The Robert Jones and Agnes Hunt Orthopaedic Hospital
NHS Foundation Trust

Infection Prevention & Control & Cleanliness Annual Report 2017/18

0. Reference Information

Author:	Sue Sayles Phil Davies	Paper date:	20/05/2018
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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

Surveillance

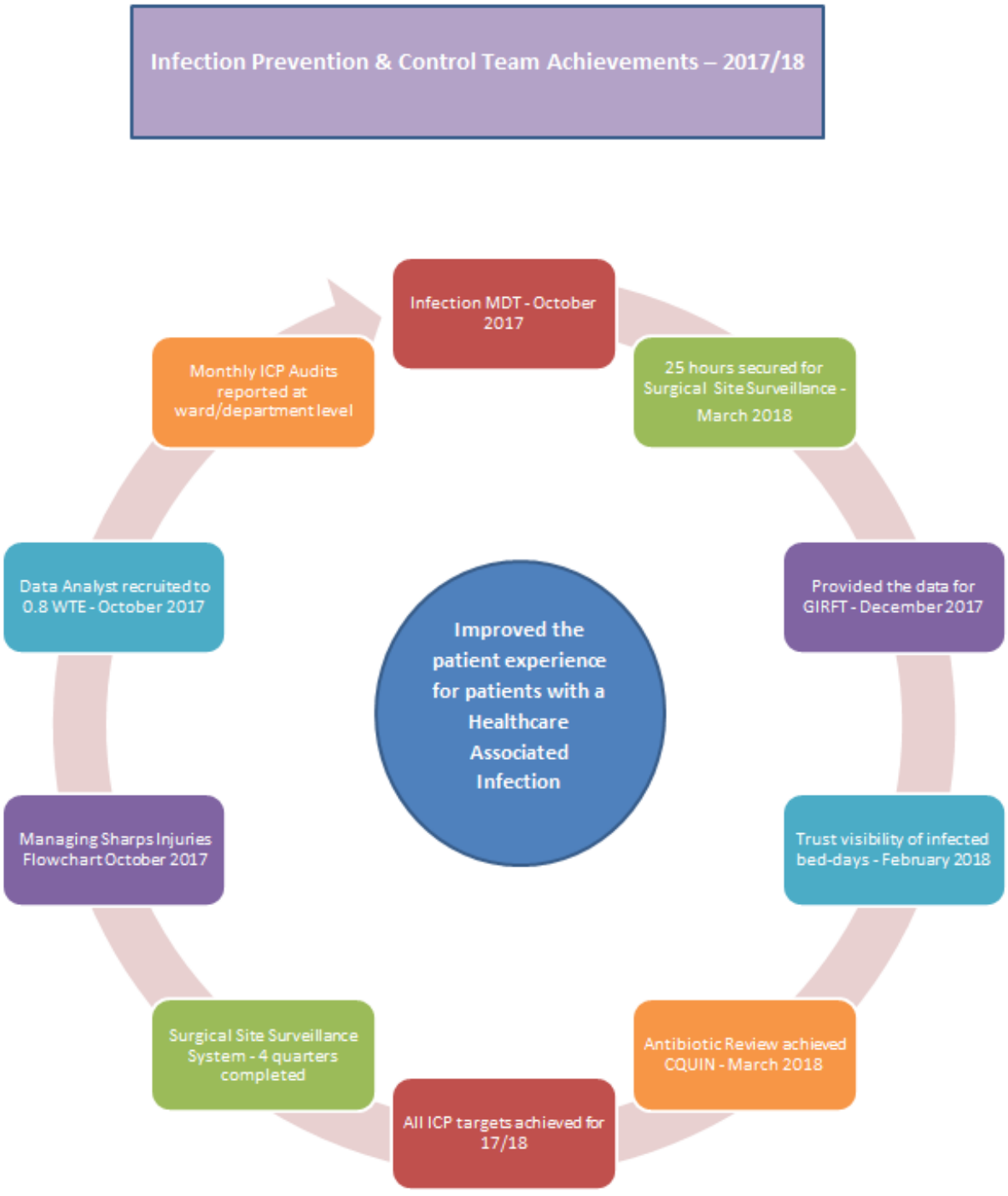
- There were no cases of MRSA bacteraemia
- The Trust remains on trajectory and has had one case of C.*difficile* against a target set at two for 2017/18
- There were 6 cases of *E.coli* blood stream infections, all cases were related to urinary tract infections
- There was one case of MSSA bacteraemia attributable to RJAH
- There was an outbreak of Norovirus on Sheldon ward

2.3. Conclusion

The Board is asked to:

(a) To note the report

(b) To discuss and determine actions as appropriate


Infection Prevention & Control Team Achievements – 2017/18
Improved the patient experience for patients with a Healthcare Associated Infection
Infection MDT - October 2017
25 hours secured for Surgical Site Surveillance - March 2018
Provided the data for GIRFT - December 2017
Trust visibility of infected bed-days - February 2018
Antibiotic Review achieved CQUIN - March 2018
All ICP targets achieved for 17/18
Surgical Site Surveillance System - 4 quarters completed
Managing Sharps Injuries Flowchart October 2017
Data Analyst recruited to 0.8 WTE - October 2017
Monthly ICP Audits reported at ward/department level

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) and are displayed on public STAR boards.

3.2. 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.

3.2.1. 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 infection at RJAH.

The **Director of Infection Prevention & Control** 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 and is contracted for 3 sessions a week to include the microbiology ward round and microbiological reporting. The role includes:

- Advising and supporting 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 Infection multidisciplinary team meetings providing expert advice on complex/infected cases
- Has the authority to challenge inappropriate practice including inappropriate antibiotic prescribing decisions

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:

- Consultant Microbiologist: 24h infection control advice is available from the on-call consultant microbiologist
- Infection Prevention and Control (IP&C) Clinical Nurse: (1 WTE) Band 7
- Surgical Site Surveillance Nurse (0.4 WTE): Band 5 – A post of (0.66 WTE) is vacant
- Infection Control Analyst (0.8 WTE): Band 4

The **Antimicrobial Pharmacist**: The Trust employs 0.5 WTE 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 and the Antimicrobial Stewardship Committee meetings
- Supporting antimicrobial stewardship initiatives
- Participating in and contributing to the ward rounds with the ICD
- Carrying out audits in line with national guidance
- Providing training 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 2017/18.

Attendance at IPCC

	April	*Sept*	*Oct*	*January*
DIPC	*apol*	✓	*apol*	*apol*
ICD	✓	✓	✓	✓
IPCN	*apol*	✓	✓	*apol*
Ass. DON	✓	✓	✓	✓
SSSN	*apol*	*apol*	*apol*	✓
CCDC (PHE Rep)	*apol*	*apol*	*apol*	*apol*
Antimicrobial Pharmacist	✓	*apol*	✓ ✓	✓
Facilities Manager (Estates & Facilities Representation)	✓	✓	✓	✓
Matron (Quality & Safety)	*apol*			
Matron (Medicine)	✓	✓	✓	*apol*
Matron (Surgery)	✓	✓	*apol*	✓
Matron (Theatre & OPD)	✓	✓	✓	✓
Theatre Manager	✓	*apol*	*apol*	✓
H&S Officer				
Head of IPC SCCG & TWCCG	✓	✓	✓	✓
Clinician Rep	*apol*	✓	✓	✓
TSSU Rep	*apol*	✓	*apol*	✓

The IPC Programme of Work

The IPC programme of work 2015 - 18 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. Previously SaTH was looking into purchasing ICNET with RJAH purchasing a license; however this is no longer an option, therefore the identification of a most cost-effective solution utilising internal systems and exploring local solutions to develop with the support of resources at RSH is required.

IPC Link Practitioner System

The Infection Control Link Practitioner group meets bi-monthly, with 'e-updates' being sent out alternately. This has been used as a tool for improving communication to the wider ward/departmental teams.

Topics of discussion for 2017-18 have included:

- Surgical Site Infection
- Skin Preparation
- Hand Hygiene Competency
- Sharps Safety
- Outbreak Reports
- Winter Virus Preparations
- Updates on IPC issues
- E. *coli*, MSSA Bacteraemia, C.*difficle*/Post Infection Review and Documentation
- Audit requirements/Results
- Sharps injury poster
- Saving Lives toolkit revised version & Feedback on current audits
- Flu campaign

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

Mandatory Surveillance

Blood Stream Infection

- MRSA
  There were 0 cases of MRSA bacteraemia at RJAH in 2017-87. The target remains at 0 MRSA bacteraemia, any case attributed to RJAH would be considered a never event for the Trust.

- MSSA
  There was 1 case of MSSA bacteraemia attributed to RJAH in 2017-18. The Patient on Powys Ward underwent reconstruction knee surgery and post operatively became unwell with sepsis. Blood cultures and wound aspiration obtained grew staphylococcus aureus. The root cause analysis identified that the wound infection was the most likely source of the bacteraemia.

- *E. coli* (or gram negative bacteraemia)
  In light of the Department of Health's new ambition to reduce healthcare associated blood stream Infections by 50% by the year 2021, the Local Health Economy felt that it would be prudent to convene a group to look at more joined up ways of working locally to try to prevent blood stream infections in our patients. Infections can occur across the wider health economy (hospital and community settings); therefore, reductions can only be achieved by working together across the whole health and social care sector.

  During 2017/18 the health economy was to focus on *E.coli* as one of the largest infection groups and this is supported by the Quality Premium for CCG's. The local health economy Infection prevention and Control (IPC) group has worked together and agreed a reduction plan with a focus to reduce E.coli by 10% or greater.

There were 6 cases of *E.coli* bacteraemia in 2017 -18. All cases were reviewed individually to determine whether there were common themes to help identify priority areas for action, all cases related to urinary tract infections that were unavoidable.

- C. *difficile*

There was 1 case of C *difficile* at RJAH in 2017 -18. The Trust appealed the case as the findings of the RCA identified that there had been no lapse in patient care. The case was considered by the Commissioners and agreed for removal from the Trusts actual number of cases for the purpose of calculations of financial sanctions. The positive outcome of the appeals process is tabled below:

Robert Jones and Agnes Hunt
2017/18 CDI Post Infection Review Outcome

Quarter	CCG	Date of Specimen	ID	DOB	Ward / Care Group	Appeals Panel Decision	Rationale for Decision	Appeals Panel Additional Comments/Actions
Q1	Out of County	24/05/17	1172536	31/07/61	Wrekin Ward	UPHELD	1. No indication to suspect transmission 2. No antibiotics given within RJAH	1. Comprehensive information within CDI PIR documentation 2. There were missed opportunities to take a faecal specimen in the days prior to sample being obtained

Lessons learnt from this case included the need for adaptions to the current admission assessment document for spinal injured patients upon transfer from other trusts. This now incorporates a more detailed assessment of the patient's history of infection, alongside improved detail of any other infections present in the ward environment from the transferring hospital.

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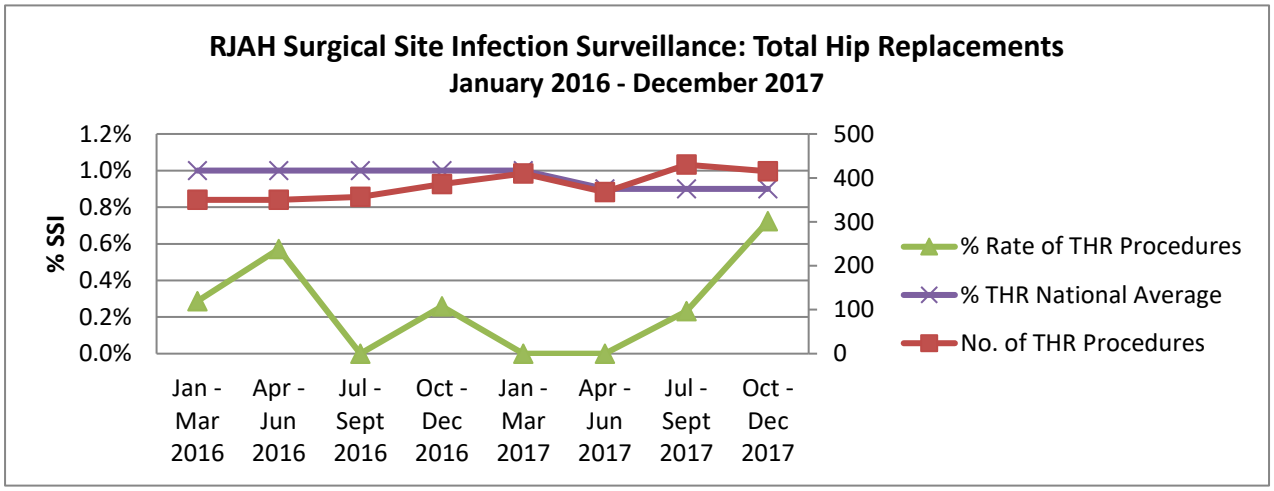
Surgical Site Surveillance (SSI)

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

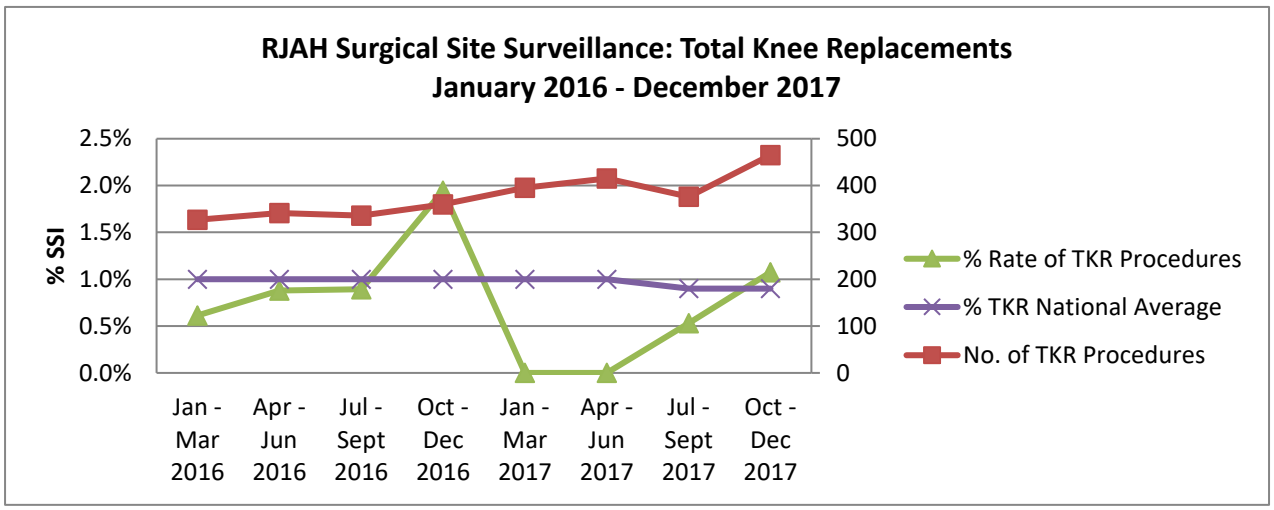
From January 2017 – December 2017, data on 4039 operations – total hip replacements, total knee replacements and spinal surgery was collected by the RJAH surgical site surveillance team.

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.

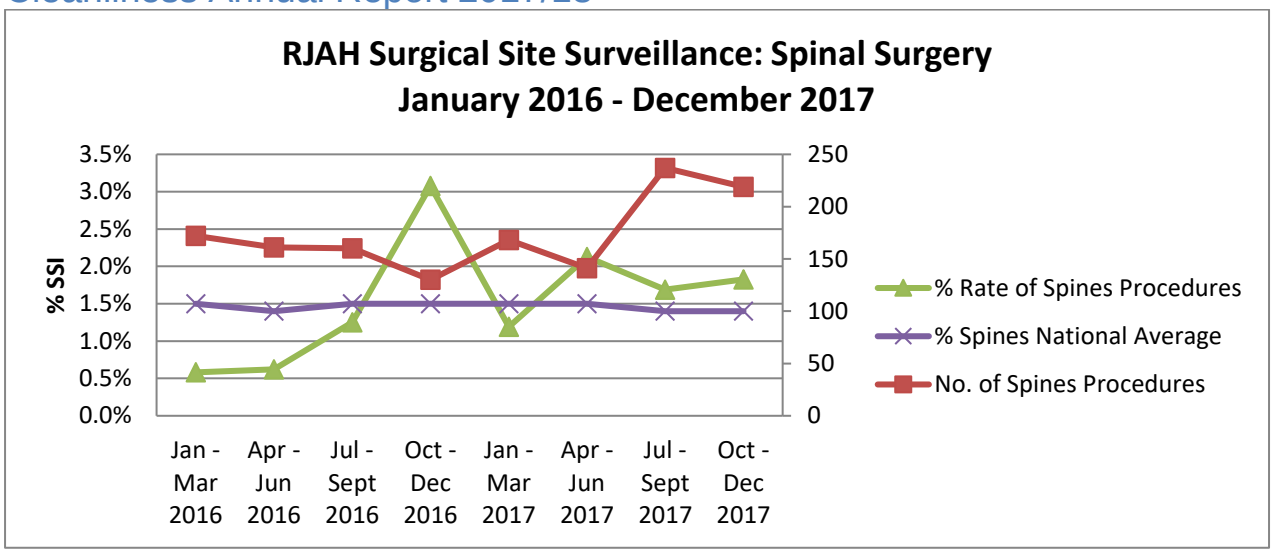
Surgeon specific data allows the surgical site surveillance team to provide analysis of infection rates to individual surgeons as part of their validation and appraisal process.



The RJAH rate of SSI for total hip replacements has been consistently below the national average through 2016 and 2017.

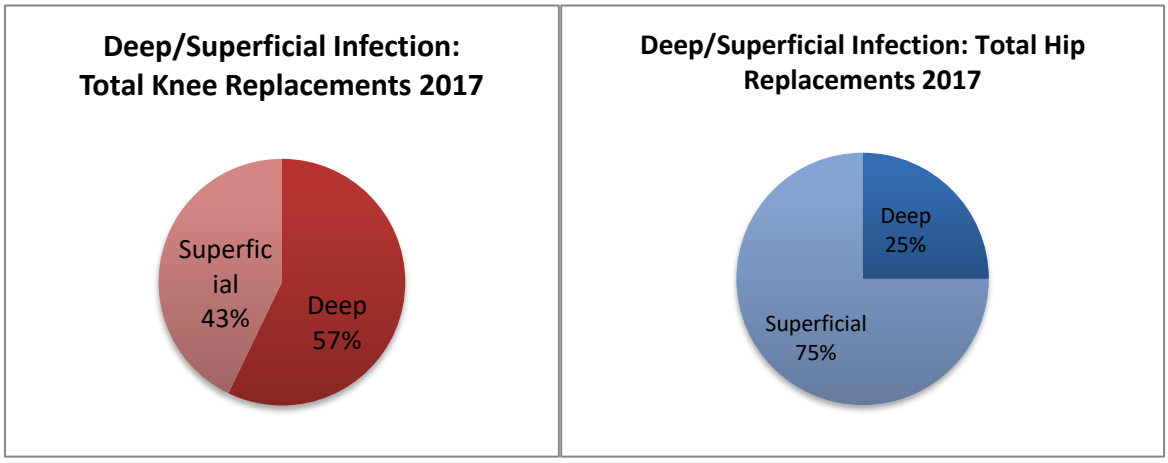


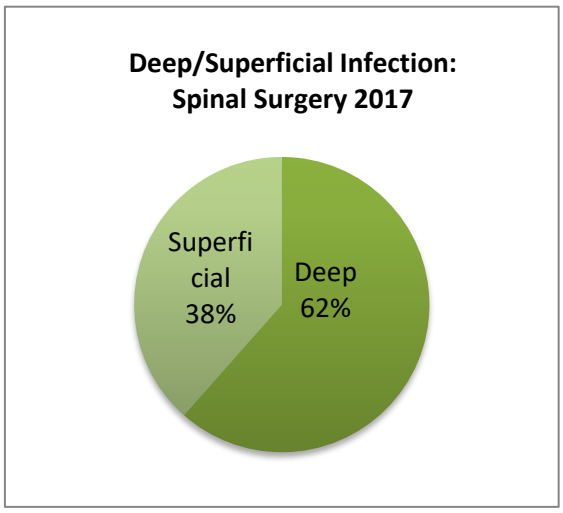
The RJAH rate of SSI for total knee replacements has been consistently below the national average through 2016 and 2017, with the exceptions being Oct-Dec 2016 and Oct – Dec 2017.



The RJAH rate of SSI for spinal surgery has been below the national average four quarters out of the eight during the period Jan 2016 and Dec 2017, with a peak showing in Oct-Dec 2016. The last 3 quarters show the rate as being consistently above the national average.

The pie charts below show the infections reported split by Deep/Superficial:





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The tables below show how our Hip and Knee Replacement SSI rates and activity compare with other Orthopaedic Alliance Trusts for 2016/17. Data for 2017/18 has not been published at the time of this report. The figures demonstrate that RJAH performs the highest activity levels nationally.

2016/17 - Hip			
NHS Trust	No. operations	No. of SSIs	% of SSIs
The Robert Jones and Agnes Hunt Orthopaedic Hospital NHS Foundation Trust	1503	2	0.1
Wrightington, Wigan and Leigh NHS Foundation Trust	1305	3	0.2
The Royal Orthopaedic Hospital NHS Foundation Trust	1223	4	0.3
Royal National Orthopaedic Hospital NHS Trust	421	3	0.7

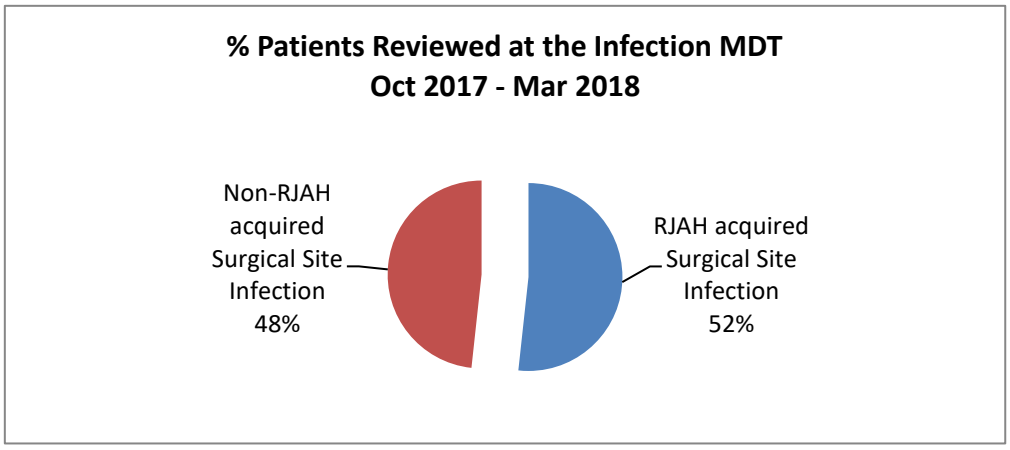
2016/17 - Knee			
NHS Trust	No. operations	No. of SSIs	% of SSIs
The Royal Orthopaedic Hospital NHS Foundation Trust	1004	3	0.3
Royal National Orthopaedic Hospital NHS Trust	520	3	0.6
The Robert Jones and Agnes Hunt Orthopaedic Hospital NHS Foundation Trust	1432	10	0.7
Wrightington, Wigan and Leigh NHS Foundation Trust	1066	7	0.7

Infection MDT

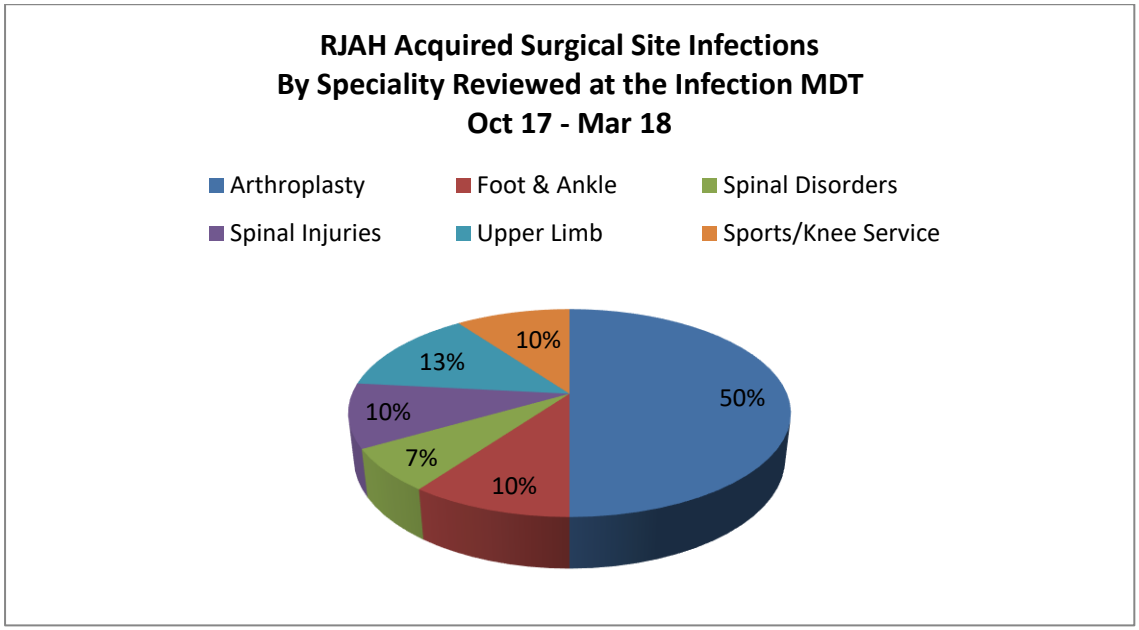
The Infection MDT commenced during October 2017, led by Consultant Surgeons within the Trust to review all patients who have been identified as having a surgical site infection. The purpose of the MDT is to discuss complex infections and to make recommendations for the surgeons' treatment plan. The Infection MDT is attended by the Consultant Microbiologist, Antimicrobial Pharmacist, the Infection Prevention & Control Team, Radiologist and Histopathologist. It is an opportunity for all surgeons to share learning and peer support.

Since the Infection MDT has been running, there have been 58 patients reviewed, of which 30 were identified as having a surgical site infection which was acquired at RJAH. PHE's Surgical Site Surveillance System requirements are to report hips, knees and spines; the Infection MDT reviews patients from all orthopaedic specialities, e.g. upper limb, lower limb, sport, spinal injuries.

The pie chart below shows the split of RJAH and non-RJAH acquired SSIs:



The chart below shows how the RJAH acquired surgical site infections are split by speciality:



It has become apparent since the implementation of the Infection MDT in October 2017, how much data is being collected Trust-wide that enables the Trust to have visibility of infection rates across all orthopaedic specialities.

As a recognised centre of excellence, additional resource is required to support maximising the value of our quality and performance in this field.

Getting it Right First Time (GIRFT)

During Oct16-Oct 17 The Trust took part of in the National Audit for infection. The 'Getting It Right First Time' (GIRFT) audit for surgical site infections in hip, knee, shoulder, elbow and ankle replacements; led by Professor Tim Briggs from the Royal National Orthopaedic Hospital, Stanmore.

This initiative encouraged the scrutiny of SSIs and their causes and was intended to be introduced without prejudice to and without interfering with the complementary collection and publication of surveillance data on SSIs undertaken by the Trust for Public Health England.

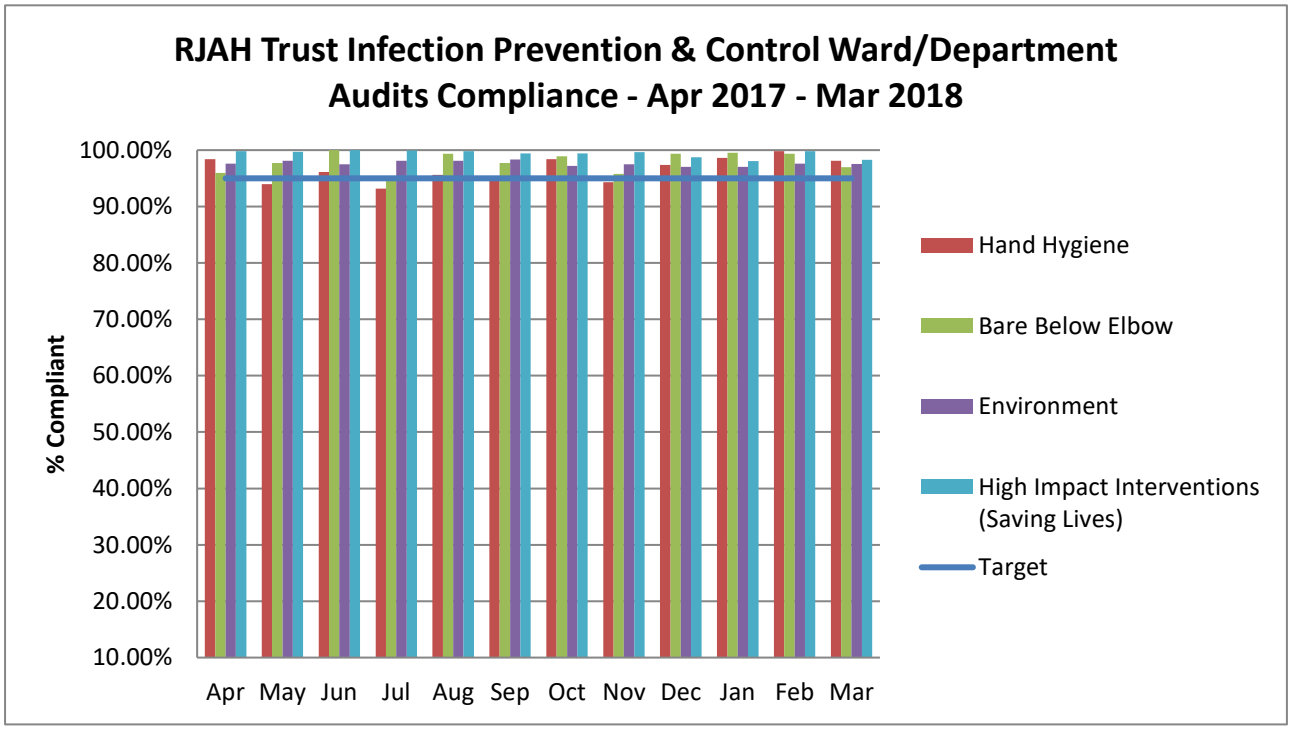
The audit data was submitted in October 2017, to date the results have not been published.

It is likely that collection of this data will become compulsory for all trusts as part of the solutions being developed from the GIRFT programme, with data inputted into the dashboards for each speciality and hosted by the model hospital.

Infection Prevention & Control Ward/Department Audits

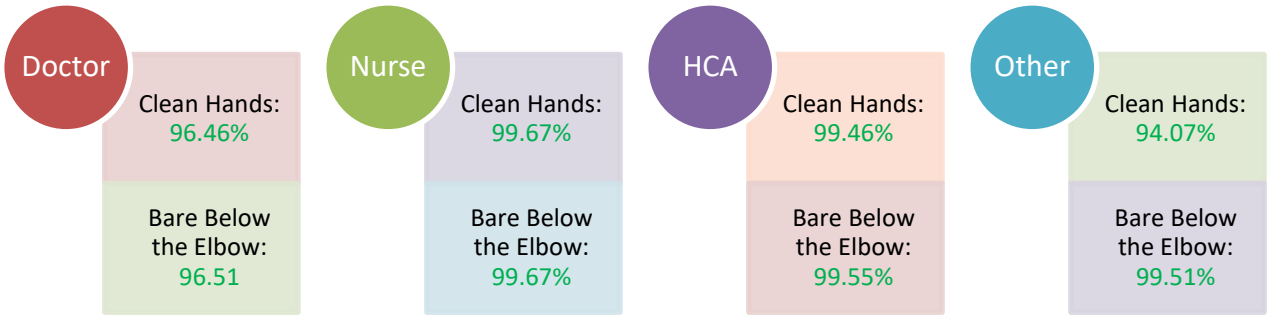
Wards and departments complete a robust package of infection prevention and control audits across the year. The toolkit comprises of environmental auditing, which highlights patterns of non-compliance to be addressed, the hand hygiene audit tool includes bare below the elbows and a revised set of High Impact Interventions (Saving Lives) tool was implemented January 2018.

The graph below shows the Trust's compliance against each of the individual audits. The results show how the Trust consistently achieves the 95% in all areas each month, with the exception of Hand Hygiene for May 2017 and July 2017, actions plans for non-compliant areas were implemented and staff encouraged to challenge at the point of care.



Hand Hygiene & Bare Below the Elbows

The image below shows the 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.



Environmental Audits – Top Failing Areas:

Top Failing for Apr 17 to Mar 18

Subject	Question	Fails
Environment	Floors clean & in good state of repair	46
Waste	Staff training is up to date	25
Environment	Furniture clean & in good state of repair (e.g. lockers, chairs, tables)	23
Sharps	Temporary closure mechanisms are in use	19
Environment	Sluice clean & in good state of repair	18

Each matron receives a monthly report to show the results of their areas with a view to implementing any action plans for areas that have not achieved the 95% target. A copy of the audit results also goes to the Infection Control Link Nurses and Ward/Department Managers.

Improvements that have been made include:

- Floor replacement programme on the Spinal Injuries Unit
- Outpatients have been decorated and received new chairs
- The Daniels representative has visited departments to provide advice and support on temporary closure mechanisms on sharps boxes

High Impact Interventions (Saving Lives)

During January 2018, a revised set of High Impact Interventions (Saving Lives) audits were implemented across the Trust. The aspects of care, volume and compliance of audits are shown in the following table:

High Impact Interventions	No. audits completed	% Compliance
*Antimicrobial Prescribing	42	96.43%
*Antimicrobial Secondary Care	12	75%
Central Venous Access Devices - Insertion Action	5	100%
Central Venous Access Devices – Ongoing Care	450	99.11%
Chronic Wounds - Wound Care Phase	305	92.46%
Peripheral Vascular Access Devices – Insertion Action	500	100%
Peripheral Vascular Access Devices – Ongoing Care	3516	96.59%
Preventing Surgical Site Infections - Intra-Operative Phase	56	100%
Preventing Surgical Site Infections - Pre-Operative Phase	16	100%
Urinary Catheter - Insertion Phase	1024	99.80%
Urinary Catheter - Routine Maintenance	3168	98.80%
Cleaning and Decontamination	1614	100%

*To note: the Antimicrobial Prescribing aspects of the audits are new and were completed by ward staff, training for staff will be implemented to support the completion of these audits.

Validation Auditing

The peer review audits are complemented by validation audits undertaken by the infection control team.

Areas reviewed in 2017/18 are shown below. All areas received copies of audits completed alongside action plan templates and suggestions for improvements in the clinical environment. Staff are encouraged to use the 'Planet FM' system to document environmental issues requiring estates attention.

Theatres

Areas of improvements required include:

- Clutter along the theatre corridors
- No clear responsibilities for cleaning
- High levels of dust on the stacking trollies
- Inappropriate placement of trollies obstructing the vents.
- Rust on wheels

TSSU

Areas of improvements required include:

- Trolley wheels rusty
- Build-up of scale on the washers
- Floors and walls damaged requiring attention

Hydrotherapy Pool

Areas of improvements required include:

- Rust observed on:
    - plinth legs/hydraulics
    - changing room benches
    - shower chairs
    - poolside rails
    - door brackets
- Lockers discoloured with rusty locks

Orthotics

Areas of improvements required include:

- No privacy curtain for when patients undergoing plaster application
- Build- up of scale in the plaster sink
- Cluttered shelves with open stored clinical equipment, recommend cupboard doors to be fitted to prevent collections of plaster dust
- Clinical equipment being stored in an office environment

Orthotics RSH

Areas of improvements required include:

- Limited storage for clinical equipment within clinical room
- Lack of hand hygiene facilities for office staff receiving soiled footwear
- Taping to floor mat damaged and unable to be cleaned effectively
- Poor access to sluice activities

Gladstone

Areas of improvements required include:

- Lack of hand washing posters
- Macerators visibly soiled and had hairline cracks
- Extraneous items stored in the sluice
- Breakfast trolley in poor state of repair
- PPE dispensers dusty and not fully stocked

Alice

Areas of improvements required include:

- Sinks in both sluices have not got elbow taps
- Clinimatic has two hairline cracks
- Plaster room - COPD lack of storage clutter surfaces
- New hand washing sink in plaster room in COPD does not meet standards
- Fridge in COPD office for Occupational health immunisations – regular checks not always completed and fridge should not be located in an office

Commodes

22 chairs were audited across the Trust by external company Vernacare

Areas of improvements identified include:

- 2 chairs were found to have soiling on the footrests
- 7 chairs required replacing due to poor state of repair

Troughs/Foam Leg Supports

All troughs/foam leg supports throughout the Trust were audited.

Areas of improvements identified include:

- When uncovered/unzipped bodily fluids evident
- The majority of the troughs/leg supports were not waterproof
- A replacement programme to be implemented

3.2.3. 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 are monitored through several sources including internal monitoring, internal patient satisfaction surveys, the PLACE assessment and the CQC inpatient survey.

Cleanliness – Deep Cleaning

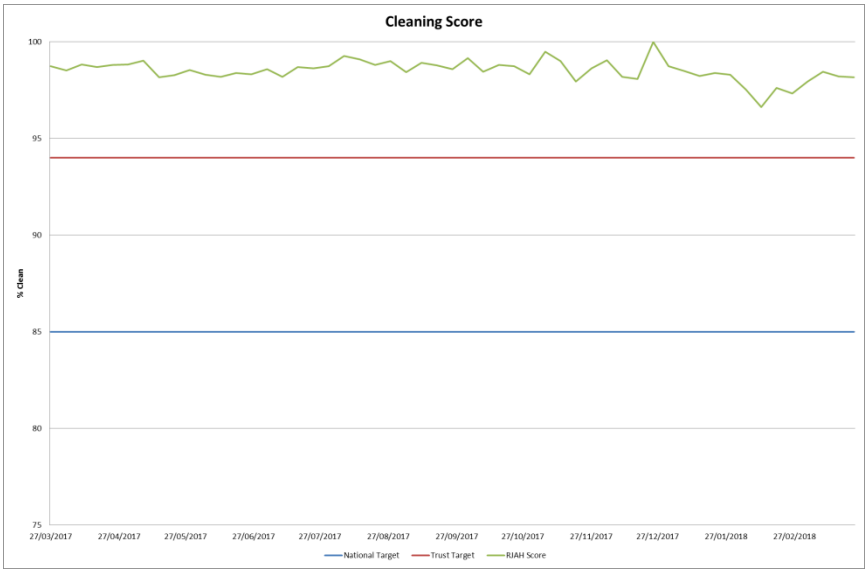
Whilst routine cleaning is completed in all areas on a daily basis, staff in high risk areas are supported with extra staff to complete a deep clean on a weekly basis. In the very high risk area of theatres there is a rolling deep clean programme that runs alongside the routine clean; cleaning in these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

In case of an outbreak, the Trust recognises the potential need to employ the use of technologies such as hydrogen peroxide vapour for the fogging of facilities and equipment. The Trust now also has a working relationship with Bioquell, whose service can be called upon as need requires it.

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 weekly basis. Very high risk areas are monitored by a 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, along with the patient survey, go to the Infection Prevention & Control Committee on a quarterly basis.



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The Trust has a risk based national cleanliness target of 85%, internally the Trust has set a 94% target, for the year 2017/18 the Trust achieved an average score of 98.45%

Cleanliness – Patient Satisfaction – Internal

Internal monitoring very much aligns to the feedback PALS (Patient Advice and Liaison Service) receive from the patient. On a monthly basis an internal team speaks to patients one to one and also reviews feedback forms that the patient can fill in privately. The results are fed back to the Estates and Facilities team to act upon. Satisfaction for cleanliness in 2017/18 was recorded as 99.4%.

Further to the categorisation of cleanliness standards through the patient surveys, the department also reviews every comment as part of its 360° review and learns as a team from negative feedback but also highlights the numerous positive comments associated with the hard work of the cleaning team.

Were you satisfied with the hygiene of the Ward					
Month	**Always**	**Mostly**	**Sometimes**	**Never**	**Don't know**
Apr-17	262	5	1	0	0
May-17	219	6	1	0	5
Jun-17	297	11	1	0	1
Jul-17	255	11	2	1	0
Aug-17	283	9	2	0	2
Sep-17	261	11	3	0	2
Oct-17	371	14	2	0	13
Nov-17	383	5	2	1	13
Dec-17	261	10	2	0	5
Jan-18	332	20	1	0	10
Feb-18	405	18	2	0	9
Mar-18	366	19	2	0	21

Cleanliness and Environment - Kitchen

The Trust kitchen is 5 Star rated for its food hygiene environment by the area Environment Health Officer. To reinforce standards, the department is calling upon a third party auditor to independently review standards; this has been a recommendation of the Environmental Health Officer.

PLACE – Patient Led Assessment of the Care Environment

The 2017 PLACE assessment identified many positives for the Trust and also areas to work upon. In relation to cleanliness and the environment;

- The Trust has improved across all measures, partly down to actions taken over the last 12 months and partly down to the much improved facilities in the new build. There are still areas for improvement, some easy to achieve and some that will only be achieved through future new builds.

- Cleanliness maintained its high standard, consistent with previous years and the internal reporting that goes to the Infection Control Committee quarterly. The few issues identified were mostly related to dust; all issues were resolved within days following the report.

The Trust has already completed its 2018 assessment; Full results will be published later this year.

All PLACE elements are addressed through the quarterly Infection Prevention & Control Committee; these include elements that fall outside of Criterion 2; cleanliness and the environment.

Linen

In collaboration with the Shropshire Linen Consortium, the Facilities and Infection Control team undertook an audit of the Mid Cheshire Hospital's laundry facility. The audit was undertaken to a rigorous standard, and concluded with a risk rated action plan. Whilst the staff were enthusiastic to work with the auditors in recognition of the service they provide, a number of issues relating to process were identified. These included a need for improved signage around clean/dirty area, locations of hand wash basins and application of PPE.

Owing to the buy in created by the collaborative working, actions have been undertaken to reach a gold standard. The team is due to return after June, the Mid Cheshire staff team are confident that all issues have been addressed.

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.

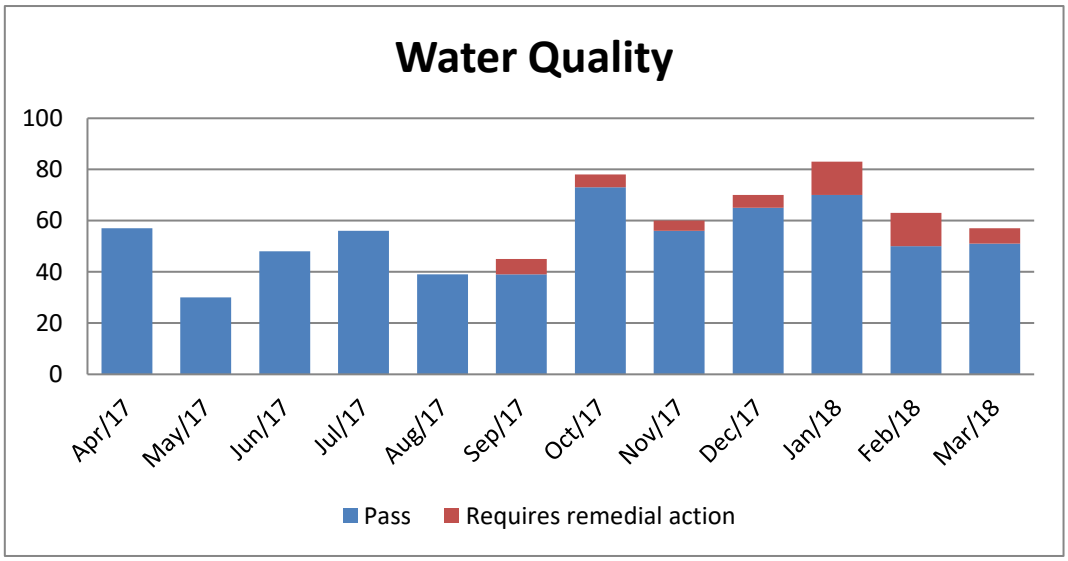
Water

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 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 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 Sub Committee.

Estates Operational Service continually undertake water tests throughout the Trust estate, during April 17 – March 18 at total of 688 water sample tests were undertaken, with 92% of tests being within specified limits. Those tests which recorded a score outside of the most

stringent parameters were actioned for immediate resolution; actions included water flushing and replacement of taps. The levels recorded were of no concern to patient safety.



As a further development to the robust approach that Estates and Facilities take to water safety training, the department has developed bespoke video tutorials referencing real areas around the Trust for training purposes.

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.

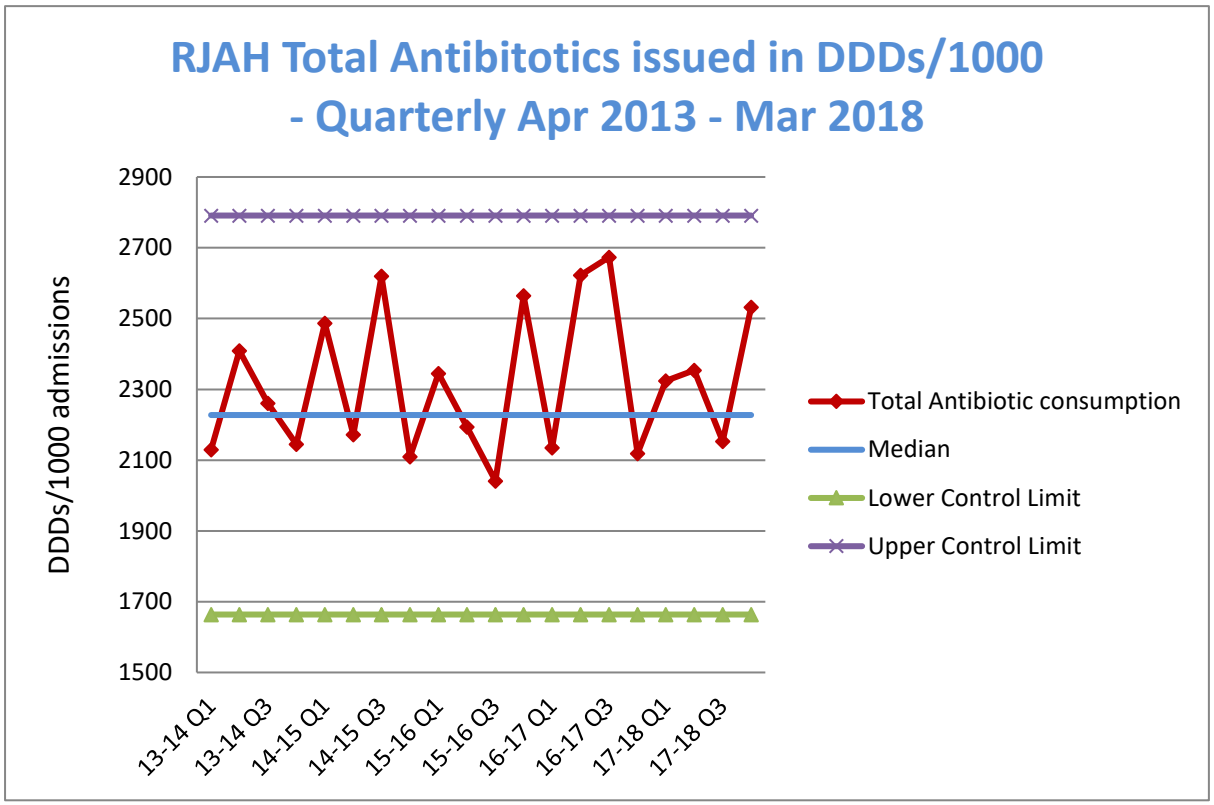
Further, there is a three monthly review of test results, control measures and procedures to ensure compliance with current legislation and these results are published at a sub-committee of the Infection Prevention & Control & Cleanliness Committee.

For the year 2017/18, all theatres passed their revalidation based on their install specification.

3.2.4. Criterion 3: Ensure appropriate antimicrobial use

The Antimicrobial Stewardship (AMS) Committee meets quarterly. The committee discusses antibiotic consumption and antimicrobial issues within the trust and has also included discussion of antimicrobial Datix incidents at each meeting and agreed an audit plan for 2018-19.

Monitoring of antibiotic consumption is the responsibility of the Antimicrobial Pharmacist within the trust. Consumption of carbapenems and piperacillin/tazobactam has specifically been monitored. Consumption in DDDs/1000 admissions is calculated and compared to historical data, as per the graph below:



CQUIN achievements

- The use of broad spectrum antibiotics, such as piperacillin/tazobactum and carbapenems is recognised to contribute to the increase of antibiotic resistant organisms. Reduction in the use of these antibiotics is part of the antimicrobial stewardship program and one of the themes for the 2017-18 CQUIN .
- In line with Public Health England's finger tips data, our data shows we are achieving a steady but gradual decrease in the four quarter rolling rate of total antibiotic prescribing per 1000 admissions and Piperacillin-tazobactum but an increase in carbapenem prescribing.
- Antibiotic Review of antibiotic prescriptions by 72 hours for 'Sepsis' patients was another component of this year's CQUIN and the targets were achieved in all four quarters.

Areas of focus for 2017/18 have been:

- Audit
- Introduction of Point prevalence studies
- Contribution to Local Health economy infection prevention and control and antimicrobial prescribing group
- Introduction of specific vancomycin drug chart
- Infection MDT

Aspirations for the 2018/19 are:

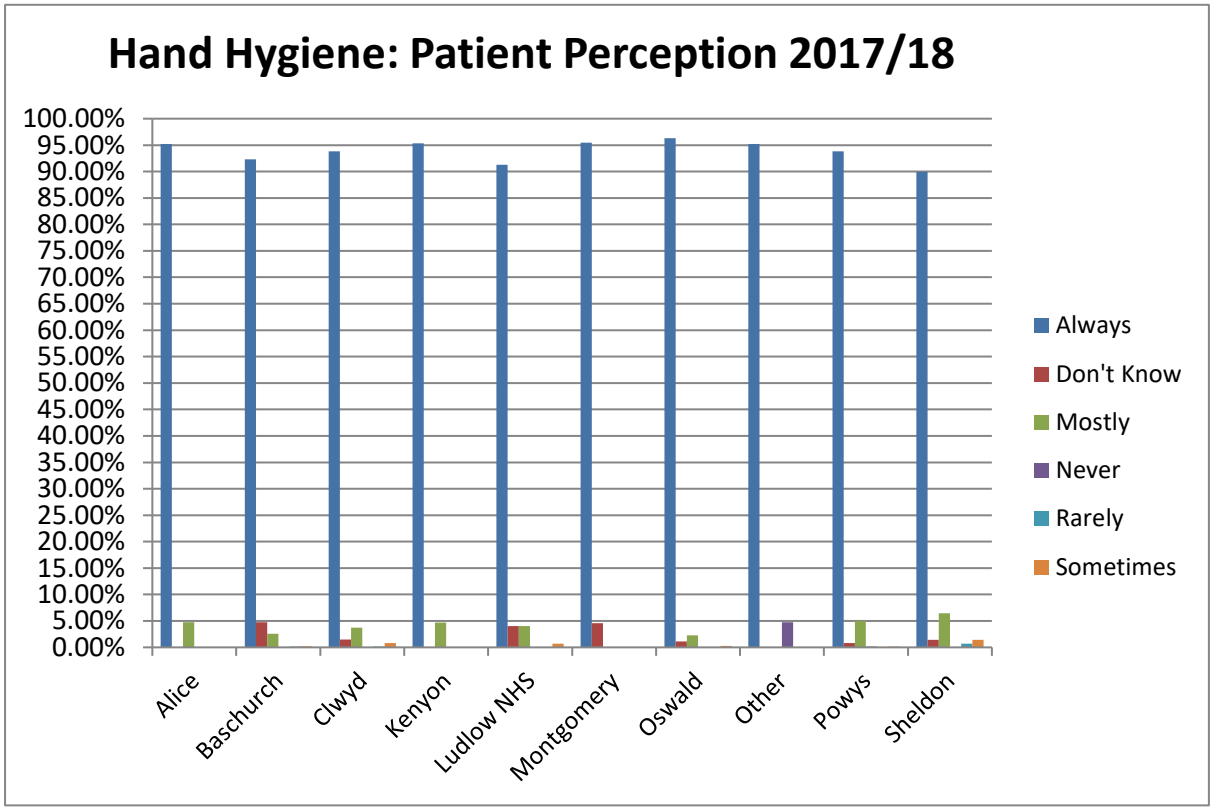
- Review of current Trust drug chart to incorporate a specific section for prescribing of antimicrobials
- Trust wide use of the vancomycin chart
- Training with Rx info on bench marking antibiotic consumption to other Vanguard sites.
- Introduction of the SaTH gentamicin calculator on RJAH's intranet
- Integration of the high impact intervention scheme at ward level and ownership by nursing staff

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

All patients with alert organisms are seen by the infection control nurse and information leaflets are provided. The microbiologist will also give advice and support to patients and their relatives upon request.

The Trust promotes best practice in 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 are used as a resource of data – including a specific question asking "Did the staff practice good hand hygiene". The results shown below provide encouraging feedback from a patient's perspective.

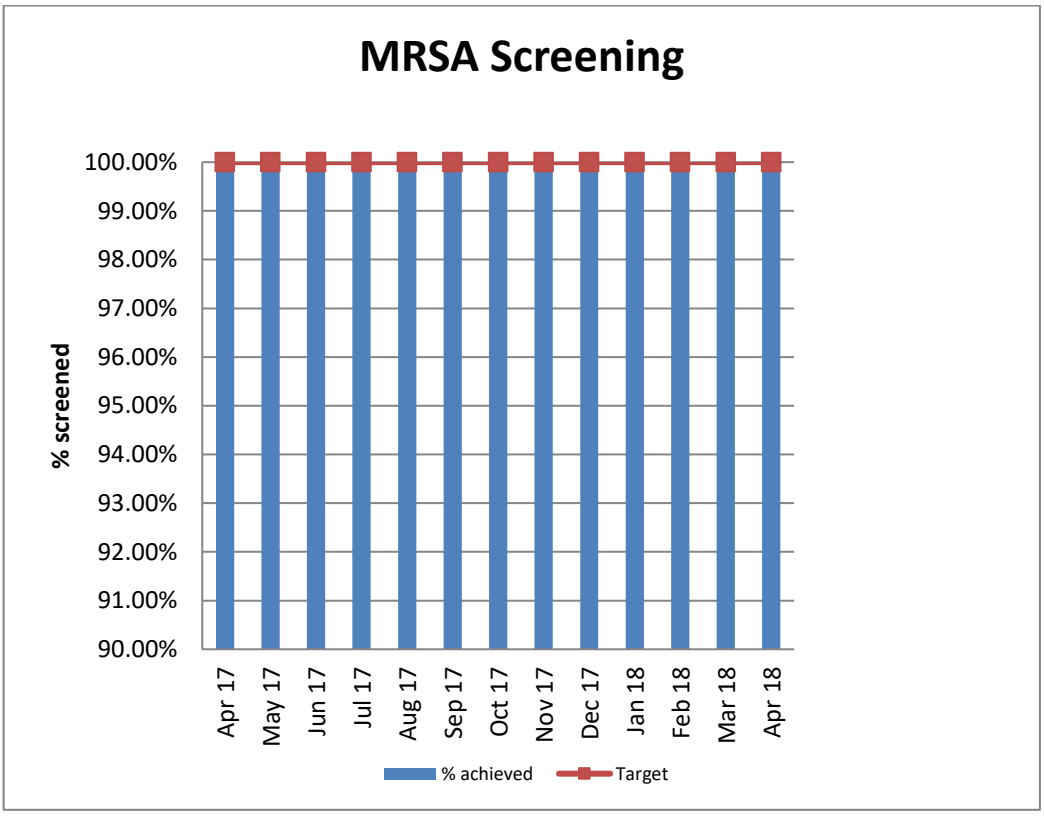


3.2.6. Criterion 5: Ensure prompt identification of people who have or are at risk of developing an infection

Patients who are at risk or require extra attention – this includes those unable to maintain high levels of hygiene standards, with poor quality skin or at risk of falls. Stakeholders receive an email with patient summaries and suggestions of actions to be in place in readiness for admission & surgery.

MRSA positive cases and ESBL infections are alerted to the IPCT daily as part of the lab 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.

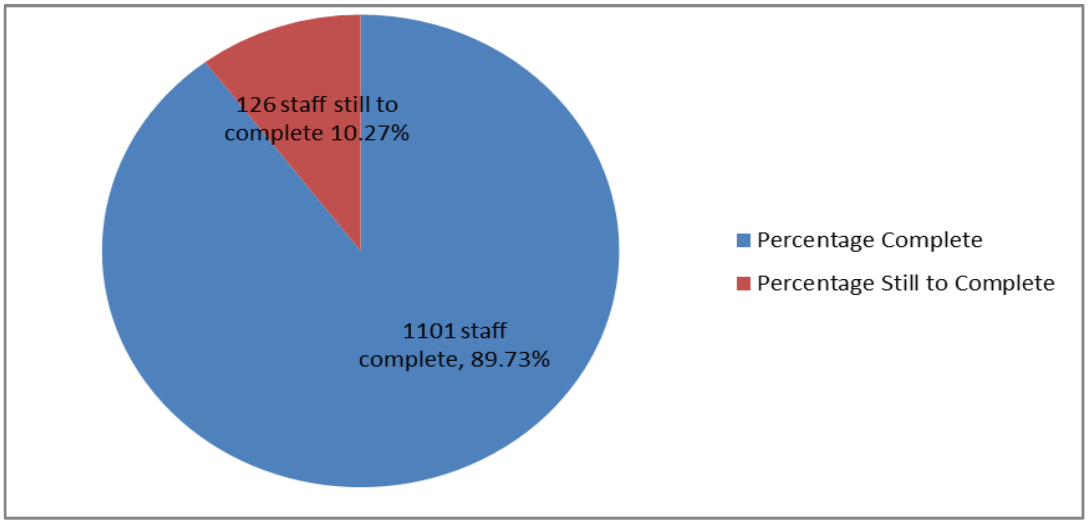
The Infection Control Nurse/Surgical Site Surveillance Nurse provides advice and support to patients/relatives in the event of acquiring infection.



The graph above demonstrates the MRSA screening compliance which is consistently above 99%, set against a Trust target of 95%.

3.2.7. 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.

The provision of IPC training is met through provision of a mandatory e-learning package based on Department of Health evidence based infection control guidelines. In total 1101 staff have completed this training with 126 staff still to complete during 2017/18.



Additional training sessions provided by the IPCN include:

- Induction training of 45 minutes for all clinical and non-clinical staff (separate sessions for junior hospital doctors).
- All new/rotational doctors receive a short induction session provided by the IPCN.
- 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
- Well received face to face training for groups of staff such as:
  - Catering
  - Porters
  - Domestics
  - Estates Maintenance staff

Domestic staff enjoying face to face hand hygiene training

3.2.8. 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. However, during the outbreak of Norovirus on Sheldon Ward, once all side rooms were occupied, other symptomatic patients were cohorted together in the bays with robust infection control precautions in place.

Ideally, it is recommended that there are closable doors on a number of the bays to provide further isolation facilities during an outbreak and taking into consideration the mixed sex accommodation requirements.

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

The management of prosthetic joint infection is challenging, the microbiology ward round is held once a week with the 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 lab sends 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.

A fit for purpose IT system is required to record and report the positive samples to enable the Trust to respond, have visibility of the impact and be able to undertake full surveillance of infections.

3.2.10. 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 & Control Policies & 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 30 specific IPC SOP.

Policies Reviewed in 2017- 18	
Notifiable Infections	Norovirus
IPC Protocol	Legionella
IPC Framework	Viral Haemorrhagic Fever
Outbreaks of Infection	Trust Cleaning Policy
MRSA	
Blood Borne Virus and Sharps Injury	

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

Sharps Safety

The annual Trust wide audit of compliance with sharps practice was undertaken by Daniels Healthcare Ltd in February 2018. The object of the site survey was to establish whether or not sharps are disposed of in a safe manner, the survey also provided the opportunity for the auditor to raise sharps awareness, assess practice, discuss problems and advise on compliance to current legislation.

- 33 wards/departments were audited
- 23 wards/departments demonstrated compliance of >95%
- 6 wards/ departments demonstrated compliance of 85-94.9%
- 4 wards/departments demonstrated compliance of <85%

The table below shows the results of the Audit by Ward/Department:

	AREA	ACTUAL SCORE	PERCENT COMPLIANT
1	ALICE WARD	14	87.50%
2	BLOOD ROOMS X 2	32	100.00%
3	CHILDRENS OUTPATIENTS	32	100.00%
4	CLWYD WARD	40	100.00%
5	C.T.	23	95.83%
6	DAART	16	100.00%
7	GLADSTONE WARD	28	87.50%
8	HAND UNIT	6	75.00%
9	H.D.U.	96	100.00%
10	KENYON WARD	40	83.33%
11	LUDLOW WARD + O.P.D.	59	81.94%
12	MATERNITY UNIT	72	100.00%
13	M.C.S.I.	40	100.00%
14	MENZIES DAY SURGERY	45	93.75%
15	M.R.I.	8	100.00%
16	OCCUPATIONAL THERAPY	8	100.00%
17	OUTPATIENTS	192	100.00%
18	O.R.L.A.U.	24	100.00%
19	ORTHOTICS	16	100.00%
20	PAIN CLINICS	23	95.83%

	AREA	ACTUAL SCORE	PERCENT COMPLIANT
21	PHARMACY	16	100.00%
22	PHYSIOTHERAPY	24	100.00%
23	POWYS WARD	49	87.50%
24	PRE OP	86	97.73%
25	SHELDON WARD	39	81.25%
26	THEATRES X 10 / RECOVERY	606	95.89%
27	WREKIN WARD	40	100.00%
28	ULTRASOUND in X - Ray	16	100.00%
29	X - RAY	31	96.88%
30	BASCHURCH DAY UNIT	91	87.50%
31	LABS (ARC)	113	94.17%
32	MONTGOMARY UNIT	32	100.00%
33	OSWALD WARD	39	97.50%

Audit results and photographic evidence have been shared with the Ward/departmental Managers and action plans have been implemented for scores below 95%.

A training plan, based on the recommendations noted below, with Daniels, has been organised for the Infection Control Link Nurses and the theatre department during audit day in 2018.

Recommendations:

- Training in the assembly of sharps containers
- Train staff not to overfill sharps containers
- Train staff to match Lid and Label correctly
- Brackets in areas where appropriate
- Keep sharps containers off the floor
- Train staff to fill in label following assembly
- Train staff not to put non sharps in sharps containers
- Train staff to put the temporary closure in place when unattended or when moved
- A one-brand system
- Re-audit within one year

Occupational Health

Team Prevent 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, Team Prevent 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.

Flu Campaign

- Team Prevent support the Trust with their annual Seasonal Flu Immunisation Programme.

- The final submission results to Immform for 2017/18 season resulted in achieving 63% of all frontline healthcare workers having the flu vaccine. This has showed a continued improvement on uptake from previous years.

Blood Borne Virus Exposure Incidents

- Team Prevent are cognisant that Blood Borne Virus Exposure incidents or injuries represent a significant risk to staff working in health care environments

- Under Health and Safety Legislation, Team Prevent 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.

- Team Prevent 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.

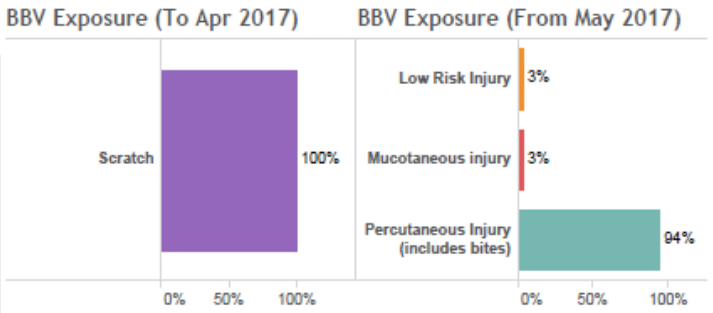
Team prevent

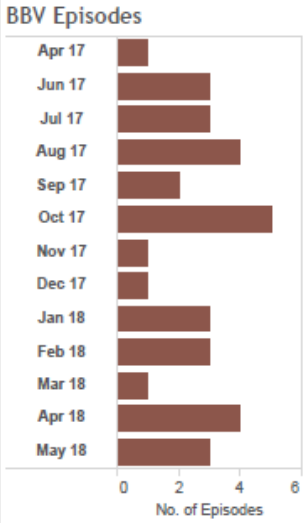
Monthly Dashboard - RJAH
Org Level 1 - RJAH
From 1 April 2017 to 31 May 2018

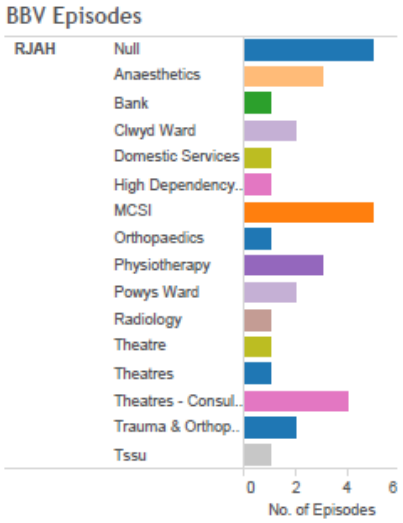
(months with zero data will not be displayed)

Innoculation/BBV Incidents

		Apr 17	Jun 17	Jul 17	Aug 17	Sep 17	Oct 17	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Total
RJAH	Null				2	1	1						1		5
	Anaesthetics		1							1			1		3
	Bank										1				1
	Clwyd Ward			1					1						2
	Domestic Services						1								1
	High Dependency Unit - HDU			1											1
	MCSI					1					1	1	1	1	5
	Orthopaedics										1				1
	Physiotherapy		1				1			1					3
	Powys Ward	1												1	2
	Radiology						1								1
	Theatre						1								1
	Theatres									1					1
	Theatres - Consultant Surgeons		1		1			1					1		4
	Trauma & Orthopaedics			1	1										2
	Tssu													1	1
	Total	1	3	3	4	2	5	1	1	3	3	1	4	3	34
Grand Total		1	3	3	4	2	5	1	1	3	3	1	4	3	34







Team prevent

Monthly Dashboard - RJAH
Org Level 1 - RJAH
From 1 April 2017 to 31 May 2018

(months with zero data will not be displayed)

Neddlestick Hospital Attended

		Month of Episode Start Date												
Question	Quest Answer	Jun 17	Jul 17	Aug 17	Sep 17	Oct 17	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Grand T..
Was the Injury reported out of hours and the individual obtained treatment or assessment from A&E or another source before speaking to Team Prevent?	No	2	3	4	2	5	1	1	3	3	1	2	3	30
	Yes											1		1
Which hospital/clinic was attended?	RSH											1		1

Classification Glossary

Low Risk Bodily Fluids - These fluids are not considered a risk UNLESS they are visibly blood stained: urine, vomit, saliva, faeces, nasal secretions, sputum, sweat, tears

Low Risk Injury - Splash on intact skin (there is no known risk of BBV transmission from exposures to intact skin)

Mucotaneous Exposure - is an exposure where there is direct contact of blood/body fluid with eyes, nose & mouth or broken skin e.g. uncovered cuts, abrasions or eczema not covered with waterproof dressing)

Percutaneous Injury (including bites) - is an exposure incident in which penetration of the skin occurs by a needle or other sharp object which may have been in contact with blood, tissue, or other body fluid before the exposure.

3.3. Serious Incidents/ Periods of Increased Incidence

There were no Infection Prevention & Control Serious Incidents reported during 2017/18.

Periods of Increased Incidence – Joint infections following joint injections

Three patients were readmitted with streptococcal infections following joint injections. One patient was infected with a streptococcus sanguinis and two had streptococcus oralis – both under the same consultant's care. These were performed two weeks apart; one in clinic and the other in a theatre setting.

A full root cause analysis was undertaken for these cases; investigation identified no correlating factors to link these cases.

Lessons learned identified through the RCA process has led to a

- A change in skin preparation prior to injection
- Increased documentation of the injection procedure
- An SOP for joint injection procedures being drafted with the Upper Limb Team and is awaiting approval at the Quality and Governance Quarterly Meeting.

Periods of Increased Incidence – Spinal Surgical Site Infections

As the Trust had identified a gradual increase of spinal surgical site infections during the first two quarters of 17/18, this continued into quarter 3 which prompted concerns to be raised around a specific operating theatre; following analysis of the cases, there was no correlation with the infections and the specific theatre. An improvement plan was developed and the Theatre Complex underwent a full environmental deep clean, declutter of the corridors and deep clean of clinical equipment over the Christmas period 2017. A more robust cleaning regime is now in place with clearer cleaning responsibilities and an enhanced monitoring programme, which forms part of the Infection Prevention & Control & Cleanliness Committee agenda.

During January to March 2018, to date, there have been no spinal surgical site infections reported.

3.4. Conclusion

The year 2017/18 was another successful period in meeting the targets set by Public Health England and the Clinical Commissioning Group at RJAH Orthopaedic Hospital NHS foundation Trust.

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

A highlight of 17/18 was the introduction of the weekly infection multi-disciplinary team meetings that have been implemented where complex patients are discussed to achieve a collaborative decision, amongst other decisions, for the most effective treatment plan which includes surgical options and antibiotic therapy for patients with complex/resistant infection cases. Given the volume of patients reviewed, further investment is required to facilitate full surgical site surveillance across all orthopaedic specialities in line with other Orthopaedic Alliance Trusts.

Bev Tabernacle: Director of Infection Prevention and Control

Sue Sayles: Infection Prevention and Control Nurse

June 2018

Key Areas of Focus for 18/19

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	Recruitment of Surgical Site Surveillance Nurse to 1 WTE	Research software for recording VIP Score
Introduce annual competencies for ANTT.	Members of the 'Joint Infection' Multi Disciplinary Team.	Additional surgical site surveillance for all Orthopaedic Specialities

Appendix 1: Acronyms

AE (D)	Authorised Engineer (D)
AMS	Antimicrobial Stewardship Committee
ANTT	Aseptic Not Touch Technique
CCDC	Consultant in Communicable Disease Control
CQC	Care Quality Commission
CQUIN	Commissioning for Quality and Innovation
DIPC	Director of Infection Prevention & Control
E.Coli	Escherichia coli
EPR	Electronic Patient Record
ESBL	Extended Spectrum Beta Lactamase
GIRFT	Getting It Right First Time
HCAI	Healthcare Associated Infection
HEE	Health Education England
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
PHE	Public Health England
PIR	Post Infection Review
RCA	Root Cause Analysis
RSH	Royal Shrewsbury Hospital
SATH	Shrewsbury and Telford Hospitals
SCCG	Shropshire Clinical Commissioning Group
SSI	Surgical Site Surveillance
SNAHP	Senior Nurse and Allied Health Professionals
SOP	Standard Operating Procedure

STAR	Sustaining Through Assessment and Review
TSSU	Theatre Sterile Services Unit
VIP	Visual Infusion Phlebitis
WTE	Whole Time Equivalent