organisation
IPC	Infection Prevention and Control		

Introduction

Imperial College Healthcare NHS Trust provides acute and specialist healthcare to over 1.3 million people a year with over 16,000 members of staff. Our five hospitals in central and west London – Charing Cross, Hammersmith, Queen Charlotte's & Chelsea, St Mary's and the Western Eye – have a long track record in research and education, influencing care and treatment nationally and worldwide. We offer private healthcare in dedicated facilities on all our sites.

We are a member of the North West London Acute Provider Collaborative, a partnership established in 2022 with the other acute NHS trusts in the sector – Chelsea and Westminster Hospital NHS Foundation Trust, The Hillingdon Hospitals NHS Foundation Trust and London North West University Healthcare NHS Trust. We work together to make the most effective use of our collective resources to provide better care, for more people, more fairly. Between us, we run 12 hospitals, employ 33,000 staff and serve a local population of over 2.2 million. We remain independent organisations with a chair in common and a board in common.

This annual report offers assurance that Imperial College Healthcare is in line with the Health and Social Care Act 2008: code of practice on the prevention and control of infections and related guidance, the Care Quality Commission (CQC) Health and Social Care Act 2008 (Regulated Activities) Regulations 2014, regulation 12 (2 (h)), regulation 15 (2), regulation 17 (2 (b)), and the National Infection Prevention and Control Manual for England (2022).

Preventing the spread of organisms that cause healthcare associated infections (HCAI) and ensuring optimal antimicrobial use is fundamentally important for all healthcare facilities. The prevention and control of infection remains a top priority for the Trust and is central to how services are planned, and care is delivered to patients. The IPC service is responsible for ensuring that policies and procedures for appropriate antimicrobial use and reducing the risk of HCAI are in place, that these practices are embedded throughout the organisation and that expert advice is available continuously.

Our patients have increasingly complex care needs, with ageing populations and increasing co-morbidities. This means that for many, the impact and consequences of HCAI are more serious. The Trust has continued work to address avoidable infections including *Methicillin-Resistant Staphylococcus Aureus* (MRSA), bloodstream infections, *Clostridiodes difficile* (*C. difficile*) infections and respiratory viruses.

Organisation of our service

The chief executive has overall corporate responsibility for IPC within the Trust. The IPC directorate is a clinical directorate within the office of the medical director and the medical director reports to the Trust board on all aspects of IPC.

The multidisciplinary service is led by the director of IPC, with the support of a deputy director of IPC. Together, they oversee the service comprising of medical staff, nurses, pharmacists, data scientists and other technical and operational experts who work collaboratively across the organisation to ensure patient safety through effective infection control practices (Figure 1). The service also works closely with key external regulatory and public health agencies and experts and provides clinical and operational expertise throughout the Trust.

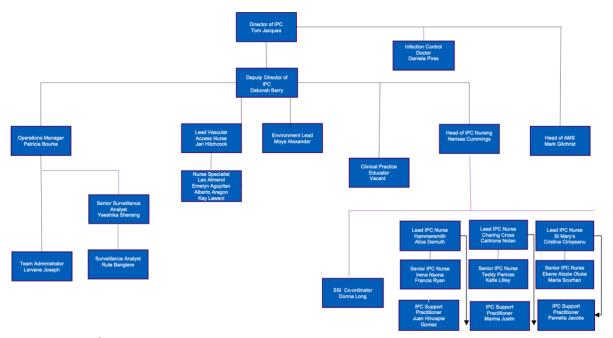


Figure 1: IPC establishment structure

Key activities of the IPC team

The IPC team encompasses aspects of IPC nursing, medicine, vascular access, environmental management, AMS and epidemiology. The team:

- provides expert advice and guidance to staff, patients, relatives and visitors in relation to infection prevention and control
- participates in surveillance, investigation and management of HCAI and infectious diseases
- ensures that current legislation in relation to IPC is implemented and adhered to Trust-wide
- advises and assures the Trust board on IPC legislation, its implementation and compliance
- plans and implements strategies to reduce HCAI, including mandatory requirements
- ensures that policies and procedures within the IPC manual are up to date and are readily available on the Trust's intranet
- provides education for all staff on all aspects of IPC to carry out safe and effective IPC measures, including hand hygiene
- organises and conducts IPC audits and reports compliance in accordance with IPC policy
- ensures responsible antimicrobial use through safe, appropriate and economic application, in line with good antimicrobial stewardship
- records and follows up incidents of infection after surgery, and uses results to review or change practice as necessary
- provides advice and support to staff on all aspects of clinical care relating to vascular access, including line placement when an expert is required
- provides a robust surveillance and epidemiology service to monitor progress on controlling major HCAI and for providing epidemiological evidence to inform action to reduce them.

Governance

During 2024-25, the Trust maintained its compliance with the criteria set out in the Health and Social Care Act codes of practice (2008). The annual plan for IPC for 2024-25 set out the proposed activities for the IPC directorate, ensuring that we continued to meet the expected requirements and standards outlined by regulation and legislation. The plan also accounted for locally agreed actions, as well as internal programmes of work that we planned to deliver throughout the year.

Progress with the plan is regularly reviewed through the governance structure set out below, to assess impact and provide assurance. Progress on actions is also monitored through regular operational meetings. The IPC annual plan and associated action plans support delivery of the Trust's strategic objective to improve outcomes for patients and local communities.

IPC reporting structure

IPC performance is monitored at executive and board level via a monthly IPC report to executive management board quality group (EMBQ), and a quarterly report to executive management board (EMB) and quality committee. An annual report is also reported to these committees ahead of publication on the Trust internet.

A monthly IPC scorecard is produced that includes IPC performance and quality metrics at divisional and directorate level. The scorecards are reviewed at the divisional quality and safety meetings, which the IPC team attend, where areas of good performance and opportunities for improvement are identified. Data on key mandatorily reportable HCAIs is also included in the Trust's quality and safety scorecard, reported to EMBQ, EMB, quality committee and standing committee, and the acute provider collaborative (APC) clinical outcomes dashboard reported to APC EMB, quality committee and board in common.

In 2024 we set up a quality review meeting process to review the data in more detail in areas where there were infection prevention and control challenges using our refreshed scorecard, and identify any additional support required. This supported the development of data-driven IPC improvement plans across the divisions, resulting in improvements in hand hygiene, screening for key infections and IPC training compliance in key areas. This was then replaced with deep-dive meetings with our clinical divisions, focused on developing and monitoring improvement plans in response to local areas of risk. These have all been stood down, except for surgery and cancer, following positive assurance of progress. The surgery and cancer meeting continues primarily to review actions in response to surgical site infections.

Trust infection prevention and control committee (TIPCC)

The Trust infection prevention and control committee (TIPCC), which reports to EMBQ via the monthly report described above, brings together all elements of the IPC agenda. There are several governance and operational meetings which report into TIPCC and

provide forums for focused review of key IPC related issues. The governance chart below sets this out (Figure 2).

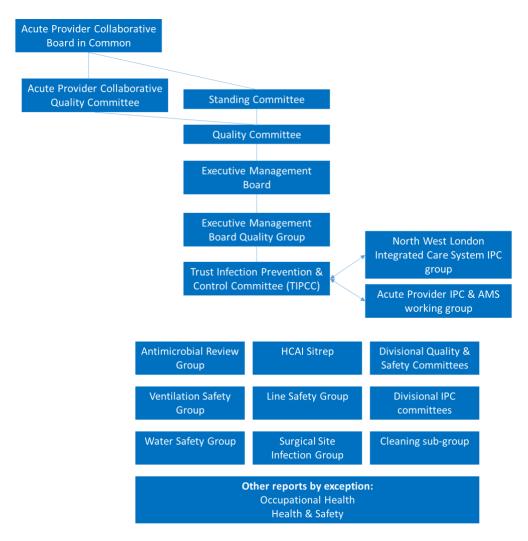


Figure 2: IPC governance structure

Risk register

The IPC risk register identifies risks to the organisation in relation to IPC practices. These are monitored monthly and reviewed at each Trust infection prevention and control committee meeting on a quarterly basis.

National Infection Prevention and Control Manual (NIPCM)

The National IPC Manual (NIPCM) for England was first published in April 2022. We are compliant in all areas and are working to improve the management of evidence including linking policies to the manual and improvements to allow quick access to the information our staff need through the intranet.

Infection prevention and control board assurance framework

In June 2020, NHS England/NHS Improvement (NHSE/I) published an IPC board assurance framework initially to support the provision of assurance to Trust boards that their approach to the management of COVID-19 was in line with national IPC guidance and that risks had been identified and were mitigated against. The board assurance framework has since been revised several times to align previous key lines of enquiry with a broader focus to account for all seasonal respiratory viruses and wider IPC practices.

The framework contains 54 key lines of enquiry over ten domains. An action plan is in place to undertake the necessary work that will improve board assurance related to IPC management. This is being monitored regularly through the structure outlined above. Most key lines of enquiry are rated green (52), with two rated partially compliant.

Freedom of information (FOI) requests

During 2024-25, five requests for data and information were received by the Trust under the Freedom of Information Act (2000) relating to IPC. All requests were completed within the legislated timeframe.

Review of policies and guidelines

There is a well-established, comprehensive policy review programme within the Trust, managed through corporate governance, to ensure all policies, guidelines and patient information leaflets are up to date and reflect the latest evidence-based practice. IPC participate fully in this programme and ensure that all documents owned by or requiring IPC input follow the necessary review and approvals process.

Category	No. of approvals
Policies	6
Clinical Guidelines	14
Patient Information Leaflets	0

Table 1: Policies, guidelines and patient information approved 2024-25

Significant and reportable incidents

There were 920 infection control related incidents reported in 2024-25 (Figure 3), across a range of IPC sub-categories (Figure 4) requiring formal investigation.

None of the reported incidents resulted in moderate or above harm (Figure 5). The team continue to monitor reporting rates and themes of incidents.

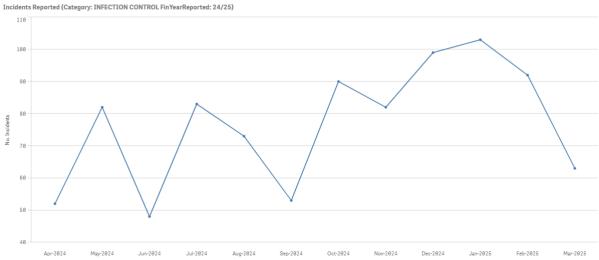


Figure 3: Numbers of infection control incidents reported per month 2024-25

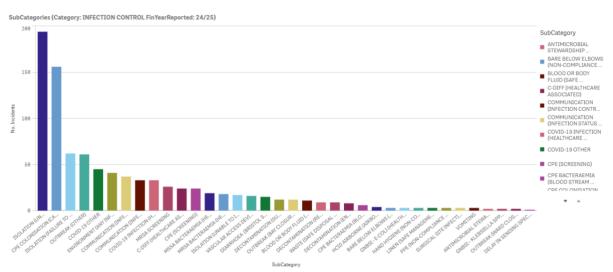


Figure 4: Datix harm categories 2024-25

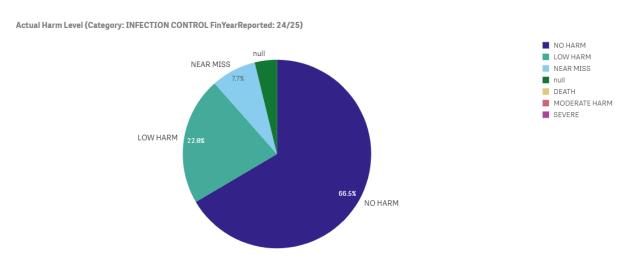


Figure 5: Datix incident reports 2024-25

Healthcare associated infections (HCAIs)

All trusts are required under the NHS Standard Contract to minimise rates of both *C. difficile* and of gram-negative bloodstream infections (*E. coli, Klebsiella spp., P. aeruginosa*), so that they are no higher than the threshold levels set by NHS England. The Trust is also required to mandatorily report *Staphylococcus aureus* bloodstream infections (BSI) – both *methicillin resistant Staphylococcus aureus* (MRSA) and *methicillin sensitive Staphylococcus aureus* (MSSA) although they have no set threshold.

A full description of the set thresholds is detailed in Table 2.

Organism	Trust threshold 2024-25	Trust position 2024-25
C. difficile	81 cases	83 cases
E. coli	116 cases	104 cases
MRSA	0 cases	8 cases
MSSA	No threshold	32 cases
Klebsiella spp.	52 cases	63 cases
P. aeruginosa	41 cases	48 cases
CPE	No threshold	5 cases

 Table 2: Imperial College Healthcare set thresholds 2024-25

Thresholds are calculated on the basis outlined below:

Pathogen	C. difficile	Gram-negative bloodstream infections (<i>E. coli, Klebsiella spp., P. aeruginosa</i>)
Threshold 1:	If a trust had fewer than or equal to 10 cases during the 12 months ending November 2021, the threshold will be equal to that count. If a trust had more than 10 cases, the threshold will be two cases less than the count.	If a trust had fewer than or equal to 10 cases during the 12 months ending November 2021, the threshold will be equal to that count. If a trust had more than 10 cases, the threshold will be 10% less than the count.
Threshold 2:	If a trust had fewer than or equal to 10 cases during the 12 months ending November 2022, the threshold will be equal to that count. If a trust had more than 10 cases, the threshold will be one case less than the count.	If a trust had fewer than or equal to 10 cases during the 12 months ending November 2022, the threshold will be equal to that count. If a trust had more than 10 cases, the threshold will be five per cent less than the count.
Final Threshold:	For each trust, NHS England has selected the lower of the two thresholds previously	For each trust, NHS England has selected the lower of the two thresholds previously

	described and this has been published as the threshold.	described and this has been published as the threshold.			
Note:	All thresholds were rounded down to the nearest whole number				
	and pertain to healthcare-associated cases (i.e. HOHA and				
	COHA cases).				

Table 3: Threshold calculation formula

Cases can be classified based on the following prior exposure groups:

Prior healthcare exposure group	Definition
Hospital-onset healthcare- associated (HOHA)	Specimen date is three or more days after the current admission date (where day of admission is day one)
Community-onset healthcare- associated (COHA)	Is not categorised HOHA and the patient was most recently discharged from the same reporting trust in the 28 days prior to the specimen date (where day one is the specimen date)
Community-onset, indeterminate association (COIA)	Is not categorised HOHA and the patient was most recently discharged from the same reporting trust between 29 and 84 days prior to the specimen date (where day one is the specimen date)
Unknown	Is not categorised HOHA and the patient has not been discharged from the same reporting organisation in the 84 days prior to the specimen date (where day one is the specimen date)
No information	The reporting trust did not provide any answers to questions on prior admission

Table 4: Prior exposure groups

Trust position

The Trust's position for 2024-25 across each of the reportable pathogens is demonstrated in Table 5.



 Table 5: Trust position on nationally mandated HCAI reporting 2024-25

The Trust's position in relation to neighbouring hospital trusts within our sector is detailed in Table 6.



Table 6: North West London ICS Providers HCAI position 2024-25

Against a national perspective of increasing HCAIs and in addition to benchmarking against other trusts in the sector, the Trust also benchmark our performance against trusts in the Shelford Group of hospitals (a collaboration between ten of the largest teaching and research NHS hospital trusts in England) as well as our national position against all acute trusts. Table 7 details the Trust position in respect to the Shelford group.

		C. difficile	E. coli	Klebsiella spp	MRSA	MSSA	Pseudomonas aeruginosa
Organisation name	Apr-24 to Mar-25	Rate per 100,000 bed-days	Rate per 100,000 bed-day				
Organisation name	All Acute Trusts (mean healthcare associated rate)	33.88	46.57	26.01	1.64	17.73	10.15
IMPERIAL COLLEGE HEALTHCARE NHS TRUST	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	23.49	29.43	17.83	2.26	9.05	13.58
INFERIAL COLLEGE REALTHCARE NEST TROST	Shelford position	3	1	1	8	1	7
CAMBRIDGE UNIVERSITY HOSPITALS NHS FOUNDATION TRUST	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	44.69	51.73	29.79	2.17	14.90	10.83
CAMBRIDGE UNIVERSITY HOSPITALS NAS FOUNDATION TRUST	Shelford position	10	6	8	7	4	6
GUY'S AND ST THOMAS' NHS FOUNDATION TRUST	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	16.64	32.77	27.48	1.76	13.11	9.33
GUY'S AND ST THOMAS: NHS FOUNDATION TRUST	Shelford position	1	2	7	5	3	4
KING'S COLLEGE HOSPITAL NHS FOUNDATION TRUST	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	22.68	36.91	27.43	0.62	15.67	15.67
KING S COLLEGE HOSPITAL NES FOUNDATION TRUST	Shelford position	2	3	6	2	5	8
MANCHESTER UNIVERSITY NHS FOUNDATION TRUST	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	35.96	40.57	23.72	1.87	18.98	4.49
MANCHESIER UNIVERSITY NAS POUNDATION TRUST	Shelford position	6	4	3	6	8	1
OXFORD UNIVERSITY HOSPITALS NHS FOUNDATION TRUST	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	43.44	58.63	26.92	2.93	17.59	16.79
OXFORD UNIVERSITY HOSPITALS NHS FOUNDATION TRUST	Shelford position	9	9	5	10	6	9
SHEFFIELD TEACHING HOSPITALS NHS FOUNDATION TRUST	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	34.14	65.22	25.81	0.61	22.15	7.31
SHEFFIELD TEACHING HOSPITALS NHS FOUNDATION TRUST	Shelford position	5	10	4	1	9	2
THE NEWCASTLE UPON TYNE HOSPITALS NHS FOUNDATION TRUST	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	41.98	54.12	32.39	1.49	27.06	10.01
THE NEWCASTLE UPON TYNE HOSPITALS NHS FOUNDATION TRUST	Shelford position	8	7	9	4	10	5
UNIVERSITY COLLEGE LONDON HOSPITALS NHS FOUNDATION TRUST	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	28.79	57.14	32.78	2.66	12.85	20.82
UNIVERSITY COLLEGE LONDON HOSPITALS NHS FOUNDATION TRUST	Shelford position	4	8	10	9	2	10
UNIVERSITY HOSPITALS BIRMINGHAM NHS FOUNDATION TRUST	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	37.72	46.07	23.38	1.38	18.27	7.47
UNIVERSITY HOSPITALS BIRMINGHAM NHS FOUNDATION TRUST	Shelford position	7	-	2	3	7	2

Table 7: Imperial College Healthcare, Shelford, Acute provider position 2024-25

Five-year trajectory

Whilst the national thresholds have adjusted year on year, there has been little in the way of significant fluctuation in the numbers observed at trust level. A review of the national trajectory alongside the Trust's annual reported figures is detailed in Table 8.

Organism	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25
C.difficile threshold	77	99	67	65	81
C.difficile cases	59	71	90	85	83
MRSA threshold	0	0	0	0	0
MRSA BSI cases	5	11	5	9	8
MSSA threshold	No ceiling				
MSSA BSI cases	31	38	46	36	32
E.coli threshold	No ceiling	152	95	90	116
E.coli BSI cases	60	105	115	120	104
Klebsiella spp. threshold	No ceiling	68	78	54	52
Klebsiella spp. BSI cases	49	70	61	53	63
P.aeruginosa threshold	No ceiling	51	44	23	41
P.aeruginosa BSI cases	47	36	38	44	48

Table 8: Five-year trajectory national set thresholds versus Imperial College Healthcare position

Clostridioides difficile infection

Clostridioides difficile (C. difficile) is a bacterium that is found in people's intestines. It can be found in healthy people, where it causes no symptoms (up to three per cent of adults and 66% of babies). C. difficile causes disease when the normal bacteria in the gut are disadvantaged, usually by someone taking antibiotics. This allows C. difficile to grow to unusually elevated levels. It also allows the toxin that some strains of C. difficile produce to reach levels where it attacks the intestines and causes mild to severe diarrhoea. C. difficile can lead to more serious infections of the intestines with severe inflammation of the bowel (pseudomembranous colitis). C. difficile is the biggest cause of infectious diarrhoea in hospitalised patients. People can become infected with C. difficile if they ingest the bacterium (through contact with a contaminated environment or person). People who become infected with C. difficile are usually those who have taken antibiotics, particularly the elderly and people whose immune systems are compromised.

The Trust has had the third lowest rate in the Shelford group for the last four consecutive years (Table 9).

	0.1100.11	EV 2020/24	FV 2024 (22	FV 2022 /22	5) / 2022 /2 A	EV 2024/25
Organisation	C.difficile		FY 2021/22		-	
	All Acute Trusts (mean healthcare associated rate)	25.72	25.74	29.59	29.41	32.55
Imperial College Healthcare	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	21.00	22.19	27.73	24.06	23.49
imperial college riealtricare	Shelford position	2nd	3rd	3rd	3rd	3rd
Guy's & St. Thomas'	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	13.96	15.98	16.53	15.99	16.64
Guy s & St. Hiomas	Shelford position	1st	1st	1st	1st	1st
University College London Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	44.19	40.78	49.41	26.53	28.79
Oniversity Conege London Hospitals	Shelford position	10th	10th	10th	4th	4th
King's College Hospital	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	22.53	21.77	27.47	23.32	22.68
Killg's College Hospital	Shelford position	3rd	2nd	2nd	2nd	2nd
Sheffield Teaching Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	38.60	34.91	38.07	27.16	34.14
Sheriferd reaching nospitals	Shelford position	8th	7th	6th	5th	5th
The Newcastle upon Tyne Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	31.19	38.08	38.76	29.80	41.98
The Newcastle upon Tyrie Hospitals	Shelford position	6th	9th	8th	6th	8th
University Hospitals Birmingham	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	28.47	26.67	30.73	33.14	37.72
University Hospitals Birmingham	Shelford position	5th	4th	5th	7th	7th
Combridge University Hespitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	24.97	36.38	38.46	39.05	44.69
Cambridge University Hospitals	Shelford position	4th	8th	7th	10th	10th
Name de cata de la lacia de cata de la	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	32.25	29.21	28.78	35.59	35.96
Manchester University	Shelford position	7th	5th	4th	9th	6th
Out and Hairranian Hannian	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	39.67	30.21	39.80	34.77	43.44
Oxford University Hospitals	Shelford position	9th	6th	9th	8th	9th

Table 9: *C. difficile* ranking Imperial College Healthcare v Shelford v acute providers (2020-25)

We exceeded the set threshold across three of the last five reported years, as shown in Figure 6.

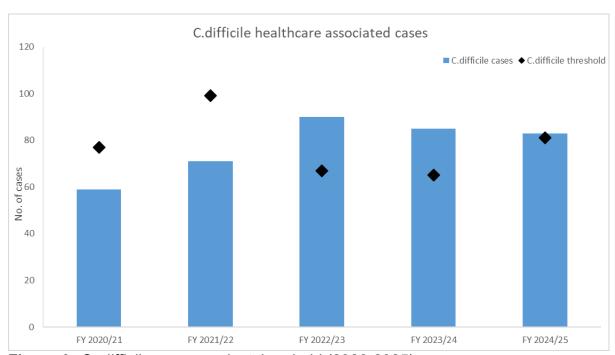


Figure 6: C. difficile cases against threshold (2020-2025)

The annual threshold set by UKHSA was 81 for 2024-25. The Trust reported 83 cases meaning the Trust surpassed the annual threshold set for the year, although we did see a small reduction in cases compared to 2024-25.

Analysis and learning

A review into the 83 cases of *C. difficile* infections in 2024-25 revealed no specific care and service delivery problems but it was identified that many patients were from highrisk groups. These include patients with present or past malignancy, existing gastrointestinal disease including Crohn's or ulcerative colitis and patients who are

immunosuppressed. Pre-existing colonisation has also been suggested as an important risk factor, with the disease activated by concomitant illness. Most cases had received antimicrobial treatment in line with the Trust's antimicrobial prescribing policy. Of the 83 cases, 70 were HOHA, and 13 cases were COHA. Seven cases were repeat samples from previously known positive patients.

There was several learning issues identified, including the timely isolation of patients with symptoms. The appropriate sampling of patients was also a noted issue with advice provided in relation to resampling of previous positive cases. There were also opportunities for education identified, in relation to documentation of stool charts. In response to identified learning needs, the IPC team expedited a comprehensive revision of the *C. difficile* policy. The updated policy provides clearer guidance for clinical teams, outlining specific actions and expectations when managing a case of *C. difficile* infection. Key improvements included simplified patient management algorithms to support staff decision-making. These changes were shared and discussed across Trust-wide learning forums to ensure consistent understanding and implementation.

In addition to the multidisciplinary team meetings at each hospital site, where all cases of HCAI are reviewed, all cases of *C. difficile* are peer reviewed monthly at a specific *C. difficile* meeting. Colleagues from microbiology, pharmacy, North West London Pathology, as well as the integrated care board and primary care are all represented within the group, to ensure a comprehensive review takes place. This also ensures that we maximise all learning opportunities. The presence of the integrated care board and primary care also ensures that issues, learning, and good practice can be shared.

C difficile healthcare associated (HOHA + COHA) cases

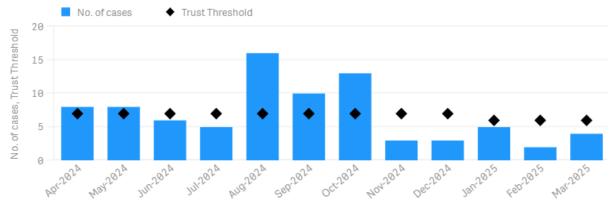


Figure 7: Imperial College Healthcare *C. difficile* infection rates 2024-25

* HOHA = Healthcare Onset Healthcare Associated (Samples taken >= 48 hours into a patient's admission)

**COHA = Community Onset Healthcare Associated (Samples taken < 48 hours into a patient's admission and where the patient was an inpatient at the reporting Trust in the 28 days prior to sample collection date)

Staphylococcus aureus

Staphylococcus aureus (S. aureus) is a bacterium that commonly colonises human skin and mucosa without causing any problems. It can also cause disease, particularly if there is an opportunity for the bacteria to enter the body, for example through broken skin or a medical procedure. If the bacteria enter the body, illnesses which range from mild to life-threatening may then develop. Most strains of S. aureus are sensitive to the

more commonly used antibiotics, and infections can be effectively treated. Some *S. aureus* bacteria are more resistant. Those resistant to the antibiotic methicillin are termed *methicillin resistant Staphylococcus aureus* (MRSA) and often require distinct types of antibiotics to treat them. Those that are sensitive to methicillin are termed *methicillin susceptible Staphylococcus aureus* (MSSA).

MRSA

Those resistant to the antibiotic methicillin are termed *methicillin resistant Staphylococcus aureus* (MRSA) and often require distinct types of antibiotics to treat them. MRSA and MSSA only differ in their degree of antibiotic resistance.

The Trust position has had one of the higher rates in the Shelford group for the last five years, most recently eighth in the group, shown in Table 10.

Organisation	MRSA	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25
Organisation	All Acute Trusts (mean healthcare associated rate)	1.32	1.01	1.10	1.34	1.38
Imperial College Healthcare	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	1.78	3.39	1.42	2.55	2.26
ппрена сопеде неактсаге	Shelford position	6th	10th	7th	9th	8th
Guy's & St. Thomas'	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	2.04	1.38	0.75	2.50	1.76
Guy s & St. Hiomas	Shelford position	7th	6th	3rd	8th	5th
University College London Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	2.24	1.44	2.17	1.30	2.66
oniversity conege tondon nospitals	Shelford position	8th	7th	9th	3rd	9th
King's College Hospital	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	1.19	1.06	1.86	2.06	0.62
King a conege nospital	Shelford position	4th	3rd	8th	6th	2nd
Sheffield Teaching Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	0.78	0.00	0.40	1.41	0.61
Sherriera reaching nospitals	Shelford position	3rd	1st	1st	4th	1st
The Newcastle upon Tyne Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	0.28	0.00	0.41	0.83	1.49
The New castle upon Tyrie hospitals	Shelford position	2nd	2nd	2nd	1st	4th
University Hospitals Birmingham	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	0.27	1.32	1.08	0.97	1.38
Offiversity Hospitals Diffilligiani	Shelford position	1st	5th	6th	2nd	3rd
Cambridge University Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	1.76	1.49	0.82	2.20	2.17
Cambridge Offiversity Hospitals	Shelford position	5th	8th	4th	7th	7th
Manchester University	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	2.44	2.14	2.20	2.85	1.87
Manchester Offiversity	Shelford position	9th	9th	10th	10th	6th
Oxford University Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	3.51	1.13	1.07	1.60	2.93
Oxford Offiversity Hospitals	Shelford position	10th	4th	5th	5th	10th

Table 10: MRSA bloodstream infection ranking Imperial College Healthcare v Shelford v acute providers (2020-25)

There is no set threshold for MRSA, with a zero-tolerance position. The Trust has reported several cases across the last five reported years, with eight occurring in 2024-25 as shown in Figure 8.

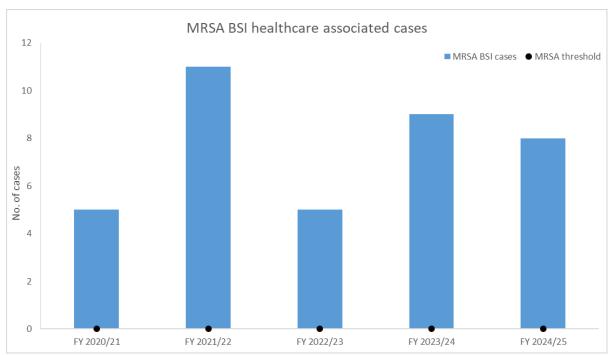


Figure 8: MRSA bloodstream infection cases against threshold (2020-2025)

The Trust figures for MRSA are demonstrated in Figure 9.

MRSA BSI healthcare associated (HOHA + COHA) cases

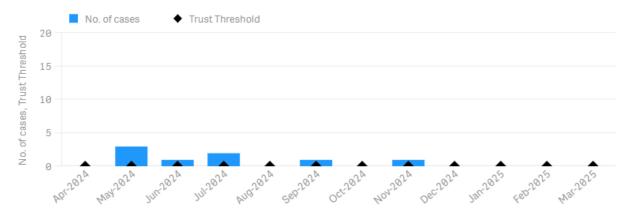


Figure 9: Imperial College Healthcare MRSA infection rates 2024-25

* HOHA = Healthcare Onset Healthcare Associated (Samples taken >= 48 hours into a patient's admission)

Analysis and learning

A review of the eight cases of MRSA BSI in 2024-25 revealed that none were microbiologically linked to one another. There were five patients classified as having a line associated bloodstream infection, three linked to central venous access, and two related to peripheral vascular devices. One patient had a lower respiratory tract source, whilst one case was thought to be a contaminant. In one patient there was no obvious primary source of infection identified, following in-depth analysis. All cases were HOHA cases.

^{**}COHA = Community Onset Healthcare Associated (Samples taken < 48 hours into a patient's admission and where the patient was an inpatient at the reporting Trust in the 28 days prior to sample collection date)

Common themes identified across the cases included missed opportunities for MRSA suppression therapy in colonised patients, concerns around vascular access device care and documentation, inconsistent use of aseptic non-touch technique (ANTT), and gaps in skin preparation and blood culture documentation.

In response, the vascular access service conducted a Trust wide audit of line care practices, including central venous catheters (CVCs), Hickman lines, midlines, and peripheral cannulas. The audit findings mirrored those from the case reviews and were shared across the Trust learning forums and with divisional leadership.

As a result, line care has been included as a Trust safety improvement priority for 2025-26. A routine audit process will be integrated into the IPC performance scorecard, and training delivery will be strengthened under the leadership of the incoming IPC practice educator.

MRSA admission screening

The primary rationale for MRSA screening is to identify carriers at the earliest opportunity. Early identification enables timely prescription and administration of topical MRSA suppression therapy, informs the selection of appropriate systemic antimicrobial prophylaxis for surgical procedures, and guides empirical antimicrobial treatment in the event of sepsis. Additionally, it supports decision-making regarding appropriate patient placement in hospital to minimise transmission risk.

Targeted efforts have been undertaken in collaboration with emergency department colleagues to improve screening performance. A key issue was identified concerning patients awaiting admission decisions. By initiating screening at this earlier stage, a significant improvement in compliance was achieved, with continued upward trends. Ongoing work aims to ensure consistent screening practices across all clinical services. Screening performance is routinely monitored and reported to divisional leadership teams to maintain accountability and drive further improvement.

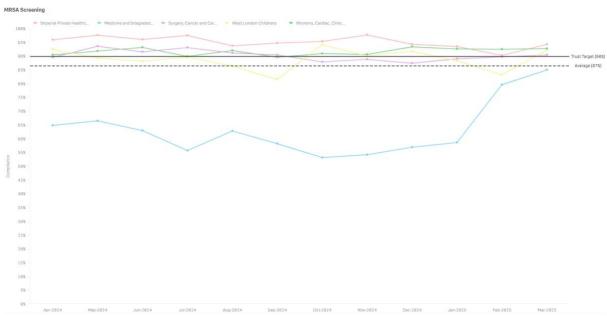


Figure 10: Imperial College Healthcare MRSA screen compliance 2024-25

MSSA

Those that are sensitive to methicillin are termed *methicillin susceptible Staphylococcus aureus* (MSSA). MRSA and MSSA only differ in their degree of antibiotic resistance.

The Trust has had the lowest rate in the Shelford group for the last four years (Table 11).

Organisation	MSSA	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25
Olganisation	All Acute Trusts (mean healthcare associated rate)	17.27	16.00	16.69	15.89	15.80
Imperial College Healthcare	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	14.24	11.09	14.17	9.91	9.05
imperial college Healthcare	Shelford position	3rd	1st	1st	1st	1st
Guy's & St. Thomas'	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	22.13	20.94	15.70	16.99	13.11
Guy s & St. Hiomas	Shelford position	5th	9th	3rd	6th	3rd
University College London Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	24.05	13.43	15.83	14.78	12.85
oniversity conege tondon nospitals	Shelford position	7th	2nd	4th	2nd	2nd
King's College Hospital	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	11.62	18.17	17.54	16.92	15.67
Killg 3 College Hospital	Shelford position	2nd	6th	5th	5th	5th
Sheffield Teaching Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	24.87	20.50	19.60	23.54	22.15
Sheriferd reaching hospitals	Shelford position	8th	8th	9th	10th	9th
The Newcastle upon Tyne Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	28.10	24.79	22.31	22.35	27.06
The New Castle upon Tyrie Hospitals	Shelford position	10th	10th	10th	8th	10th
University Hospitals Birmingham	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	19.16	14.27	15.36	15.38	18.27
Oniversity Hospitals Birmingham	Shelford position	4th	3rd	2nd	3rd	7th
Cambridge University Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	10.90	15.80	19.38	16.50	14.90
Cambridge Offiversity Hospitals	Shelford position	1st	4th	8th	4th	4th
Manchester University	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	22.49	18.66	19.38	22.52	9.05
Manchester Oniversity	Shelford position	6th	7th	7th	9th	1st
Oxford University Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	25.28	16.37	18.35	18.72	17.59
Oxford Oniversity Hospitals	Shelford position	9th	5th	6th	7th	6th

Table 11: MSSA bloodstream infection ranking Imperial College Healthcare v Shelford v acute providers (2020-25)

There is no set threshold for MSSA, with a zero-tolerance position. The Trust has reported cases across the last five reported years, as shown in Figure 11. There were 32 cases reported in 2024-25, meaning we did not meet the zero-tolerance target. However, this represents a continued improvement in performance since 2022-23.

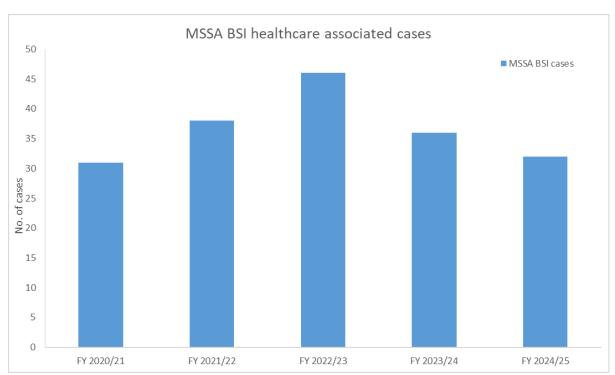


Figure 11: MSSA bloodstream infection cases against threshold (2020-25)

The Trust figures for MSSA are demonstrated in Figure 12.

MSSA BSI healthcare associated (HOHA + COHA) cases

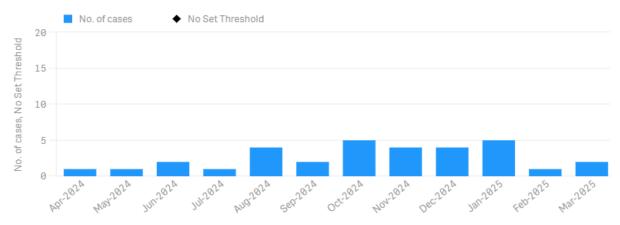


Figure 12: Imperial College Healthcare MSSA cases 2024-25

* HOHA = Healthcare Onset Healthcare Associated (Samples taken >= 48 hours into a patient's admission)

MSSA bloodstream infection

Analysis and learning

A review of the 32 cases of MSSA in 2024/25 identified 26 patients as HOHA, and six cases as COHA. Of the COHA cases, four were patients with surgical site infections, one was a renal patient on dialysis, and one was a long-term haematology patient with neutropenic sepsis.

^{**}COHA = Community Onset Healthcare Associated (Samples taken < 48 hours into a patient's admission and where the patient was an inpatient at the reporting Trust in the 28 days prior to sample collection date)

Cardiovascular or intravascular sources accounted for half of all cases of MSSA with nine linked to central venous access, and seven related to peripheral vascular devices. Other sources included skin or soft tissue (four patients), lower respiratory tract (three patients), and cardiac sources (one patient, who had endocarditis). For one patient the source of the infection was thought to be a contaminant. In one patient there was no obvious primary source of infection identified.

Key areas identified for improvement in MSSA prevention include the care of vascular access devices, documentation of line insertion and maintenance, and adherence to ANTT. Additional contributing factors relate to personnel and environmental practices, particularly compliance with hand hygiene protocols.

The strategic approach to MSSA improvement aligns with the broader MRSA strategy already outlined, ensuring a cohesive and consistent infection prevention framework across both areas.

Gram negative bloodstream infections

There are several types of gram-negative bacteria that can be resistant to antibiotics. These infections are associated with an increased risk of sepsis and mortality. The most common healthcare associated gram-negative bloodstream infections are related to *Escherichia coli (E. coli)*, *Klebsiella species (Klebsiella spp.) and Pseudomonas aeruginosa (P. aeruginosa)*. Some key healthcare-associated risk factors include invasive procedures (e.g. biopsy and surgery), in-dwelling vascular access devices and other devices such as urinary catheters.

Escherichia coli

Escherichia coli (E. coli) is the most common pathogen causing bacteraemia both in the community and in healthcare settings. A bacteraemia usually develops as a complication of other infections, with the most common sources being urinary tract, gastrointestinal and hepatobiliary infections.

The Trust has had the lowest rate in the Shelford group in four of the last five years (Table 12).

Organisation	E.coli	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25
	All Acute Trusts (mean healthcare associated rate)	42.17	37.99	40.10	40.01	40.67
Imperial College Healthcare	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	31.68	30.51	35.44	33.97	29.43
	Shelford position	1st	1st	2nd	1st	1st
Guy's & St. Thomas'	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	44.94	33.89	31.68	34.23	32.77
	Shelford position	4th	2nd	1st	2nd	2nd
University College London Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	66.57	52.29	53.73	55.66	57.14
	Shelford position	10th	9th	7th	10th	8th
King's College Hospital	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	38.90	36.35	37.19	38.17	36.91
	Shelford position	2nd	4th	3rd	3rd	3rd
Sheffield Teaching Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	61.66	44.60	58.56	55.53	65.22
	Shelford position	9th	6th	9th	9th	10th
The Newcastle upon Tyne Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	54.79	46.42	51.15	53.39	54.12
	Shelford position	6th	7th	6th	8th	7th
University Hospitals Birmingham	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	47.50	40.71	41.59	40.45	46.07
	Shelford position	5th	5th	4th	5th	5th
Cambridge University Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	55.92	52.78	56.95	50.32	51.73
	Shelford position	7th	10th	8th	7th	6th
Manchester University	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	39.58	34.05	42.32	39.09	40.57
	Shelford position	3rd	3rd	5th	4th	4th
Oxford University Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	56.87	47.71	58.72	46.28	58.63
	Shelford position	8th	8th	10th	6th	9th

Table 12: E. coli ranking Imperial College Healthcare v Shelford v acute providers (2020-25)

National thresholds for *E. coli* were introduced in 2021-22. Since implementation, the Trust has exceeded the set threshold in two of the last four years, as shown in Figure 13.

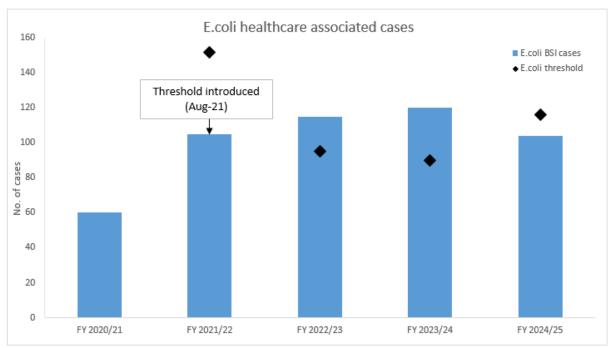


Figure 13: E. coli cases against threshold (2020-25)

The annual threshold set by UKHSA was 116 for 2024-25. The Trust reported 104 cases meaning the Trust was within the annual threshold set for the year.

Analysis and learning

A review of the 104 cases of *E. coli* bloodstream infections in 2024-25 identified 70 patients as HOHA, and 34 cases as COHA. A significant number COHA cases related

to re-admissions to the Trust (20 patients), with other being regular frequent attenders to haematology or oncology services (nine patients) or renal dialysis (five patients). Seven of these patients had more than one blood culture sample recorded as positive.

The review revealed that urinary sources accounted for 33 cases of all *E. coli* bloodstream infections attributed to the Trust. Amongst those patients with a urinary source, just over half had a urinary catheter in place in the 28 days preceding diagnosis, and seven patients having previous treatment with antibiotics for a urinary infection. Other sources included hepatobiliary sources (22 patients), gastrointestinal or intraabdominal (18 patients), cardiovascular or intravascular (five patients), lower respiratory tract (two patients), bone or joint infection (two patients), skin or soft tissue infection (one patient), central nervous system (one patient). Whilst some patients had multiple potential sources, and 15 per cent of patients across all categories were severely immunocompromised, 17 patients (16 per cent) had no obvious source identified.

Most patients with *E. coli had* some form of invasive (vascular / urinary etc.) device in place or had recent surgery.

Sources for cases reported in 2024-25 can be found in Figure 14. The Trust figures for *E. coli* are demonstrated in Figure 15.

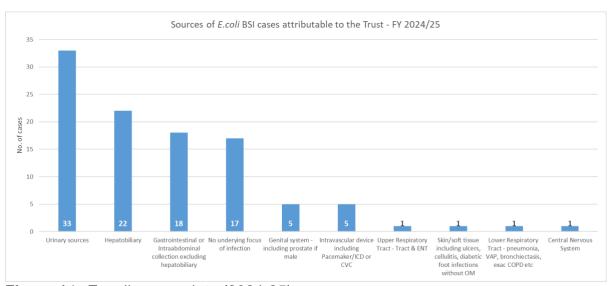


Figure 14: *E. coli* source data (2024-25)

E.coli BSI healthcare associated (HOHA + COHA) cases

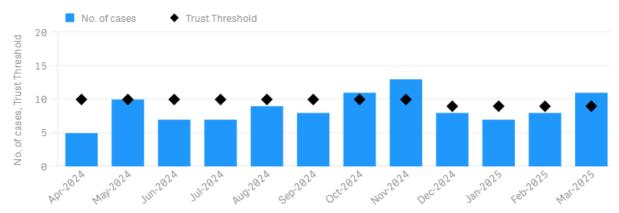


Figure 15: Imperial College Healthcare E. coli cases 2024-25

Klebsiella spp.

Klebsiella spp. species are gram-negative bacteria belonging to the Enterobacteriaceae family. These species can cause a range of HCAI, including pneumonia, bloodstream infections, wound or surgical site infections (SSI) and meningitis. Infections can be associated with the use of invasive devices or following medical procedures.

The Trust has had the lowest rate in the Shelford group in three of the last five years, including the most recent reported year (Table 13).

	Kleb	FV 2020/21	FY 2021/22	EV 2022/22	EV 2022/24	EV 2024/2E
Organisation			-		-	
	All Acute Trusts (mean healthcare associated rate)	19.15	16.26	16.94	16.68	17.22
Imperial College Healthcare	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	22.43	21.57	18.49	15.00	17.83
	Shelford position	1st	3rd	2nd	1st	1st
Guy's & St. Thomas'	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	35.07	25.62	28.38	25.74	27.48
	Shelford position	7th	5th	7th	7th	7th
University College London Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	40.83	27.34	36.46	38.27	32.78
	Shelford position	10th	6th	10th	10th	10th
King's College Hospital	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	38.43	29.16	32.54	28.27	27.43
	Shelford position	9th	7th	9th	8th	6th
Sheffield Teaching Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	23.06	22.75	28.16	20.92	25.81
	Shelford position	3rd	4th	6th	4th	4th
The Newcastle upon Tyne Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	36.25	32.90	32.00	23.59	32.39
	Shelford position	8th	10th	8th	5th	9th
University Hospitals Birmingham	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	22.67	15.25	17.01	16.35	23.38
	Shelford position	2nd	1st	1st	2nd	2nd
Cambridge University Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	32.71	29.22	25.05	30.80	29.79
	Shelford position	6th	8th	4th	9th	8th
Manchester University	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	25.80	20.37	19.52	18.12	23.72
	Shelford position	4th	2nd	3rd	3rd	3rd
Oxford University Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	31.95	29.92	25.69	25.14	26.92
	Shelford position	5th	9th	5th	6th	5th

Table 13: *Klebsiella spp.* ranking Imperial College Healthcare v Shelford v acute providers (2020-25)

National thresholds for *Klebsiella* were introduced in 2021-22. Since implementation, the Trust exceeded the set threshold in the first year, and the most current year, as shown in Figure 16.

^{*} HOHA = Healthcare Onset Healthcare Associated (Samples taken >= 48 hours into a patient's admission)

^{**}COHA = Community Onset Healthcare Associated (Samples taken < 48 hours into a patient's admission and where the patient was an inpatient at the reporting Trust in the 28 days prior to sample collection date)

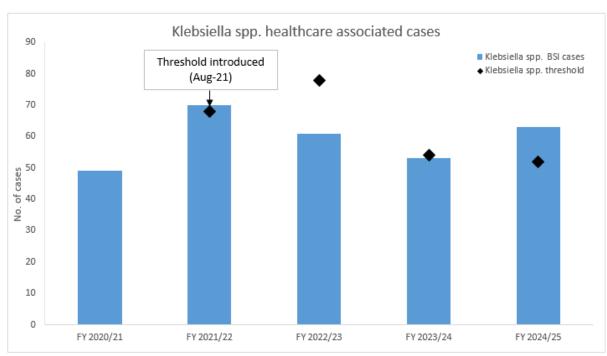


Figure 16: Klebsiella spp. cases against threshold (2020-25)

The annual threshold set by UKHSA is 52 for 2024-25. The Trust reported 63 cases meaning the Trust was over the annual threshold set for the year.

Analysis and learning

A review of the 63 cases of *Klebsiella spp.* bloodstream infections (Figure 18) in 2024-25 identified 51 patients as HOHA, and 12 cases as COHA. There were six cases that were repeat samples for patients already known to be positive with *Klebsiella spp.* A significant number of COHA cases related to re-admissions to the Trust (seven patients), with others being regular frequent attenders to haematology or oncology services (five patients). Seven of these patients had more than one blood culture sample recorded as positive.

The review revealed that urinary sources accounted for 12 cases of all *Klebsiella spp.* bloodstream infections attributed to the Trust. Amongst those patients with a urinary source, several had a urinary catheter in place in the 28 days preceding diagnosis or had previous treatment with antibiotics for a urinary infection. Other sources of infection identified included hepatobiliary (11 patients), gastrointestinal or intra-abdominal (11 patients), cardiovascular or intravascular devices (ten patients), lower respiratory tract (seven patients), genitourinary (one patient), central nervous system and skin or soft tissue infection (one patient). Whilst some patients had multiple potential sources, and 22% of patients across all categories were severely immunocompromised, nine patients (14%) had no obvious source identified. Up to 55% of patients with *Klebsiella spp.* had some form of invasive (vascular / urinary etc.) device in place or had recent surgery.

Sources for cases reported in 2023-24 can be found in Figure 17. The Trust figures for *Klebsiella* are demonstrated in Figure 18.

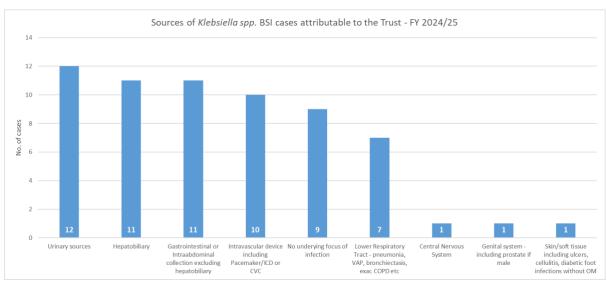


Figure 17: Klebsiella spp. source data (2023-24)

Klebsiella spp. BSI healthcare associated (HOHA + COHA) cases

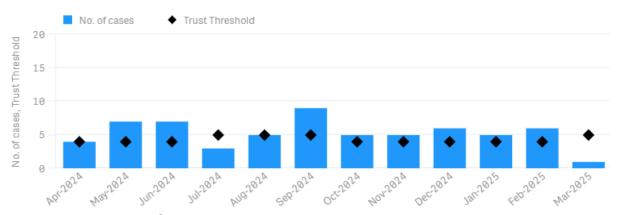


Figure 18: Imperial College Healthcare Klebsiella spp. cases 2024-25

* HOHA = Healthcare Onset Healthcare Associated (Samples taken >= 48 hours into a patient's admission)

Pseudomonas aeruginosa

Pseudomonas aeruginosa is a gram-negative opportunistic pathogen which rarely affects healthy individuals, but can cause a wide range of infections, particularly in those with a weakened immune system. In hospitals, the organism can contaminate devices that are left inside the body such as respiratory equipment and catheters. P. aeruginosa is resistant to many commonly used antibiotics.

The Trust has had the fifth lowest rate in the Shelford group for three of the last five years, however we were seventh in 2024-25 as displayed in Table 14.

^{**}COHA = Community Onset Healthcare Associated (Samples taken < 48 hours into a patient's admission and where the patient was an inpatient at the reporting Trust in the 28 days prior to sample collection date)

Organisation	Pseud	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25
	All Acute Trusts (mean healthcare associated rate)	8.77	7.46	7.42	7.16	6.96
Imperial College Healthcare	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	20.29	11.09	11.71	12.46	13.58
	Shelford position	9th	5th	5th	5th	7th
Guy's & St. Thomas'	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	19.07	14.33	15.98	13.49	9.33
	Shelford position	7th	7th	9th	7th	4th
University College London Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	34.68	20.63	19.19	20.87	20.82
	Shelford position	10th	10th	10th	10th	10th
King's College Hospital	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	19.69	16.69	15.21	14.44	15.67
	Shelford position	8th	9th	7th	8th	8th
Sheffield Teaching Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	6.48	7.21	6.98	6.64	7.31
	Shelford position	1st	2nd	1st	2nd	2nd
The Newcastle upon Tyne Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	12.64	9.69	11.49	8.69	10.01
	Shelford position	4th	4th	4th	4th	5th
University Hospitals Birmingham	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	8.10	8.12	7.13	8.07	7.47
	Shelford position	3rd	3rd	2nd	3rd	3rd
Cambridge University Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	16.88	12.82	15.21	13.20	10.83
	Shelford position	5th	6th	6th	6th	6th
Manchester University	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	7.50	6.70	8.83	6.21	4.49
	Shelford position	2nd	1st	3rd	1st	1st
Oxford University Hospitals	Healthcare associated (HOHA + COHA) rate per 100,000 bed-days	18.25	14.40	15.81	16.85	16.79
	Shelford position	6th	8th	8th	9th	9th

Table 14: *P. aeruginosa* ranking Imperial College Healthcare v Shelford v acute providers (2020-25)

National thresholds for *P. aeruginosa* were introduced in 2021-22. Since implementation, the Trust was within threshold for the first two reporting years but has exceeded the set threshold for the most recent reported financial year, as shown in Figure 19.

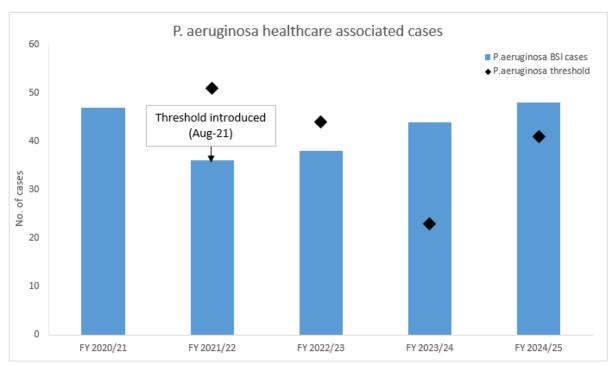


Figure 19: *P. aeruginosa* cases against threshold (2020-2025)

The annual threshold set by UKHSA is 41 for 2024-25. The Trust reported 48 cases meaning the Trust surpassed the annual threshold set for the year.

Analysis and learning

A review of the 48 cases of *P. aeruginosa* bloodstream infection (Figure 22) in 2024-25 identified 36 patients as HOHA, and 12 cases as COHA. There were four cases that were repeat samples for patients already known to be positive with *P. aeruginosa*. A significant number of COHA cases related to regular frequent attenders to haematology or oncology services (nine patients), with others being re-admissions to the Trust (three patients).

The review revealed that cardiovascular or intravascular sources were the most common sources of infection with 19 patients. Other sources of infection included lower respiratory tract (seven patients), urinary sources (seven patients), hepatobiliary (four patients), cardiac sources (three patients, who had prosthesis), skin or soft tissue infection (three patients), gastrointestinal (GI) or intra-abdominal (one patient), and bone or joint infection (one patient). Whilst some patients had multiple potential sources, in three (six per cent) patients there was no obvious primary source of infection identified. Up to 79% of patients with *P. aeruginosa* had some form of invasive (vascular / urinary etc.) device in place or had recent surgery. In addition, 23% of patients were severely immunocompromised.

Sources for cases reported in 2024-25 can be found in Figure 20. The Trust figures for Pseudomonas aeruginosa are demonstrated in Figure 21.

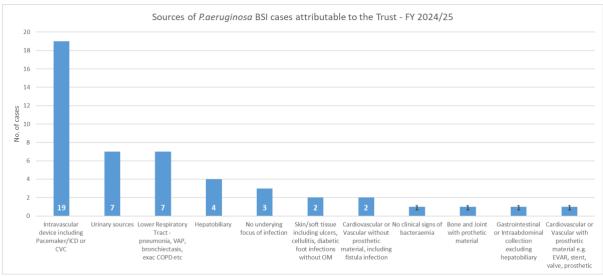


Figure 20: P. aeruginosa source data (2024-25)

Pseud BSI healthcare associated (HOHA + COHA) cases



Figure 21: Imperial College Healthcare P. aeruginosa cases 2024-25

* HOHA = Healthcare Onset Healthcare Associated (Samples taken >= 48 hours into a patient's admission)

Other infections of note

Carbapenemase-producing enterobacterales (CPE)

Enterobacterales are a large family of bacteria that usually live harmlessly in the gut of humans and animals. They include species such as *E. coli, Klebsiella spp.* and *Enterobacter. Enterobacterales* producing acquired *carbapenemases* are referred to as CPE. KPC, OXA-48-like, NDM, VIM, and IMP enzymes are the most prevalent enzymes in the UK. Increasing gut colonisation with these resistant bacteria will inevitably lead to an increase in difficult-to-treat infections. Unless action is taken and lessons are learnt from experiences elsewhere in the world, rapid spread of CPE will pose an increasing threat to public health and medical treatment pathways in the United Kingdom (UK). These resistant bacteria can spread rapidly in healthcare settings. There is no threshold set by UKHSA for CPE. The Trust reported five cases in 2024-25.

CPE BSI healthcare associated (HOHA + COHA) cases

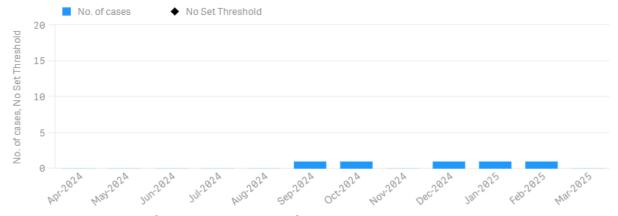


Figure 22: Imperial College Healthcare CPE cases 2024-25

^{**}COHA = Community Onset Healthcare Associated (Samples taken < 48 hours into a patient's admission and where the patient was an inpatient at the reporting Trust in the 28 days prior to sample collection date)

^{*} HOHA = Healthcare Onset Healthcare Associated (Samples taken >= 48 hours into a patient's admission)

**COHA = Community Onset Healthcare Associated (Samples taken < 48 hours into a patient's admission and where the patient was an inpatient at the reporting Trust in the 28 days prior to sample collection date)

CPE screening

The primary aim of CPE screening is early identification of carriers to support timely infection prevention measures. Early detection enables appropriate patient placement in isolation facilities, the addition of alert flags to patient records, and informed clinical decision-making to reduce the risk of cross-transmission, guide treatment and prevent invasive infections.

The Trust currently exceeds national CPE screening requirements, largely in response to past outbreaks. However, the existing strategy is not well understood across the organisation, leading to both under-screening and unnecessary screening in some areas. To address this, the IPC team, in collaboration with microbiology, is reviewing the current approach to identify opportunities for improvement.

While high screening volumes have led to increased detection of colonised patients, the incidence of invasive CPE infections remains consistent with regional and national benchmarks.

Screening is required for all patients who:

- have had an overnight stay in any hospital (UK or abroad) within the last 12 months
- are resident abroad
- have known epidemiological link to a known carrier of CPE
- are admitted to augmented care or high-risk units.



Figure 23: Imperial College Healthcare CPE at risk screening compliance 2024-25 *Applies to patients meeting screening criteria admitted to any part of the Trust

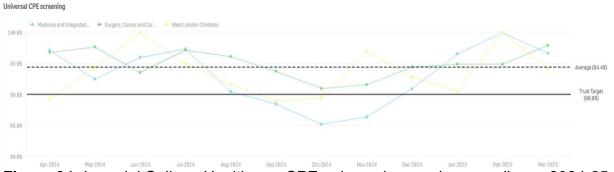


Figure 24: Imperial College Healthcare CPE universal screening compliance 2024-25

*Applies to patients admitted to augmented care or high-risk units (adult and paediatric critical care, haematology, renal and vascular specialities)

Outbreaks

In 2024-25, the Trust reported 125 outbreaks or periods of increased incidence of infection, a notable rise from 74 in the previous year. This increase is largely attributed to the implementation of the outbreak dashboard, which was introduced during the same period and has significantly enhanced oversight and reporting capabilities.

Many of these outbreaks were linked to high community transmission of respiratory viruses such as COVID-19 and influenza. While these events require careful management and monitoring, they do not always necessitate the formation of an outbreak control group. In contrast, more significant outbreaks, such as those involving widespread respiratory viruses, norovirus, *C. difficile*, MRSA, or CPE typically require an outbreak control group, convened by the site IPC team. These groups bring together the appropriate expertise to ensure effective containment and resolution at the earliest opportunity.

Outbreak reports are generated following each event to support organisational learning and continuous improvement in infection prevention practices.



Figure 25: Declared outbreaks and periods of increased incidences of infection – by month 2024-25

Number of Outbreaks/Possible Outbreaks by Organism

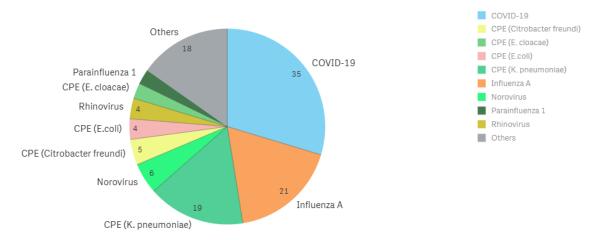


Figure 26: Declared outbreaks and periods of increased incidences of infection – by pathogen 2024-25



Figure 27: Declared outbreaks and periods of increased incidences of infection – by site 2024-25

Surgical site infection (SSI)

The Trust has actively participated in the nationally mandated surveillance in orthopaedic surgery since 2004. Data is continuously tracked and formally reviewed on a quarterly basis with information submitted on SSI rates to UKHSA's national surveillance platform. In addition to the mandatory requirements, the Trust commenced voluntary surveillance in cardiothoracic surgery via the national portal in 2011.

Since 2021 we have had an SSI clinical co-ordinator in post, to work with specialities to standardise data collection, and to enhance the quality of patient care by encouraging the use of data obtained from surveillance. This allows services to compare rates of SSI over time, and to benchmark rates against nationally available data. This information is then used to review and guide clinical practice.

Neurosurgery and obstetric surgery currently undertake internal data collection. Once internal systems have been established and validated, they aim to transition to national reporting.

Process for reporting and validating SSI

For those specialties reporting on the UKHSA portal (orthopaedics and cardiac surgery), activity data is uploaded directly by the specialty for all cases. When a patient is identified with a potential SSI, either due to re-admission or following review in clinic the SSI co-ordinator is notified so that a timely root-cause analysis can be conducted. Once the root-cause analysis is completed this is reviewed in conjunction with microbiology at site-based multidisciplinary team meetings. Specialty based teams are invited to participate in these meetings and are involved in reaching a decision on confirmed SSI status. Only confirmed SSI cases are then validated on the UKHSA portal.

We are planning to establish a quarterly Trust-wide SSI meeting which will focus on sharing learning and improvements across services.

Clinical services

The following services report on SSI performance:

Orthopaedic surgery

Orthopaedic surgery submit data under two clinical categories: Hip replacement (primary and revision), and knee replacement (primary and revision).

Hip replacement

The Trust reported one case of SSI for a patient who had a hip replacement in 2024-25:

 the case was classified as an organ space infection. The patient was readmitted shortly after discharge with wound complications and required surgical debridement

This case means we are above the national average for SSI rates following hip replacement.

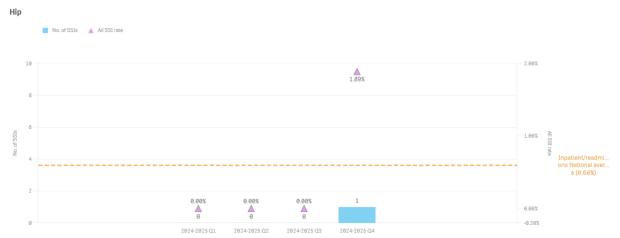


Figure 28: Imperial College Healthcare SSI position (2024-25) – Orthopaedic surgery – Hip replacement surgery

Knee replacement

The Trust reported one case of SSI for patients who had knee replacements in 2024-25:

 this case involved a return to theatre for haematoma washout. The SSI was classified as organ space

Due to this individual case reported, our SSI rate following knee replacement was above the national average during 2024-25 for readmissions but below when all reported cases are analysed.

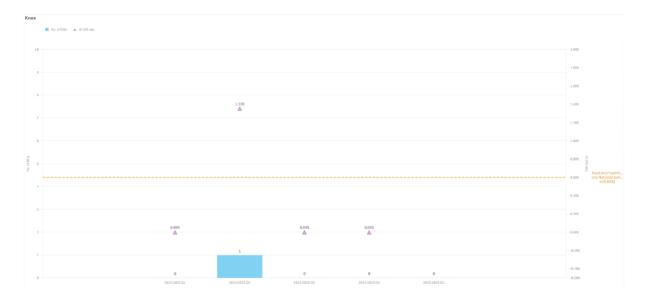


Figure 29: Imperial College Healthcare SSI position (2024-25) – Orthopaedic surgery – Knee replacement surgery

Cardiothoracic surgery

Cardiothoracic surgery submit data under two clinical categories: coronary artery bypass graft (CABG) (primary and revision surgery), and non-CABG (primary and revision).

CABG (primary and revision)

The Trust reported 25 cases of SSI for 24 patients following a CABG procedure in 2024-25. This represents a significant increase from seven cases in 2023-24. One patient experienced two separate SSIs:

- most cases (19 patients) were classified as superficial incisional infections, with
 14 infections at the donor site, and five infections at the chest site
- five cases were classified as deep incisional infections, all occurring at the chest site. In all five cases the patients required additional treatment, including drain insertions and return to theatre for exploration or debridement
- this upward trend in SSIs, particularly deep infections, highlights the need for targeted review and intervention to mitigate risks and improve patient outcomes

Analysis and learning

Infection themes are routinely analysed and shared with clinical teams to inform targeted improvement actions. A rise in SSI cases was noted during a period of reduced resource availability, prompting a review of staffing and service capacity. As a result, resources have been realigned to support consistent data collection and service delivery.

Key improvement measures include:

- standardisation of post-operative dressings
- review of the pre-assessment processes, particularly where assessments are conducted by external trusts due to patient locality
- a planned deep dive into 2024-25 infection cases to identify focused actions for quality improvement

These steps aim to strengthen infection prevention and enhance patient outcomes across the CABG pathway.

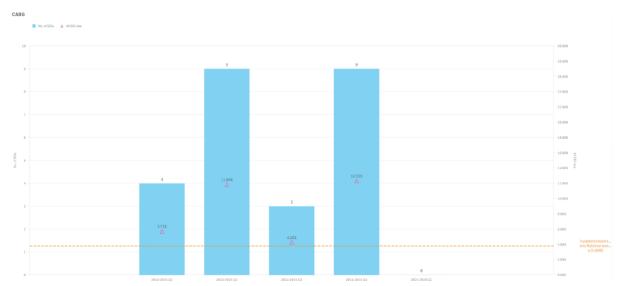


Figure 30: Imperial College Healthcare SSI position (2024-25) – Cardiac surgery – CABG surgery

Non-CABG (primary and revision)

The Trust reported two cases of SSI for patients following non-CABG procedures in 2024-25, with both occurring in quarter two (July – September 2024).

- one was a superficial chest wound
- the second case was a deep incisional chest wound, requiring extensive debridement and antibiotic therapy due to polymicrobial colonisation, resulting in a prolonged admission



Figure 31: Imperial College Healthcare SSI position (2024-25) – Cardiac surgery – non-CABG surgery

Locally reported services

The following specialties are collecting data as part of a local quality improvement process with the aim of submitting to the national SSI programme within the next year. We do not have national benchmarking for these programmes currently.

Neurosurgery

The neurosurgical service collects local data on patients with SSI after undergoing cranial or spinal surgery. While they are not yet reporting to the national programme, the specialty is actively reviewing its internal processes and plans to begin national data submission once robust collection systems are established, aligning the approach used in orthopaedics and cardiac surgery.

To support this, alongside other improvement works already ongoing in the specialty several dedicated working groups have been established, focusing on data quality, pre-assessment, intraoperative care, postoperative care, and the theatre environment.

Although infection numbers are tracked, there is currently limited contextual data to inform targeted improvement plans. The implementation of formal SSI surveillance, alongside these groups, will enable more effective monitoring and drive reductions in infection rates through evidence-based interventions.

Obstetric surgery

The obstetric team continues to collect and monitor local data on SSIs following collect caesarean section procedures. While there is currently no national reporting module for this data, a pilot programme is underway, offering potential for future national submission.

Local surveillance indicates a reduction in infection rates, attributed to improvements in post-operative care, including a change in dressing protocols. These early results demonstrate positive progress and support ongoing efforts to enhance patient safety and surgical outcomes.

Antimicrobial stewardship

The overarching aim of antimicrobial stewardship (AMS) is to optimise safe, appropriate and economic use of antimicrobial agents to improve patient outcomes from infection whilst minimising negative consequences such as healthcare-associated infections and the development of antimicrobial resistance (AMR). The AMS programme allows us to control and maintain antimicrobial use and respond to the rising global resistance threat of AMR.

In 2024-25 the AMS programme has achieved substantial progress in enhancing antimicrobial use, improving patient outcomes, and driving cost efficiencies. These include:

- **clinical improvements:** reviewed 25 guidelines and introduced four new antimicrobial agents to improve the quality of care. Compliance with the Department of Health and Social Care (DHSC) antimicrobial quality indicators reached 90%, reflecting strong adherence to best practices
- education and training: Delivered 34 multidisciplinary trainings sessions and engaged 137 staff through the LEARN platform, significantly improving AMS knowledge (average score increase from 3/5 to 5/5)
- **antifungal stewardship:** Initiatives including clinical rounds and laboratory enhancements led to savings of £144,000
- **innovative services:** Launched two pharmacist-led clinics focused on penicillin allergy management and fungal therapeutic drug monitoring for complex cases
- **collaborative impact:** Strengthened cross-functional collaboration, notably with the paediatric AMS service and community pharmacists, to develop north west London community GP antibiotic guidelines
- research and recognition: Expanded research efforts resulted in eight peerreviewed publications, seven abstracts, and two invited presentations at international conferences, underscoring the programmes innovation and influence

AMS assurance

The effectiveness of AMS is measured by evaluating quantity, type, and quality of antimicrobial prescriptions via several nationally mandated measures.

Point prevalence survey (PPS)

Antimicrobial prescribing standards, along with safety and quality indicators, are routinely monitored through bi-annual point prevalence surveys, based on standards in the DHSC 'Start Smart then Focus' antimicrobial stewardship guidance. In 2024-25, two surveys were conducted, with the most recent completed in January 2025 (see Table 15). Overall, Trust compliance across all antimicrobial prescribing indicators exceeded 90% throughout the year. The infection pharmacy team continue to work with the specialist areas to develop local action plans to help drive improvement.

Division	Number of patients on antimicrobial(s)/total patients seen (%)		Number of antimicrobials prescribed		INDICATOR A % antimicrobials in line with policy or approved by Microbiology/ID		INDICATOR B % review within 72 hours of initial prescribing		INDICATOR C % duration in line with policy or approved by Microbiology/ID	
	July 2024	Jan 2025	July 2024	Jan 2025	July 2024	Jan 2025	July 2024	Jan 2025	July 2024	Jan 2025
Medicine & Integrated Care	168/571	243/742	245	368	91%	93%	93%	93%	89%	91%
Surgery and Cancer	205/422	191/383	349	370	90%	91%	96%	87%	88%	91%
Women's, Cardiac, Clinical Support & Sexual Health Services	45/190	58/246	63	90	95%	94%	94%	98%	90%	86%
West London Children's Healthcare	27/37	22/39	68	51	98%	100%	98%	100%	100%	100%
Private	9/27	4/14	13	4	92%	75%	100%	100%	77%	100%
Trust Results	454/1247 (36%)	518/1424	738	883	92%	93%	95%	91%	90%	91%
Trust Target 2024/25	•				90%		90%		90%	

Table 15: Overview of Trust and divisional performance on the appropriate use of systemic antimicrobial use

The Trust continues to prioritise the timely transition of patients from intravenous (IV) to oral antimicrobial therapy, in alignment with best practice stewardship principles. The latest PPS (see Table 16) reflects progress in this area, although a small number of patients remained on IV therapy beyond the optimal duration.

This ongoing initiative is supported by a multidisciplinary collaboration involving pharmacy, infection teams, clinical specialties, and the Trust's sustainability group. These efforts are further reinforced by continuous education and training programmes, ensuring broad engagement and a shared understanding of antimicrobial stewardship across the organisation.

Metric	September 2023	January 2024	July 2024	January 2025
% of patients receiving an IV antibiotic past the point at which they met the criteria to switch	12% (21/178)	11% (22/203)	13% (39/305)	14% (42/301)
Target < 40%				
*a lower % - better performance				

Table 16: IVOS results per quarter (2023-25)

NHS England contract reduction

Significant progress was made in antimicrobial optimisation during 2024-25, contributing to NHS England contract objectives. Total antibacterial usage decreased by four per cent compared to 2023-24, with a six per cent reduction in the use of WHO-classified 'watch' and 'reserve' agents. Intravenous antibacterial use also decreased by six per cent, generating a cost saving of approximately £600,000 year on year. These outcomes were achieved through robust stewardship initiatives and close collaboration with pharmacy medicines efficiency teams.

To strengthen monitoring capabilities, the team worked with the IPC data specialists to design an advanced antimicrobial consumption dashboard. By integrating financial

metrics, the dashboard offers enhanced visibility into both clinical performance and economic impact, supporting assurance processes and ongoing quality improvement.

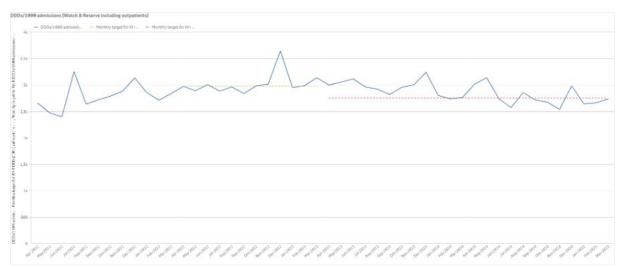


Figure 32: NHS contract reduction in WHO 'Watch and Reserve' antimicrobials

Safety of antimicrobial use

Due to their nature of action and risk of toxicity associated with antimicrobials, the AMS programme ensures there are measures in place to minimise these risks. This is principally via the antimicrobial review group, frequent clinical infection ward rounds and bespoke project work.

Antimicrobial review group

The antimicrobial review group is responsible for overseeing all Trust antimicrobial stewardship activities to ensure their safe, appropriate, and economic use, in line with good antimicrobial stewardship. This includes the review of anti-infective policies and clinical guidelines, AMS performance targets, unintended consequences and support of formulary applications and research and development. The group met bi-monthly in 2024-25.

Key outputs from the antimicrobial review group for 2024-25 include:

- **governance and guidance:** approved 25 new antimicrobial guidelines and standard operating procedures to support clinical best practice
- **digital transition:** successfully migrated the Trust's infection app to the Eolas platform, now used by over 1,300 clinical staff
- **regulatory response**: Led the trust wide coordination and response to the MHRA fluoroguinolone alert
- **formulary enhancements:** supported the addition of four targeted antimicrobial agents to the Trust formulary, strengthening AMR management
- **cost efficiency:** switched nitrofurantoin formulation, achieving £36,000 in annual savings; introduced generic liposomal amphotericin B with standardised e-prescribing

• **clinical innovation:** implemented continuous beta-lactam infusions in critical care to optimise treatment outcomes and reduce AMR risk

Pharmacy led AMS clinics

This year, the infection pharmacy team expanded its impact beyond the inpatient setting through the introduction of pharmacist-led outpatient clinics. These included:

- **penicillin allergy de-labelling clinics:** focused on the safe and effective removal of inaccurate penicillin allergy labels, enabling more appropriate prescribing and streamlined patient care
- **fungal therapeutic drug monitoring clinics:** designed to manage complex fungal infections in outpatient settings, improving treatment precision and patient outcomes

These initiatives reflect a proactive approach to antimicrobial stewardship enhancing continuity of care and reinforcing a strong commitment to patient centred outcomes across care settings.

Antifungal stewardship

The antifungal stewardship team delivered strong performance in 2024-25, generating a new revenue of £143,986 for the Trust. Key initiatives included weekly clinical stewardship rounds, monthly multidisciplinary meetings, and targeted laboratory projects. These efforts have been instrumental in optimising antifungal prescribing and improving patient outcomes.

Paediatric stewardship

In 2024-25, paediatric antimicrobial stewardship was a key area of focus. The paediatric infectious diseases team, in collaboration with the ARG, led several initiatives aligned with AMS objectives, including:

- development of neonatal AMS templates and formalised guidelines
- specialist input into North West London community GP guidelines
- contribution to the NHSE paediatric AMS commissioning standards
- collaboration with paediatric critical care on AMS service specifications
- transition of paediatric guidelines to the Eolas app and promotion of its use

These efforts were supported by multiple audit and quality improvement projects, further strengthening stewardship across paediatric services.

Anti-infective safety overview for 2024-25

All incidents relating to medicines management are reviewed in the medicine safety review group (MSRG). The role of MSRG is to provide strategic direction to the Trust on medication safety related issues. This includes monitoring and reviewing trends relating to medicine incidents, review of all medication alerts and identification of quality work streams. MSRG provide summary reports on all incidents relating to anti-infective medications twice per year.

Key areas of concern in 2024-25 included:

- incidents causing moderate and above harm: two notable cases involved a rifampicin dispensing error and a medication mix-up in the emergency department. Both incidents were investigated and appropriate actions implemented as a result.
- high risk areas: surgery and critical care reported the highest number of incidents
- **commonly involved drugs:** issues with vancomycin, co-amoxiclav and aminoglycosides were the most frequently reported, with monitoring challenges noted in critical care
- positive trend: improved penicillin allergy documentation contributed to a reduction in allergy related incidents

Ongoing efforts are focused on data consistency and enhancing monitoring practices to support safer antimicrobial use.

Education and training

The Trust continues to prioritise education as a key driver of its AMS strategy. In 2024-25, a refreshed and innovative approach was adopted to broaden engagement and improve knowledge cross the organisation:

- digital learning: a bespoke AMS training video was launched on the Trust's LEARN platform. Post-training assessments showed a marked improvement in AMS understanding
- **training delivery:** the infection pharmacy team delivered 34 structured education sessions (13 face-to-face, 21 virtual), which was an increase of 95% from previous years. Sessions targeted pharmacy staff (59%), Nursing staff (24%), and medical staff (18%), with additional ad-hoc ward-based teaching provided by the wider infection team
- targeted initiatives: tailored AMS content was delivered at a specialist nurses study day, and a new programme was introduced for preceptorship nurses, supporting early career development
- **expanded content:** educational materials were redesigned and expanded to include antifungal stewardship, dosing in obesity, and penicillin allergy management.

These efforts reflect a strong commitment to innovation, accessibility, and continuous improvement in AMS education across the Trust.

AMS audits/projects 2024-25

In 2024-25, our AMS programme delivered a series of targeted audits and service evaluations aimed at improving the safety, effectiveness, and sustainability of antibiotic use across our hospitals. These initiatives helped ensure patients received the right treatment at the right time, reduced unnecessary antibiotic exposure, and strengthened our fight against antimicrobial resistance. Key projects focused on improving

prescribing practices in urgent care, neonatal and paediatric settings, surgical procedures and discharge planning. The outcomes have led to better guideline adherence, enhanced patient care, and more responsible use of vital medicines.

Research and national profiles

Building on its designation as an AMS Centre of Excellence in 2023, the Trust continued to advance antimicrobial stewardship through research, innovation and national leadership:

- academic collaboration: ongoing partnerships with Imperial College London, the Fleming Initiative, the Health Protection Research Unit AMR (HCAI AMR), and the Centre for Antimicrobial Optimisation (CAMO) supported pioneering work, including the integration of Artificial Intelligence to optimise IV to oral antimicrobial switching
- research output: the team presented eight abstracts, including two oral presentations at international conferences, and supported seven pharmacy trainee quality improvement projects. They also contributed to the Imperial College Intercalated Batchelor of Science programme through mentorship and teaching
- **national influence:** team members played key roles in shaping national policy and guidance:
 - member of the NICE antimicrobial evaluation committee
 - contributor to the national multi-drug resistance tuberculosis treatment consensus forum
 - co-lead authors of NHS England outpatient parental antimicrobial therapy (OPAT) guidance for integrated care boards
 - chair of the Royal Pharmaceutical Society of Great Britain expert advisory committee on AMR

These achievements reflect the Trust's continued leadership in antimicrobial research, education, and policy development at both national and international levels.

AMS priority objectives for 2025-26

The AMS programme will focus on advancing stewardship through innovation, targeted interventions, and strategic leadership. Key objectives include:

- real-time prescribing feedback: development of automated systems to deliver specialty level, real time feedback on antimicrobial prescribing, enhancing precision and accountability
- **targeted stewardship:** strengthening AMS efforts in surgical and emergency care settings, with a focus on reducing overall antimicrobial duration
- **efficiency and quality improvement:** continued identification of antimicrobial efficiency savings and implementation of quality improvement initiatives to sustain progress
- **leadership and influence:** reinforcing the Trust's position as a national and global leader in antimicrobial stewardship through innovation, collaboration, and leadership

Hand hygiene

Hand hygiene improvement

Hand hygiene remains one of the most effective measures to prevent infections and limit the spread of antimicrobial resistance. In healthcare settings, where patients are particularly vulnerable, maintaining high standards of hand hygiene practices is vital. Consistent adherence to the World Health Organisation's (WHO) 5 Moments for Hand Hygiene is essential to protect both patients and staff.

In 2024-25 hand hygiene was confirmed as a trust wide safety improvement priority. The vision is to reduce patient harm from by HCAIs by embedding consistently excellent hand hygiene practices, across all professional groups. This will be achieved by fostering a strong hand hygiene culture, with progress measured through the WHO hand hygiene self-assessment framework score and hand hygiene compliance scores.

In May 2024, a baseline assessment using the WHO hand hygiene self-assessment framework placed the Trust at the intermediate level of implementation for the hand hygiene multimodal strategy, with a score of 330 out of 500. This evaluation identified key areas requiring focused improvement efforts.

To address these, a collaborative partnership was formed between the safety improvement team and IPC. Together they launched a comprehensive strategy in May 2024, founded in the WHO's multimodal hand hygiene improvement strategy (Figure 33), with a phased rollout planned throughout the year.

This initiative has seen the active involvement of over 60 staff members from across the Trust. Participants include multidisciplinary professionals from all clinical divisions, occupational health, health and safety, and two patient safety partners all contributing to one or more workstreams.

The strategy is fully aligned with the WHO's framework, focusing on its five core components:

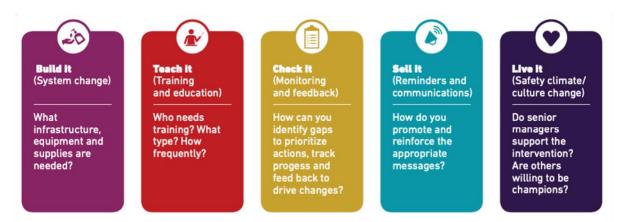


Figure 33: WHO Multimodal Hand Hygiene Improvement Strategy

• **build It**: Ensuring hand gel is always readily available in all the right places, and prioritising staff skin health

- **teach It**: Delivering ongoing training and education for all staff to reinforce best practices
- **check It**: Regularly monitoring compliance, offering immediate feedback, and developing practical toolkits to support ward-level improvement
- **sell It**: Re-launching of a communications strategy and recognising and celebrating good hand hygiene practices
- **live It**: Demonstrating visible leadership, supporting patients and visitors, and securing active engagement from medical staff

A summary of the main work streams is listed in Table 17:

Work stream	Focus	Achievements 2024-25	Next steps 2025- 26
Hand hygiene toolkit	To create a diagnostic tool and a set of action cards enabling wards or departments to identify improvement opportunities and address them through quick wins or smallscale quality improvement projects	Ward-based diagnostic tool, adapted from the WHO framework, codeveloped with four pilot wards across three hospital sites (acute medicine, critical care and surgery). PDSA cycles initiated for full toolkit implementation.	Finalise and launch the diagnostic tool Trust wide; complete development of supporting toolkit resources.
System change	Ensuring point-of-care gel availability and supporting staff skin health	Rolled out environmental audits; established working group and baseline on procurement and stocking – focusing on end-of-bed gel dispensers; began assessing impact of poor staff skin health.	Develop occupational health pathways for staff with skin issues and actions to ensure end-of-bed gel availability.
Medical staff	Senior medic role modelling and quality improvement projects by resident doctors	Consultant working group formed to explore medic barriers; 18 resident doctors engaged in eight hand hygiene QI projects with consultant mentorship.	Expand QI project rollout; ensure consultant representation and pilot leadership role-modelling initiatives.

Patient focus	Engaging patients in safety by building on the national 'simple steps to stay safe in hospital' campaign	Conducted deep dive with patient representatives to identify barriers and needs; baseline questionnaire developed and currently being rolled out.	Develop key messages and a communication plan on patient hand hygiene and visitor guidelines.
Training and education	Enhance education effectiveness through alternative teaching methods	Developed and tested interactive teaching tools, including UV glow boxes, agar plate testing, and a germspread video.	Project to re-instate in-situ training with Ecolab, focusing on tailored education for medical doctors.
Communication	To develop a long- term communication strategy.	Celebration of the world hand hygiene day (5 May 2024)	Finalise and launch hand hygiene communication strategy; collaborate with occupational health and green team to refresh the 'Gloves off' campaign.

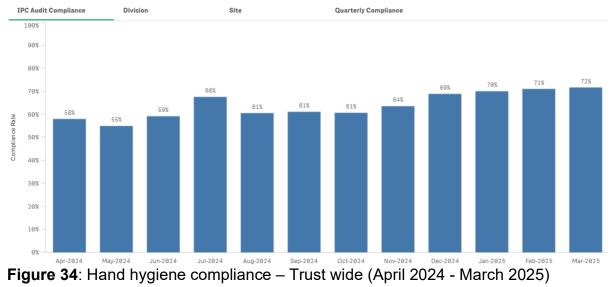
Table 17: Hand hygiene improvement work streams 2024-25

Hand hygiene audit

The Trust launched a new hand hygiene audit tool and reporting platform in November 2023. The audit tool is via a digital form and accessible to both departmental staff as well as the IPC team. It allows for a continuous reporting cycle, with results displayed in bespoke dashboard within QlikView.

Since launching, the tool has received positive feedback and is now well embedded in practice.

The overall Trust compliance with hand hygiene is shown in Figure 34. We have seen a steady improvement, with compliance reached 72% by March 2025, just below our ambitious 75% target set following review of available evidence and research.



Education

The Trust implemented the UK Core Skills Training Framework in 2013. This is now well embedded across the organisation. In 2022-23 the Trust increased the frequency of the Level 2 IPC module. Moving from three yearly to an annual update provides clinical staff with more regular and up to date education and brings the Trust in line with the Skills for Health Framework. In 2024-25 the average compliance with training was:

Level 1 is completed by all staff, bank and volunteers (unless compliant at a higher level) every three years. Compliance in 2024-25 was 94.3%.

Level 2 is completed by all healthcare workers every year. Compliance in 2024-25 was 86.0%.

ANTT Training: An additional module is completed by staff who undertake ANTT as part of their role. Compliance in 2024-25 was 86.4%.

Divisions have actions in place to improve compliance across all modules.

Vascular access

Vascular access is a medical procedure that allows doctors and nurses to easily reach a patient's bloodstream. This is done by inserting a small, flexible plastic tube called a catheter into a blood vessel, usually a vein.

The vascular access service provides expert advice and support to staff on all aspects of clinical care relating to vascular access. The team consists of a lead nurse and four clinical nurse specialists. The team supports both inpatient and outpatient services in various clinical areas across the Trust.

The primary clinical activity of the team involves the insertion of peripherally inserted central catheters (PICC), midlines, and on occasion, some ultrasound guided peripheral cannula, where expertise is required for securing vascular access in the most challenging patients. The team also provide follow up insertion care, ensuring that vascular access devices are managed in line with Trust guidance.

As described above, improving line care safety is a safety improvement priority for the Trust during 2025-26, with a focus on regular audit to drive local improvement.

Intravascular device insertions

The vascular access service receives referrals for a variety of clinical indications.

Therapeutic referrals cover four main clinical indicators (to administer IV antimicrobials, to administer IV chemotherapy, to administer IV medications, and to administer IV parenteral nutrition). Referrals to the vascular access service for other indications are varied and often relate to patients already known to the service, where support with vascular access care is required. The vascular access service site several invasive device types, with most lines sited being PICC. Activity data is shown in Table 18.

Vascular Access patient activity

Reason for referral (all patients)	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Progress
Vascular Access Review	59	70	53	106	129	110	62	80	100	88	94	102	•
Dressing change	3	3	5	27	23	8	4	10	12	13	8	7	-
Poor vasculature	20	17	9	18	17	23	15	15	22	18	34	36	•
Portacath Access	3	10	1	9	9	12	2	6	8	7	3	9	•
Removal	8	6	8	14	16	19	5	12	14	15	14	12	-
Troubleshooting devices	6	16	21	25	38	33	25	25	24	25	18	22	•
MARSI	0	0	0		7	1	3	3	3	3	3	2	-
Other	19	18	9	13	19	14	8	9	17	7	14	14	-
Therapaeutics	135	138	117	143	126	117	135	102	108	154	93	96	•
IV Antimicrobials	21	36	35	15	22	27	35	19	35	47	27	19	-
IV Chemotherapy	68	55	40	63	42	44	53	42	35	63	31	28	4
IV Other Medication	22	19	28	36	29	24	21	22	12	18	10	24	•
Parenteral Nutrition	23	27	14	26	33	20	25	15	19	25	23	23	•
Other	1	1		3		2	1	4	7	1	2	2	-
Vascular Access Device	134	125	94	164	172	157	124	131	128	155	132	153	•
PICC	105	90	79	128	124	109	97	100	110	127	102	105	•
Midline	16	16	11	17	29	24	23	21	14	22	17	12	4
Cannula	6	2	2	4	2	8	2	1	0	2	7	12	Φ.
Hickman	2	4	0	0	3	4	1	3	0	2	1	5	•
Other VAD	0	1	0	2	1	0	0	4	3	0	0	5	•
Port	5	12	2	13	13	12	1	2	1	2	5	14	中

Table 18: Vascular access referral data 2024-25

Intravascular device education

In addition to operating a clinical service, the vascular access team also provide several educational courses designed to minimise the risk associated with the insertion, maintenance, and prompt removal of peripheral cannula. These courses are in high demand, often exceeding current capacity. The team are currently working with clinical divisions to optimise the impact and reach of training opportunities for future courses.

Ultrasound-guided deep vein cannulation training was successfully introduced within one clinical area. However, due to staff turnover, the programme has required reintroduction, with a renewed focus on embedding sustainable practices in the coming months. Further rollout to additional clinical areas will be limited in scale, given current service capacity constraints. Strategic planning will be essential to ensure any expansion is both effective and sustainable.

Line safety management group

The line safety management group is the Trust-wide group with responsibility for reviewing matters relating to the safety of intravascular devices. This includes the review of incidents relating to vascular access devices and IV therapy to ensure adherence to best practice and make recommendations where appropriate. The clinical divisions are represented on this group by senior clinical staff who contribute to the multidisciplinary group reviews of all bacteraemia related to vascular access devices. Trends are noted and acted upon to provide safe practice for our patients.

The group continued to note challenges throughout 2024-25 due to fragile supply chain of consumables associated with vascular access and IV therapy. They continue to collaborate with colleagues within the north west London sector to have standardisation of product selection, as well as establishing agreed alternatives which can be used when supply issues occur. The group also review new products prior to implementation.

IPC in the built environment (water, ventilation, and decontamination)

Water safety

The IPC team plays a critical role in patient safety and serves as a key liaison between clinical teams, estates and contractors. One of the most significant ongoing challenges is the management of water safety, which has become increasingly complex due to:

- the ageing hospital estate and water infrastructure
- numerous modifications to original water systems over time
- rising frequency of water test results exceeding acceptable levels for pathogens such as *Pseudomonas* and *Legionella*
- the cost and operational complexity of required maintenance
- the need to maintain clinical services during essential works in patient care areas

Despite these challenges, it is important to note that no clinical infections related to water safety were reported in 2024-25, reflecting the effectiveness of current monitoring and mitigation efforts.

The water safety group

The water safety group is a multidisciplinary group tasked with discharging the responsibility of commissioning, maintenance, development, implementation, and review of the water safety plan. The aim of the water safety group is to ensure the safety of all water used by patients, residents, staff, and visitors across all Trust premises, minimising the risk of infection associated with waterborne pathogens inline with Health Technical Memorandum 04-01: Safe water in healthcare premises Part B 'Operational Management' and the HSE's technical guidance HSG274 Part 2.

The water safety group provides a forum where people with a range of competencies and subject matter experts come together to share responsibility and take collective ownership for ensuring water-related hazards are identified, risks are assessed, control measures are monitored, and to develop incident protocols, guidance and other documentation as required. The water safety group meets regularly and reports to the Trust infection prevention and control committee. Additional site-specific water safety meetings to review the finer detail or site-specific issues are also held monthly, or more frequently when required.

The Trust employs the services of an independent authorising engineer for water. They provide unbiased expert guidance to the water safety group. In addition, site-based authorised persons for water are in post across the Trust. Specialist sub-contractors are used to monitor and carry out remedial works where required. An IPC environmental advisor supports all aspects of water safety, working closely with all teams involved in water safety to ensure there is strong clinical representation in all forums.

As part of assurance activity, the authorising engineer conducts an annual water quality audit that reviews all aspects of the Trust's water safety systems, governance, documentation, and compliance. The 2025 audit report showed a 12% improvement from the previous year, rising from 48% in 2024 to 60% in 2025. While this improvement is encouraging, the report also identified several areas where further work is required. The water safety group is overseeing the delivery of the improvement actions to address these findings and support the continued progress over the coming year.

Ventilation safety

The Trust has adopted recommendations in the revised Health Technical Memorandum 03-01: Specialised ventilation for healthcare premises Part B: The management, operation, maintenance and routine testing of existing healthcare ventilation systems, and the Trust ventilation safety group.

Ventilation safety group

Ventilation systems across the Trust are overseen by the ventilation safety group, which is embedded in the Trust's governance structure, reporting to the Trust infection prevention and control committee. It is chaired by the associate director of health, safety and working environment.

The ventilation safety group is a multidisciplinary group with a remit to assess all aspects of ventilation safety and resilience required for the safe development and operation of healthcare premises.

The main aims of the group are to oversee the following:

- ventilation elements in design process for new healthcare premises
- ventilation elements in design process for modifications to existing premises
- commissioning and validation process
- management and maintenance of specialist and non-specialist ventilation
- annual verification and performance testing
- prioritising the plant replacement programme
- decommissioning and removal of redundant equipment

All decisions affecting the resilience, safety, and integrity of the ventilation systems at the Trust and its associated equipment are made with the agreement of the ventilation safety group.

The annual verification of critical ventilation is carried out by an external contractor, Remedial actions implemented in response are carried out by the estates team, monitored by the ventilation safety group.

The ventilation safety group review any requests for derogation in the installation of new air handling units. They have approved a small number that were required due to the age and layout of buildings and roof spaces, but there have been no derogations relating to air changes in clinical areas that would impact patient or staff safety.

Most of the existing air handling units across the Trust are older than the 20-year life span specified in the Health Technical Memorandum, which has led to additional costs for maintenance. The estates team are reviewing the duct work and air handling units across the organisation to develop a plan for ongoing maintenance or replacement.

Decontamination

Sterile services department

The Trust's sterile services department is sub-contracted to IHSS Ltd. a third-party supplier as part of the North West London collaboration. They are accredited to ISO 13485: Medical Devices Quality Management. The contract is managed by the Imperial College Healthcare estates and facilities team. The sterile services department operates to standards set in health technical memoranda 01-01: decontamination of surgical instruments (HTM 01-01). This guidance offers best practice on the whole decontamination cycle, including the management and decontamination of surgical instruments used in acute care.

The sterile services department team includes a decontamination manager, quality manager and receipt and dispatch operatives for each site. IPC provide supplementary advice and expertise when required.

IHSS Ltd, as part of its contractual and governance arrangements hold customer contract management meetings, as well as a joint management board. These report into the estate's quality meeting which in turn reports to the Trust infection prevention and control committee. As part of the service level agreement the Trust has set key performance indicators which are reported monthly. Issues such as fast-track activity, quality of service, and turnaround times are all monitored. In accordance with the health technical memoranda, all surgical sets are electronically tracked and are traceable. Additionally, individual instruments which are high value or for high-risk surgery are also laser marked, tracked and are traceable.

Endoscopy decontamination units

The Trust operates endoscopy services across all three main hospital sites, each supported by dedicated decontamination units. These units adhere to the standards outlined in *Health Technical Memorandum (HTM) 01-06: Decontamination of Flexible Endoscopes* and maintained ISO 13485 accreditation throughout 2024-25. Compliance is verified through regular internal and external audits under a robust quality management system.

An independent authorising engineer, appointed by the Trust, conducts annual audits in line with Institute of Healthcare Engineering and Estate Management (IHEEM) standards and contributes to the Joint Accreditation of Gastroenterologists (JAG) process. This role also includes assessing and signing of the competence of authorised persons, which in turn oversee and endorse the work of competent persons.

All technicians are trained, assessed, and signed off as competent, with annual updates and additional training provided as needed. Endoscope tracking is sully electronic and traceable, in accordance with HTM 01-06 requirements.

The quality management systems in place ensure consistent, safe, and standardised decontamination practices across all sites, providing assurance of compliance and patient safety.

Other decontamination areas

Medical devices outside of designated sterile services departments and endoscopy decontamination units may also require decontamination. Staff in those areas must also comply with Medical Device Regulations 2002 requirements. Local equipment such as ultrasound probes may require local decontamination with high level disinfection. This is monitored by staff within those areas who have been trained and assessed as competent and who undergo annual update and revalidation of competence.

Equipment, such as bedpan washers, is monitored daily, weekly, quarterly, and yearly. This is provided both internally by end users and externally using sub-contractors when required.

Laboratory areas are required to have sterilisers to render discarded specimens inactive and safe for waste disposal. These are also subject to health technical memoranda 01-01. Weekly, quarterly, and annual testing takes place by a competent person. These are also signed off by the authorised person and have a yearly audit conducted by the authorising engineer who is independent to the Trust.

Medical devices

All medical devices purchased, loaned, or acquired by the Trust for trial purposes have a pre-acquisition questionnaire supplied by the manufacturer. The questionnaire supplies decontamination instructions and how the equipment should be treated to comply with safety requirements. All pre-acquisition questionnaires are assessed by the IPC team to ensure they can be processed adequately in the Trust. Oversight for medical devices is via the medical devices management group.

Redevelopment and capital projects

The Trust's redevelopment team part funds a post within the IPC team. This post was implemented to ensure expert advice can be provided at the conceptual phase of new projects, right through to completion of redevelopment works.

IPC play an important part in the Trust's capital programme which incorporates building works, water safety and ventilation. Health Building Note 00-09 (HBN 00-09) 'Infection Control in the Built Environment' is used to risk assess the environment within the healthcare sectors. The various stages of a capital project are covered, from initial

concept through to post-project evaluation with particular focus on aspects such as dust control measures, or other IPC related matters that may be required. Other health technical memoranda and health building notes are consulted when needed.

Cleaning services

The provision of a clean and safe healthcare environment remains a key priority for all healthcare organisations. It provides not only a foundation for effective IPC but also promotes patient confidence and demonstrates the existence of a positive safety culture. The absolute requirement to provide clean, safe healthcare is now written into a range of key legal processes and documents which govern the delivery of NHS funded care.

Accountabilities

Cleaning services and monitoring arrangements are delivered through the directorate of estates and facilities. The chief nurse is the designated board nominee responsible for estates and facilities services and thus is responsible for ensuring that there are effective arrangements throughout the Trust, as stated in the National Standards of Healthcare Cleanliness 2021. This was revised and updated in 2025. The board nominee with responsibility for the overall delivery of IPC is the medical director.

The National Cleanliness Standards

In setting cleanliness standards, the Trust uses the National Standards of Healthcare Cleanliness 2021-2025 as its reference point. The facilities department has responsibility for the operational cleaning services to our five main hospital sites, all of which are managed and delivered by an in-house service. NHS Property Services (NHSPS) provides facilities and cleaning services to our services managed on external sites, such as satellite units and community services.

Monitoring arrangements

Monitoring is conducted as per the requirements of The National Standards of Healthcare Cleanliness 2021-2025. The facilities department is responsible for monitoring cleaning procedures and standards. A programme of audits is in place to monitor the performance and effectiveness of the service being delivered and to validate achievement of cleaning standards.

The system has three objectives:

- 1. Maintain consistently exacting standards and meet the required specification by means of inspection analysis and action.
- 2. Identify any failures to meet the required level of service.
- 3. Rectify any failures of the required level of service.

The audits include items cleaned by clinical staff, as well as estates and facilities staff. Table 31 details the scores per hospital site for all functional risk categories and includes both clinical and non-clinical areas across the Trust. The table demonstrates the average individual audit score by Functional Risk (FR) category, where FR1 is the highest risk (95% pass mark, acute areas such as operating theatres) and FR6 is the lowest risk (75% pass mark, non-clinical administrative areas) and across the sites for NHS and private teams.

Part way through the year a target of 95% for all areas in FR categories 1-4 was set by NHS England through the Premises Assurance Model. The table below has had that RAG rating applied throughout the data table.

Dat	te/Site	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Average
FRs 1-4	SMH/WEH	93.9	89.9	93.8	92.2	93.0	91.3	94.1	96.9	97.7	96.9	97.7	97.7	94.6
	CXH	94.7	95.3	94.3	94.4	94.4	92.6	95.4	96.3	96.3	94.4	94.5	96.3	94.9
	HH/QCCH	93.3	96.6	95.5	97.8	96.8	97.9	96.8	97.9	96.8	98.9	99.0	96.9	97.0
	IPH	93.8	93.8	93.8	93.8	93.3	93.3	93.3	93.3	93.3	93.3	93.3	100.0	94.0
	Trust	94.0	93.5	94.4	94.5	94.5	93.6	95.2	96.8	96.8	96.5	96.9	97.1	95.3

	>95%
key	93-95%
	<93%

Table 19: National Standards of Healthcare Cleanliness results 2024-25 for all areas

Patient-led assessments of the care environment (PLACE)

The Department of Health and Social Care and the NHS Commissioning Board encourages all hospitals, hospices, and independent treatment centres to undertake an annual PLACE.

The aim of PLACE assessments is to provide a snapshot from a service user's perspective of how an organisation is performing against a range of non-clinical activities which impact on the patient experience of care, which include cleanliness, the condition, appearance and maintenance of healthcare premises, the extent to which the environment supports the delivery of care with privacy and dignity, how well the needs of patients with dementia are met, how well the needs of patients with a disability are met and the quality and availability of food and beverages.

The Trust conducted 96 full PLACE inspections across all sites between September to December 2024. The inspections were conducted by small teams, comprised of facilities monitoring officers, clinical representatives, and patient assessors. These full assessments were formally submitted within the prescribed timeframes and the results were published nationally in the estates and facilities management (EFM) system table (Table 20).

Recent assessments have provided valuable insights into environmental and operational standards across the Trust. In response, a regular steering group, comprising of patient assessors, clinical teams, and estates and facilities representatives has been established to develop and oversee action plans aimed at enhancing the already strong baseline standards.

As a result of audit findings at the Western Eye Hospital, a dedicated task and finish group has also been convened to address site-specific issues. This group is focused on implementing targeted improvements and ensuring alignment with Trust wide quality and safety objectives.

Metric	Trust	СХН	НН	QCCH	SMH	WEH
Cleaning	99.49%	99.88%	99.96%	99.25%	98.76%	95.25%
Food	91.97%	91.70%	92.09%	97.28%	91.11%	n/a
Organisation food	94.50%	94.50%	94.50%	94.50%	94.50%	n/a
Ward food	91.43%	90.96%	91.42%	100.00 %	90.22%	n/a
Privacy, dignity and wellbeing	89.46%	93.80%	93.70%	89.81%	81.27%	80.95%
Condition, appearance and maintenance	99.20%	99.62%	98.97%	96.56%	99.43%	89.21%
Dementia	91.25%	95.45%	94.50%	96.71%	82.92%	84.29%
Disability	91.90%	94.79%	95.20%	92.28%	86.05%	83.02%

Table 20: EFM Imperial College Healthcare 2024-25

This 2024-25 infection prevention and control annual report was written on behalf of Tom Jacques, director of infection prevention and control.

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