0.0 Reference Information

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The Trust has maintained low infection rates. We ensure ongoing monitoring and surveillance of all infections, as well as regular monitoring of ward and department level practices.

During an unprecedented year we continued to focus on delivery of safe, high-quality services for our patients, underpinned by robust business management.

A key focus area for the Trust is the Infection, Prevention and Control Improvement plan. Following an MRSA outbreak* during the Summer 2021, which involved eight hospital acquired infections, the Trust continued to work hard to implement changes outlined by NHSE/I.

Unfortunately, following a visit in February the Trust were in discussions with the regulators regarding a potential breach of licence. In May 2022 the breach of license was confirmed and Trust were to be moved to segment 3 on the single oversight framework (SOF3).

The Trust have implemented a IPC Quality Assurance Committee which reports directly to the Board of Directors to enhance oversight over all aspects of IPC.
The Trust is committed to implementing the improvements identified, along with welcoming support from NHSE/I and the System.

The Board thank the staff for the continued hard work throughout a challenging time and noted the positive outcomes following the issues identified which has supported a improved direction of change for the organisation. It is important to note that no patients were harmed during the MRSA outbreak.

1. Purpose of Paper

1.1. Why is this paper going to Trust Board and what input is required?
For approval from Executive Committee.

2. Executive Summary

2.1. Context

The Annual Report provides assurance in terms of compliance with the Code of Practice on the prevention and control of infections and related guidance (The Health and Social Care Act 2008).

2.2. Summary

In 2021/22 the IPC Team continued to adapt in response to the extraordinary COVID-19 circumstances since 2020. The department has worked hard to maintain robust measures and implement the precautions expected in order to keep our staff, patients and visitors safe.

In synchronicity, the department is proud to show another year of improvements in the continuing campaign to reduce avoidable Health Care Associated Infections (HCAI) at the RJAH Orthopaedic NHS Foundation Trust (See figure 1).

Positive feedback in relation to the redesigned IPC unit reports was received in August 2021 from the BDO audit. The reports strenghthened governances processs with matrons receiving complete oversite to IPC related data identifiying themes and trends.

The IPC QMS will continue to evolve to provide high level assurance.

The following HCAIs were reported for 2021/22 with further details provided throughout the report:

- 3 C.*difficle* infections
- 1 MSSA
- 3 E.coli
- 2 klebsiella

Ten COVID-19 outbreaks and one MRSA outbreak were declared for 2021/22 (see pg. 32)

There were 34 surgical site infections reported for 2021/22 (see pg. 27)

Figure 1

2.3. Conclusion

The Board is asked to:

(a) To note the report

(b) To discuss and determine actions as appropriate

3. The Main Report

3.1. Introduction

The Director of Infection Prevention and Control (DIPC) is required to produce an Annual Report on the state of Healthcare Associated Infection (HCAI) in the organisation for which she is responsible and release it publicly according to the Code of Practice on the prevention and control of infections and related guidance (The Health and Social Care Act 2008). The Annual Report is produced for the Chief Executive and Trust Board of Directors and describes the activity of the Infection Prevention and Control Team (IPCT) during the year, including progress made against the work plan and targets identified in the Infection Prevention and Control Annual Programme. It also includes performance against key areas in Infection Prevention & Control. Ward specific audits are reported on a monthly basis through Trust wide key performance indicators (KPI's).

The Trust has maintained low infection rates. We ensure ongoing monitoring and surveillance of all infections, as well as regular monitoring of ward and department level practices. During an unprecedented year we continued to focus on delivery of safe, high-quality services for our patients, underpinned by robust business management. A key focus area for the Trust is the Infection, Prevention and Control Improvement plan. Following an MRSA outbreak* during the Summer 2021, which involved eight hospital acquired infections, the Trust continued to work hard to implement changes outlined by NHSE/I. Unfortunately, following a visit in February the Trust were in discussions with the regulators regarding a potential breach of licence. In May 2022 the breach of license was confirmed and Trust were to be moved to segment 3 on the single oversight framework (SOF3). The Trust have implemented a IPC Quality Assurance Committee which reports directly to the Board of Directors to enhance oversight over all aspects of IPC. The Trust is committed to implementing the improvements identified, along with welcoming support from NHSE/I and the System. The Board thank the staff for the continued hard work throughout a challenging time and noted the positive outcomes following the issues identified which has supported a improved direction of change for the organisation. It is important to note that no patients were harmed during the MRSA outbreak.

Health & Social Care Act Code of Practice

The Robert Jones & Agnes Hunt Orthopaedic Hospital has registered with the Care Quality Commission and have acknowledged full compliance with the Health and Social Care Act (2008) Code of Practice (commonly known as the Hygiene Code). A self assessment against the IPC Programme of Works has been undertaken with a planned review in 2022/23.

Compliance criterion	What the registered provider will need to demonstrate
1	Systems to manage and monitor the prevention and control of infection. These systems use risk assessments and consider the susceptibility of service users and any risks that their environment and other users may pose to them.
2	Provide and maintain a clean and appropriate environment in managed premises that facilitates the prevention and control of infections.
3	Ensure appropriate antimicrobial use to optimise patient outcomes and to reduce the risk of adverse events and antimicrobial resistance.
4	Provide 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.
5	Ensure prompt identification of people who have or are at risk of developing an infection so that they receive timely and appropriate treatment to reduce the risk of transmitting infection to other people.
6	Systems 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.
7	Provide or secure adequate isolation facilities.
8	Secure adequate access to laboratory support as appropriate.
9	Have and adhere to policies, designed for the individual's care and provider organisations that will help to prevent and control infections.
10	Providers have a system in place to manage the occupational health needs and obligations of staff in relation to infection.

Health and Social Care Act Compliance Assessment		
Compliance requirements		RAG (% compliance)
Overall Summary of Compliance		
1	Systems to manage and monitor the prevention and control of infection. These systems use risk assessments and consider the susceptibility of service users and any risks that their environment and other users may pose to them.	98%
2	Provide and maintain a clean and appropriate environment in managed premises that facilitates the prevention and control of infections.	91%
3	Ensure appropriate antimicrobial use to optimise patient outcomes and to reduce the risk of adverse events and antimicrobial resistance.	94%
4	Provide 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.	90%
5	Ensure prompt identification of people who have or are at risk of developing an infection so that they receive timely and appropriate treatment to reduce the risk of transmitting infection to other people.	100%
6	Systems 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.	100%
7	Provide or secure adequate isolation facilities.	89%
8	Secure adequate access to laboratory support as appropriate.	100%
9	Have and adhere to policies, designed for the individual's care and provider organisations that will help to prevent and control infections.	99%
10	Providers have a system in place to manage the occupational health needs and obligations of staff in relation to infection.	100%

Key to RAG rating
91-100%
61-90%
<60%

3.1.1 Criterion 1 a): Systems to manage and monitor the prevention and control of infection.

IPC Structure

The **Chief Executive Officer** has overall accountability for the control of infections at RJAH.

The **Director of Infection Prevention & Control (DIPC)** is the Executive Lead for the IPC service, and oversees the implementation of the IPC programme of work through her role as Chair of the Trust Infection Prevention and Control and Cleanliness Committee (IPCC). The DIPC approves the Annual IPC report and releases it publicly. The DIPC reports directly to the Chief Executive and the board on IPC matters. The DIPC has the authority to challenge inappropriate practice.

The **Infection Control Doctor (ICD)** is the Clinical Lead for the IPC service.

The ICD is employed by SaTH but is contracted by RJAH for four sessions a week to include clinical microbiology advice and reporting, microbiology ward rounds, antimicrobial stewardship and infection prevention and control advice. The ICD:

- Advises and supports the DIPC
- Oversees local IPC policies and their implementation by ensuring that adequate laboratory support is in place
- Attends the Water Safety Group and Decontamination Group
- Chairs the Trust Antimicrobial Stewardship Committee
- Provides expert clinical advice on infection management
- Attends the weekly Infection MDT meetings and provides expert advice on complex/infected cases
- Has the authority to challenge clinical practice including inappropriate antibiotic prescribing.

The ICD reports to the DIPC on IPC matters.

The Infection Prevention and Control Team (IPCT)

The Infection Prevention and Control Team (IPCT) are the medical and nursing infection prevention and control specialists responsible for carrying out the work described in the infection control programme of work.

RJAH Orthopaedic Hospital NHS Foundation Trust (RJAH) IPCT currently consists of:

- Infection Prevention and Control (IP&C) Lead Nurse: (1 WTE) Band 7
- Infection Prevention & Control Nurse Specialist: (1 WTE) Band 6
- Surgical Site Surveillance Nurse: (0.4 WTE) Band 5
- Infection Control Data Analyst (0.8 WTE): Band 4
- The Infection Control Doctor (0.4 WTE)
- Infection Prevention & Control Modern Apprenice (1 WTE until February 22)

In July 2021, the IPC Data Analyst stepped up into the IPC Governnace Lead role as an interim arrangement. Following commencement in post, the IPC Governance Lead designed a local IPC Quality Management System (QMS) to refine and strengthen governance within the department.

It was highlighted following a full IPC governance review in November 2021 that the QMS must be maintained for contuing assurance and strenghthen governance processes for IPC and therefore a business case was approved to uplift the current Infection Control Data Analyst post to a band 6, Assurance Lead post of 37.5 hr and band 2 Administrative assistant/secretarial post to replace the IPC Apprentice position in February 2022.

In addition to the contracted sessions from the Infection Control Doctor we also have 24hr infection control advice available from the on-call Consultant Microbiologist at SaTH as part of the Pathology SLA.

The Antimicrobial Pharmacist

The Trust employs a part-time Antimicrobial Pharmacist who works closely with the ICD and other members of the IPC team. There is robust management of antimicrobial stewardship throughout the Trust. The role of the antimicrobial pharmacist includes:

- Attending and contributing to the Trust Infection Prevention & Control Committee meetings, weekly Infection MDT Meetings and the Antimicrobial Stewardship Committee meetings
- Supporting antimicrobial stewardship initiatives
- Participating in and contributing to the weekly ward rounds with the ICD and IPC nurse specialist
- Lead for the Trust antimicrobial CQUINs
- Maintaining a robust programme of audits in line with national guidance
- Providing training and education regarding antimicrobial stewardship to clinical staff within the Trust

Infection Prevention Control Committee

The RJAH Infection Prevention & Control Committee (IPC&C) is a multidisciplinary Trust committee with outside representation from UKHSA and the CCG. The IPCC oversees the activity of the IPCT and supervises the implementation of the infection control programme of work. The IPCC meetings were increased to bi-montly from July 2021, and from February 2022, the frequency of this meeting was increased to monthly for additional assurance and increased oversite at board level.

Attendance at IPCC committee

	Apr 2021	*July 2021*	*Sept 2021*	*Nov 2021*	*Jan 2022*	*March 2022*
DIPC	✓	✓	✓	*apol*	✓	✓
ICD	✓	✓	*apol*	✓	✓	*apol*
IPCN	✓	✓	✓	✓	*apol*	✓
Ass Chief Nurse MSK	*apol*	*apol*	*apol*	*apol*	*apol*	*apol*
Ass Chief Nurse SSU	✓	✓	✓	✓	✓	✓
Ass Chief Of Professions CSU	✓	✓	*apol*	*apol*	✓	*apol*
Antimicrobial Pharmacist	*apol*	*apol*	*apol*	*apol*	*apol*	*apol*
IPC Assurance Lead/Data Analyst	✓	✓	✓	✓	*apol*	✓
Facilities Manager (Estates & Facilities Representation)	✓	✓	✓	✓	✓	✓
Matron (Specialist)	✓	✓	✓	*apol*	✓	✓
Matron (MSK Wards & HDU)	✓	*apol*	✓	*apol*	✓	*apol*
Matron (Theatre & OPD)	✓	✓	✓	✓	✓	✓
Head of IPC SCCG & TW CCG	✓	✓	✓	✓	✓	✓
Clinician Rep	✓	✓	*apol*	✓	✓	*apol*
TSSU Rep	*apol*	*apol*	*apol*	*apol*	*apol*	*apol*
Team Prevent Occupational Health	*apol*	✓	✓	✓	✓	✓
UKHSA	*X*	*X*	*X*	✓	✓	✓

The IPC Programme of Work

The IPC programme of work 2021-22 was specifically designed to focus on achieving full compliance with the standards identified in the Code of Practice, and the achievement of national and local infection related targets. In order to accommodate the fluctuations in guidance and change in processes in the management of COVID-19, the Team opted to adopt an annual plan.

The Trust demonstrated good compliance to the code of practice but further works are required to:

- Increase surgical site surveillance to incorporate all othropaedic specialities.
- Formalised environmental IPC audits of Orthopaedic satelite clinics
- No automated system in place to identify abnormal trends of infections

A Trustwide tender process was undertaken in 2021 for the introduction of a new electronic patient record system (EPR). A fit for purpose system was purchased and will include an alert tagging system for the infection status of patients.

The Trust was unsuccessful in the recruitment of a part time Surgical Site Surviellance nurse. Therefore, further funds were secured in February 2022 to increase the hours to a full time post with a change of title to Surgical Site Surveillance practitioner.

Quality Management System

A bespoke Quality Management system was designed in-house and implemented in July 2021 to strengthen assurance to processes and compliance to national requirements. The system was designed to consolidate all IPC related data and a central space for correlation of themes and trends. The system contains a dashboard providing a live position for IPC governance.

The system has been since expanded to include:

- Policy matrix and review tracker
- Redesigned IPC unit reports linked to the system for auto-population of data. Reports are presented at Infection Control & Cleanliness Committee
- Interactive audit dashboard containing audit scores circulated on a monthly basis to all ward and departmental managers.
- Rolling audit plan to include all IPC Assurance audits
- Live reporting to surgical site infections

Infection Prevention and Control Working Group

Infection Prevention and Control Working Group met on a bi-monthly basis with poor attendance throughout 2021. This group reports to the Infection Prevention & Control and Cleanliness Committee. In February 2022, the frequency of this meeting increased to weekly to align with the IPC&C Committee. Full review of the Terms of reference was undertaken to strengthen attendance. The meeting provides effective communications between Infection Control, operational areas and Estates & Facilities by identifying and resolving issues in line with Trust priorities.

IPC Link Staff System

The Infection Control Link Practitioner group meets bi-monthly to provide advice and support and disseminate information regarding Infection Prevention and Control to their peers within their wards/departments. Link staff, IPC team and the link staff ward/department managers agree to roles and responsibilities which clearly define the expectations of the link staff role.

Link Staff Attendance

In adherence to social distancing requirements, face to face meetings continued to be prohibited in 2021/2022 with virtual meetings held. Attendance to these meetings continued to deteriorate since the beginning of the pandemic due to poor staffing levels in wards and departments, and also difficulties in accessing MS Teams in order to join the virtual meetings. In response to this, the IPC team will be relaunching the Link staff practitioner programme to include roles and responsibilities with additional support in the form of hand hygiene champions.

3.1.2 Criterion 1 b): Monitoring the prevention and control of infection

CQC Assessment/ COVID-19 Board Assurance Framework

The IPC Board assurance framework (BAF) was developed to help providers assess themselves against the guidance as a source of internal assurance that quality standards are being maintained. The framework offers providers a way to continually review processes and respond in an evidence-based way to maintain the safety of patients, service users and staff.

Two further versions of the BAF were released in 2021/22 with Version 1.7 released in April 2021 (with a revised version in July 21) and version 1.8 released in December 2021 containing 80 new key lines of enquiry (KLOE).

Version 1.7 April & July 2021

Key changes made to version 1.7 focused on compliance to COVID-19 national screening requirements and monitoring of compliance to Personal Protective Equipment (PPE) for staff and patients.

The Trust undertook its first audit in April 21 to assess compliance to the following COVID-19 national screening requirements introduced in 2020.

- 72 hours pre admission swab
- Swab on day of admission
- 72 hour/3 day post admission swab (where applicable)
- 5-7th day swab (where applicable)
- 13th day swab (where applicable)

Results showed good Trust compliance to four of the national screening requirements with exception to the 3 day swab. The Information department developed an automated alert system highlighting due dates for patients swabs. Following implementation, a further audit was undertaken in December 21 where results showed significant improvements to the compliance of the 3 day swab. To provide ongoing assurance, the IPC Governance Lead will continue to audit Trust position to COVID-19 screening compliance and IPC Annual audit programme to be expanded to include twice yearly audits.

Changes made in relation to PPE focused on the compliance of mask wearing for staff and patients in all settings. Early 2021 the Department of Health (DoH) deployed two members of staff to the Trust to assist with fit testing. A Trustwide SOP was introduced to ensure:

- Fit testing is provided for all FFP3 users using at least two different masks (ideally three)
- A range of FFP3 masks to be made available to staff and overall should not exceed 25% usage on any one type of FFP3 mask

FFP3 users and fit test results were also uploaded in ESR with individual usage reviewed every quarter.

Further SOP was introduced for patients wearing surgical face masks (IIR). IPC audits were expanded to monitor compliace to face mask wearing for staff and patients

Version 1.8 December 2021

Changes introduced within this version focused on encouraging Trusts to step down on IPC precautions to assist in the restoration of the services. Further changes included:

- Risk assessments undertaken where deviations in national guidance is adopted.
- Documented risk management process for Trust management of COVID-19
- Review of adequate ventilation requirements
- BAF governance process.

On its release, regional prevalance of the Omicron strain of COVID-19 had increased significantly and therefore Trust made the decision to delay the implementation of the recommendations and continue to enforce high level IPC precautions.

A risk was added to the risk register at the start of the pandemic to include risk to staff, patients and visitors. Risk was separated to align with recommendations made within the BAF.

Eight air scubbers were purchased following a review of ventilation in all areas.

An electronic file system of was set up to store all documented evidence to all KLOEs and hyperlinked to the the framework with a governance tracker added to the BAF to track board level oversite and approval with dates shown below:

Version	Date Review at Infection Control & Cleanliness Committee	Date Presented at Quality & Safety Committee	Date Presented to Trust Board
1.7	April 2021	May 2021	May 2021
1.7	July 2021	September 2021	Nov 2021
1.8	January 2022	March 2022	April 2022
1.8	March 2022		

Progress for the BAF is montored via the IPC Quality Management System and live dashboard data presents Trust position at Infection Control & Cleanliness Committee.

IPC Timeline 2021-22

April 21 – June 21

April 21: Procurement of the SureWash Hand Hygiene device.

May 21: First COVID-19 national swabbing requirement audit undertaken showed good Trust compliance. Guidance poster devised for staff.

June 21: National IPC Guidance released providing support for maintenance of Services and Coronavirus Policy updated to reflect changes.
Implementation of Tendable internal auditing system with staged roll out to all areas.
Introduction of new PHE guidance 'COVID-19: Guidance for maintaining services within health and care settings' The Trust continued to restore elective services across the hospital in conjunction with updated NICE guidance

July – September 21

July 21: IPC Ward & Departmental Audits uploaded to Tendable
Introduction of a bespoke IPC Quality Management System (QMS) to collect all data and monitor assurance.
Redesign of the IPC Quarterly Unit reports to communicate with the QMS
MRSA Outbreak Wrekin Ward. All lessons learnt and recommendations were shared Trustwide for learning.

Aug 21: Audit undertaken by BDO - good feedback received in relation to IPC QMS.

Sept 21: IPC Assurance audit process was enhanced, shifting to a rolling programme of IPC Quality Assurance Walks monitored by the IPC QMS outcome aligned with a robust escalation process. Rise in SSI's reported for April – June period escalated to DIPC/Chief Nurse and MD's. Additional analysis showed majority of infections caused by MSSA.
COVID-19 outbreak Therapies & SOOS. RCA completed. Lessons learned were shared at SNAHP 19th October 2021

October – December 21

Oct 21: Further rise in SSIs reported for July – Sept 21 period. Individual RCAs and thematic analysis completed for each infection.

Dec 21: OneTogether Assessment undertaken as a response to rise in SSIs by the IPC Nurse Specialist
COVID-19 Outbreaks declared on Clwyd, Pharmacy, Gladstone & Sheldon. RCAs undertaken lessons learnt shared at local safety huddles, SNAHP, IPCCWG and IPCC Committee.
Version 1.8 IPC Board Assurance Framework released containing 80 new KLOEs.

January 22 – March 22

Jan 22: COVID-19 Outbreaks declared on Alice Ward, Wrekin Ward & Doctors Residence.

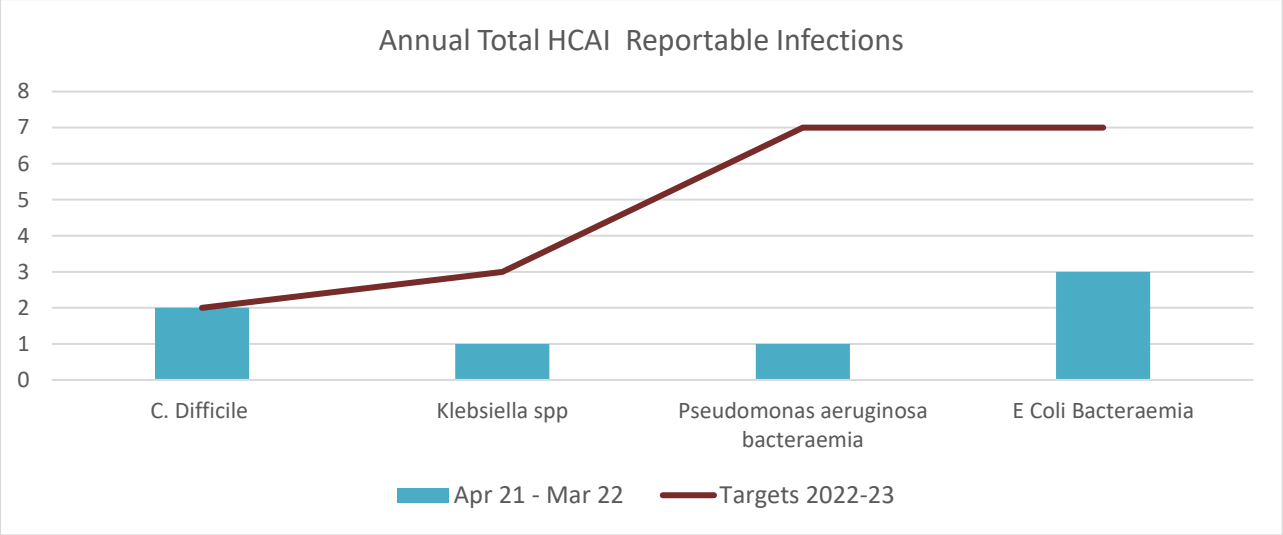
Feb 22: Quality Assurance Walks uploaded to internal auditing software Tendable
Trust agreed to utilise Tendable to centralise actions in response to NHSEI & CCG external visit. Validation exercise undertaken to review all action plans prior to change in process. IPC General inspection audit was used a mechanism to move all open actions onto Tendable.

Mar 22: Shower chair and commode audit undertaken with iems not complying to standards replaced.
SSI Prevention Working Group introduced. Membership from across the surgical pathway and chaired by the MSK Matron. Action plan devised and monitored on a bi-weekly basis. Progress on actions will be monitored through IPCC committee.

Mandatory Surveillance

Healthcare Associated Infections

Reducing health care-associated infections (HCAIs) remains high on the Government's safety and quality agenda. In 2016 a long term plan to reduce the number of Gram-negative bloodstream infections by 50% by 2024/25 was introduced.



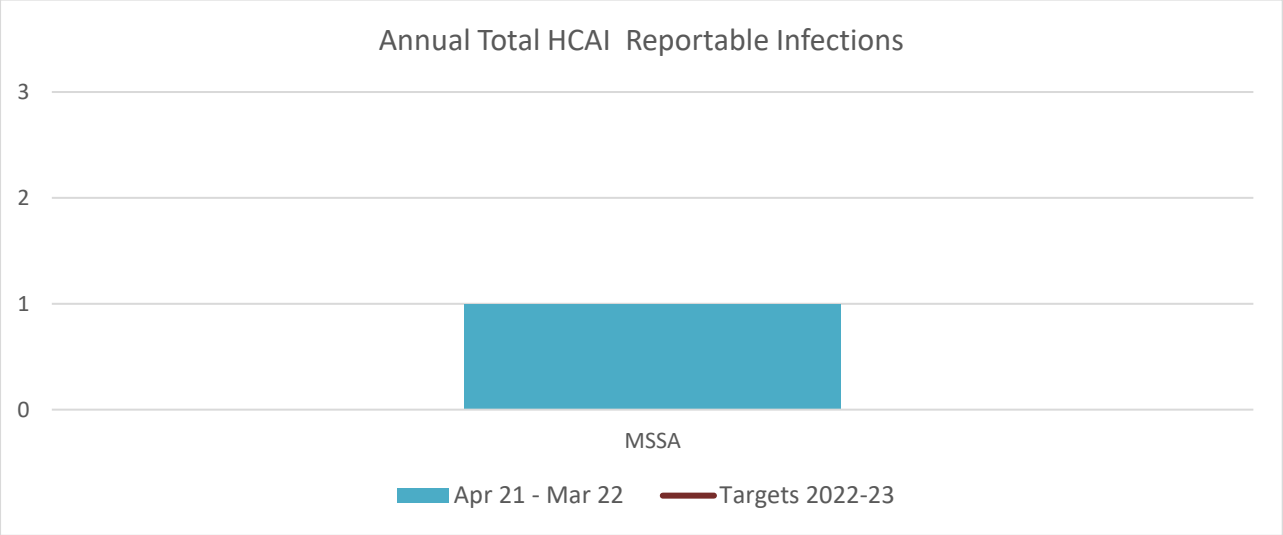
The graph above shows the total of Healthcare Associated Infections (HCAI) blood stream infections reported from April 2017 to March 2022.

The Trust continued to maintain low cases of RJAH acquired HCAI's for 2021/22. It should be noted that there was a significant reduction in elective surgical activity due to the COVID-19 pandemic.

Methicillin Resistant Staphylococcus Aureus Bacteraemia (MRSA)

The Trust is in its 16th year of reporting zero cases of MRSA bacteraemia and continues to comply to the governments 'zero tolerance' strategy set out in the NHS England Planning Guidance released in 2013 and provides confidence that the IPC practices in place have been sustained. Our performance is in keeping with national data whereby Trust apportioned cases of MRSA have significantly reduced.

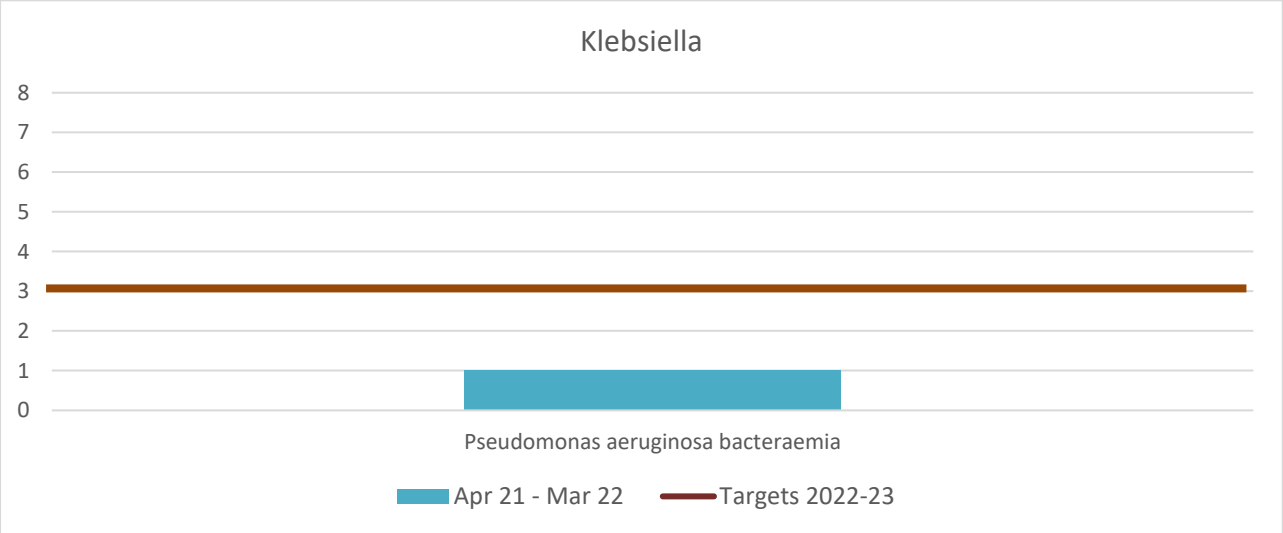
Methicillin Sensitive Staphylococcus Aureus (MSSA)



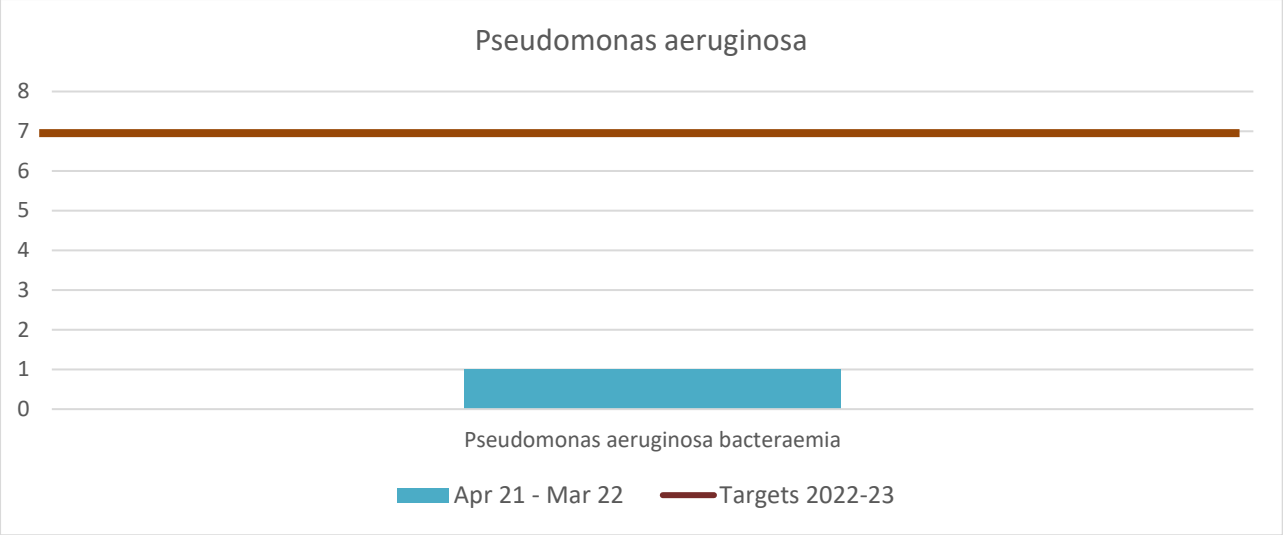
In 2021-2022 there was 1 Trust apportioned MSSA bacteraemia reported in August 2021 which remained consistent to 2020-2021. A post-infection review (PIR) was undertaken which identified a surgical site infection as the source. Themes were identified in relation to poor documentation around catheter insertion and blood cultures. Progress from the PIR action plan were monitored through the Quality Management System and reported to IPCC Committee.

Gram-Negative Blood Stream Infections

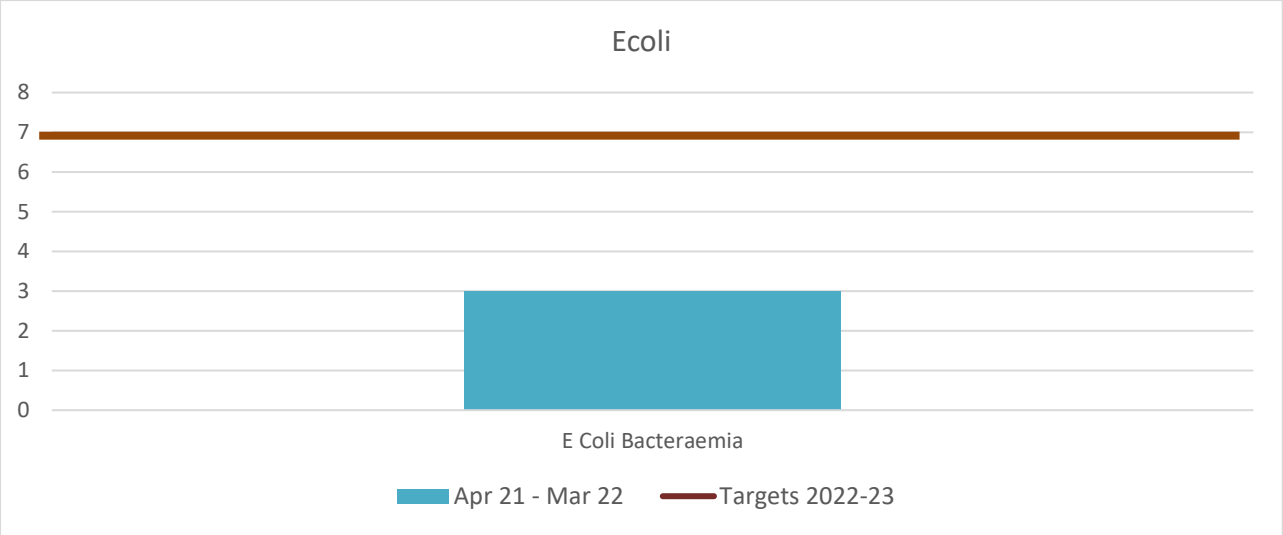
Gram-negative blood stream infections (BSIs) are a healthcare safety issue and from April 2017 there has been an NHS ambition to reduce the number of healthcare associated Gram –negative BSIs. For this purpose the gram-negative organisms are Escherichia coli (E. coli), Pseudomonas aeruginosa (P. aeruginosa) and Klebsiella species (Klebsiella spp.). Psuedomanoas aeruginosa and Klebsiella species bloodstream infections have only been reportable since April 2018.



In 2021/22 there were 2 cases Klebsiella sps reported with one 1 case apportioned to the Trust.



In 2021/22 there was 1 RJAH acquired positive BSI sample for Pseudomonas aeruginosa.



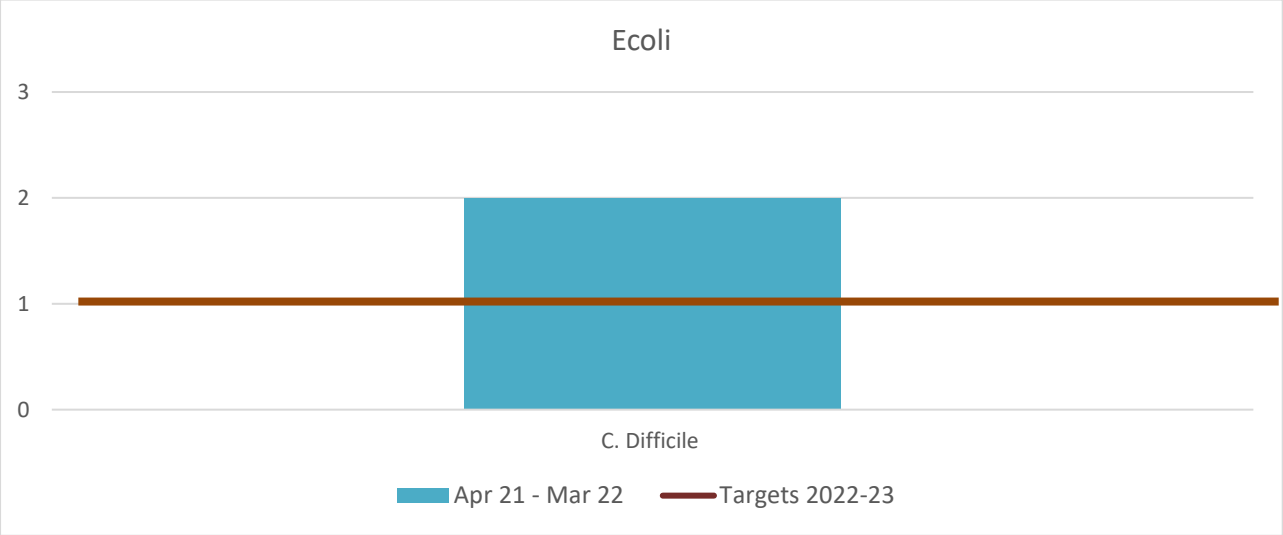
The graph above shows a continued reduction in E.coli cases for 2021/22 with 3 Trust apportioned cases compared to 6 in 2020/21.

The common theme of all 3 cases were related to catheter associated UTIs (CAUTI). There are plans for a review of the catheterisation policy and associated documentation to be undertaken.

The Secretary of State for Health launched an important ambition to reduce healthcare associated Gram-negative bloodstream infections by 50% by 2021 and reduce inappropriate antimicrobial prescribing by 50% by 2021.

Post-infection review meetings were undertaken for all RJAH acquired bloodstream infections in order to identify the root causes and any actions required. All lessons learned were presented at ward safety huddles, link staff meetings and SNAHP for wider learning and improvement.

Clostridium Difficile Infection (CDI)



To date we have had 3 RJAH acquired apportioned cases of C.*difficile* infection against an objective of 1 case. One case was apportioned to us from SaTH in November 21, this patient went on to develop further symptoms and relapsed in December 2021.

Case 1 – May 2021:

A post-infection review (PIR) was undertaken which highlighted long-term antibiotic therapy as the most likely source of the infection. Areas of good practice were identified, such as the timely decontamination of the side room. This case was considered to be an unavoidable infection due to the patient's requirements for antibiotic therapy.

Case 2 – November & December 2021:

The patient had been diagnosed with C.*difficle* on the 19/11/21 during a short admission to Royal Shrewsbury Hospital from RJAH due to cholecystitis.

On the 22/12/21 the patient developed further diarrhoea symptoms; a sample obtained identified a relapse in C.*difficle* infection. The patient was reviewed by the Consultant Microbiologist and was treated with Fidaxomicin.

Lessons learned were identified which included:

- Guidance to be provided to ward staff regarding the screening of other patients on the ward
- A-Z of infections to be available on the Intranet for staff to follow management of infections
- Patient had a stool sample taken before being isolated – education provided to team
- Patient felt isolated and alone in side room – discussed importance of regular communication with patients im isolation. This was shared in June's link staff meeting.

Infection Prevention & Control Ward/Department Audits

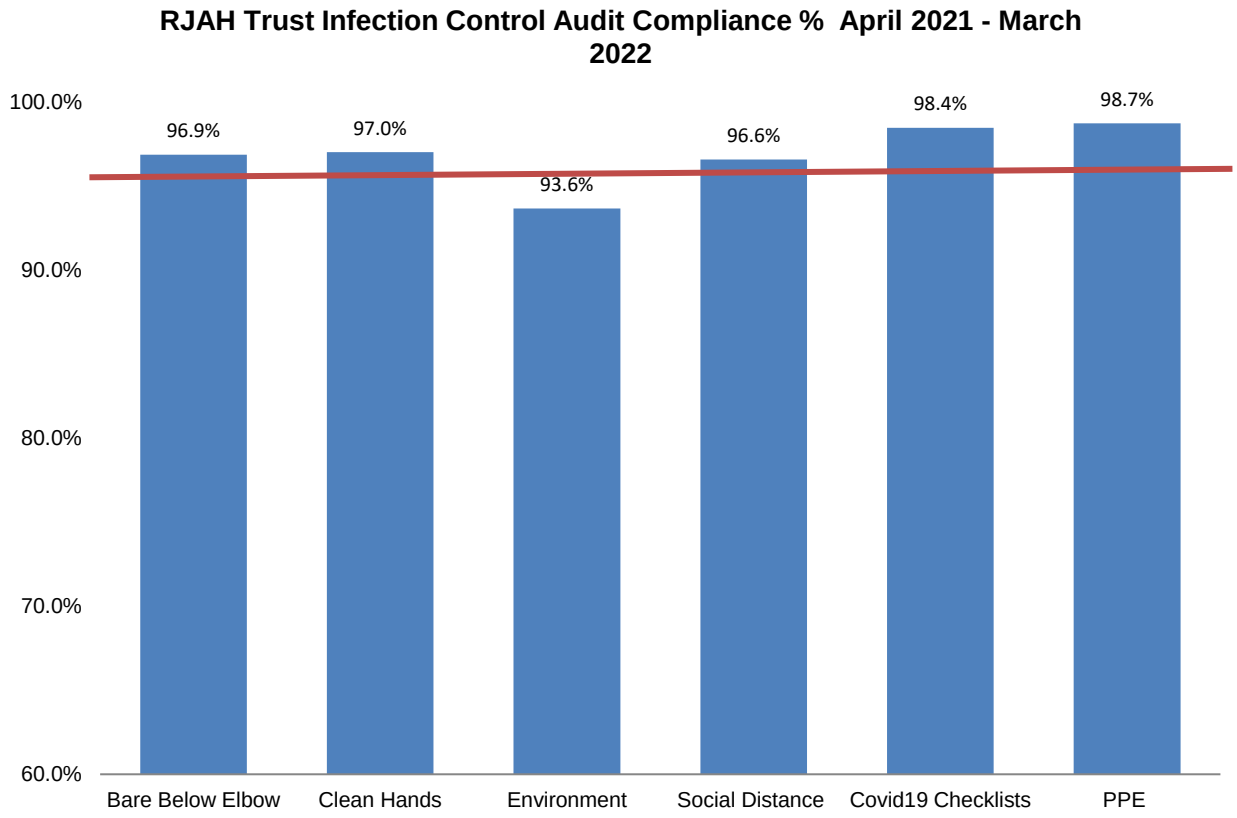
Wards and departments complete a package of infection prevention and control audits across the year. The suite comprises of environmental auditing, Hand Hygiene, Bare Below the Elbows (BBE) Personal Protective Equipment (PPE) COVID-19 checklist and Social Distancing Audits. In July 2021, The Trust introduced an electronic app based auditing software named Perfect Ward, (renamed to Tendable in November 2021) with phased roll out to all wards and departments. Paper system was withdrawn with all areas undertaking aduits via an Ipad preloaded with the auditing software. By September 2021 all but the following areas were had been sep up and utilising Tendable to undertake their audits:

- ORLAU
- Montgomery
- Orthotics
- Menzies

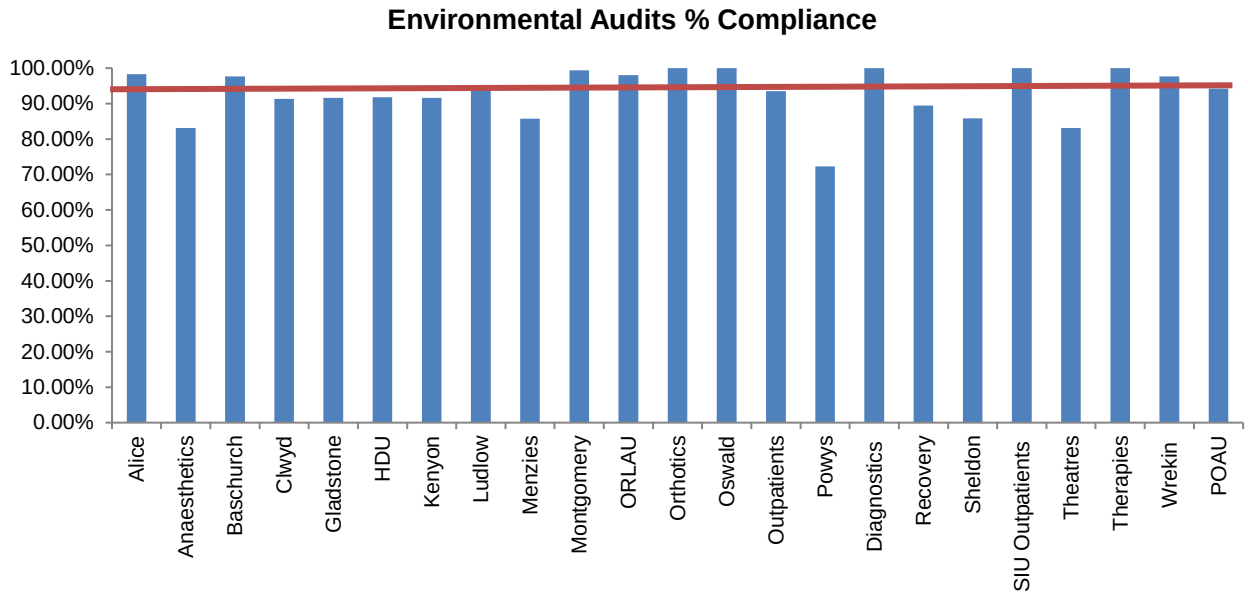
- Therapies

In February 2022, the Trust moved to manage all action plans via Tendable and as a result, further QR codes were obtained to allow full implementation in the above areas. Roll out will continue in 2022. These areas will continue to undertake paper based audits in the interim. All data is analysed by the Interim IPC Governance Lead/Data Analyst and monitored via the IPC Quality Management System.

The following graph shows the Trust's compliance against each of the individual audits. Tendable contains an algorithm that negatively weights scores against repeat episodes of specific issues for non compliance. As a result, scores began to fluctuate signficantly following its implementation.
The results show that despite this change, the Trust consistently achieved the 95% target in all areas for Bare Below the Elbow, Hand Hygiene COVID-19 Precautions and social distancing. Scores for environmental IPC audits fell below the 95% target due to a large number of Estates works identified on wards. All areas are now able to obtain scores and full details of non compliance via Tendable. All actions generated from an audit are sent directly to the ward/departmental manager for their oversite, action and resolve. All Estates works identified continue to be reported via the QUBE portal and will be assigned a requisition number.
For the areas awaiting roll out of Tendable, scores continue to be circulated via the interactive audit dashboard.



Environmental Audits



Scores for environmental audits fluctuated throughout the year with averages falling below the 95% target for many areas. As stated above scores must be viewed with consideration to Tendables scoring system and the variables highlighted above.

The Estates department have commenced a programme of works to address remedial works required within the Trust. The department is also working to strengthen its helpdesk processes for requisitions received. All areas continue to submit Estates related job requests via QUBE.

Hand Hygiene & Bare Below the Elbows

The following graphs show variation of scores to hand hygiene and bare below the elbow audits for 2021/22 with some areas reporting scores below the 95% target by end of March 22.

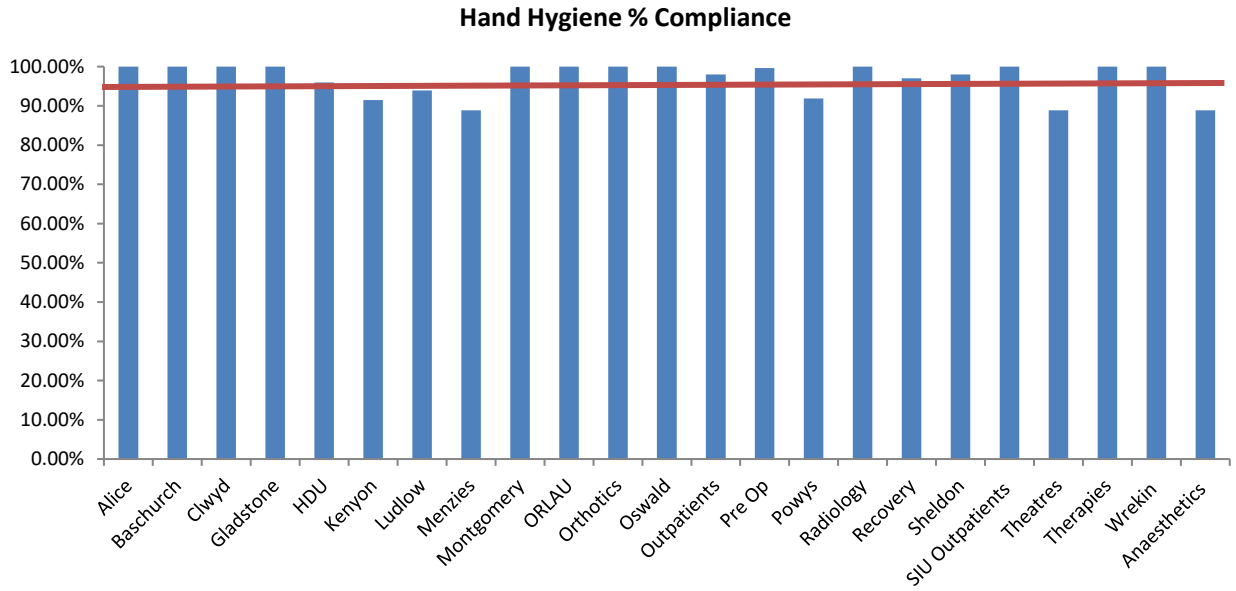
Poor scores related to the question set for this audit. In November 2021, in order to monitor compliance to hand hygiene competencies the following question was added:

“ Are hand hygiene competencies in date? Please produce a picture of the register/paperwork”

Although this helped to alert managers to their update, the question posed challenges upon completion of the audit due to registers being kept locally and stored securely. Access to this paperwork was not always available therefore penalising scores.

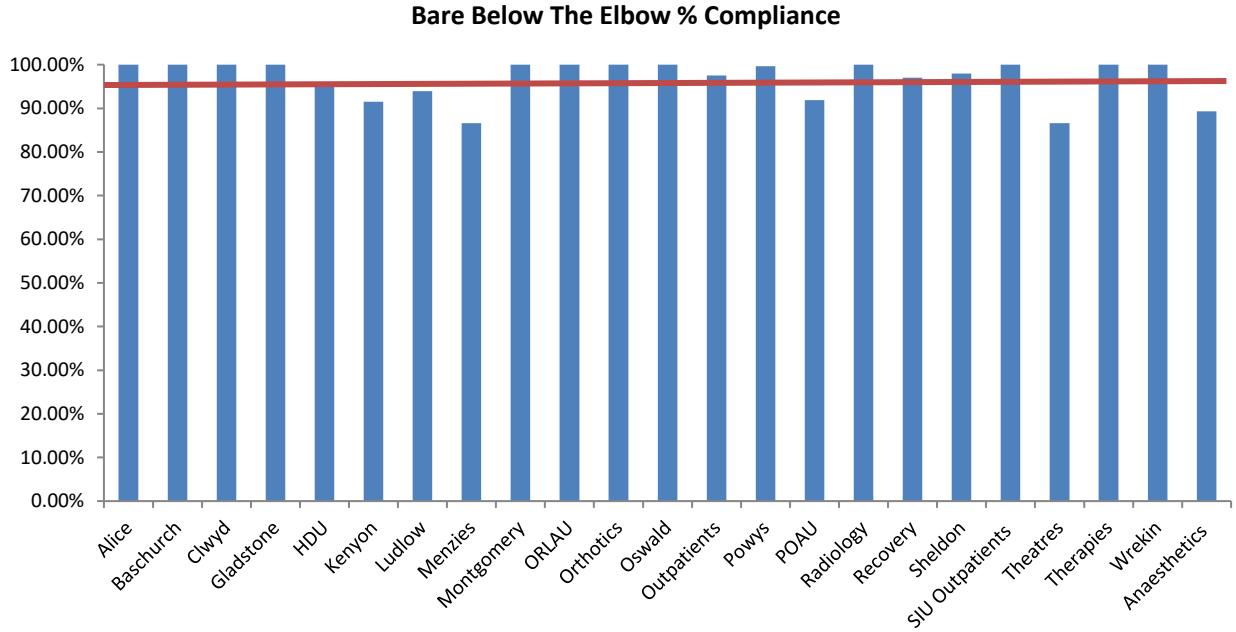
Following a training needs analysis it was agreed that hand hygiene training module will be uploaded to ill be uploaded to ESR. This training will be made mandatory in order to monitor staff competencies. Compliance to this training will be monitored in line with all mandatory training modules with a full report being presented to the Infection Control & Cleanliness Committee.

All audit question sets on Tendable are regularly reviewed to monitor the effectiveness of data with tailoring sessions planned throughout the year with the Tendable Project Team.



Scores for bare below the elbow also fluctuated due to repeated incidents being observed of non compliance to bare below the elbow principles.

Further analysis showed the most common theme for non compliance was due to staff wearing smart watches with medical staff wearing long sleeves jackets being the second. This issue was escalated to the Chief Nurse and Chief Medical Officer who has communicated regular reminders to all staff around the importance of maintaining bare below the elbow. Moving into 2022/23 – a full review of the Trust's uniform policy will be undertaken in order to provide clarity to staff and also new BBE posters will be created and placed around the Trust. The team forecast an improvement in BBE compliance as we move forward. The IPC team's audit process will continue to capture compliance around BBE and an escalation process is in place.



IPC Quality Assurance Walks

The IPC Assurance Audit process was reviewed in line with the introduction of the Quality Management System in July 2021

In August 2021 the team shifted to the new IPC Quality Assurance Walk system. To ensure prompt identification and resolution for issues the system was enhanced to include a rolling porgramme of audits driven by a RAG rated escalation process.

The escalation process determines the timescale for follow up audit.
Existing toolkits were reviewed and updated to include monitoring to national requirements.
Quality Assurance walks are undertaken via the internal auditing system (Tendable) and scored in line with other IPC audits within this system.
The programme is monitored via the IPC QMS with scores mapped in accordance with the escalation process as shown below:

Quality Assurance Walks

Ward/Department	2021 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2022 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Alice								82%		93%			92%		100%						P			
Clwyd								91%				93%			95%						P			
Gladstone								92%		83%						94%					P			
Wrekin								96%		89%			91%		94%						P			
Kenyon								WC					88%		92%						P			
Ludlow								81%								94%						P		
Oswald								90%								98%						P		
Powys								86%			91%						P							
Sheldon								81%				91%						P						
HDU								82%							93%						P			
Recovery								82%	87%							93%						P		
Montgomery																100%					P			
TSSU																								
Theatres									81%		87%				73% OD		P							
Outpatients									81%						86%	P								
Radiology								81%								83%	P							
Baschurch																94.7						P		
Pre-op																								
Vac Hub. One off QA Audit following set up						99%																		
Physio						91%										81%	P							
Pharmacy																								
Hydro Pool																								
Louise House																								
Maternity																								
ORLAU																								
Orthotics																								

General Key				Frequency of QA walks is based on the RAG rating score key below:
D	Due	OD	Overdue	If score is >90% Green Compliant Repeat Audit 6 monthly
P	Planned		Audit pre process	Partial Compliance 81-90% Repeat audit following month with ACN
				Non compliance <80% Escalate to Matron for weekly visits
				Audit undertaken but not scored

From April 2021 – March 2022 a total of 33 walks were undertaken.
upon follow up audits for many areas.
Common themes for non-compliance are detailed below:

- High volume of Estates works required for many areas triangulating with the IPC environmental ward and departmental audits.
- Patients non compliance to mask wearing not being documented.
- Clutter in many areas prohibited housekeeping teams to undertake cleaning tasks.
- Cleaning Checklists are being completed but format of the document does not allow for sign off.
- Environmental issues remain a correlating theme throughout the quarter

Additonal walks were undertaken in areas with declared outbreaks of COVID-19 as per the outbreak management process.

The auditing system is configured to ensure all actions generated via these audits, are sent electronically to the ward and departmemental managers for their action/resolution.

The IPC team continue to undertake regular quality assurance walks across clinical ares and the QMS will track follow up audits and provide a live position to all walks undertaken.

4. Criterion 2: Provide and maintain a clean and appropriate environment

The Trust understands the importance of a clean, appropriate environment and focuses on providing excellent outcomes.

Cleanliness

Cleaning is provided by the Trust's in-house team of cleaners and deep cleaners; the internal team is supported by external window cleaners and pest control operatives. Cleaning staff are allocated to their own area, giving them ownership of the standard; the number of hours for each area is determined by the Credits for Cleaning information system, with further input from local stakeholders, on a risk adjusted basis.

Since July 2021, as part of the wider actions identified by NHSE/I audits, this internal team has been supported by externally contracted cleaning technicians who have focused on deep cleaning of clinical equipment.

Outcomes for cleaning continued to be monitored internally throughout the year. External and patient led monitoring, including PLACE assessment, did not take place during this time, however the Trust has implemented a programme of internal PLACE assessments, utilising NHS England's PLACE Lite tool, to ensure that there is continued oversight the environment from a patient perspective.

Cleanliness – Deep Cleaning

Whilst routine cleaning is completed in all areas on a daily basis, staff in high-risk areas are supported with extra staff to complete a deep clean on a weekly basis. In the very high-risk area of theatres there is a rolling deep clean programme that runs alongside the routine clean; cleaning in these areas is completed over night, when the theatres are not in use, to provide the most effective service.

The Trust recognises the potential need to employ the use of technologies such as hydrogen peroxide vapour for the fogging of facilities and equipment in certain circumstances, as specified by the Infection Control Policy, room cleaning is completed as below:

- Green – Standard daily clean using detergent
- Amber – Terminal clean using 1000 ppm Chlorine Based Agent
- Red – Terminal clean using 1000 ppm Chlorine Based Agent followed by HPV fogging

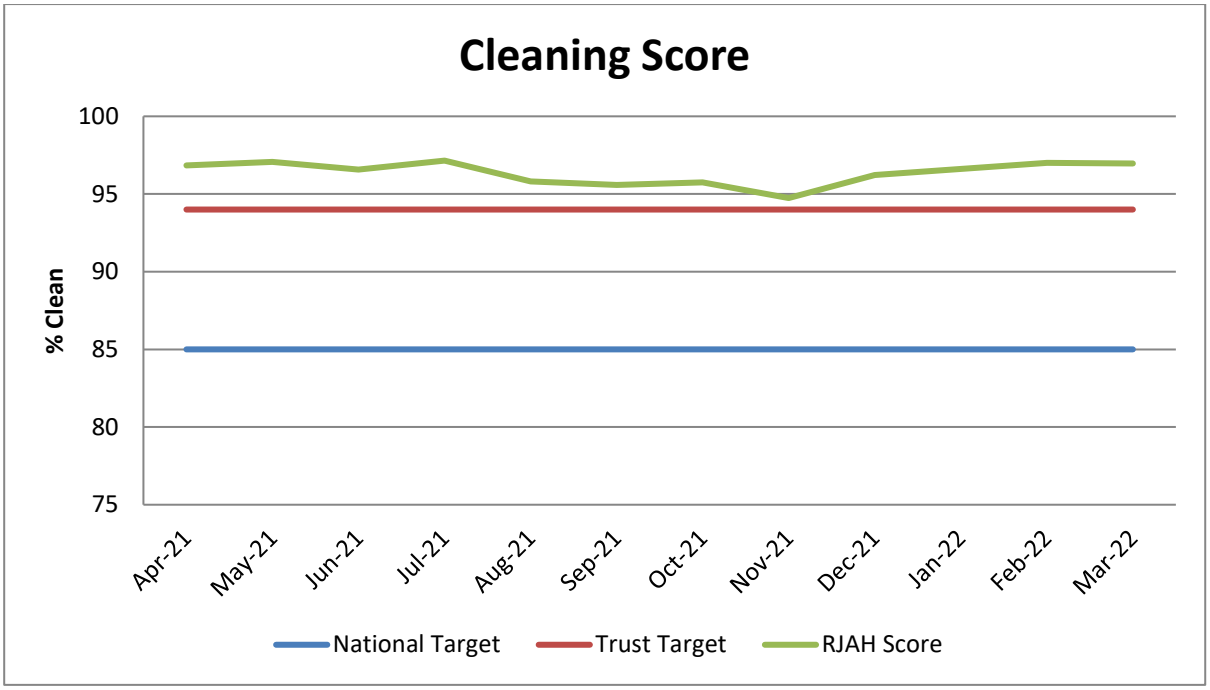
This protocol has ensured that there are no delays in the provision of enhanced cleaning whilst clinical sign off is sought.

The Trust employed an external contractor to complete HPV fogging; responses to date have been quick, effective, and professional.

12 individual rooms and 1 complete bay and a full ward have required a red terminal clean in 2021/22; in each case a stringent process of isolation is undertaken by the estates team alongside a physical clean of the environment and equipment prior to completion.

Cleanliness – Internal Monitoring

The Housekeeping Department has devised an effective sign-off sheet that allows staff to easily demonstrate the work they have completed and alert the next person on shift to any outstanding requirements. Evidence of cleaning is retained by the department and is validated by supervisor monitoring and managerial spot checks.



Internal monitoring is carried out every day, visiting all areas on a rolling programme according to their risk. All cleanliness matters are issued within 24 hours to the relevant team, assurance is provided in relation to resolution through signed off completion. All required improvements identified by the audits are acted upon by the internal team and the results are reported to the Infection Prevention & Control Committee on a quarterly basis, with specific action plans or failure themes managed through the Infection Prevention & Control Working Group.

The Trust has a risk based national cleanliness target of 85%, internally the Trust has set a 94% target, for the year 2021/22 the Trust achieved an average score of 96.36%.

National Standards of Cleanliness 2021

The National Standards of Healthcare Cleanliness were published in May 2021. Developed in collaboration with an expert multi-disciplinary team including Infection Control, Health and Safety, Nursing, Clinical and Microbiology leads and healthcare cleaning professionals, the standards have been introduced to drive improvement whilst allowing maximum flexibility to suit the needs of all healthcare organisations.

Adherence these standards is mandatory, and defined through the NHS Standard Contract 2022/23, with acute Trusts given a deadline of May 2022. Following the implementation guidance provided by NHS England, the Trusty undertook a multi-disciplinary review of the requirements – which included a gap analysis considering the correct 2007 NHS Cleaning Specification, engagement with colleagues internally and externally to apply functional risk ratings, evaluation of cleaning responsibilities and a Trust wide communication strategy.

The standards are on schedule to be launched at RJAH on April 1st, 2022, with support and approval at each stage of implementation through the IPC working group, and committee.

Cleanliness and Environment - Kitchen

The Trust kitchen retained its 5-star food hygiene rating at last inspection in June 2021, which in particular, called out the high standards of cleanliness within the Trust kitchens.

Supporting this inspection, the Trust procures a separate externally accredited food safety audit which produces a detailed action plan, undertaken in September 2021 which recommended appropriate measures were in place to retain a 5-star rating.

CQC Inpatient Survey

The CQC Inpatient Survey 2020 results were published in October 2021, with the Trust scoring top in the country under the metric 'how clean was the hospital room or ward that you were in' with an average score of 98.62%. The consistently good results achieved through this survey are a testament to the dedication and exacting standards shown by the entire housekeeping team.

PLACE – Patient Led Assessment of the Care Environment

The 2021 National PLACE assessment was cancelled in response to the pandemic.

With this vital external patient experience audit paused since early 2020, a programme of internal 'mini-PLACE' audits has been completed throughout 2021/22, as a multi-disciplinary spot check, with actions fed through the Infection Control Working Group. A focus for these inspections has been learning where best practice is already in place and replicating this where possible in other areas of the Trust. National assessment criteria were revised despite no requirement to audit, and therefore these internal checks have ensured that patient comfort and experience within the clinical environment continues to be prioritised.

Linen

Quarterly review meetings continued to ensure standards relating to the provision of linen were monitored.

Linen services are provided by an alternative external supplier, who continues to provide assurance to the infection control working group through monthly compliance reporting against HTM 01 04.

Clinical Waste

Quarterly review meetings continued to ensure standards relating to the provision of clinical waste were monitored.

Clinical waste services are provided by an alternative external supplier. Assurance this waste is being managed, both at Trust level and by the external contractor, in line with HTM 07 01 is provided to the infection control working group though annual pre acceptance audits.

In line with NHS England requirements, the Trust has continued to work collaboratively with all waste contractors servicing the site to ensure the ability to flex to relevant pandemic guidance and changes in activity has been maintained.

Estates Department Contribution to the Clean and Appropriate Work Environment

Estates department activity is essential in delivering the IPC agenda, and is delivered under the principles outlined in two main documents: -

1. Health Building Note 00-09 (Department of Health, 2013 -which supersedes and replaces all versions of Health Facilities Note 30) and covers the importance of a clean, safe environment for all aspects of healthcare.

2. Health Technical Memorandum 04 01, The Control of Legionella, hygiene, "safe" hot water, cold water and drinking water systems."

Part A: Design, installation, and testing, and

Part B: Operational management. (Department of Health (DOH) 2006). CWP's 'control of Legionella' closely adopts the requirements of the above HTM.

Matters of estate that impact the clean environment are escalated through the IPC working group for prioritisation and oversight.

Water

The control of water is covered by the legal requirements of the Health & Safety at Work Act 1974 concerning risks from exposure to legionella and guidance on compliance with the relevant parts of the Management of Health and Safety at Work Regulations 1999.

Water safety is managed and controlled by the estates department to guidance L8 ACoP, HSG274 and HTM 04.

The Estates department continues to employ a third-party contractor to provide technical advice for water services and undertake water risk assessments on Trust properties every two years, or where required following incidents or significant infrastructure changes.

There is a written site-specific scheme of control for each inpatient premises. Eurofins provide the Trust an internet-based water testing database storage and reporting for statutory test results. There is also a three-monthly review of test results, control measures and procedures at the Water Safety Group to ensure compliance with current legislation and these results are published at the Infection Prevention Control Working Group.

The Trust has an Authorising Engineer (Water) (AE(W)) appointed in writing. The AE(W) is a 'critical friend,' a requirement of HTM 04-01b and offers technical advice to the Estates Engineers, auditing the management of water safety and increasing the Trust's resilience and bolsters the management of water hygiene.

Estates Operational Service continually undertake water tests throughout the Trust estate. This water testing is carried out under legislation and guidance set out by The Health & Safety Executive and the Department of Health (BS8680, HTM 04 01b, HSG 274, L8 ACoP). Testing is standard practice at RJAH to ensure robust control of waterborne infections such as legionellosis; it is a method of using qualitative data to measure that our planned maintenance is successfully controlling growth of microorganisms in the potable water supply. During April 21 – March 22 a total of 589 water sample tests were undertaken, this is a greater frequency than required by guidance; the purpose of which is to identify potential issues sooner so that corrective actions can be implemented at the earliest possible time.

In response to out of parameter results, the mechanical team within the Estates department continue to employ an effective method of thermal disinfection. This process increases efficacy and reduces costs because of the in-house delivery of such works. Disinfection is often employed to manage domestic water hygiene.

This year, the estates department have addressed critical backlog issues for the main water supply, infrastructure and will complete by Q4 22/23.

Decontamination Group

Decontamination covers the theatre and sterile services environment under the guidance of HTM 03-01.

Decontamination is led and monitored by the estates department supported by their third party accredited Authorising Engineer AE(D).

Accredited third party contractors revalidates theatres on an annual basis, providing an inspection and reverification report. These reports are then reviewed by the AE(D)

The RJAH estates team maintain a local testing regime of decontamination equipment on a monthly basis to proactively manage any issues with compliance.

Further, there is a three-monthly review of test results, control measures and procedures to ensure compliance with current legislation and these results are published at a sub- committee of the Infection Prevention & Control & Cleanliness Committee.

Annual revalidations continue to be completed by approved contractors, with the AE(D) sighted on reports, and any follow up maintenance.

Estates & Facilities COVID19 Response

The department has provided support to the wider Trusts pandemic response, contributing to strategic, tactical, and operational matters with a focus on adaptation and maintaining a safe environment during challenging circumstances.

Personal Protective Equipment (PPE)

The department took responsibility for control of PPE, to ensure the Trust benefited from sufficient stock of appropriate PPE; responsibilities included:

- Management of Trust stock through the National PUSH model and consideration of mutual aid requests to support the wider region.
- Installation of PPE stations across site & daily top up service of these, alongside ensuring adequate PPE is available at point of care for clinical teams.
- Provision of FFP3 fit testing & supporting clinical teams to ensure staff are protected with masks in line with the most up to date guidance.

Enhanced Cleaning

Implementing the National SOPs for cleaning in line with each risk level, which included additional touch point cleaning, enhanced cleaning in staff only areas (such as staff rooms), and increased frequency of cleaning in clinical areas. Additional documentation, in line with these SOP's has provided valuable evidence for the outbreak control team.

Supporting Social Distancing & Staff Safety

Whilst working from home and reduced site footfall has been advocated throughout the year, the Estates & Facilities team have supported on site teams to work as safely as possible.

This has included advising on risk assessments and action plans; supporting clear communication of restrictions through signage, posters and physical barriers, updating regularly in line with relevant guidance; providing additional rest areas with appropriate social distancing and cleaning measures in place; reconfiguring offices and departments to support new ways of working and ensuring all on site teams have access to hand hygiene facilities and appropriate cleaning products.

IPC Related Estates & Facilities Actions & Improvements

External review of RJAH in response to an MRSA outbreak prompted, amongst a number of actions, a focus on cleanliness and the environment.

Responding to cleaning related actions, deep cleaning was increased to support those staff with cleaning responsibilities. A case has been made to the ICS in relation to options for sustained standard maintenance.

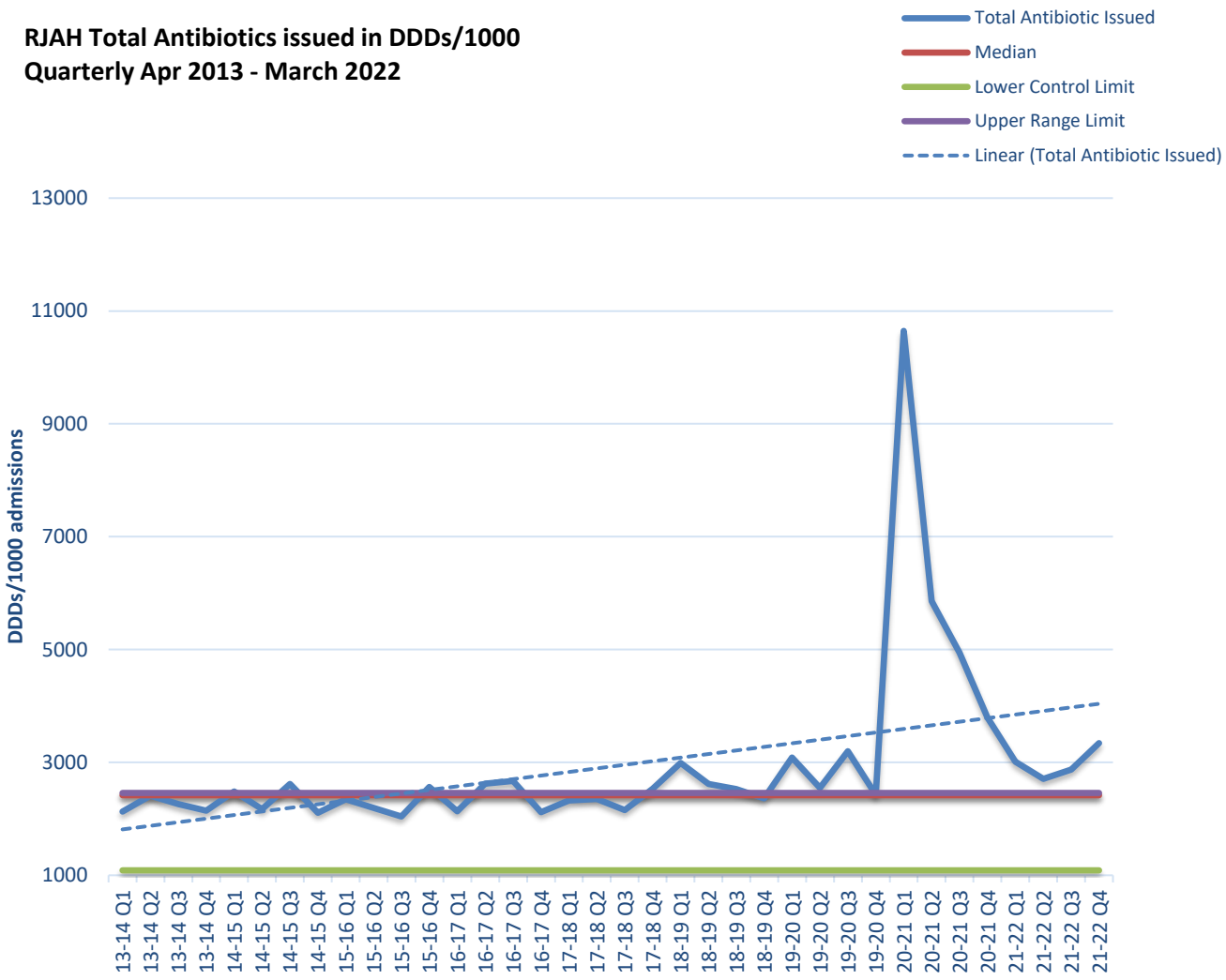
Alongside this facilities response, focus on the estate has led to a number of refurbishment programmes with the outcome being significant investment and improvement to the hospital environment. This programme is continuing into 2022/23.

The multi-disciplinary team, including estates and facilities, continue to drive standards collaboratively ensuring they align to the IPC agenda and are supported by good governance.

4.1.1. Criterion 3: Ensure appropriate antimicrobial use

Antimicrobial Stewardship (AMS) The trust antimicrobial management group (AMG) includes representatives from pharmacy, microbiology, nursing and medical staff. This group manages policy with regard to antimicrobial stewardship,formulates policy with regard to antimicrobial stewardship and responds to concerns in this area. The group feeds back actions and concerns to the executive board via the drug and therapeutic committee and reports in to the Infection Prevention and Control Committee. The action of AMG continues to be hampered by the lack of attendance of the medical representatives. This means that the group meetings are often non-quorate. Actions by the group can therefore be difficult to implement this has been escalated to the Chief Nurse to be addressed with changes being implemented in 2022/23.

Total antimicrobials

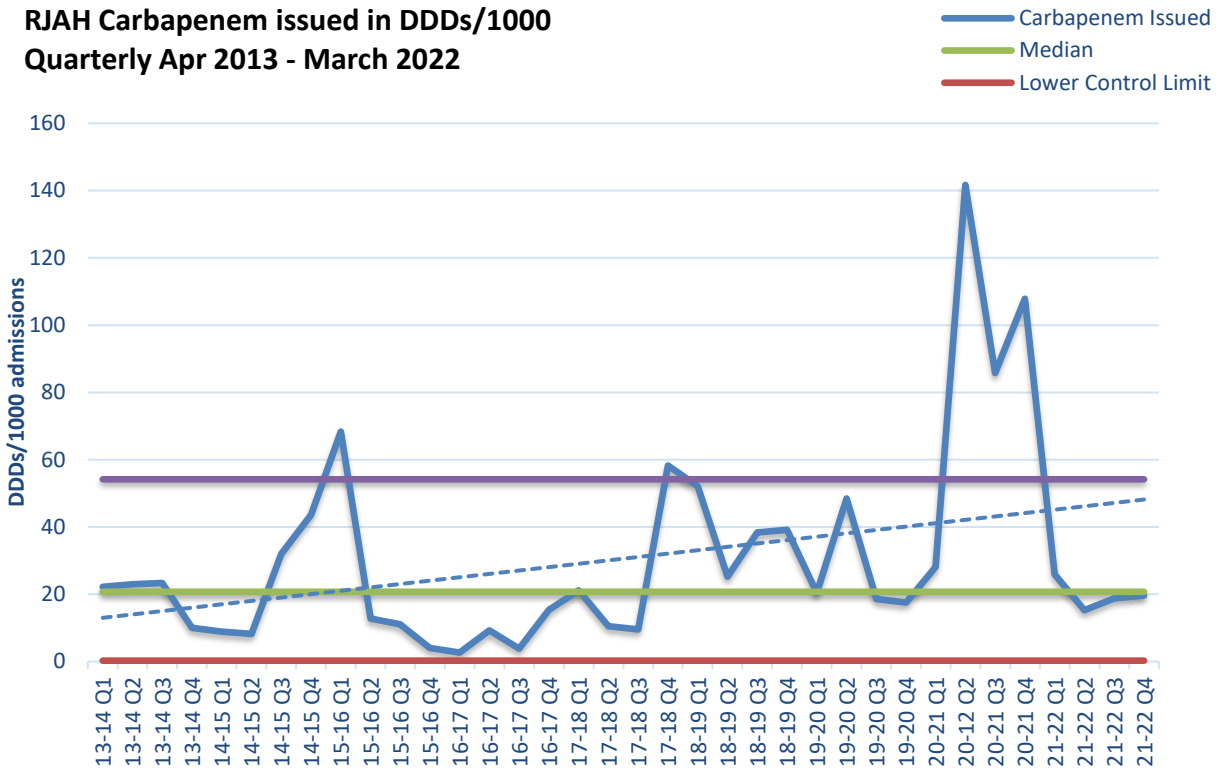


The graph above shows the total antibiotics issued in pharmacy, between April 2013 and March 2022, in DDDs per 1000 admissions. The peak seen in Q1 2020/21 was due to RJAH becoming a trauma centre during the COVID-19 pandemic, however, the usage declined up until Q2 2021/22. Since Q2 2021/22 the usage has begun to slightly increase, and it is thought that this may be due to the following reasons:

- Number of spinal injuries patients in proportion to rest of hospital
- Tend to see a greater number of antibiotics prescribed in the winter months – chest infections etc.
- We are seeing more patients who are requiring longer courses of antibiotics (some exceeding 3 months)

Overall, when looking at the total antibiotics issued, there is an upward trend from around 2000 to 4000 DDDs/1000 admission. It is, therefore, vital that antibiotic usage is continually monitored.

Carbapenems



This graph shows the total carbapenems issued from pharmacy, between April 2013 and March 2022, in DDDs per 1000 admissions. As you can see the usage seems to have plateaued over the last few quarters. Especially last quarter, when reviewing the patients prescribed either ertapenem or meropenem they were all appropriate and as per microbiologist advice which is positive. If a microbiologist advises ertapenem this can usually be switched to meropenem which is a more cost-effective option – the doctors will need to be made aware of this.

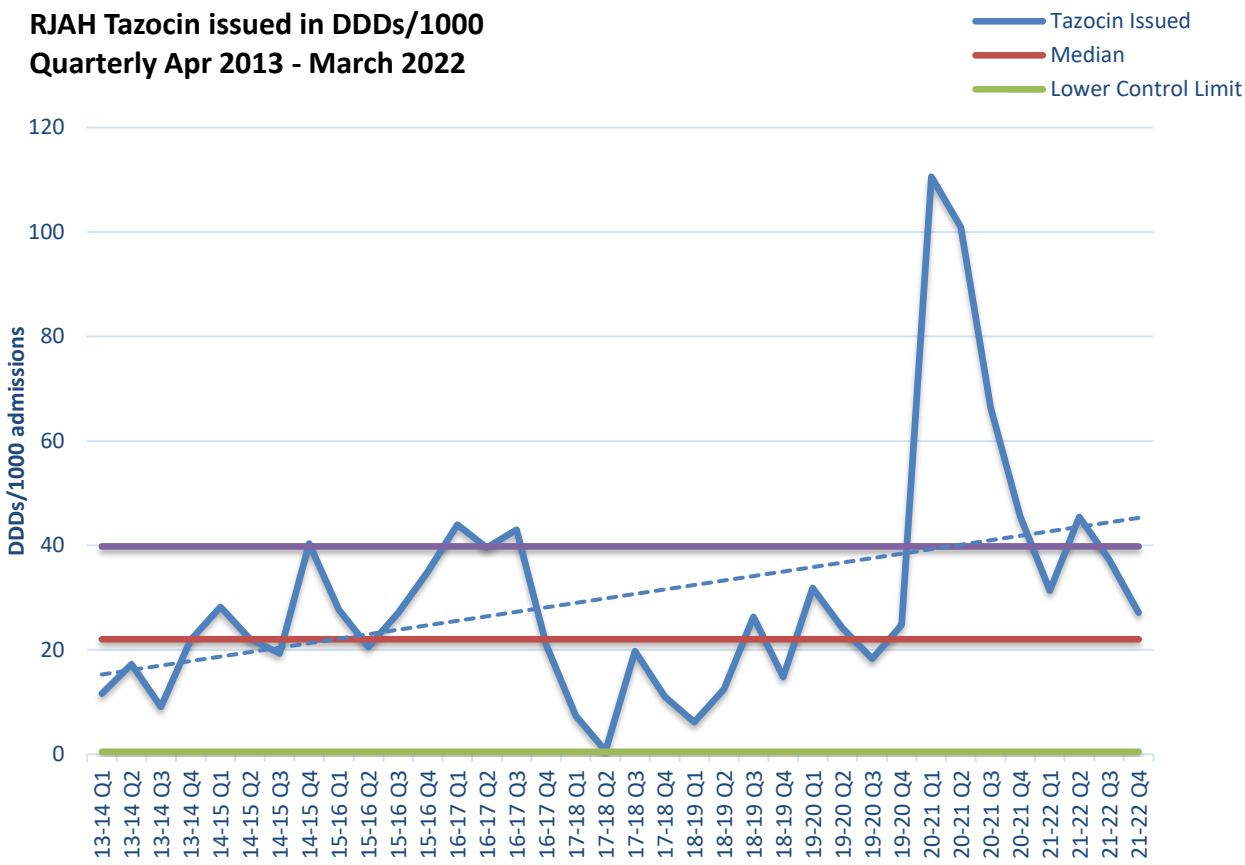
We need to continue to try to limit the use of carbapenems by ensuring that they are only prescribed if indicated in the antibiotic guideline or as per advice from a microbiologist.

Piperacillin/tazobactam (Tazocin)

Spike in usage of tazocin in Q1 2021-22 is attributed to the fact that RJAH became a trauma centre during the COVID-19 pandemic. The usage then declined but, there was another peak in usage of tazocin in Q2 2021-22 when looking at DDDs/1000 admissions although it is not clear why. Due to this a record was made of all those patients prescribed tazocin in the months following to check the appropriateness of prescribing. Although some cases were prescribed tazocin in accordance with the antibiotic policy or as per microbiology advice, the indication and rationale for some of the others were not clear. Due to tazocin being a restricted antibiotic it is vital that there is a clear and appropriate indication for its use and this will need to be fed back to the doctors.

Fortunately, the usage is starting to fall again but this will continue to be monitored.

It is important that tazocin is prescribed appropriately for the indication either according to the antibiotic policy or as per advice from a microbiologist.



4.1.2. Criterion 4: Provide suitable accurate information on infections to service users

Communication Programme

The Trust has a dedicated Communication Team. The IPC team informs the Communications Team, via email, of all outbreaks. Where these may result in media interest because of the nature or impact of the outbreak, the Communications Team is invited to meetings to provide support and guidance and to prepare proactive and reactive media statements.

The IPC and Communications Teams work together to:
- Promote IPC events.
- Update the Trust website and intranet.
- Issue media statements during outbreaks.
- Support the annual flu vaccination campaign

Trust Website and Information Leaflets

Redesign of the Trust Intranet was completed in February 2022. It features a favourite character in our hospital history, Percy the Peacock. Research showed that adopting a persona for the Intranet improved engagement. A new feature is soon to be introduced called 'Ask Percy' to help staff find information.

Further review of the Trust webpage is planned to ensure information provided to patients and visitors reflects Trust expectations to IPC precautions, in line with national guidance.

Internal and external webpages will promote infection prevention issues and guide people to performance information on MRSA, Clostridium difficile and other organisms. The IPC team have updated a range of information leaflets on various organisms that are available for patients and visitors. Paper copies are also available.

The webpage will continues to be updated by the Communications Team with advice from IPC as new information becomes available.

All patients with alert organisms are seen by the Infection Control Nurse and information leaflets are provided. The consultant microbiologist will also provide advice and support to patients and their relatives upon request.

The Trust promotes best practice in the infection prevention and control to its patients, relatives and visitors; highlighting the roles they can play in preventing infection through the website, targeted poster campaigns, and promotional events such as hand hygiene day.

4.1.3. Criterion 5: Ensure prompt identification of people who have or are at risk of developing an infection

The IPC team receive a daily report (between Mon-Fri) which identifys all positive samples sent to the laboratory as part of the Oswestry Infection Control (OIC) reporting system. This system enables the IPC team to advise and support on patient placement and management.

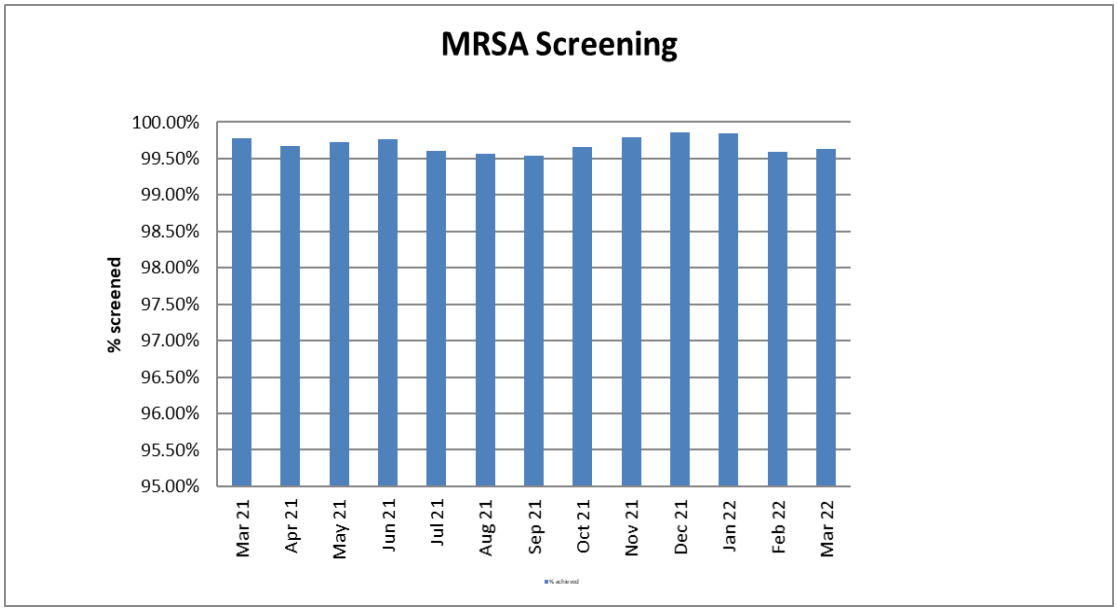
The pre-op assessment process identifies patients who are at risk of infection or require extra attention – this includes those unable to maintain their own levels of hygiene, or those with compromised skin integrity.

The graph and table below demonstrates the MRSA screening compliance which is consistently above 99%, set against a Trust target of 100%.

MRSA positive cases are alerted to the IPCT daily as part of the laboratory reporting system, which are disseminated to the relevant departments; this ensures that positive cases can be decolonised within a timely framework preventing prolonged postponements of patient surgery.

CPE screening is performed on any patients who have been transferred from inner city hospitals or have been hospitalised abroad as per national guidance.

The Infection Control Nurse/Surgical Site Surveillance Nurse provides advice and support to patients/relatives in the event of acquiring infection.



	Mar 21	Apr 21	May 21	Jun 21	Jul 21	Aug 21	Sep 21	Oct 21	Nov 21	Dec 21	Jan 22	Feb 22	Mar 22
Eligible patients	460	610	728	856	763	697	868	878	963	711	646	739	800
Screened for MRSA	459	608	726	854	760	694	864	875	961	710	645	736	797
% achieved	99.78%	99.67%	99.73%	99.77%	99.61%	99.57%	99.54%	99.66%	99.79%	99.86%	99.85%	99.59%	99.63%
Target	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Further analysis was undertaken of the decolonisation of patients who are identified as MRSA positive at preop assessment. A breakdown of pre-admission decolonisation is provided on a quarterly basis via the IPC Quarter report.

Surgical Site Surveillance (SSI)

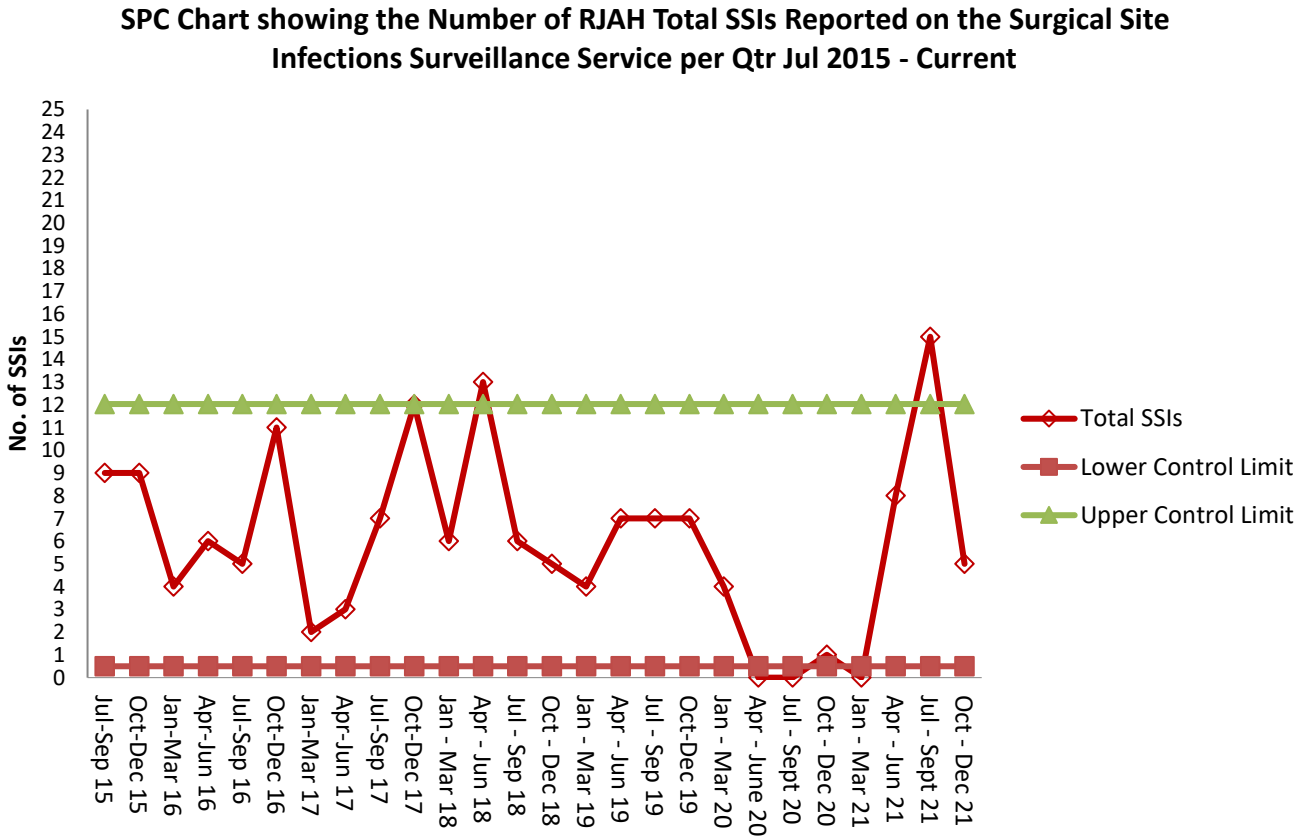
Since July 2008, all hospitals are required to have systems in place to identify patients who are included in the surveillance and later develop a surgical site infection.

The Trust submits surgical site infection data to the UK Health Security Agency (UKHSA) database on a quarterly basis.

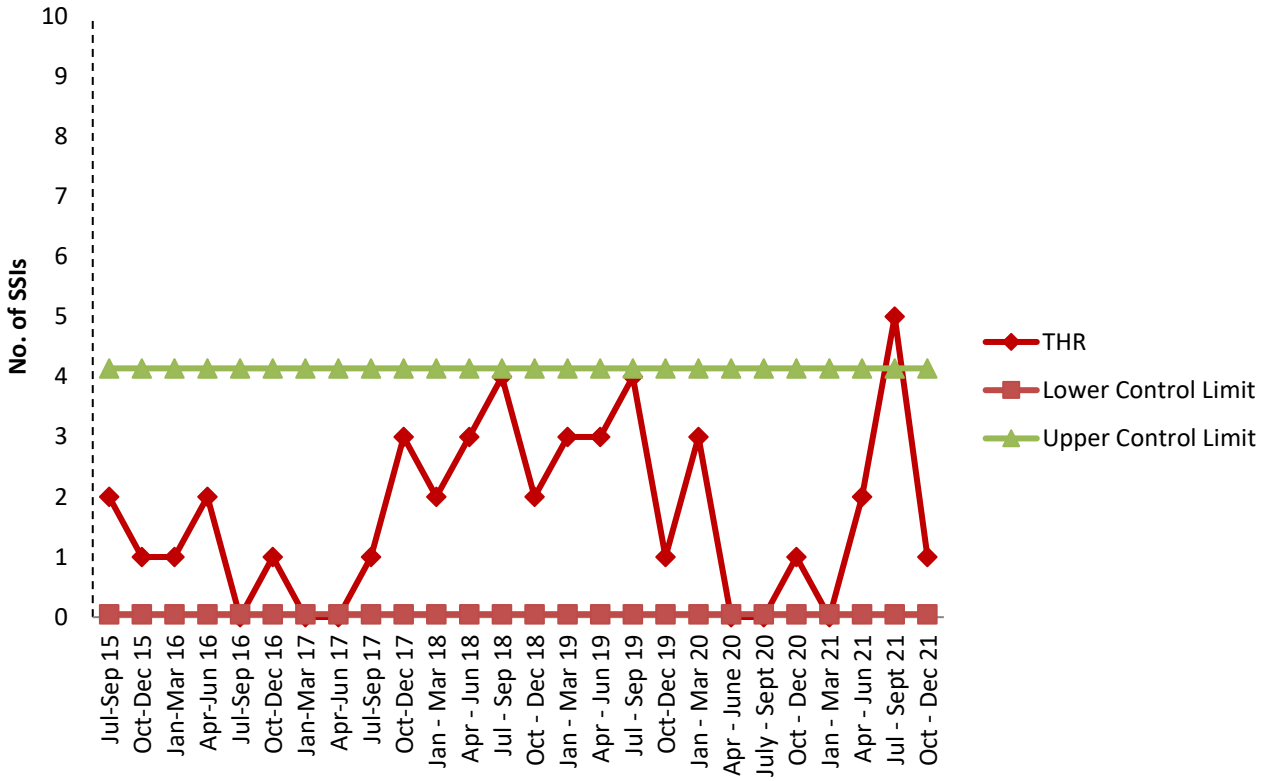
UKHSA (Formerly PHE) analyses the submitted data at quarterly intervals to identify hospitals whose SSI incidence falls above the 90th or below the 10th percentiles nationally for a given surgical category, enabling the Trust to benchmark itself against the national rate of infection.
Surgeon specific data allows the surgical site surveillance team to provide analysis of infection rates to individual surgeons as part of their revalidation and appraisal process.

From April 2021 – March 2022, data on 937 operations – 385 Total Hip Replacements (THR), 345 Total Knee Replacements (TKR) and 207 Spinal surgeries was collected by the RJAH surgical site surveillance team. During this period, there have been a total of 34 SSIs reported, 11 THR, 12 TKR, and 11 spinal surgeries.

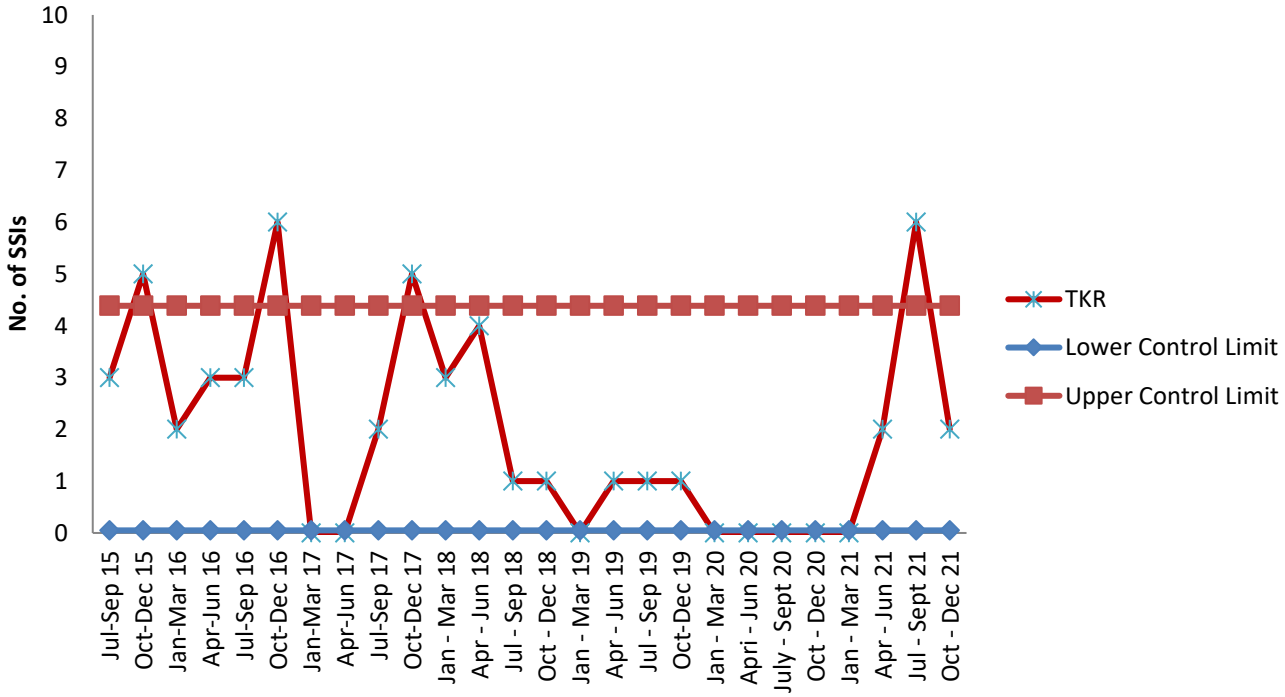
The following graphs show the breakdown in the total number of SSIs reported to UKHSA between January 2015 and December 2021.



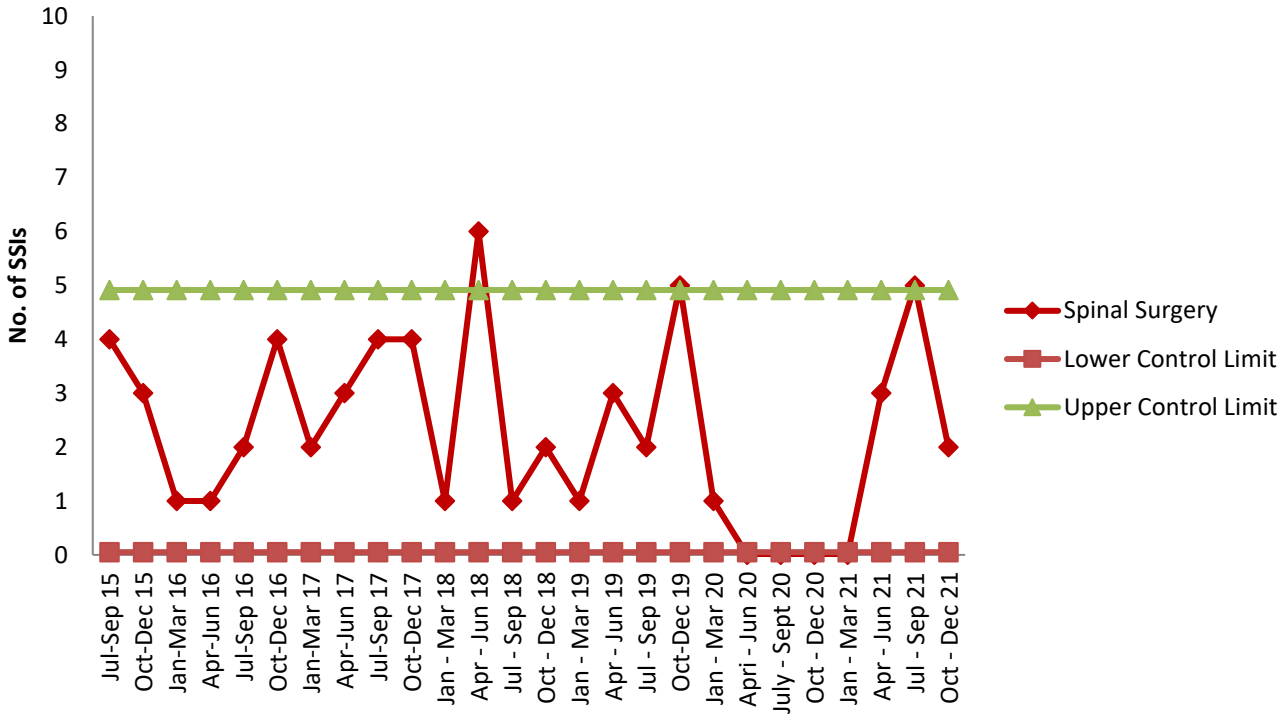
SPC Chart showing the Number of RJAH (THR) Hip Replacement SSIs Reported on the Surgical Site Infections Surveillance Service per Qtr Jul 2015 - Current



SPC Chart showing the Number of RJAH (TKR) Knees SSIs Reported on the Surgical Site Infections Surveillance Service per Qtr Jul 2015 - Current



SPC Chart showing the Number of RJAH Spinal SSIs Reported on the Surgical Site Infections Surveillance Service per Qtr Jul 2015 - Current



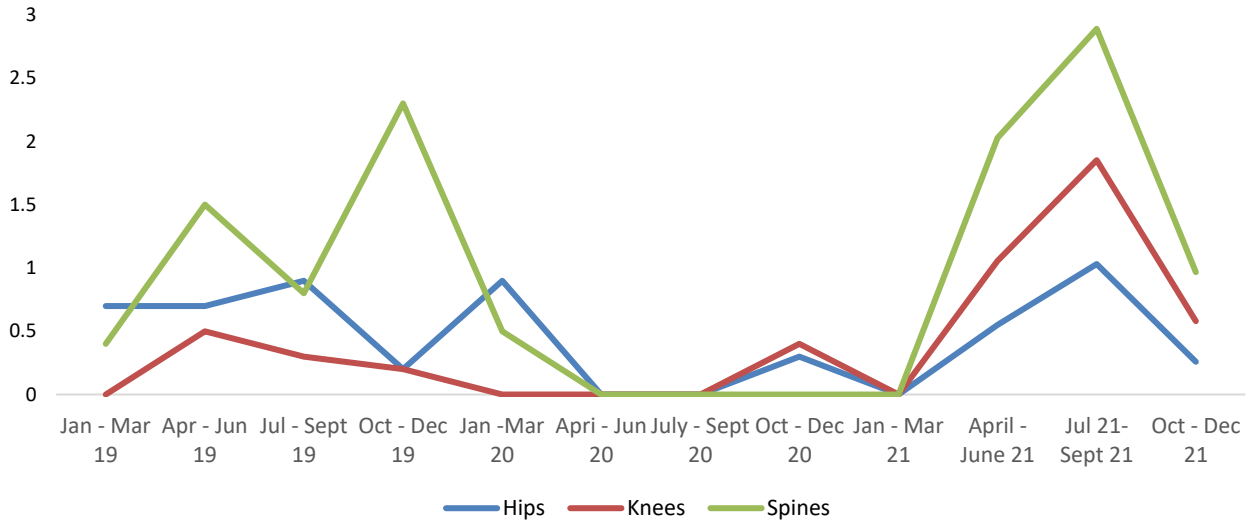
The Trust reported an increase of SSI infections for surgeries undertaken within the April -June 21 period with a total of 8 reported.
A deep dive of the SSI data since 2015 was undertaken and it was determined that this rate remained consistent with historical trends.

A further 15 infections were reported for July – September period instigating a full investigation to determine cause and contributory factors.

Investigations showed that out of 23 SSI infections reported from April 21, 15 of these were found to have MSSA growth. Specimens were sent for typing but results showed no consistent strain.

Rise of infections for July – September period resulted in rates being calculated above the national average for all three specialities generating outlier letters from UKHSA.

SSI Rates



Full review of the Surgical Site Surveillance process was undertaken by the Trust with the following improvements implemented:

- Confirmed numbers for SSIs aligned to the Trust KPI reporting for Board level oversite
- Funding secured to increase vacant Surgical Site Surveillance Nurse post increased to full time post.
- Embedded Post Infection Review process to identify critical points and contributory factors throughout the process. Promoting lessons learnt and recommendations for improvement.
- IPC QMS was expanded to capture live data for SSI's as they are confirmed.
- The OneTogether Programme was undertaken by the IPC Nurse Specialist.
- Surgical Site Infection Improvement Working Group to support Trustwide commitment to prevent surgical site infection.
- Consideration to MSSA decolonisation treatment for patients pre admission.

Infection Multi-Disciplinary Team (MDT)

The Infection MDT continues to meet weekly. The purpose of the MDT is to discuss infections and make recommendations for treatment. The Infection MDT is attended by Consultant Surgeons, a Consultant Microbiologist, the Antimicrobial Pharmacist, the Infection Prevention & Control Team, and a Consultant Radiologist.

UKHSA Surgical Site Surveillance System requirements are to report hip, knee and spinal surgery. The Infection MDT reviews patients from all orthopaedic specialities,including upper limb, lower limb, sports & spinal injuries.

A full review of the governance process for this meeting is being undertaken.

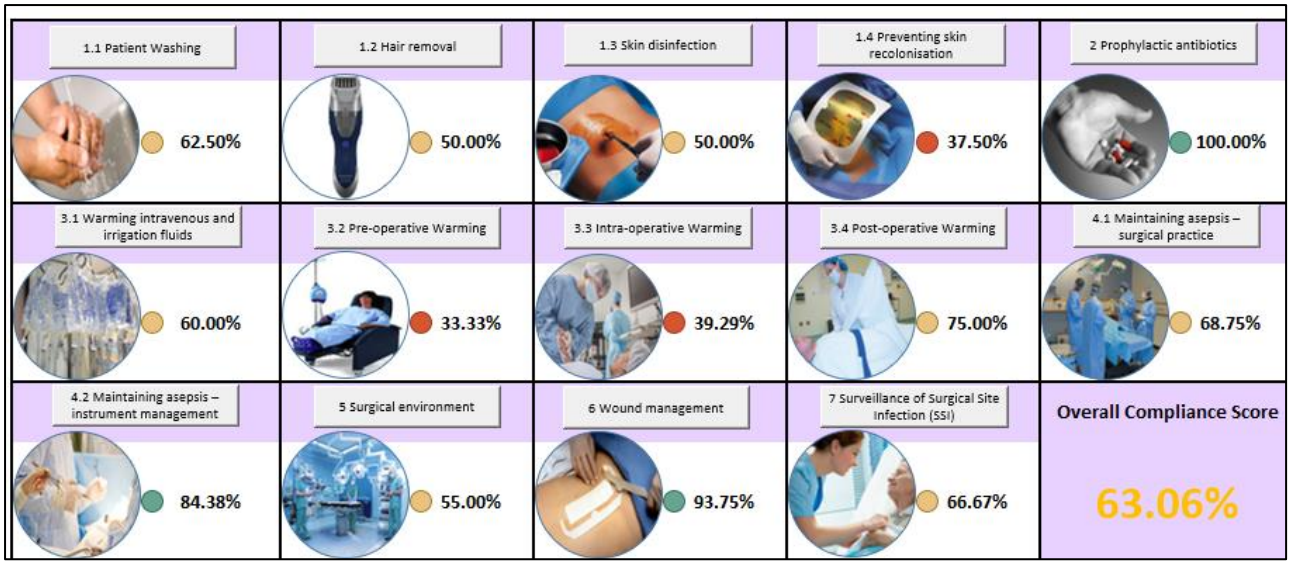
One Together

OneTogether is a partnership between leading professional organisations with an interest in the prevention of surgical site infection (SSI). The partnership has been initiated as a quality improvement collaborative with the aim of promoting and supporting the adoption of best practice to prevent SSI throughout the patient's surgical pathway.

The OneTogether assessment tool has been designed to demonstrate compliance across the surgical pathway and is set out in 7 standards:

1. Skin preparation
2. Prophylactic antibiotics
3. Patient warming
4. Maintaining asepsis
5. Surgical environment
6. Wound management
7. Surveillance of surgical site infection

The assessment was carried out in December 2021 and results showed an overall compliance of 63.06% and are summarised below:



General findings included:

- There is no defined local policy in relation to assisting patients to wash who cannot wash themselves prior to surgery. There is no shower facility on Baschurch
- No standardised practice for skin preparation. Several options being used – SOPs do not align with COSHH.
- No local policy for the use of incise drapes
- No local policy about patient warming or the warming of irrigation fluids. This is across pre-op through to post-op phase of surgical pathway. Patients are not assessed for risk of hypothermia at pre-op and are not given information about keeping warm prior to surgery.
- No regular assessment of surgical practice i.e., surgical hand antisepsis, gowning and gloving etc
- No defined process for the management of staff traffic throughout theatre and ensuring that doors to theatres are closed whilst surgery is in progress.
- Patients do not get information about the risks of SSIs at pre-op, only info relating to wound issues at discharge.

A Surgical Site Infection Prevention Working Group (SSIPWG) was set up in March 2022 which includes membership from across the surgical pathway and will be chaired by the MSK Matron. The group have developed an action plan that will be monitored on a bi-weekly basis. The group have prioritised pre-operative and intra-operative patient warming as these were the lowest scoring areas – mainly due to the lack of defined local policies. A repeat audit will be undertaken during Quarter 3 2022. Progress on actions will be monitored through IPCC committee.

Outbreaks

Each outbreak was investigated by the Outbreak Control Team, which consisted of a multi-disciplinary team that reviewed all available evidence, and reported to UKHSA and the CCG. A summary of the outbreaks for 2021-2022 is tabled below:

2021

Dept	Date declared	Outbreak Type	How many involved (staff and pts)	Themes identified/Contributory Factors	Actions Taken
Wrekin Ward	20/07/2021	COVID-19	10 Patients 0 Staff	The importance of maintaining a clutter free environment Importance of hand hygiene in between each patient interaction Doors to isolation rooms should remain closed unless risk assessment is in place i.e compromised patient safety issue from keeping doors closed	Review Trust MRSA policy Clear cleaning responsibilities between clinical and domestic to be defined Audit of MRSA decolonisation regimes IPC quality walkabout audits undertaken using the RAG rating system to determine frequency of audits dependant on the overall score Immediate identification and resolution of all environmental and estates repairs
Clwyd Ward	03/12/2021	COVID-19	7 patients 2 staff	Improved process required for checking patient mask wearing compliance No process for ventilation (opening windows regularly) One patient not vaccinated	Updated patient mask wearing flowchart created Review of ventilation by H&S Officer Ventilation chart created – clinical areas opening windows 10 mins per hour. Regular action item for future outbreak action logs
Pharmacy	27/12/2021	COVID-19	5 staff	Social gathering during Christmas period Staff working within the same area in Pharmacy department Poorly ventilated break room	Review of social distancing in break room and signage displayed Review of ventilation Encourage staff to work from home where possible
Gladstone	27/12/2021	COVID-19	11 patients 16 staff	RCA to be completed – outbreak ongoing	Declutter of ward New lockers installed for patient belongings Donning and doffing training for staff Declared as a serious incident
Sheldon	30/12/2021	COVID-19	11 patients 10 staff	RCA to be completed – outbreak ongoing	Purchase of more Air Sentry devices to aid ventilation Declared as a serious incident

2022

Dept	Date declared	Outbreak type	How many involved (staff and pts)	Themes identified/Contributory Factors	Actions Taken
Doctor's Residence	7/1/2022	COVID-19	5 staff*	*Linked to Gladstone (declared during Q3). Not treated as separate outbreak	Designated on call rooms per shift now available
Wrekin	12/1/2022	MRSA	3 patients 1 patient admitted with MRSA 2 patient acquisitions	No clear rott cause identified – several contributory factors including IPC compliance issues	
Wrekin	3/1/2022	COVID-19	1 patient 2 staff	No clear root cause identified	
Alice	24/01/2022	COVID-19	2 patients 1 parent 7 staff	Poor PPE compliance from family members who were symptomatic when visiting Unavoidable due to family non-compliance and non-believers of COVID-19	Patient isolated appropriately. Mother isolated with child inside room – meals provided to reduce transmission risk
Gladstone	29/3/2022	COVID-19	1 patient 3 staff	High prevalence of COVID-19 in the community Envornmental clutter	Storage solutions in place, ward re-fit Increase in cleanliness technican cover (10-4 shift)
Kenyon	25/03/2022	COVID-19	3 patients 3 staff	Lack of patient mask wearing when moving around ward Lack of social distancing	Additional break spaces made available for staff Encouraging patients to wear masks

4.2. Serious Incidents/ Periods of Increased Incidence

There were 2 serious incidents reported during Quarter 3 (Dec) 2021/22.

Gladstone Outbreak SI

In total 11 patients and 11 staff tested positive for COVID-19. All the patients affected contracted COVID-19 15 days (or later) following admission. The investigation found no single clear identified cause of the outbreak, particularly given the level of prevalence in the community, but identified Trust factors which potentially contributed to the outbreak. Infection prevention and control contributory factors included:

- Cluttered patient areas (e.g., locker tops) meant that wiping down surfaces was compromised.
- Severely cluttered staff working areas with a large amount of paper records and storage meant that wiping down was a very large task which could not be completed

- Lack of awareness of the cleaning roles and responsibilities manual
- Sluice room needs upgrading and new macerator.
- Patient lockers needed upgrading.

Immediate identification and timely completion of estates work in relation to infection prevention included:

- Reflooring of corridors
- Redecoration of walls & woodwork within side rooms and bays where required.
- Replacement of handwash basins with HTM compliant IPS units.
- Replacement floors bays E, F & G
- Refurbishment of Storeroom including new floor and wall coverings and new cupboards.
- Refurbishment of Sluice Room including new flooring and hygienic cladding.

The IPC team responded to staff concerns around lack of understanding in relation to PPE, and a programme for donning and doffing refresher was completed that included students and staff from external care agencies.

The ward has invested in new patient lockers (that are located on the corridor) in order to create more space for patients' belongings and reduce the amount of items stored at the patient bedside. Patients are also being encouraged to keep their bed spaces tidy to facilitate cleaning and the prevention of infection.

The IPC team are working with the ward staff to develop a guide that will outline practical tips for outbreak management, and this will be shared across all wards once completed.

Sheldon outbreak SI

A total of 11 patients and 11 staff tested positive for COVID-19 and it has been determined that all eleven of the patients contracted COVID-19 whilst admitted under the care of RJAH.

Although there was no single clear identified cause of the outbreak, the resulting investigation found that there were several factors which could have contributed. These included increased community prevalence, Christmas period with prolonged holiday period and increased socialisation within the community, poor ventilation, reduced staffing numbers due to increased sickness, which included a heavy reliance on temporary staff and some evidence of estate in need of repair. There were reports of some staff not always taking the opportunity to perform hand hygiene on some occasions.

Full details of both serious incidents can be found in the respective SI report papers.

4.2.1. Criterion 6: Systems 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.

Training data not available at the time of this report.

The IPC team deliver numerous training sessions year round, these have included programme of mandatory sessions and corporate induction days. Additional training sessions provided by the IPCN include:

- Induction training for all clinical and non-clinical staff (separate sessions for junior hospital doctors).
- All new/rotational doctors receive a short induction session.
- All volunteers receive a short training presentation and hand hygiene education.
- The team is part of the work experience programme run by the Trust on a quarterly basis.
- Provided 'train the trainer' education for link practitioners.
- Engage in the work experience programme based at RJAH
- Engage in the Trust preceptorship programme
- Provided workshop training sessions at ward training days
- Face to face training for groups of staff such as:
  - Catering
  - Porters
  - Domestics
  - Estates Maintenance staff
  - Volunteers

Going forward the Trust has invested in a IPC Support Worker to assist the IPC Team with training and surveillance.

4.2.2. Criterion 7: Provide or secure adequate isolation facilities

The Trust has always been able to accommodate patient isolation with minimal disruption to the running of the wards. A risk assessment tool is available to help staff in making these decisions and ensuring that practice is consistent.

The IPC team work closely with ward staff and Clinical Site Managers to ensure the most effective use of side rooms according to risk. Due to the increase of patients carrying antibiotic resistant organisms requiring siderooms for isolation, a door replacement programme was commenced to enable patients with the same carriage to be cohorted in a bay with the doors acting as a barrier as well as a reminder for staff to implement transmission based precautions.

To date doors have been installed to the following areas:

- Sheldon
- Wrekin
- Kenyon

There are three outstanding doors awaiting installation to bays on Gladstone Ward.

The Trust has 1 negative pressure sideroom to care for patients with multidrug resistant infections.

4.2.3. Criterion 8: Secure adequate access to laboratory support as appropriate.

Laboratory services for RJAH are located at SaTH (Royal Shrewsbury Hospital & Princess Royal Hospital). The Microbiology Laboratory has full Clinical Pathology Accreditation (CPA).

The Infection Prevention Nurses work closely with the Consultant Microbiologist. The management of prosthetic joint infection is challenging, the microbiology ward round is held once a week with the consultant microbiologist, infection control nurse and the antimicrobial pharmacist. Each patient is reviewed and requires a tailored approach of antimicrobial prescribing due to the microorganisms grown on culture.

The microbiology laboratory send a daily list of all positive samples including sensitivities. This enables all patients to receive the appropriate treatment/antibiotic therapy and prompt isolation if required.

4.2.4. Criterion 9: Have and adhere to policies, designed for the individual's care and provider organisations that will help to prevent and control infections

Infection Prevention and Control Policies and Standard Operation Procedures (SOP) are reviewed and agreed at the Infection Prevention & Control Committee.
IPC currently operates with 1 Infection Prevention & Control Policy, A framework of Infection Prevention & Control and specific IPC overarching operating procedures.

Policies Reviewed/Published in 2021- 22	
Coronavirus Policy	Viral Haemoraggic fever (VHF)
Streptoccocal Infections	Outbreak Management Policy
Vancomycin Reistant Enterococci (VRE)	Surgical Site Infection Policy

The IPC Team made good progress in reviewing the backlog of policies and procedures in 2021/22.

The QMS includes a policy tracker and matrix and provides a robust system for the review and update of policies and procedures. The matrix serves as a working planner and provides dashboard data to the Infection Control & Cleanliness Committee for assurance. The Coronavirus policy is regulary monitored and updated to relect the changes in national guidance.

4.2.5. Criterion 10: Providers have a system in place to manage the occupational health needs and obligations of staff in relation to infection.

TP Health Occupational Health & Employee Well-Being

TP Health is committed to the protection of all Trust employees as an essential part of Infection Control policies and guidance.

In line with the Health and Social Care Act 2013 and Department of Health Guidelines, TP Health have arrangements in place for assessing the immunisation status of all Trust employees as well as regularly reviewing the immunisation status of existing healthcare workers and providing vaccinations as necessary and in accordance with the Green Book to reduce the risk and spread of vaccine-preventable disease.

There is a current backlog of Mantoux and BCG vaccinations due to previous vaccine shortage, Covid Pandemic and limited room availability at RJAH and SATH, which is where the second appointment is carried out.

Although we now have a department at SATH again, some of RJAH staff are unable or unwilling to travel.

Blood Borne Virus Exposure

Blood borne virus exposure incidents or injuries may represent a significant risk to staff working in healthcare environments.

Under Health and Safety Legislation, TP Health work collaboratively with the Trust to ensure their responsibility for the health and safety of staff in relation to preventing, reducing, and controlling the risks of healthcare associated infection and management of occupational exposure to blood borne viruses and post exposure prophylaxis.

TP Health are responsible for the assessment and follow up of all blood borne virus exposure incidents occurring during departmental opening hours and for the follow up of those exposure incidents occurring out of hours in emergency departments.

April 2021 to March 2022 exposure incidents reported to TP Health was a total of 14, which is the same number as the previous 12 months. 10 of the cases were due to a percutaneous injury.

Safer Sharp Regulations

The Health and Safety (Sharp Instruments in Healthcare) Regulations came into effect in May 2013 requiring employers to use safer sharps, which incorporate protection mechanisms to prevent or minimise the risk of accidental injury.

TP Health can see a reduction of blood borne virus incidents over the past 3 years since RJAH started using safety sharp.

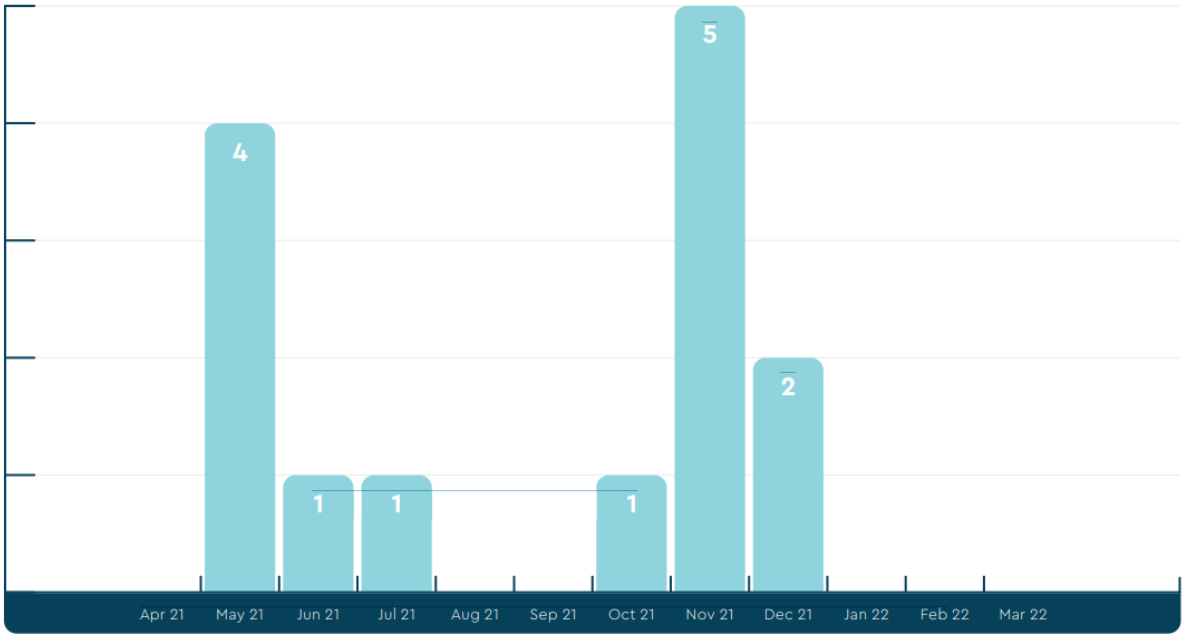
There were 33 reported needlestick injuries in 2019/20 compared with 14 in 2021/22.

COVID-19

RJAH have been provided with numerous updated Covid Risk Assessments from TP Health to support in the management of staff within the trust. The most recent Covid Risk Assessment was sent to HR on 5th May 2022.

The graph below is a breakdown of reported Blood Borne Virus incidents in the last 12 months -

April 2021 to March 2022



Conclusion

Overall, our success is measured by our compliance with the Health Act, which encompasses all aspects of infection prevention and control, including the QMS, environment, cleaning, training and policies to protect patients and staff.

The IPC team have reflected in what has been another challenging year as we responded to the global COVID-19 pandemic. The team have felt an overwhelming sense of responsibility to comprehend, disseminate and implement guidance that has changed frequently, yet have continued to remain focussed on providing support to patients and staff in order to aid in the prevention of transmission of infection.

Effective collaboration between IPC and Estates/Facilities team has resulted in significant improvements over the last year.

Progress for the BAF continues to be montored via the IPC Quality Management System and live dashboard data presents Trust position at Infection Control & Cleanliness Committee.

We have also completed 93% of our programme of work. Incomplete tasks will be carried forward into 2022-23 IPC Programme of works.

In response to the MRSA outbreak declared in July 21, NHSE/I and CCG visited the Trust on a number of occasions to seek assurance that concerns had been actioned and sustainable improvements made. In February 22 an inspection conducted by NHSE/I could not offer the assurance required and therefore discussions between the Trust and NHSE/I commenced regarding the level of oversite and input that support would be required from NHSE/I to ensure sustainable improvements for IPC are achieved.

RJAH was escalated to Red on the NHSE/I IPC Matrix in August 2021. NHSE/I have continued to provide support to RJAH and the IPC team and alongside colleagues from partner organisations, have visited the site regularly. Following the last visit on the 11th of February 2022 there were heightened areas of concern identified with IPC practice and governance. The Trust therefore remains red on the NHSE/I IPC matrix with immediate remedial action required. The Trust has been moved into SOF 3 of the single oversight framework and issued with enforcement undertakings.

Additonal support received from the Clinical Commisioning Group (CCG) and NHSE/Ihas proved invaluable during these difficult times.

Sara Ellis-Anderson: Director of Infection Prevention and Control (DIPC)

Hayley Gingell Infection Prevention and Control Team

Sue Sayles Infection Prevention & Control Lead Nurse

Anna Morris Infection Prevention & Control Nurse Specialist

June 2022

Key Areas of Focus for 22/23

- Achieving UKHSA National & CCG Infection targets
- PIRs for all Surgical Site Infections
- New secure SSI database for data collection.
- Embrace & utilise available digital platforms
- Auditing of satelite clinics to be added to the QMS
- Expand the administrative resource within the Team .

Appendix 1: Acronyms

AE (D)	Authorised Engineer (D)
AMS	Antimicrobial Stewardship Committee
ANTT	Aseptic Non Touch Technique
CAUTI	Catheter-Associated Urinary Tract Infection
CCG	Clinical Commissioning Group
CPE	Carbapenemase-producing Enterobacteriaceae
CQC	Care Quality Commission
DIPC	Director of Infection Prevention & Control
E.Coli	Escherichia coli
EPR	Electronic Patient Record
ESBL	Extended Spectrum Beta Lactamase
HCAI	Healthcare Associated Infection
HPV	Hydrogen Peroxide Vapour
HTM	Health Technical Memorandum
IPC	Infection Prevention & Control
IPCC	Infection Prevention & Control Committee
IPCT	Infection Prevention & Control Team
ICD	Infection Control Doctor
IV	Intravenous
KPI's	Key Performance Indicators
MDT	Multi Disciplinary Team
MRSA	Methicillin-resistant Staphylococcus aureus
MSSA	Methicillin-sensitive Staphylococcus aureus
PALS	Patient Advice and Liason Service
PHE	Public Health England
PIR	Post Infection Review
PLACE	Patient Led Assessment of the Care Environment

Appendix 1: Acronyms Continued:

RCA	Root Cause Analysis
RSH	Royal Shrewsbury Hospital
SATH	Shrewsbury and Telford Hospitals
SSI	Surgical Site Surveillance
SNAHP	Senior Nurse and Allied Health Professionals
SOP	Standard Operating Procedure
TSSU	Theatre Sterile Services Unit
WTE	Whole Time Equivalent

Appendix 2: Glossary

Bacteraemia	The presence of bacteria in the blood without clinical signs or symptoms of infection
C. difficile	or C. diff is short for Clostridium difficile. It is a type of bacteria (germ) which less than 5% of the population carry in their gut without becoming ill. It is normally kept under control by the 'good' bacteria in the gut. However, when the good bacteria are reduced, e.g. by taking antibiotics, C. difficile can multiply and produce toxins (poisons) which can cause

	diarrhoea. The C. difficile bacteria form spores (germs that have a protective coating). These spores are shed in the diarrhoea of an infected person and can survive for a long time in the environment. C. difficile is highly infectious and can be spread from patient to patient unless strict hygiene measures are followed.
E coli	is an organism we all carry in our gut, and most of the time it is completely harmless. It is part of the coliform group of bacteria – often known as Gram Negative bacteria. Most strains do not cause any symptoms while being carried in the gut. Instead E coli forms part of our "friendly" colonising gut bacteria. However when it escapes the gut it can be dangerous. E coli is the commonest cause of blood stream infections (bacteraemia) in the community. The most frequent problem it causes is a urinary tract infection, but it can also cause infections in the abdomen such as gallbladder infections or following perforations of the bowel.
HCAI	Health Care Associated Infection. An infection acquired as a result of receiving treatment in a health care setting.
MRSA	or Methicillin Resistant Staph aureus, is a highly resistant strain of the common bacteria,Staph aureus. Bloodstream infections (bacteraemia) cases are the most serious form of infection where bacteria, in this case MRSA, escape from the local site of infection, such as an abscess or wound infection, and spread throughout the body via the bloodstream. All cases of MRSA detected in the blood are reported by the trust.
MSSA	or Methicillin Sensitive Staph aureus, is the more common sensitive strain of Staph aureus. Up to 25% of us are colonised with this organism. Mostly it causes us no problem but it is a frequent cause of skin, soft tissue and bone infections. As with its more resistant cousin, MRSA, sometimes the infection can escape into the bloodstream producing a "bacteraemia" i.e. bacteria in the blood. Unlike MRSA, the majority of the infections will be acquired in the community, and are not associated with health care. However, some may arise as a consequence of health care, and like MRSA, it can arise from infected peripheral and central intravenous lines and other health care interventions. We were asked by the Department of Health in 2011 to report all MSSA bacteraemia cases, whether acquired in the community or in hospital, so that we can review the sources and identify potentially avoidable cases. So far no targets have been set. However, we can compare ourselves with other trusts and put in interventions to further reduce infections.