The Robert Jones and Agnes Hunt Orthopaedic Hospital NHS Foundation Trust

Infection Prevention & Control Annual Report

2015

Executive Lead: Bev Tabernacle: DIPC
Author: Dr Graham Harvey: Consultant Microbiologist
Sue Sayles: Infection Prevention and Control Nurse,
Phil Davies: Facilities Manager

April 2015 – March 2016

EXECUTIVE SUMMARY

OVERVIEW

RJAH Orthopaedic Hospital NHS Foundation Trust is compliant with the Code of Practice on the prevention and control of infections and related guidance (The Health and Social Care Act 2008).

The Trust was inspected by the Care Quality Commission (CQC) during October 2015. Each specialty inspected included an assessment of Infection Control, details are provided in this report.

In recognition of the role all staff play in infection prevention and control, education has been delivered at all levels across the organisation. This report demonstrates that a standard programme of infection prevention, including hand hygiene, cleaning standards and personal protective equipment, is complimented by specialist training when needed.

Recognising the importance of infection prevention and control, the Trust continues to undertake surveillance of all infections, which is supported the availability of a regular wound clinic for all patients as required in order to support and review post-operative wound management.

As part of the Trusts vision to be a leading centre high quality, sustainable orthopaedic and related care, the STAR (Sustaining Quality Through Assessment & Review) performance assessment framework has been introduced as a measure of quality, providing evidence against national standards.
The STAR initiative incorporates robust infection prevention and control standards, including evidence of Link meetings and audit results, which are displayed on STAR quality boards in each ward area, providing assurance to patients and visitors of the robust Infection Prevention and Control measures across the Trust.

The trust board fully recognised the importance and positive impact that good infection prevention performance has on patient experience and their safety. The Trust has made patient safety its number one priority having infection prevention as its founding principle. The challenge of 2016/17 remains to maintain low rates of HCAI and to continue to improve practice to ensure the best care for all patients.

SURVEILLANCE

- There were 0 cases of MRSA bacteraemia assigned to RJAH in 2015/16.
- There were 0 cases of post-72 hour C. *d*ifficile infection in 2015/16 against a target of 2 cases.
- There were 0 cases of MSSA bacteraemia assigned to RJAH in 2015/16.
- There were 2 cases of E Coli bacteraemia assigned to RJAH in 2015/16, both in April. An IPC review was undertaken in both cases and fed back through infection control committee.

OUTBREAKS/INCIDENTS

- There were no hospital outbreaks in 2015/16. Details of the serious incident concerning the increase in surgical site infections are provided within the report.
- Seasonal Norovirus activity was significantly lower during the winter with no outbreaks within the Trust.
- During December there was a hospital acquired acquisition of MRSA on Sheldon ward. A full RCA was performed and action plan implemented. There is a lot of learning required from Medical and Nursing Staff which includes improved accountability for microbiological results when taking samples.

OTHER

Jayne Downey resigned from the post of Director Infection Prevention and Control (DIPC) in November 2015, Julie Roberts Assistant Director of Nursing took on the interim role of DIPC until the appointment of Bev Tabernacle the new Director of Nursing and DIPC.

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 s/he 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 2010). 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.

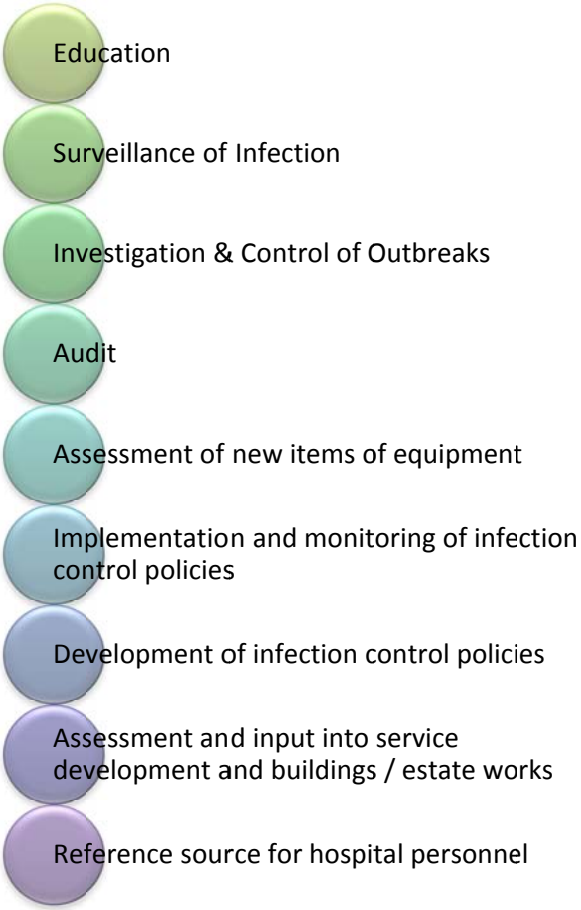
THE INFECTION PREVENTION AND CONTROL TEAM (IPCT)

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: 1 programmed activity (4 hours/week) is agreed with Shrewsbury and Telford Hospital Trust for provision of this service. 24h infection control advice is available from the on-call consultant microbiologist (3 programmed activity sessions cover in hours and on call)
- Infection Prevention and Control (IP&C) Clinical Nurse: (1 WTE) Band 7
- Surgical Site Surveillance Nurse (0.8 WTE): Band 5
- Infection Control Administrator (0.43 WTE): Band 2

THE ROLE OF INFECTION CONTROL



Annual Programme and Achievement of Targets

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.

- MRSA bacteraemia target for 2015/16:

The target of 0 as set by NHS England was achieved.

- C. *difficile* target for 2015/16

There were 0 reported cases of RJAH acquired C. difficile against the NHS England target of 2 post 72 hour cases.

Infection Control Committee

The RJAH Infection Control Committee (ICC) is a multidisciplinary Trust committee with outside representation from Public Health England and the CCG. The ICC oversees the activity of the IPCT and supervises the implementation of the infection control programme of work. The ICC met every 3 months during 2015/16. During 2016/17, membership will be extended to include Ward Managers and Matrons, and meetings will be held via video-conference where required.

The Care Quality Commission

The Care Quality Commission (CQC) has published its report in February 2016, following its inspection of The Trust in October 2015.
A summary of CQC findings is below:

Cleanliness, Infection control and Hygiene: CQC Summary

- There have been no cases of methicillin-resistant staphylococcus aureus (MRSA) Bacteraemia reported by the trust since August 2006 and no Clostridium Difficile (C.Diff) cases reported since June 2014.
- From April 2014 to August 2015 MRSA screening was recorded as 100%.
- The trust reported an increase in surgical site infection rates in quarter 2 of 2015. The rate jumped from 0.2% in quarter 1 to 1.3% in quarter 2 for knee replacements, this is a six-fold increase. There was a three-fold increase over the same time period for hip replacements from 0.7% to 2.0%. At the time of the inspection, the Trust were investigating the reasons for the increase but were unable to confirm the source.
- All areas of the hospital visited appeared clean and mostly tidy. There were cleaning plans in place and these were being followed.
- Wards and departments had side rooms that could be used to isolate potentially infectious patients to prevent cross-infection or to protect patients with low immunity if needed.
- The trust infection and control policy requires that uniforms and work wear should not impede effective hand hygiene, and should not unintentionally come into contact with patients during direct patient care activity. Bare below the elbow and hand washing procedures during the provision of care was not embedded and CQC observations confirmed this.
- During CQC discussions and observations, it was clear that senior consultant staff were not engaged in the infection control agenda and did not role model the behaviours required to ensure that junior staff followed nationally recognised good practice.
- Hand hygiene audit results consistently demonstrated 100% compliance all areas. When investigated, the results related to a observing a sample of staff over a 20 minute period, who knew at the time they were being watched.
- The weekly observation audits were in the process of being developed to include bare below the elbows as it was not currently included.
- There were adequate hand washing facilities in clinical areas. Hand sanitising gel was available at entrances to the hospital and treatment areas. Accompanying signs to draw attention to their purpose or provide instructions for staff were not displayed, and staff and visitors were not routinely using the sanitising gel.

CQC ACTIONS

Following these findings, a comprehensive action plan has been implemented. Actions taken included:

- Replacement of all hand gel dispensers and associated signage.
- Poster campaign throughout Trust advocating bare below initiative.
- Improved pop up posters at the main entrance, including 'Hand Hygiene Champions'.
- Visual hand hygiene cue's designed for main entrance to remind visitors of the importance of hand hygiene within the Trust.
- IPC team trialled the SureWash hand hygiene training aid, providing hand hygiene competency assurance for all designations.
- Increased hand hygiene audits
- The hand hygiene audit tool has been adapted to incorporate bare below elbow, which is currently recorded as an average score across all areas; This has been adapted to enable accurate reporting of bare below the elbow compliance for specific designations

EDUCATION AND TRAINING

The Code of Practice requires that all staff undertake mandatory infection prevention and control training on a regular basis. The specific requirement is: 'that relevant staff, contractors and other persons whose normal duties are directly or indirectly concerned with patients care receive suitable and sufficient training, information and supervision on the measures required to prevent and control risks of infection'. This need is met through provision of a mandatory e-learning package based on Department of Health evidence based infection control guidelines. In total 82.7% of staff have completed this training during 2015/16.

Facilities Management and Estates contract staff are also required to undertake induction and annual mandatory training including a competency assessment, which is provided by the IPCN.

Additional training sessions provided by the IPCT 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 IPCT.
- 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.
- Took part in the 'Skills Drills' training day organised by the clinical practice educator.
- Provided 'train the trainer' education for link practitioners.

The IPCN and Surgical Site Surveillance Nurse attended a conference on the prevention of infection in the surgical pathway, covering:

- Theatre ventilation
- Advances in infection prevention in joint replacement
- Benefits of patient warming
- Preoperative washing and skink preparation

INFECTION CONTROL LINK PRACTITIONER SYSTEM

The Infection Control Link Practitioner Programme was reviewed and restructured during 2015/16. The 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 2015-16 have included:

- Decontamination of patient equipment
- Norovirus
- Safer Sharps
- Decontamination of mattress protocol

- Commode purchasing & audit
- C difficile treatment
- Increase in infections
- IPC Programme of work
- HSE Press Release
- CQC reminders
- Powys ward presentation: re-visiting Waterlow
- Antibiotic resistance
- IPC Policy and SOP's
- Flu Vaccination uptake
- Skin decontamination for cannulation
- Danger of infection identification
- External speakers have attended meetings; including reps from Daniel's, Convatec, Crawford Healthcare and healthcare Matters.

AUDIT

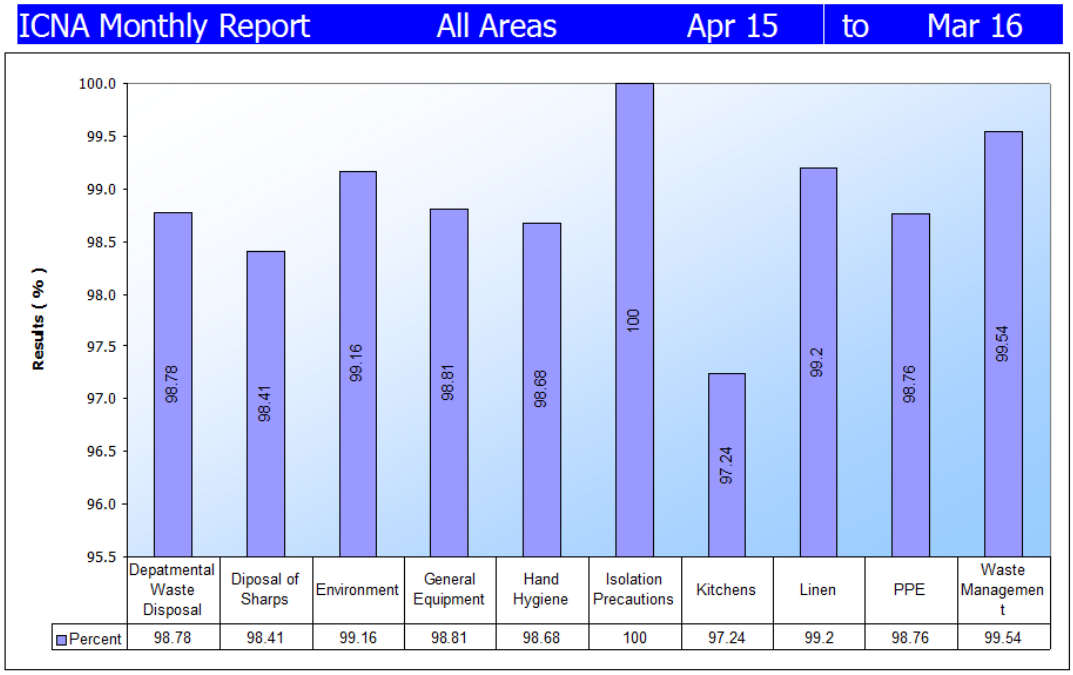
The IPCT have undertaken the following audits (with appropriate support from IPC Links, Matrons and external agencies):

Audit	Completed	Achievement
Management of sharps (annual)	April 2016	A Trust wide audit of compliance with sharps practice was undertaken by Daniels Healthcare Ltd, whose sharps boxes are used predominantly at RJAH. **34** wards/departments were audited Trust wide. **25** wards/departments demonstrated compliance of >95% **9** wards/departments demonstrated compliance of 85 - 94.9%. **0** wards/departments demonstrated a compliance of < 85%. An action plan will be developed and disseminated in May 2016. A complete Trust wide sharps audit will be undertaken again in 2017.
Infection Control Audits of Environmental and Clinical Practice	Rolling Programme	Regular audits (every 12-18 months) of the clinical environments are undertaken by the IPCT in conjunction with the Ward/ Department Managers or IPC Links; Trust wide, utilising the Infection Control Nurses Association environmental audit tools package. The completed audit report is sent to the Ward/Department Manager, who is responsible for both formulating and implementing an action plan within a designated time frame. The formulation of the action plan and the re-auditing of clinical areas that fail to meet the required standards form part of matron's divisional reports. The results of these audits are reported quarterly at the infection control committee. In 2015-16; the IPC team audited: ➢ TSSU ➢ Theatre complex ➢ Hydrotherapy pool ➢ X-ray ➢ Trust wide ward kitchen audit
Annual audit of commodes – Trust wide	July 2015	A Trust wide audit of commodes was undertaken by Vernacare in July 2015 in order to assess cleanliness and the condition of commodes. Of the 15 commodes audited, 5 required repair or replacement, which was fed back to individual managers and replacements sourced. The Audit will be undertaken every 12 months by Vernacare and the IPCN.
Mattress/ Zipped item check	Monthly	All foam mattresses are checked by ward staff according to the criteria on the RJAH mattress label on a monthly basis by individual wards/departments. Mattresses/covers are replaced accordingly. Other zipped items are also checked and replaced accordingly.

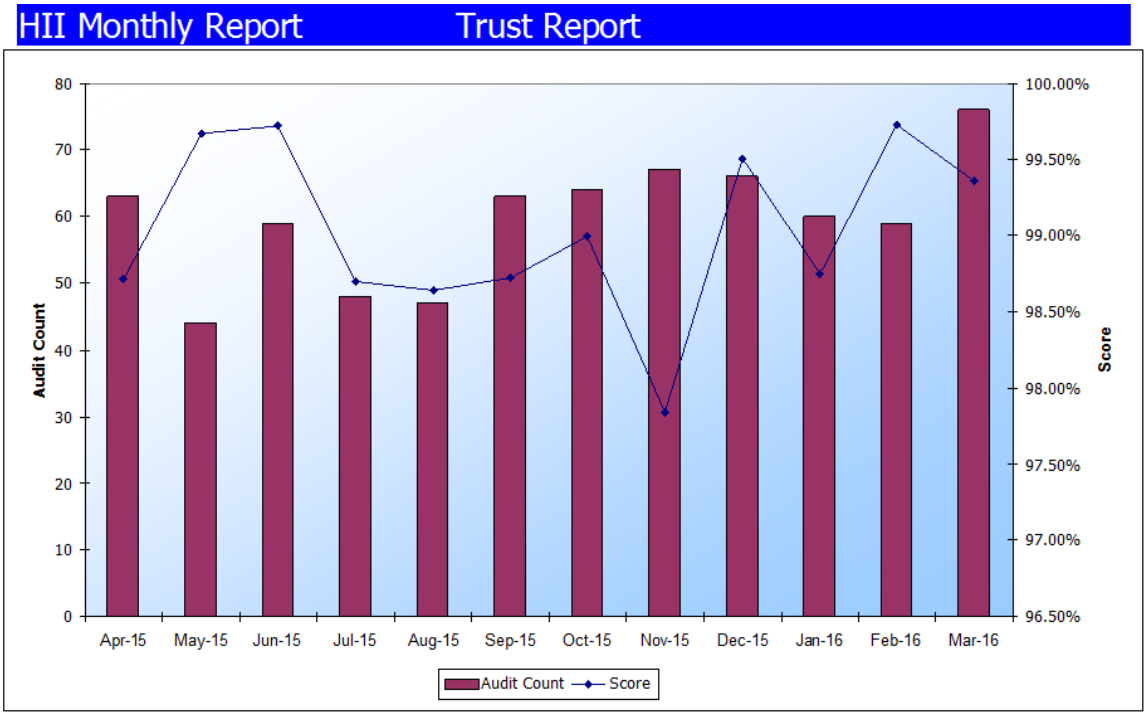
AUDIT RESULTS

ICNA

Over the year, all ICNA audits performed above the Trust target of 95%. These audits are validated by those completed by the IPCT and ad-hoc audit performed as part of link practitioner meetings.

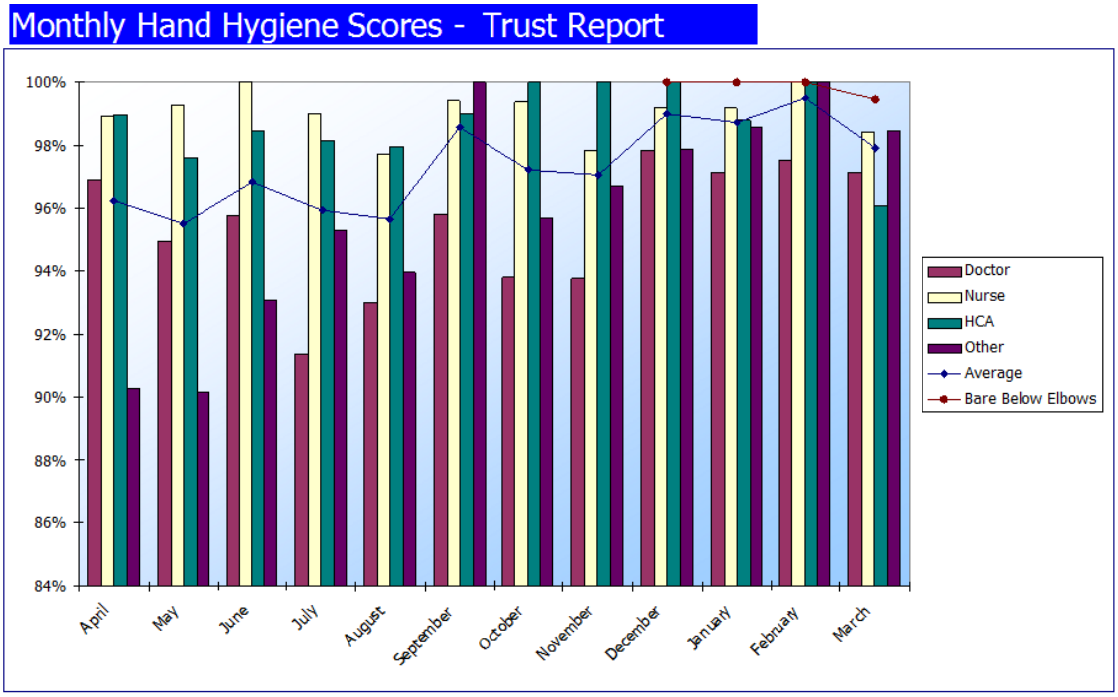


HIGH IMPACT INTERVENTIONS



Overall, audits of the high impact interventions have consistently scored over the Trusts target of 95%. These include insertion and care of peripheral, central and PICC lines; insertion and care of urinary catheters; prevention of surgical site infection and cleaning and decontamination.

HAND HYGIENE



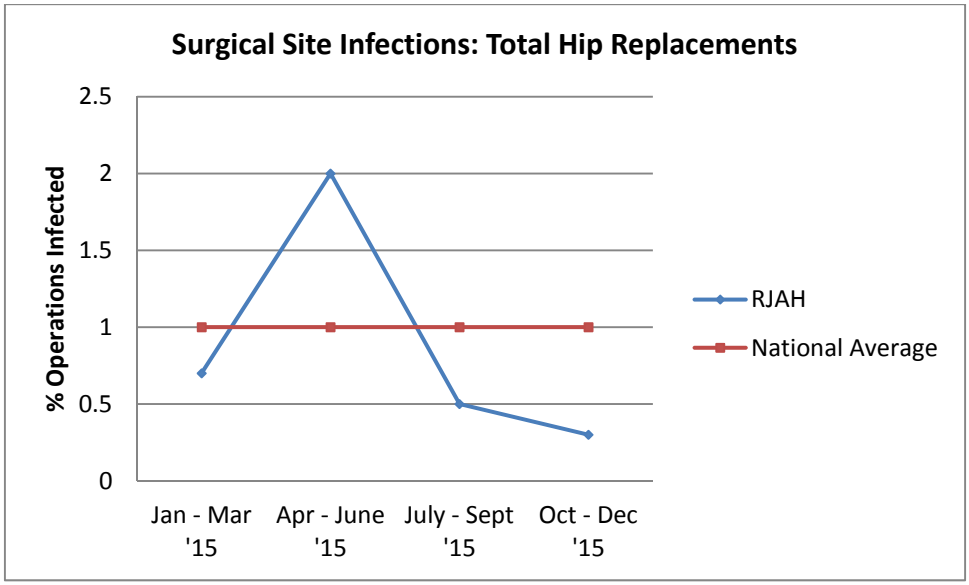
Staff Group		*Score*	*Audits Completed*
Bare Below Elbows	Overall	99.81%	530
Doctor	Overall	95.27%	1164
HCA	Overall	98.70%	1073
Nurse	Overall	98.99%	1777
Other	Overall	95.66%	783

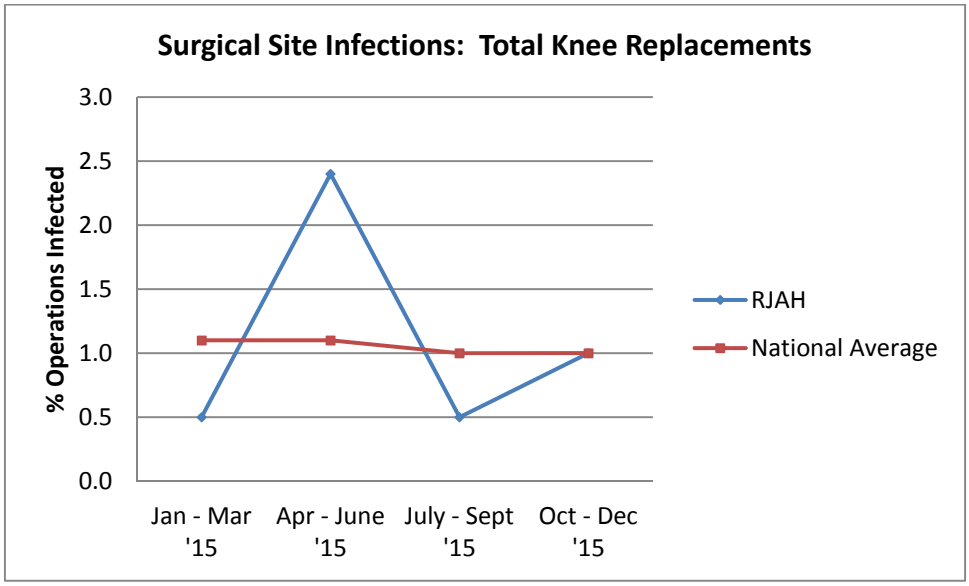
Overall Score	*Audits Carried Out*
97.71%	**5327**

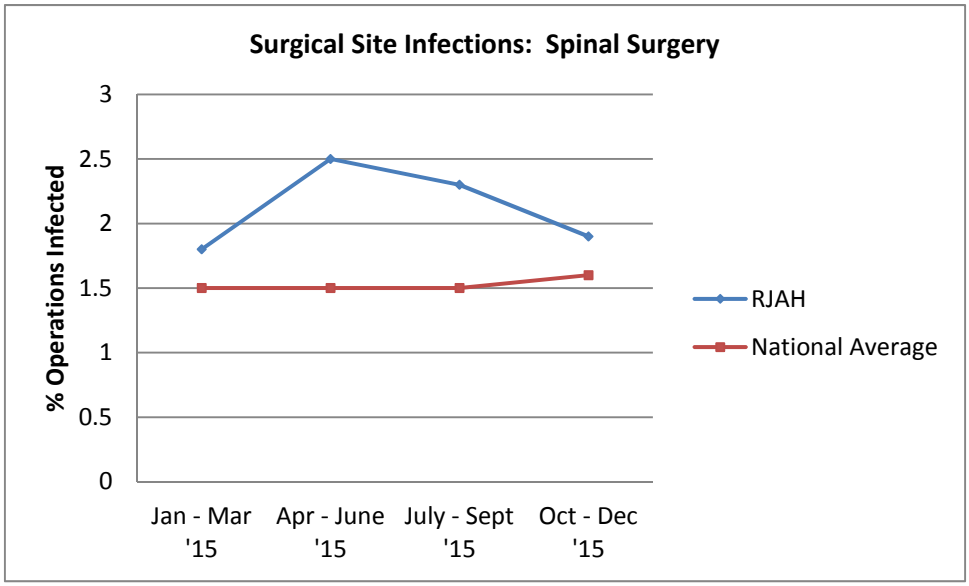
The compliance achieved by doctors has improved on 2014-15 score. The number of audits completed overall all has also risen by over **1**000. The hand hygiene audit tool has been adapted to incorporate bare below elbow, which is currently recorded as an average score across all areas. This was adapted in Q1 2016-17 to enable accurate reporting of bare below the elbow compliance for specific designations.

SURGICAL SITE SURVEILLANCE

Surgical site infection data is reported retrospectively, in line with Public Health England protocol. Rates for January – December 2015 are shown below.


Surgical Site Infections: Total Hip Replacements
% Operations Infected
2.5
2
1.5
1
0.5
0
Jan - Mar '15
Apr - June '15
July - Sept '15
Oct - Dec '15
RJAH
National Average


Surgical Site Infections: Total Knee Replacements
% Operations Infected
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Jan - Mar '15
Apr - June '15
July - Sept '15
Oct - Dec '15
RJAH
National Average


Surgical Site Infections: Spinal Surgery
% Operations Infected
3
2.5
2
1.5
1
0.5
0
Jan - Mar '15
Apr - June '15
July - Sept '15
Oct - Dec '15
RJAH
National Average

The graphs above demonstrate that the Trust has seen an increase in surgical site infections during 2015, at its peak between April - June, 21 patients were identified as having acquired a surgical site infection at RJAH.

A thorough review of these cases has been undertaken by the infection control team, in conjunction with the surgical teams, lead nurses and theatre staff. This has identified a number of factors which may have contributed to this increase, resulting in changes to current practices.

The Infection Control Team has worked closely with Public Health England, Mr Peter Hoffman (Theatre ventilation specialist) and the Senior Epidemiologist who is currently undertaking an epidemiological study of the infections to provide the Trust with an in depth analysis of this incident.

To date, the figures for total hips and total knees has reduced, however spinal surgical infections continue to be above the Trust and national average for this category of surgery.

The serious incident regarding the rise in surgical site infections was closed in January 2016, and a full report and action plan published.

Patients are under surveillance as part of the surgical site surveillance plan for up to a year post surgery; therefore, there is the potential for further cases to be identified.

Multi-Disciplinary Working

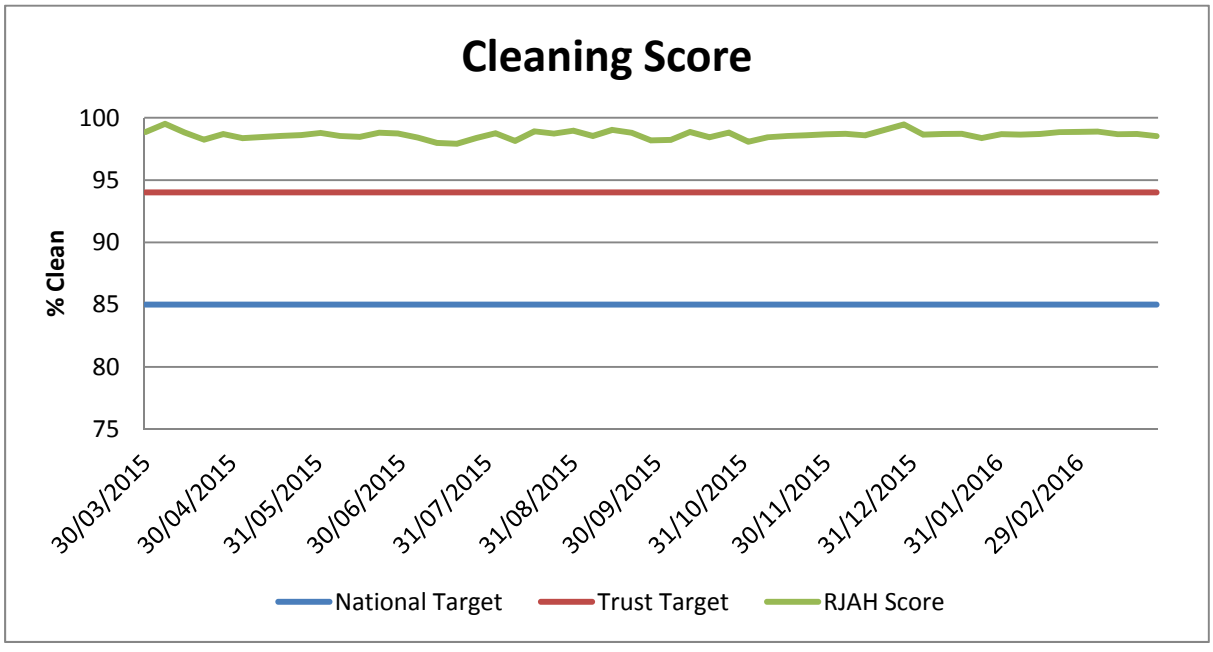
Hospital Hygiene

The IPCT have continued to monitor standards of cleanliness within the Trust and promote good practice in conjunction with the Hospital and Facilities Managers through participation in the following activities:

- Patient-led Assessment of the Care Environment (PLACE).
- Advising contractors/contract management on cleaning and domestic issues.
- Day to day advice/intervention as appropriate with regard to cleaning issues.

Hospital Cleanliness

Auditing of hospital cleanliness plays an important role in identifying good and bad practice. The Housekeeping team carried out over 2000 audits during the year, auditing most significant risk and above areas on a weekly basis. By working closely with other clinical and non-clinical teams any



identified issues were swiftly addressed, resulting in a year average score of 98.6%.

Measured standards in the Very High Risk areas, including Main Theatres, HDU and Menzies, exceeded the National Target of 98% as an average for the year. The average standard achieved over the year in each area was as follows:

HDU	99.7%
Menzies	99.5%
Main Theatres	99.1%
TSSU	99.2%

HOSPITAL CLEANING STAFF

The Trust has a dedicated team of Housekeeping and Deep Cleaning staff, totalling 58 members. Each member of staff is assigned to their own area and through ownership of their area pride in the standard of work is clear to see. Along with their mandatory training staff also complete bespoke training with the Infection Control team and Estates team. Staff understand their role and learn practical measures to minimise the risk of potential issues, including hospital infections and legionella. Compliance with training, as with all cleaning metrics, is monitored and reported quarterly to the Infection Control Committee.

HOSPITAL CLEANLINESS FEEDBACK

Many compliments are received each month for the cleanliness of the Trust. Feedback is closely monitored so that any learning opportunities are realised and every opportunity to let staff know how appreciated they are is also recognised.

Over the year 99.5% of patients asked through the PALS survey “Did you feel the Ward environment was clean?” responded “always” or “mostly”. In the survey 57 patients took the time to write praise for their experience of the cleaning.

	Response				
Month	Always	Mostly	Sometimes	Never	Don’t know
Apr-15	332	11	1		12
May-15	313	14	4		5
Jun-15	393	11			7
Jul-15	248	10	1		5
Aug-15	246	19			5
Sep-15	223	13	1		4
Oct-15	279	11	1		3
Nov-15	215	15	1		2
Dec-15	188	9			6
Jan-16	262	11	3		6
Feb-16	423	11	1		11
Mar-16	263	8	3		2

HOSPITAL ENVIRONMENT

The Trust is aware that the importance of a clean, safe environment for all aspects of healthcare should not be underestimated. It is important that healthcare buildings are designed with appropriate consultation, and the design facilitates good infection prevention and control practices and has the

quality and design of finishes and fittings that enable thorough access, cleaning and maintenance to take place.

Designed-in IPC means that designers, architects, engineers, facilities managers and planners work in collaborative partnership with the IPC team, healthcare staff and the users to deliver facilities in which IPC needs have been anticipated, planned for and met. To achieve this, the IPCN regularly attends update meetings with both the contractors and Trust estates team throughout the design and building of the new theatre complex.

PROCUREMENT

The IPCN attends the monthly procurement meeting, to provide advice and expertise in the purchasing of new equipment and to ensure patient safety is not compromised when trying to achieve a cost saving.

SAFER SHARPS

Following implementation of a comprehensive action plan to introduce safer sharps devices across the Trust, the safer sharps group has been stepped down. Sharps related incidents are reported to the infection control committee via the health and safety & Datix report.

ANTIMICROBIAL STEWARDSHIP

The antimicrobial stewardship group has been formed in line with the NICE guideline (NG 15). It meets on a quarterly basis; lead by the Consultant Microbiologist and the newly appointed antimicrobial pharmacist. Its key responsibilities include:

- To develop, implement and monitor the Trusts antimicrobial stewardship programme.
- To regularly review and issue antimicrobial usage by directorate on quantity used and prescriptions of antimicrobials.
- To regularly review information on antibiotic resistance and antibiotic-related unwanted effects including superinfection and C. difficile and devise strategies in relation to antibiotics to reduce these.
- To review and develop education and training relating to appropriate prescribing and review of microbials.
- Ensure that a multidisciplinary strategy develops within the Trust to ensure compliance with antibiotic policy.
- Review and monitor antibiotic interventions by Clinical Pharmacy and others.

LOCAL HEALTH ECONOMY

The Infection Control Nurse attends the CAUTI (catheter associated urinary tract infections) and C.difficle meetings with the Infection Control teams from Shrewsbury, Telford and Shropshire Community Health. This ensures a standardised approach across Shropshire and provides a support mechanism for RJAH.

CONCLUSION

The year 2015/16 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 increase in incidence of surgical site infections has proved to be a challenge for all involved, the infection rates in hip and knee replacements have come down; however the spinal infection rate continues to sit well above both the RJAH average and the national average.

By working closely with Public Health England and the surgical team, a full and frank investigation of the whole spinal surgical pathway at RJAH is being implemented.

RJAH strives to keep infection prevention and control high on the agenda at all levels of the Trust in order to continue to put our patients care first.

KEY AREAS FOR FOCUS 2016/17.

- To reduce surgical site infections by 50% by implementing the 'One Together' partnership toolkit, including a full assessment of the current pathway, adopting improvements where needed to promote best practice to prevent SSI though the patients' surgical journey.
- To seek funding for additional post discharge surveillance and a data analyst (new post plus increase in part-time hours) via a business case.
- The infection prevention & control team plan on increasing surveillance and analysis of all healthcare associated infections.
- To maintain an up to date infection register of all patients with wound concerns, and to form a surgical site surveillance working group to ensure full consultant engagement when discussing potential surgical site infections.
- To continue to embed the 'bare below the elbows' initiative across all disciplines and provide compliance data as part of the audit programme, including updating the hand hygiene assessment form to provide designation specific BBE compliance.
- Take part in Public Health England's point prevalence survey in autumn 2016.
- Provide advice and support through the antimicrobial stewardship committee, to allow the Trust to achieve its CQUIN of reducing antimicrobial prescribing and consumption.
- Continue to be an active member of Shropshire Local Health Economy – including attending meetings, providing input for action plans (C difficile, CAUTI) and sharing lessons from RJAH root cause analysis.
- The provision of advice across a broad spectrum of disciplines across the Trust, including sharps safety, procurement, waste management and infection control in the built environment.
- To maintain a zero tolerance for RJAH acquired MRSA bacteraemia.
- Promote a 'self-governance' culture for infection prevention and control. This includes evidence that all staff are accountable and take ownership and responsibility for continuous quality improvement and compliance with relevant aspects of the Code of Practice.

RECOMMENDATIONS

The Board of Directors are asked to note the progress outlined in the annual report and approve the report.

Bev Tabernacle
Director of Nursing
May 2016