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NHS
Norfolk and Norwich University Hospitals
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# Infection Prevention and Control Annual Report 2023-24


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**Infection Prevention and Control Team**

# Infection Prevention and Control Annual Report 2023-24

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# Infection Prevention and Control Annual Report 2023-24

## Executive Summary

This annual report incorporates information and data pertaining to healthcare associated infections (HCAI) during the period 1st April 2023 until 31st March 2024. It provides a summary of the Infection Prevention and Control (IP&C) work undertaken, the management and governance structures and the assurance processes.

The format follows the 10 hygiene code criteria detailed in the Health and Social Care Act 2008: code of practice on the prevention and control of infections and related guidance, updated December 2022. The annual report will be released publicly by the Director of Infection Prevention and Control (DIPC) as outlined in the code.

The Infection Prevention & Control (IP&C) team monitor alert organisms and undertake audit and surgical site surveillance programmes in partnership with the divisions.

Official alert organism government objectives were set in April 2023 and the Trust continued to monitor against objectives throughout this period:

- There were 93 total cases of *Clostridioides difficile* infection (CDI) against an objective of 77.
- There was 1 case of Hospital Attributable Meticillin Resistant *Staphylococcus aureus* (MRSA) blood stream infection (BSI), against an objective of zero cases. The MRSA bacteraemia was classified as healthcare associated due collection of blood culture over 48 hrs after admission. However, it was acknowledged upon case review with the Integrated Care Board (ICB) infection control representatives, that the bacteraemia was due to a medical condition present prior to admission and therefore truly a community acquired infection.
- There were 103 total cases of *Escherichia coli* against an objective of 91.
- There were 56 total cases of *Klebsiella species* against an objective of 24.
- There were 30 total cases of *Pseudomonas aeruginosa* against an objective of 19.

The COVID-19 pandemic was declared by the World Health Organisation (WHO) March 2020. Within 2023 NHS England began a transition to utilising COVID-19 testing to focus on reducing adverse outcomes and enabling individual treatment decisions, rather than identifying every individual case of COVID-19. The early risk of harm was thought to be mitigated through high immunity, high vaccination coverage and increased access to COVID-19 therapeutics. The likelihood of being admitted to hospital for COVID-19 was thought to be lower than Influenza in the general population. An approach was taken to move COVID-19 testing into clinical care pathways, alongside those that are routine for other respiratory infectious diseases. Personal Protective Equipment (PPE) requirements were also reduced, government guidance was closely followed, and adjustments made accordingly throughout the trust and across the local healthcare system (as outlined on page 46). General infection control principles remain throughout as referenced within the National infection prevention and control manual (NIPCM) (2024).

Within 2023-2024, there was an unprecedented number of laboratory confirmed cases of Measles nationally.

From the 1st of January to the 31st of December 2023 there were 362 laboratory confirmed measles cases in England.

Activity earlier on in the year was mainly focused on the London region. However, a rapid escalation in cases from the beginning of October was due to an outbreak in the West Midlands. Most of the cases in 2023 (62%) were in children aged 10 years and younger and 19% were in teenagers and young people aged 15 to 34 years. Between January 2024 to the end of March 2024, there were 807 laboratory confirmed cases, the majority of these continuing to be in London and the West Midlands. Confirmed cases of measles in England by month, age, region and upper tier local authority: 2024 - GOV.UK (www.gov.uk)

The rise in cases is thought to be attributed to a decline in Measles, Mumps, and Rubella (MMR) vaccination rates in recent years.

Whilst there have been confirmed cases of Measles within the East of England, there were nil reported cases reported at the NNUH.

Workplace Health and Wellbeing have communicated and contacted staff who are deemed to require vaccination. Current guidance has been made available on the trust intranet and circulated throughout the NNUH as appropriate. Workplace Health and Wellbeing (WPHWB) have reviewed in detail the government guidance for staff and developed an action plan to consider the workforce elements relating to the emerging increase in infection across the country.

The IP&C team recognise the hard work and commitment of staff across the healthcare community who have collaboratively continued to strive for the highest quality IP&C standards, promoting patient and staff safety and reduce the risk of nosocomial transmission of infection. Recognising that this has been a challenging period with changes to COVID-19 guidance, the re-emergence of disease such as Measles and the increased demand operationally.

The authors of this report would also like to acknowledge the contribution of other teams and colleagues in compiling this report.

- **Chief Nurse and Interim Director of Infection Prevention and Control:** Rachael Cocker
- **Deputy Director of Infection Prevention and Control:** Dawn Cursons
- **Infection Control Doctor and Consultant Microbiologist:** Catherine Tremlett

# Infection Prevention and Control Annual Report 2023-24

## Abbreviations

| | |
|---|---|
| AMS | Antimicrobial Stewardship |
| AMU | Acute Medical Unit |
| BSI | Bloodstream infection |
| CDI | Clostridioides difficile Infection |
| *C. difficile* | Clostridioides difficile |
| CEO | Chief Executive Officer |
| COCA | Community Onset Community Associated |
| COHA | Community Onset Healthcare Associated |
| COIA | Community Onset Indeterminate Association |
| CPD | Continuing Professional Development |
| CPE | Carbapenemase-producing Enterobacteriaceae |
| CPO | Carbapenemase-producing organisms |
| CQC | Care Quality Commission |
| CQUIN | Commissioning for Quality and Innovation |
| CVC | Central Venous Catheter |
| DDD | Defined Daily Dose |
| DGSA | Dangerous Goods Safety Advisor |
| DH | Department of Health |
| DIPC | Director of Infection Prevention & Control |
| E. coli | Escherichia coli |
| EAUS | Emergency Assessment Unit Surgical |
| EDU | Endoscopy Decontamination Unit |
| ENT | Ear Nose Throat |
| EPA | Eastern Pathology Alliance |
| ESBL | Extended Spectrum Beta Lactamase |
| FFP3 | Filtering facepiece protection |
| FM | Facilities Management |
| FR | Functional Risk |
| GRE | Glycopeptide Resistant Enterococcus |
| H&S | Health and Safety |
| HBN | Health Building Notes |
| HCAI | Health Care Associated Infection |
| HICC | Hospital Infection Control Committee |
| HII | High Impact Intervention |
| HMB | Hospital Management Board |
| HOHA | Hospital Onset Healthcare associated |
| HTM | Health Technical Memorandum |
| ICB | Integrated Care Board (previously Clinical Commissioning Group) |
| ICD | Infection Control Doctor |
| ICS | Integrated Care System |
| IGAS | Invasive group A Streptococcus |
| IHEEM | Institute of Healthcare Engineering & Estates Management |
| IMT | Incident Management Team |
| IP&C | Infection Prevention & Control |
| IPR | Integrated Performance Report |
| IS | Information Services |
| ITU | Intensive Care Unit |
| JAG | Joint Advisory Group |
| LFT | Lateral Flow Tests |

| | |
|---|---|
| MDR TB | Multidrug-Resistant Tuberculosis |
| MHRA | Medicines and Healthcare products Regulatory Agency |
| MMR | Measles, mumps and rubella |
| MRSA | Meticillin Resistant Staphylococcus aureus |
| MSSA | Meticillin Sensitive Staphylococcus aureus |
| NaNOC | The Norfolk and Norwich Orthopaedic Centre |
| NHS | National Health Service |
| NHSE/I | National Health Service England and National Health Service Improvement |
| NHSI | National Health Service Improvement |
| NICE | National Institute for Health and Care Excellence |
| NICU | Neonatal Intensive Care Unit |
| NIPCM | National Infection Prevention Control Manual |
| NNUH | Norfolk and Norwich University Hospital Foundation Trust |
| NRPIC | Norwich Research Park Innovation Centre |
| OPM | Older People's Medicine |
| OWL | Organisation Wide Learning |
| PAS | Patient Administration System |
| PCR | Polymerase chain Reaction |
| PEEG | Patient Engagement & Experience Governance Sub-Board |
| PFI | Private Finance Initiative |
| PICC | Peripherally Inserted Central Catheter |
| PII | Period of Increased Incidence |
| PIR | Post Infection Review |
| PLACE | Patient-led assessments of the care environment |
| PPM | Planned Preventative Maintenance |
| POPs | persistent organic pollutants |
| POU | Point of Use |
| PPE | Personal Protective Equipment |
| PPM | Pre-planned maintenance |
| PPS | Point Prevalence Survey |
| PVL | Panton-Valentine Leukocidin |
| QI | Quadrum Institute |
| RO | Reverse Osmosis |
| RSV | Respiratory Syncytial Virus |
| SARS-CoV2 | Severe Acute Respiratory Syndrome - Coronavirus 2 |
| SMART | Specific, Measurable, Achievable, Relevant, Timely |
| SOP | Standard Operating Procedure |
| SPC | Statistical Process Control |
| SSD | Sterile Service Department |
| SSI | Surgical Site Infection |
| TVCs | Total Viable Counts |
| UEA | University of East Anglia |
| UKAP | United Kingdom Advisory Panel |
| UKHSA | United Kingdom Health Security Agency |
| UTI | Urinary tract infection |
| VRE | Vancomycin Resistant Enterococcus |
| VZV | Varicella zoster virus |
| WHO | World Health Organisation |
| WHWB | Workplace Health and Well-Being |
| WSG | Water Safety Group |

**Hygiene Code Compliance Criteria 1:**
Systems to manage and monitor the prevention and control of infection.
These systems use risk assessments and consider how susceptible service users are and any risks that their environment and other users may pose to them.

## Governance and Monitoring

Overall responsibility for IP&C is held by the Chief Executive Officer (CEO).

The Board of Directors collectively work within the Norfolk and Norwich University Hospital NHS Foundation Trust (NNUH) Healthcare Governance Framework to ensure that high quality and safe services are in place for patients, visitors, and staff to minimise the risk of infection.

The Hospital Infection Control Committee (HICC) is a key element of the assurance process and reports to the Clinical Safety and Effectiveness Board, see Chart 2. HICC ensures that effective systems and processes are in place to reduce the risk of hospital acquired infections and provide assurance to the board. External members from UKHSA and the ICB, along with patient representatives are invited to meetings held monthly, with exception of August and December. HICC is responsible for the strategic planning and monitoring of the Trusts IP&C programme.

The DIPC provides strategic direction and leadership to the Trust on all IP&C matters.
In February 2024 the existing DIPC of five and a half years resigned, to embark on a new leadership opportunity within the Nursing and Midwifery Council (NMC). The DIPC role is currently undertaken by the Chief Nurse with the support of the IP&C team.

### IP&C Reporting Processes

The IP&C team provides a comprehensive monthly IP&C report which is widely distributed to senior managers, divisional leads, governance leads, matrons, ward managers and ICB IP&C nurses. This report provides graphical evidence of alert organism figures and trends alongside UKHSA benchmarking data, screening, antimicrobial reports and details of any outbreaks or incidents and highlights any risks.

The IP&C team report on all key aspects of IP&C at the HICC meetings with reports from internal and external representatives, see Chart 3. The Chief Nurse, who is DIPC and executive lead for IP&C, reports key performance indicators monthly to the Trust board.

The Deputy DIPC provides monthly key information within the Integrated Performance Report (IPR) in relation to mandatory reportable Health Care Associated Infections (HCAI).

The Deputy DIPC reports to the Clinical Safety and Effectiveness Sub-Board (CSESB) monthly.

### Internal IP&C audit

In October 2023, an IP&C review was undertaken as part of the 2023-24 approved internal audit plan to allow the Trust Board to take assurance over the design and effectiveness of the processes in place to manage infections at ward level. The object of the review was to assess the guidance and application of the defined processes with regard to prevention and control of infections, including a review of the lessons learnt mechanisms, the identification and implementation of infection control actions, and how actions arising from clinical audit activity are being enacted.

In total, four management actions were agreed. Two actions were classified as medium priority, specifically relating to inconsistencies in completing Tendable audits and the necessity for Specific, Measurable, Achievable, Relevant and Timely (SMART) actions, as well as the need for improved action planning regarding temporary staff infection prevention and control training. Two low priority actions were identified, these included improvement of timely reporting, investigation, and closure of IP&C related incidents on Datix and the need to review the HICC terms of reference.

Upon completion of the actions, the review concluded that the Trust has well- designed controls regarding the documentation and communication of key roles and responsibilities relating to IP&C, availability of IP&C training modules for clinical and non-clinical staff, completion of IP&C training by substantive staff, and the dissemination of lessons learnt via the IP&C Organisational Wide Learning (OWL). Also commended were the consistent completion of hand hygiene and Commode audits as well as well-established and sound governance arrangements for managing IP&C issues by HICC and the CSESB.

The internal audit final opinion was, that the board can take reasonable assurance that the controls upon which the organisation relies to manage IP&C are suitably designed, consistently applied and effective. See Chart 1 for definitions of assurance.

**Chart 1**

| Graphic | Opinion |
|---|---|
| Minimal assurance ← Partial assurance \| Reasonable assurance → Substantial assurance | Taking account of the issues identified, the board can take minimal assurance that the controls upon which the organisation relies to manage this risk are suitably designed, consistently applied or effective.<br>Urgent action is needed to strengthen the control framework to manage the identified risk(s). |
| Minimal assurance ← Partial assurance \| Reasonable assurance → Substantial assurance | Taking account of the issues identified, the board can take partial assurance that the controls upon which the organisation relies to manage this risk are suitably designed, consistently applied or effective.<br>Action is needed to strengthen the control framework to manage the identified risk(s). |
| Minimal assurance ← Partial assurance \| Reasonable assurance → Substantial assurance | Taking account of the issues identified, the board can take reasonable assurance that the controls upon which the organisation relies to manage this risk are suitably designed, consistently applied and effective.<br>However, we have identified issues that need to be addressed in order to ensure that the control framework is effective in managing the identified risk(s). |
| Minimal assurance ← Partial assurance \| Reasonable assurance → Substantial assurance | Taking account of the issues identified, the board can take substantial assurance that the controls upon which the organisation relies to manage this risk are suitably designed, consistently applied and effective. |

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**Chart 2**

## Board of Directors and Management Board Reporting and Accountability Structure

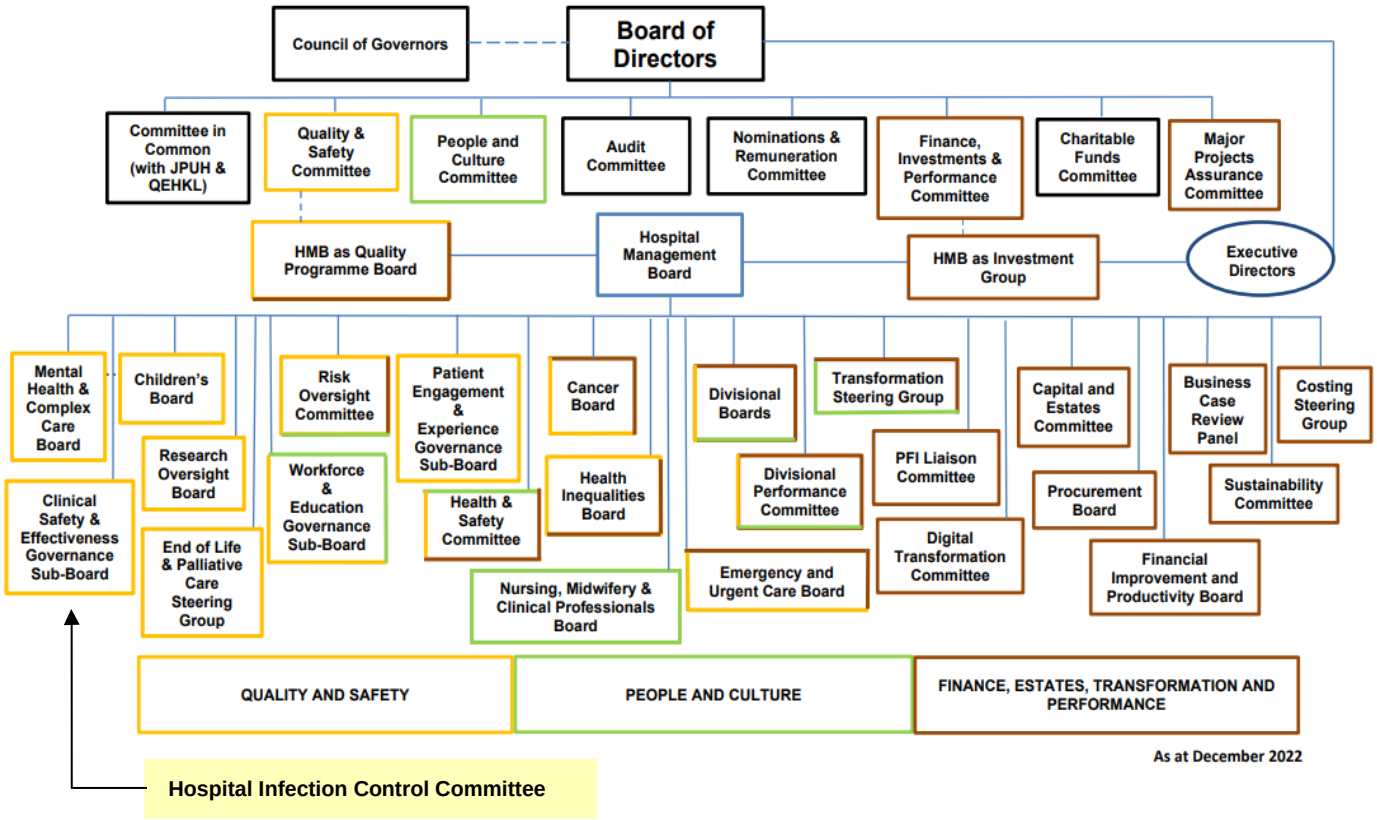
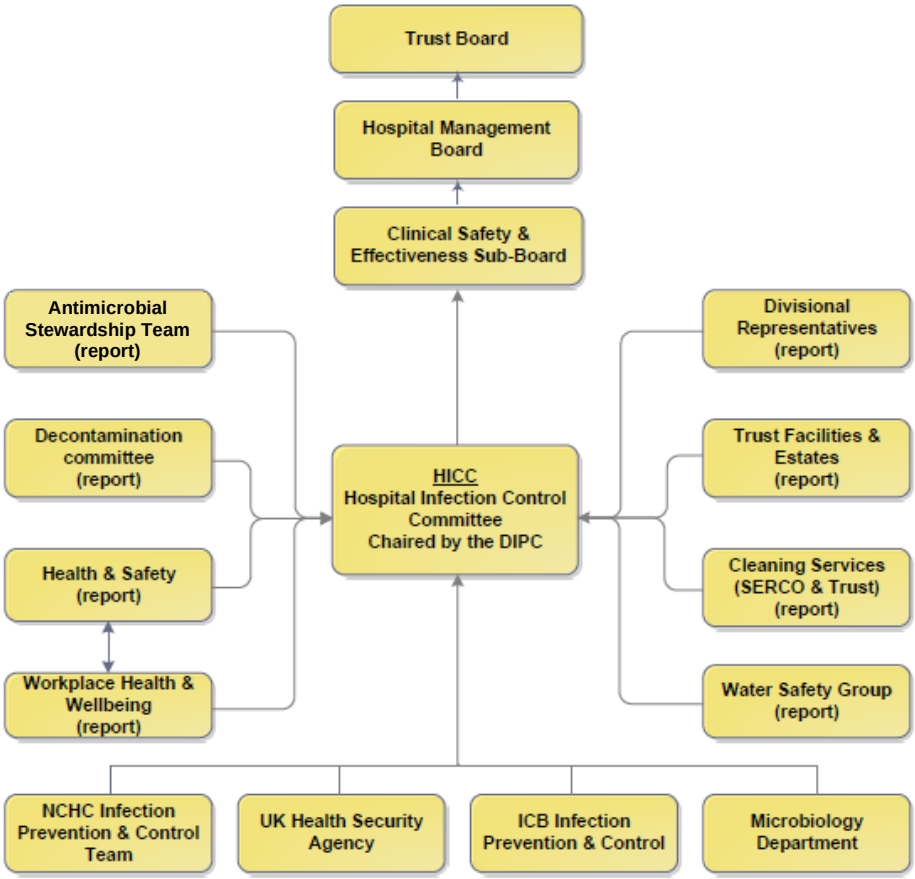
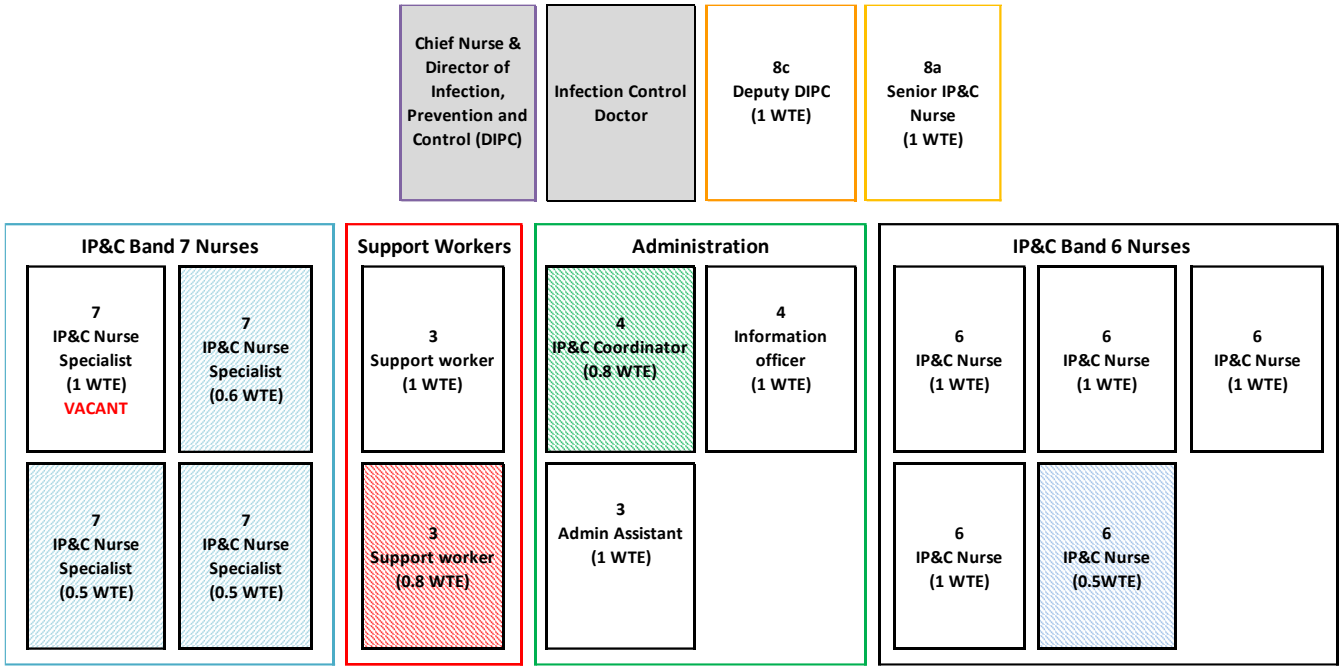



**Chart 3**

## Infection Prevention & Control Governance Structure



## Chart 4 – Infection Prevention & Control Team Structure




An on-call out of hours service provided by the IP&C team provides 24 hour, 7 day a week cover for the Trust. The team is supported by a team of Consultant Microbiologists and Virologists, who also undertake speciality on-call.

Within the IP&C establishment there has been the opportunity to recruit two new members of staff, following two successful secondments which have progressed to substantive posts. This provides continued succession planning for the future.

### Integrated Care Board (ICB)

IP&C at the NNUH is monitored by the ICB IP&C team. This involves attendance at HICC, participation in environmental inspections, contributions to Incident Management Team (IMT) meetings, conducting Post-Incident Reviews (PIRs) for all patients who develop an MRSA bacteraemia or CDI in accordance with national guidance, and attending bi-weekly Norfolk and Waveney Infection Prevention and Control (IP&C) collaborative meetings.

### ICNet (IP&C Software system)

The IP&C team use a commercial software system, called ICNet to manage alert organism results, suspected infections, monitor for Periods of Increased Incidence (PII) and minimise risk of outbreaks. ICNet served notice on the existing software due to its age. Since approval was granted to purchase the newer version 7 of ICNet, a team within the region have worked collaboratively across the Integrated Care System (ICS), to implement this.

The new version of ICNet is planned to be hosted by the James Paget server, enabling local community trusts and the three acute trusts to provide pertinent IP&C patient information across the organisations and improve patient safety.

The project is currently ongoing and has taken a little longer than expected due to some technical obstacles which the provider is working to resolve. All IP&C teams have received training on the new system, it is anticipated that the project will be finalised, and all of the participating teams will go live in September 2024.

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## Building

The IP&C team continue to participate in a multitude of refurbishment and new developments across the different sites as the Trust reconfigures to expand and improve facilities. IP&C offer support and advice from the design stage to ensure compliance with Health Building Notes (HBN) and Heath technical memorandum (HTM). Human factor issues can also be addressed when considering new projects. The IP&C team work together with key stakeholders within the departments, facilities, project teams and contractors. When projects are near completion, IP&C join the snagging team to ensure the finished product meets requirements and safety standards.

The IP&C team regularly participates in the monthly facilities management meetings to stay informed about current and upcoming projects.

Some of the building projects IP&C have been involved in during the year are as follows:

- NNUH Community Diagnostic Centre (CDC) approved in June 2023 and forecast to be operational by early 2025 (Image 1).
- Continuing construction of the Norfolk and Norwich Orthopaedic Centre (NaNOC), due for completion July 2024 (Image 2).
- New Paediatric theatres opened January 2024 (Image 3).
- Cooling units on level 4 required due to intolerable heat instigated as part of the Hot and Uncomfortable Working Group.

**Image 1 - CDC**

**Image 2 - NANOC**

**Image 3 - Paediatric theatre**

## Healthcare Inspections

During the period of 2023-24 there were no IP&C external healthcare inspections undertaken.

## Water Safety Group (WSG)

As part of the Trust's Governance Structure, a WSG has been established as per the Health Technical Memoranda (HTM), Safe Water in Healthcare Premises 04-01 and The Health Care Associated Infection (HCAI) Code of Practice.

Meeting quarterly, the aim of the WSG is to ensure the safety of all water used by patients, staff and visitors, and to minimise the risk of infection associated with waterborne pathogens.

NNUH has an appointed water authorising engineer who is a pivotal member of the WSG which ensures that decisions affecting the safety and integrity of the water systems and associated equipment do not go ahead without being agreed by them. This includes consultations relating to decisions on the procurement, design, installation and commissioning of water services, equipment, and associated treatment processes.

Three members of the IP&C team have completed the Legionella/water quality risk management responsible persons course, a further two members of the team have attended a study day in water safety in March 2023.

Ongoing further development of the IP&C team is anticipated, with further training on water safety planned for two members of the team in April and May 2024.

**Water Safety Management Group Report provided by Chair of the Trust Water Safety Group**

The Water Safety Management Group (WSG) is held on a monthly basis. Stakeholders include NNUH facilities management, NNUH Divisional representation, Norse, Serco and external facility providers and external responsible person for water compliance, who participate in meetings or send reports as required.

Under the Health and Safety at work act 1974 and control of substances hazards to health regulations 2002, actions are taken to prevent and control harmful effects of contaminated water. *Legionella* and *Pseudomonas Aeruginosa* testing is routinely conducted in order to ensure the safety of our staff, patients and visitors, this includes safe hot water, cold water and drinking water.

The WSG provides assurance that areas with abnormal test results are identified and acted upon. Where risks are identified, action plans and mitigations are put in place ensuring that IP&C procedures are maintained and monitored and approval for changes in procedure are agreed and approved.

The last water quality audit was completed in September 2023 by the Trusts water authorised engineer. The audit reviewed *Legionella* and *Pseudomonas aeruginosa* management and control, including recording all relevant Practices Programmes, ongoing operational procedures, extent of management responsibility, risk management and control, in line with the following standards:

- Legionnaires' disease - The Control of Legionella bacteria in water systems Approved Code of Practice and guidance on regulations L8 (Fourth Edition) 2013.
- Health and Safety Guidance 274 Parts 1-3 2013.
- Department of Health - Water Systems Health Technical Memorandum 04-01: Safe Water in Healthcare Premises: Parts A, B, C & Supplement: 2016.
- Department of Health - Health Technical Memorandum 00: Policies and principles of healthcare engineering: 2014.

The outcome of the audit provided a clear action plan to review and update records and processes.

The audit identified that improvements have been seen across the areas of the audit, however, more work is needed in the pre-planned maintenance schedules and action plans are in place across the NNUH sites to improve testing and maintenance, these include the increase in

*pseudomonas* testing, increasing the numbers of sentinel points that are tested across areas including the accommodation block (some of which require contractual changes) continued monitoring of hot and cold water and particularly in summer and sampling of drinking water across areas (which is currently not undertaken).

### NNUH *Legionella* Testing report

A Trust wide report is completed on a monthly basis providing assurance on legionella testing and outcomes of testing. The report is shared and presented to HICC.

### *Pseudomonas* Testing

The monthly meetings provide assurance from facility companies that water testing is carried out in appropriate areas of augmented care on a scheduled basis and actions taken where results identify cause for concern. This is in the fixture of filters and further investigation as to the cause of the concern. Once repeat results are satisfactory and after remedial action removal of filters can be considered.

Results of testing have led to an increase in the use of filters from February 24 to May 24 across the Trust. Investigations are taking place to understand if any of the causes are due to aged pipework, poor sink etiquette, the thermoplastic pipework becoming brittle or the jointing compound suitability used on the pipework. Initial works will commence within the delivery suite.

### Flushing Reports

Any unused water outlets should be flushed on a regular basis to avoid water contamination from the growth of harmful bacteria that grow in stagnant water.

Unused outlets are identified to the facilities team by Divisional staff and flushing compliance monitored through Divisional Governance meetings and the WSG meeting.

Within NNUH, Serco Domestic staff flush water outlets that are in regular use during cleaning routinely. Unused water outlets within ward areas and outpatient clinical areas are identified by Trust staff and communicated to Serco to ensure they are included in the flushing schedule.

### Offsite clinic areas hosted by NNUH and water safety

There are over 50 off site areas used by NNUH staff to host clinics for patients. Facility providers of offsite NNUH units present water safety updates to the Water safety meeting on a monthly basis.

Work is in progress to ensure that assurance is gained from all offsite areas.

### Water Safety Risks

All water risks are monitored through the corporate risk review meeting to ensure that mitigations and actions are in place to ensure safety of water for our patients, visitors and staff.

# Infection Prevention and Control Annual Report 2023-24

| Table 1 – Water Risks on Register | | | | | | | |
|---|---|---|---|---|---|---|---|
| ID | Opened | Title | Current | Potential Cause (If) | Potential Effect (Then) | Potential Consequence (Resulting in) | Target |
| 876 | 09/2019 | Risk of *Pseudomonas* cross infection | 4 | If *Pseudomonas* is isolated in the water supply on Neonatal Intensive Care Unit (NICU) | Then there is a risk of cross contamination to babies | Resulting in significant harm | 4 |
| Controls in place | | 1) Enhanced frequency of water testing<br>2) Use of Point of Use (POU) filters on taps<br>3) Fixed cleanable screens fitted between sinks and incubators<br>4) IP&C policies and procedures<br>- Use of Personal Protective Equipment (PPE)<br>- Hand washing protocols<br>- IP&C Perfect Ward Audits<br>5) Sinks in bays used for handwashing only (not personal cares) | | | | | |
| 1130 | 05/2020 | Replacement of existing taps to model able to accept POU filters for water hygiene control | 5 | If there is a shortage of taps within the Trust and availability is not good from suppliers | Then there could be a shortage of taps which are able to accept POU in high-risk patient areas (Augmented care) | Resulting in the risk of compromised water hygiene | 5 |
| Controls in place | | 1) We are currently holding enough POU in stock to serve 2 wards. | | | | | |
| 2093 | 08/2022 | Legionella in water outlets across the Trust | 5 | If Legionella is isolated in the water supply | Then there is a risk of infection to patients and staff | Resulting in significant harm to both patients and staff | 5 |
| Controls in place | | 1) Rolling programme of water testing and ad-hoc if deemed appropriate by IP&C team.<br>2) Use of POU filters on taps where appropriate (where test positive).<br>3) Isolation of taps where POU are not possible.<br>4) Markwik 21+ taps currently preferred tap for new installation or replacements.<br>5) Heat sanitisation where appropriate and available.<br>6) Temperature monitoring and control of water in place (below 20$^{c}$ or above 60$^{c}$ at source).<br>7) IP&C and facilities involved in design and commissioning of new buildings and renovations.<br>8) Education through mandatory training.<br>9) Water safety policies and procedures in place.<br>10) Cleaning of outlets according to HTM 04.01.<br>11) Flushing carried out for outlets not in use or that have been isolated. | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | 12) Cleaners carry out regular draw offs from all outlets.<br>13) Authorised engineer appointed.<br>14) WSG formalised.<br>15) Planned maintenance of water tanks and calorifiers carried out. | | | | | |
| 2341 | 05/2023 | Risk of Mycobacterium abscessus infections related to water supply | 5 | If the water supplies within the trust become colonised with Mycobacterium abscessus | Then this could cause Mycobacterium abscessus infections in patients - of particularly concern are patients who are severely immuno-suppressed | Resulting in lung infection and in the worst case scenario, fatalities for those who are severely immuno-suppressed | 5 |
| Controls in place | | 1) Monitoring of new Mycobacterium abscessus to identify any concerns around hospital acquisition.<br>2) WSG to ensure that for all new builds, correct disinfection protocols are followed as part of the commissioning process, which includes sign off sheets in water safety plan. | | | | | |
| 2028 | 06/2022 | *Pseudomonas aeruginosa* in water outlets in augmented care areas | 16 | If *Pseudomonas* is isolated in the water supply in augmented care areas | Then there is a risk of cross contamination to patients | Resulting in significant harm | 4 |
| Controls in place | | 1) Regular frequency of water testing (3-6 monthly) and ad hoc if deemed appropriate by IP&C team.<br>2) Use of POU filters on taps where appropriate (where test positive).<br>3) Isolation of taps where POU are not possible.<br>4) Markwik 21+ taps currently preferred tap for new installation or replacements.<br>5) Heat sanitisation where appropriate and available.<br>6) Other remedial actions as appropriate.<br>7) 3 monthly heat sanitisation where appropriate (NICU).<br>8) Education through mandatory training and ad hoc re handwashing sinks.<br>9) Clear separation of handwashing sinks and other sinks.<br>10) Water safety policies and procedures in place.<br>11) Cleaning of outlets according to HTM 04.01.<br>12) Flushing carried out for outlets not in use or that have been isolated.<br>13) Cleaners carry out regular draw offs from all outlets.<br>14) Authorised engineer appointed.<br>WSG formalised. | | | | | |

### Water Safety Incidents

There have been no recent water safety incidents.

### Water safety training

Water safety training is crucial within the healthcare setting, all staff complete a section on Water training as part of IP&C mandatory training. Members of facilities working in areas related to water have enhanced training, as does the IP&C team, IP&C doctor and members of the WSG. The

Trust has an up-to-date Water Safety Plan approved by HICC and IP&C policies and protocols that are followed and audited re compliance to provide assurance of safety.

### Emergency Response of Water safety

Responding to contamination events, such as detecting legionella have clear protocols and actions are led through the Emergency Preparedness Resilience and Response organisational framework.

## Decontamination Committee

The Decontamination Committee oversee NNUH compliance with the Health and Social Care Act (2008) Code of Practice on the Prevention and Control of Infections and HTM 01-01, and 01-06.

In April 2023 a senior member of the IP&C team attended an external decontamination lead and responsibility course.

### Decontamination Committee Report – provided by Chair of the Trust Decontamination Group

### Audit and Governance

The 23-24 annual decontamination audit took place in December 2023 and this resulted in 3 x minor actions for correction. There were no major actions. The next audit is booked for September 2024, and this is a full reaccreditation audit which will be carried out on-site over approximately 4 days. There was a supplemental 'Extension to Scope' carried out off-site by SGS in February 2024 to incorporate 3 x replacement autoclaves and replacement Reverse Osmosis (RO) water supply into the Quality Management System.

Joint Advisory Group (JAG) accreditation audits (for flexible endoscope reprocessing) were carried out for the Endoscopy Decontamination Unit (EDU) and Quadrum Institute (QI) Decontamination Units during January 24 (IP&C) and May 24 Institute of Healthcare Engineering & Estates Management (IHEEM). Action plans for any corrective actions have been completed and forwarded to the JAG accreditation team.

The bi-monthly report on decontamination operational performance continues to be monitored by the Decontamination Committee Meeting to ensure full oversight.

### Quadram Institute (QI) & EDU (N&N)

There have been no further problems with Mycobacteria but there have been occasional recent 'spikes' involving high Total Viable Counts (TVCs) and/or presumed pseudomonads on weekly water quality testing which has caused some disruption to processing. There are currently no adverse operational issues to report.

### Operational highlights

The department workload has fluctuated considerably over recent weeks. The opening of the paediatric theatre development, NaNOC, additional weekend theatre working, endoscopy waiting list initiatives and additional weekend working in areas such as dermatology and Ear Nose and Throat (ENT) outpatients have created occasional backlogs. These have generally been quickly resolved.

Three replacement autoclaves were commissioned at the beginning of 2024 (see Audit and Governance above). These replaced original Getinge sterilizers which had been in place since the hospital opened and had been condemned from July 2023 during insurance inspections because of chamber cracks.

### Risks

The logistics arrangements for supply and return to NaNOC are likely to become unsustainable when that unit is operating at full capacity. Various mitigating actions are currently being explored to offset the impact this could have on the Sterile Service Department (SSD) ability to keep this unit supplied effectively.

Discussions surrounding support for NaNOC2 are continuing. It will be essential to ensure that the SSD is resourced with the equipment, staffing and logistics to adequately service this area.

Remote decontamination audit awaiting completion.

## Ventilation Committee Report – provided by Chair of the Trust Ventilation Group

The Trust appointed a ventilation Authorising Engineer in November 2023. They plan to conduct a ventilation audit for the trust in the summer of 2024. It can be noted that ductwork cleaning is undertaken as to planned preventative maintenance (PPM) requirement following Industry practice guidance. The cleaning of theatres and negative pressure side rooms is conducted as part of the established annual programs and in compliance with current legislation.

A condition survey which commenced two years ago, which includes ventilation. has been carried out alongside the Private Finance Initiative (PFI). The findings of this are now being worked through.

The newly established trust ventilation safety group is scheduled to meet on a quarterly basis, with the first meeting planned for April 2024.

## Mandatory Surveillance of Healthcare Associated Infection to UK Health Security Agency

### *Clostridioides difficile* infection (CDI)

In line with NHS England - NHS Standard Contract to minimise instances of *Clostridioides difficile* (*C. difficile*). Both hospital-onset healthcare associated (HOHA) and community-onset healthcare associated (COHA) *C. difficile* cases are required to be reported to UKHSA.

The C. *difficile* attribution for 2023-24 was 77 (HOHA and COHA).

Table 2 shows all C. *difficile* cases within NNUH 2023-24. Table 3 shows NNUH C. *difficile* figures (COHA & HOHA) compared to the East of England.

**Hospital onset healthcare associated (HOHA):** cases where specimen date is >2 days after current admission (where day of admission is 0)

**Community onset healthcare associated (COHA):** cases that occur in the community (or <2 days after admission) when the patient has been an inpatient in the trust reporting the case in the previous 28 days.

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**Community onset indeterminate association:** cases that occur in the community (or <2 days after admission) when the patient has been an inpatient in the trust reporting the case between 29 and 84 days prior to the specimen date.

**Community onset community associated:** cases that occur in the community (or <2 days after admission) when the patient has not been an inpatient in the trust reporting the case in the previous 84 days.

**Table 2**

**NNUH *C. difficile* 2023-24 – number of cases**

| Financial Year | NNUH Objective | Community Origin (sampled before day 3) | | Hospital Origin (Sampled on or after day 4) | | Total |
|---|---|---|---|---|---|---|
| 2023-24 | 77 | COIA 16 | COCA 97 | HOHA 58 | COHA 35 | 206 |
| | | 113 | | Total 93 cases out of objective of 77. 59 cases had no lapses, leaving **34** with lapses in care. | | |
| 2022-23 | 83 | COIA 28 | COCA 103 | HOHA 56 | COHA 31 | 218 |
| | | 131 | | Total 87 cases of which 68 had no lapses, leaving **19** with lapses in care. | | |
| 2021-22 | 57 | COIA 31 | COCA 121 | HOHA 49 | COHA 40 | 241 |
| | | 152 | | Total 89 cases of which 66 had no lapses so not counting towards final objective, leaving **23** with lapses in care counting towards the objective. | | |

https://www.gov.uk/government/statistics/clostridium-difficile-infection-monthly-data-by-nhs-acute-trust

**Table 3**

UK Health Security Agency

**Clostridium difficile**

Count of healthcare associated cases per month

| Trust Code | Acute Trust Name | Trajectory* | 2023 April | May | June | July | August | September | October | November | December | 2024 January | February | March | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RC9 | Bedfordshire Hospitals NHS Foundation Trust | 56 | 4 | 5 | 12 | 5 | 4 | 9 | 7 | 9 | 4 | 6 | 5 | 5 | 75 |
| RGT | Cambridge University Hospitals NHS Foundation Trust | 109 | 6 | 4 | 12 | 12 | 16 | 9 | 13 | 15 | 10 | 8 | 16 | 21 | 142 |
| RWH | East & North Hertfordshire NHS Trust | 58 | 6 | 10 | 10 | 7 | 7 | 5 | 10 | 6 | 7 | 12 | 4 | 7 | 91 |
| RDE | East Suffolk and North Essex NHS Foundation Trust | 101 | 5 | 9 | 11 | 8 | 14 | 9 | 18 | 8 | 7 | 8 | 11 | 12 | 120 |
| RGP | James Paget University Hospitals NHS Foundation Trust | 26 | 0 | 3 | 3 | 2 | 0 | 3 | 2 | 0 | 1 | 2 | 5 | 3 | 24 |
| RAJ | Mid and South Essex NHS Foundation Trust | 174 | 22 | 22 | 21 | 20 | 25 | 19 | 10 | 19 | 13 | 18 | 19 | 28 | 236 |
| RD8 | Milton Keynes Hospital NHS Foundation Trust | 13 | 5 | 6 | 6 | 3 | 3 | 4 | 1 | 5 | 3 | 3 | 6 | 3 | 48 |
| RM1 | Norfolk & Norwich University Hospitals NHS Foundation Trust | 77 | 10 | 8 | 8 | 8 | 9 | 8 | 8 | 5 | 5 | 8 | 10 | 6 | 93 |
| RGN | North West Anglia NHS Foundation Trust | 100 | 14 | 13 | 11 | 7 | 12 | 13 | 8 | 14 | 7 | 14 | 9 | 17 | 139 |
| RGM | Papworth Hospital NHS Foundation Trust | 7 | 2 | 2 | 1 | 2 | 0 | 1 | 0 | 2 | 1 | 1 | 4 | 3 | 19 |
| RQW | Princess Alexandra Hospital NHS Trust | 34 | 3 | 4 | 1 | 6 | 5 | 2 | 5 | 7 | 2 | 4 | 3 | 7 | 49 |
| RCX | The Queen Elizabeth Hospital King's Lynn NHS Trust | 53 | 5 | 5 | 5 | 7 | 8 | 3 | 5 | 8 | 4 | 9 | 6 | 6 | 71 |
| RWG | West Hertfordshire Hospitals NHS Trust | 57 | 7 | 9 | 9 | 8 | 4 | 2 | 3 | 7 | 1 | 4 | 3 | 5 | 62 |
| RGR | West Suffolk Hospitals NHS Trust | 49 | 3 | 6 | 7 | 11 | 5 | 11 | 9 | 7 | 9 | 7 | 9 | 10 | 94 |
| | **East of England Total** | | **92** | **106** | **117** | **106** | **112** | **98** | **99** | **112** | **74** | **104** | **110** | **133** | **1263** |

A thorough PIR investigation is completed for each hospital attributable CDI (HOHA and COHA) case using a standardised PIR process, datix and including the sharing of learning and good practice at governance meetings. The investigating group includes the clinical team responsible for the patient, Antimicrobial Pharmacist, Microbiologist, NNUH IP&C and a representative from

the ICB infection control team. At the meeting the decision is made whether there have been any lapses in care and it is an opportunity to share any learning for community partners.

Following PIR meetings with the ICB IP&C team, 6 COHA and 28 HOHA cases were reviewed as trajectory (with lapses in care) against an objective of 77 cases. 29 COHA and 30 HOHA cases were deemed non-trajectory (no lapses in care), see table 4.

**Table 4**

| **NNUH lapses in care identified from 28 HOHA and 6 COHA trajectory cases of *C. difficile* 2023-24** | |
|---|---|
| **Lapses** | **Number of times lapse occurred** |
| Delay in isolation (placing in single room) | 15 |
| Delay in sampling | 15 |
| Inappropriate sampling | 8 |
| Gaps in stool chart | 7 |
| Period of Increased Incidence | 6 |
| **Some trajectory cases had more than one lapse. Lapses are included in the learning outcomes.** | |

A weekly multidisciplinary team ward round of CDI patients is undertaken by a consultant microbiologist, member of the IP&C team, antimicrobial pharmacist and consultant gastroenterologist.

*Clostridioides difficile* can be carried asymptomatically and may be present prior to admission becoming apparent when toxin production is triggered by administration of antibiotics. Possible sources of infection are from asymptomatic colonisation prior to admission or via cross infection in a healthcare setting e.g. from contaminated equipment, environment or hands of staff. It is notable that some patients who are colonised with *Clostridioides difficile* may excrete the bacteria and spores without showing symptoms of infection.

Recognised risk factors for CDI include antibiotic use, proton pump inhibitors, use of laxatives, opioids, iron, and bowel procedures along with age >65, presence of co-morbidities such as malignancy, diabetes, kidney and liver disease and immunosuppression from treatment or cancer.

Despite thorough investigations using timelines, tracking patients' movements in the preceding 3 months and molecular typing, it is often difficult to prove conclusively where a patient acquired the *C. difficile* organism.

Treatment guidelines for CDI are in accordance with National Institute for Health and Care Excellence (NICE) guidance (July, 2021) the antibiotic Fidaxomicin is available on the NNUH formulary. For second line therapy of infection after discussion with Microbiology.

### Glycopeptide-resistant Enterococcus (GRE) BSI

The Trust continues to record very low rates of GRE BSI. Patient identified as having a GRE are nursed in a single room with enhanced IP&C precautions. Antibiotics are prescribed based on the sensitivity of the particular strain.

Enterococci are organisms that reside in the gastrointestinal tract. GRE are resistant to the Glycopeptide antibiotics Vancomycin and sometimes Teicoplanin.

There were 12 cases of GRE/Vancomycin Resistant Enterococcus (VRE) BSI in 2023-24.

### Carbapenemase-producing Enterobacteriaceae (CPE)

In the UK, over the last few years there has been a rapid rise in the incidence of infection and colonisation by multi-drug resistant Carbapenemase-producing organisms (CPO) with an increase in the number of clusters and outbreaks reported in England.

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 UK. These resistant bacteria can spread rapidly in healthcare settings. (Freeman, R et al, 2020 as cited in UKHSA, 2022).

Table 5 indicates the number of positive CPE cases screened within the NNUH during 2023-24.

All known CPE positive patients are alerted within ICE desktop, the patient administration system (PAS) and within the IP&C team's ICNet surveillance system. The CPE policy has been updated to reflect the most recent UKHSA guidance published, September 2022. https://assets.publishing.service.gov.uk/media/63346c44d3bf7f34f1bc882d/Framework_of_actions_to_contain_CPE.pdf

**Table 5**

| Carbapenemase-producing Enterobacteriaceae - Cases identified | | |
|---|---|---|
| **Financial Year** | **New cases tested positive on admission** | **New positive cases** |
| **2023-24** | **4** | • 1x Screened due to hospital admission in London<br>• 3x Screened due to hospital admissions in India, Egypt, South Africa |
| **2022-23** | **0** | • 1 new case identified.<br>(Preadmission screening due to hospital admission in Sudan) |
| **2021-22** | **4** | • 2 x clinical samples<br>• Screened due to hospital admission in Spain<br>• Screened due to recent exposure to Tazocin |

### Gram-Negative Bacteraemia/BSI

UKHSA expanded their mandatory surveillance of Gram-negative BSI from *Escherichia coli* (*E. coli*) bacteraemia (mandated for reporting in June 2011) to include *Pseudomonas aeruginosa* and *Klebsiella species* (Public Health England, 2017).

This is the seventh year of UKHSA reporting for *Klebsiella species and Pseudomonas aeruginosa* and therefore we now have comparative figures for *E. coli, Klebsiella species* and *Pseudomonas aeruginosa*. See tables 6, 7, 8, 9, 10 & 11.

The 2023-24 objectives set were inclusive of both COHA and HOHA cases and were reduced from the previous year's objectives as shown in table 6, 8 and 10.

### *Escherichia coli*

Often referred to as *E. coli*, this is part of the normal gut flora and can commonly cause urinary, biliary, or gastrointestinal tract related infection leading to BSI (*E. coli* BSI). Some *E. coli* produce enzymes known as extended spectrum beta lactamase (ESBL) which increase the resistance to multiple antibiotics.

The IP&C team developed a Standard Operating Procedure (SOP) to reduce Urinary tract infections and Gram-negative blood stream infections in 2019-20 and continue to work collaboratively to promote these resources in relation to urine sampling, mid-stream urine collection, hydration, patient information and catheter prevention. The IP&C team have been working collaboratively with IP&C colleagues, across the Norfolk and Waveney ICS, participating in workstreams to reduce Gram-negative bacteraemia, initially focussing upon *E. coli* urinary catheter infections.

The NNUH objective for 2023-24 was 91 inclusive of COHA and HOHA cases. 49.5% of the 103 Hospital origin *E. coli* BSI were considered to have a urinary tract primary focus, 16.5% had an unknown focus, 17.5% were considered hepatobiliary, 12.5% gastrointestinal or intraabdominal collection, lower respiratory tract 3%, skin/soft tissue 1%.

**Table 6**

**NNUH *Escherichia coli* BSI – number of cases**

| Financial Year | NNUH Objective | Community Origin | Hospital Origin | Total |
|---|---|---|---|---|
| **2023-24** | **91** | **242 COCA** | **103 (49 HOHA & 54 COHA)** | **345** |
| 2022-23 | 96 | 214 COCA | 92 (49 HOHA & 43 COHA) | 306 |
| 2021-22 | 119 | 283 COCA | 99 (51 HOHA & 48 COHA) | 382 |

**Table 7**

UK Health Security Agency

**Escherichia coli**

Count of healthcare associated cases per month

| Trust Code | Acute Trust Name | Trajectory* | 2023 April | May | June | July | August | September | October | November | December | 2024 January | February | March | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RC9 | Bedfordshire Hospitals NHS Foundation Trust | 60 | 6 | 6 | 6 | 13 | 6 | 12 | 7 | 6 | 4 | 5 | 6 | 6 | **83** |
| RGT | Cambridge University Hospitals NHS Foundation Trust | 149 | 19 | 16 | 12 | 19 | 10 | 11 | 18 | 17 | 17 | 21 | 9 | 14 | **183** |
| RWH | East & North Hertfordshire NHS Trust | 44 | 1 | 3 | 6 | 7 | 7 | 2 | 6 | 4 | 7 | 3 | 8 | 3 | **57** |
| RDE | East Suffolk and North Essex NHS Foundation Trust | 113 | 12 | 10 | 9 | 26 | 9 | 11 | 12 | 15 | 16 | 16 | 10 | 16 | **162** |
| RGP | James Paget University Hospitals NHS Foundation Trust | 52 | 2 | 2 | 7 | 6 | 7 | 7 | 3 | 7 | 2 | 2 | 3 | 8 | **56** |
| RAJ | Mid and South Essex NHS Foundation Trust | 208 | 24 | 17 | 17 | 24 | 15 | 19 | 21 | 12 | 17 | 16 | 23 | 25 | **230** |
| RD8 | Milton Keynes Hospital NHS Foundation Trust | 27 | 7 | 2 | 1 | 7 | 6 | 4 | 6 | 6 | 6 | 5 | 5 | 4 | **59** |
| RM1 | Norfolk & Norwich University Hospitals NHS Foundation Trust | 91 | 8 | 11 | 9 | 4 | 10 | 13 | 10 | 10 | 7 | 5 | 5 | 11 | **103** |
| RGN | North West Anglia NHS Foundation Trust | 70 | 5 | 12 | 9 | 8 | 4 | 12 | 8 | 1 | 8 | 7 | 7 | 8 | **89** |
| RGM | Papworth Hospital NHS Foundation Trust | 5 | 0 | 1 | 0 | 2 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 2 | **9** |
| RQW | Princess Alexandra Hospital NHS Trust | 33 | 2 | 5 | 5 | 7 | 4 | 4 | 8 | 1 | 3 | 4 | 3 | 7 | **53** |
| RCX | The Queen Elizabeth Hospital King's Lynn NHS Trust | 49 | 8 | 10 | 3 | 6 | 9 | 4 | 3 | 7 | 2 | 7 | 5 | 3 | **67** |
| RWG | West Hertfordshire Hospitals NHS Trust | 61 | 3 | 8 | 6 | 7 | 9 | 7 | 7 | 5 | 8 | 8 | 9 | 6 | **83** |
| RGR | West Suffolk Hospitals NHS Trust | 34 | 4 | 3 | 7 | 3 | 6 | 6 | 5 | 5 | 5 | 6 | 3 | 6 | **59** |
| | **East of England Total** | | **101** | **106** | **97** | **139** | **103** | **113** | **114** | **96** | **103** | **106** | **96** | **119** | **1293** |

### *Klebsiella species*

The IP&C team undertake surveillance investigation of hospital origin Gram-negative BSI. The NNUH objective for Klebsiella in 2023-24 was 24, inclusive of COHA and HOHA cases. Of the 56 Hospital origin *Klebsiella species* BSI, 25% were considered urinary tract, 34% had an unknown primary focus, 14.2% Gastrointestinal or Intraabdominal collection, 9% hepatobiliary, 7% Lower Respiratory Tract, 3.6% Bone and joint, 3.6% Skin/Soft Tissue, 3.6% Intravascular device.

**Table 8**

**NNUH *Klebsiella species* BSI – number of cases**

| Financial Year | NNUH Objective | Community Origin | Hospital Origin | Total |
|---|---|---|---|---|
| **2023-24** | **24** | **75 COCA** | **56 (41 HOHA, 15 COHA)** | **131** |
| 2022-23 | 48 | 45 COCA | 27 (21 HOHA, 6 COHA) | 72 |
| 2021-22 | 25 | 73 COCA | 40 (28 HOHA, 12 COHA) | 113 |

**Table 9**

UK Health Security Agency

**Klebsiella spp.**

Count of healthcare associated cases per month

| Trust Code | Acute Trust Name | Trajectory* | 2023 April | May | June | July | August | September | October | November | December | 2024 January | February | March | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RC9 | Bedfordshire Hospitals NHS Foundation Trust | 16 | 5 | 2 | 1 | 5 | 3 | 3 | 4 | 1 | 5 | 3 | 1 | 1 | **34** |
| RGT | Cambridge University Hospitals NHS Foundation Trust | 71 | 4 | 9 | 4 | 9 | 11 | 6 | 18 | 12 | 11 | 8 | 11 | 9 | **112** |
| RWH | East & North Hertfordshire NHS Trust | 18 | 0 | 2 | 3 | 2 | 2 | 1 | 4 | 3 | 0 | 2 | 2 | 1 | **22** |
| RDE | East Suffolk and North Essex NHS Foundation Trust | 36 | 4 | 5 | 6 | 3 | 3 | 5 | 4 | 2 | 10 | 5 | 6 | 1 | **54** |
| RGP | James Paget University Hospitals NHS Foundation Trust | 28 | 1 | 3 | 4 | 4 | 4 | 3 | 4 | 2 | 3 | 2 | 2 | 6 | **38** |
| RAJ | Mid and South Essex NHS Foundation Trust | 84 | 10 | 8 | 16 | 6 | 7 | 7 | 11 | 16 | 11 | 12 | 17 | 15 | **136** |
| RD8 | Milton Keynes Hospital NHS Foundation Trust | 14 | 0 | 1 | 1 | 3 | 1 | 2 | 2 | 1 | 2 | 3 | 1 | 1 | **18** |
| RM1 | Norfolk & Norwich University Hospitals NHS Foundation Trust | 24 | 4 | 2 | 6 | 10 | 3 | 5 | 6 | 5 | 5 | 4 | 1 | 5 | **56** |
| RGN | North West Anglia NHS Foundation Trust | 34 | 2 | 3 | 2 | 2 | 0 | 5 | 2 | 1 | 2 | 4 | 3 | 1 | **27** |
| RGM | Papworth Hospital NHS Foundation Trust | 10 | 1 | 2 | 1 | 0 | 0 | 1 | 2 | 1 | 0 | 1 | 0 | 0 | **9** |
| RQW | Princess Alexandra Hospital NHS Trust | 16 | 2 | 2 | 1 | 0 | 3 | 2 | 1 | 3 | 2 | 3 | 2 | 1 | **22** |
| RCX | The Queen Elizabeth Hospital King's Lynn NHS Trust | 20 | 1 | 5 | 0 | 3 | 4 | 5 | 2 | 0 | 0 | 2 | 4 | 3 | **29** |
| RWG | West Hertfordshire Hospitals NHS Trust | 32 | 5 | 8 | 6 | 1 | 2 | 2 | 4 | 4 | 5 | 3 | 3 | 5 | **48** |
| RGR | West Suffolk Hospitals NHS Trust | 10 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 1 | 3 | 4 | 2 | **23** |
| | **East of England Total** | | **41** | **54** | **53** | **49** | **45** | **49** | **66** | **52** | **57** | **55** | **57** | **51** | **629** |

### *Pseudomonas aeruginosa*

The NNUH objective for Pseudomonas in 2023-24 was 29, inclusive of COHA and HOHA cases.

Following investigation by the IP&C team 23% of the 30 Hospital origin *Pseudomonas* BSI, were considered to have a primary focus of urinary tract, 30% had an unknown focus, 10% were considered hepatobiliary, 14% Lower Respiratory Tract, 3% intravascular device and 20% skin/soft tissue.

**Table 10**

| NNUH *Pseudomonas aeruginosa* BSI – number of cases | | | | |
|---|---|---|---|---|
| **Financial Year** | **NNUH Objective** | **Community Origin** | **Hospital Origin** | **Total** |
| **2023-24** | **29** | **26 COCA** | **30 (18 HOHA & 12 COHA)** | **56** |
| 2022-23 | 26 | 27 COCA | 18 (10 HOHA & 8 COHA) | 45 |
| 2021-22 | 24 | 21 COCA | 29 (17 HOHA & 12 COHA) | 50 |

**Table 11**

UK Health Security Agency

**Pseudomonas aeruginosa**

Count of healthcare associated cases per month

| Trust Code | Acute Trust Name | Trajectory* | 2023 April | May | June | July | August | September | October | November | December | 2024 January | February | March | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RC9 | Bedfordshire Hospitals NHS Foundation Trust | 12 | 1 | 2 | 2 | 1 | 1 | 2 | 0 | 0 | 3 | 1 | 0 | 0 | 13 |
| RGT | Cambridge University Hospitals NHS Foundation Trust | 36 | 0 | 5 | 5 | 3 | 5 | 4 | 10 | 3 | 2 | 4 | 5 | 2 | 48 |
| RWH | East & North Hertfordshire NHS Trust | 10 | 2 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 4 | 12 |
| RDE | East Suffolk and North Essex NHS Foundation Trust | 19 | 3 | 4 | 4 | 0 | 0 | 2 | 6 | 1 | 1 | 4 | 4 | 6 | 35 |
| RGP | James Paget University Hospitals NHS Foundation Trust | 9 | 0 | 1 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 2 | 11 |
| RAJ | Mid and South Essex NHS Foundation Trust | 45 | 4 | 5 | 5 | 3 | 4 | 5 | 8 | 2 | 3 | 5 | 7 | 1 | 52 |
| RD8 | Milton Keynes Hospital NHS Foundation Trust | 9 | 0 | 1 | 2 | 1 | 1 | 1 | 2 | 2 | 0 | 0 | 1 | 0 | 11 |
| RM1 | Norfolk & Norwich University Hospitals NHS Foundation Trust | 19 | 2 | 1 | 2 | 5 | 3 | 4 | 1 | 3 | 3 | 2 | 3 | 1 | 30 |
| RGN | North West Anglia NHS Foundation Trust | 15 | 1 | 0 | 1 | 0 | 1 | 2 | 1 | 3 | 2 | 2 | 0 | 0 | 13 |
| RGM | Papworth Hospital NHS Foundation Trust | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| RQW | Princess Alexandra Hospital NHS Trust | 4 | 0 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 9 |
| RCX | The Queen Elizabeth Hospital King's Lynn NHS Trust | 8 | 2 | 1 | 1 | 2 | 1 | 0 | 2 | 3 | 0 | 1 | 3 | 0 | 16 |
| RWG | West Hertfordshire Hospitals NHS Trust | 11 | 2 | 1 | 2 | 1 | 5 | 2 | 2 | 2 | 3 | 1 | 3 | 4 | 28 |
| RGR | West Suffolk Hospitals NHS Trust | 3 | 0 | 1 | 2 | 1 | 1 | 2 | 0 | 0 | 1 | 0 | 1 | 1 | 10 |
| | **East of England Total** | | 17 | 25 | 29 | 19 | 24 | 27 | 36 | 21 | 20 | 22 | 29 | 21 | 290 |

## Meticillin Susceptible and Meticillin Resistant *Staphylococcus aureus*

The bacterium *Staphylococcus aureus* is commonly found colonising the skin and mucous membranes of the nose and throat. It can cause a wide range of infections from minor boils to serious wound infections; however, most people carry this organism harmlessly. In hospitals, it can cause surgical wound infections and bloodstream infections. Mandatory reporting includes all isolates, whether true infections or contaminated blood cultures and will initially be attributed to the Trust if the positive specimen is taken on or after day 2 of admission (where day of admission is 0).

## Meticillin Susceptible *Staphylococcus aureus* (MSSA)

There remains no national objective currently for MSSA. Table 12 shows NNUH comparative figures years 2021-2022 until current 2023-2024. Table 13 shows NNUH count of healthcare associated cases per month comparatively to other organisations within the country.

57% of MSSA BSI were of community origin. Of the 44 hospital origin, 37% had an unknown primary focus, 32% with a skin and soft tissue primary focus, 2% urinary tract, 5% intravascular device, 11% respiratory infection, 11% bone/joint 2% aortic root abscess.

**Table 12**

| NNUH Meticillin Susceptible Staphylococcus aureus BSI - number of cases | | | |
|---|---|---|---|
| ***Financial Year*** | **Community Origin** | **Hospital Origin on or after day 3** | **Total** |
| **2023-24** | **58 COCA** | **44 (38 HOHA & 6 COHA)** | **102** |
| 2022-23 | 74 COCA | 41 (35 HOHA & 6 COHA) | 115 |
| 2021-22 | 73 COCA | 38 (30 HOHA & 8 COHA) | 111 |
| | | | |

**Table 13**

UK Health Security Agency

**Methicillin-sensitive Staphylococcus aureus**

Count of healthcare associated cases per month

| Trust Code | Acute Trust Name | Trajectory* | 2023 April | May | June | July | August | September | October | November | December | 2024 January | February | March | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RC9 | Bedfordshire Hospitals NHS Foundation Trust | N/A | 2 | 3 | 3 | 7 | 5 | 3 | 2 | 5 | 2 | 1 | 5 | 0 | **38** |
| RGT | Cambridge University Hospitals NHS Foundation Trust | N/A | 3 | 7 | 1 | 3 | 2 | 6 | 5 | 9 | 4 | 9 | 7 | 4 | **60** |
| RWH | East & North Hertfordshire NHS Trust | N/A | 1 | 1 | 3 | 2 | 2 | 1 | 5 | 1 | 3 | 2 | 2 | 2 | **25** |
| RDE | East Suffolk and North Essex NHS Foundation Trust | N/A | 2 | 6 | 2 | 3 | 5 | 2 | 6 | 5 | 8 | 11 | 8 | 2 | **60** |
| RGP | James Paget University Hospitals NHS Foundation Trust | N/A | 3 | 1 | 2 | 5 | 1 | 3 | 1 | 1 | 0 | 0 | 2 | 2 | **21** |
| RAJ | Mid and South Essex NHS Foundation Trust | N/A | 9 | 13 | 9 | 10 | 12 | 9 | 11 | 14 | 10 | 2 | 3 | 9 | **111** |
| RD8 | Milton Keynes Hospital NHS Foundation Trust | N/A | 3 | 0 | 2 | 2 | 1 | 3 | 4 | 2 | 0 | 1 | 1 | 2 | **21** |
| RM1 | Norfolk & Norwich University Hospitals NHS Foundation Trust | N/A | 6 | 4 | 2 | 4 | 4 | 3 | 3 | 3 | 3 | 6 | 4 | 2 | **44** |
| RGN | North West Anglia NHS Foundation Trust | N/A | 0 | 3 | 3 | 3 | 4 | 5 | 2 | 2 | 2 | 2 | 3 | 3 | **32** |
| RGM | Papworth Hospital NHS Foundation Trust | N/A | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | **5** |
| RQW | Princess Alexandra Hospital NHS Trust | N/A | 3 | 1 | 0 | 1 | 1 | 2 | 0 | 0 | 2 | 2 | 0 | 0 | **12** |
| RCX | The Queen Elizabeth Hospital King's Lynn NHS Trust | N/A | 2 | 1 | 3 | 3 | 2 | 0 | 1 | 3 | 1 | 4 | 2 | 1 | **23** |
| RWG | West Hertfordshire Hospitals NHS Trust | N/A | 4 | 9 | 5 | 3 | 1 | 5 | 3 | 7 | 0 | 3 | 1 | 1 | **42** |
| RGR | West Suffolk Hospitals NHS Trust | N/A | 2 | 3 | 3 | 2 | 2 | 4 | 1 | 4 | 2 | 2 | 3 | 3 | **31** |
| | **East of England Total** | | **40** | **52** | **39** | **48** | **42** | **46** | **44** | **56** | **38** | **46** | **42** | **32** | **525** |

*UKHSA data includes community data with patients with prior Trust exposure within 28 days.

## Meticillin Resistant *Staphylococcus aureus* (MRSA)

All *Staphylococcus aureus* BSI are reported. They are categorised according to their resistance to antibiotics and are then reported separately as MSSA and MRSA. Surveillance and reporting of MRSA BSI continues with the limit set at 0 avoidable cases.

Table 14 shows NNUH comparative figures years 2021-2022 until current 2023-2024.
Table 15 shows NNUH count of healthcare associated cases per month comparatively to other organisations within the country.

There was one hospital origin MRSA BSI during 2023-24. This was classified as a healthcare associated bacteraemia by definition, due to collection of the blood culture 48 hours post admission. However, it was acknowledged upon case review with the ICB that the bacteraemia was due to a predisposing medical condition, present prior to admission and therefore truly a community acquired infection.

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**Table 14**

| NNUH MRSA BSI - number of cases | | | | |
|---|---|---|---|---|
| **Financial Year** | **NNUH objective** | **Community Origin** | **Hospital Origin (on or after day 3)** | **Total** |
| **2023-24** | **0** | **1** | **1** | **2** |
| 2022-23 | 0 | 0 | 0 | 0 |
| 2021-22 | 0 | 2 | 1 | 3 |

**Table 15**

UK Health Security Agency

**Methicillin-resistant Staphylococcus aureus**

Count of healthcare associated cases per month

| Trust Code | Acute Trust Name | Trajectory* | 2023 April | May | June | July | August | September | October | November | December | 2024 January | February | March | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RC9 | Bedfordshire Hospitals NHS Foundation Trust | N/A | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 4 |
| RGT | Cambridge University Hospitals NHS Foundation Trust | N/A | 2 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 8 |
| RWH | East & North Hertfordshire NHS Trust | N/A | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| RDE | East Suffolk and North Essex NHS Foundation Trust | N/A | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 2 | 0 | 1 | 7 |
| RGP | James Paget University Hospitals NHS Foundation Trust | N/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RAJ | Mid and South Essex NHS Foundation Trust | N/A | 3 | 1 | 4 | 1 | 0 | 2 | 2 | 3 | 2 | 6 | 2 | 1 | 27 |
| RD8 | Milton Keynes Hospital NHS Foundation Trust | N/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RM1 | Norfolk & Norwich University Hospitals NHS Foundation Trust | N/A | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| RGN | North West Anglia NHS Foundation Trust | N/A | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 3 |
| RGM | Papworth Hospital NHS Foundation Trust | N/A | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| RQW | Princess Alexandra Hospital NHS Trust | N/A | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| RCX | The Queen Elizabeth Hospital King's Lynn NHS Trust | N/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RWG | West Hertfordshire Hospitals NHS Trust | N/A | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 5 |
| RGR | West Suffolk Hospitals NHS Trust | N/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | **East of England Total** | | 7 | 2 | 7 | 3 | 4 | 4 | 5 | 5 | 4 | 10 | 4 | 4 | 59 |

## Audit Programme

Throughout the year, the IP&C team provided assistance with a range of audits, including those related to hand hygiene, commodes, mattresses, environmental factors, isolation rooms, and the auditing of indwelling devices such as cannulas, urinary catheters, and central venous catheters.

The IP&C team, work in partnership with link practitioners and ward staff across the Trust. This ranges from teaching ward staff how to undertake their own audits to help them understand the standards of practice required; to overseeing an ongoing programme of audits, sharing learning, and supporting to drive improvement and provide assurance. Once a year the IP&C team work with link practitioners to audit the isolation rooms across the Trust.

Staff undertake monthly High Impact Intervention audits within their departments of peripheral cannula, urinary catheter, central venous catheter, and ventilator associated pneumonia care bundle practice. Peer auditing is encouraged, and results are fed back in divisional reports at HICC.

In each area staff undertake weekly Tendable IP&C audits using handheld devices. This inspection application provides an opportunity to record photographs and comments to evidence decisions made. There are also IP&C questions within the daily safety check audit; Results and reports are available on completion and provide performance comparisons and trends across individual areas, divisions, and the Trust as a whole. Staff are required to act on any learning from these audits to continually drive improvement.

# Infection Prevention and Control Annual Report 2023-24

Audit results are also shared with clinical areas and at HICC and can be accessed via the intranet on the IP&C electronic dashboard where they can be viewed by individual area, division, or whole trust. See Chart 5 below. The IP&C team have worked collaboratively with the digital team and representatives from each division to compile the HICC dashboard. This means that all automated electronic data necessary for reporting at HICC is consolidated in a single location.

**Chart 5**

*Audit results Dashboard March 2023*

| | | | YTD | Quarter | | | | 2023 | | | | | | | | | 2024 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 22/23 | 23/24 | 1 | 2 | 3 | 4 | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar |
| **IP&C Audits** | | | | | | | | | | | | | | | | | | | |
| Commode | Number Pass | 1772 | 1781 | 443 | 380 | 384 | 574 | 119 | 165 | 159 | 117 | 127 | 136 | 120 | 134 | 130 | 127 | 250 | 197 |
| | Number Fail | 175 | 179 | 25 | 53 | 40 | 61 | 7 | 8 | 10 | 10 | 26 | 17 | 7 | 22 | 11 | 20 | 24 | 17 |
| | % Pass | 91% | 91% | 95% | 88% | 91% | 90% | 94% | 95% | 94% | 92% | 83% | 89% | 94% | 86% | 92% | 86% | 91% | 92% |
| Bed Pans | Number Pass | 2146 | 2059 | 467 | 433 | 458 | 701 | 124 | 176 | 167 | 118 | 164 | 151 | 151 | 150 | 157 | 172 | 327 | 202 |
| | Number Fail | 67 | 48 | 9 | 19 | 12 | 8 | 5 | 3 | 1 | 2 | 11 | 6 | 4 | 4 | 4 | 1 | 1 | 6 |
| | % Pass | 97% | 98% | 98% | 96% | 97% | 99% | 96% | 98% | 99% | 98% | 94% | 96% | 97% | 97% | 98% | 99% | 100% | 97% |
| Hand Hygiene (HH) & Dress Code (DC) | No of audits | 1047 | 1019 | 263 | 225 | 267 | 264 | 74 | 83 | 106 | 56 | 65 | 104 | 91 | 67 | 109 | 77 | 101 | 86 |
| | Staff Audited | 9336 | 8676 | 2221 | 1806 | 2312 | 2337 | 644 | 735 | 842 | 484 | 512 | 810 | 820 | 630 | 862 | 674 | 889 | 774 |
| | HH Pass % | 96% | 97% | 98% | 97% | 97% | 97% | 98% | 98% | 98% | 97% | 97% | 97% | 97% | 97% | 98% | 96% | 97% | 97% |
| | DC Pass % | 99% | 99% | 99% | 99% | 99% | 99% | 99% | 99% | 99% | 99% | 99% | 99% | 99% | 99% | 100% | 98% | 99% | 99% |
| **High Impact Intervention Audits** | | | | | | | | | | | | | | | | | | | |
| HII 1 Central Venous Catheter | Insertion Obs | 1260 | 1545 | 315 | 285 | 485 | 460 | 110 | 105 | 100 | 120 | 125 | 40 | 165 | 110 | 210 | 180 | 135 | 145 |
| | Pass % | 99% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| | Ongoing obs | 6016 | 6161 | 1613 | 1624 | 1457 | 1467 | 501 | 569 | 543 | 581 | 527 | 516 | 422 | 526 | 509 | 512 | 388 | 567 |
| | Pass % | 93% | 90% | 89% | 89% | 93% | 88% | 86% | 90% | 91% | 91% | 89% | 86% | 92% | 92% | 93% | 91% | 90% | 85% |
| HII 2 Peripheral Intravenous Cannula | Insertion Obs | 13080 | 13924 | 3530 | 3575 | 3374 | 3445 | 1065 | 1270 | 1195 | 1175 | 1265 | 1135 | 1134 | 1080 | 1160 | 1210 | 1090 | 1145 |
| | Pass % | 98% | 98% | 98% | 98% | 97% | 98% | 96% | 99% | 97% | 98% | 98% | 97% | 97% | 96% | 97% | 97% | 98% | 99% |
| | Ongoing obs | 12167 | 13372 | 3446 | 3389 | 3296 | 3241 | 1195 | 1138 | 1113 | 1051 | 1197 | 1141 | 1145 | 1127 | 1024 | 1157 | 1022 | 1062 |
| | Pass % | 90% | 89% | 87% | 89% | 89% | 90% | 85% | 89% | 88% | 87% | 90% | 88% | 87% | 88% | 90% | 91% | 87% | 92% |
| HII 5 Ventilated patients | Obs | 685 | 747 | 217 | 180 | 239 | 111 | 81 | 67 | 69 | 81 | 55 | 44 | 99 | 72 | 68 | 65 | 10 | 36 |
| | Pass % | 98% | 98% | 97% | 98% | 99% | 100% | 96% | 99% | 97% | 96% | 100% | 98% | 98% | 100% | 100% | 100% | 100% | 100% |
| HII 6 Urinary catheter | Insertion Obs | 4004 | 4920 | 1272 | 1204 | 1200 | 1244 | 380 | 452 | 440 | 400 | 424 | 380 | 396 | 484 | 320 | 436 | 412 | 396 |
| | Pass % | 98% | 94% | 93% | 93% | 93% | 96% | 95% | 91% | 94% | 96% | 91% | 92% | 92% | 93% | 95% | 95% | 94% | 99% |
| | Ongoing obs | 10263 | 12209 | 3170 | 3116 | 3028 | 2895 | 1058 | 1073 | 1039 | 1050 | 1074 | 992 | 1081 | 1028 | 919 | 1112 | 917 | 866 |
| | Pass % | 90% | 90% | 89% | 90% | 89% | 92% | 90% | 88% | 89% | 90% | 91% | 89% | 92% | 89% | 86% | 93% | 91% | 93% |

## Staff Training and Supervision

Whilst the mandatory e-learning package has continued to be in place, and some training remains on Teams, the IP&C team take the opportunity to deliver training face to face whenever possible and participate in regular training for healthcare assistants, volunteers, overseas colleagues, and corporate induction. The team also provide bespoke training for departments upon request and have attended divisional study days for areas such as older peoples medicine (Image 4 & 5).

The team also encourage colleagues from across the organisation to spend time with them to gain a greater understanding of the role and how increased IP&C knowledge can support daily with quality and safety of patients.

The IP&C Team continued to support clinical teams across the organisation including those wards on supportive measures for a period of increased incidence.

IP&C took part in the Junior Doctor induction which encompassed hand hygiene, infection prevention and control in practice and multi drug resistant organisms, Image 6.

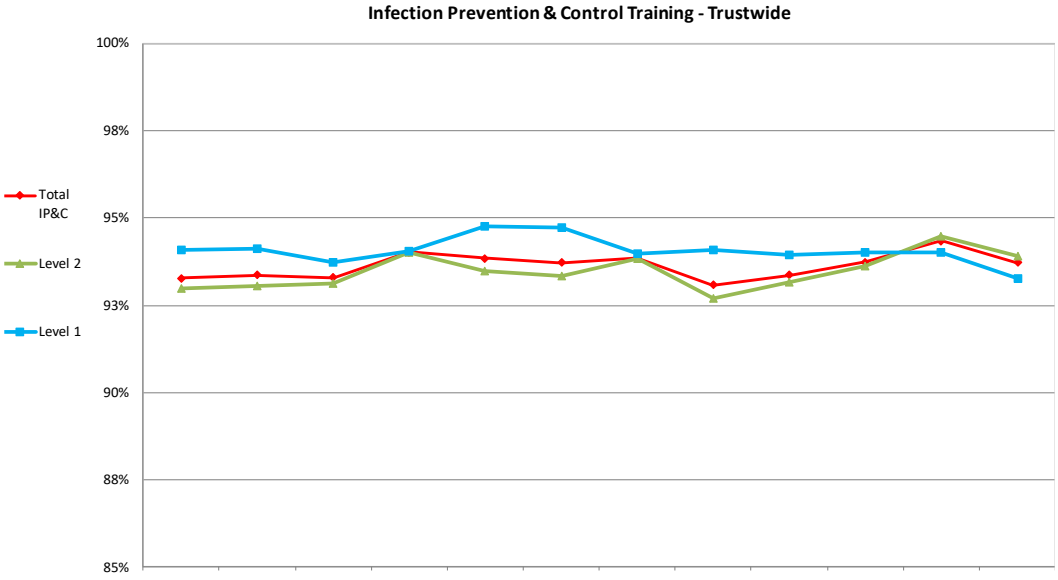
Trust overall IP&C mandatory compliance was between 93% and 95% (see Graph 1).

**Image 4**

**Image 5**

**Image 6**

**Graph 1**




| IP&C Level | Apr-23 | May-23 | Jun-23 | Jul-23 | Aug-23 | Sep-23 | Oct-23 | Nov-23 | Dec-23 | Jan-24 | Feb-24 | Mar-24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Level 1 | 94.1% | 94.1% | 93.7% | 94.1% | 94.8% | 94.7% | 94.0% | 94.1% | 93.9% | 94.0% | 94.0% | 93.3% |
| Level 2 | 93.0% | 93.1% | 93.1% | 94.0% | 93.5% | 93.3% | 93.8% | 92.7% | 93.2% | 93.6% | 94.5% | 93.9% |
| **Total IP&C** | **93.3%** | **93.4%** | **93.3%** | **94.0%** | **93.9%** | **93.7%** | **93.9%** | **93.1%** | **93.4%** | **93.7%** | **94.3%** | **93.7%** |

*Compliance % figures exclude Honorary, Locums and Bank staff*

## University of East Anglia (UEA) Healthcare student training

Students are encouraged to spend time with the IP&C team. Whilst on placement nursing students joined the team to gain a greater understanding of the principles of IP&C and the diverse role of the team and how this supports the NNUH and wider healthcare systems.

## IP&C team training

The IP&C team have taken advantage of numerous opportunities to engage in internal and external development opportunities, in the form of a postgraduate diploma, leadership opportunities, webinars, and conferences. These provide a great opportunity to hear from leading experts in their fields and engage with fellow IP&C colleagues from across the East of England region, and NHSE/I, enabling networking and learning.

## Hand Hygiene Day

The 5th May 2023 marked the annual World Hand Hygiene Day, with both NNUH and Cromer Hospital actively participating in the event. This year's theme focused upon maintaining healthy hands along with the reduction of inappropriate glove use. The IP&C team were joined by the

Trust's sustainability manager recognising that appropriate glove use can reduce the transmission of organisms and infection whilst supporting the Net Zero National Health Service strategy. Staff and visitors alike interacted with the IP&C team.

Image 7 and 8 show the presentations provided within each hospital.

**Image 7**

**Image 8**


**Image 9**

SC Johnson (hand sanitiser provider) also attended, visiting various areas and reinforcing the need to use the right technique and compliance with the WHO 5 moments when decontaminating hands. https://cdn.who.int/media/docs/default-source/integrated-health-services-(ihs)/infection-prevention-and-control/your-5-moments-for-hand-hygiene-poster.pdf?sfvrsn=83e2fb0e_21

### IP&C International awareness week

IP&C Awareness Week is an annual event which is typically conducted each October.

During 2023, due to participation in the national Point Prevalence Survey (PPS) of healthcare associated infections, antimicrobial use and antimicrobial stewardship in England, the team was unable to proceed with this in the usual manner. However, the IP&C team and pharmacy colleagues were visible across the NNUH at this time enabling them to offer support and education to their peers during their visits to various areas, while also gathering the necessary information for the survey.

Additional information pertaining to the PPS can be found in Criteria 3 on page 43 of the report.

### IP&C link practitioners

The IP&C team continued to provide support to the IP&C link practitioners in the Trust during 2023-24.

Meetings took place throughout the year with a variety of topics covered. These were attended by IP&C link practitioners from across the organisation, who were encouraged to use these hours towards their Continuing Professional Development (CPD). Refer to Table 16 for an overview of the meeting agendas. Image 10 is an example of the meeting poster which was circulated to staff members and Image 11 is a guest speaker from 3M delivering a presentation to the IP&C link practitioners on CVC/PVD dressings, VIP scores and protecting the skin.

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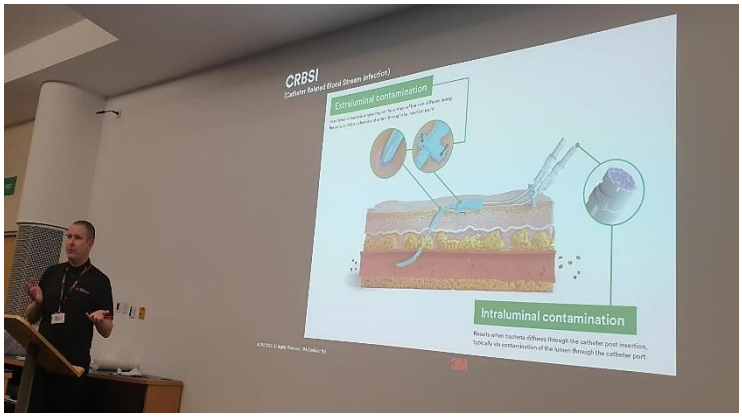
| Table 16 | |
|---|---|
| **IP&C Link Practitioner meetings 2023-24** | |
| **Date** | **Agenda** |
| **22nd June 2023** | • Highlights from conference<br>• Covid testing and isolation<br>• General overview of TB<br>• Catheter care and how it impacts on gram negative<br>• CPE presentation |
| **20th September 2023** | • IP&C Interactive question and answers<br>• Hand Hygiene<br>• Uploading an LFT on ICE Suspected infectious diarrhoea Clinell Wipes<br>• Cohort Isolation management<br>• Stool charting on admission |
| **14th December 2023** | • What does the role of IP&C link practitioner mean to you? How can we improve the experience?<br>• Keeping you up to date on national and local IP&C issues<br>• NNUH Gloves off initiative<br>• CVC/PVD dressings, VIP scores and protecting the skin |
| **21st March 2024** | • Norovirus – Latest increase and common themes<br>• IP&C Support Workers<br>• IP&C Sampling<br>• Reusable Tourniquets<br>• IP&C Interactive Q&A |
| | |

**Image 10**


**Image 11**



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## Organisation Wide Learning (OWL)

The IP&C team continues to produce monthly organisational wide learning (OWL). The OWL is sent out in the form of a poster, sharing Trust wide IP&C information on key issues and learning such as:

- Monthly learning from *C. difficile* PIR
- Key IP&C messages
- Current or upcoming IP&C topics
- Highlighting areas of good practice
- Highlighting areas of improvement

Examples of OWLs from the year are shown in Image 12 & 13.

**Image 12**

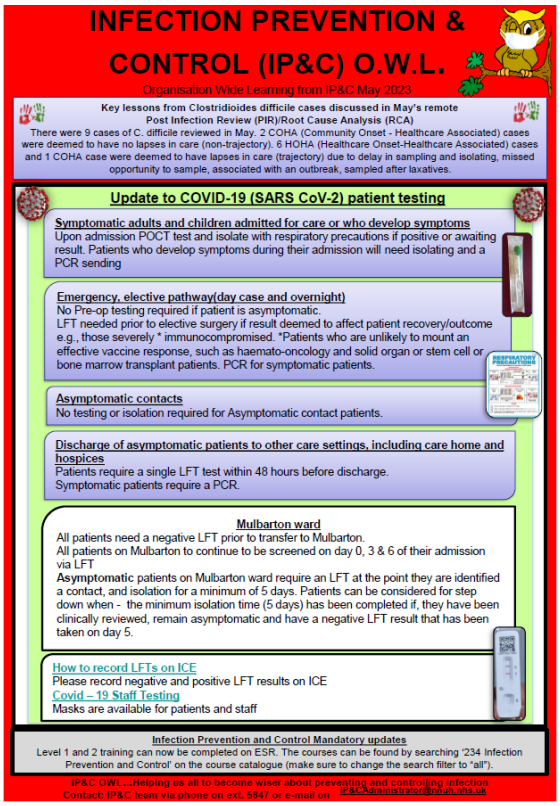
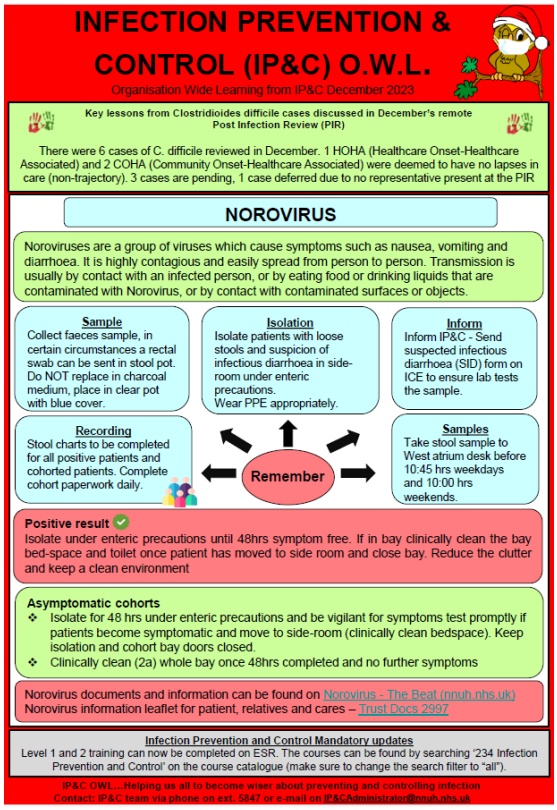



**Image 13**




**Hygiene Code Compliance Criteria 2:**
The provision and maintenance of a clean and appropriate environment in managed premises that facilitates the prevention and control of infections.

## Cleaning

The IP&C team work in partnership to deliver a clean safe environment for patients. Cleaning schedules/charters are displayed in each area. The National Cleaning standards (2021) were implemented April 2022. All areas have been categorised in one of the 6 Functional risk categories and are reviewed according to need. A matrix of cleaning responsibilities remains in place, with commitment to the Cleanliness charter being made. Audits of all areas provide assurance and are displayed. Star ratings are in place in line with the national guidance.

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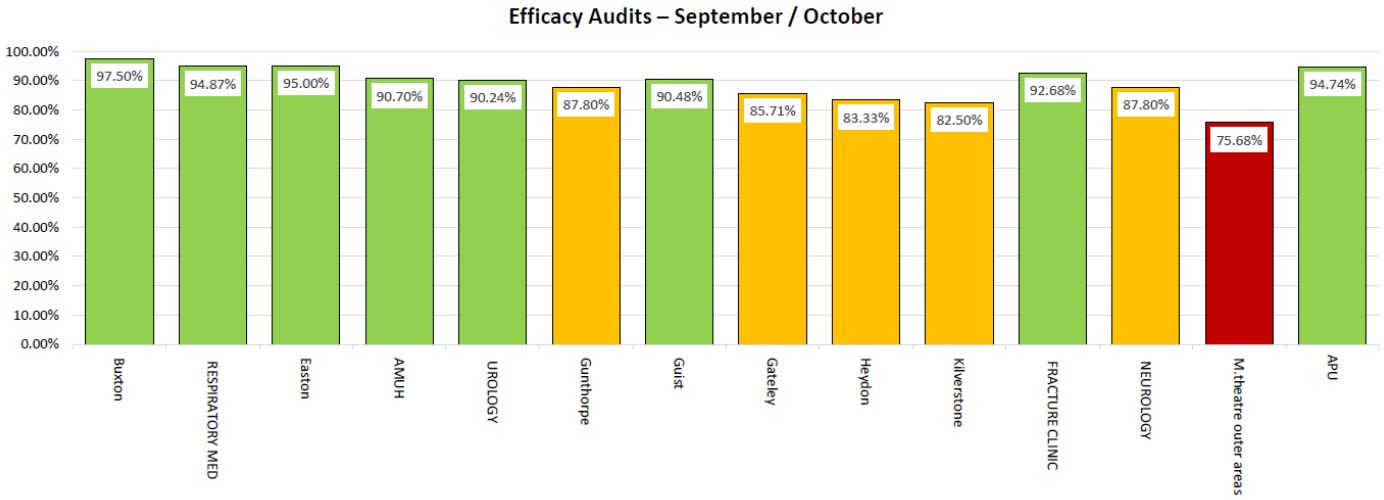
The IP&C team attend twice weekly efficacy audits undertaken at the NNUH, these are designed to assess the process of cleaning and infection control related to cleaning. The audit is carried out by a domestic manager, representatives from the facilities department, IP&C and clinical teams. Good practice is to report the findings from efficacy audits at executive level, to acknowledge good service, address poor service and drive continuous improvement. (National standards of healthcare cleanliness, 2021).

Table 17 illustrates within the NNUH how the audit is scored and results shared within the auditing group and at HICC.

**Table 17**




## Cleaning Audits

Cleaning of the environment, equipment and estates are monitored through regular joint audits attended by both Trust and Provider staff using Facilities Management (FM) First software. See Tables 22, 23 & 24.

During the referred period, Healthcare Cleaning Services underwent a transition on several levels. The implementation of a new Computer Aided Facilities Management System along with the retirement of the Service Lead, who had a huge impact in shaping Domestic Operations on NNUH, are amongst some of the changes felt in 2023-24.

The team's knowledge, administration, deployment strategies, and resolve, were put to the test to a new extent by the pressures resulting from the volume of additional patients on the wards and the high number of clinical cleans that were necessary under Winter Pressures.

The FM specialist for Cleaning and the Operations Team on Site were inspired to design, develop, and begin delivering a new training methodology (Playbook Training) in response to the challenges presented by the new National Standards of Healthcare Cleanliness 2021 and the implementation of Efficacy Audits. This initiative will have a significant impact on the way training is delivered and the skillset that is embedded on regular operations and frequencies for years to come.

The Domestic team has also tested and put into use new cleaning equipment, that is far more effective than what was previously in place, improving cleanliness and efficiencies. As part of a larger plan, the team will also replace the outdated vacuum cleaner fleet and a reliable, albeit aging medium scrubber/dryer with the newest technology, optimizing efficiency, whilst meeting infection control regulations.

While lower than in prior years, the period saw high volumes of reactive cleaning requests that trended above the 5-year average and above pre-pandemic levels, see Graph 2.

**Table 18 - NNUH audit scores**

| Functional risk | 2022-2023 | | 2023-2024 | | Target |
|---|---|---|---|---|---|
| | Number of audits | Average score | Number of audits | Average score | |
| FR 1 | 1920 | 98.98% | 2106 | 98.97% | 98% |
| FR 2 | 635 | 97.56% | 673 | 96.97% | 95% |
| FR 3 | 7 | 98.31% | 6 | 96.23% | 90% |
| FR 4 | 236 | 95.57% | 218 | 94.95% | 85% |
| FR 5 | 63 | 95.43% | 43 | 93.40% | 80% |

**Table 19 - Cromer Hospital audit scores**

| Functional risk | 2022-2023 | | 2023-2024 | | Target |
|---|---|---|---|---|---|
| | Number of audits | Average score | Number of audits | Average score | |
| FR 1 | 175 | 96.64% | 220 | 98.01% | 98% |
| FR 2 | 109 | 95.25% | 84 | 92.28% | 95% |
| FR 3 | 0 | N/A | 0 | N/A | 90% |
| FR 4 | 21 | 96.03% | 46 | 87.08% | 85% |
| FR 5 | 1 | 98% | 2 | 100% | 80% |

**Table 20 - Offsite areas audit scores**
*20 Rouen Road, Cotman Centre, Eye Clinic, Francis Medical Records*

| Functional risk | 2022-2023 | | 2023-2024 | | Target |
|---|---|---|---|---|---|
| | Number of audits | Average score | Number of audits | Average score | |
| FR 1 | 12 | 99.73% | 84 | 99.79% | 98% |
| FR 2 | 180 | 99.07% | 84 | 98.74% | 95% |

**Graph 2**

## Patient led, focus on the environment (PLACE)

The national PLACE Assessment results have been published. 1,106 assessments were undertaken nationally in 2023 compared to 1,046 in 2022. 37 assessments were excluded due to patient assessor numbers or ratio to staff assessors not meeting the minimum criteria. National findings are based on the 1069 remaining assessments and results are not comparable with previous years due to changes in methodology.

National averages for each domain are listed below:

- Cleanliness (acutes) – 98.1%
- Condition, appearance and maintenance (acutes) – 96.0%
- Dementia (acutes) – 81.5%
- Disability (acutes) – 83.4%
- Combined food (acutes) – 90.8%
- Organisation food (acutes) – 91.3%
- Ward food (acutes) – 90.8%
- Privacy, dignity and wellbeing (acutes) – 86.3%

The NNUH's results for each domain are listed below:

- Cleanliness – 96.04% (94.96% in 2022)
- Condition, appearance and maintenance – 92.68% (94.02% in 2022)
- Dementia – 71.97% (75.40% in 2022)
- Disability – 73.10% (76.67% in 2022)
- Combined food – 85.42% (79.87% in 2022)
- Organisational food – 98.96%
- Ward food – 82.41%
- Privacy, dignity and wellbeing – 71.82% (72.67% in 2022)

NHS England have advised that the results are not comparable with previous years. However, we have used the same data collection methods in 2022 and 2023 so as we continue to collect more data, we can start to compare scores going forward.

This year has seen an increase in our scores in cleanliness and ward food. However, we have seen a decrease in our scores for condition, appearance and maintenance, dementia, disability and privacy/dignity/wellbeing.

Our performance in comparison to the national scores is also lower than the median in all domains and in terms of the picture across the East of England our scores have fallen below the averages for the East of England in all domains except organisational food. For Norfolk & Waveney, our neighbouring Trusts scores scored higher than us except in organisation food scores.

We have lower scores across all domains apart from organisation food than other Trusts in Norfolk & Waveney, although data for other Trusts may not have been completely submitted at time of assessment.

The Patient Engagement & Experience Team, Estates and Facilities Team, Serco and Quality Improvement have been working together to look at the corrective action plans. The Estates & Facilities Team have shared the cleanliness and catering actions with wards to update on progress and help review the food actions. The Patient Engagement & Experience Team, Estates and Facilities Team and the Quality Improvement team have reviewed all corrective actions to identify trust wide themes which may require further support.

Report and Action Plans to be shared and monitored via Patient Engagement & Experience Governance Sub-Board (PEEG) and Estate/Facilities Governance and contract management routes. Overall results and updates will feed through to Hospital Management Board (HMB) and the Trust Board.

## Commode and Bedpan Cleanliness

The IP&C support workers maintain a continuous programme of commode and bedpan audits Trust wide with practical training provided. See Table 21.

**Table 21**

| Number of commodes audited and average percentage pass across NNUH sites | | |
|---|---|---|
| **Financial Year** | **Total No. of Commodes audited** | **Percentage Pass** |
| **2023-24** | **1781** | **91%** |
| 2022-23 | 1772 | 91% |
| 2021-22 | 1837 | 87% |
| Scores of 0-49% result in a re-audit within 1 week, 50-74% within 2 weeks, and 75-99% within 3 weeks. | | |

## Environmental Authority

The Environment Agency attended the NNUH to complete a Healthcare Waste Audit on the 8th of November 2023. The three inspectors were hosted by Trust Estates, Health and Safety Lead Advisor and a contingent from the soft FM provider.

The following actions were identified from the audit which centre around ensuring waste segregation, offensive waste, policy and checks on waste collectors and consignment notes.

### Action 1

- Take measures to prevent and minimise paper hand towels being deposited into green bins for recycling by both colleagues and the public if they aren't able to be currently routed into that waste stream.
- Take measures to ensure paper hand towels are correctly coded depending on the source and use of the towels.
- Take measures to ensure paper hand towels are routed to waste facilities that can accept the relevant coded waste.
- Update Trust Waste Management Policy to remove hand towels from the recycling waste stream if they aren't able to be currently routed into that waste stream.

**Action 2**

- Review Trust waste management policy to consider the strategy target in the HTM 07-01 to introduce arrangements for the management of offensive waste streams.

**Action 3**

- Ensure the Trust use the correct consignment note format in line with the guidance provided on GOV.UK.

**Action 4**

- Review guidance on GOV.UK on persistent organic pollutants (POPs). Consider how the Trust can ensure waste containing POPs is managed in accordance with the guidelines provided.

**Action 5**

- Carry out duty of care checks to ensure mixed municipal waste is taken to a site that can accept this waste type. Ensure the place of disposal provided on your transfer notes correctly reflect this disposal/recovery site and contains the correct legal entity.

The findings are being managed via the Soft FM Group which consists of PFI Landlord, Trust Estates, Health and Safety as well as the soft FM provider. Details of the audit and findings were discussed during the January 2024 Health and Safety Committee for awareness.
Visit completed and report received back from the Environment Agency on the 11th December. This is being managed through the Soft FM meeting which has attendees from PFI, Serco and Trust.

## Face Fit Testing

To ensure Business Continuity for future pandemics, potential high consequence infectious diseases or exposure to other respiratory infections, Face Fit Testing continues to meet the requirements of the 5 key resilience principles per the Department of Health and Social Care, Filtering facepiece protection (FFP3) Resilience in the Acute Setting correspondence received in June 2021.

The Trust has assigned the management of Fit Testing back to the divisional fit testers (in place pre Covid-19) for the mandatory areas. The Trust has 229 colleagues (fit testers) that have undertaken Train the Trainer for Fit Testing. Details on compliance is provided via the Health and Safety Committee as part of the Health and Safety Quarterly report.

Currently two forms of fit testing can be completed:

- Quantative by Portacount
- Qualitative by Hood/Solution

As of the 31/03/24 the Trust was at 79.2% compliance for mandatory areas.

## Waste Policy

The main policy for Waste Management is located on Trust Docs as ID: 609. This policy applies to all sites within the Trust remit although the Facilities Management (FM) companies with operational responsibility differ across the sites.

The policy was recently reviewed in January 2024 after the findings from the Healthcare Waste Audit and amendments made to align with HTM 07-01 update on Offensive Waste as well as Persistent Organic Pollutants. During the review stage the following areas were involved in the consultation process Dangerous Goods Safety Advisor, Infection Prevention and Control, Trust Estates, Serco Waste Management Team, Radiation Safety/QA Lead – Radiology and Health and Safety Committee Membership.

The document is due its biannual review in January 2026, but this can be completed earlier where there is a change of legislation, process etc.

The current responsibility for the management and control of clinical waste sits with various departments:

- Trust Facilities department manage the contracts via facilities management (FM) providers. All clinical waste is currently collected by an appointed external service provider.
- Trust H&S team leads on waste policy and participate in monitoring with Facilities team. The policy is based on the document HTM 07-01 Safe Management of Healthcare Waste.
- During period 2023-24 the Safety Team continued with the services of the external contractor Independent Safety Services Ltd to act in the role of Dangerous Goods Safety Advisor on behalf of the Trust.
- Nuclear Medicine department oversee the management process of radioactive waste.

The Trust has an appointed a Sustainability Manager in post with a focus on sustainability within our waste processes.

## Waste Monitoring and Measurement

The following monitoring takes place in relation to waste and dangerous goods:

- The Dangerous Goods Safety Advisor (DGSA) has a provision of 6 days over the 12-month period which includes report writing.
- Clinical waste is monitored on a daily basis by the FM companies to ensure it has been placed in the correct stream before leaving site. This involves a visual check of bin and content and observation of items entering the compactors. Waste bags are never decanted or opened unless there is any suspicion of them containing incorrect waste.
- On site monitoring of correct clinical waste segregation via pre-acceptance audits (annually) this was completed in November 2023 by Stericycle.
- Security of clinical waste is monitored by the FM contractor and Trust PFI Contract manager.

## Duty of Care Visits

Unfortunately, Duty of Care visits for Clinical and Non-Clinical waste had not been completed during the period and this was identified in the Healthcare Waste Audit Action 5. This has been taken forward within the Soft FM group as action ref 0712/123.

## Dangerous Goods Safety Advisor (DGSA)

The DGSA has completed site visits and audits in the following areas.

| Table 22 | | | |
|---|---|---|---|
| **27/06/2023** | **26/09/2023** | **05/12/2023** | **25/03/2024** |
| Stericycle Vehicle Audit | Medical Gases | Nuclear Medicine/ Radiopharmacy | Sterile Services |
| Main waste compound | Microbiology | Theatres – Radiation Protection | Disposal holds in Outpatient Areas |
| Battery Storage | The Cotman Centre (Cytology & Histopathology) | Brachytherapy | |
| Chemical Waste and Storage - Serco | Pathology | Pharmacy | |
| CSSD and Endoscopy Chemicals | Endoscopy | Internal waste storage areas. | |

During the visits in 2023 there were a total of 22 issues identified which were incorporated into an action plan and monitored by the Health and Safety Lead Advisor. All 22 issues have been closed. At the time of report the details for the March visit have not been received.

## Sharps

The safe handling and disposal of sharps is covered by policy Trust Doc ID 585 Prevention and Management of Needlestick (inoculation), Sharps Injuries, and Blood exposure incidents which also sit within the Health & Safety Team remit. This was reviewed in January 2024 with the next full review scheduled for January 2026.

Compliance with the policy is monitored on a frequent basis by the following routes: Collaborative approach by the Health & Wellbeing and Health & Safety Teams via incidents raised by the electronic reporting system Datix.

- The inoculation Incident Group meets on a quarterly basis and monitors incident trends. This forum also provides the opportunity for each of the division to discuss risk assessments in place for non-safety sharps that are in use.
- Trends of incidences are highlighted through the Health & Safety Committee and Infection Prevention & Control Committee to disseminate to divisional areas to aid learning and prevent future incidents as well as highlighting at the Workforce and Education Sub-Board.

Minimising blood splashes is also a main focus of the Inoculation group members. The purpose of the group still continues to change the culture and that PPE is not just for COVID-19 and that eye protection is to be worn where a blood/bodily fluid splash could occur.

The HMB is fully supportive of ensuring staff safety, protection from blood or bodily fluid splashes. Management at all levels should be promoting to colleagues that eye protection should be worn where there is a potential for a blood/body exposure to occur.

Currently sharps bins used within the Trust are the disposable type and these will continue in small quantities in regard to those being provided to patients when they are discharged. During the latter part of 2023 a trial was undertaken utilising reusable sharps bins which are more robust, solid in construction improving colleague safety. This trial has proved popular and a roll out with the main hospital site is planned for 2024.

## Laundry

Trust PFI Contract Performance Manager informed that the Estates Team have completed a Duty of Care visit on the provider in November 2023. From the visit no issues were highlighted, and it was observed all linen was washed, stored and transported appropriately.

In terms of monitoring, the monthly inspections continue with on average 340 items being reviewed at the time with contractor, Soft FM provider and a member of the Trust monitoring team in attendance. Additionally, the service elements are all monitored throughout the course of the month, which includes HTM 01-04 Decontamination of linen for health and social care, https://www.england.nhs.uk/publication/decontamination-of-linen-for-health-and-social-care-htm-01-04/.

**Hygiene Code Compliance Criteria 3:**
Appropriate antimicrobial use and stewardship to optimise outcomes and to reduce the risk of adverse events and antimicrobial resistance.

## Prudent Use of Antibiotics (information provided by Specialist Antimicrobial Pharmacist)

## Antimicrobial Consumption Surveillance

For the purposes of surveillance and monitoring, antimicrobial consumption is reported in units of Defined Daily Dose per 1000 total admissions (including day case). Defined Daily Dose (DDD) is the WHO standard unit and is based on the average daily dose of a medicine used for its main indication in adults. Standardisation in this manner enables comparison between Trusts of different size and range of specialties and against the average for the East of England region. Data for surveillance is obtained from RxInfo Define as this is the source used by UKHSA for monitoring antibiotic consumption within the NHS Standard Contract.

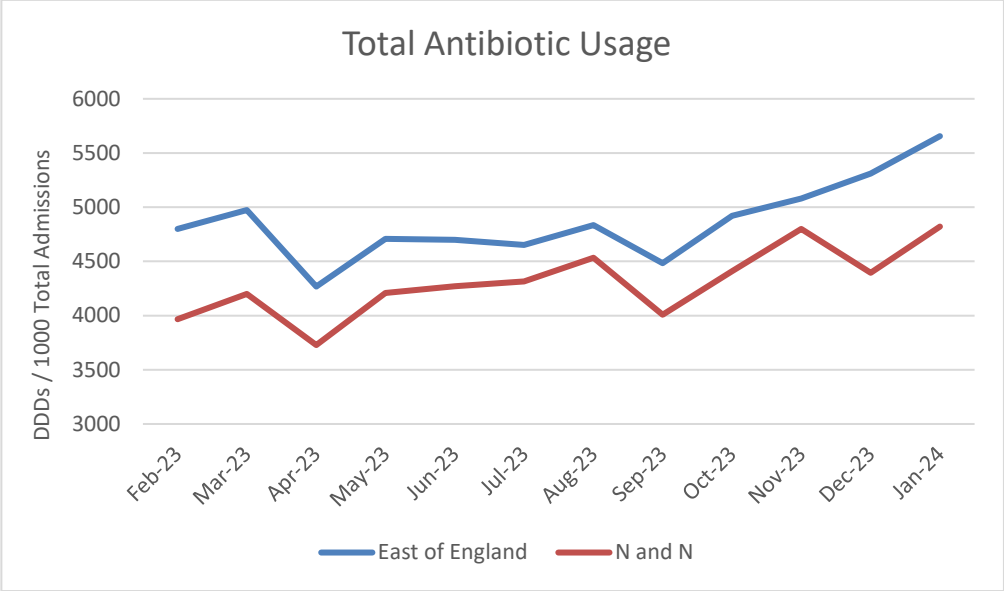
The figures below show the 12-month rolling trend of antimicrobial usage within the Trust compared with the NHS East of England average.

### Total Antibiotic Consumption

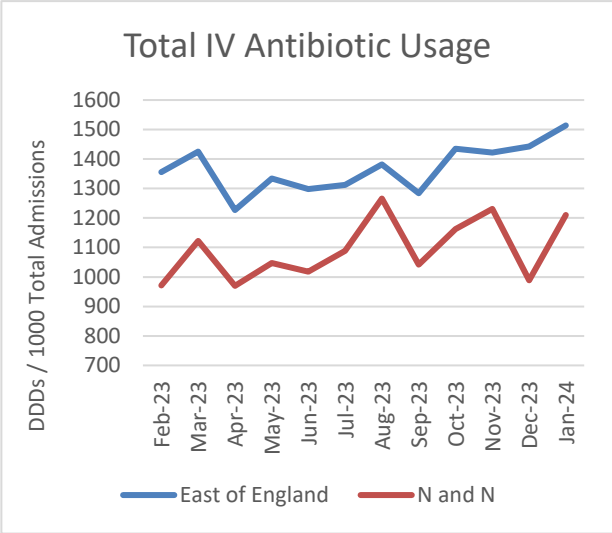
Total antibiotic consumption over the most recent period appears to be consistent with use from previous months and is broadly in-line with the trend of the region. NNUH continues to use considerably fewer antibiotics when compared to the rest of the region. We should continue to focus our efforts on minimising broad-spectrum antibiotic use and on timely IV to oral switching refer to Table 27.

Following the Medicines and Healthcare products Regulatory Agency (MHRA) warning in January 2024 regarding the use of Ciprofloxacin we have seen a dramatic fall in use. Of particular note is our recent increase in Carbapenem consumption since January 2024. This can partly be explained due to the decrease in use of Ciprofloxacin. We will now be focussing our efforts to reducing Carbapenem use by monitoring appropriate use on a daily basis and re-instating Meropenem ward rounds.

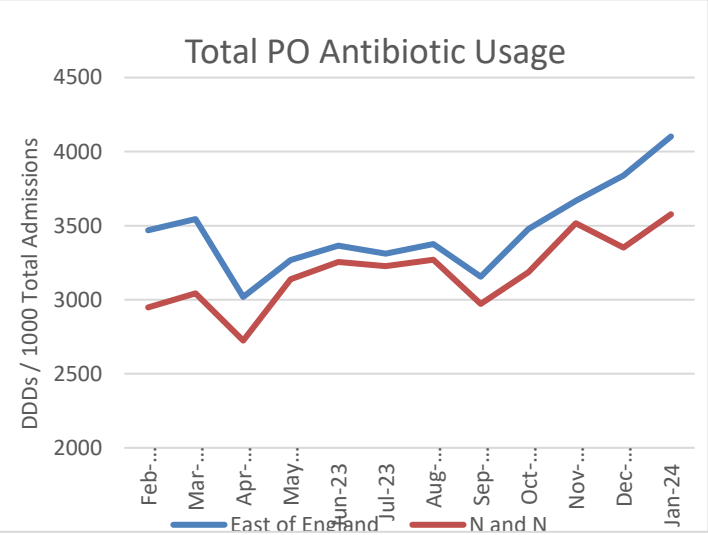
**Graph 3**




**Graph 4**




**Graph 5**




## Broad-Spectrum Antibiotic Consumption

The Trust continues to use significantly fewer broad-spectrum antibiotics than the regional average except for doxycycline and cephalosporins. These figures will be monitored to ensure that any increase in prescribing is appropriate, and that action is taken to reduce unnecessary use of broad-spectrum agents.

Doxycycline use is higher as we recommend this in the Antibiotic policy in place of Co-amoxiclav (which has a higher likelihood of causing C. *difficile* infection).

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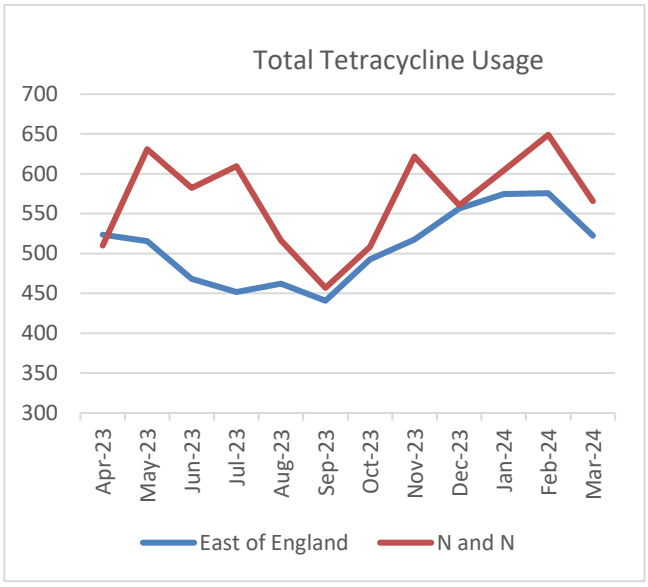
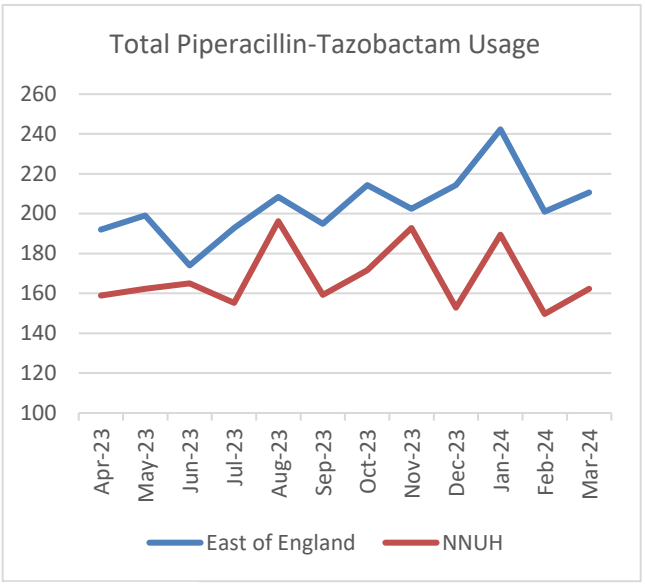
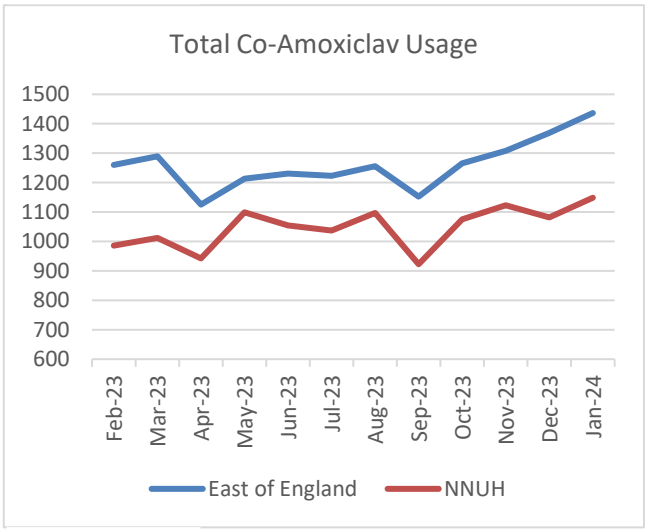
## Graph 6



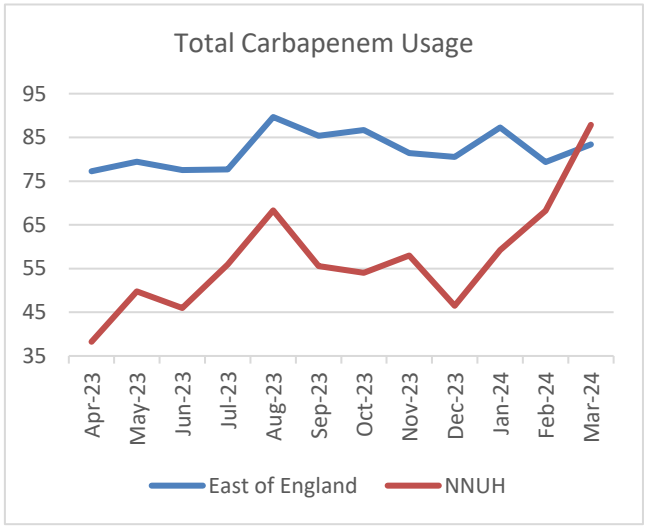

## Graph 7



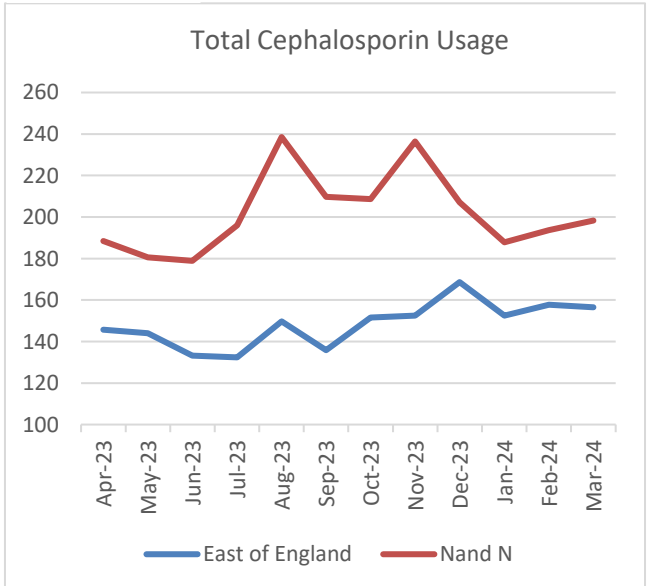

## Graph 8



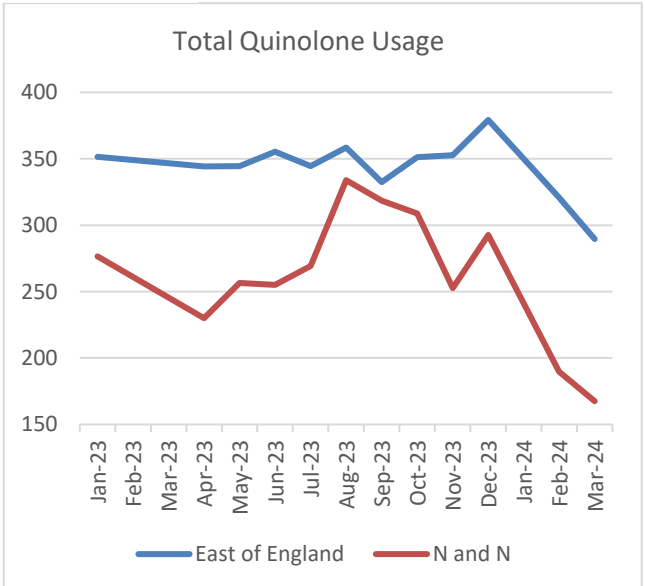

## Graph 9



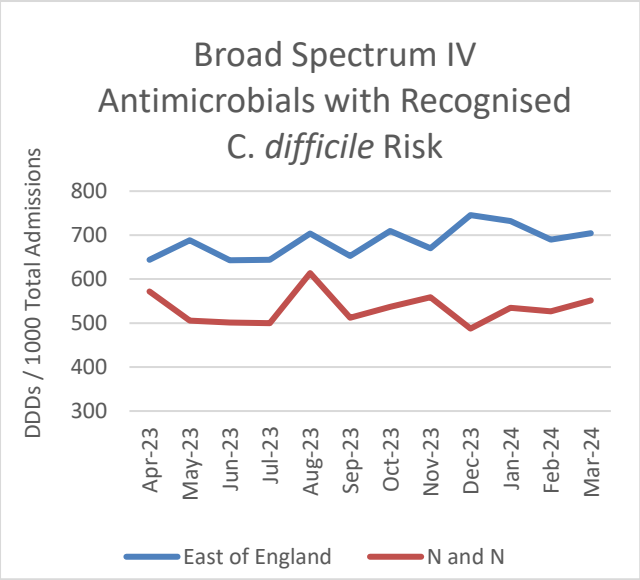

## Graph 10




## Graph 11



**Graph 12**




## Antibiotic Audits

### Point Prevalence Survey

The last point prevalence audit was carried out in March 2024. The next audit is scheduled for June 2024.

| Table 23 - Trust Wide Data | | | | | |
|---|---|---|---|---|---|
| **Date** | **% of patients on Antibiotics** | **% given by oral route** | **% given by IV route** | **Tazocin use as % of Ab use** | **Co-amoxiclav use as % of Ab use** |
| Sept 2023 | 41 | 46 | 54 | 8 | 7 |
| Dec 2023 | 43 | 51 | 49 | 12 | 23 |
| March 2024 | 43 | 48 | 52 | 15 | 24 |

| Table 24 - Surgery Data | | | | |
|---|---|---|---|---|
| **Date** | **Number of Antibiotics prescribed** | **% given by oral route** | **% given by IV route** | **Tazocin use as % of Ab use** |
| Sep 2023 | 174 | 42 | 58 | 17 |
| Dec 2023 | 171 | 42 | 58 | 11 |
| March 2024 | 176 | 43 | 57 | 12 |

| Table 25 – Older Peoples Medicine Data | | | |
|---|---|---|---|
| **Date** | **Number of Antibiotics prescribed** | **% given by oral route** | **% given by IV route** |
| Sept 2023 | 77 | 59 | 41 |
| Dec 2023 | 68 | 57 | 43 |
| March 2024 | 70 | 64 | 36 |

| Table 26 - Medicine Data | | | |
|---|---|---|---|
| **Date** | **Number of Antibiotics prescribed** | **% given by oral route** | **% given by IV route** |
| Sept 2023 | 177 | 54 | 46 |
| Dec 2023 | 180 | 61 | 39 |
| March 2024 | 187 | 47 | 53 |

### Other Audits

We have recently audited antibiotic use in the Older People Medicine department and are in the process of feeding the results back to the department.

## Antimicrobial Stewardship (AMS) Commissioning for Quality and Innovation (CQUIN)

### CQUIN 2023-24

AMS CQUIN for 2023-24: Data collection ran from April 2023 to March 2024. Data for 100 patients per quarter were collected across varying specialities.

**Table 27**

| CQUIN04: Prompt switching of intravenous (IV) antimicrobial treatment to the oral route of administration as soon as patients meet switch criteria | |
|---|---|
| **Applicability:** Acute<br>**CQUIN goal:** 60% to 40% (NB lower % = more compliant)<br>**Supporting ref:** NICE NG15[4] | There are significant benefits to IVOS interventions demonstrated in research literature including: increasing hospital bed capacity to support recovery from the COVID-19 pandemic; reducing exposure to broad-spectrum antibiotics; increasing nursing workforce capacity; reducing drug expenditure; reducing carbon footprint of medicines; and reducing healthcare-associated bloodstream infections.<br>This CQUIN aligns with a commitment in NHS England's 2022-23 Priorities and Operational Planning Guidance to support reduced lengths of hospital stays by ensuring that intravenous antibiotics are only used for as long as clinically necessary. |

The aim was that patients would be switched to oral antibiotics sooner, and/or have reduced course lengths. This coincides with multiple benefits including reduced lengths of hospital stay, improved patient experience, fewer line-related adverse events, reduced carbon footprint, and reduced expenditure.

### Results

The CQUIN was achieved for all four quarters.

**Table 28**

| 1: CQUIN Compliance<br>Minimum 60%<br>Maximum 40%<br>Lower = better performance | Q1 | Q2 | Q3 | Q4 |
|---|---|---|---|---|
| | 27% | 29% | 19% | 23% |

There is no mandatory CQUIN for the year 2024-25.

## Guidelines and Policies

### Updates

Following the MHRA warning regarding the use of ciprofloxacin the Trust Empirical Antibiotic guideline has been reviewed and amended where necessary, removing ciprofloxacin as the empirical choice where appropriate. The Antifungal guideline is up for review and is in the process of being updated. The Paediatric Antibiotic guideline and Sepsis guideline are also in the process of being updated.

### MicroGuide

Funding for Microguide has been continued for another 3 years as of February 2023.

## Formulary Updates

### Applications

New formulary applications for Cefiderocol for the treatment of severe drug-resistant Gram-negative bacterial infections have been discussed and approved at D&TC.

### Supply Chain

Nil to report currently.

## Antimicrobial Stewardship Ward Rounds

### Ward Round Update

Weekly ward rounds continued on surgical wards, including Vascular and General Surgery, all Older People's Medicine (OPM) wards and Gastroenterology. These are in addition to a number of other well established clinical rounds that include antimicrobial review – e.g. NICU, Critical Care Units and Haematology and Oncology ward.

## National Point prevalence Survey on healthcare associated infections, antimicrobial use and antimicrobial stewardship in England, 2023.

National Point Prevalence Surveys (PPS) for HCAIs and/or antimicrobial use have been conducted in England for the past 40 years.

Throughout the survey period of September, the 18th to October the 27th 2023, the IP&C team worked alongside antimicrobial pharmacist colleagues to gather the required inpatient data for submission to the UKHSA.

Information was gathered across acute, community and mental health NHS trusts and independent acute-care hospitals. 124 trusts and independent sector organisations participated.

The NNUH were 1 of 78 acute trusts across England that participated.

The survey was aimed at providing a snapshot of the burden of HCAI and describe antimicrobial use to allow meaningful comparisons between organisations.

Preliminary summary results have been shared with each participating trust, there are some adjustments still to be made. The final report is pending and will be shared trust wide once available.

The results of the survey will:

- Support development of local and national policies and procedures to reduce HCAIs and inappropriate antimicrobial use.
- Facilitate comparisons of HCAI and antimicrobial use across organisations in England and in an international context.
- Contribute to efforts to address antimicrobial resistance nationally and internationally through National and Global Action Plans.
- Allow benchmarking with peer group hospitals in England to identify opportunities for improvement.

**Hygiene Code Compliance Criteria 4:**
The provision of suitable accurate information on infections to service users, their visitors and any person concerned with providing further support or nursing/medical care in a timely fashion.

## Information for Service Users, Visitors and Carers

The IP&C team regularly update the information and have continued to work closely with the communications department updating information in line with current IP&C guidance. IP&C information is shared in several ways including:

- Face to face discussion
- Via IP&C link practitioners
- Awareness campaigns
- Information leaflets
- Posters
- Noticeboards
- Switchboard answer phone messages
- Press statements via the NNUH website
- NNUH website

**Hygiene Code Compliance Criteria 5:**
That there is a policy for ensuring that people who have or at risk of developing an infection are identified promptly and receive the appropriate treatment and care to reduce the risk of transmission of infection to other people.

## Patient Alerts and Surveillance of Alert Organisms e.g. MRSA, *C. difficile*

The IP&C team use ICNet software to monitor patient alerts. This assists in the early detection of a patient re-admitted with an alert organism/infection or a cluster of the same alert organism in the same area, allowing for timely intervention. The alert organisms are monitored at a weekly surveillance meeting with the ICD and IP&C team.

Screening is undertaken on emergency and elective admissions for MRSA. This enables any patients found to be positive whilst in the Trust to have topical decolonisation and if required antimicrobial treatment, see Table 29. Compliance with screening is monitored divisionally and reported to HICC monthly.

**Table 29**

| MRSA Screening for Emergency and Elective Patients - numbers of Patient Screened | | |
|---|---|---|
| **Financial Year** | **Emergency Screened Patients** | **Elective Screened Patients** |
| **2023-24** | **92.1%** | **92.4%** |
| 2022-23 | 89.2% | 92.2% |
| 2021-22 | 96.1% | 94.8% |

There are 3 electronic boards designed by the IP&C team which are available on the intranet for staff to check if there is Norovirus, Influenza or COVID-19 in any areas of the hospital and to be aware of community healthcare settings that have suspected or confirmed Norovirus, Influenza or COVID-19 outbreaks.

A winter dashboard created by collaborative working between the IP&C team and digital health team, is accessible to Trust staff and provides a live overview of inpatients with Influenza, COVID-19, Norovirus & Respiratory Syncytial Virus (RSV).

There is also a screening process in place for patients that may be at risk of colonisation with CPE or are a previously known case, see Table 30. CPE risk assessment updated in May 2022, to reflect isolation requirements.

**Table 30**

| Carbapenemase-Producing Enterobacteriaceae - numbers of Patient Screened | | | | |
|---|---|---|---|---|
| **Financial Year** | **Admission in UK high risk hospital in last year** | **Hospital admission abroad in last year** | **Screened for other reasons (e.g., Holiday for Renal Dialysis patients)** | **Total** |
| **2023-24** | **530** | **96** | **1019** | **1645** |
| 2022-23 | 431 | 73 | 1541 | 2045 |
| 2021-22 | 459 | 36 | 541 | 1036 |

## Period of Increased Incidence (PII) and Supportive Measures

A PII is declared when 2 or more hospital acquired organisms of concern e.g. *C. difficile* toxin, MRSA or ESBL results are received from the same ward in 28 days. The IP&C team commence supportive measures, working closely with the ward team to support and educate staff via a programme of audits and training opportunities. This enables the staff to have a clearer understanding of all the different ways they can work together to prevent the spread of infection and promote the high standards that they expect in their area. The IP&C Link practitioners can help to support and lead their teams by role modelling good IP&C practice, leading to the successful conclusion of the PII.

Audit results are monitored weekly by the IP&C team and additional interventions planned with the ward management team to provide an action plan.

| Table 31 | | | | |
|---|---|---|---|---|
| **Number of new episodes of supportive measures due to a PII** | | | | |
| **Financial Year** | **MRSA** | ***C. difficile*** | **ESBL** | **VRE** |
| **2023-24** | 2 | 4 | 1 | 1 |
| 2022-23 | 0 | 3 | 1 | 0 |
| 2021-22 | 1 | 4 | 1 | 0 |

During this reporting year there were 4 PIIs for *C. difficile* which triggered supportive measures, see Table 32. These were on Mulbarton, (2 patients) Heydon (3 patients), Ingham (3 patients) and Dilham (2 patients) wards. Further PIIs for MRSA were triggered on Home First Unit (formerly Gunthorpe ward, 2 patients) & NICU (2 patients). Supportive measures were initiated on Mulbarton for 2 patients with VRE. Two babies presented with ESBL on NICU activating a PII.

The IP&C team supported the staff throughout this period, supportive measures were continued until there had been 28 days with no further cases and IP&C Tendable, Hand Hygiene, Environmental and isolation room audits were all in acceptable range. The team established strong engagement at all levels, as the clinical teams actively participated in the enhanced interventions, training, auditing, and improvement initiatives.

## COVID-19

On the 12th of January 2020 the World Health Organisation (WHO) announced that a novel coronavirus had been identified in samples obtained from Wuhan City, Hubei Province, China. This virus is now regularly referred to as COVID-19. WHO declared a pandemic on the 11th of March 2020.

Throughout this reportable year 2023- 2024, Government guidance and prevalence of disease dictated the process and type of testing required by patients.

In April 2023 the UKHSA published revised guidance on testing during low prevalence. Throughout the COVID-19 pandemic, the government prioritised protecting the most vulnerable and those in high-risk settings. Government-funded testing continued to focus on these groups, with new guidance coming into effect in England from 1 April 2023.

The ongoing success of the vaccination programme, increased access to treatments and high immunity amongst the population, allowed the government to scale back testing in England. Symptomatic adults and children admitted for care or developing symptoms within hospitals could be tested by a lateral flow device at local discretion. The need for polymerase chain reaction (PCR) testing was no longer a requirement for all scenarios.

The NNUH released new guidance to reflect this change at the beginning of May 2023, having had executive approval at the Hospital Management Board (HMB). It was agreed that all symptomatic patients would continue to receive a PCR test. Asymptomatic patients on the oncology and haematology ward would continue to screen upon day 0, 3 & 6 as a precautionary measure.

Asymptomatic contacts were no longer required to be tested or isolated, unless on Mulbarton ward. Known contacts would only be tested (by PCR) if they became symptomatic.

A Norfolk and Waveney system approach was undertaken when aligning the reduction of wearing surgical masks for sessional use in April 2023 to align with government guidance, with the exception of Mulbarton ward, which serves exceptionally vulnerable patients. This area minimised mask usage in June 2023, returning to transmission-based infection prevention and control precautions as per the NIPCM and other areas across the trust.

In August 2023 a review of testing and screening for COVID-19 on Mulbarton ward was undertaken, the decision was made supported by HMB, that testing and isolation procedures would align with all other inpatient areas.

Throughout the year, the IP&C team continued to advise staff on updated UKHSA guidance and digital systems were adjusted according to new regimes.

The COVID-19 situation continues to be monitored, regular IP&C ICS meetings and regular information from colleagues at NHS England provide information upon regional and national prevalence and updates.

Graph 13 provides NNUH COVID-19 by attribution April 2023-March 2024. Image 14 provides attribution definitions.

**Graph 13**

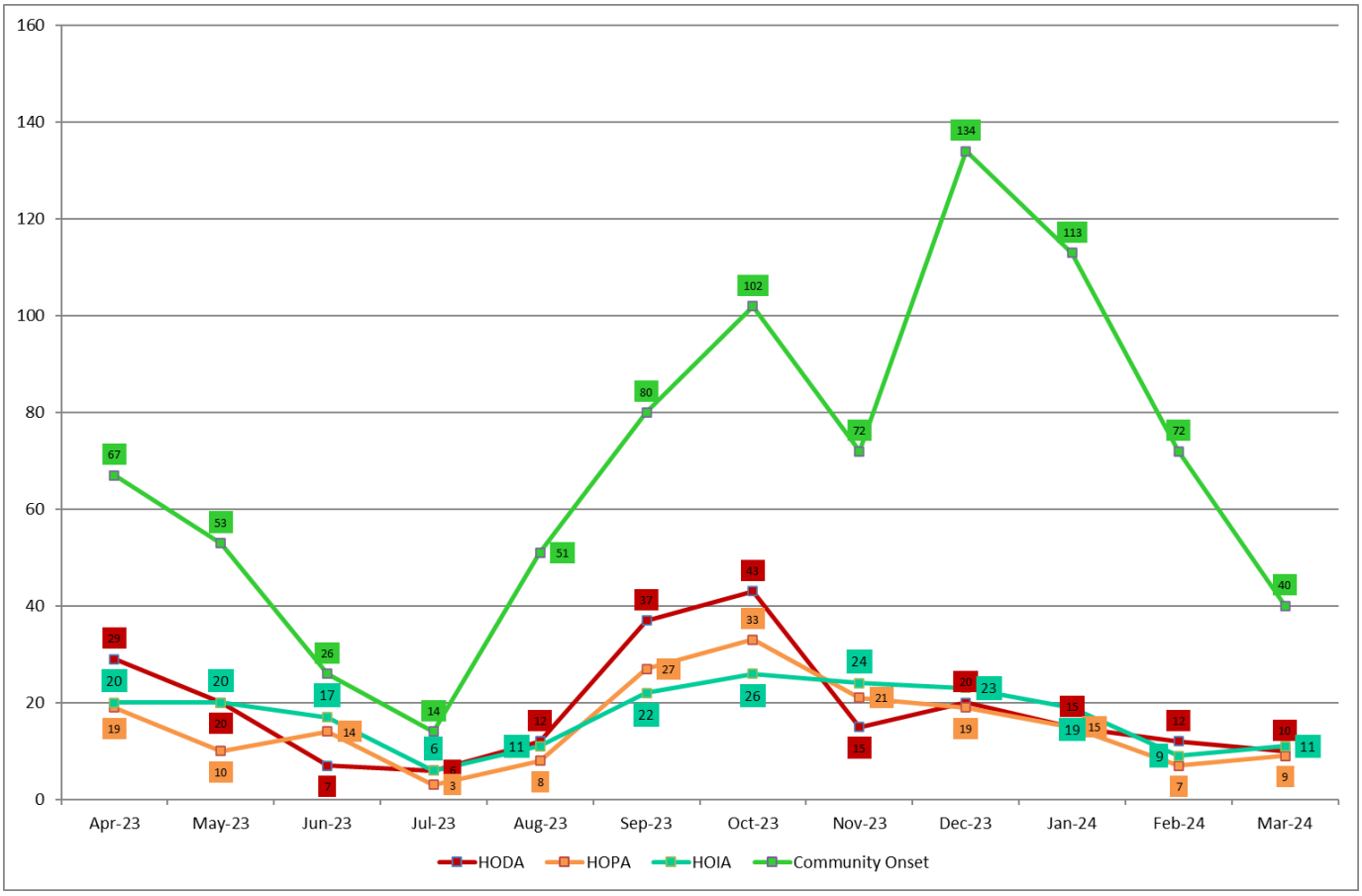


**Image 14**

| Attribution Short Name | Attribution Full Name | Definition |
|---|---|---|
| HODA | Hospital-Onset Definite Healthcare-Associated | First positive SARS-CoV2 sample taken at day 15 or more after admission to hospital |
| HOPA | Hospital-Onset Probable Healthcare-Associated | First positive SARS-CoV2 sample taken between day 8 - 14 after admission to hospital |
| HOIA | Hospital-Onset Indeterminate Healthcare-Associated | First positive SARS-CoV2 sample taken between day 3 - 7 after admission to hospital |
| Community Onset | Community -Onset | First positive SARS-CoV2 sample taken between admission and day 2 after admission to hospital |

During 2023–2024 there were 2886 positive cases of COVID-19 within the organisation. 7.8% of these were Hospital Onset Definite Healthcare-Associated and 6.4% were Probable Healthcare-Associated.

## Outbreaks and Serious Incidents

**Table 32**

| Number of episodes of outbreak or serious incident | | | | | |
|---|---|---|---|---|---|
| **Financial Year** | **MRSA** | ***C. difficile*** | **Influenza Ward closure** | **Norovirus Ward closure** | **COVID-19 Outbreaks** |
| **2023-24** | **1** | **3** | **2** | **6** | **49** |
| 2022-23 | 0 | 0 | 1 | 4 | 111 |
| 2021-22 | 0 | 0 | 0 | 8 | 46 |

Between April 2023 and March 2024, according to NHSE COVID-19 outbreak definition there were 49 COVID-19 outbreaks at NNUH. These outbreaks continued to be reported centrally as a requirement from NHS England. Outbreaks involved between 2 and 49 patients. The duration of these lasted 28 days. As from March 2024, the closure of an outbreak was signified by no test-confirmed cases with illness onset dates in the previous 5 days in the outbreak setting as per UKHSA guidance. Prior to this, the requirement had been 28 days.

The IP&C team offered assistance to the affected areas during each outbreak by providing educational support and conducting audits. They also held regular meetings with ICB IP&C colleagues to discuss outbreak management to minimise nosocomial transmission.

PPE continued to be accessible through the procurement team, who designated a specific collection point for PPE. The H&S team has coordinated fit testing for staff members. Furthermore, regular audits were conducted to ensure compliance with PPE requirements in our wards via Tendable, thereby maintaining a safe and secure working environment.

In March 2023, UKHSA revised the information regarding next steps and the wearing of facemasks. A system wide IP&C review was undertaken, to align with the UKHSA “next steps” and the transition to reduce the wearing of face masks sessionally in all areas, across all three acute trusts was agreed. From April the 3rd 2023, staff were no longer required to wear Type IIR SFM masks in offices, social settings or when travelling around the hospital. Those working in clinical areas continued to wear the appropriate facemask as part of Personal Protective Equipment (PPE) and transmission-based precautions i.e. universal type IIR SFM or FFP3 when required.

## Indwelling device audit

The High Impact Intervention (HII) care bundles are designed to highlight critical elements of each procedure or care process and the key actions required, providing a way of demonstrating reliability through the audit process. The care bundles at the NNUH are available to access electronically on the IP&C department page. The IP&C team support auditors in each area with training and advice. All areas are expected to achieve a compliance of 80% or above.

**Table 33**

| High Impact Intervention Audit Scores | | | |
|---|---|---|---|
| High Impact Intervention care bundle audit | 2021-22 | 2022-23 | **2023-24** |
| Central venous catheter care | 95% | 93% | **90%** |
| Peripheral intravenous cannula | 93% | 90% | **89%** |
| Ventilated patients | 97% | 98% | **98%** |
| Urinary catheter | 93% | 90% | **90%** |

## Audit of Compliance with Isolation Guidelines and Single Room Use

An annual audit of compliance with the Isolation guidelines was undertaken by the IP&C team supported by a group of Trust Volunteers in October 2023 (see Image 15). This audit aimed to ensure that practices are consistent with the guidance outlined in the Health and Social Care Act, 2008, and that clinical practices adhere to the Trust's Isolation guidelines.

**Image 15**

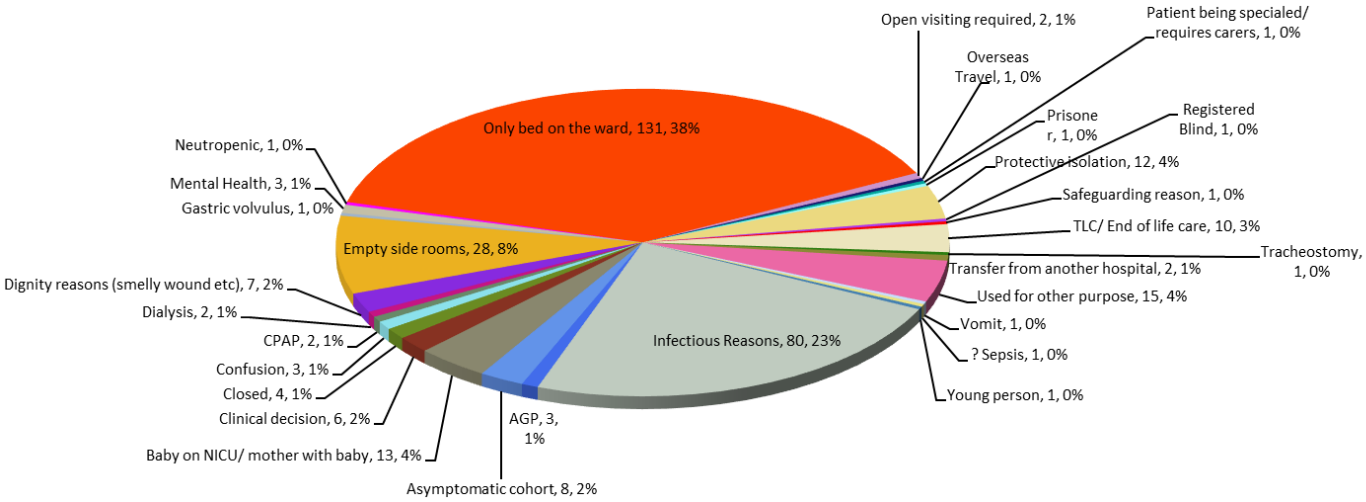
All patients with confirmed or suspected infection require isolation. At the time of audit 23% of single rooms were being used for IP&C reasons in comparison to 38% in 2022. 100% of patients requiring isolation for IP&C reasons were provided with a single room, no patients at the time of audit were risk assessed as unsafe to isolate for any reason. The electronic ward view system highlights those requiring isolation for IP&C reasons facilitating correct placement of these patients.

Overall compliance with the audit of single isolation rooms was 81% compared to 83% in 2022.

| Table 34 | |
|---|---|
| **NNUH - Isolation and Single Room Use Audits** | |
| **Financial Year** | **Overall Compliance %** |
| **2023-24** | **81%** |
| 2022-23 | 83% |
| 2021-22 | 80% |

The top three issues were single room doors being open with lack of documentation to support this, dedicated observation equipment and colour coded cleaning equipment available in side-rooms. The results were shared Trust wide along with actions for continuing to facilitate improvement, see Table 34 & Chart 6.

## Chart 6 – Single room isolation audit reasons




## Central Venous Catheter (CVC) Surveillance

A continuous surveillance programme monitors the CVC infection rates in adults. The overall infection rate remains below the Matching Michigan reference point of 1.4 per 1000 line days. During 2023-24 haematology line infection rates were reported as 2.70 per 1000 line days. Recently the number of haematology central lines included within the surveillance has decreased, with a total of 21 lines being included throughout 2023/24. it is difficult to compare data to previous years when the denominator data have changed substantially. This is due to the increase usage of PICC lines throughout the Trust. The IP&C team will investigate introducing PICC surveillance in the future. Of the 21 haematology central lines included within the surveillance 3 were reported to have infections.

Quarterly results are shared with Trust staff and in the IP&C monthly report, see Table 35.

| Table 35 | | | |
|---|---|---|---|
| **NNUH CVC related infections** | | | |
| CVC infections are measured by rate per 1000 line days | **2021-22** | **2022-23** | **2023-24** |
| Renal | 0.24 | 0.37 | **0.27** |
| Haematology | 2.55 | 0.93 | **2.70** |
| Other areas | Nil | Nil | **Nil** |
| Overall | 0.40 | 0.41 | **0.33** |

## Surgical Site Surveillance (SSI) Committee

A SSI surveillance committee was initiated to help structure and promote the Surgical Site Infection Surveillance within the Trust, in line with recommendations Government guidance Protocol for the Surveillance of Surgical Site Infection commencing January 2023. The committee meet every quarter with the objective of aiding in the development and supervision of a well-structured surveillance program. Additionally, the committee strive to encourage the adoption of surveillance practices throughout the organisation, identify and address any training gaps, assist in the formulation and monitoring of action plans to improve practices whenever necessary based on surveillance findings, and review, analyse, and consider the implementation of new guidance and recommendations as they become available.

The last meeting took place in July 2023. Subsequent meetings have been postponed due to operational constraints and challenges in achieving quorum. Surgical site surveillance has continued, and the results were reviewed in divisional and specialty governance meetings as well as during the Health Infection Control Committee (HICC) discussions. As the organisation transitions to business as usual these meetings will be reinstated.

## Orthopaedic Surgical Site Surveillance (*information contributed by Orthopaedic Senior Surgical Assistant)*

### Hip, Knee and Fracture Neck of Femur: mandatory submission

The Trauma and Orthopaedic department undertake continuous Surgical Site Surveillance for Hip and Knee replacements and Fractured Neck of Femur procedures.

Mandatory UKHSA data are now submitted each quarter for one of the categories.

Surgical teams are adapting to new upgraded theatres, with excellent outcomes.

The validated rates of infection (identified prior to discharge and on readmission) for Orthopaedic categories were: See Table 36.

The rates of infection above UKHSA standards within hip and knee surgery have been discussed within governance meetings and reported to HICC. Upon investigation the increased infection rate was thought to have been linked to the unavailability of an elective orthopaedic ward. Consequently, provisions have been made to reinstate the elective orthopaedic ward which is currently situated on Cringleford ward.

**Table 36**

| Orthopaedic Surgical Site Surveillance - Percentage of SSI detected post op (mandatory submission) | | | |
|---|---|---|---|
| **Calendar Year** | **Hip – UKHSA 0.5%** | **Knee – UKHSA 0.4%** | **Repair # Neck of Femur – UKHSA 0.9%** |
| **2023 SSI %** | **1.17%** | **0.62%** | **0.42%** |
| 2022 SSI % | 0.19% | 0.34% | 0.43% |
| 2021 SSI % | 0.48% | 0.53% | 0.71% |

### Spinal Surgery: Voluntary submission

UKHSA data submission for Spinal SSI was undertaken for April-December 2023. See Table 37.

**Table 37**

| Spinal Surgical Site Surveillance - Percentage of SSI detected post op (voluntary submission) | | |
|---|---|---|
| **Calendar Year** | **Spinal SSI %** | **UKHSA SSI %** |
| **2023 SSI %** | **1.55%** | **1.4%** |
| 2022 SSI% | 0% | 1.4% |
| 2021 SSI % | 0.32% | 1.3% |

## Other Surgical Site Surveillance

### Vascular surgery surveillance

There has been continuous voluntary systematic SSI surveillance in vascular surgery since 2009. During 2022-23 the SSI rates have been between 6.0% and 8.5%. UKHSA inpatient and readmission benchmark is 2.3%. Results are shared for discussion and action at Vascular governance and HICC. See Table 38.

**Table 38**

| Post vascular surgery surgical site infection rates | | | | |
|---|---|---|---|---|
| **Year** | **April-June SSI %** | **July-Sept SSI %** | **Oct-Dec SSI %** | **Jan-March SSI %** |
| **2023-24** | **6.0%** | **6.1%** | **7.6%** | **8.5%** |
| 2022-23 | 5.9% | 5.5% | 3.9% | 3.9% |
| 2021-22 | 6.7% | 3.4% | 4.0% | 4.4% |

### Caesarean section surgery

There has been continuous systematic voluntary SSI surveillance following C-section since 2010. Collaborative working between the obstetric department and IP&C provides an on-going cycle of feedback and review at clinical governance meetings.

During 2023-24 the SSI rates have been between 1.2% - 2.4%. No UKHSA benchmark is available. See Table 39.

| Table 39 | | | | |
|---|---|---|---|---|
| **Post caesarean section surgical site infection rates** | | | | |
| **Year** | **April-June SSI %** | **July-Sept SSI %** | **Oct-Dec SSI %** | **Jan-March SSI %** |
| **2023-24** | **1.3%** | **2.4%** | **1.2%** | **1.6%** |
| 2022-23 | 0.8% | 1.7% | 1.2% | 0.8% |
| 2021-22 | 2.5% | 2.2% | 2.0% | 1.8% |

## Audit Programme

### Hand Hygiene and Dress Code Audits

The IP&C undertake a continuous programme of Hand Hygiene and Dress Code audits across the Trust.

These audits assess compliance with the Hand Hygiene policy and observe the opportunity for the WHO 5 moments of hand hygiene in clinical areas throughout the Trust. If scores are below 95% guidance is provided on actions required to improve. Audit scores are displayed on the IP&C electronic dashboard by ward/department, division, and overall Trust.

All IP&C mandatory training includes Hand Hygiene guidance. Staff are encouraged to strive for 100% compliance and act as role models, challenging and educating others in best practice. See Table 40.

| Table 40 | | | |
|---|---|---|---|
| **Number of hand hygiene and related dress code audits and average percentage pass in NNUH** | | | |
| **Financial Year** | **Number of Audits** | **Percentage Pass** | |
| | | **Hand Hygiene** | **Dress code** |
| **2023-24** | **1019** | **97%** | **99%** |
| 2022-23 | 1051 | 96% | 99% |
| 2021-22 | 758 | 96% | 99% |
| **Scores <95% lead to a re-audit within 1 week.** | | | |

The IP&C team has engaged in discussions with staff and reviewed national guidance regarding workwear and the implementation of reasonable adjustments that will fulfil appropriate hand hygiene practices, particularly in scenarios where exposure of forearms may not be appropriate. This has since been included within the latest dress code and uniform policy (Trust Docs ID 22782).

**Hygiene Code Compliance Criteria 6:**
Systems are in place to ensure that all care workers (including contractors and volunteers) are aware of and discharge their responsibilities in the process of preventing and controlling infection.

All staff including volunteers joining the Trust are required to attend an IP&C induction session and thereafter mandatory IP&C training. Compliance with IP&C training is monitored by the training department.

In addition, there are other opportunities for raising staff awareness such as link practitioner meetings, ad-hoc education, teaching, planned study and awareness days.

The Trust official visitors and contractors' procedure document (Trust Docs ID 587), along with all policies and guidelines, are available to staff via the Beat. There are also IP&C specific documents available on the Beat, IP&C department page. IP&C have worked together with SERCO, providing information to complement existing IP&C training provided.

**Hygiene Code Compliance Criteria 7:**
The provision or ability to secure adequate isolation facilities. The provision or ability to secure adequate isolation facilities.

The IP&C team undertake an annual isolation room audit to assess why patients are in the single rooms across the Trust, how many patients who require isolation facilities are in single rooms and how those in isolation are managed. See Table 34 (page 50) and Chart 6 (page 50).

Most of the single room accommodation on each ward is en-suite and can be used for isolation of infectious and suspected infectious patients. In addition, the respiratory ward has two single en-suite rooms that have negative pressure ventilation for severe respiratory disease e.g. multi-drug resistant Tuberculosis (these rooms do not have lobbies so are limited for use as an isolation facility). Areas such as Paediatrics where there is a recognised lack of side rooms for isolation have added this as a risk to the Trust risk register. The Hoveton unit has 9 isolation rooms with the capacity to be used as negative pressure, each has an area for donning and doffing. This facility was opened on March 31, 2021, and has not yet been required to be utilised as an isolation unit.

An electronic system called Ward view is in operation for ward staff and the operations centre staff to track patient placement and identify why patients are in a single room. This system allows easily accessible reports to determine how many single rooms are in use for isolation reasons, clinical reasons, end of life care and no reason recorded. This system allows rapid assessment of the allocation of isolation facilities and fewer referrals to IP&C out of hours for advice with risk assessment of isolation.

**Hygiene Code Compliance Criteria 8:**
The ability to Secure adequate access to laboratory support as appropriate.

## Laboratory, information contributed by Microbiology Network Manager and Chief Biomedical Scientists

The laboratory services for NNUH are provided by the Eastern Pathology Alliance (EPA). EPA is a county-wide pathology network service providing Clinical Biochemistry, Immunology, Toxicology, Haematology, Blood Transfusion, Andrology and Microbiology services to primary and secondary care providers across Norfolk and Waveney. The network operates a hub and spoke model with blood science laboratories at the 3 acute hospitals in Norfolk.

Microbiology is centralised at the Norwich Research Park Innovation Centre (NRPIC) close to the main NNUH site and provides services to all three acute Trusts in Norfolk including NNUH and the Norfolk and Waveney Integrated Care Board (ICB). It is divided into Bacteriology, TB, Mycology, Virology, Serology and Molecular Sections.

Microbiology provides a 7-day service which includes MRSA, C. difficile, CPE, ESBL, Respiratory pathogen and Norovirus etc. as follows:

**Laboratory Operational Hours**

| | |
|---|---|
| Monday – Friday: | 08:00 – 20:00 |
| Saturday, Sunday & Bank Holidays: | 08:00 – 16:00 |

Out of operational hours is covered by an on-call agreement for both technicians and Microbiology Consultants.

Following recent audits, we can confirm that we remain compliant with the 4-hour bleed to load time target for blood cultures.

We have several service improvement plans in place as well as verifications of new tests and repatriated tests in order to provide a higher quality service to the users.

We continue to evaluate and act on as appropriate, new clinical guidance to remain as up to date as possible with recommendations and developments.

Over the past year we have continued to see a 10% increase in work in all areas of the department.

A number of IP&C staff have been to the laboratory for tours, which has made us feel closer together and helped to open communication lines to enable us to work more effectively together. We hope to continue doing this.

**Hygiene Code Compliance Criteria 9:**
Have and adhere to policies, designed for the individual's care, and provider organisations that will help to prevent and control infections.

## IP&C Policies

NNUH has a robust process for keeping guidelines and policies up to date. The IP&C team share new and reviewed documents via the weekly communications bulletins. They widely consult when developing new documents and they are signed off by the HICC.
All IP&C and associated policies and guidelines are easily accessible to staff via several electronic routes.

**Hygiene Code Compliance Criteria 10:**
Providers have a system or process in place to manage staff health and wellbeing, and organisational obligation to manage infection, prevention and control.

## Workplace Health and Wellbeing (WHWB) Report provided by Head of WHWB

All staff have access via self-referral route to gain appropriate occupational health (OH) advice. Ordinarily this is available Monday – Friday between 08:30–17:00hrs. Out of hours infection related OH advice continues to be available via the intranet (now named The Beat) with a dedicated section 'Contact with Infectious diseases.

WHWB have maintained their full suite of in-house procedures and Trust guidelines in relation to prevention and management of communicable infections. Easily accessible advice for staff as detailed above on The Beat. Policies created by the IP&C team are reviewed by WHWB to consider the staff implications.

## Immunisation Services

Immunisations for staff are available and provided in line with Green Book.

All staff who have patient contact (clinical & non-clinical) are required to have an immunisation review. This commences with their pre-placement health questionnaire. If immunisations for their specific role are not complete, then they are required to attend WHWB for an immunisation assessment. Their immunisations are recorded on their individual record on the dedicated occupational health system. At the time of the assessment the relevant immunisations are offered whilst advising the worker the importance of complying with UKHSA guidance.

The WHWB team keep up to date with new guidance and review both Trust guidelines and WHWB procedures accordingly. If any new guidance requires to review the immunisation status of existing staff, then this is undertaken. Due to the pandemic, a significant backlog of staff are outstanding in various immunisation requirements. Whilst WHWB are attempting to resolve this, without significant additional resource being allocated to the team, this will remain for several years.

### Covid Autumn Boosters/Influenza Vaccinations

The Head of Health & Wellbeing once again mobilised a team to provide a seasonal vaccination programme which included both Covid and Influenza boosters. A programme of co-delivery was designed but also allowed staff to have these undertaken separately if that was their preference.

The team used a dedicated software system to allow online booking and were provided with a clinical space to create a dedicated vaccine hub. For financial resourcing constraints, our programme ran for a 2-month period rather than 3 (& beyond) as per previous campaigns. A separate programme was made available to those staff based at Cromer to prevent travelling to Norwich and the vaccination team made visits to offsite locations as well as using the flu trolley on the main site to increase participation.

Whilst our uptake was not as high as previous years, our results reflected the national picture of vaccine fatigue amongst NHS staff. NNUH was the 2nd highest Acute Trust uptake in our region for flu and highest nationally for Covid, with 55% of our staff receiving a Covid vaccine & 67% of staff receiving a flu vaccine. Our success within this programme, was undoubtedly because of strong medical and nursing leadership together with the support of a dedicated software programme and prominent communications plan.

**Figures at close of January 2024:**

| **Table 41** | | | | |
|---|---|---|---|---|
| **All staff number** | **Covid Booster** | **Covid %** | **Flu** | **Flu %** |
| All staff (without bank) | 4806 | 50 | 5730 | 61 |
| All staff (with bank) | 5239 | 52 | 6289 | 63 |
| All Staff (with Bank & Contractors) | 5960 | 55 | 6791 | 65 |

| **Table 42** | | |
|---|---|---|
| **Division %** | **Covid %** | **Flu %** |
| Medicine | 46 | 56 |
| Surgery & Emergency Services | 48 | 59 |
| Women & Children | 44 | 57 |
| Clinical Support Services | 56 | 65 |
| Corporate Services | 57 | 72 |

| **Table 43** | | | | |
|---|---|---|---|---|
| **Staff Groups** | **Covid** | **%** | **Flu** | **%** |
| Add prof & Scientific | 252 | 55 | 284 | 62 |
| Add Clinical Support | 880 | 45 | 1252 | 61 |
| Administrative | 1315 | 59 | 1491 | 66 |
| Allied Health Professional | 347 | 60 | 393 | 68 |
| Estates & Ancillary | 98 | 44 | 108 | 49 |
| Healthcare Scientist | 147 | 52 | 154 | 54 |
| Medical | 787 | 55 | 890 | 61 |
| Nursing / Midwives | 1355 | 47 | 1708 | 58 |

## Contact Tracing undertaken 2023-24

Below is a summary of the various contact tracing activities that WHWB have undertaken in the last year.

### Tuberculosis

WHWB have undertaken contact tracing for Tuberculosis on 5 separate occasions:

- **May 2023:** DPU theatres whereby bronchial washings were being undertaken and staff were not wearing FFP3' masks. As a result of the contact tracing 9 staff required follow up and attended for IGRA blood tests 6 weeks post exposure in line with Trust policy. A datix report was submitted in this case. TB was subsequently excluded.
- **May - June 2023**: Dilham & Guist ward. Whilst the patient was orginally admited in April 2023, WHWB were not advised that suspected TB until 2nd June 2023. WHWB were advised no staff met definition of close contact and were wearing appropriate PPE.
- **June 2023**: Matishall Ward confirmation from ward manager no staff met definition of close contact.
- **July 2023:** Emergency Department & Buxton ward. No staff met definition of close contact.
- **January 2024:** PAU pre-assessment. No staff met definition of close contact.

### IGAS

15 areas were contact traced during the reporting period for IGAS infection – HDU, AMU (x3), EAUS (x3), PAU, ICU, Easton ward, Gissing ward (x2), Buxton ward, Colitishall ward, Loddon ward, Docking ward, Emergency Department (x2), CCC, OPED, and Elsing ward.

### VZV

VZV contact tracing has been implemented for 9 cases following notification from IP&C of confirmed cases:

- **April 2023:** Buxton and Coltishall ward
- **May 2023**: PAU, AMUI and Cringleford ward
- **June 2023:** Guist Ward
- **June 2023**: Endoscopy Unit including administrative staff
- **July 2023:** Buxton & CAU
- **October 2023:** Buxton, CAU, Jenny Lind Unit
- **November 2023**: Langley, MRI scanning
- **November 2023**: Opthamology
- **January 2024:** PAU, Gastro & Guist ward. This patient was a 'corridor patient' which had significant impact on number of staff exposed to the virus. No staff needed to be excluded due to VZV history but masks had not been routinely worn.

### VZV – Shingles

- **January 2024:** Langley, EAUS & Gately ward
- **Janury 2024:** Nelson Day unit

- **February 2024:** Nelson Day unit

**Meningitis**

- **April 2023:** AMU - Notification from IP&C regarding postive Meningitis case. Patient was isolated and nursed with appropriate PPE so no staff contact trace action required.
- **October 2023**: Eye casualty & Coltishall ward – No staff level of contact required prophylaxis.
- **November 2023:** Buxton & Jenny Lind - No staff level of contact required prophylaxis.

**Monkey Pox**

- **January 2024:** WHWB were alerted to a case who had been admitted on EAUS via SDEC. This case requried significant OH Nurse and doctor input. It was estimated as 5 days OHA time, 2 days band 8a & 1 day OHP due to the level of details needed from staff, the difficulties encountered in gaining information from UKHSA, the changes to the vaccination availability for post exposure prophylaxis and the requirement for NNUH to provide this service to a staff member at short notice (which included writing of written instruction, engagement with pharmacy to obtain the vaccine etc.).

  At the conclusion of the case, the totals were as follows:

  - Category 1 – 1 staff member
  - Category 2 - 4 staff members
  - Category 3 - 6 staff member
  - 1 staff member was offered the vaccination however, refused following private reading

- **January 2024**: suspected case Oncology/Dermatology.

**PVL (panton valentine leukocidin) staphylococcus aureus**

- **February 2024:** WHWB were alerted by IP&C of a postive patient on NICU – did not meet the criteria for contact tracing as not respiratory.

**Measles**

- **March 2024:** Coltishall / Buxton

**Mumps**

- **March 2024**: Coltishall / Buxton

**Summary**

The relaxation of PPE wearing by staff has significantly increased the level of contact tracing required by WHWB during this year. Upon investigation staff are often found not to be following the transmission based precautions. Compliance with this would reduce the level of contact tracing being undertaken.

## Measles

Following release of NHSE document 'Guidance for risk assessment and infection prevention and control measures for measles in healthcare settings' and updated UKHSA 'National Measles Guidance' in January 2024, WHWB have reviewed in detail the documents and developed an action plan to consider the workforce elements relating to the emerging increase in infection across the country.

Key areas of work involve:

- Checking immunity of staff in high-risk areas.
- Developing a risk assessment for immunosuppressed staff and pregnant staff.
- Developing contact tracing and exclusion guidance in the event of exposure as well as promoting Fit testing compliance.

All information has been updated on The Beat as well as communicated via email to Ward leaders, Matrons, Service Directors.

A task and finish group was created to consider both Workforce and patient aspects in relation to this subject area of which WHWB is undertaking many of the workforce actions. With Hospital Management Board (HMB) support, additional resources have been provided to check through records of staff in high-risk areas and this work is progressing. To date the entry points in the hospital have been reviewed as well as areas with vulnerable patients. Commencement of the rest of the medical division has now commenced. Where we have not got confirmed evidence on the occupational health file, invites to book a vaccine are being sent. We have seen a significant increase in the uptake of MMR vaccinations and some measles serology testing since this work has commenced. In Oct – Dec 2023, 259 MMR vaccinations were given. In this reporting period 723 have been undertaken. As a result, additional vaccination clinics have been provided.

In addition, to ensure new starters have the necessary protection, with HMB approval, WHWB will not provide clearance to start in employment until evidence of MMR has been seen or undertaken by WHWB for all clinical areas. WHWB have also ensured that missed MMR appointments from workers are being chased and encouraged to re-book.

## Blood Borne Virus

In line with UKHSA guidance, all staff can access a test for Hep B/C or HIV if requested. Those staff who are Exposure Prone procedure workers will have the appropriate tests prior to undertaking this activity in line with the 'Integrated guidance on health clearance of healthcare workers and the management of healthcare workers infected with bloodborne viruses (Hepatitis B, Hepatitis C & HIV)'. Any staff member found to be positive will have a consultation with the Consultant Occupational Health Physician who will advise on fitness for work and further monitoring and refer to Hepatologist or Sexual health services if required for further monitoring and treatment. For those 'Exposure Prone Procedure' workers who have a blood borne virus strict monitoring is undertaken by the occupational health department and monitoring recorded via United Kingdom Advisory Panel (UKAP) – Occupational Health Register. Currently we have 3 individuals who are being monitored in this way.

### Blood exposure incidents

All staff are required to contact WHWB in the event of an accidental occupational exposure to blood and body fluids. A risk assessment is undertaken by our duty nurse and appropriate follow screening and treatment is undertaken.

Staff members who require emergency treatment following an accidental occupational exposure to blood/body fluids will be assessed by the Consultant occupational health physician. If the incident occurs out of hours, then this is undertaken by the A&E department and then advised to contact WHWB for further support and follow up the next working day.

157 needlestick incidents were reported in this last year and occurred at the following stages of the activity.

- During procedure - 72
- During disposal - 61
- Incorrect disposal – 24

Key theme resulting in injury were:

- Lapse of concentration (63)
- Safety device not being implemented correctly/Not adhering to safety of sharp (29)
- Unexpected movement of patient (17)
- Incorrect disposal by colleague (14) patient (4)
- Sharps bin too full (5)

29 Blood exposure incidents (splash were also reported of which 9 could have been avoided if correct PPE was worn). It is vitial that all practitioners wear appropriate PPE including eye wear when performing tasks where a blood splash may occur

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