0.0 Reference Information

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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

Despite the impact of dealing with the global pandemic of COVID-19 2020/21 was 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).

Successes included:

- The prevention and control of COVID-19
- Meeting our MRSA bacteraemia target of zero for the fifteenth year.
- No cases of C.*difficile* infection.
- 33.3% Reduction in HCAI reportable infections
- 30% Reduction in needle stick injuries

The increased flu vaccination uptake of 82.96% from 66.38% during 2020/21 against a national target of 90%, demonstrated the hard work of our lead Practice Nurse Facilitator to raise awareness of the benefits of the flu vaccination whilst working alongside Team Prevent and additional nurse vaccinators, improving the accessibility and availability of the flu vaccine to all staff.

The work of the IPC Team was significantly impacted by the COVID-19 pandemic from mid March 2020. RJAH implemented and responsded to national guidance and recommendations in ceasing elective work reconfiguring acute services with orthopaedic trauma capacity.

2.3. Conclusion

The Board is asked to:

(a) To note the report

(b) To discuss and determine actions as appropriate

Figure 1

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 Divisional 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).

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).

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.

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. She 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
- Surgical Site Surveillance Nurse: (0.6 WTE) Band 5 (Current vacancy)
- Infection Control Analyst (0.8 WTE): Band 4
- The Infection Control Doctor (0.4 WTE)
- Infection Prevention & Control Modern Apprenice (1 WTE)

A successful business case resulted in the appointment of an additional band 6 Infection Control Nurse Speacilist, a band 5 Surgical Site Surveillance Nurse and a full time Infection Control Administration Apprentice

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 (IPCC) is a multidisciplinary Trust committee with outside representation from Public Health England and the CCG. The IPCC oversees the activity of the IPCT and supervises the implementation of the infection control programme of work. The IPCC met every 3 months during 2020/2021. Extra ordinary meetings were arranged in May 2020 and January 2021 in response to changes in guidance for managing COVID-19.

Attendance at IPCC

	Apr 2020	*July 2020*	*Oct 2020*	*Jan 2021*
DIPC	✓	✓	✓	✓
ICD	✓	✓	✓	✓
IPCN	✓	✓	✓	✓
Ass. DON	✓	✓	✓	*apol*
Antimicrobial Pharmacist	✓	*apol*	*apol*	✓
Facilities Manager (Estates & Facilities Representation)	✓	✓	✓	✓
Matron (Medicine)	✓	✓	*apol*	*apol*
Matron (Surgery)	✓	✓	*apol*	✓
Matron (Theatre & OPD)	✓	✓	✓	*apol*
Theatre Manager	*apol*	*apol*	*apol*	*apol*
Head of IPC SCCG & TWCCG	✓	✓	*apol*	✓
Clinician Rep	*apol*	✓	✓	✓
TSSU Rep	*apol*	*apol*	*apol*	*apol*

The IPC Programme of Work

The IPC programme of work 2018-21 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, using a template set by the Shropshire & Telford & Wrekin IPC Lead. The Trust has achieved full compliance on all the standards with the exception of having a fit-for-purpose IT system to support surveillance activity. The identification of a most cost-effective solution utilising internal systems and exploring local solutions continues to be required. SaTH progressed IC Net through their business case with a view of wider local health economy purchase. This has been highlighted and reported on the Risk Register.

Infection Prevention and Control Working Group

The working group meets bi-monthly and continues to improve communications between Infection Control, operational areas and Estates & Facilities by identifying and resolving issues in line with Trust priorities. This group reports to the Infection Prevention & Control and Cleanliness Committee.

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 Nurse Attendance

There was a reduction in face to face meetings within the Trust due to the requirement for social distancing, however meetings did take place on MS Teams, and if it was not possible to hold a link meeting on MS Teams, an IPC update was disseminated. Attendance has been highlighted to the Senior Nurse Allied Healthcare Professionals (SNAHP) meeting.

Ward	*April 20*	*June 20*	*Aug 20*	*Oct 20*	*Feb 21*
Ludlow					
OPD	✓			✓	
POAU	✓				
Powys	✓				
Clwyd					
HDU					
Theatres		✓			✓
Anaesthetics					
Recovery		✓		✓	
Oswald	✓				
Radiology					
TSSU					
Gladstone			✓		

Wrekin			✓		
SIU OPD			✓		
Kenyon	✓			✓	
Alice					
Sheldon	✓	✓	✓	✓	
Therapies	✓				
Baschurch		✓			
ORLAU		✓	✓		✓
Library personal	✓		✓		✓
Orthotics				✓	✓

CQC Assessment/ 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.

Version 1 of the BAF was presented to the CQC in June 2020 in which the Trust had provided the required evidence of the 10 Key Lines of Enquiry.

The BAF has been regularly monitored and updated to reflect the changes in national guidance. Version 2 was updated in December 2020 and version 3 in February 2021, with all updates presented at the Infection Prevention and Control Committee ,Quality and Safety Committee and subsequently presented to the Board .

The Trust has undertaken a thorough assessment of infection prevention control across all services, since the pandemic of Covid-19 was declared.

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

COVID-19 IPC Coronavirus Reponse

The work of the IPC Team was significantly impacted by the COVID-19 pandemic from mid March 2020.

The IPC Team took a leading role in screening, isolating and cohorting patients.
Infection and Prevention and Control measures included:

- Early recognition/reporting of cases
- Early assessment/triaging of cases
- Maintaining separation in space and/or time between suspected and confirmed COVID-19 patients
- Educating staff and patients about Standard Infection Control Precautions (SICPs)
- Prompt implementation of Transmission Based Precautions (TBPs) including the appropriate use of Personal Protective equipment (PPE) to limit transmission.
- Restricting access of visitors to the trust.

• Participation in the planning and implementation of strategies for surge capacity.

An IPC COVID-19 working group was set up in April, chaired by a Consultant Anaethetist. The group met on a weekly basis to discuss operational issues and guidance and had representatives from all areas within the Trust and fed through to the Silver/Gold command structure in line with the Major Incident Plan Policy. The group continued to meet weekly until October when it was reduced to a monthly basis once local systems had been implemented.

Following the release of national guidance the Trust was divided into green, amber and red zones and an isolation ward was identified for positive/suspected cases of COVID-19. As the guidance was updated the Trust introduced patient green, amber and red pathways. Close collaboration with Estates and Facilities was maintained throughout the pandemic to ensure the ongoing provision of a clean, safe environment.

The following road map shows a detailed timeline for the Trusts journey throughout the COVID-19 pandemic:

RJAH COVID-19 Road Map

March 20

- Public Health England published IPC guidance to incorporate PPE requirements
- Trust ceased its elective surgery to acccept trauma patients from SaTH
- Trust reported its first COVID positive patient.
- Introduction of Microsoft Team to allow meetings to be undertaken virtually.
- Restricted visiting was introduced.
- External company was commissioned to perform fit testing for staff.
- COVID-19 Swabbing commenced for admissions.
- Working from home commenced.
- Staff sheilding

April 20

- PHE released further updates the IPC guidance to include clarity on PPE use for different clinical scenarios.
- The Trust took part in a Point prevalence Survey for asymptomatic carriage for staff and patients.
- First COVID-19 outbreak declared on Sheldon Ward Reported as a serious incident.
- The Trust introduced PPE champions to provide face to face training and support across the wards and departments.
- B6 Theatre Sister redeployed to IPC team for additional support
- NHS supply chain began to take lead on the supply of PPE
- IPC COVID-19 meeting was set up to discuss operational issues and guidance and chaired by a Consultant Anaesthetist. This group fed into Silver Command and continued to meet on a weekly basis until October when it was reduced to monthly once local systems had been implemented.
- Absence reporting line for staff commenced.

May 20

- Beds removed to ensure 2m distancing in bays.
- Estates & Facilities took on the management of PPE and an electronic system was introduced to monitor supplies from the national chain.
- Two Healthcare Assistants became Infection Control, Train the Trainers for Care Homes across Shropshire, Telford & Wrekin.
- Hand Hygiene and Bare Below the Elbow audit tool adapted to include Personal Protective Equipment (PPE) to capture compliancy throughout the Trust,
- PHE issued a Board Assurance Framework with key lines of enquires relating to COVID-19.

June 20

- Nominated staff members received comprehensive Fit Testing training to allow testing to be undertaken in-house. (Train the Trainer).
- Antibody testing commenced for staff.
- COVID-19 and Social Distancing checklists introduced to monitor issues relating to PPE and social distancing in all areas.
- Front door manned with temperature checks and reminder to wear mask/face covering when entering the Trust
- Introduction of surgical masks to be worn by clinical staff within the Trust.

July 20

- CQC visit to assess the IPC Board Assurance Framework and associated evidence relating to COVID-19.
- Introduction of Social Distancing Observational Tool
- Coronavirus Policy Introduced in line with new guidance released by PHE: Introduction of the COVID 19 rapid guideline: arranging planned care in hospitals and diagnostic services.
- Limited patient visiting introduced.

August 20

- Updated PHE guidance changed from zones to red/amber/green care pathways.
- Trauma returned to SaTH
- Business case agreed to expand the IPC Team.
- Staff returned from sheilding

September 20

- Recommenced elective surgery
- Patients were required to wear surgical masks on Amber & Red pathways.
- All staff clinical/non clinical required to wear a surgical mask.

October 20

- COVID-19 Outbreak on Pre Op Assessment Unit
- Band 6 Infection Control Nurse Specilaist appointed.

November 20

- Lateral Flow Tests introduced for all staff
- COVID-19 Outbreak Outpatients
- COVID-19 Outbreak on Powys Ward& HDU
- Sheilding for extremely vulnerable staff members

December 20

- COVID-19 Outbreak on MCSI (resettlement)
- COVID-19 Outbreak TSSU
- COVID-19 Outbreak Outpatients 2
- COVID-19 Outbreak Radiology
- IPCN took part in 'Drive it down for Christmas' campaign for Shropshire Council
- Staff returned from Sheilding

January 21

- COVID-19 Outbreak on Sheldon
- COVID-19 Outbreak MCSI
- Set up of the Vaccination Centre First vaccination administered to a member of public 7th January.
- COVID-19 Outbreak on Sheldon Ward
- Introduction to patients wearing surgical masks if tolerated.
- Restricted patient visiting reintroduced.
- Clinically extremely vulnerable staff shelding

February 21

- IPC Modern Apprentice was appointed.
- Additional hand hygiene training device was purchased.

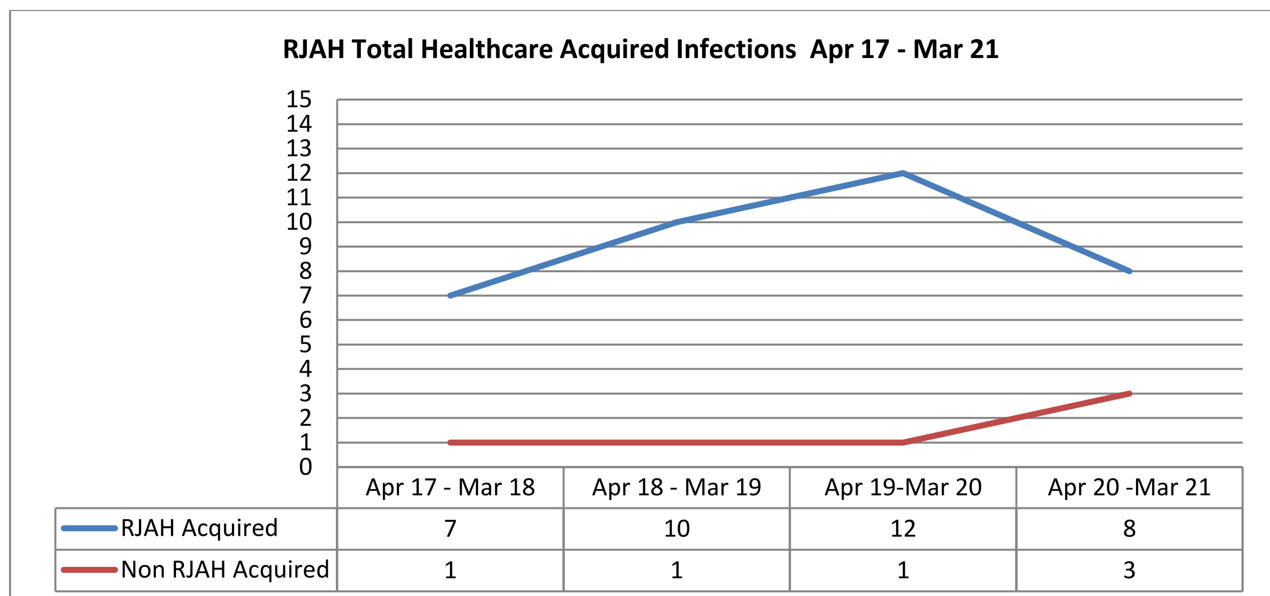
March 21

- Limited patient visiting resumed.
- IPC Team updated the Hand Hygiene video.
- Staff returned from Sheilding

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.



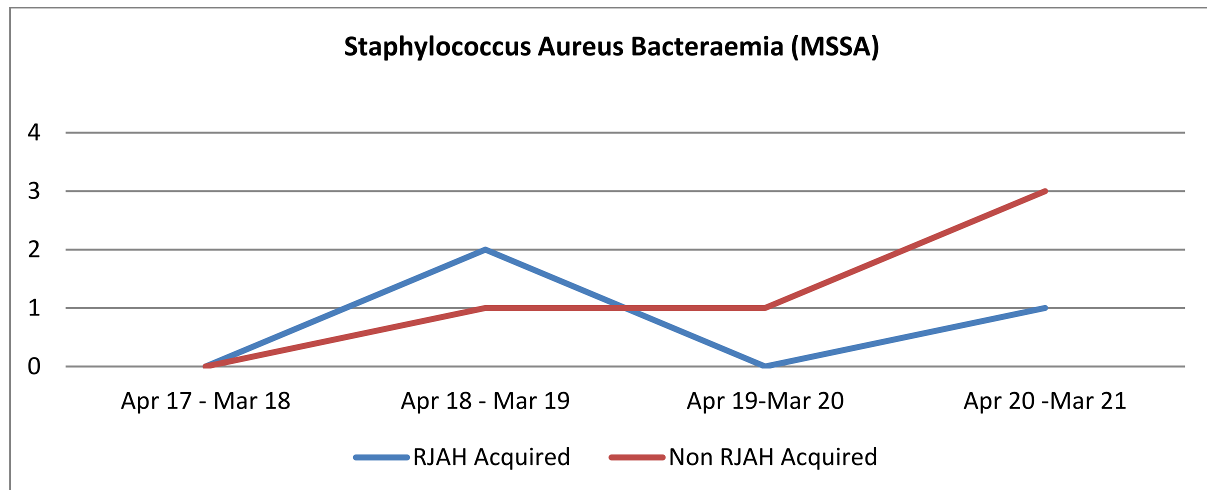
	Apr 17 - Mar 18	Apr 18 - Mar 19	Apr 19-Mar 20	Apr 20 -Mar 21
RJAH Acquired	7	10	12	8
Non RJAH Acquired	1	1	1	3

The graph above shows a 33.4% reduction in the total number of RJAH acquired Healthcare Associated Infections for 2020/21 from the previous year. It should be noted that there was a significant reduction in elective surgical activity due the response to the COVID-19 pandemic.

Methicillin Resistant Staphylococcus Aureus Bacteraemia (MRSA)

The Trust is in its 15th 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.

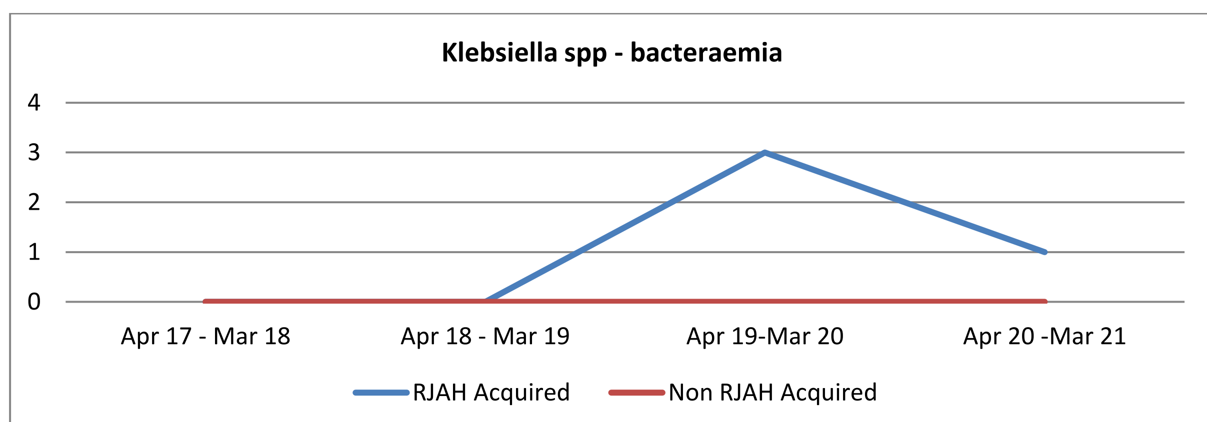
Methicillin Sensitive Staphylococcus Aureus (MSSA)



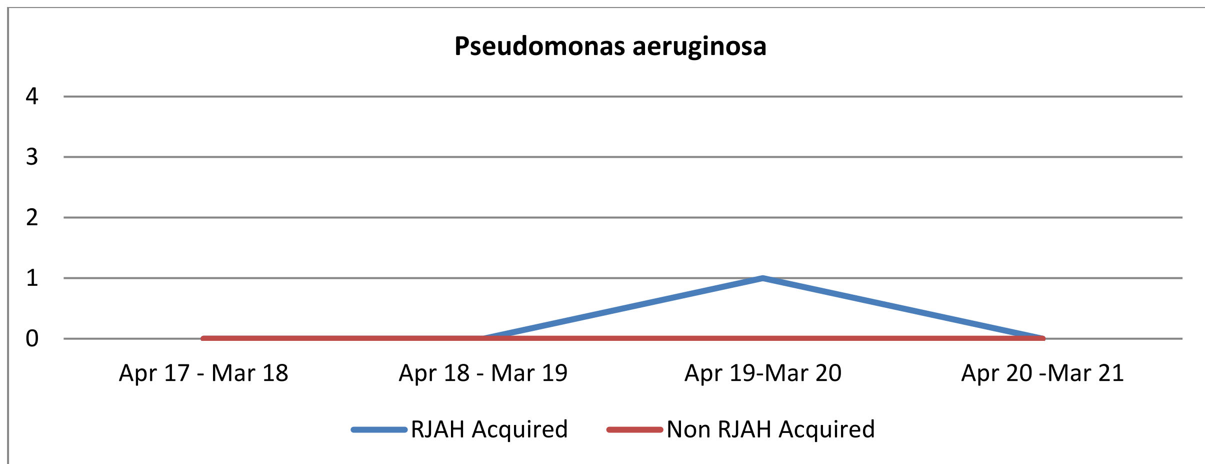
In 2020-2021 the trust reported 4 cases of MSSA bacteraemia, only one of these was RJAH acquired. This patient had a positive MSSA bloodstream infection at RSH following bladder surgery and subsequently developed staphylococcal infections in a spinal abscess, shoulder joint and total knee replacement. The patient was transferred to RJAH for drainage of the spinal abscess and a repeat blood culture was taken. This is a continuing episode of MSSA infection. The patient has been reviewed by the consultant microbiologist and treated with multiple surgical washouts and intravenous antibiotics.

Gram-Negative Blood Stream Infections

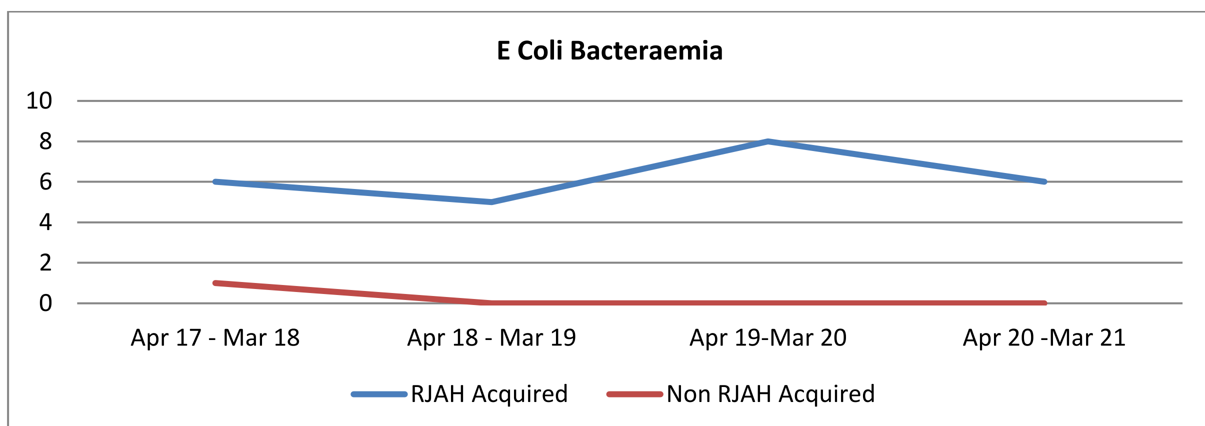
Gram-negative blood stream infections (BSIs) are a healthcare safety issue and from April 2017 there has been an NHS ambition to reduce the number of healthcare associated Gram –negative BSIs. For this purpose the gram-negative organisms are Escherichia coli (E. coli), Pseudomonas aeruginosa (P. aeruginosa)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



In 2020/21 there was 1 Klebsiella sps case apportioned to the Trust, compared to 3 in 2019/20. This is a reduction of 2 cases on last year.



In 2020/21 there were no positive BSI samples for Pseudomonas aeruginosa.



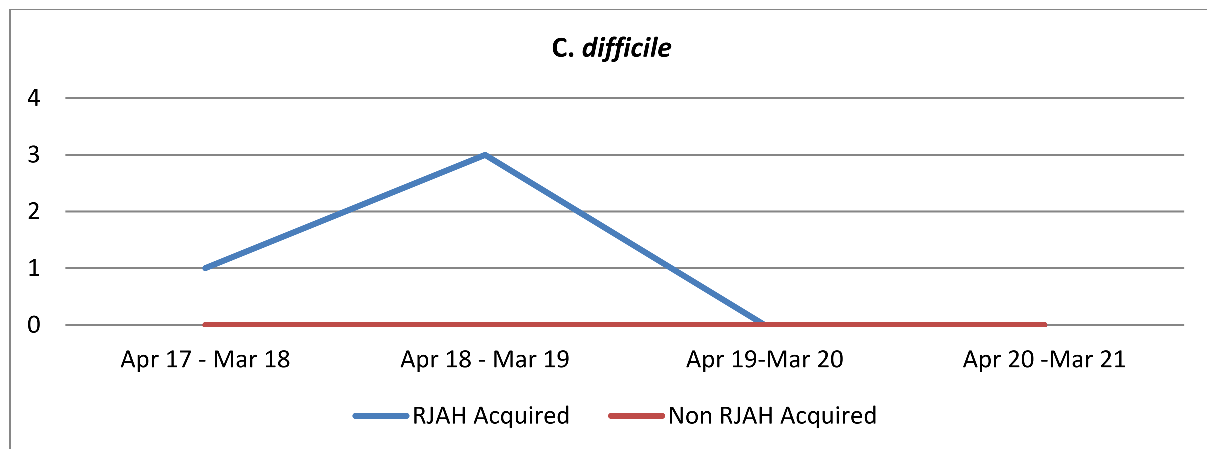
In 2020/21 we had 6 trust apportioned E.coli cases, compared to 8 in 2019/20. This is a reduction of 2 cases on last year.

Since 2018/19 there has been a continued focus on using the Health Economy approach to reduce Escherichia coli bloodstream infections as they represented 55% of all Gram-negative bloodstream infections nationally.

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. Gram-negative bloodstream infections are believed to have contributed to approximately 5,500 NHS patient deaths in 2015. We know GNBSI cases can occur in hospitals however, half of all community onset cases have had some healthcare interventions either from Acute, Primary or Community Care. Therefore, a Health economy approach is required to achieve the reductions

A post-infection review was undertaken for all RJAH acquired bloodstream infections in order to identify the root causes and any actions required. All lessons learned were fed to the link nurses and at SNAHP meetings.

Clostridium Difficile Infection (CDI)



The Trust continues to report zero cases of C.*difficile* since January 2019.

Carbapenemase–Producing Enterobacteriaceae cases (CPE)

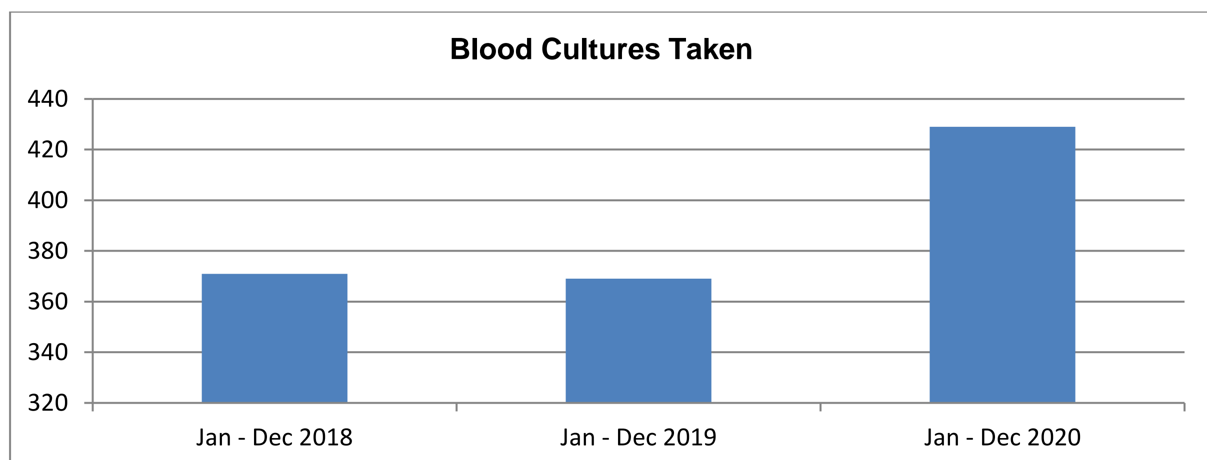
In 2020/21 the Trust reported no cases of CPE

Blood cultures

There has been a significant increase the number of blood cultures taken since 2019/20 due to the Trust's response to the diagnosis and management of sepsis.

Even with the rise in blood cultures taken, the Trust is continuing to meet national targets for the overall reduction in HCAI cases.

The Trust reported a 42% reduction to its Gram-negative bacteraemia blood stream infections for 20/21 from 2019/20. Taking into account the data as a whole, the Trust achieved a 33% reduction on its HCAIs for 2020/21.



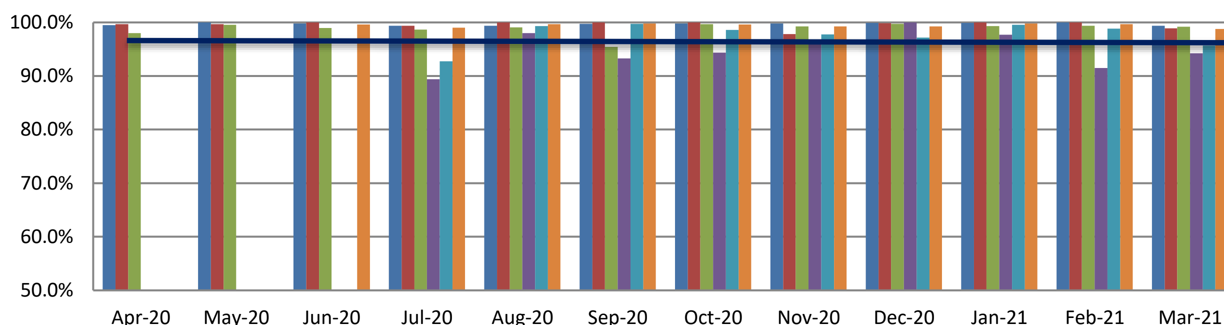
The Trust reported a 42% reduction specifically to its gram-negative bacteraemia blood stream infections for 20/21 from 2019/20. Taking into account the data as a whole, the Trust achieved a 33% reduction on its HCAIs for 2020/21.

Infection Prevention & Control Ward/Department Audits

Wards and departments complete a robust package of infection prevention and control audits across the year. The toolkit comprises of environmental auditing, which highlights patterns of non-compliance to be addressed. The Hand Hygiene audit tool includes Bare Below the Elbows (BBE) and an additonal Personal Protective Equipment (PPE) element was introduced to the hand hygiene and bare below the elbow audit in May 2020 to monitor PPE compliance throughout the Trust. Further COVID-19 checklist and Social Distancing Audits were introduced in July 2020.

The following graph shows the Trust's compliance against each of the individual audits. The results show how the Trust consistently achieved the 95% target in all areas for Bare Below the Elbow, Hand Hygiene and Environmental Audits; but compliance to COVID-19 preventative measures and social distancing has fluctuated throughout the pandemic. Scores are sent to all ward and departmental managers monthly to ensure areas of non compliance are highlighted to allow corrective actions to be taken.

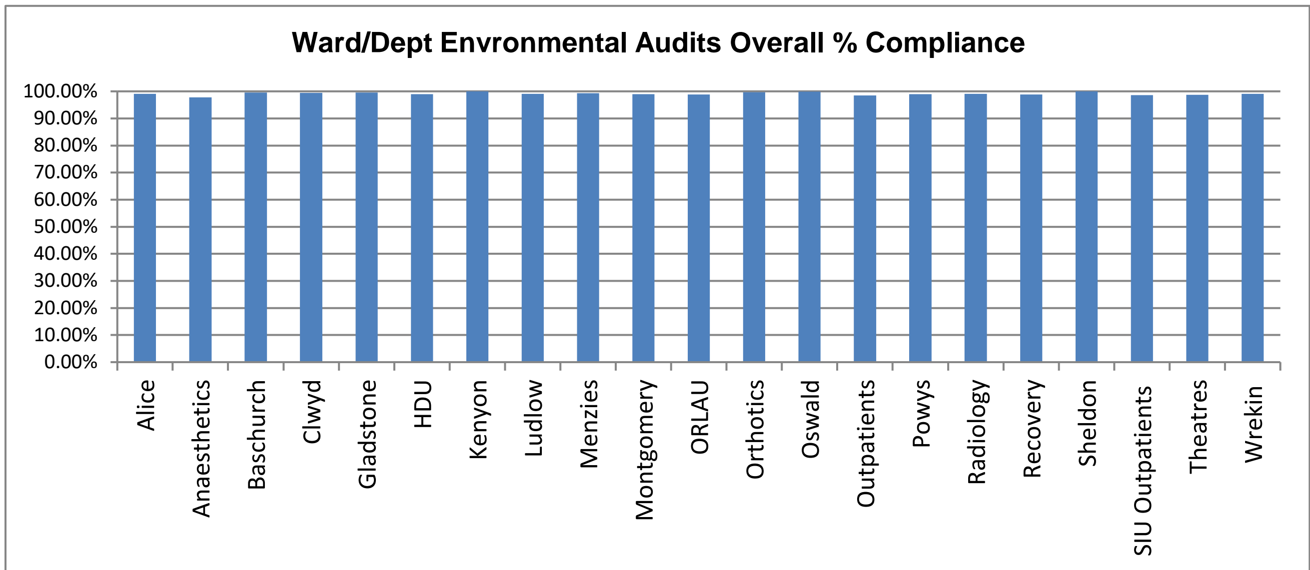
RJAH Trust Infection Prevention & Control Ward/Departmental Audit Compliance April 20 - March 21



	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21
Bare Below Elbow	99.5%	100.0%	99.8%	99.4%	99.4%	99.8%	99.8%	99.8%	99.9%	99.9%	100.0%	99.4%
Clean Hands	99.7%	99.7%	100.0%	99.4%	100.0%	100.0%	100.0%	97.8%	99.9%	100.0%	100.0%	98.9%
Environment	98.0%	99.6%	99.0%	98.7%	99.1%	95.4%	99.7%	99.3%	99.8%	99.3%	99.4%	99.2%
Social Distance				89.4%	98.0%	93.3%	94.3%	96.5%	100.0%	97.7%	91.5%	94.2%
Covid19 Checklists				92.8%	99.3%	99.8%	98.6%	97.8%	97.2%	99.5%	98.8%	95.7%
PPE			99.6%	99.0%	99.7%	99.8%	99.6%	99.3%	99.3%	99.8%	99.7%	98.8%

An Interactive dashboard was created and is disseminated on a monthly basis to all wards and departmental managers, IPC link staff and senior nurses detailing scores for IPC audits. The dashboard also includes brief detail for areas relating to non compliance and a common themes section to monitor trends. The dashboard was well received by staff within the Trust and therefore will remain following imminent implementation of the Perfect Ward System.

Environmental Audits



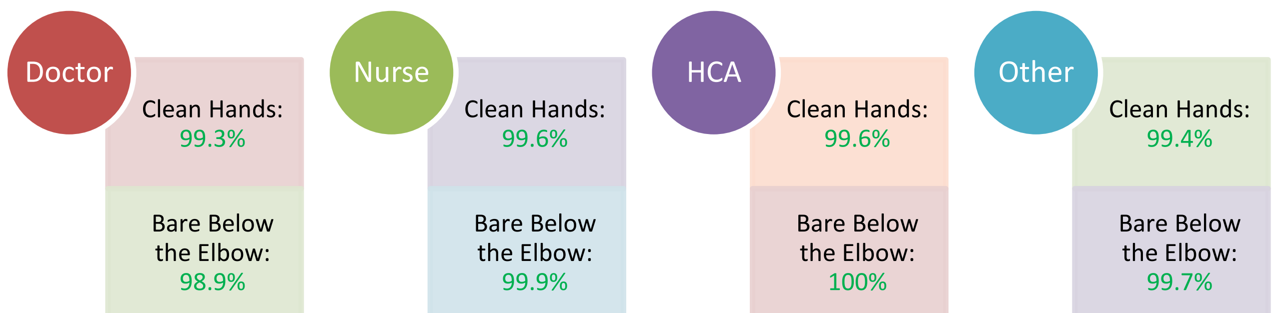
The most common areas of the Environment Audit non-compliance:

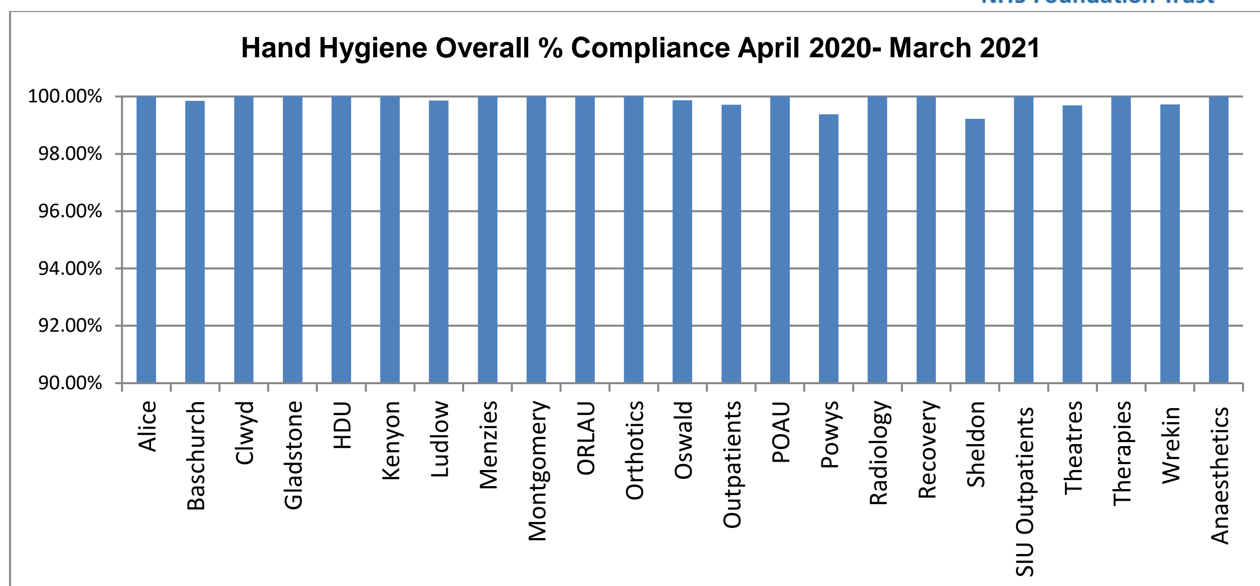
- Floors clean and in good state of repair
- Safer Sharps Devices are in use, or if not a risk assessment has been completed
- High and low surfaces clean & dust free
- Furniture clean and in good state of repair

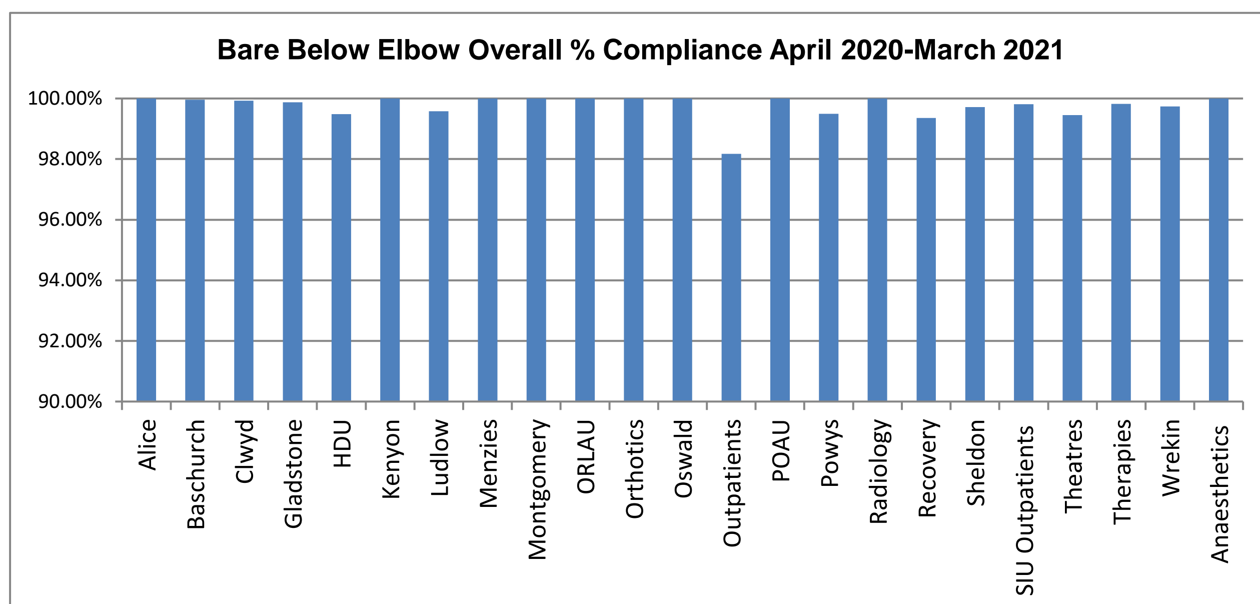
Staff are encouraged to raise requisitions with the Estates department. Waste and sharps awareness sessions have been held at Link meetings to support staff in raising awareness and educate staff within their departments. A rolling programme of backlog maintenance is in place for floor replacements.

Hand Hygiene & Bare Below the Elbows

The image below shows the positive Hand Hygiene and Bare Below the Elbow compliance split by designation. The 'Other' category captures other members of the multi-disciplinary team, such as therapy support, pharmacists and students.







IPC Team Environmental Walkround Audits

Location	Audit date	Issues Identified	Actions Undertaken
Vaccination Centre	March 2021 April 2021	• Patients and some administration staff not adhering to social distancing	• Chairs removed to enable social distancing. • Perspex screen installed between administration desks.

Location	Audit date	Issues Identified	Actions Undertaken
Theatres	March 2021	• Cluttered office spaces and floors unclean. • Staff footwear not always following AfPP guidelines • Build-up of gel residue inside hand gel dispensers • Floor cluttered with items. • cleaning regime required for footwear	• Office spaces decluttered. • Facilities team to source additional hours for cleanliness technicians to be based in Theatres. • Cleaning regime put in place for hand gel dispensers. • Storage identified for warming mattress. • Items relocated to available shelves from the floor.

Location	Audit Date	Issues Identified	Actions Undertaken
Gladstone	March 2021	• Taps heavily tarnished with build-up of lime scale. • Dust inside dani-centres • Build-up of gel residue inside hand gel dispensers • Patient bed spaces cluttered • Macerator over filled • Storage cupboard in sluice room untidy. • No paper towel or soap dispenser in bathrooms. • Shower head and temperature gauge in need of repair.	• Cleaning regime put in place for hand gel dispensers and Dani centres. • E&F have introduced a replacement programme for taps. • Additional storage on order for bays on Gladstone ward to reduce clutter. • Broken items and equipment added to the Estates job plan for repair.

Location	Audit Date	Issues Identified	Actions Undertaken
Wrekin	March 2021	• Taps heavily tarnished with build-up of lime scale. • Dust inside dani-centres • Build-up of gel residue inside hand gel dispensers	• Cleaning regime put in place for hand gel dispensers and dani centres. • Ongoing tap replacement programme put in place.

Location	Audit Date	Issues Identified	Actions Undertaken
Powys	March 2021	• Social distancing in staff for not adhered to. • Taps heavily tarnished with build-up of lime scale • Broken equipment on female shower rooms	• Additional signage added to enforce Social Distancing rules. • Broken equipment reported to E&F job plan for repair.

Location	Audit Date	Issues Identified	Actions Undertaken
TSSU	February 2021	• Lime scale noted on multiple taps • Rusty wheels clogged with hair and dust. • Build-up of gel residue inside hand gel dispensers	• Descaling programme put in place. • Cleaning regime put in place for hand gel dispensers.

		• Vents dirty • Fire exits blocked with trolleys and condemned items.	• Vent cleaning regime put in place. • Wheel replacement programme put in place

Location	Audit Date	Issues Identified	Actions Undertaken
Clwyd	February 2021	• Lime scale build up on some taps • Damaged macerator	• Descaling programme put in place • Broken macerator reported via Qube system.

Location	Audit Date	Issues Identified	Actions Undertaken
HDU	February 2021	• Lime scale build up and tarnishing on taps • Build-up of gel residue inside hand gel dispensers	• Ongoing descalant programme in place • Cleaning regime put in place for hand gel dispensers.

Location	Audit Date	Issues Identified	Actions Undertaken
Ludlow	February 2021	• Dust inside dani-centres • Build-up of gel residue inside hand gel dispensers	• Cleaning regime put in place

Location	Audit Date	Issues Identified	Actions Undertaken
Alice	February 2021	• Damaged macerator in sluice • Build-up of gel residue inside hand gel dispensers • Lime scale build up and tarnishing on taps	• Damaged macerator reported via Qube. • Descalant programme put in place for taps • Cleaning regime put in place for hand gel dispensers.

Location	Audit Date	Issues Identified	Actions Undertaken
Radiology	February 2021	• Damaged concrete flooring outside staff room requires repair or replacement. • Build-up of gel residue inside hand gel dispensers • Lime scale build up on water dispenser and taps.	• Cleaning regime in place and recorded on room cleaning sheets • Repair of the concrete floor is on the Estates job plan. • Ongoing descalant programme put in place

Location	Audit Date	Issues Identified	Actions Undertaken
Oswald	February 2021	• Inappropriate items in sharps bin. • Limescale build up on taps in patient rooms. • Dust found inside Dani-centres • Build-up of gel residue inside hand gel dispensers	• Ongoing descalant programme put in place. • Cleaning regime put in place • Appropriate disposal of sharps

Location	Audit Date	Issues Identified	Actions Undertaken
Outpatients	February 2021	• Storage drawers cluttered. • Inappropriate storage of PPE • Ceiling tiles stained due to roof and window leak. • Lime scale build-up on taps. • Plaster room floor damaged. • Items stored on floor.	• Ongoing tape replacement programme put in place. • Storage drawers de-cluttered • Window leak reported via Qube. • Large box of splints removed from floor • Plaster room floor replacement scheduled for Autumn 2021

Location	Audit Date	Issues Identified	Actions Undertaken
Sheldon	February 2021	• Sealant around base of toilets damaged • No evidence for cleaning of the ice machine • Build-up of gel residue inside hand gel dispensers • Inappropriate items in sharps bin	• Estates replaced seals on all toilets. • Cleaning regime for ice machine in place • Hand gel cleaning regime put in place • Appropriate disposal of sharps

Location	Audit Date	Issues Identified	Actions Undertaken
Baschurch	February 2021	• Lack of storage • Build-up of gel residue inside hand gel dispensers • Lime scale build-up on taps • Dust inside dani centres.	• Further storage located and utilised. • Hand gel and dani centre cleaning regime put in place • Ongoing descalant programme put in place.

Location	Audit Date	Issues Identified	Actions Undertaken
Montgomery	February 2021	• Dust on top of bed space curtain rails • Build-up of gel residue inside hand gel dispensers	• High dusting including curtain rails and examination lights has been incorporated onto the weekly cleaning sheet. • Hand gel dispenser cleaning regime put in place.

3.1.3. 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.

Outcomes for cleaning continued to be monitored internally throughout the year, despite dispensation to pause audit programmes for the duration of the pandemic. External and patient led monitoring, including PLACE assessment, did not take place during this time.

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

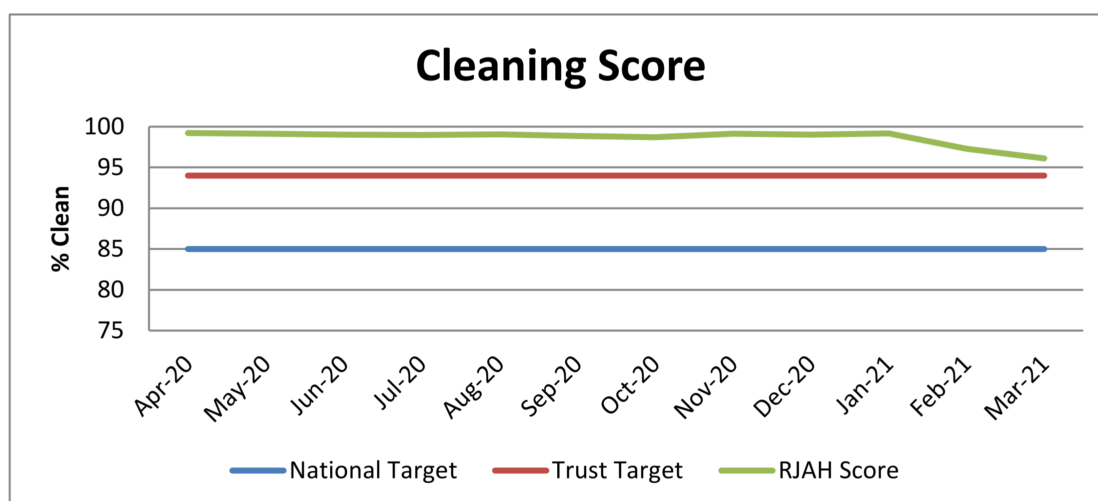
This protocol has ensured that there are no delays in the provision of enhanced cleaning whilst clinical sign off is sought.

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

12 individual rooms and 4 complete bays have required a red terminal clean in 2020/21; 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. Very high risk areas are monitored in collaboration with the clinical team to ensure the broadest picture is seen. 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.

A revised approach has been taken to cleanliness monitoring from February 2021, working to a more stringent definition, and with a stenghthended auditing team, which has resulted in a slightly reduced score, seen in the chart, but provides more assurance to site users.

The Trust has a risk based national cleanliness target of 85%, internally the Trust has set a 94% target, for the year 2020/21 the Trust achieved an average score of 98.64%.

Cleanliness and Environment - Kitchen

The Trust kitchen retained its 5 star food hygiene rating at last inspection in February 2020. In response to restrictions during the pandemic, Shropshire Council suspended all site visits in March 2020, with these yet to resume.

The Trust took part in a remote assessment in March 2021, with no concerns raised and now awaits a site visit to confirm a 5 star rating.

Supporting this inspection, the Trust procures a separate externally accredited food safety audit which produces a detailed action plan, undertaken in September 2020 which recommended appropriate measures were in place to retain a 5 star rating.

CQC Inpatient Survey

The CQC Inpatient Survey 2019 results were published in June 2020, 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 scrore of 9.8 out of 10. The consistently good results achieved through this seurvey are a testament to the dedication and high standards shown by the entire housekeeping team.

PLACE – Patient Led Assessment of the Care Environment

The 2020 National PLACE assessment was cancelled in response to the pandemic.

The Trust anticipates this pause in external patient experience auditing will continue into 2021/22; and therefore a programme of internal 'mini PLACE' audits has been scheduled, to be completed as a multi disciplinary spot check, with actions fed through the Infection Control Working Group. A focus for these inspection will be learning where best practice is already in place, and replicating this where possible in other areas of the Trust.

Linen

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

Following the closure of the Trusts provider, linen services have been 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

In 2020/21, the Trust took part in a consortium waste tender alongside Shrewsbury & Telford Hospitals NHS Trust and Shropshire Community NHS Trust. The new contract for clinical waste, effective from April 2021, provides assurance the Trust will continue to maintain its compliance against the relevant HTM (07-01) and retains the ability to flex to National guidance implemented to manage the pandemic.

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.

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. 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 20 – March 21 a total of 585 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 perameter results, the mechanical team within the Estates department have developed an effective method of thermal disinfection. This process has increased efficacy and reduces costs because of the in-house delivery of such works. Disinfection is often employed to manage domestic water hygiene.

The main water storage tanks that were installed in the 1970s supplying potable and softened water to 90% of the estate have been replaced with HTM compliant tanks, with the works being completed and handed over in January 2021.

This year, Estates & Facilities are reviewing water efficiencies in parallel to the implementation of the water storage tanks in Q3 and Q4 and have now significantly reduced water consumption. As a Trust, we have been an outlier amongst our peer Trusts on our water consumption, so we're looking at ways of reducing the amount of water we consume without compromising the service we provide to patients, visitors and staff. We're looking at:

- Urinal water consumption
- Our flushing regimes
- Water tank chlorination
- The cumulative effect of small leaks
- Our steam raising plant and traps, and how much 'condensate' we dump to drain
- Removing infrequently used outlets (that have to be flushed), if no longer required
- The type of siphon we use for toilet cisterns

These initiatives do not come without risk of proliferation of legionella, however, so we're remaining vigilant by continuing our routine monitoring throughout site.

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 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 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 & Ventilation

Implementing the National SOP's 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.

Clinical strategy determined that the HDU unit would be utilised for known Covid-19 patients requiring high flow oxygen, so change of pressure regimes to negative was required because of the possible communication and contamination into the adjacent theatres.

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 barriers; 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.

The team also facilitated removal of non-essential equipment from site – allowing for social distancing and ease of cleaning particularly in clinical areas.

Additional staff shower facilities were installed, and the hydrotherapy pool shower facilities made available to staff for use after their shifts.

Infrastructure

As the Trusts patient population changed during the pandemic response, so too did the requirements of key aspects of the site, including;

- Medical Gases, whereby assurances were sought around resilience of services and continuity of supply given the increased clinical need of COVID patients.

- Medical Devices, whereby the Trusts robust protocols for procurement and management of new medical devices was reiterated when processing the requirements for additional devices (for example, 20 new anaesthetic machines were received during the first wave)

Patient Flow

Ensuring patient's access and route through site was is as safe as possible has seen restrictions to entrances, with all patients signposted to the main entrance and other entrances made staff only using door access controls.

At the main entrance, a screening desk is in place, managed by the Estates & Facilities team with support from volunteers, ensuring that all site users are adhering to both National and Trust level infection control guidance.

When elective surgery returned to the Trust, the department led on the installation of an alternative enrtrance for patients following a specific pathway, feeding directly into Baschurch unit.

Elsewhere on site, ward and departmental access was controlled with additional door access controls at their entrances.

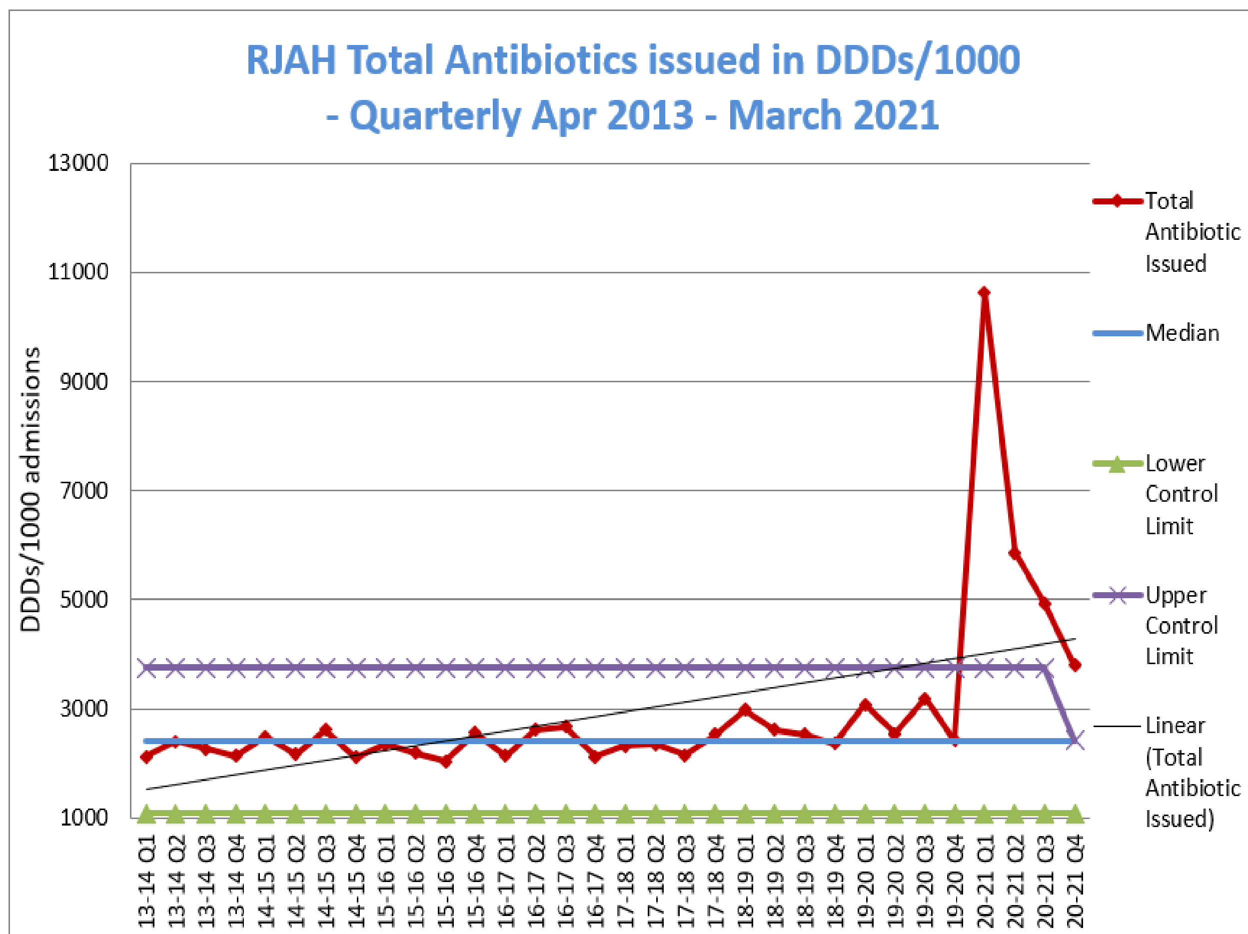
Vaccination Centre

In the last quarter of this year, the Trust hosted a COVID-19 Hospital Hub for vaccinations. Further the Department led on the remodelling of the service to facilitate its conversion to a Vaccination Centre, the first transformation of its kind in the country.Under considerable time constraints, the temporary relocation of maternity services was managed alongside refit and set up of facilities required to facilitate a vaccination service. Advice was given to ensure access, patient flow and infection control risks were considered and mitigated.

3.1.4. Criterion 3: Ensure appropriate antimicrobial use

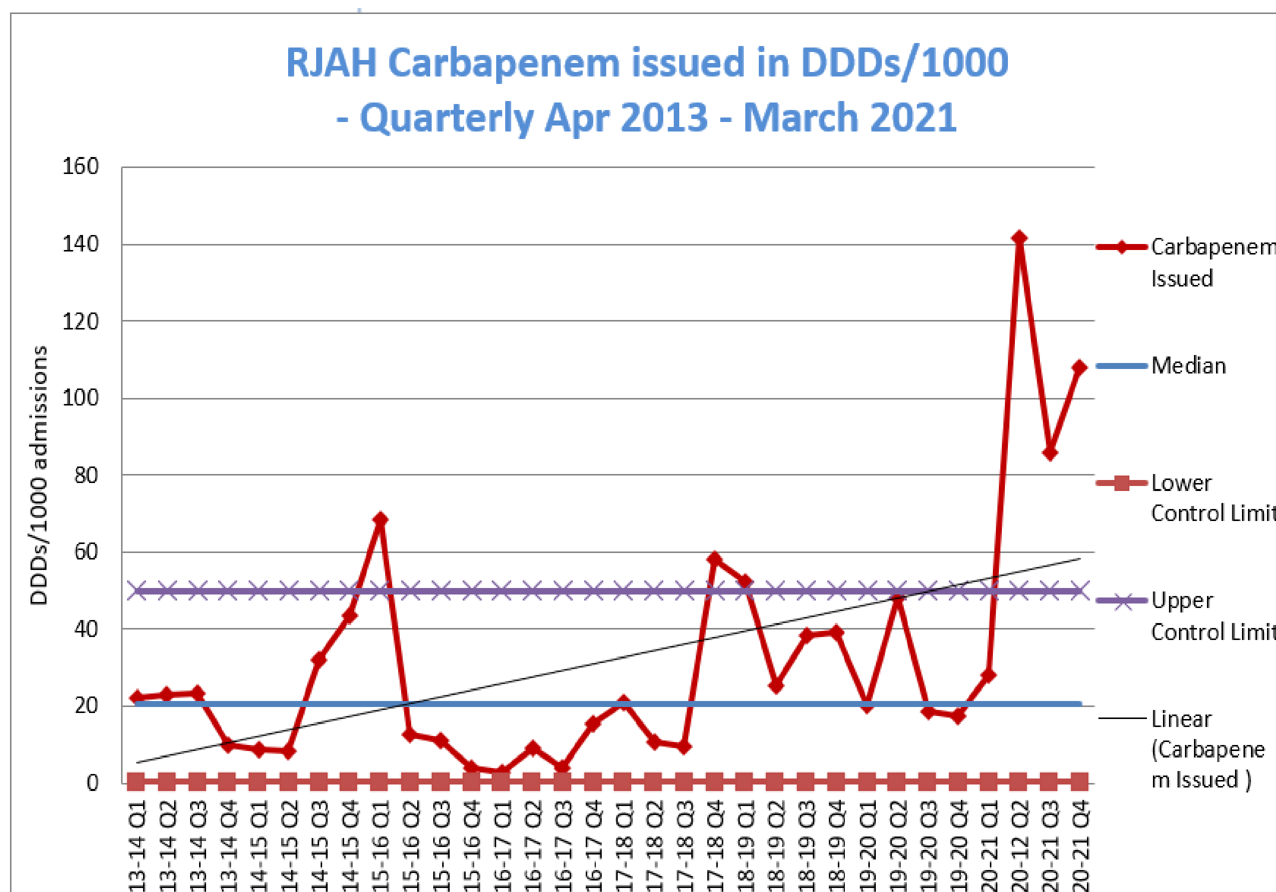
Antimicrobial Stewardship (AMS) The trust antimicrobial management group (AMG) includes representatives from pharmacy, microbiology, nursing and medical staff. This group manages policy with regard to antimicrobial stewardship,formulates policy with regard to antimicrobial stewardship and responds to 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.

Total antimicrobials



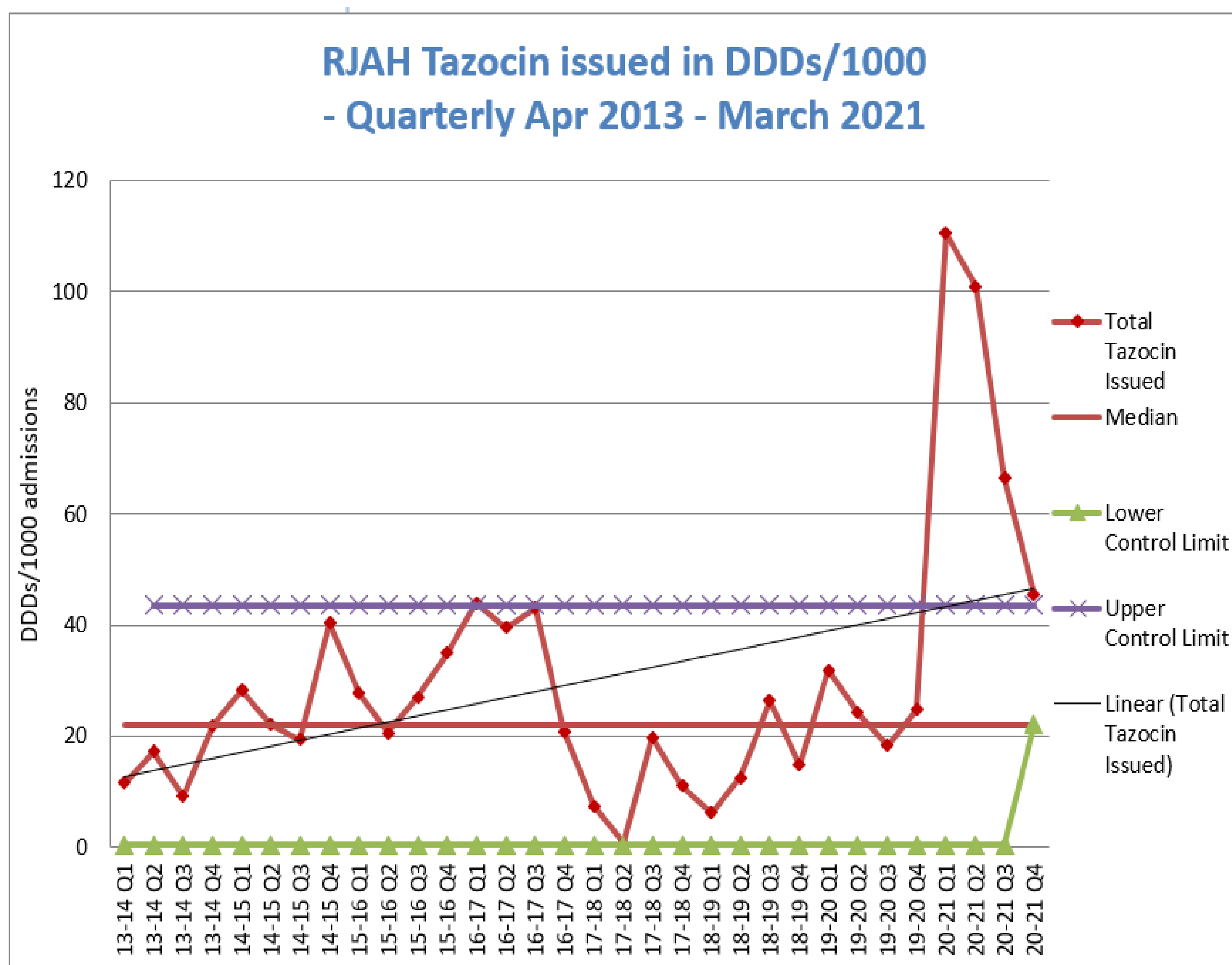
The graph above shows the total antibiotics issued from pharmacy, between April 2013 and March 2021, in DDDs per 1000 admissions. The black line indicates that there is an upward trend in antibiotics issued. The peak seen in Q1 20-21 can be attributed to the hospital becoming a trauma centre during the COVID-19 pandemic, however, it is gradually coming back down as the number of elective surgeries is increasing (i.e. the number of admissions is increasing but the antibiotic usage is decreasing in terms of DDDs/1000 admissions).

Carbapenems



This graph shows the total carbapenems issued from pharmacy, between April 2013 and March 2021, in DDDs per 1000 admissions. There is an upward trend in the amount of carbapenems issued especially in the last year. This is partly due to RJAH becoming a trauma centre, however, a large proportion of carbapenems are issued to long term spinal injuries rehab patients. The latter is often due to pressure sores/osteomyelitis and epidural abscesses for example.

Piperacillin/tazobactam (Tazocin)



This graph shows the total piperacillin/tazobactam issued from pharmacy, between April 2013 and March 2021, in DDDs per 1000 admissions. Again, the overall trend is upwards, but as can be seen by the graph the amount of Tazocin issued increased in Q1 20-21 due to RJAH becoming a trauma centre. This is gradually coming back to the normal range and will continue to be monitored.

The use of carbapenems/ piperacillin/tazobactam (Tazocin) is restricted to the indications specified in the antibiotic policy or as per microbiology advice. Their usage is monitored and they should only be booked out to individual patients and not be given as ward stock. This is so that the prescriptions can be screened by pharmacy prior to being issued to ensure appropriateness. We need to ensure that the use of these antibiotics is tightly controlled as the overuse of broad-spectrum antibiotics can lead to antimicrobial resistance.

3.1.5. 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.

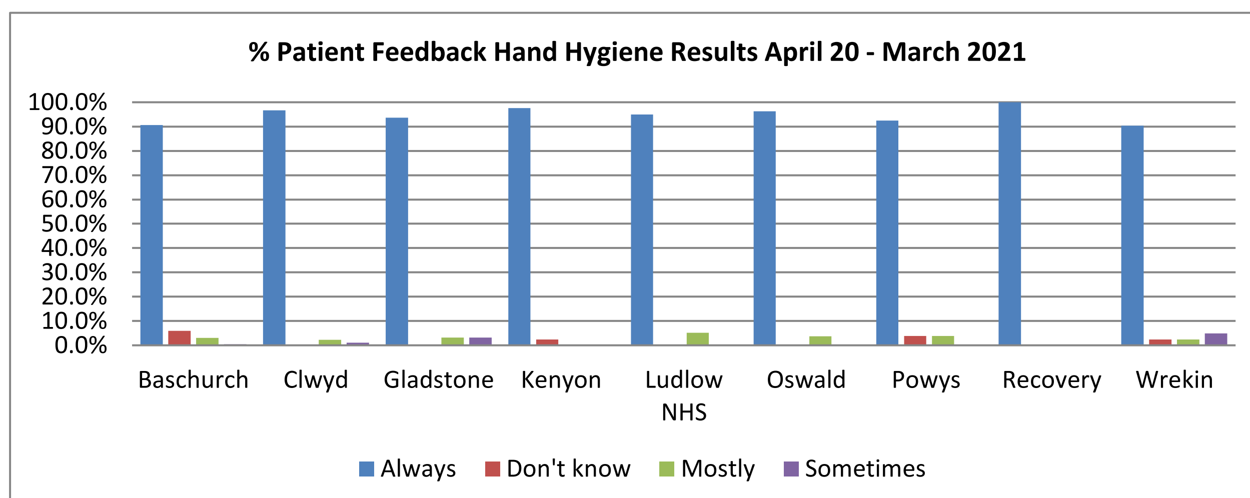
The IPC and Communications Teams work together to:
• Promote IPC events.
• Update the Trust website and intranet.
• Issue media statements during outbreaks.
• Support the annual flu vaccination campaign

Trust Website and Information Leaflets
The Trust website promotes infection prevention issues and guides people to performance information on MRSA, Clostridium difficile and other organisms. The IPT have produced a range of information leaflets on various organisms.
A large number of documents relating to COVID-19 were added during 2020, including information for patients, visitors and staff. This included topics such as volunteering, symptoms of COVID-19, how to keep healthy and avoid infection, how to get tested and visiting. This 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.

The patient comment cards were paused at the beginning of COVID-19. The Patient Advice & Liason Service (PALS) Team resumed comment card feedback in December 2020. Feedback received since December 2020 was extracted from the Meridian software to produce the graph below:

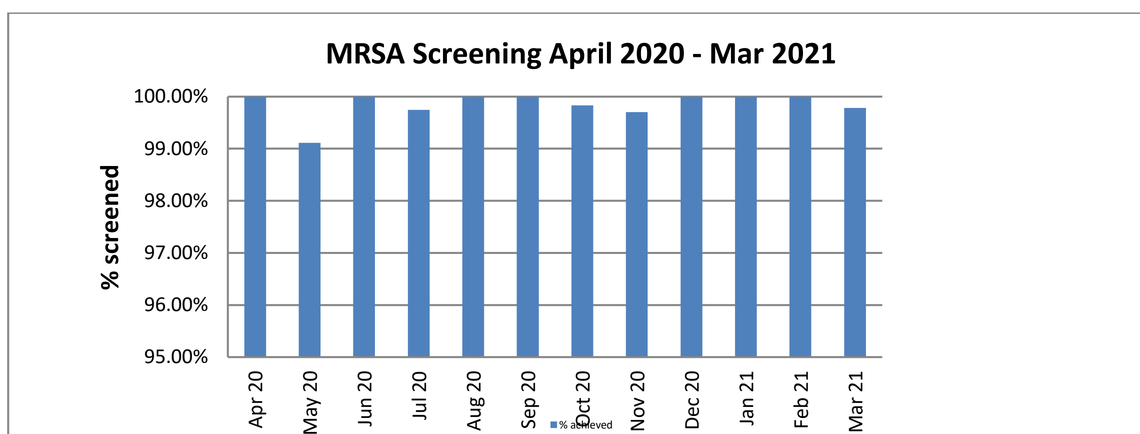


The results are collected from a specific question incorporated on the comment card: “Did the staff practice good hand hygiene” and results provide positive feedback from a patient’s perspective.

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

The IPC team receive a daily report which idenfities 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.



	Apr 20	May 20	Jun 20	Jul 20	Aug 20	Sep 20	Oct 20	Nov 20	Dec 20	Jan 21	Feb 21	Mar 21
Eligible patients	166	225	269	391	299	519	586	668	788	361	251	460
Screened for MRSA	166	223	269	390	299	519	585	666	788	361	251	459
% achieved	100.00%	99.11%	100.00%	99.74%	100.00%	100.00%	99.83%	99.70%	100.00%	100.00%	100.00%	99.78%
Target	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

The graph and table above 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.

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.

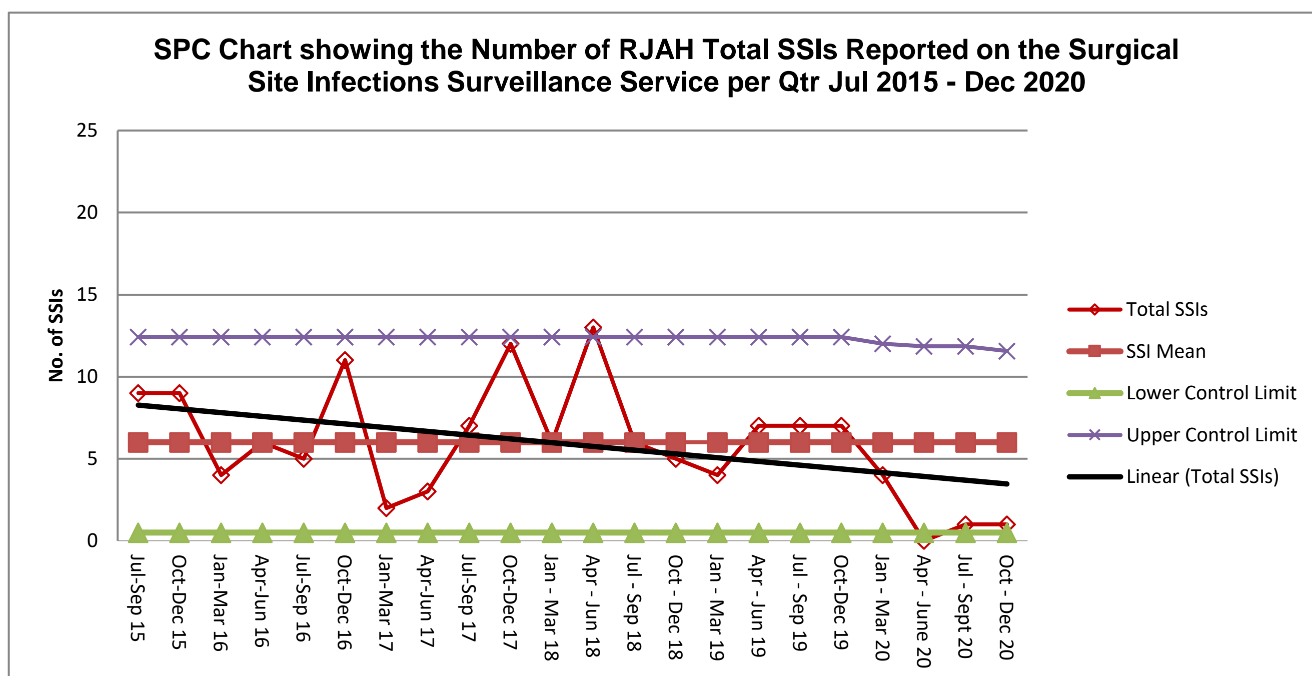
The Trust submits surgical site infection data to the Public Health England (PHE) database on a quarterly basis.

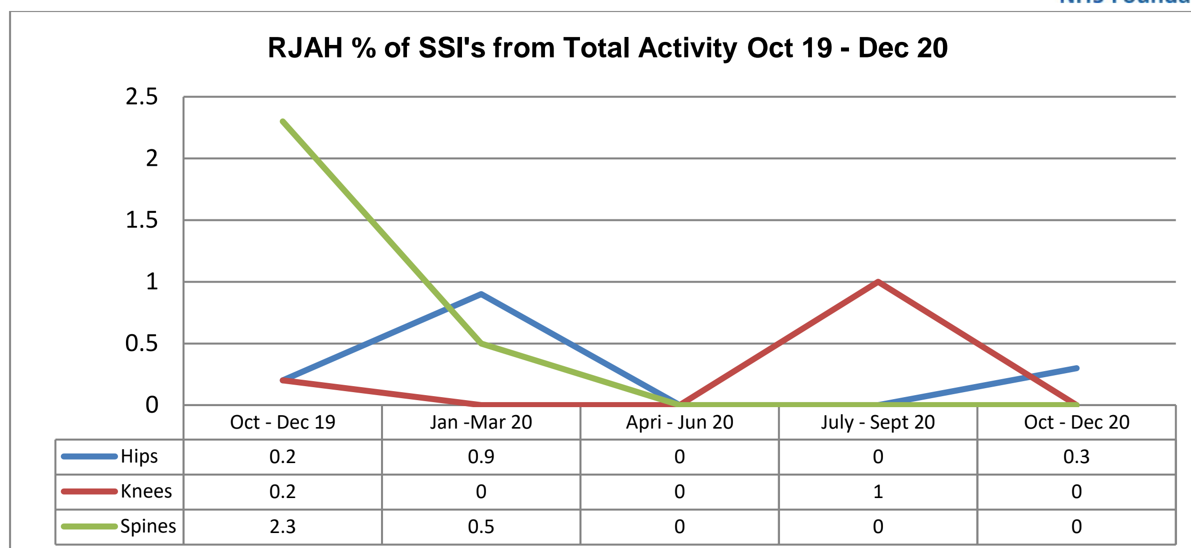
In March 2020, the Trust stopped all elective surgery and supported SaTH by undertaking their trauma service in response to the COVID-19 pandemic.

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.

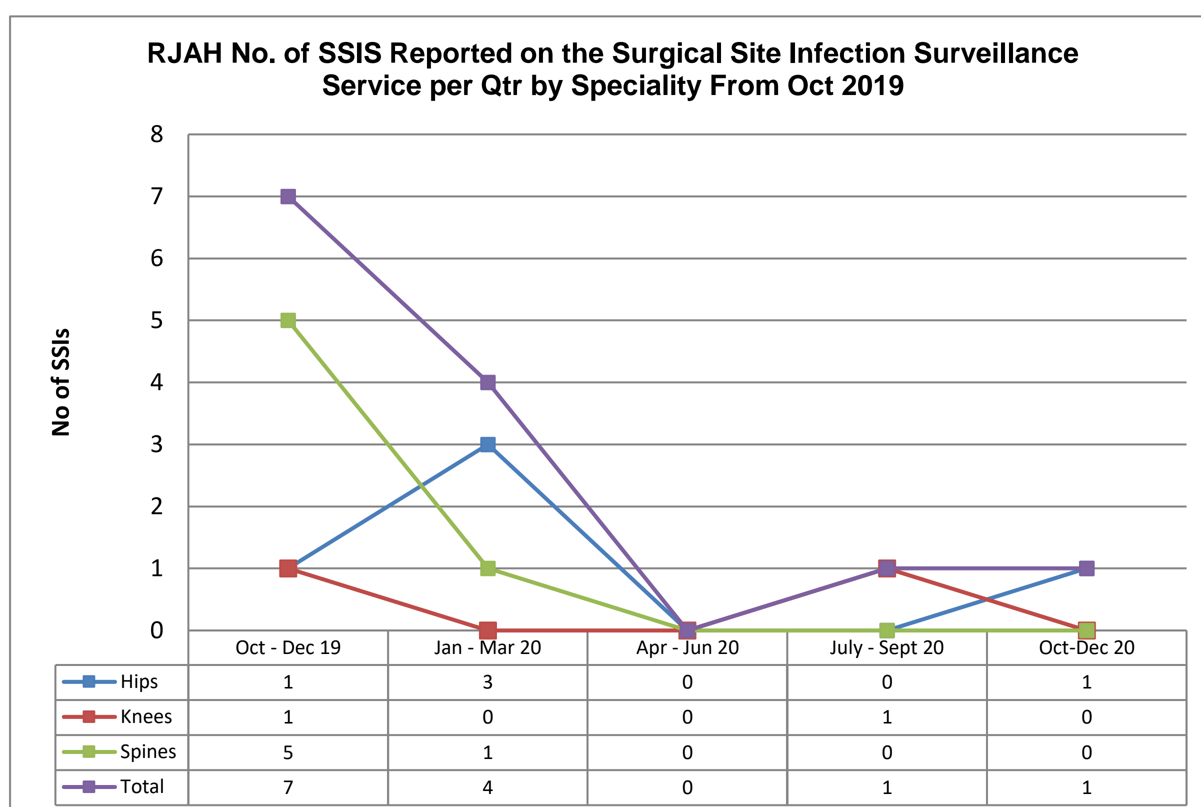
From April 2020 – March 2021, data on 968 operations – 423 Total Hip Replacements (THR), 334 Total Knee Replacements (TKR) and 211 Spinal surgeries was collected by the RJAH surgical site surveillance team. During this period, there have been a total of 2 SSIs reported, 1 THR, 1 TKR, and no spinal surgeries. This compares to a total of 4044 operations with 26 SSI's 11 THR, 4 TKR, 11 Spinal surgeries, reported April 2019 – March 2020.

The following graph shows the trends of the total number of SSIs that have been reported to PHE between January 2015 and December 2020. Reduced activity due to COVID-19 creates low denomanting numbers. The one TKR SSI reported in July – September came in at 1% and took us over the national average of 0.7%. The SSI portal is nationally automated and therefore can not off-set reductions in activity figures. Because of this, the Trust received an outlier letter from PHE

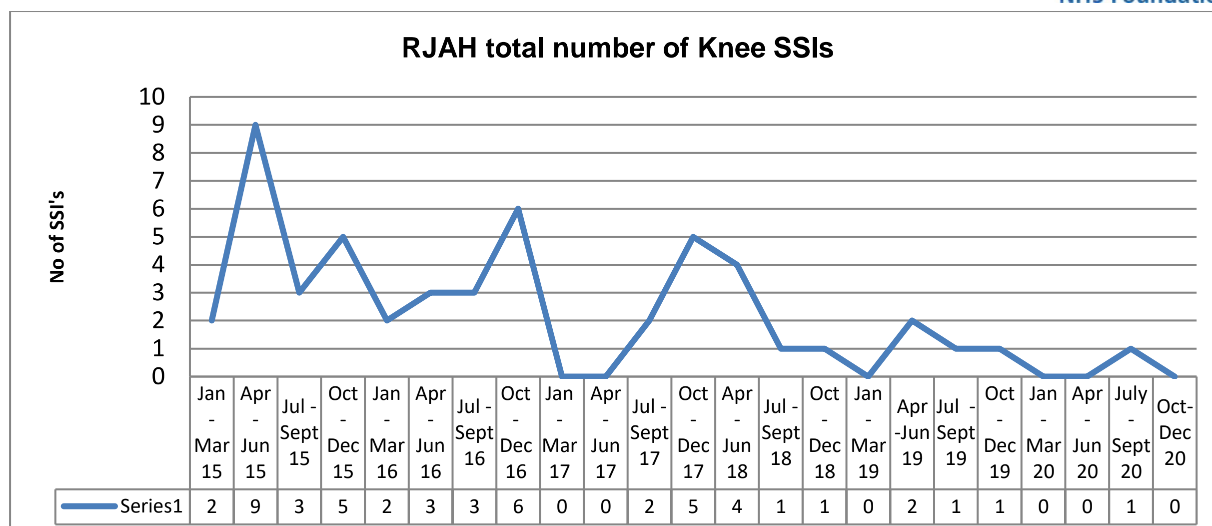


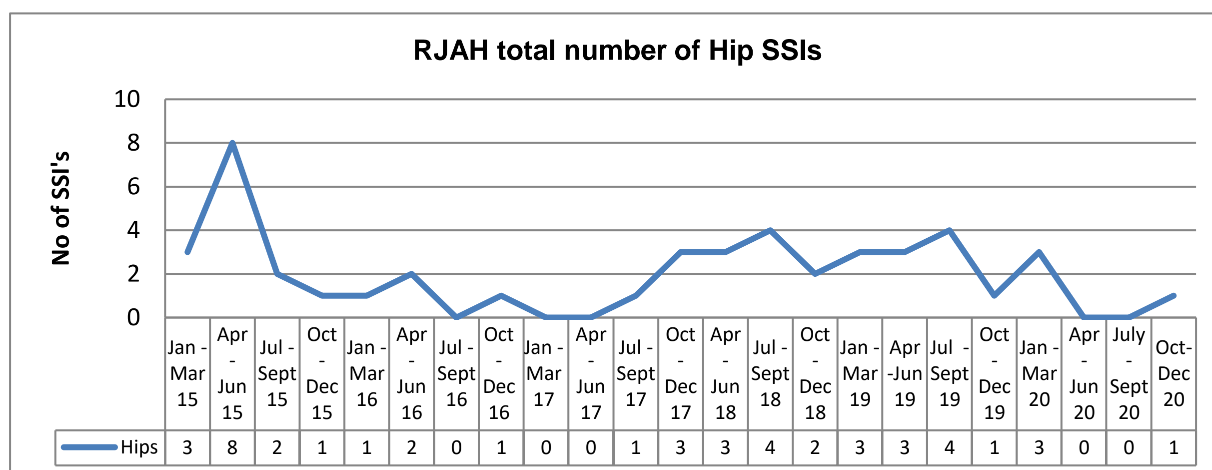


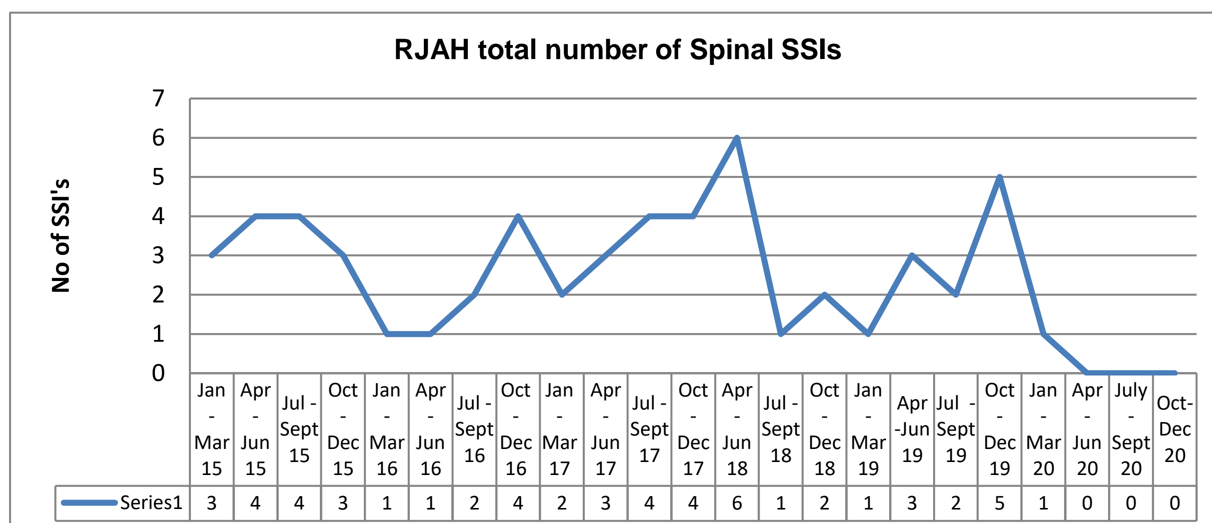
	Oct - Dec 19	Jan -Mar 20	Apri - Jun 20	July - Sept 20	Oct - Dec 20
Hips	0.2	0.9	0	0	0.3
Knees	0.2	0	0	1	0
Spines	2.3	0.5	0	0	0



	Oct - Dec 19	Jan - Mar 20	Apr - Jun 20	July - Sept 20	Oct-Dec 20
Hips	1	3	0	0	1
Knees	1	0	0	1	0
Spines	5	1	0	0	0
Total	7	4	0	1	1







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.

PHE's 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.

Outbreaks

There was a total of nine COVID-19 outbreaks across the Trust during 2020/21.

Each outbreak was investigated by the Outbreak Control Team, which consisted of a multi-disciplinary team that reviewed all available evidence, and reported to PHE and the CCG.

The main lessons learned from outbreaks were the non-compliance of social distancing in rest rooms/areas and poor compliance around PPE. Lessons learned were shared with the ward/departmental teams, SNAHP, and any areas of good practice/safety improvements were shared with other teams through the infection control working group and committee.

2020

Dept	Date declared	How many involved (staff and pts)	Themes identified
Pre-op assessment Unit	29/10/2020	3 staff	• Possible link to a patient at POAU
Powys/HDU	02/11/2020	4 patients 8 staff	• PPE compliance • Social Distancing compliance
OPD	26/11/2020	5 staff 1 Company Rep	• PPE compliance • Amber area = Higher risk of transmission
TSSU	8/12/2020	2 staff	• Worked together on one shift but not breaches in PPE. No root cause found
Radiology	15/12/2020	4 staff	• RCA currently being undertaken
OPD2	23/12/2020	3 staff	• Amber area, high volume of staff/patients
MCSI Resettlement	31/12/2020	2 staff	• Environmental clutter

2021

MCSI	18/01/2021	8 patients 5 staff	• Staff member came into work while household member displayed COVID-19 symptoms • Some lapses in PPE usage by staff • Some environmental cleanliness issues
Sheldon Ward	25/01/2021	2 patients	• Patients in same ward at referring Trust – possible transmission

3.2. Serious Incidents/ Periods of Increased Incidence

There were 2 serious incidents reported during 2020/21.

During April 2020 there was an outbreak of COVID-19 involving 4 patients and 2 staff which was reported as a serious incident. Two of the patients were part of the asymptomatic point prevalence trial. A route course analysis was undertaken which identified the root cause being that the patient had moved to multiple bedspaces. Lessons learnt include:

- Limit patient bed space movement within the trust.
- Positive patients to remain in isolation for 14 days as per national guidance.

During November there was an incident in which involved an anaesthetist who had an external PCR swab taken for COVID-19 and was notified of a positive test result. An internal contact tracing

investigation as part of the root cause analysis subsequently identified 10 contacts who had breached the Trusts PPE/Social Distancing guidelines. Consequently 11 members of staff from the same department needed to self-isolate for 14 days which impacted on the cancellation of patients.

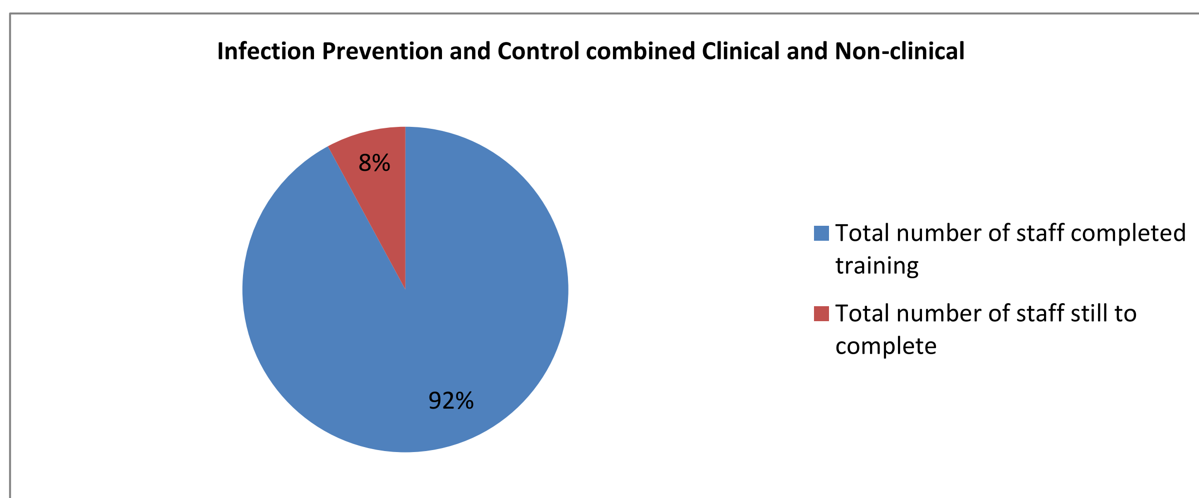
3.2.1. Criterion 6: Systems to ensure that all care workers (including contractors and volunteers) are aware of and discharge their responsibilities in the process of preventing and controlling infection.

At RJAH infection prevention is included in all job descriptions.

IPC training is delivered via the national 'e-learning for Health' module. The graph below shows the trainng compliance for 2020/21.

Training Compliance

Core Training Compliance - Infection Prevention & Control - 31/03/2021		Including Bank Staff			
Validity Period	**Course Name**	**Total number of staff required to complete training**	**Total number of staff completed training**	**Total number of staff still to complete**	**Compliance Percentage**
Annual	Infection Prevention & Control (Clinical Staff)	1001	901	100	90.01%
3 Yearly	Infection Prevention & Control (Non-clinical Staff)	635	606	29	95.43%
Annual/3 Yearly	Infection Prevention & Control combined Clinical and Non-clinical	1636	1507	129	92.11%



The graphs above show a break down in the Infection Prevention and Control training figures for clinical and non clinical staff by unit which is accessed via e-learning. Ward/departmental managers are responsible for ensuring that staff are up to date with Infection Control training as part of the appraisal process. Interactive infection control training is delivered to all staff on induction including volunteers and work experience to the Trust. Practical ward training is delivered on request.

It was noted that a minority of staff (8%) had not completed Infection Control Training and although work was undertaken to identify reasons for non compliance, this level of detail is not currently captured by the Training Department.

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

3.2.2. 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. However, due to the increase of patients carrying antibiotic resistant organisms requiring siderooms for isolation, the installation of additional doors to the bays has been implemented on the spinal injuries unit to enable patients with the same carriage to be cohorted together in an isolated bay with the doors acting as a barrier as well as a reminder for staff to implement standard precautions.

In response to the isolation requirements during the COVID-19 pandemic; an options appraisal has been submitted for the installation of additional doors on bays across the Trust.
During the first wave of COVID-19 Ludlow ward which consist of 14 single siderooms was identified as the isolation area for patients who were displaying symptoms/ confirmed positive.

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

3.2.3. 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.

3.2.4. 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 standard operating procedures.

Policies Reviewed Published in 2020- 21	
Coronavirus Policy	HCAI Reporting
Meningococcal Disease	Aseptic Technique
Waste Policy	HCAI Reporting
Varicella Zoster Virus	Clostridium Difficile

The IPC Team made it a priority to review the backlog of policies and procedures for 2020/21. A policy tracker was created to ensure a robust system for the review and update of policies and procedures. A matrix has also been implemented to serve 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.

An Infection Prevention & Control A-Z of Common Infections is available on the Trust's intranet. This significantly enhances the quick location of key infection prevention guidance by our front line staff in regards to infection control common infections. Staff also have a direct link from the intranet to the Royal Marsden polices on nursing procedures.

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

Team Prevent Health Occupational Health and Employee Well-Being

Team Prevent (TP) Health is committed to the protection of all Trust employees as an essential part of Infection Control. 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 and limited room availability at RJAH and SATH, which is where the second appointment is carried out.

Blood Bourne Virus Exposure

Blood Borne Virus Exposure incidents or injuries may represent a significant risk to staff working in health care 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 2020 to April 2021 exposure incidents reported to TP Health was a total of 14 which is a reduction since 2019/2020 figures. 7 of the cases were due to a percutaneous injury. The highest number of incidents occurred in theatres.

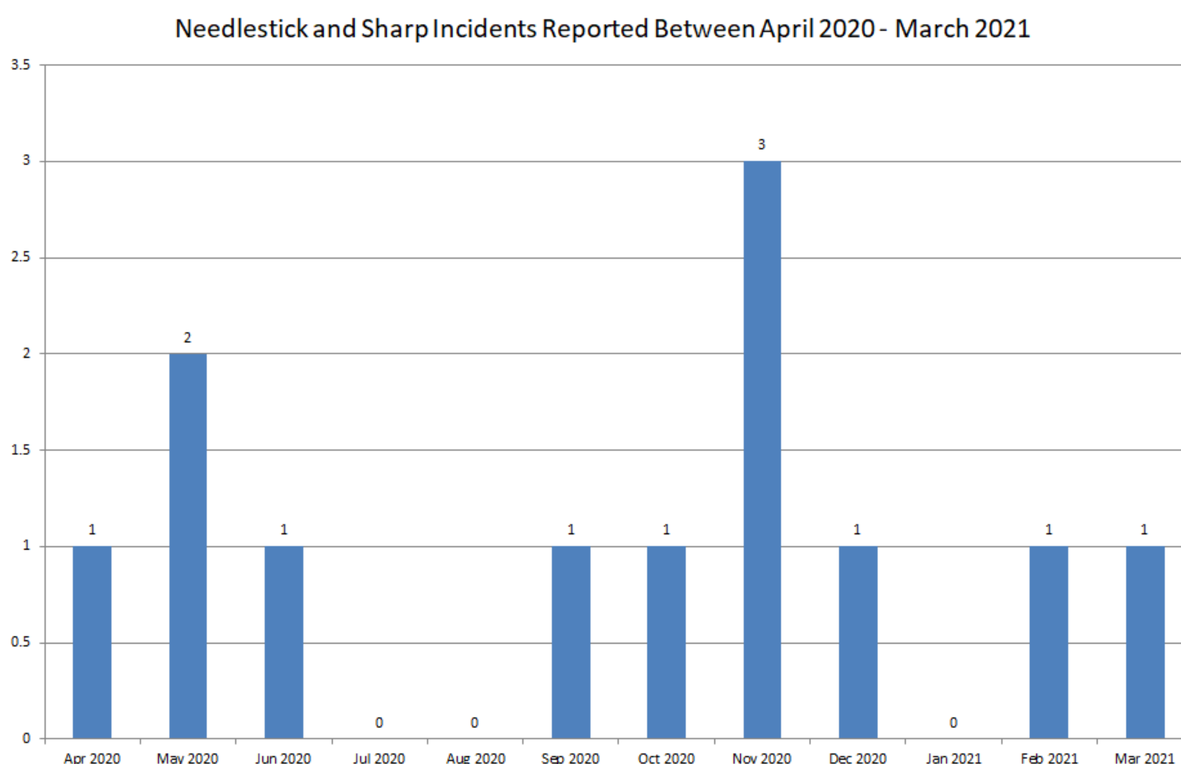
Safer Sharp Regulations

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.

Following a review of safer sharps it was highlighted that the Trust was failing to comply with the above regulations. Positive action was taken to return the Trust to compliance which led to a significant reduction in needlestick injuries compared to the 2019/20 reporting year.

There were 33 reported needlestick injuries in 2019/20 compared with 12 in 2020/21.

The graph below is a breakdown of reported Needlestick / Sharps incidents in the last 12 months:



Conclusion

The year 2020/21 was another successful period in meeting the targets set by Public Health England and the Clinical Commissioning Group at RJAH Orthopaedic Hospital.

The Infection Prevention and Control Team have continued to provide an essential service to the Trust encompassing the infection prevention and control service ,surgical site surveillance service, microbiology ward rounds, post infection review/root cause analysis, education, HCAI surveillance, meetings and audits.

The COVID-19 pandemic has proved a huge challenge for the NHS with a profound impact on Infection Prevention and Control Teams having to comprehend, disseminate and implement the ever changing national guidance.

The Infection Prevention and Control Team and Estates & Facilities have worked together in a united approach to provide a safe environment for patients and staff across the Trust.

9 COVID-19 outbreaks were declared during the second wave ,however the hard work, coloboration and determination of all staff resulted in the prevention and control of the virus across the wards and departments.

COVID-19 has changed the map of infection Control both nationally and internationally highlighting the paramount importance of standard infection control precautions.

The Trust management team have recognised, improved and expanded the IPC team to incorporate new challenges that we will be faced with in the near future.

The biggest challenge for Infection Prevention and Control next year will continue to be the ongoing managemert of the COVID-19 pandemic.

Stacey Keegan: Director of Infection Prevention and Control (DIPC)

Sue Sayles: Infection Prevention and Control Lead Nurse

June 2021

Key Areas of Focus for 21/22

- Achieving PHE National & CCG Infection targets
- PIR of all patients reported with positive blood cultures
- IT Solution for Infection Prevention & Control
- Improve website and intranet
- Collaborative programme for IPC review in satellite clinics
- Introduce a policy tracker system

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
JAC	JAC – Electronic Pharmacy System
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.