Pull Together to Prevent Infection

Worcestershire Acute Hospitals NHS Trust

Infection Prevention and Control Annual Report 2016-17

And Infection Prevention Plan 2017-18

Vicky Morris
Chief Nursing Officer / Director Infection Prevention & Control

David Shakespeare
Associate Chief Nurse – Infection Prevention & Control

Patients | Respect | Improve and innovate | Dependable | Empower

Taking **PRIDE** in our healthcare services

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Foreword

Having joined the Trust in mid March 2017, I am presenting an Infection Prevention & Control Annual Report for 2016-17, which provides a helpful context for the future improvements we will be taking forward in the plan for 2017-18.

Prevention of Healthcare Associated Infection (HCAI) remains a cornerstone of patient safety both in terms of cleanliness of the environment and in clinical practice.

Infection Prevention at the Trust experienced a challenging year as cases of *Clostridium difficile* exceeded the trajectory set by NHS England of no more than 32 cases with a total of 41 cases reported. This number was also above the 29 cases reported during 2015-16. In addition the Trust has reported 4 MRSA bacteraemia during the year against a national zero tolerance and a background of one case during 2015-16.

The inspection of the Care Quality Commission during November and December 2016 also highlighted problems of non compliance with hand hygiene and use of personal protective equipment during their visits, to which a comprehensive response has been put in place. The Trust however, has seen some success, with almost 76% of front line staff receiving their influenza vaccination.

We will be working comprehensively with the clinical and non clinical teams across the Trust and our stakeholders to ensure the learning from analysis of these cases and from the Care Quality Commission's observations is embedded, so that practice can be improved.

Vicky Morris
Chief Nursing Officer and Director Infection Prevention & Control

1. Executive Summary

- The Trust has reported 41 cases of hospital attributable *Clostridium difficile* infection against an NHS England set trajectory of no more than 32.

- The Trust experienced 4 cases of trust attributable MRSA bacteraemia during the year 2016-17. This means the Trust exceeded the nationally set target of zero tolerance.

- The Trust continues to participate in a Worcestershire health economy approach to minimising risk from HCAI and meets bi-monthly to monitor progress against the agreed health economy strategy.

2 Introduction

This is the annual report from the Director of Infection Prevention and Control (DIPC) providing information on infection prevention and control (IPC) activity across the organisation. The Director of Infection Prevention & Control during 2016-17 was Jan Stevens CBE until March 2017 when Vicky Morris took up the role.

The purpose of this report is to provide detail to our patients, public, staff, Trust Board and Commissioners on the IPC agenda.

This report covers the period from April 2016 to March 2017 and provides information that includes:

Reporting arrangements for IPC
Clostridium difficile infection rates and analysis of cases
Meticillin Resistant *Staphylococcus aureus* (MRSA) bacteraemia figures and description of lessons identified
Key work undertaken to strengthen water and ventilation governance
A summary of education & training for IPC undertaken in year
A summary of audits undertaken in year
A plan of key objectives for 2017/18

Cases of *C.difficile* infection have increased during 2016-17 with 41 cases against a trajectory of no more than 32 cases. These are cases where the sample has been taken beyond day of admission to hospital plus two days. This represents an increase on the 29 cases reported during 2016-17 and the 36 cases reported during 2014-15.

Four cases of hospital attributable MRSA bacteraemia (blood stream infection) are also disappointing given the position of national zero tolerance. This represents a deterioration on the position during 2015-16 when one case was reported.

3. Reporting arrangements

The *Trust Board* recognises and agrees their collective responsibility for minimising the risks of infection and agrees and supports the means by which these risks are controlled. The responsibility for Infection Prevention and Control lies with the Director of Infection Prevention & Control (DIPC) who is the *Chief Nurse*. The Chief Nurse is supported in this respect by an Associate Chief Nurse Infection Control, by the Consultant Microbiologists and the Infection Prevention & Control Nurse Team (IPCT). The *Chief Executive* accepts on behalf of the Trust Board responsibility for all aspects of Infection Prevention & Control within the Trust. This responsibility is delegated to the Chief Nurse as the DIPC. The Chief Nurse reports directly to the Chief Executive and the Board and chairs the Trust Infection Prevention & Control Committee.

The *Consultant Microbiologists* provide expert microbiological and infection prevention advice and provide support for the wider IPCT and fulfil the *Infection Control Doctor* function.

The *Associate Chief Nurse Infection Prevention & Control* provides strategic direction and leadership for the IPCT. The Associate Chief Nurse reports professionally to the Chief Nurse / DIPC and works closely with the Consultant Microbiologists to interpret and incorporate national guidance into local practice. While part of the IPCT, the Associate Chief Nurse works with Divisional leaders to ensure best practice is embedded across the Trust.

The Lead Nurse IPC is a source of expert clinical advice and is operationally responsible for the development of policies, guidance, infection prevention practice; and education and training for infection prevention Trust wide.

The *Trust Infection Prevention & Control Committee* (TIPCC) is the main forum for discussion and monitoring of action around IPC practice at the Trust. The membership of TIPCC includes representation from all Divisions at the Trust, plus the Clinical Commissioning Group IPC Lead Nurse and is chaired by the Chief Nurse. The committee meets bi-monthly. The Chief Nurse takes a report from the committee to the Clinical Governance Committee and then the Quality Governance Committee, which is a subcommittee of the Trust Board.

Infection Control *Link Practitioners* are a cornerstone of the IPC infrastructure at Worcestershire Acute Hospitals NHS Trust (WAHT) and are the champions of infection prevention in clinical areas. Study days are held at least quarterly to ensure Link Practitioners remain involved in IPC activity and are equipped to follow national best practice guidance. There is also a well attended annual Link Practitioner study day.

In terms of *Estates*, the Trust receives a monthly report for the Worcestershire Royal Hospital site from the Private Finance Initiative Funder (Special Purposes Company) and monthly reports from service providers Engie with respect to the estate and building fabric; Siemens with respect to equipment management; and ISS comprising chiefly of Housekeeping, Catering, Portering and Security arrangements. For the Alexandra Hospital and Kidderminster Treatment Centre sites a monthly report is received from the Trust Estates and Facilities Team on the above services; where Housekeeping, Catering,

Portering and Security arrangements are also considered at the Trust Patient Environmental Operational Group.

Patient representation is present in Infection Prevention & Control at the Trust via monthly and annual Patient Led Assessments of the Care Environment, otherwise known as PLACE audits. Patient representatives are primarily drawn from the Trust Patient Forum, League of Friends and Worcestershire Health watch.

Reporting of HCAI: WAHT continues to participate in mandatory surveillance of Meticillin Resistant *Staphylococcus aureus* (MRSA) blood stream infections (BSI), Meticillin Sensitive *Staphylococcus aureus* (MSSA) BSI, *Escherichia coli (ECO)* BSI, Glycopeptide (or Vancomycin) resistant *Enterococci* (GRE/VRE) and *Clostridium difficile* infections. MRSA, MSSA and *E.coli* BSIs and laboratory detected *Clostridium difficile* toxins are reported monthly via the Public Health England HCAI data capture system. This is signed off on behalf of the Chief Executive and reported to TIPCC. Enhanced surveillance of MSSA and *E.coli* has also commenced from April 2017.

Infection Prevention & Control Team Nurse and administrative (IPCT) establishment

The IPCT whole time equivalent (WTE) establishment is:

1.0 WTE Associate Chief Nurse (Band 8C)
1.0 WTE Lead Nurse (Band 8a)
1.0 WTE Senior IPC Nurse (Band 7)
4.3 WTE IPC Nurse Advisors (Band 6)
1.9 WTE IPC Staff Nurse (Band 5)
1.0 WTE Healthcare Support Worker (Band 3)
0.8 WTE Data Analyst (Band 4)
0.9 WTE Administrative Support Officer (Band 4)
0.8 WTE MRSA Screening Co-ordinator (Band 3)

The team has nurses and administrative staff who are based at and circulate between the Worcestershire Royal and Alexandra Hospital sites. The team also provide a service to Kidderminster Treatment centre and other Acute Trust services based at Evesham Community Hospital and Princess of Wales Community Hospital, Bromsgrove.

Members of the IPCT attend and participate in the following groups / committees:
TIPCC
Health Economy HCAI Steering Group
Water Safety Committee
Decontamination Committee
Ventilation Safety Group
Antimicrobial Stewardship Group
Medical Devices Committee
Senior Nurse Meeting
Patient Environment Operational Group
Winter preparedness Groups
Occupational Health meetings including for staff influenza vaccination
Estates liaison meetings for environmental cleaning and building planning

The Assurance Framework for IPC

Reporting arrangements for IPC at WAHT are outlined in the policy for 'The Management of Infection Prevention & Control' CG-043.

The Assurance Framework for IPC and reporting arrangements for TIPCC are as follows:

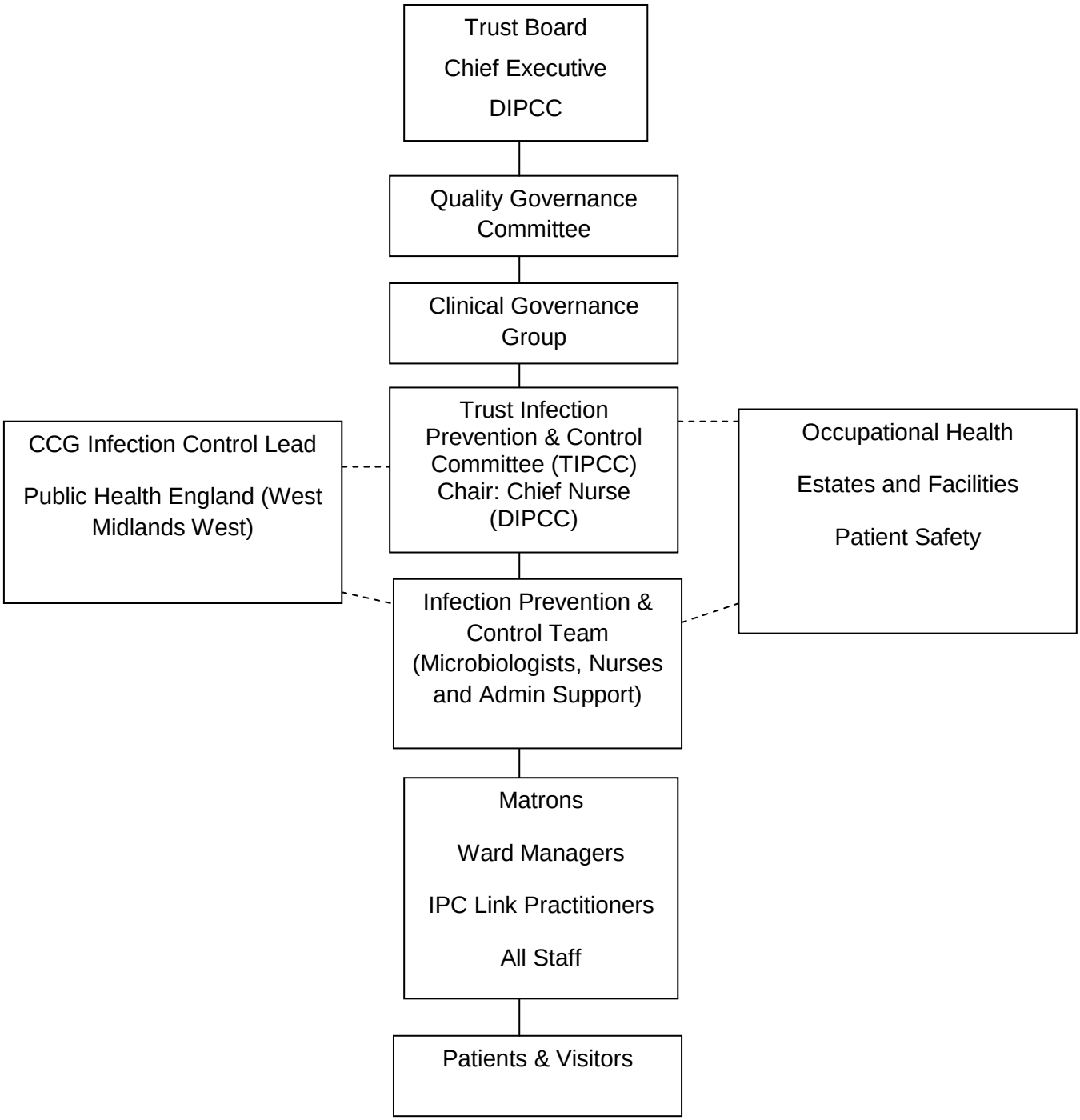

Figure 1: Assurance framework for IPC at WAHT

4. Compliance with the Hygiene Code

The Trust is required to demonstrate compliance with The Health and Social Care Act 2008: Code of Practice on the prevention and control of infections and related guidance (The Hygiene Code). The Trust declares compliance with the Hygiene Code during 2016-17, but accepts challenges to compliance following the findings of the Care Quality Commission during their inspection visits November and December 2016.

The Trust collates and continually updates evidence of compliance against the 10 criteria of the Hygiene Code. Evidence is continually collated in an electronic folder of evidence with hyperlinks to the specific documents, which are available for regulators to access.

This includes, but is not limited to:

Criterion one: Systems to manage and monitor the prevention & 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.
Trust Infection Prevention & Control Committee Terms of Reference Sample cleaning schedules Sample water safety group minutes Diarrhoea and vomiting risk assessment tool Infection Prevention & Control local risk register IPC Annual Report IPC serious incident investigation reports Mandatory update presentations and attendance figures Sample discharge letter for Norovirus affected areas Infection Prevention & Control audit tools and results Management of Infection Prevention & Control Policy Hand Hygiene policy High Impact Interventions audits and results Waste Management policy Food Hygiene policy Linen policy Infection Control and Bed Management policy
Criterion two: Provide and maintain a clean and appropriate environment in managed premises that facilitates the prevention and control of infections.
Sample environmental cleaning schedules and checking process Sample cleanliness scores Sample nurse cleaning schedules and ward cleanliness handover records Sample IPC audit tool Decontamination policies Sample Patient Environmental Operational Group report General Decontamination policy Trust Cleaning policy

Criterion three: Ensure appropriate antimicrobial use to optimise patient outcomes and to reduce the risk of adverse events and antimicrobial resistance.
Trust Antimicrobial Prescribing Guidelines Antimicrobial Stewardship Group Terms of Reference and minutes *C.difficile* management quick guide Sample Consultant Microbiologist on call rota
Criterion four: 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.
Norovirus patient information leaflet *C.difficile* patient information leaflet VRE patient information leaflet Meticillin resistant S*taphylococcus aureus* (MRSA) patient information leaflet Hand hygiene leaflet for staff patients and visitors Close ward poster (in event of Norovirus outbreak). Chief Nurse (DIPC) and Chief Medical Offer posters Protocol for the management of MRSA MRSA screening – protocol for admissions screening MRSA including elective, non-elective, orthopaedic Multi-resistant Gram negative bacteria including Extended spectrum beta lactamase (ESBL) producing organisms; Vancomycin resistant E*nterococci* (VRE) and Carbapenemase producing *Enterobacteriaceae* (CPE) – policy for the management and prevention of spread.
Criterion five: 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.
ICNET surveillance system to identify alert and other organisms Isolation policy Sample outbreak agenda Sample outbreak circulation list HCAI case analysis for *C.difficile* and MRSA Notifiable diseases – policy for notification Policy for presumed outbreaks of viral diarrhoea and vomiting Policy for the management of *C.difficile* and prevention of spread Flu quick guide 2016-17 IPC protocol for seasonal influenza Screening for MRSA Screening as required in response to potential or actual outbreak of specific organism

Criterion six: 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.
IPC training records for contractors Sample estates project IPC sign off Compliance with attendance at IPC mandatory training Standards of dress policy Sample of job descriptions with IPC element Standard precautions poster Management of Infection Prevention & Control Policy
Criterion seven: Provide or secure adequate isolation facilities.
IPC risk assessment tool for prioritisation of side rooms Ventilation Committee Terms of Reference Patient admission assessment for risk of infection Isolation Policy Ward Environmental Risk Assessment tool Site based profile of available isolation rooms
Criterion eight: Secure adequate access to laboratory support as appropriate.
Laboratory United Kingdom Accreditation Service (UKAS) accreditation certificate Laboratory standard operating procedures
Criterion nine: Have and adhere to policies, designed for the individual's care and provider organisations that will help to prevent and control infections.
Full range of IPC policies (with policy review process) required by the code including: Control of outbreaks Safe handling and disposal of sharps Aseptic technique
Criterion ten: Providers have a system in place to manage the occupational health needs and obligations of staff in relation to infection.
Occupational Health policies including: Seasonal influenza policy (for staff vaccination) Vaccination and management of Measles, Mumps and Rubella in healthcare and related workers Vaccination and management of Varicella zoster virus in healthcare workers Vaccination and management of Hepatitis B in healthcare and related workers The management of HIV in healthcare and related workers Occupational Health Reports to Trust Infection Prevention & Control Committee Minutes of Trust Infection Prevention & Control Committee for Occupational Health issues

The Trust Infection Prevention & Control Committee received assurance during 2016-17 of compliance to the Hygiene Code. During 2017-18 The Trust Infection Prevention & Control Committee will review 2 criterion of the Hygiene Code at bi monthly meetings to ensure all criteria are formally reviewed to assess the level of assurance on compliance.

5. Care Quality Commission Visits

The Care Quality Commission (CQC) undertook unannounced visits at the Trust during November and December 2016 and a report on these visits was published during June 2017.

What did CQC say about cleanliness and infection prevention?

The CQC summarised:

'Wards and clinical areas were visibly clean and ward-cleaning schedules were in place in most areas'

'All equipment in use appeared clean and 'I am clean' stickers were in place...staff were observed cleaning equipment after use'.

However, the report also cited that:

'Staff did not always clean their hands between caring for patients, there was incorrect use of personal protective equipment and some doctors were not 'arms are below the elbow'.

How has the Trust responded?

The Trust has responded to these concerns with a comprehensive programme which has included the following:

- Letter from Medical Director to all medical staff requiring their compliance with hand hygiene (January 2017). While outside the period of this annual report, this was reinforced again by the new substantive Medical Director in July 2017 when a further letter to medical staff was issued requiring continued compliance and requesting challenge to any non-compliance observed.
- Infection Control Team Newsletter including focus on hand hygiene and personal protective equipment (January 2017).
- Link Practitioner focus on hand hygiene at quarterly meeting (March 2017) and subsequently at annual study day (May 2017).
- Revised hand hygiene policy with escalation procedure for non-compliance leading to Medical and Nurse Directors – applicable to all staff groups (March 2017).
- Extensive hand hygiene audits including immediate feedback where non compliance is observed.
- Increasing Trust Infection Control Committee to monthly for 2017-18 to increase scrutiny and profile on infection prevention.
- Increased walkabouts by Infection Control Nurse Team and senior nurses to check for hand hygiene and compliance with correct use of personal protective equipment and cleanliness.
- Ward pledges displayed in clinical areas – these are displayed statements signed by staff members committing to a clutter free and clean environment and compliance with hand hygiene and correct use of personal protective equipment.

- A screensaver developed to be utilised periodically to reinforce hand hygiene message:

- Use of the Trust newspaper 'Worcestershire Way' during March 2017 to reinforce the message around the requirement for clinical staff to be bare below the elbow:

- A new 'how to' hand hygiene video made within the Trust now shown at Trust Induction and all mandatory updates to explain why hand hygiene is so important and the required technique.

In addition the Infection Control Nurses have been working alongside Divisional teams to address the concerns raised and the issues will continue to be monitored at the Trust Infection Prevention Committee where improvements and remaining challenges will be measured and scrutinised. During 2017-18 the Infection Control Nurses will continue to work closely with matrons, ward sisters and departmental heads to ensure they understand their responsibilities for infection prevention. A new cleanliness escalation framework will also be developed to ensure that all staff know who is responsible for environmental cleanliness in their areas and how to escalate and resolve any concerns raised. In addition there will also be an increased frequency of checks by the infection control nurses and senior nurses to ensure the environment and medical devices are clean and that infection control practices are as expected in line with Trust policy.

6. Clostridium difficile

The end of financial year 2016-17 position for *C.difficile* infections (CDI) is 41 reported cases against a trajectory of no more than 32. This represents a deterioration on the 29 cases reported during 2015-16 and the 36 cases reported during 2014-15.

Figure 2 below summarises cases of trust attributable CDI against a monthly trajectory agreed with the Clinical Commissioning Group for the financial year 2016-17.

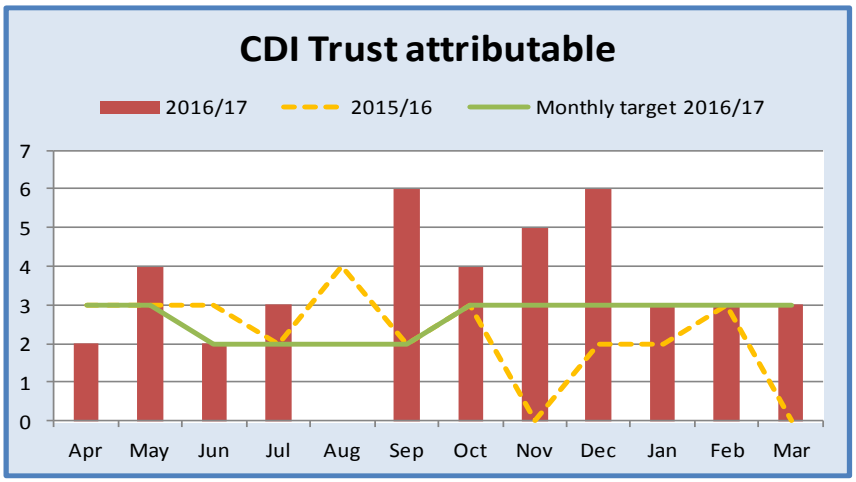

Figure 2: Trust attributable *C.difficile* infections shown monthly for 2016-17 with 2015-16 cases for comparison.

Figure 3 shows cumulative cases against the annual trajectory of no more than 32 cases, showing the end of year above trajectory position.

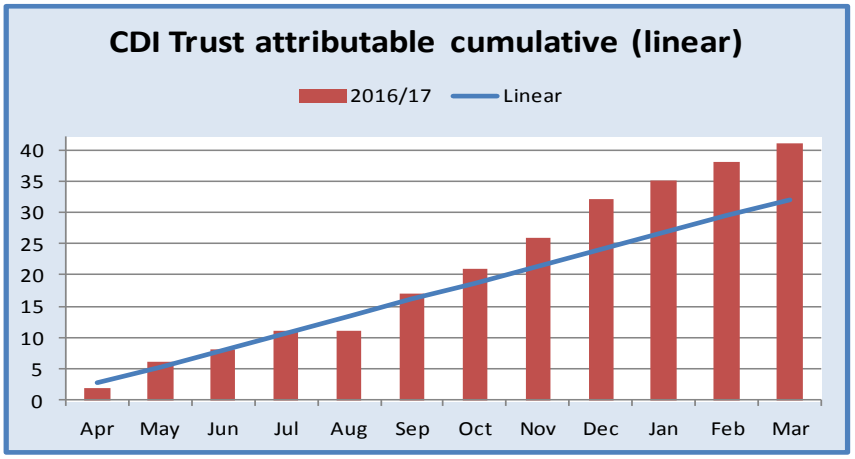

Figure 3: Cumulative trust attributable cases of *C.difficile* infection against linear distribution of trajectory 2016-17.

Figure 4 shows CDI by month and site. Of the 41 reported cases, 35 were from specimens taken at Worcestershire Royal Hospital, 6 at the Alexandra hospital and none at Kidderminster Treatment Centre. All cases are investigated to ascertain if there are lessons to apply to future case prevention.

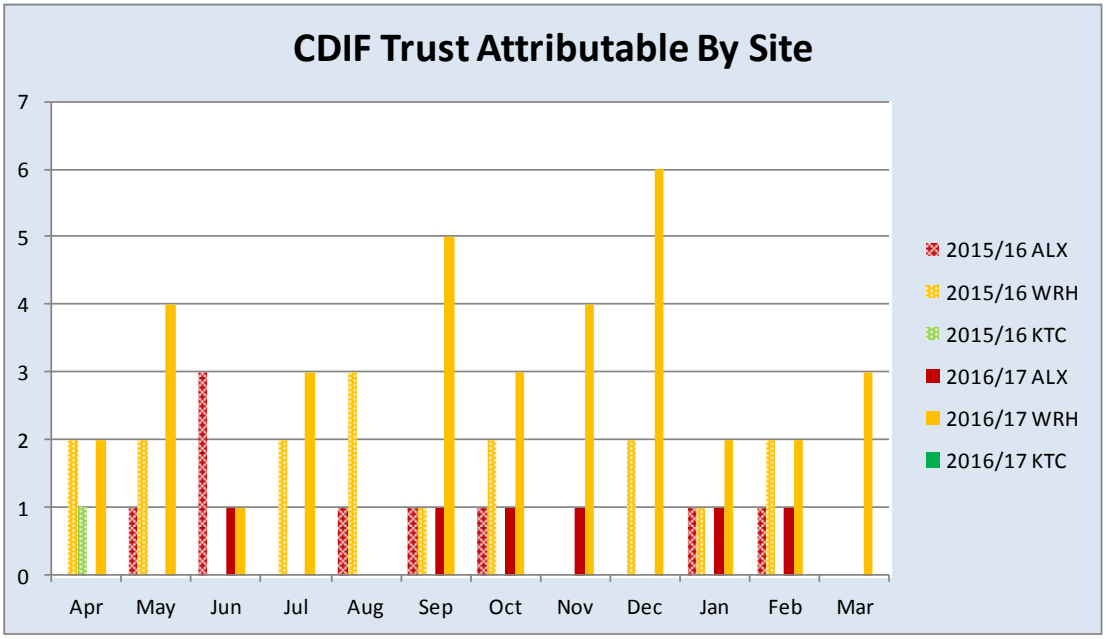

Figure 4: *C.difficile* infections by month and site

Analysis of cases

Definitions, agreed with the Clinical Commissioning Groups in Worcestershire are used primarily to support clinical case reviews being based on harm reduction and prevention and cases are assigned a Red/Amber/Green rating:

Lapse in care contributing to acquisition of CDI	Lapse in care not contributing to acquisition	No lapse in care

A review of each of the 41 cases has been undertaken and considers specific risk factors for acquisition of CDI and then looks at the management of the patient including antimicrobial use prior to onset of symptoms, compliance with the CDI protocol and also considers the presence of concurrent cases, environmental cleanliness and hand hygiene. Figure 5 shows a summary of identified lapses in care 2016-17.

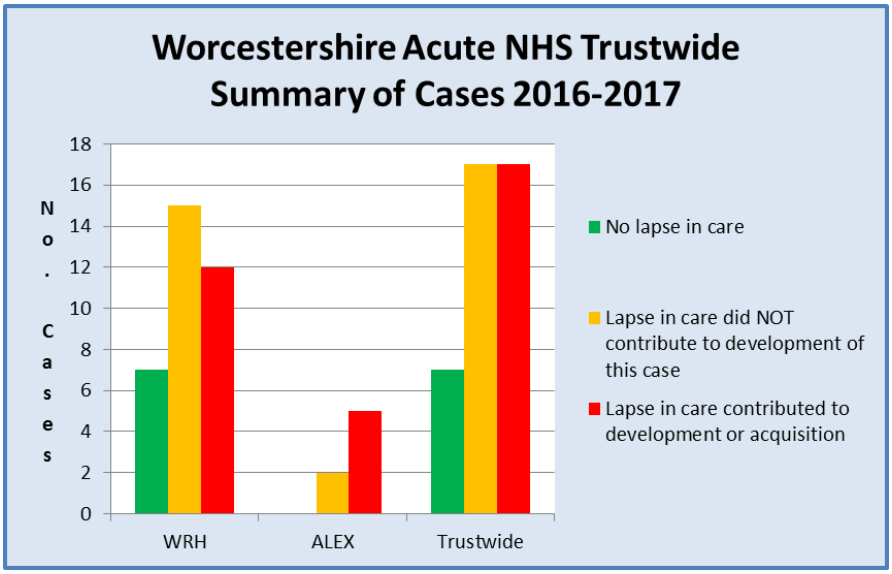

Figure 5: Summary of cases by lapse in care 2016-17

Findings:

- 83% (34/41) cases were found to demonstrate a lapse in care
- 41.5% (17/41) of all cases were red lapses in care contributing to the development or acquisition of CDI.
- 29% (5/17) of red lapse cases were reported at the Alexandra Hospital site and 71% (12/17) were reported at the Royal Worcestershire Hospital site.
- 41.5% (17/41) of all cases were amber lapses in the care, not contributing to development or acquisition of CDI. 12% (2/17) of amber lapses were at the Alexandra site and 88% (15/17) were at the Royal Worcestershire Hospital site.
- 17% (7/41) of all cases were green (no lapse in care) and were all at the Royal Worcestershire Hospital site.

Key risk factors identified:

- The highest risk factor for acquisition of CDI is antibiotic usage in the three month period prior to confirmation and occurred in 97.5% of cases (40/41). However, antimicrobial therapy was almost always required but was also the trigger for CDI development.
- This was closely followed by concurrent CDI cases on the ward (66% cases), which may not be the same ribotype, though is thought to increase the likelihood of environmental loading with *Clostridium difficile* (Spores of *C.difficile* contaminating and remaining in the ward environment).
- The third highest risk factor was use of laxatives or anti-emetics related to previous hospital admission in the three month period prior to acquisition (61% cases).
- The fourth was previous admission in the last 3 months (56% cases).
- Co-amoxiclav was found to be the antimicrobial agent most likely to trigger CDI with 68% (28/41) cases having received treatment with this agent before developing CDI.

The age range of patients was between 58 and 96 years and 40 of the 41 patients affected were over the age of 65 years. 95% (39/41) of cases were emergency admissions.
Some good practice was noted in the management of CDI cases notably:

- 97.5% (40/41) cases were monitored through use of a stool chart.
- Proton Pump Inhibitor (a class of drugs also known to trigger CDI) review had taken place in 93% (38/41) cases.
- Antibiotic review had taken place in 85% (35/41) cases.

However, some deficiencies were noted including:

- Sampling was delayed in 56% (23/41) cases with only 44% (18/41) sampled the same day as onset of symptoms.
- There were delays in isolation with 71% (29/41) cases not isolated on the day they developed symptoms.
- There were delays in empirical treatment being commenced with only 17% (7/41) of all patients receiving empirical treatment before a diagnosis was confirmed.
- There were delays in commencing full treatment with 73% (30/41) receiving timely treatment the same day once a diagnosis of CDI was confirmed.

In response to these findings key actions to be undertaken during 2017-18 include:

- Ratification and launch of revised antimicrobial prescribing policy and programme of antimicrobial prescribing audits and feedback to prescribers to be fully in place before end of September 2017.
- Launch of antimicrobial prescribing smart phone App for prescribers to be in place before end of September 2017.
- Letter to prescribers reminding them of appropriate alternatives to the use of Co-amoxiclav in order to help reduce consumption (July 2017).
- Further ongoing education and training opportunities around antimicrobial stewardship, hand hygiene and other IPC practice and completion of IPC documentation.
- Zero tolerance of non compliance with hydrogen peroxide vapour treatment for single rooms for high risk infections.
- Review and refinement of the policy for management of *Clostridium difficile* prior to re-approval before end of September 2017.
- Initial case review undertaken within 3 days of the case being identified.
- Reminder for clinical staff to obtain a sample as soon as possible after symptoms have developed included in mandatory training and via link practitioners.

Clostridium difficile infection 30 day all-cause mortality

Clostridium difficile 30 day all-cause mortality is defined as death occurring within 30 days of a specimen testing positive for *C.difficile*. It is important to remember that this is 'all-cause' mortality where a death may have occurred due to a range of co-morbidities and

does not mean that *C.difficile* is the cause of death. In addition, these figures are calculated from trust attributable cases only and reflect only when a sample has been taken beyond day of admission plus two.

A separate calculation is also made for deaths where *C.difficile* is cited as the cause of death on part 1a of a death certificate (the *C.difficile* attributable death rate). Where this happens, such cases are recorded and investigated as serious incidents.

Figure 6 below shows the Trust's *C.difficile* 30 day all-cause mortality for 2016-17. The all cause *C.difficile* mortality for 2016-17 is 15 of 41 cases equating to 36.5%. This is higher than expected as the Department of Health (2008) guide '*Clostridium difficile* infection: How to deal with the problem' identified action is required if the 30 day mortality rate approaches 20%. A further analysis of these cases will therefore be undertaken during July 2017 in order to assure the Trust Infection Prevention & Control Committee if there any further lessons not already understood from the analysis of cases for 2016-17; and this report will be received at the Trust Infection Prevention & Control Committee in August 2017.

The *C.difficile* attributable death rate (where *C.difficile* has been cited on part 1a of the death certificate) is 1 of 41 cases equating to 2.4%.

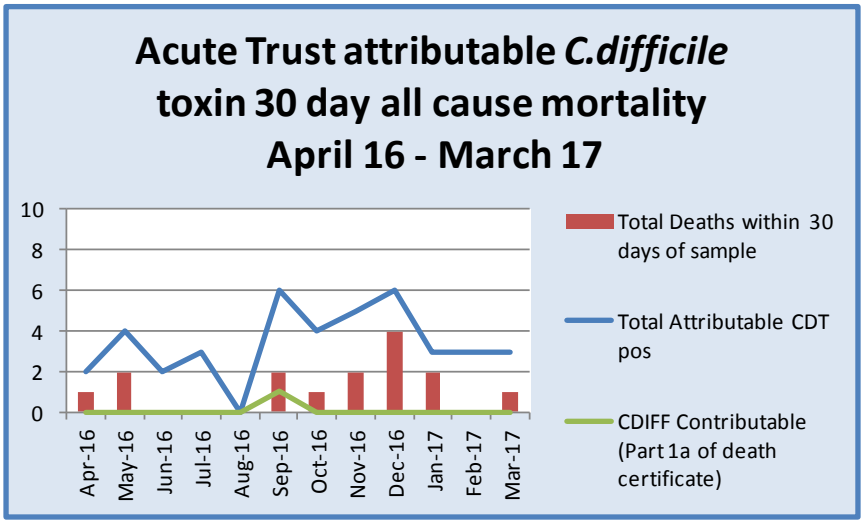

Figure 6: *C.difficile* all-cause mortality 2016-17.

Clostridium difficile infection trajectory for 2016-17

The trajectory for 2017-18 for the Trust has been set by NHS England, at no more than 32 trust attributable cases which is consistent with the 2016-17 target.

C.difficile PCR

C.difficile PCR is also monitored in accordance with the three step algorithm. The Trust follows Department of Health 2012) guidance on diagnosis and reporting of *C.difficile and* uses a three step process of glutamate dehydrogenase (GDH), toxin enzyme

immunoassays (EIA) and toxin gene (PCR) testing. This means the Trust is compliant with national guidance with regard to laboratory testing for *C.difficile*.

In addition to externally reportable toxin positive cases as described above, PCR testing is also undertaken. This testing is able to identify toxin negative patients but PCR positive, where a patient is carrying *C.difficile* with the potential capability of making toxin. It is therefore important to monitor these patients and assess risk e.g. if symptomatic to ensure isolation precautions ensue and treatment is instigated.

Figure 7 shows PCR by location and Figure 8 shows PCR and toxin by location. The IPCT monitors these to ascertain if there is any action that could be taken to prevent further toxin positive cases.

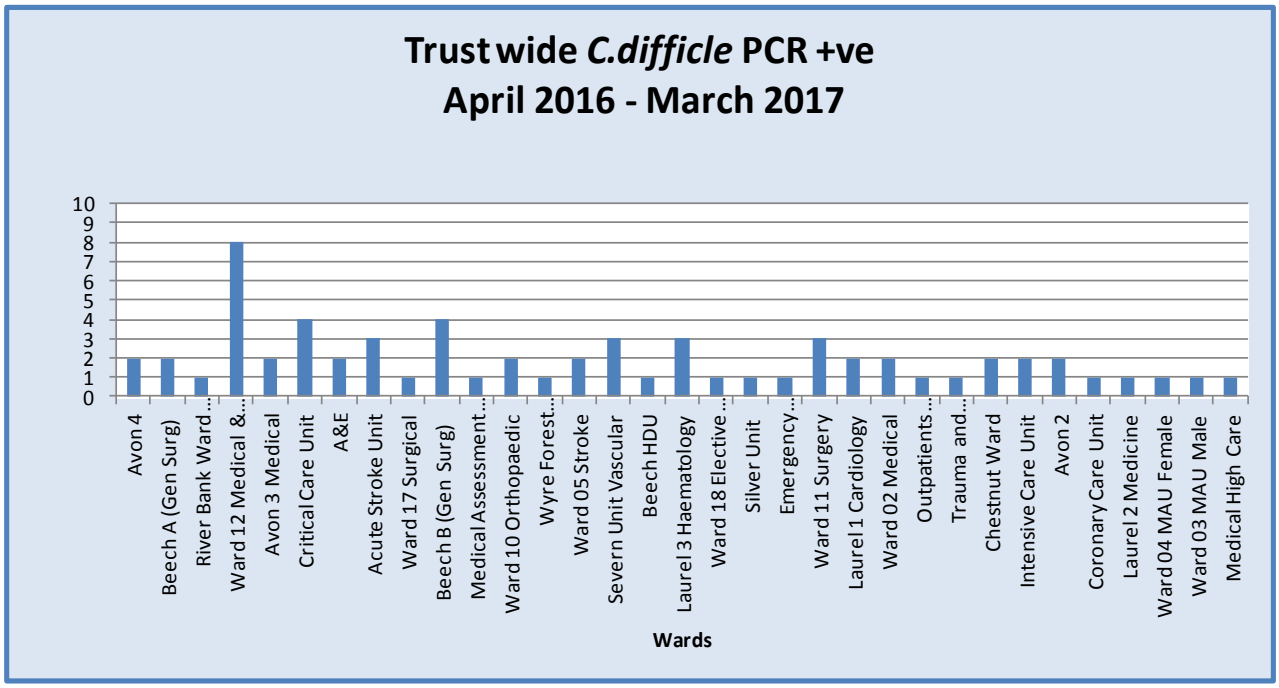

Figure 7: *Clostridium difficile* PCR by location 2016-17 (Tot: 65, WRH 38, Alex 26, KTC 1)

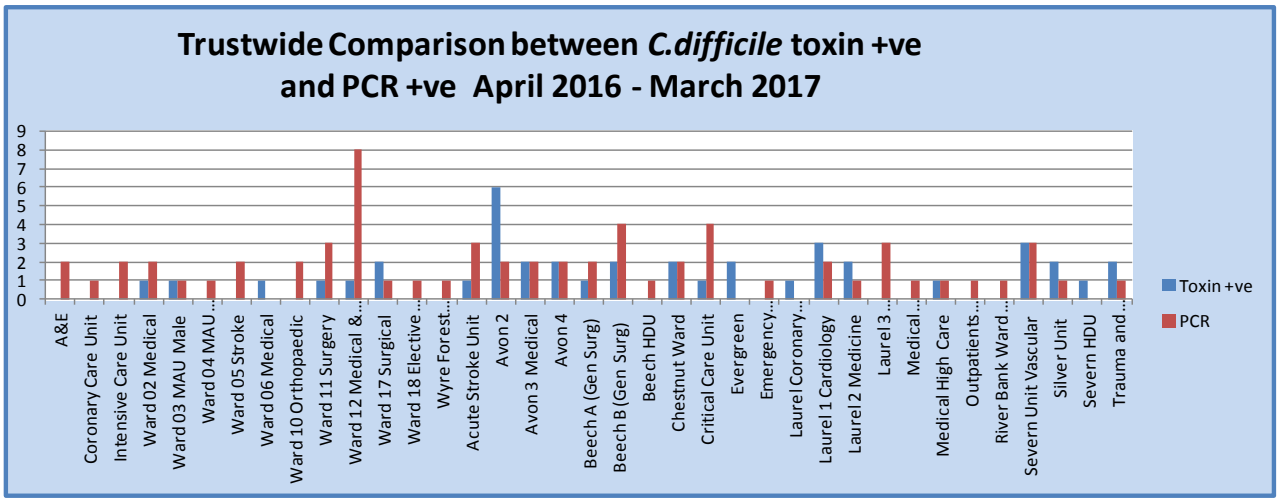

Figure 8: *Clostridium difficile* toxin and PCR by location 2016-17

7. Meticillin resistant *Staphylococcus aureus* (MRSA) bacteraemia

During 2016-17 a total of 7 MRSA bacteraemia (blood stream infections) were reported. Of these cases, 4 were attributed on post infection review to the Trust. This represents a breach of the national zero tolerance of hospital attributable MRSA bacteraemia; and is worse than the one case reported during 2015-16, as reflected in Figure 9 below.

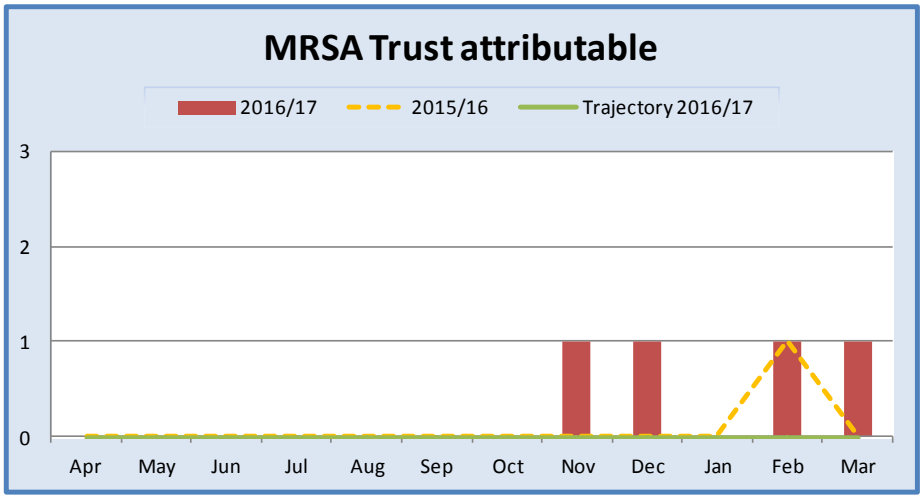

Figure 9: Trust attributable MRSA BSI 2016-17; also showing the 2015-16 case

The Trust attributable cases were reported as three at the Alexandra site in November 2016 and January and March 2017; and one at the Worcestershire Royal Hospital site in December 2016. The 2015-16 cases is also shown, having occurred at the Worcestershire Royal Hospital site in February 2016 (Figure 10).

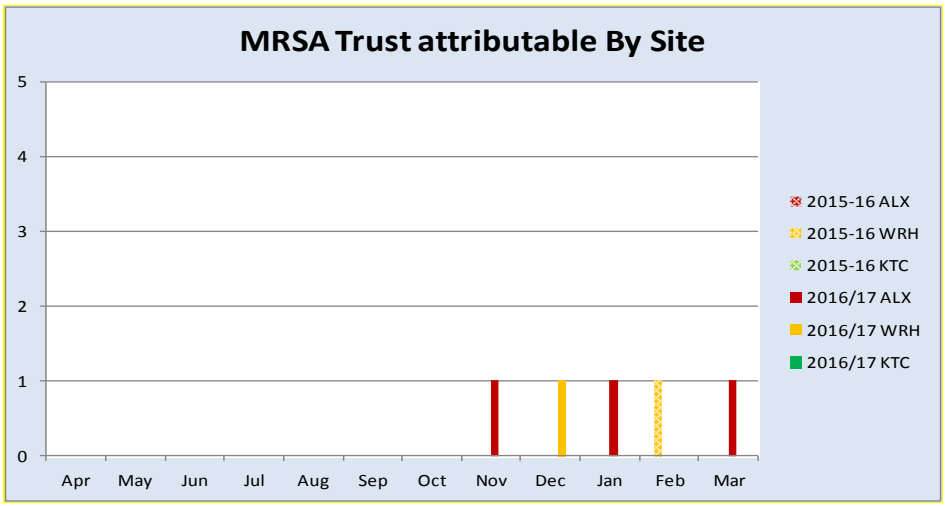

Figure 10: Trust attributable MRSA by site 2016-17 and 2015-16 for comparison.

Trust attributable cases:

Case	Sample date	Location	Outcome
1	22/11/16	Ward 2, Alexandra Hospital	Contaminant – Trust attributable
2	22/12/16	T&O Ward, Worcestershire Royal Hospital	Acute attributable
3	07/02/17	Ward 12, Alexandra Hospital	Acute attributable
4	19/03/17	Ward 11, Alexandra Hospital	Acute attributable

Summary of cases

Case 1 occurred in a gentleman > 80 years admitted from sheltered housing with a previous history of MRSA. While not reported as a serious incident, the case as a contaminant is attributed to the Trust.

Case 2 occurred in a gentleman > 80 years with no previous history of MRSA. The investigation found that the likely portal of entry for the MRSA was via a wound.

Case 3 occurred in a gentleman > 80 years with no previous history of MRSA. The investigation found that the likely portal of entry for the MRSA was also via a wound.

Case 4 occurred in a lady > 80 years who had a previous history of MRSA. The investigation found that the likely cause was related to an existing medical condition of the patient.

Cases 2-4 were reported by the Trust as serious incidents and further detail and key lessons from these cases is outlined in section12 of this report: 'Infection Prevention & Control Serious Incidents and outbreaks of infection'.

The figures for the previous full year 2015-16 were 5 MRSA bacteraemia of which 4 were non attributable cases and 1 attributable case.

For purposes of comparison, published figures by Public Health England indicate that for the financial year 2016-17, of 17 acute trusts covered by Public Health England in the West Midlands area, there has been one Trust with 7 hospital attributable MRSA bacteraemia; one other Trust with 4 cases; one trust with 3 cases; and four Trusts reporting one case.

MRSA screening

During 2016-17 the Information Team and IPCT have worked closely to further refine data quality around MRSA screening compliance figures, leading to improvements that now more accurately reflect the vigilance placed on MRSA screening by the Pre-operative Assessment Team.

A definition of high risk has been taken from Department of Health (2014) modified MRSA screening guidance. This includes: Vascular, renal/dialysis, neurosurgery, cardiothoracic surgery, haematology/oncology/bone marrow transplant, orthopaedics/trauma, all intensive care units (Adult/paediatric/Neonatal), High Dependency Units, Coronary Care Units and the Neonatal Unit at Worcester Royal Hospital.

Figure 11 shows MRSA screening compliance of high risk elective patients against a target of 95%.

Date 2016-17	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17
High Risk MRSA Elective Screening %	94.4%	94.7%	95.5%	95.9%	95.9%	92.3%	97.1%	96.3%	93.8%	97.1%	96.2%	95.5%
Target	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%

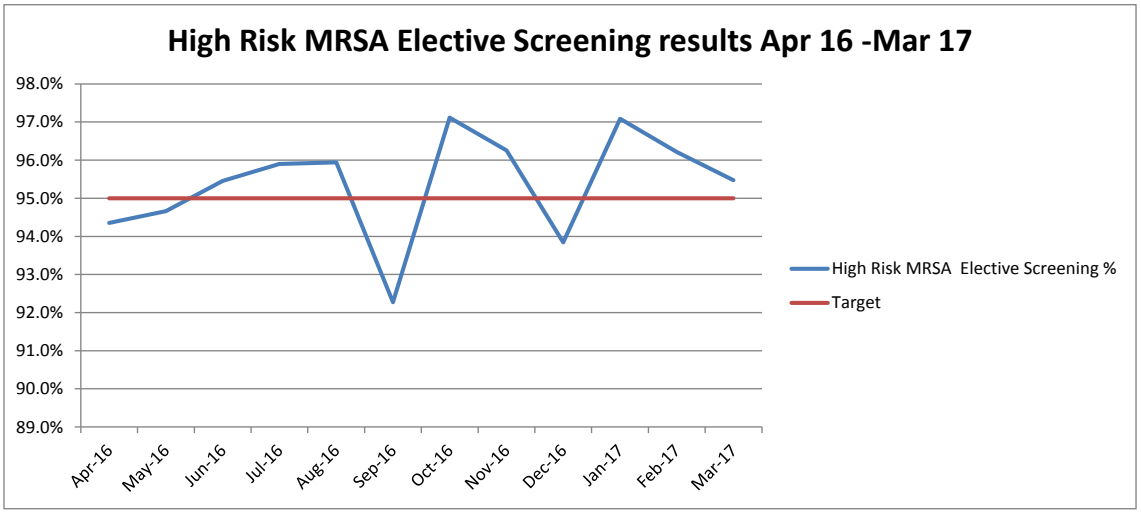

Figure 11: MRSA high risk Elective screening compliance against 95% target

For any incidence of screening non-compliance reported, the information is forwarded to the Division for them to assess if the patient should have been screened and to do so at the earliest next opportunity, or assess if the patient did not in fact require screening.

Work around MRSA screening will continue in 2017-18 to further refine data quality for MRSA screening of emergency admissions.

Despite publishing MRSA screening compliance in accordance with the definition of 'high risk' above, the Trust continues to screen all emergency admissions to the Trust as part of a continued policy of universal screening; and almost all elective admissions are screened with some low risk procedures exempt from MRSA screening in line with Department of Health guidance.

Re–screening for longer term in-patients is undertaken one month post admission. Compliance with this has remained at 100% for 10 months of the year with two dips though these remained at 96% for June 2016 and 95% for August 2016. (Figure 12).

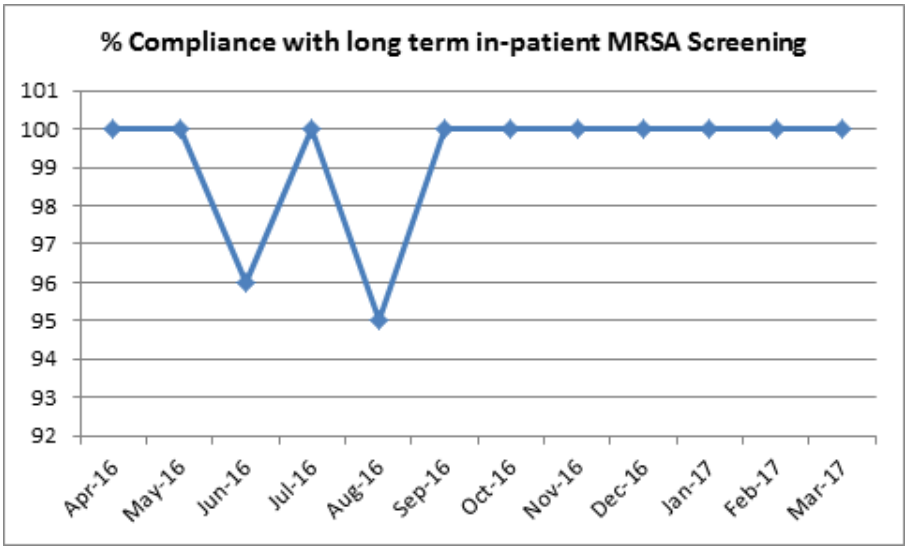

Figure 12: Long term inpatient MRSA re- screening 2016-17

8. Meticillin sensitive *Staphylococcus aureus* (MSSA) bacteraemia

Bloodstream infections due to Meticillin sensitive *Staphylococcus aureus* became subject to mandatory reporting in April 2011. During 2016-17 the trust has recorded 71 MSSA BSI, of which 12 occurred in patients beyond the first post-admission day and were therefore classified as hospital attributable for national reporting purposes.

Figure 13 below shows the 12 Trust attributable MSSA BSI reported during 2016-17 and comparison with the 16 cases reported during 2015-16. Of the 12 cases reported 2016-17, 7 were reported in blood cultures from Worcestershire Royal Hospital and 5 from the Alexandra Hospital.

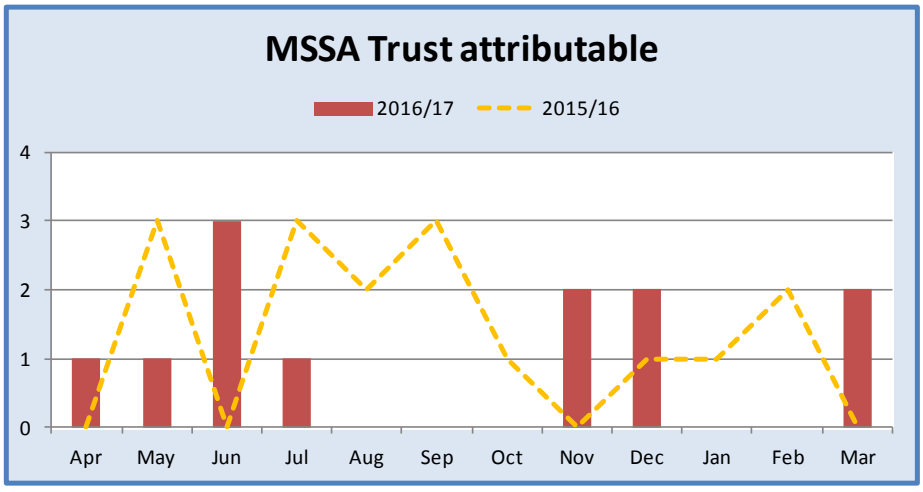

Figure 13: Trust attributable Meticillin sensitive *Staphylococcus aureus* (MSSA) BSI 2016-17.

While each case is reviewed, there were no clear key themes in the cases relating to causative factors. However, it was noted that there was some non-compliance with completion of peripheral vascular device (PVD) monitoring forms and this has been highlighted to IPC link practitioners to observe and encourage improvements in completion in their ward areas. This area of practice is also highlighted as a priority for improvement during 2017-18.

There continues to be no local or national mandatory reporting trajectories for MSSA. It is not anticipated that there will be any national trajectories introduced during 2017/18.

9. *E.coli bacteraemia*

During 2016-17 the Trust recorded 372 *E.coli* bacteraemia of which 67 were classified as trust attributable, having been detected in patients beyond the first post admission day. This compares with 49 trust attributable cases during 2015-16 and 61 during 2014-15. Of the 67 cases, 50 were reported in blood cultures from Worcestershire Royal Hospital, 17 from the Alexandra Hospital and 0 from Kidderminster Treatment Centre. The most significant cause group appears to be urosepsis.

Figure 14 shows trust attributable *E.coli* bacteraemia during 2016-17 with 2015-16 for comparison. *E.coli* bacteraemia has been included in the mandatory reporting process since June 2011. There are no national or local trajectories set for *E.coli* bacteraemia.

However, as part of arrangements for the Clinical Commissioning Group Quality Premium scheme for 2017-18, a target 10% reduction has been set with actions to achieve this set around improved antimicrobial stewardship; a focus on reducing catheter related urinary tract infection (CAUTI), ensuring asepsis for intravascular device insertion and their improved effective management by means of education on the issue and improved management of hydration.

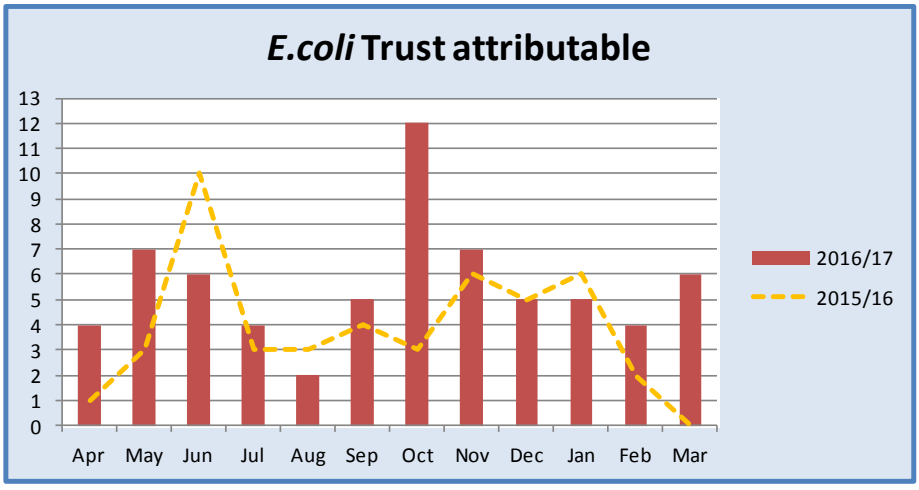

Figure 14: trust attributable *E.coli* bacteraemia 2016-17.

A breakdown by site is as follows for 2016-17 with 2015-16 for comparison (Figure 15)

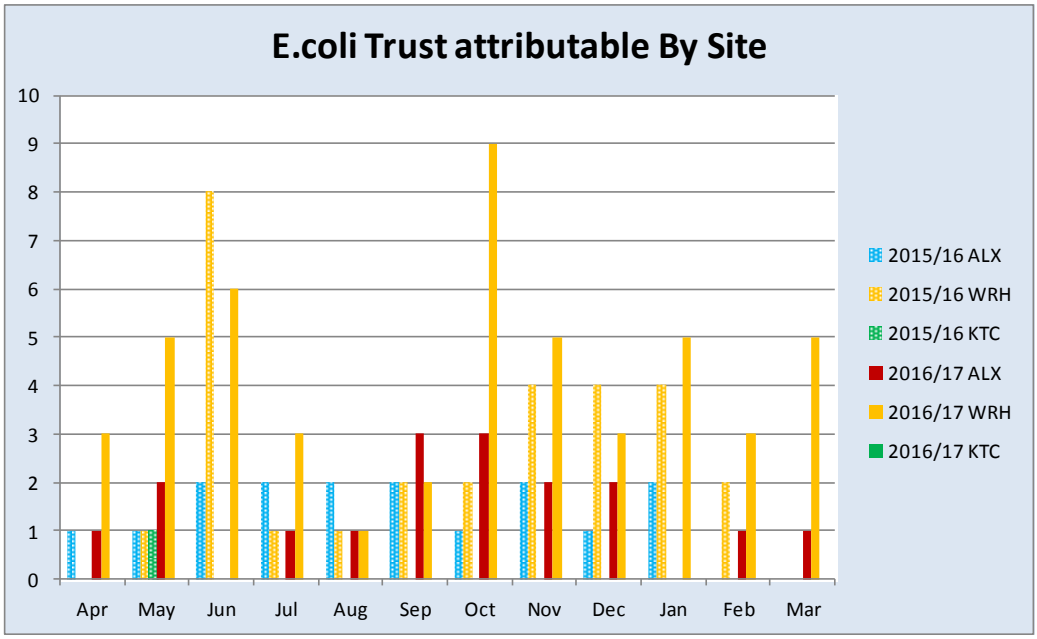

Figure 15: *E.coli* Trust attributable bacteraemia by site at WAHT 2016-17 with 2015-16 comparison

10. Blood culture contamination rates

The blood culture is an important tool used by health care professionals in order to detect the presence of potentially harmful pathogens in the bloodstream. A positive blood culture can suggest a definitive diagnosis which enables targeted therapy against the specific organism identified. A contamination occurs when organisms that are not present in the blood stream are grown in the culture. With all blood culture results a decision is made as to whether the identified infection is clinically significant. Contaminated cultures may occur as a result of sub optimal practice of the healthcare professional taking the culture or may be related to the patient's physiology should it prove difficult to obtain a sample, or if there is a heavy presence of a particular organism on the skin.

The rate of blood culture contamination for adult patients at WAHT is 2.54% against a national average of 3% indicating that the rate for WAHT is within expected parameters. (Figure 16).

	Total number of non-paediatric blood cultures received	Total number contaminated	Percentage contamination rate (non-paediatric patients)	Number of blood cultures received from paediatric patients	Number contaminated	Percentage contamination rate (paediatric patients)
Apr-16	1037	30	2.89%	130	4	3.08%
May-16	1204	21	1.74%	112	0	0.00%
Jun-16	1026	19	1.85%	123	4	3.25%
Jul-16	984	26	2.64%	142	1	0.70%
Aug-16	1024	27	2.64%	120	2	1.67%
Sep-16	1054	23	2.18%	129	3	2.33%
Oct-16	1166	32	2.74%	98	0	0.00%
Nov-16	1119	32	2.86%	116	2	1.72%
Dec-16	1261	36	2.85%	119	0	0.00%
Jan-17	1206	30	2.49%	125	3	2.40%
Feb-17	1028	29	2.82%	126	1	0.79%
Mar-17	1039	30	2.89%	188	3	1.60%
Total	**13148**	**335**	**2.54%**	**1528**	**23**	**1.50%**

Figure 16: Blood culture contamination rates WAHT 2016-17.

11. Antimicrobial Stewardship

Antimicrobial stewardship is a systematic effort to stem the overuse of antimicrobials and retard the development of antimicrobial resistance in micro-organisms.

The departments of microbiology and Infection Prevention and Control continued to implement the recommendations of the "Start Smart then Focus" national campaign for the financial year 2016-17. Existing antimicrobial stewardship activities such as, *C. difficile* post-infection review meetings, daily intensive care unit ward rounds, weekly *C. difficile* ward rounds and selective reporting of antimicrobial susceptibilities were maintained through the year. Antimicrobial stewardship training was provided to senior clinical staff, junior doctors as part of their mandatory training sessions and at an Infection Prevention and Control link nurse study day. A workshop at a Medicines Management Link nurse study day was also held. The secondary care Paediatric Antimicrobial Prescribing Guidelines were reviewed and published in December 2016. The secondary care Adult Antimicrobial Prescribing guidelines were extensively reviewed, updated and expanded and will be launched in the new financial year following approval by the Trust's Medicines Optimisation Expert forum. Funding for MicroGuide, which enables publication of the prescribing guidelines via smart portable electronic devices (tablets and smart phones) and the Trust intranet in the new financial year, has been secured.

Antimicrobial Usage Trend

Overall antibiotic consumption for the Trust continued to increase to 16 372 DDD/1000 admissions for the financial year. This was increased by 31% compared to consumption in 2015-16 (12 439 DDD/1000 admissions) and by 35% to that of 2014/2015 (12 098 DDD/ 1000 admissions). Details of consumption by selected broad-spectrum antimicrobials detailed are displayed in 17-21 below. Piperacillin with Tazobactam use was decreased markedly due to a manufacturing problem of the injection. This led to an increase in Co-Amoxiclav consumption and, more so, in carbapenem consumption. There was a marked increase in cephalosporin consumption in quarter 1 of 2016-17, likely due to an increase in OPAT use for the management of cellulitis. However this decreased to below previous year's use for the remainder of the year.

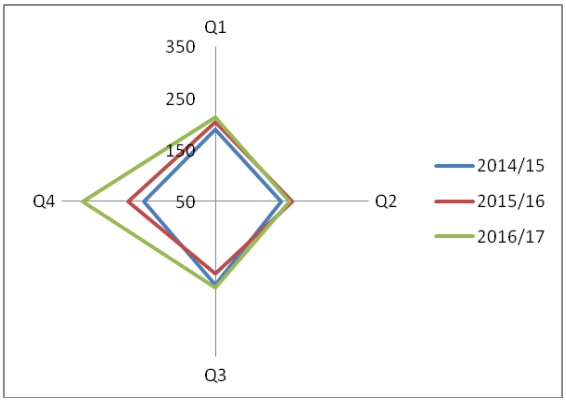

Figure 17 WAHT Carbapenem Usage (DDD/1000 admissions)

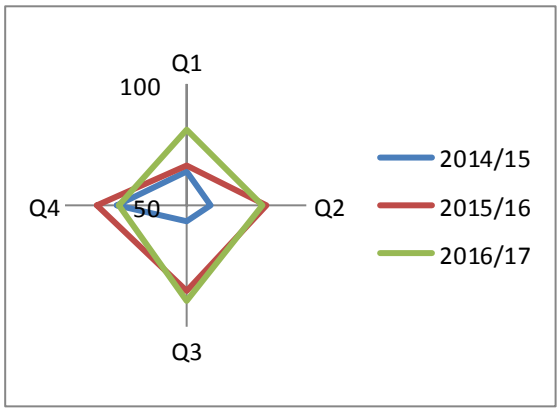

Figure 18 WAHT Cephalosporin Usage (DDD/1000 admissions)

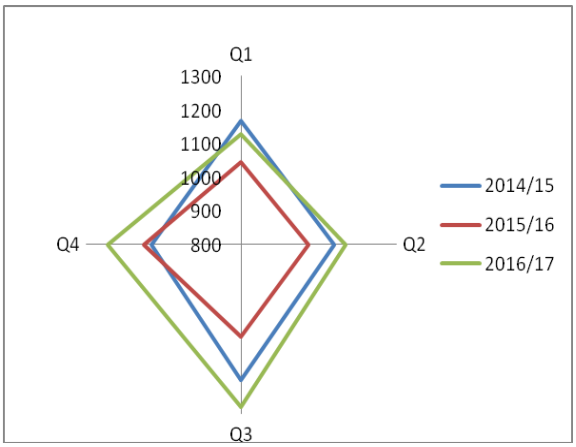

Figure 19 WAHT Co-Amoxiclav Usage (DDD/1000 admissions)

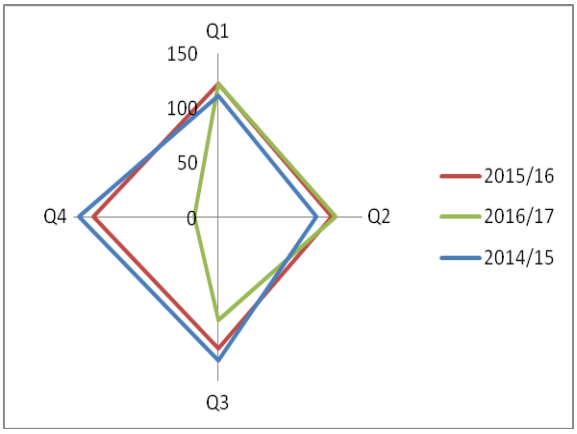

Figure 20 WAHT Piperacillin with Tazobactam Usage (DDD/1000 admissions)

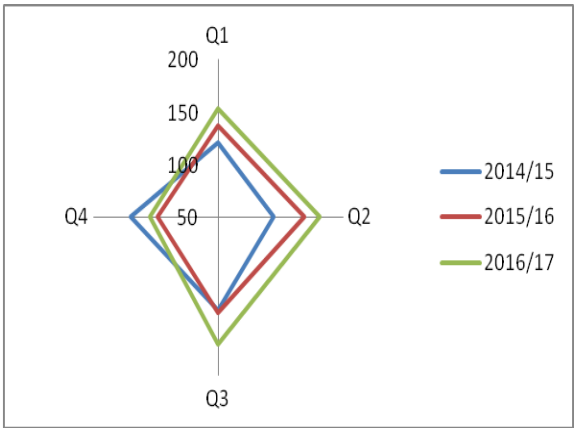

Figure 21 WAHT Quinolone Usage (DDD/1000 admissions)

Ongoing contributing factors for the increase in overall antimicrobials include:

- An increasingly frail, elderly population with multiple co-morbid conditions and high susceptibility to bacterial infection.
- An increasing rate of infection with multi-drug resistant Gram-negative pathogens (an increased laboratory isolation rate of ESBL-producing Enterobacteriaceae has been noted from surveillance).
- Increasing awareness of sepsis, due to high-profile national campaigns and a lower threshold to prescribe broad-spectrum antimicrobials in response.
- Inadequate time, confidence or training of medical practitioners resulting in inadequate initial assessment of a patient to determine the likely focus of infection and hence over-reliance on broad spectrum agents to manage sepsis rather than narrow spectrum “site-specific” therapy.
- Limited antimicrobial prescribing guidance available to practitioners at the point of prescribing.
- Failure to de-escalate to a narrower spectrum agent upon receipt of culture and sensitivity data.

- Continuation of antimicrobial therapy post-operatively as 'extended prophylaxis', in opposition to the trust's guidelines (demonstrated from an audit of surgical patients).
- Lack of a dedicated, full-time antimicrobial pharmacist or whole-time equivalent to support stewardship activity
- Strained resources for medical microbiologists limiting the expansion of Stewardship Rounds for targeted review of carbapenem prescriptions and high risk patients to clinical areas.
- Increasing numbers of oncology patients being cared for in Worcestershire and, hence, increased numbers of patients with febrile neutropenia presenting to hospital. First-line agents for febrile neutropenia are Piperacillin with Tazobactam or if penicillin-allergic or a haematology/oncology patient, meropenem.

Plans for a dedicated, full-time antimicrobial pharmacist were approved during the financial year and the post was filled end of November 2016.

Commissioning for Quality and Innovation (CQUIN) – Antimicrobial Stewardship 2016-17

The Antimicrobial Stewardship CQUIN was introduced for the 2016-17 financial year. For part A of the CQUIN the Trust was required to reduce the consumption of total antimicrobials, piperacillin with tazobactam and carbapenems (i.e. ertapenem and meropenem) by 1% each of the baseline value (consumption in the financial year 2013-14); the indicator weighting was 0.20%. This meant a target 7.5% reduction on current consumption, which was not achieved. Part B of the CQUIN (indicator weighting 0.05%) required evidence showing that up to 90% of prescriptions have been reviewed within 72-hours of initiation of antimicrobial therapy.

Both, antibiotic usage and review data were submitted to PHE ESPAUR programme in a timely manner. Whilst reduction in total antibiotic consumption (Figure 22) and carbapenem consumption (Figure 23) were below CQUIN target, the reduction in total piperacillin with tazobactam consumption achieved CQUIN target (Figure 24).

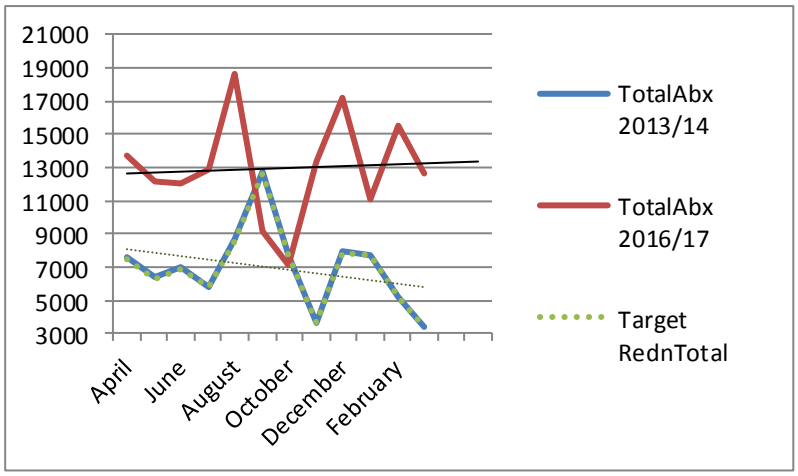

Figure 22 Total antibiotic usage 2016-17 vs 2013/14 (DDD/1000 admissions)

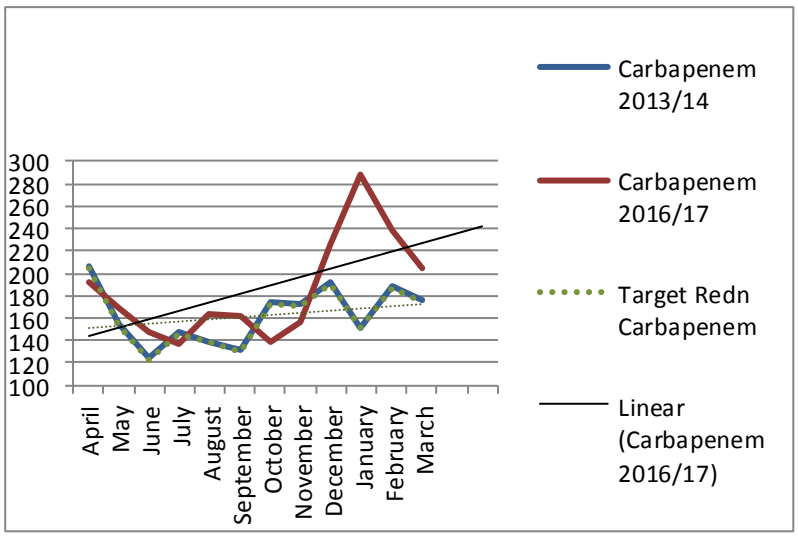

Figure 23 Carbapenem usage 2016-17 vs 2013/14 (DDD/1000 admissions)

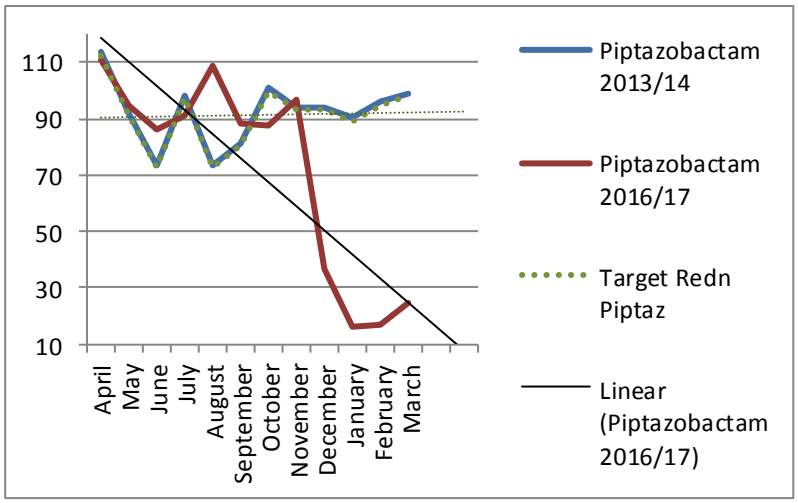

Figure 24 Piperacilin with Tazobactam usage 2016-17vs 2013/14 (DDD/1000 admissions)

Performance for timely antibiotic review achieved CQUIN target for Q1-Q3; the target for Q4 was narrowly missed. Improvements are required in clinical areas when reviewing prescribed antimicrobial treatment, particularly those started empirically. Monthly audits demonstrated that the majority of prescriptions have unspecific plan following review and showed low intravenous to oral switch rates (Figure 25).

Results for audit of antibiotic review (quarters 3 and 4)

Criteria	Q 3	Q 4
Number of prescriptions audited	204	339
Number of prescriptions reviewed within 72 hours	191 (93.6%)	303 (89.4%)
Number of prescriptions not reviewed within72 hours	13 (6.4%)	36 (10.6%)
Number of prescriptions for IV antibiotics at start of therapy	164 (80.4%)	258 (76%)
Number of prescriptions stopped within 72 hours	35 (17.2%)	35 (10%)
Number of prescriptions continued at review	69 (33.8%)	204 (60.2%)
Number of prescriptions where therapy was escalated following review	70 (34.3%)	18 (5%)
Number of prescriptions where therapy was de-escalated following review	10 (4.9%)	11 (3%)
Number of prescriptions where therapy was switched to oral therapy at review	11 (5.4%)	32 (9%)
number of prescriptions where microbiology/ID advice was followed	103 (50.5%)	no data
number of prescriptions that complied with Trust Antibiotic prescribing guidelines	152 (74.5%)	309 (91%)

Figure 25: Results for audit of antibiotic review (quarters 3 and 4)

For financial years 2017-19 the AMS CQUIN and Sepsis CQUIN have been combined in the Reducing the Impact of Serious Infections CQUIN with the aim to timely identify and treat sepsis and reduce clinically inappropriate antibiotic prescription and consumption. The CQUIN will target a reduction in total antibiotic, carbapenem and piperacillin with tazobactam consumption reduced by1 or 2% compared to baseline (antibiotic consumption January to December 2016).

Glossary (Antimicrobial prescribing)

Abx	antibiotics
AMS	Antimicrobial Stewardship
CQUIN	Commissioning for Quality and Innovation
DDD	Defined Daily Dose
OPAT	Outpatient Antimicrobial Therapy
PHE ESPAUR	Public Health England English Surveillance Programme for Antimicrobial Utilisation and Resistance
WAHT	Worcestershire Acute Hospitals NHS Trust

12. Infection Prevention & Control Serious Incidents and outbreaks of infection

Outbreaks of infection, including MRSA bacteraemia or death from *Clostridium difficile* recorded on part 1a on a death certificate, or significant incidents involving other organisms are classified as serious incidents and are reported via the serious incident reporting system STEIS in accordance with the Serious Incident Management Policy and Procedure. Figure 26 below lists the 6 HCAI related serious incidents reported during 2016-17.

Incident date	Site	Summary
08/07/16	Worcestershire Royal Hospital	Outbreak of VRE – two linked bacteraemia
09/07/16	Worcestershire Royal Hospital	Period of increased incidence *C.difficile* Severn Suite
09/09/16	Alexandra Hospital	*C.difficile* death part 1 of death certificate Ward 17
22/12/16	Worcestershire Royal Hospital	MRSA bacteraemia T&O ward
07/02/17	Alexandra Hospital	MRSA bacteraemia Ward 12
19/03/17	Alexandra Hospital	MRSA bacteraemia Ward 11

Figure 26: HCAI serious incidents reported 2016-17

Summary of each of the SIs

Outbreak of VRE – two linked bacteraemia

Two bacteraemia (Blood stream infections) caused by Vancomycin resistant Enterococci (VRE) were identified in patients linked to the same ward (Laurel 3) on 7th and 14th June 2016. The incident let to deep cleaning of the environment using chlorine based agents and hydrogen peroxide fogging. Subsequent environmental testing revealed negative results.

In response to this incident the Trust instigated for 2 months routine patient VRE screening on Laurel 3 and Intensive Care Units as a precaution and to help inform antimicrobial prescribing in patients where the VRE screen was positive. Screening of patients on Laurel 3 then discontinued but environmental screening continues as a means of measuring the risk posed by VRE in this area with any positive sample resulting in additional cleaning. Routine VRE screening in Intensive Care Unit continues.

Period of increased incidence *C.difficile* Severn Suite

A period of increased incidence of *Clostridium difficile* toxin was detected on 9th July 2016, when a second toxin positive case was confirmed on a patient on Severn Suite within a 28 day period following a first case on 7th July 2016. However, typing of the two cases confirmed differing strains and therefore there was no direct evidence of cross infection between the cases. However, the investigation felt that a lapse in care had occurred owing to the percentages scored in cleaning audits around this time and the

areas affected on the ward were treated with chlorine releasing agents and hydrogen peroxide fogging.

C.difficile death part 1 of death certificate Ward 17

A patient was admitted following a fall during August 2016. Following surgery the patient was declared medically fit for discharge. However, deterioration in clinical condition was then observed. Type 7 stools led to a diagnosis of severe *C.difficile* disease. The investigation found that opportunities to recognise the onset of *C.difficile* disease were missed and this delay led to fulminant disease and the death of the patient.

Key learning points in this case included:

The importance of completion of the D&V risk assessment.
Addressing of gaps in medical and nursing knowledge concerning the prescribing and administration of Vancomycin.
The need for audits of antimicrobial prescribing audits for surgical prophylaxis.
Medical education around recognition of *C.difficile* disease leading to pan-colitis.

MRSA bacteraemia T&O ward

A gentleman > 80 years was admitted from a care home with non specific deterioration during December 2016. Sepsis of unknown origin was managed with intravenous antibiotics. Following a septic episode in which urinary tract infection was initially suspected; blood cultures confirmed the presence of MRSA.

The investigation found that the national early warning score (NEWS) chart was not adequately completed leading to the patient not being escalated for timely medical review. The gentleman had no previous history of MRSA and therefore a failure of infection prevention practice may have led to the transmission of the infection which the investigation found is likely to have entered the body via a wound. The case was therefore felt to be avoidable.

MRSA bacteraemia Ward 12

A gentleman > 80 years was admitted to the Alexandra Hospital during January 2017 and was treated for a chest infection. There was no previous history of MRSA. The investigation found that the likely portal of entry was a wound resulting from previous surgery. The investigation found that there had been failures in the management of the wound and an MRSA screen of the wound had not been undertaken. The case was therefore felt to have been avoidable.

The key lesson from this case was around re-enforcement of the protocol for MRSA screening and a further learning point was noted with regard to monitoring of peripheral vascular devices and completion of charts.

MRSA bacteraemia Ward 11

A lady > 80 years was admitted to the Alexandra hospital during March 2017 with adnominal pain and a moisture lesion to her sacrum. The lady had a previous history of MRSA though this admission the initial screen was negative. However, the previous history of MRSA had not been checked on admission. The Infection Control Team informed the ward of the patient's previous history of MRSA and advised commencement of body washes for MRSA. However, a communication failure meant that the washes did not commence. This was the first of two missed opportunities to prevent the bacteraemia in this case. The second occurred when the patient developed suspected hospital acquired pneumonia. Had the previous history of MRSA been acknowledged by the medical team, an intravenous antimicrobial effective against MRSA could have been chosen. The investigation found that the most likely portal of entry for the MRSA was felt to be related to an existing condition of the patient. The case was therefore felt to have been avoidable. In response to the case the Trust is now introducing a policy of 3 post admission screens in the event of a previous history of MRSA in order to negate the risk of a false negative screen on admission.

Note the MRSA bacteraemia in November 2016 recorded as a contaminant was not required to be recorded as a serious incident.

Outbreaks of infection

Outbreaks of infection are not always reported as serious incidents if the response to them is as expected in line with trust policy.

The Trust has a standard response to Norovirus outbreaks which includes daily review by the Infection Prevention & Control Team of affected patients, an increase in the frequency of environmental cleaning using a chlorine releasing product and restriction of staff movement in order to prevent spread. Outbreak meetings are held which receive an overview of the wider community prevalence of Norovirus. This means that where Care Homes are affected, this information is relayed to admitting areas in the Trust to ensure that patients from affected locations in the community can be placed in isolation on admission.

Cases of flu are also managed by via outbreak meetings, in particular if there is evidence of spread within the hospital and cases are managed using personal protective equipment including full face piece (FFP3) masks when an aerosol generating procedure is to be performed. A quick flu guide is used to provide staff with practical information to support managing cases in their ward areas.

Figures 27 and 28 show known or suspected Norovirus and influenza cases during 2016-17. When a positive Norovirus case is identified in a ward area, further testing is not always undertaken as patients who are symptomatic are treated as positive in order to prevent spread to other areas. Any patient suspected of being involved in an outbreak or is a contact of a known or symptomatic case is also monitored and assessed for any clinical symptoms as part of preventing further spread.

MONTH	ALEXANDRA SITE & number wards affected	Norovirus No. patients affected (de-duplicated)	No. Patients Norovirus positive	Influenza No. Patients affected (de-duplicated)	No. Patients + Staff Influenza Positive
April 2016	1 ward	12	0	40	10
May 2016	5 wards	53	9	13	3
June 2016	2 wards	9	0	2	1
July 2016	Nil	9	0	2	1
August 2016	Nil	5	0	1	1
September 2016	1 ward	10	0	0	0
October 2016	1 ward	6	0	0	0
November 2016	2 wards	20	3	1	0
December 2016	8 wards	118	8 + 2 staff	15	9
January 2017	4 wards	22	1 + 2 staff	19	8
February 2017	8 wards	91	19 + 3 staff	34	7 + 1 staff
March 2017	Nil	12	24 + 2 staff	5	1

Figure 27: Norovirus and flu cases and patient affected Alexandra site

MONTH	WORCESTER SITE number wards & affected	Norovirus No. patients affected (de-duplicated)	No. Patients + Staff Norovirus positive	Influenza No. patients affected (de-duplicated)	No. Patients + Staff Influenza Positive (Zero staff positive)
April 2016	7 wards	58	8 + 3 staff	11	27
May 2016	3 wards	14	0 + 8 staff	44	12
June 2016	3 wards	27	0 + 2 staff	19	3
July 2016	Nil	29	0	1	0
August 2016	Nil	14	0 + 1 staff	2	0
September 2016	2 wards	18	0	1	0
October 2016	2 wards	18	0 + 1 staff	2	0
November 2016	6 wards	32	2 + 9 staff	3	1
December 2016	2 wards	52	5 + 7 staff	53	14
January 2017	4 wards	39	3 + 1 staff	65	17
February 2017	10 wards	63	10 + 8 staff	26	8
March 2017	10 wards	63	18 + 2 staff	12	4

Figure 28: Norovirus and flu cases and patient affected Worcestershire Royal site.

13. Tuberculosis (TB) and other Mycobacterial infections.

Worcestershire continues to be a low incidence area for tuberculosis with an incidence below the national average. Most cases of TB are community based but occasionally admission to hospital is required. Cases are managed by the TB lead physicians, predominantly on an outpatient basis, and supported by the county wide TB nursing team who also screen contacts of each case. If admission to hospital is required, cases of suspected or confirmed pulmonary tuberculosis are admitted to isolation rooms, preferably with negative pressure ventilation.

Occasionally patients are admitted to hospital and a diagnosis of pulmonary TB comes to light after a few days into an admission. In this scenario contacts of such a case are identified and offered advice and screening where appropriate. Between April 2016 and March 2017 there have been no such TB exposure incidents at the Trust.

Whilst TB has decreased in the UK other Mycobacterial infections are on the increase both nationally and internationally. Some Mycobacterial infections such as *Mycobacterium avium–intracellulare* are seen in patients with chronic lung conditions, such as bronchiectasis and COPD, and are becoming increasingly common but complex infections to treat. New evidence based management guidelines are expected from the British Thoracic Society in 2017 and the recommendations will be reviewed locally.

Mycobacterium chimaera is a non-tuberculous Mycobacterium which has been linked to heater-cooler systems used in cardiac bypass surgery. There has been an internationally recognised outbreak linked to these by-pass machines which the MHRA and Public Health England have been investigating. Patients who have had these procedures and deemed to have been possibly at risk of this infection have been contacted by the cardiac surgical units in other Trusts where their surgery was undertaken to inform them of their potential exposure. Some patients in Worcestershire have received such letters and those with symptoms that may indicate infection are being investigated appropriately.

14. Staff influenza vaccination campaign

The Trust can report a successful staff influenza campaign for the 2016-17 influenza season with 75.95% of frontline staff being vaccinated. Figure 29 below also details uptake by frontline staff groups. This also meant achievement of the Commissioning for Quality and innovation (CQUIN) target of vaccinating 75% of frontline staff. The successful strategy included flu hubs for a 4 week period in visible locations at the Worcestershire Royal and Alexandra Hospital sites and regular pop up hubs in other Trust locations. There were also planned visits to clinical areas including during the evening and at weekends in order to maximise the update of the vaccine. The target for 2017-18 winter season will be 70% of staff.

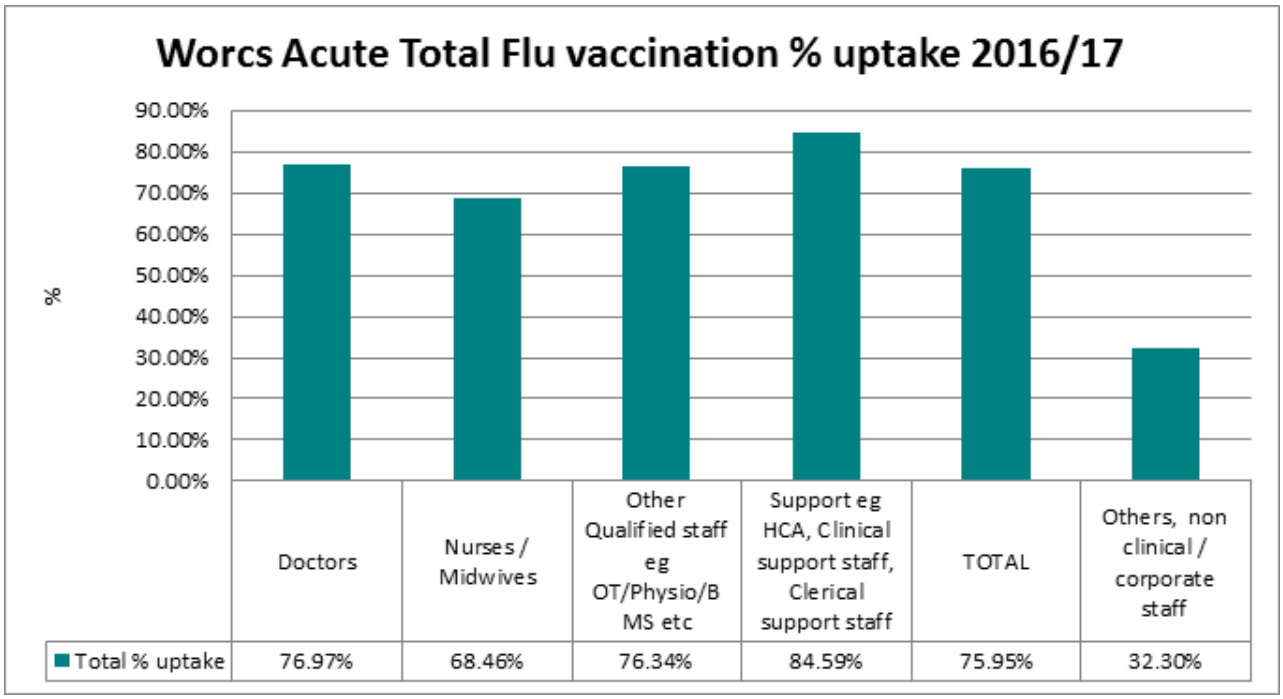

Figure 29: Staff influenza vaccine uptake 2016-17

15. Surgical Site Surveillance

In 2004 it became a mandatory requirement for all trusts undertaking orthopaedic surgery to conduct surveillance of surgical site infections, using the Surgical Site Infection (SSI) Surveillance Service of Public Health England (PHE). The data set collected as part of the surveillance is forwarded to PHE for analysis and reporting. Surveillance is divided into quarters (Jan-Mar, Apr-Jun, July-Sept and Oct-Dec) and each Trust site is required to participate in at least one surveillance period every 12 Months in at least one orthopaedic category. During 2016 the Trust participated in modules for total hip replacement, total knee replacement and fractured neck of femur repair during April to June and July to September.

The data collection is overseen by the IPCT on the Alexandra site with trained surveillance nurses collecting and inputting data on ward 1 at Kidderminster Treatment Centre, T&O ward at Worcester Royal Hospital and wards 16 & 17 at the Alexandra Hospital. During the surveillance period, all patients undergoing total hip replacements, total knee replacement or repair of fracture neck of femur must be included and the appropriate data set gathered, including post discharge surveillance, which extends for 30 days. Infections are defined according to a robust case definition. Any infections that are reported using the SSISS data base are investigated by the Orthopaedic team, surveillance nurses, ward manager and infection prevention and control team to identify any issues / practices for improvement.

Surveillance for wound infection is continued for 30 days in the immediate post-operative phase and is required for up to one year post procedure for joint prosthesis surgery. Cases of surgical site infection identified are considered at review meetings to ascertain if any lessons can be learned for future practice. Figures for SSI as published by Public Health England for total hip repair (THR), total knee replacement (TKR), and repair of fractured neck of femur (NOF), for the three sites where this surgery is performed with comparative England average are shown in Figure 30. Figures are for the last available published data showing July – September 2016 and the previous 4 periods published.

Site	Procedure	July – September 2016	No procedures	Last 4 periods	No procedures	England Average
Worcestershire Royal Hospital	THR	0.0%	21	1.0%	96	1.1%
	NOF	1.0%	103	0.3%	385	1.4%
Alexandra Hospital	THR	0.0%	98	0.5%	379	1.1%
	TKR	0.0%	110	0.7%	418	1.5%
	NOF	0.0%	56	2.3%	217	1.4%
Kidderminster Treatment Centre	THR	0.0%	10	0.0%	66	1.1%
	TKR	0.0%	15	0.0%	71	1.5%

Figure 30: Wound infection rates in hip and knee replacement and fractured neck of femur repair

16. Water governance

The Water Safety Group (WSG) continues to work to raise awareness of water safety issues throughout the Trust and continues to take steps to improve arrangements for water safety and governance:

Monthly WSG meetings are on-going. Prior to each meeting a monthly Water Report to a standard format is circulated to all members of the WSG and other stakeholders, which with the expanded agenda forms the basis of meeting discussions. Standardised reporting across all 3 sites has resulted in improved quality and consistency of reports. Non-microbiology clinical engagement however remains poor with not all clinical areas regularly represented. Better clinical representation is needed to effectively assess and respond to risks to patient safety and translate the work of the WSG to the clinical environment. The WSG has invited the Divisional Directors of Nursing to attend the meeting, or send a deputy, to ensure adequate clinical representation and engagement.

Flushing on all three Trust sites is now firmly established, with improved compliance now seen. This is a huge achievement. In an effort to reduce the associated administration and data storage burden the Estates department initiated a successful trial of a software based solution to record flushing. This will improve the ease with which clinical staff can record flushing in real time. The new system will not only create compliance reports but will also escalate non-compliance through a pre-determined electronic cascade system.

The Trust is currently working to a draft Water Safety Plan (WSP) which satisfies the requirements of HTM 04-01 addendum. The plan covers all existing buildings currently owned or occupied by Trust and new builds / refurbishments. It provides clear recommendations for the management and maintenance of existing water systems and associated equipment in addition to recommendations for the design, build, commissioning and hand over of new projects. Additional resources and clinical input are needed to move this WSP into a final format.

The new water testing protocol, agreed jointly by the Authorising Engineer, Trust Microbiologist and Principal Engineer have been in place for nearly a year. This is working well and the enhanced testing has identified hitherto unknown potential problem areas and has enabled corrective work to be undertaken to ensure continued water quality.

Over the reporting period the Estates department experienced on-going problems with two external water hygiene contractors at the Kidderminster and Redditch sites. To overcome this Estates are developing a business case for employing staff to deliver the work in house. The team believe this will improve the quality and timeliness of work and will also deliver financial savings. In Parallel to this, the 'Water hygiene' contract has been put out to a competitive tender. The work is currently being delivered by two agency staff who are performing very well.

An annual review of the Trust Legionella and Pseudomonas risk assessments has taken place, good progress has been made on resolving remedial actions and additional work is being planned with this year's capital budget. Progress against risk assessment actions will be added to WSG monthly reports.

17. Ventilation governance

A Ventilation Validation Group has been established to oversee the clinical governance around critical ventilation systems. The aim of the group is to ensure that these systems are inspected, tested, maintained and operated safely across all 3 sites, but also to ensure that the clinical staff are aware of any risks these systems may pose to clinical activity.

To improve the governance, a Trust Ventilation Policy has been written and an Authorising Engineer – Ventilation (AE) has been appointed The AE has audited the site ventilation systems in June and will produce a compliance report in due course. Two authorised persons (APs) have been trained and have been appointed by the AE. Engie, the PFI hard services provider have their own AE and APs. The duty of the APs is to ensure safe day to day operation of Trust's critical ventilation systems and to appoint and supervise suitable competent persons (CPs) to maintain and test the ventilation systems.

The Estates department reviewed all the Trust critical ventilation systems verification reports and a number of longstanding compliance issues were identified. These issues have now been addressed as far as is practicable and where issues would take time to address e.g. Air changes in sterile pack room and AHR theatre recovery, they were discussed with the department and infection control and suitable controls were identified to maintain patient safety.

In order to maintain patient and staff safety a new 'permit to work' and 'hand back' documents have been developed to ensure that staff who work with critical ventilation systems are clearly informed of the work that has taken place and are assured that the systems are safe to operate.

A ventilation issue that remains outstanding relates to the treatment rooms across all three WAHT sites. HTM 03-01 Appendix 2 (Recommended air-change rates), requires that treatment rooms have 10 air changes an hour supplied by mechanical ventilation through an S7 filter. This is required, in order to achieve sufficient dilution of the airborne contamination and reduce infection risk. The Estates team, with infection control, carried out a survey of all the rooms in the hospitals where invasive procedures were being undertaken. During 2017-18 further work will be undertaken to provide assurance that the air changes per hour (ACH) are compatible with the procedures being undertaken and if necessary to re-locate any procedures to locations with higher ACH.

18. Education and training

The IPCT continue to support a variety of educational opportunities across the Trust sites ranging from formal teaching sessions to ward based group and individual training. Sessions include Trust Induction, Mandatory Core Skills update programme for clinical and non-clinical staff. Following a change to the clinical skills core programme we are exploring alternative methods of delivery of some content such as antimicrobial stewardship. The IPCT also provide nursing, medical student and doctors induction formal sessions incorporating maintaining asepsis, peripheral cannulation, central vascular device management, blood culture sampling and phlebotomy.

In addition core skills and competency check sessions are run for FFP3 mask fit testing, commode cleaning and hand hygiene. We have been fortunate to work with our new media developer in communications department and Tissue Viability colleagues to produce two training videos on hand hygiene and aseptic technique.

The team have also responded to requests to provide wrap around support for specific wards or individual staff development.

Link Practitioner Study Days

Our link practitioner programme continues to thrive. During 2016-17 we held 9IPC study days including the Annual Link Practitioner Study Day when 132 staff attended. This was the first year we had used an external venue for our annual study day. Being off site posed several IT challenges and the venue was disappointing but we will continue to explore this option in the future. Figure 31 below shows the date, sites; number of attendees and topics discussed:

Date	Site	Number attended	Topics covered
02/04/16	Annual Worcester Rugby Club	132	An overview of the previous year UV light technologies Influenza infection and management VRE infection on ITU case study *C difficile* and Faecal transplant Health Economy IPC strategy for 2016-17 including *C difficile* summary

Date	Site	Number attended	Topics covered continued
23/06/16	Alex	36	Site wide static mattress audit, Hand hygiene principles and competency training refresher, Clinisafe® cardboard waste system roll out, IPCN and Link Practitioner Meeting
24/06/16	WRH	39	
21/09/16	WRH	32	Hand hygiene peer audit and PVD pack stock check, CPE infection and management, CQC visit preparation, CQUIN – what are they and why do they matter? Winter preparedness including Norovirus and Influenza IPCN and Link Practitioner meeting
22/09/16	Alex	35	
21/11/16	WRH	38	Audit of IPC admission assessment documentation, IPCN and Link Practitioner meeting, IV therapy update, NEWS scoring recognising the sick patient/sepsis, Urinary catheter drainage bag change of suppliers
28/11/16	Alex	29	
17/02/17	WRH	22	Hand hygiene peer audits using SNAP; hand hygiene 'train the trainer' session, MRSA decolonisation, IPC risks related to cadaver preparation, new end of life documentation and last offices, IPCN and Link Practitioner meeting including CQC Section 29a letter, Procurement Savings and change of IPC related products Urinary catheter audit
20/03/17	Alex	15	

Figure 31: Link staff study days 2016-17

Attendance at IPC Mandatory Training

Figure 32 below demonstrates the number of staff who attended infection prevention training either through an induction or mandatory core skills update session between April 2016 and March 2017. Attendance overall is at 89% with clinical staff achieving 91% attendance in the period and non-clinical staff achieving 83%; against a Trust target of 90%. Training sessions have been reviewed following the cessation of the senior risk update programme and introduction of a more flexible training pathway for all subjects.

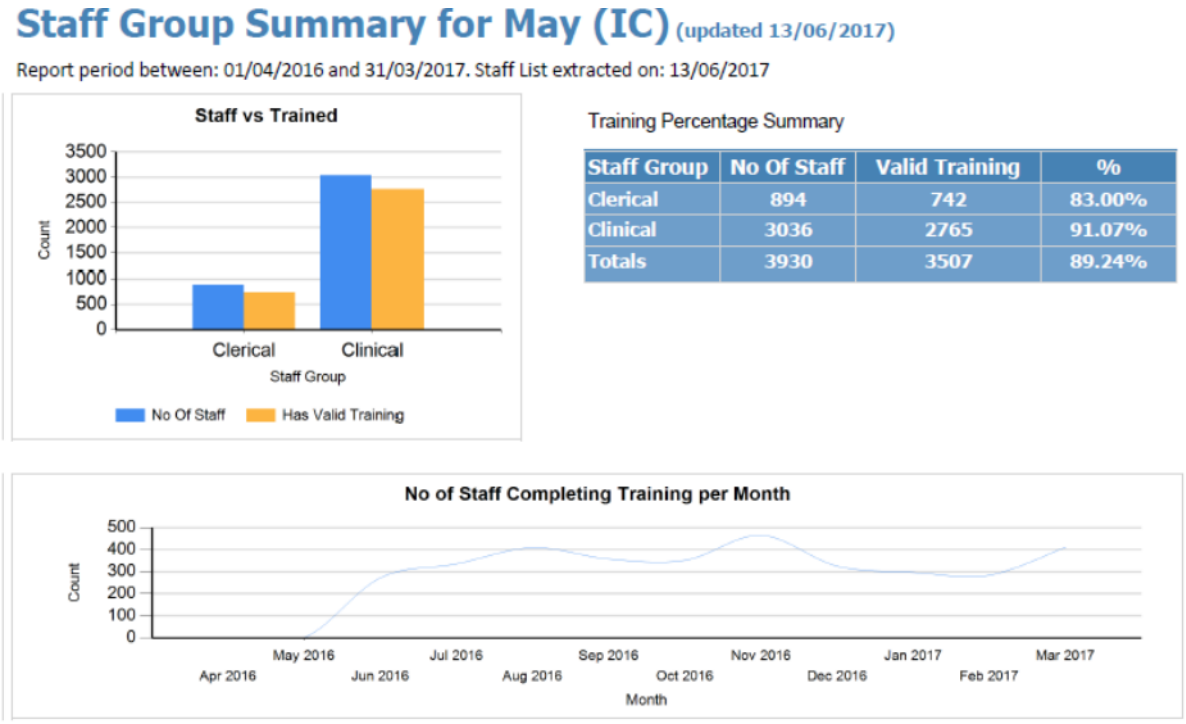

Figure 32: Attendance of IPC induction or mandatory training in year

Mandatory training includes hand hygiene theory. Practical assessment is undertaken at ward level by members of the Infection Prevention & Control Team or other staff members trained to undertake hand hygiene competency assessment. Clinical staff need to refresh their competency every two years and non-clinical staff every three years. Other information available for staff includes an induction information booklet, staff leaflet summarising standard infection prevention precautions and a ward based hard copy resource folder holding all IPC related documentation and information posters. The IPC team are currently exploring other methods of delivery of training including use of smart phone apps, video vignettes and online e-Learning.

Further Training

In addition to the above the team also provide reactive training following practice audits and bespoke training for departments where it is difficult for staff to attend regular core skills updates and the training needs to be more reflective of their role within the Trust e.g. housekeeping and portering staff.

A workshop is held for all FY1 and FY2 medical staff joining the Trust in August each year. This is to ensure they are aware of and skilled in the use of equipment provided to facilitate effective IPC practices. The workshop includes an element of theory and work station based practical skills on blood culture collection technique, safety medical devices, faecal management system insertion and management, use of peripheral vascular device insertion packs and needle free connectors, intravenous dressing application and safe removal, skin disinfection and standard IPC practices including use of Personal Protective Equipment (PPE) and hand hygiene competency assessment.

19. Infection Control audits and key findings

In 2015-16 IPC Nurses were allocated to divisions with a view to undertaking practice audits in these areas and developing a deeper relationship and knowledge of their allocated wards and departments. There are a total of 148 areas that require auditing, which includes 23 corporate areas; this is obviously a labour intensive process. Undertaking an audit requires preparation to check for previous issues that need revisiting, attendance to undertake the audit (can be 2 to 3 hours), immediate feedback and rectification actions, preparation and distribution of the report, any follow up or support activity required in subsequent weeks and a re-audit if score below 84%.

Following our CQC inspection in November 2016 the requirement to focus on hand hygiene and use of PPE disrupted the divisional audit programme, requiring the team to take a fresh approach. It was agreed all IPC Nurses would focus on auditing a specific division during a particular month and during the following month the audit programme is latent to allow for follow up of any areas with an audit score less than 84% (Fail). The audit scoring mechanism is in line with the PLACE cleaning audit scores where a Fail is <84%, a qualified pass is 85 – 94% and a pass is 95% and above.

We have also seen the development of new electronic audit tools via the SNAP audit system in an attempt to automate the audit process for hand hygiene and IPC clinical practice.

Audit Schedule amendments

Type of audit	2016-17 plan	2017/18 plan
Wards and inpatient areas	4 monthly	Every 6 months
Priority departments e.g. theatres	3 – 6 monthly	Every 6 months
Departments e.g. outpatients	6 monthly	Every 6 months
Annual duty of care audits – waste, laundry and catering	Annual	Annual

Key for Audit Scores		
	Fail	<84%
	Qualified Pass	85 – 94%
	Pass	95% and above

Division	Audit Activity	Outcome	Key themes from failed areas
Specialised Clinical Services (SCSD)	A total of 31 audits across 24 of the 44 areas were audited	Score ranged between 54% and 100% A total of 8 areas failed the audit (3 at the Alexandra, 4 at WRH and 1 at KTC)	• Condition and appearance including sticky tape residue, ceiling tiles soiled /need replacing and damaged work surface edges • High and low dust evident • Storage of items on floor/ inappropriate areas (insufficient) • Cleaning of observation machines or white boards (access to wipes) • Clean utility room cleanliness and clutter

Medicine	A total of 91 audits across 39 of the 40 areas were audited	Score ranged between 47% and 100% A total of 20 areas failed the audit (6 at Alexandra, 14 at WRH and nil at KTC)	• Condition and appearance of environment, fixtures and fittings including sticky tape residue, ceiling tiles soiled /need replacing and damaged work surface edges • High and low dust evident • Storage of items on floor/ inappropriate areas (insufficient) • Cleaning of observation machines or white boards (access to wipes) • Clean utility room cleanliness and clutter • Computers/ office equipment dusty • Sharps containers temporary closure use and storage • Personal Protective Equipment (PPE) use and disposal inappropriate • Beverage trolley cleanliness and lime scale plus sink taps
Surgery	A total of 57 audits across 22 of the 23 areas were audited	Score ranged between 61% and 100% A total of 13 areas failed the audit (5 at the Alexandra, 8 at WRH and nil at KTC)	• Condition and appearance of environment, fixtures and fittings including sticky tape residue, ceiling tiles soiled /need replacing and damaged work surface edges • High and low dust evident • Storage of items on floor/ inappropriate areas (insufficient) • Cleaning of observation machines or white boards (access to wipes) • Computers/ office equipment dusty • Sharps containers temporary closure use and storage • Personal Protective Equipment (PPE) use and disposal inappropriate • Beverage trolley cleanliness and lime scale plus sink taps

Women and Children's	A total of 34 audits across 17 of the 18 areas were audited	Score ranged between 56% and 100% A total of 10 areas failed the audits (4 at the Alexandra, 6 at WRH and nil at KTC)	• High and low dust evident • Storage of items on floor/ inappropriate areas (insufficient) • Cleaning of observation machines or white boards (access to wipes) • Dressing trollies are dusty • Inappropriate items stored in sluice • Gel dispensers requiring drip trays

It is clear from this summary the trust has not been able to resolve all the issues regarding condition and appearance of the environment in areas where the estate is aged and requires financial investment. Plans are in place at the Alexandra site to upgrade patient bathrooms and sluice areas. Storage remains a key issue which could be partially resolved by the implementation of equipment stores on each site, though this would require a business case. The issues regarding high and low level dust are concerning and reflect the issues raised with our PFI colleagues and trust cleaning teams. Capacity at the WRH site has also challenged access to areas, especially for high dusting, as this cannot be done if the patient bed is occupied; therefore closer working between service providers and trust staff is required to ensure co-operative working and facilitation of cleaning.

Results of audits are fed back to the ward manager or department head, matron and relevant cleaning teams for their actions. Failures are also followed up by the Infection Prevention & Control Team.

Other practice audits undertaken in 2016-17

Audit	Findings	Lessons Learnt/ Action Required
Urinary catheter point prevalence audit all inpatient areas	19 – 21% patients are catheterised post admission (previous audit 2014-15 was the same)	CAUTI (Catheter Associated Urinary Tract Infection) rates are difficult to calculate as this requires pre insertion and post removal microbiological sampling (no longer best practice). Instead the national Safety Thermometer tool is used that bases the diagnosis of CAUTI on any patient who is catheterised who is actively being treated with antibiotics for urinary tract infection (UTI). Evidence suggests that CAUTI rates can be reduced by minimising the use of urinary catheters and good hydration. The focus in the Trust has therefore been on reducing use of catheters post admission, introduction of a care bundle insertion pack to promote best practice at insertion, use of pre-connected urinary catheters to negate the risk of contamination of the system at insertion and removal of urinary catheters at the earliest opportunity with effective documentation and management. A health economy urinary catheter passport is due to be launched in July 2017. Both a Trust working group and a health economy urinary catheter group are in place.
IPC Admission Assessment Documentation Audit (CPE Assessment Question)	Of the areas audited documentation was present in; 81% of cases in Medicine; 88% of cases in Surgery; 100% cases in Women and Childrens (one area). The CPE assessment question was completed in; 58% of cases in Medicine; 75% of cases in Surgery 100% of cases in Women and Childrens	Whilst there is scope for improvement, this is a marked improvement on previous audits. The assessment tool has been re-launched via IPC Link Practitioners in November 2016 following the audit. A repeat audit of compliance will be undertaken at the September 2017 link study day.

The purpose of the Department of Health Saving Lives High Impact Intervention (HII) Audits is to support practitioners in preventing device related infections through monitoring clinical practices and identifying any deviance from best practice. If audit scores deteriorate this prompts the ward manager to identify which elements of practice have deteriorated and take remedial action to improve practices. Audits relevant to the area of practice are undertaken by wards on a monthly basis. Scores and a rolling 12 month history of scores are sent to ward managers and matrons on a monthly basis so they can identify trends in performance and address any practice deficits raised.

Wards and departments undertake weekly hand hygiene audits using the National Patient Safety Agency (NPSA) 20 minute observation tool to observe compliance with the World Health Organisation (WHO) Five Moments of Hand Hygiene.

The facilities monitoring team, ward manager and matrons undertake monthly cleaning monit visits that use the 50 elements of the DH PAS 5748 2011 Specification for the Planning, Application and Measurement of Cleanliness Services in Hospitals. The Alexandra and Kidderminster sites use the Credits 4 Cleaning (C4C) system and ISS Housekeeping at the Worcestershire Royal site use Service Trac®; an equivalent system. Facilities monitoring team also undertake additional peer audits checking on cleanliness, waste and catering feeding back to ward managers and matrons.

20. Policy reviews

Infection Prevention Policies reviewed during the year 2016-17

WAHT-CG-494 – Cleaning Policy

WAHT-INF-026 – Cleaning, Decontamination & Validation of Endoscopes

WAHT-INF-033 Infection Prevention and Control Protocol for Seasonal Influenza

WAHT-INF-033 Influenza Quick Guide

Policy for the Management of Linen and Laundry Services

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H.P. Loveday J.A. Wilson, R.J. Pratt, M. Golsorkhi, A. Tingle, a. Bak, J. Browne, J. Priesto, M. Wilcox (2013) National evidence-based guidelines for preventing hospital-acquired infections in NHS Hospitals in England.(Epic 3)

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Acknowledgements:

Dr H Morton, Consultant Microbiologist and Astrid Gerard, Antimicrobial Pharmacist: Antimicrobial Stewardship.
Dr T Gee, Consultant Microbiologist: Tuberculosis.
Dr M Ashcroft, Consultant Microbiologist and Simon Noon, Principal Engineer: Water governance.
Simon Noon, Principal Engineer: Ventilation Safety.
Heather Gentry, Lead Nurse Infection Prevention & Control: Audit and training summaries, policy reviews.
Vicki Shayler, Data Analyst: HCAI data and graphs.

23: Annual Plan 2017-18 (To be monitored at Infection Prevention & Control Committee)

Key work streams 2017-18	Lead Officers
Demonstrate continuous improvement in and hygiene compliance and use of personal protective equipment	
Ensuring all staff are compliant to 5 moments of hand hygiene and using PPE as per Trust policy with desired outcome of 90% compliance in hand hygiene audits trust wide: • Continue with high profile for hand hygiene and undertake monthly hand hygiene audits • Continue with high profile for use of PPE and undertake spot checks	**Lead Nurse Infection Control**
Antimicrobial stewardship	
Achieving compliance and providing assurance around antimicrobial prescribing with desired outcome of reducing overall consumption at the Trust including reduced use of carbapenems: • Revision, ratification and launch of antimicrobial prescribing guidelines and launch of smart phone App for prescribers by September 2017. • Achievement of 2017-18 antimicrobial prescribing CQUIN including reduction in overall antimicrobial prescribing. • Reduction in consumption of Co-amoxiclav.	**Director of Pharmacy** **Consultant Microbiologist** **Antimicrobial Pharmacist**
Improvements in surveillance of urinary catheter associated urinary tract infection (CAUTI) and reduction in cases during 2017-18	
Improving surveillance of urinary catheter use and reducing unnecessary usage with desired outcome of reducing catheter associated urinary tract infection by 10%. • Review and refine definition for CAUTI and data collection • Undertake baseline audit of urinary catheter usage and CAUTI and repeat in year to achieve a 10% reduction in each category.	**Associate Chief Nurse Infection Control** **Lead Nurse Infection Control**

Water Safety – further strengthening governance	
Achieving improved assurance of water quality and safety for the Trust with desired outcomes to: • Complete and ratify revised Trust water safety plan • Improve the outlet flushing regime to provide assurance of compliance to water safety plan	**Principal Engineer** **Water Safety** **Consultant Microbiologist**
Ventilation - further strengthening governance	
Achieving improved assurance of ventilation in accordance with HTM 04-01 with desired outcome to: • Complete process of assessing ventilation in rooms and risk assessment of procedures undertaken; and provide assurance thereof of compliance to HTM 04-01	**Principal Engineer** **Water Safety** **Consultant Microbiologist**
Gram negative organisms – improving management	
Achieving improved assurance on management of Gram negative organisms including for *E.coli* bacteraemia, with desired outcome of 10% reduction in *E.coli* bacteraemia; and improved assurance on management of infection or colonisation with Carbapenemase Producing *Enterobacteriaceae* (CPE) • Introduction of case reviews for *E.coli* bacteraemia as part of Public Health England extended surveillance and to achieve a Care Commissioning Group target of a 10% reduction in 2017-18 • Introduction of extended surveillance for *Pseudomonas* and *Klebsiella* bacteraemia • Re launch of CPE screening guidance and patient management of cases at the Trust	**Consultant Microbiologist** **Lead Nurse Infection Control**
Strengthening governance around cleanliness	
Enhancing the governance around cleanliness in order to identify and rectify any environmental cleanliness failures at the earliest opportunity. • A new cleanliness escalation pathway to ensure all staff know who is responsible for cleaning and how to contact them in order to report and rectify any deficiencies. • Increasing the frequency of cleanliness 'walkabouts' with senior nurses and members of the Infection Control Nurse Team and to rectify any deficiencies identified.	**Associate Chief Nurse Infection Control** **Head of Facilities**

Surgical Site Infection – improving surveillance and learning lessons	
Revitalising the approach to monitoring surgical site infection with the desired outcome to ensure SSI rates comparable or below national averages when benchmarked against other Trusts. • Revitalising the surgical site infection data collection and review process • Strengthening the review of identified infection by increasing clinician engagement • Implementing lessons from SSI investigation.	**Associate Chief Nurse Infection Control** **Lead Nurse Infection Control** **Divisional Director of Nursing for Surgery**
Recovery Plan for *C.difficile*	
Achieving within trajectory position for 2017-18 of no more than 32 cases: • *C.difficile* action plan following analysis of cases 2016-17 including introduction of rapid review of cases within 3 days of confirmation and monitoring both cases and rate of 30 day all cause mortality against trajectory at Trust Infection Prevention & Control Committee	**Associate Chief Nurse Infection Control** **Lead Nurse Infection Control** **Consultant Microbiologist**
Recovery plan for MRSA bacteraemia	
Achieving zero tolerance of MRSA bacteraemia • Completion and implementation of action plans from MRSA bacteraemia investigations 2016-17 including a focus on improving wound management and care of peripheral vascular devices	**Associate Chief Nurse Infection Control** **Lead Nurse Infection Control** **Consultant Microbiologist**

24: Trust Infection Prevention & Control Committee 2017-18

Dates of the Trust Infection Prevention & Control Committee 2017-18:

Date	Time	Location
Monday 8th May	13-00 – 15.00	Seminar Room A, Charles Hastings Education Centre
Thursday 6th July	11.00 – 13.00	Pathology Seminar Room, Worcestershire Royal Hospital
Friday 18th August	14.00 – 16.00	Pathology Seminar Room, Worcestershire Royal Hospital
Thursday 7th September	11.00 - 13.00	Northwick/Claines Meeting Room, Kings Court, Worcestershire Royal Hospital
Friday 13th October	14.30 – 16.30	Pathology Seminar Room, Worcestershire Royal Hospital
Thursday 9th November	12.00 – 13.30	Pathology Seminar Room, Worcestershire Royal Hospital
Wednesday 20th December	09.30 – 11.30	Video conference between Sky 2, Worcestershire Royal Hospital and GMMR, Alexandra Hospital
Wednesday 17th January	09.00 – 11.00	Video conference between Sky 2, Worcestershire Royal Hospital and GMMR, Alexandra Hospital
Wednesday 14th February	09.00 – 11.00	Northwick/Claines Meeting Room, Kings Court, Worcestershire Royal Hospital
Wednesday 14th March	09.00 – 11.00	Video conference between Sky 2, Worcestershire Royal Hospital and GMMR, Alexandra Hospital