

MANCHESTER UNIVERSITY NHS FOUNDATION TRUST

BOARD OF DIRECTORS

Report of:	Chief Nurse and Director of Infection Prevention and Control (DIPC) – Professor Cheryl Lenney
Paper prepared by:	Assistant Chief Nurse (ACN) and Clinical Director of Infection Prevention and Control (CDIPC) – Julie Cawthorne
Date of Paper:	April 2019
Subject:	Annual Infection Prevention and Control Report 2018/19
Purpose of Report:	Indicate which by ✓ <ul style="list-style-type: none">• Information to note ✓• Support• Resolution• Approval ✓
Consideration of Risk against Key Priorities:	Patient Safety and Patient Experience
Recommendations:	The Board of Directors are asked to receive this report for April 2018 to March 2019 and approve for publication
Contact:	<u>Name:</u> Julie Cawthorne ACN/CDIPC <u>Tel:</u> 0161 276 4042

MANCHESTER UNIVERSITY NHS FOUNDATION TRUST

Group Management Board – DATE

Infection Prevention and Control (IPC) Annual Report 2018/2019

1. Executive Summary

- 1.1 The Trust has a statutory responsibility to be compliant with the Health and Social Care Act 2008 (Department of Health, 2010). A requirement of this Act is for the Board of Directors to receive an annual report from the Director of Infection Prevention and Control. This report details Infection Prevention and Control activity from April 2018 to March 2019, outlining our key achievements and an assessment of performance against national targets for the year.
- 1.2 The prevention and control of infection is a high priority for the Trust. There is a strong commitment to preventing all Healthcare Acquired Infections (HCAI) and a zero tolerance to all avoidable infections. There has been an 80% reduction in the number of cases of *Clostridium difficile* infection (CDI) reported (from 540 Trust-attributable cases in 2007/2008, to 110 cases reported in 2018/2019). The Trust also observed a 67% reduction in the number of Trust attributable¹ Meticillin resistant *Staphylococcus aureus* (MRSA) blood cultures (from 33 to 11 cases during the same period).
- 1.3 There is a national ambition to reduce healthcare associated Gram-negative blood stream infections (GNBSIs) by 50% by March 2021 by providers and commissioners working together across the whole healthcare economy. Members of the Infection Prevention and control (IPC) team represented the Trust in a collaborative group including partners from across the whole healthcare economy to focus on reducing the incidence of Urinary Tract Infection (UTI), catheter associated UTI and appropriate antibiotic stewardship, which are the main risk factors for GNBSI, (Public Health England (PHE), 2018)

2. Key Achievements and Challenges

- 2.1 Professor Cheryl Lenney, Chief Nurse, was designated to the post of Director of Infection Prevention and Control (DIPC) for MFT and Chaired the Group Infection Control Committee (GICC). The Infection Prevention and Control/Tissue Viability (TV) Nursing Team became integrated as one team across all sites following the management of change process undertaken in accordance with the Trust policy. Microbiology Services will integrate in summer 2019.
- 2.2 Infection Control Committees were established within each Hospital/MCS. The portfolio for IPC was delegated to the Directors of Nursing by the Chief Nurse/DIPC. Each Hospital/MCS appointed a Clinical Lead to support IPC policy and practice across professional groups.
- 2.3 The MFT objective for the 2018/2019 reporting year was zero incidents of avoidable MRSA bacteraemia. There were 11 Trust-attributable MRSA bacteraemias, reported: six at Oxford Road Campus (ORC) three attributable to MRI and three attributable to Royal Manchester Children's Hospital, and five at Wythenshawe Hospital. All incidents of MRSA bacteraemia were investigated, reviewed locally and actioned as appropriate supported by the IPC Team.

¹ Following individual root cause analysis the bacteraemia is attributed to a Trust/service/CCG based on PHE guidance

- 2.4** Following four incidents of attributable MRSA bacteraemia at Wythenshawe in the first quarter of the year a meeting was held in June 2018 with Clinicians, Nurses and Pharmacists from the areas where the MRSA bacteraemias had occurred. The meeting was also attended by the Estates and Facilities Team. The meeting was led by the DIPC and was a 'call to action'. A local action plan was developed and implemented through the Heads of Nursing and Clinical Leads.
- 2.5** This year ORC/Trafford Hospital reported 69 attributable cases of CDI and Wythenshawe hospital reported a total of 41 attributable cases. Each case was investigated and reviewed locally supported by the IPC Team. Working closely with the Clinical Commissioning Group (CCG) and colleagues from local Trusts, all cases of CDI were presented at monthly peer-review meetings to determine whether they were associated with a lapse in care: 35 of the 110 Trust-attributable cases demonstrated a lapse in the care provided.
- 2.6** During Quarter 1 Wythenshawe Hospital reported a total of 19 attributable cases against a trajectory of 10 ORC/Trafford Hospital reported a total of 19 attributable cases against a trajectory of 13 (15 attributable to MRI and 4 to Trafford Hospital). This represented a 5.6% increase from last year's position for ORC/Trafford and a 46.2% increase for Wythenshawe Hospital for the same period.
- 2.7** A look back exercise was undertaken into each case of CDI by the Infection Prevention and Control (IPC) Team. The results indicated that the cases were spread across several wards, across three sites with no obvious connection. A report was prepared for the Quality and Performance Scrutiny Committee July 2018 to provide an overview of the investigation, findings and recommendations for action to all the senior management teams in each Hospital/MCS.
- 2.8** The Trust is required to submit a minimum of one quarter of data per year to comply with mandatory reporting for orthopaedic implant surgery. Hip and knee replacement data was submitted for each quarter of 2018 for ORC/Trafford Hospital. Data for hip replacements conducted at Wythenshawe Hospital was submitted for the first 3 quarters of 2018.
- 2.9** Of the 491 knee replacement procedures only one patient (0.2 %) developed a surgical site infection (SSI). The most recent national SSI rate for knee replacement surgery is 1.3 % (based on 350,026 national procedures over the previous 5 years). The most recent national SSI rate for hip replacement surgery is 0.9% (based on 322,160 national procedures over the previous five years). The last four periods for which data was submitted shows that across all sites, MFT reported an SSI rate of 0.0% for 494 hip replacement procedures performed.
- 2.10** In preparation for the 2018/2019 flu season the GICC approved a number of actions. These included widespread communication of updated guidance and a rapid testing service with extended laboratory hours/ additional support from the IPC Team during the weeks of peak activity. These were developed in response to lessons learned from the 2017/2018 flu season which demonstrated higher levels of activity than seen over the previous two seasons.
- 2.11** The Healthcare Workers Flu Vaccination Programme was launched on the 1st October 2018 and had Executive leadership provided by both the Group Chief Nurse/DIPC and Group Executive Director of Workforce. Across MFT a total of 13,890 staff (64.12%) received the vaccine, of which 11,339 staff (76%) were Frontline Healthcare Workers. This exceeded the Department of Health target of 75%. The success of this year's programme received National recognition as the Trust was shortlisted for the NHS Employers Flu Fighter Award in the 'Most Improved' Category

- 2.12** There was a 29% reduction in the number of new Carbapenemase producing enterobacteriaceae (CPE) acquisitions during 2018/2019 which decreased from 525 in 2017/2018, to 372. This reduction demonstrates the sustained Trust-wide efforts in tackling the spread of multidrug resistant organisms within MFT.
- 2.13** Currently there are two methods in use for CPE testing; a CE marked commercial Polymerase Chain Reaction test (PCR) test used at the Oxford Road Campus (ORC) microbiology laboratory and conventional bacterial culture at Wythenshawe microbiology laboratory. A business case to align both sites to PCR testing was supported by the GICC in November 2018. This is now being progressed with the expectation that funding will be made available when the PHE microbiology laboratory is moved to the ORC later this year.
- 2.14** The Trust is at the forefront of developing national as well as local policy for the management and control of patients with CPE and continued to work with PHE at a local and national level throughout the year to share the learning from local experience. Dr Andrew Dodgson, (Infection Control Doctor, ORC), Mrs Julie Cawthorne (Assistant Chief Nurse IPC/TV/Clinical DIPC) and Dr Ryan George (HCAI Surveillance Officer) were invited to speak on *Past and Present CPE Screening Strategies Employed in Central Manchester* at the Clinical Services and Public Health Delivery Group Professional Meeting on Carbapenem resistant organisms in a healthcare setting (September, 2018).
- 2.15** As previously reported the TRACE (Transmission of Carbapenemase producing Enterobacteriaceae), study investigated the role of the environment in the transmission of CPE. The findings from the study were published in two separate publications in December 2018.
- 'A Large, Refractory Nosocomial Outbreak of *Klebsiella pneumoniae* Carbapenemase-Producing *Escherichia coli* Demonstrates Carbapenemase Gene Outbreaks Involving Sink Sites Require Novel Approaches to Infection Control' Antimicrobial Agents and Chemotherapy, December 2018 (TRACE Investigators Group)
 - 'Carbapenem-resistant Enterobacteriaceae dispersal from sinks is linked to drain position and drainage rates in a laboratory model system' Journal of Hospital Infection, December 2018 (TRACE Investigators Group)
- 2.16** *Escherichia coli* (*E.coli*) is the main cause of GNBSI with increasing numbers observed internationally .There were 595 incidents of *E. coli* bacteraemia reported to PHE during the current reporting year for MFT. Of these, 152 (25.5%) cases were determined to be Trust-attributable and 364 were attributed to the community. Only 14% of Wythenshawe Hospital isolates were attributable (32 of 228 cases), compared to 32.7% of cases reported by Oxford Road/Trafford Campus (120 of 367 cases). This represents an increase in the total number of cases reported last year (119 attributable cases), which reflects the national profile.
- 2.17** A review of incidents of *E.coli* bacteraemia at Wythenshawe Hospital from January – October 2018 was presented to the Group Infection Control Committee (GICC) in January 2019. The primary cause of GNBSI was identified as urosepsis (61%) of which 24% were attributed to catheter associated urinary tract Infection (CAUTI). Many of the patients with urosepsis had a urine sample sent to the laboratory for culture and sensitivity testing from their GPs in the month prior to admission. The review identified that the sample sent from the GP grew the same bacteria as caused the subsequent bacteraemia.
- 2.18** All incidents of CAUTI that occurred in patients across MFT were monitored, investigated and reviewed at Hospital/MCS Harmfree care meetings. Lessons learned and actions were incorporated into local Infection Control work plans. In addition training and education regarding urinary catheterisation was delivered each month across all sites by the Urology specialist nurses at ORC and the practice educator at WTWA.

- 2.19** Highlights from the joint initiatives to reduce incidents of GNBSI included a Nutrition Hydration Week 11th – 17th March across MFT to raise awareness of the importance of hydration to prevent UTI. Within the wider Health Economy there are plans to engage with United Utilities to facilitate Hydration messages to the Public.
- 2.20** The Trust Antimicrobial Stewardship Committee included representatives from PHE, Clinical Commissioning Group (CCG) and Primary Care. This group liaised with Primary Care and the Community care teams to advise on the appropriate management of patients with recurrent UTI. The Trust Sepsis group also included representation from the CCG and a local General Practitioner. They are currently in the process of developing a diagnostic bundle that will facilitate early diagnosis and identification of microbial resistance in patients with sepsis, including GNBSI.
- 2.21** The Care Quality Commission (CQC) conducted a comprehensive inspection twelve months following the creation of MFT from the 2nd October to 8th November 2018. Following this inspection the trust received an overall rating of ‘Good’, with some areas of ‘Outstanding’ practice. The inspection identified many areas of good and outstanding practice with comments such as “*The service controlled infection well and there were low infection rates*” (MREH). There were some areas that were identified as *requires improvement*; immediate action was taken following the inspection and actions are followed up through the Group and hospital/MCS ICC including action plans as part of the response to the CQC report (see section 11).
- 2.22** The IPC nursing Team delivered face-to-face training on the key principles of infection prevention and control to all new starters at corporate induction until September of 2018. From October 2018 and in line with other mandatory training fields, an ‘e’ learning package was introduced. The team also delivered training on the key principals of infection prevention and control to new Medical staff and Medical Students on placement in the Trust.
- 2.23** Over the last 12 months the IPC team supported the participation in a national initiative focusing on infection prevention and control including: the World Health Organisation (WHO) Save Lives: It’s in your hands – prevent sepsis in healthcare where the emphasis was on using the WHO 5 moments to clean hands to avoid sepsis in healthcare and raising awareness in our patients to challenge staff regarding hand hygiene. The Campaign received positive feedback from both staff and members of the general public
- 2.24** The programme of works to upgrade the Trust’s Endoscope Decontamination Suites continued; the Children’s Hospital theatres, MRI Out Patients Department, Elective Treatment Centre and Main Endoscopy, and Withington Hospital Suites have all been completed. At the time of writing the Trafford Hospital Endoscope Decontamination Suite is being re-commissioned following an upgrade programme.
- 2.25** The Trafford Suite was commissioned with three endoscope re-processing machines. To achieve the recommended future capacity a fourth machine is required and waits funding. This leaves the Wythenshawe suite which is in urgent need of upgrade as it’s equipment is now time served. The manufacturer of the equipment has advised that they can no longer supply electrical components for maintenance beyond the end of the next fiscal year. This matter was raised at the GICC in April and the level of risk reassigned on the Trust Risk register.
- 2.26** The annual Patient Led Assessments of the Care Environment (PLACE Assessments) were carried out across the MFT Sites during April and May 2018. The assessors visited wards, outpatient departments and emergency departments, carried out food assessments and undertook a review of the external and internal public areas on all sites. PLACE Assessment

teams comprised Patient Assessors (who are required to make up 50% of each Assessment team), together with representatives from Nursing, IPC team and Estates and Facilities. The final scores were: Wythenshawe Hospital 87.18%; Trafford Hospital 90.54%; ORC 89.2%. These figures demonstrated an increase for both Trafford Hospital and ORC from the previous reporting year: Trafford Hospital 87.01%, ORC 87.65% and Wythenshawe 90.78%.

- 2.27** The Antimicrobial Stewardship Group was harmonised for the Group in the first quarter of 2018/19. The first priority was to synchronize antibiotic prescribing guidelines and stewardship activities. Best practice prescribing principles to promote antimicrobial stewardship are described in national guidance including PHE Start Smart then Focus (March 2015), the national CQUIN and the Trust Medicines policy. These include documenting the rationale for starting antimicrobial therapy and regular review. A monthly audit was undertaken to provide a regular snapshot of compliance with these standards with timely feedback to clinical areas so that actions could be rapidly implemented to achieve improvement if necessary.
- 2.28** In November 2018 The Antimicrobial Stewardship Group, supported by the IPC team and Microbiologists undertook a campaign to raise antibiotic prescribing awareness in line with World Antibiotic Awareness Week. A variety of promotional activities were implemented across both the ORC and Wythenshawe Hospital sites over a two week period. The events invited participation and were much appreciated.
- 2.29** The Director of Infection Prevention and Control acknowledges the breadth and depth of work undertaken by the wider IPC Team, members of the Infection Control Committees as well as the day to day contribution of all our staff and clinical leaders working together to reduce the incidence of HCAs.

Recommendation

The Board of Directors are asked to receive the Infection Prevention and Control Annual Report for 2018/19 and approve for publication.

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SECTION 3: INFECTION PREVENTION and CONTROL ARRANGEMENTS

3.1 The Director of Infection Prevention and Control (DIPC)



Professor Cheryl Lenney,
Chief Nurse, was designated as DIPC from September 2017.

3.2 Members of the IPC Team

The senior members of the IPC team can be found below:



Dr Andrew Dodgson,
Infection Prevention & Control Doctor (IPCD), Oxford Road(ORC)/Trafford Campus



Mrs Julie Cawthorne,
Assistant Chief Nurse/Clinical DIPC, MFT



Dr Moira Taylor,
Infection Prevention & Control Doctor (IPCD) Wythenshawe and Withington Hospitals

3.3 The Infection Prevention and Control (IPC) Team

The Infection Prevention and Control/Tissue Viability (IPC/TV) Nursing Team became integrated as one team across two sites from April 2019 following the management of change process undertaken in accordance with the Trust policy. Microbiology Services will integrate in summer 2019.

A diagram demonstrating the updated structure of the combined IPC/TV Nursing Team can be found in Appendix 1.

3.4 Antibiotic Pharmacists

There were 1.6 Whole Time Equivalent (WTE) Antibiotic Pharmacists at the Oxford Road/Trafford Campus and one 0.4WTE Antibiotic Pharmacist at Wythenshawe Hospital.

3.5 Provision of IPC Team Services

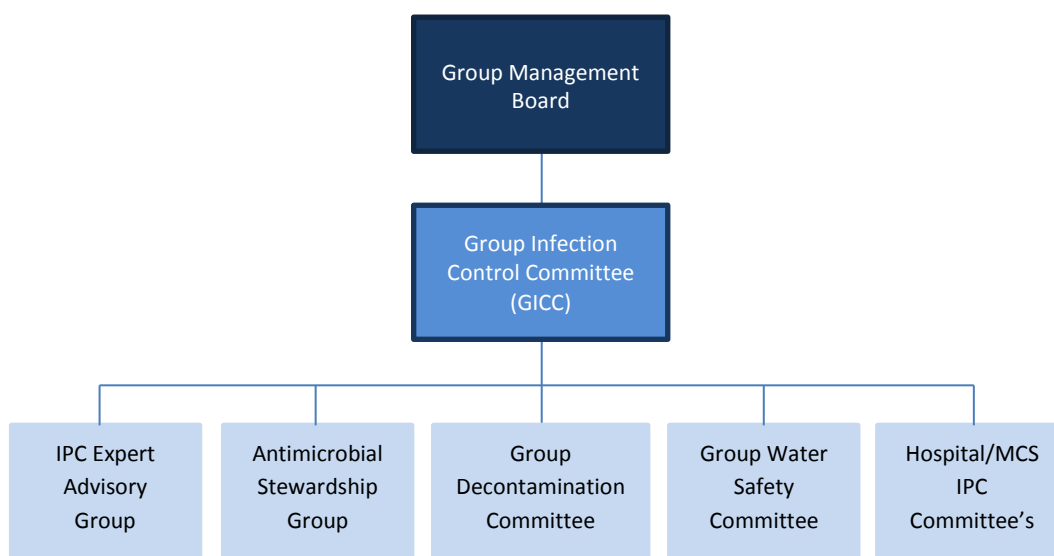
The IPC teams provided 24-hour advice and support on IPC issues to the staff and patients of the Trust across all sites. At the Oxford Road/Trafford Campus this included an out of hours telephone on-call service by the IPC nursing team and microbiology. At Wythenshawe Hospital out of hours IPC advice was provided by the Microbiologist on call.

3.6 The Group Infection Control Committee (GICC)

The Group Infection Control Committee had corporate responsibility for overseeing the implementation of infection prevention and control activities. The GICC met six times during the year and was chaired by the DIPC. The Group Infection Control Committee reported to the Group Management Board. The GICC Terms of Reference can be found in Appendix 2.

3.7 Framework for IPC

The IPC governance framework can be seen below;



3.8 Infection Prevention and Control Structure within the Hospitals/Managed Clinical Services (MCS)

An Infection Control Committee was established within each Hospital/MCS. The portfolio for IPC was delegated to the Directors of Nursing by the Chief Nurse/DIPC. Each Hospital/MCS appointed a Clinical Lead to support IPC policy and practice across professional groups and represent their Hospitals/MCS at the GICC.

The minutes from the Hospital/MCS IPC Committees were presented at the GICC.

3.9 Framework for Infection Prevention and Control (IPC)

The new Trust Strategy/ Policy for Prevention and Control of Healthcare Associated Infections for Manchester University NHS Foundation Trust was ratified at the GICC in July 2018.

3.10 Funding for Infection Prevention and Control Services

The IPC/Tissue Viability nursing teams provided a service to the organisations. Funding for the IPC/TV nursing services was provided within the Clinical and Scientific Managed Clinical Services.

3.11 Microbiology Laboratory Services

Funding for Microbiology services was covered by the service level agreement between the Trust and Public Health England (PHE). Financial support for outbreaks of infection (excluding laboratory costs) were sourced locally by the Hospitals/MCS.

3.12 Electronic Surveillance System

Recurrent funding for ICNet (electronic Infection Prevention & Control surveillance database) was from the Clinical and Scientific Managed Clinical Services.

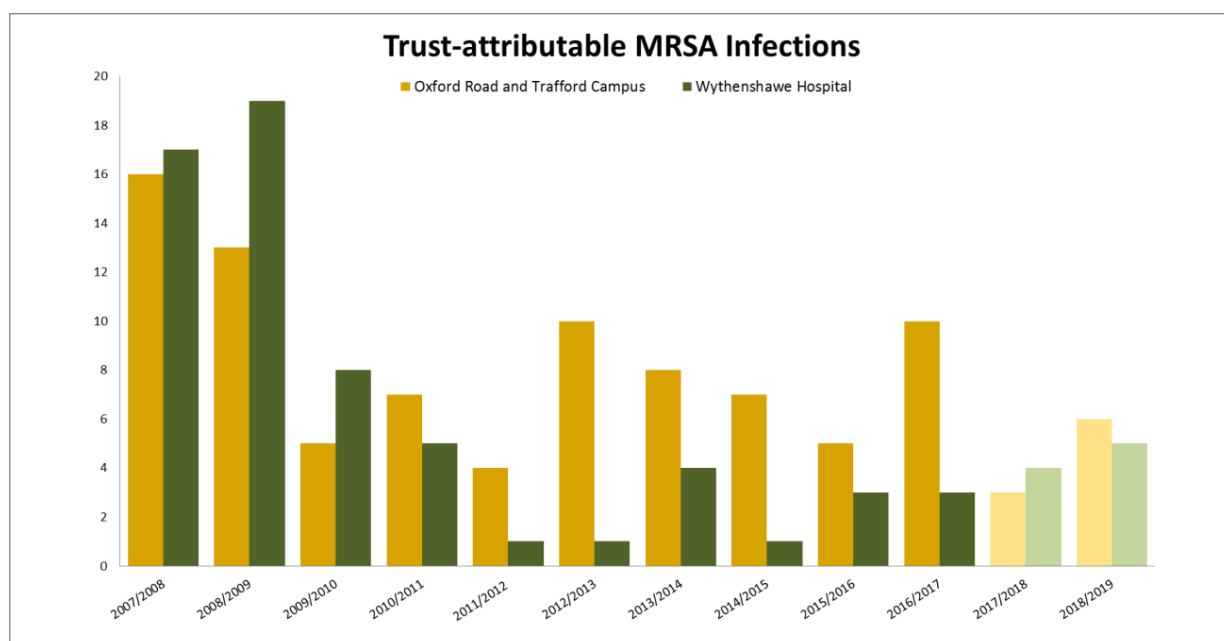
SECTION 4: HEALTHCARE ASSOCIATED INFECTION (HCAI)

4.1 HCAI Performance Targets

The prevention and control of infection remained a high priority for the Trust and there is a strong commitment to preventing all Healthcare Acquired Infections. There has been an 80% reduction in the number of cases of CDI reported (from 540 Trust-attributable cases in 2007/2008 to 110 cases reported in 2018/2019). The Trust also observed a 67% reduction in the number of Trust attributable-MRSA blood cultures reported (from 33 to 11 cases) between 2007/2008 and 2018/2019.

The significant reductions achieved since 2007 are clearly demonstrated below in Figures 1 and 2. Lighter shaded colours indicate years reporting as MFT. The reporting year 2018/2019 shows an increase in MRSA bacteraemia on the Wythenshawe Hospital site. These were addressed by developing an action plan in response. See section 4.3 below for full details.

Fig. 1 Trust-Attributable Meticillin resistant *Staphylococcus aureus* (MRSA) bacteraemia (2007/8 -2018/19)



4.2 Meticillin Resistant *Staphylococcus aureus* (MRSA) Bacteraemia

The MFT objective for the 2018/2019 reporting year was zero incidents of avoidable MRSA bacteraemia. There were 11 Trust-attributable MRSA bacteraemias, reported: six at ORC (three attributable to MRI and three attributable to Royal Manchester Children’s Hospital), and five at Wythenshawe Hospital. All incidents of MRSA bacteraemia were investigated reviewed and actioned as appropriate with support from the IPC Team.

4.3 Increased incidents of MRSA bacteraemia at Wythenshawe Hospital Quarter 1 2018/19

Following four incidents of attributable MRSA bacteraemia at Wythenshawe in the first quarter of the year a meeting was held in June 2018 with Clinicians, Nurses and Pharmacists from the areas where the MRSA bacteraemia had occurred also in attendance were the Estates and Facilities Team. The meeting was led by the DIPC and was a ‘call to

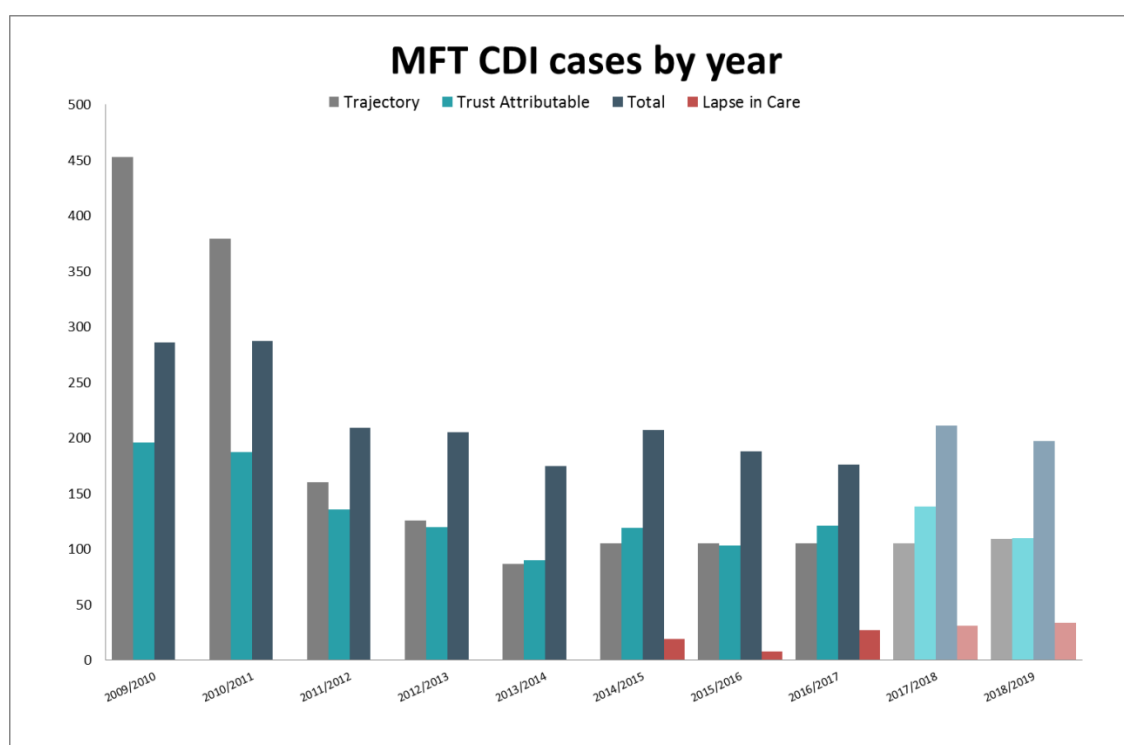
action'. A local action plan was developed and implemented through the Heads of Nursing and Clinicians.

4.4 Clostridium difficile Infection (CDI)

This year ORC/Trafford Hospital reported 69 attributable cases of CDI and Wythenshawe Hospital reported a total of 41 attributable cases. Each case was investigated and reviewed locally supported by the IPC Team. Working closely with the Clinical Commissioning Group and colleagues from local Trusts, all cases of CDI were presented at monthly peer-review meetings to determine whether they were associated with a lapse in care: 35 of the 110 Trust-attributable cases demonstrated a lapse in the care provided.

The total number of Trust-attributable CDI and lapse in care figures for previous reporting years can be found in Figure 2 below.

Fig. 2 Cumulative CDI cases (2009/10-2018/19)



4.5 Investigation into an increase in the incidents of CDI during Quarter 1 2018/19

During quarter 1 the Trust reported 38 attributable cases against a trajectory of 23. Wythenshawe Hospital reported a total of 19 attributable cases against a trajectory of 10, ORC/Trafford reported a total of 19 attributable cases against a trajectory of 13, (15 attributable to MRI and 4 to Trafford Hospital). This represented a 5.6% increase from last year's position for ORC/Trafford and a 46.2% increase for Wythenshawe Hospital for the same period.

A review of the investigation undertaken into each case of CDI was undertaken by the Infection Prevention and Control (IPC) Team. The results indicated that the cases were spread across several wards, across three sites with no obvious connection. Common themes identified included; failure to send specimens in a timely manner and inconsistencies in the recording indication and duration of antibiotic therapy (poor

antimicrobial stewardship). All isolates of CDI were sent for typing, results indicated that there was no single focus of infection in one area.

A report was prepared for the Quality and Performance Scrutiny Committee July 2018 to provide an overview of the investigation, findings and recommendations for action to all the senior management teams in each Hospital/MCS.

4.6 Meticillin Sensitive *Staphylococcus aureus* (MSSA)

Mandatory reporting of all MSSA bacteraemia commenced in January 2011. A total of 243 MSSA bacteraemia cases were reported during 2018/2019 for MFT. Of these, 80 (32%) were-Trust apportioned (i.e. occurred 48 hours or more after admission): 35.8% of the cases reported by Wythenshawe Hospital were Trust-apportioned and 29.2% of cases reported by ORC/Trafford Hospital were Trust-apportioned. There is currently no target associated with MSSA bacteraemia incidence.

4.7 Vancomycin Resistant Enterococci (VRE)

The national VRE bacteraemia reporting cycle runs from 1st October to 30th September each year. To date, there have been a total of 10 VRE bacteraemias reported for the current reporting year (three cases at Wythenshawe Hospital and seven cases for ORC/Trafford Hospital).

4.8 Orthopaedic Surgical Site Infection (SSI) Rates

The Trust is required to submit a minimum of one quarter of data per year to comply with mandatory reporting for orthopaedic implant surgery. Hip and knee replacement data was submitted for each quarter of 2018 for ORC/Trafford Hospital. Data for hip replacements conducted at Wythenshawe Hospital was submitted for the first 3 quarters of 2018.

The results from knee replacement procedures can be found in Fig. 3 below. Of the 491 knee replacement procedures conducted during the previous four quarters only one patient (0.2 %) developed a SSI which is significantly below the national average. The most recent national SSI rate for knee replacement surgery is 1.3 % (based on 350,026 national procedures over the previous 5 years).

Fig. 3 ORC/Trafford Trends in SSI Rates for Knee Replacement Surgery for 2018

Year and Period	No. Operations	All SSI*
2018 Q1	136	0.0%
2018 Q3	120	0.8%
2018 Q3	112	0.0%
2018 Q1	123	0.0%

**All SSI = Inpatient & readmission, post-discharge confirmed and patient reported*

The results from hip replacement procedures performed can be found in Fig. 4A & B below. The previous periods for which data are available are included for comparison. The most recent national SSI rate for hip replacement surgery is 0.9% (based on 322,160 national procedures over the previous five years). The last four periods for which data was submitted shows that across all sites, MFT reported an SSI rate of 0.0% for 494 hip replacement procedures.

Fig. 4A ORC/Trafford Hospital Trends in SSI Rates for Hip Replacement Surgery for 2018

Year and Period	No. Operations	All SSI*
2018 Q1	92	0%
2018 Q2	103	0%
2018 Q3	86	0%
2018 Q4	102	0%

* All SSI = Inpatient & readmission, post-discharge confirmed and patient reported

Fig. 4B Wythenshawe Hospital Trends in SSI Rates for Hip Replacement Surgery 2017 – 2018

Year and Period	No. Operations	All SSI*
2017 Q4	40	0.0%
2018 Q1	43	0.0%
2018 Q2	23	0.0%
2018 Q3	52	0.0%

4.9 Coronary Artery Bypass Graft (CABG) SSI Rates – ORC/Trafford

The Trust has participated in voluntary CABG SSI in Manchester Heart Centre (MHC) since 2011. The last period reported was Q1 of 2018 (results published following last year's Annual Report). The results from the last four quarters reported can be found in Fig. 5. The latest report from PHE identifies a **national SSI rate of 6%** for CABG for the last 5 years, based on 31,171 procedures. The latest SSI rate for CABG conducted at ORC was 5.3%: which confirmed 5 SSI out of 95 procedures performed. Only 2 of these were inpatient/readmissions. All confirmed SSI were investigated locally.

Fig. 5 ORC/Trafford Hospital SSI Rates for CABG 2017-2018

Year and Period	No. Operations	All SSI*
2017 Q1	100	5.0%
2017 Q2	105	5.6%
2017 Q3	119	5.0%
2018 Q1	95	5.3%

* All SSI = Inpatient & readmission, post-discharge confirmed and patient reported

4.10 Outbreaks of Diarrhoea and Vomiting

In total, there were 2379 lost bed days for 2018/2019. A total of 15 wards were closed or partially closed over 19 occasions due to outbreaks of diarrhoea and vomiting during 2018/2019 across ORC/Trafford Hospital and Wythenshawe Hospital (Fig. 6 and 7).

**Fig. 6 Ward Closures due to Diarrhoea and Vomiting ORC/Trafford Hospital
(April 2018 - March 2019)**

Area	Ward	Date of closure	No. of Days Closed	No. of Patients Affected	No. of Staff Affected	Bed Days Lost
RMCH	Ward 85	16/05/2018	6	14	6	168
Surgery	Manchester Vascular Centre	18/05/2018	5	7	0	42
Specialist Medicine	Ward 3	11/10/2018	2	7	0	14
RMCH	Ward 85	18/11/2018	8	19	5	224
Intermediate Care – Gorton Parks	Delemere Unit	08/03/2019	13	15	11	260

**Fig. 7 Ward Closures due to Diarrhoea and Vomiting Wythenshawe
(April 2018 - March 2019)**

Area	Ward	Date of closure	No. of Days Closed	No. of Patients Affected	No. of Staff Affected	Bed days lost
Cardio thoracic	Ward F6	02/04/2018	2	8	0	8
Complex Health & Social care	Ward F4 North	09/04/2018	11	6	1	176
Complex Health & Social Care	Ward F4 South	23/04/2018	8	9	0	128
Complex Health	Opal house – Dunham /Lymm	18/05/2018	4	11	4	80
Complex care	Ward F4 South	24/05/2018	8	7	0	128
Respiratory	Wilson ward	18/06/2018	4	8	0	56
Complex Health	Ward F15	02/07/2018	4	7	0	16
Complex Health	Ward 14	18/12/2018	6	6	5	40
Complex Health	Ward 4 South	15/01/2019	13	8	1	208
Complex Health	Opal House	18/01/2019	20	29	16	401
Medical Specialities	Ward F12	21/01/2019	8	22	2	224
Urology	Ward F3	29/01/2019	2	2	1	8
Complex Health	Opal house – Dunham/Lymm	19/03/2019	9	9	1	180
Respiratory	Doyle	22/03/19	3	8	1	18

SECTION 5: MANAGING THE RISK of INFLUENZA

5.1 Management of Patients with Influenza 2018/2019

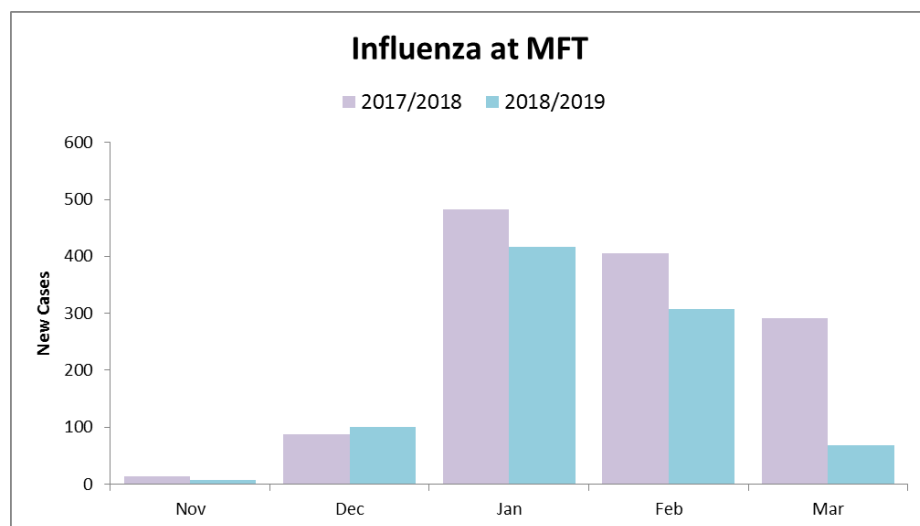
Activity at MFT in the 2017/18 flu season reflected the national picture with high levels of Influenza related admissions across all sites in comparison to the previous two seasons. The increased activity provided challenges for service delivery with the implementation of additional actions from January 2018. This was directed by regular cross site meetings led by the DIPC, to facilitate safe and effective patient management. Lessons learned from last year were incorporated into the plan for the 2018/19 and approved by the Group Infection Control Committee. The actions include:

- A review and update of the patient clinical management and infection control pathways to reflect national guidance and reflect the availability of rapid testing.
- A rapid testing service for flu was put in place in November 2018. This was supported by a seven day laboratory service with extended laboratory working hours and a dedicated rapid testing phone line.
- Laboratory data and Trust inpatient data were used to provide real time updates on inpatient flu positive cases via the Trust Reporting and Information Service in order to assist the IPC team and bed management teams to facilitate patient flow.
- Flu guidance, including control measures, clinical management and testing pathways were available on the Trust intranet. Clinical teams were made aware of the guidance via email and the intranet homepage.

Plans to provide additional support to the Trust in the form of further extended laboratory testing times and provision of additional IPC team support were activated from 11th January 2019 in response to increased activity and a request from the Hospital/MCS Management Teams. This was stood down in March 2019.

The number of new cases of flu for the 2018/19 season to date can be seen in Figure 8 below. There were 915 new cases reported for the 2018/2019 flu season compared to 1281 cases reported for the same period last year. This year clinical staff were more aware of the need to test patients for flu earlier in the season, isolate patients promptly and provide treatment when appropriate.

Fig.8 New Flu Cases at MFT 2017/18 and 2018/19



5.2 Staff Flu Vaccination Campaign 2018/19

The Healthcare Workers Flu vaccination Programme was launched on the 1st October 2018. The programme plan was led and managed by the Group Employee Health and Wellbeing (EHW) Service working in partnership with Hospitals/Managed Clinical Services, Infection Control and Communication teams.

This year Trusts were asked to provide data relating to the reasons why staff declined to have the vaccine (to try and target messages and to aim development of future programmes). At MFT the flu enrolment form was adapted to capture the required data in readiness for submission and to provide further organisational insight re staff perceptions.

Considerable improvements were made to the data collection process to ensure accurate and timely weekly reporting. The reports supported Hospital/Managed Clinical services to target their flu champion programmes.

The programme included targeting messages to engage and encourage uptake of the vaccination in staff including weekly flu messages on iNews, social media campaigns, screen savers and bespoke hospital communication. Over 170 flu champions were recruited to vaccinate and ensure availability to all staff across MFT and this was supported by the EHW team. In addition clinics were used at key events for example the Nursing, Midwifery and Allied Health Professionals Conference and staff induction. The EHW Service also offered 'pop up clinics' across MFT and open access drop-in clinics in EHW (between 8am – 4pm) every weekday.

The vaccination campaign had Executive leadership provided by both the Group Chief Nurse/DIPC and Group Executive Director of Workforce. Across MFT a total of 13,890 staff (64.12%) received the vaccine, of which 11,339 staff (76%) were Frontline Healthcare Workers. This exceeded the Department of Health target of 75%. The success of this year's programme received National recognition as the Trust has been shortlisted for the NHS Employers Flu Fighter Award in the 'Most Improved' Category.



SECTION 6: CARBAPENEMASE PRODUCING ENTEROBACTERIAECEAE (CPE)

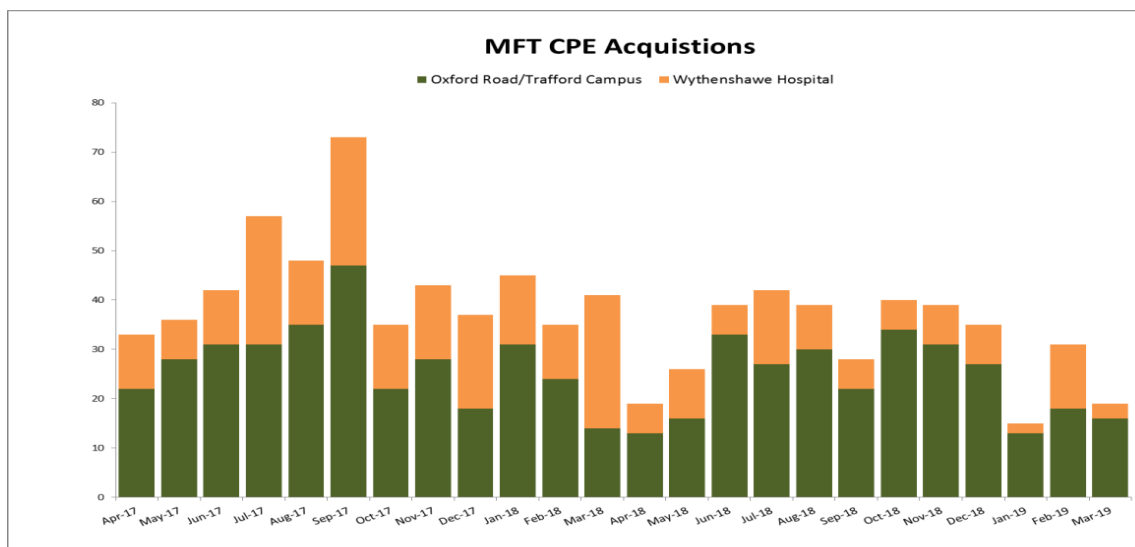
6.1 Incidents of CPE

The number of incidents of CPE acquisition across both sites for the past 12 months can be seen in Figure 9 below. There was a 29% reduction in the number of new CPE acquisitions during 2018/2019 which decreased from 525 in 2017/2018, to 372. This reduction demonstrates the sustained Trust-wide efforts in tackling the spread of multidrug resistant organisms within MFT.

The main focus of activity this year has been to align the CPE screening policy across both sites (ORC and WTWA). Currently there are two methods in use for CPE testing; a CE marked commercial Polymerase Chain Reaction (PCR) test used at ORC and conventional bacterial culture at Wythenshawe microbiology laboratory. Bacterial culture takes up to three days to produce a positive result compared with PCR which can be used to give a 2-4 hour turnaround from receipt in the laboratory.

A business case to align both sites to PCR testing was supported by the GICC in November 2018. This is currently being progressed with the expectation that funding will be available when the PHE microbiology laboratory is moved to the ORC late this year.

FIG 9 incidents of CPE acquisition across MFT



The Trust is at the forefront of developing national as well as local policy for the management and control of patients with CPE and continued to liaise with PHE at a local and national level throughout the year to share the learning from local experience.

6.2 The TRACE project

The investigation was undertaken by the IPC Team in collaboration with PHE and the National Institute for Health Research (NIHR), Public Health Research Unit (PHRU) and the national Lead for Infection Control Professor Derrick Crook, based at the University of Oxford.

This study investigated the role of the environment in the transmission of CPE and involved taking patient screens and environmental samples for CPE across six wards in the Manchester Royal Infirmary. The field work was completed in January 2017. The results from this study were published in the following papers;

- *'A Large, Refractory Nosocomial Outbreak of Klebsiella pneumoniae Carbapenemase-Producing Escherichia coli Demonstrates Carbapenemase Gene Outbreaks Involving Sink Sites Require Novel Approaches to Infection Control'*
Antimicrobial Agents and Chemotherapy, December 2018 (TRACE Investigators Group)
- *'Carbapenem-resistant Enterobacteriaceae dispersal from sinks is linked to drain position and drainage rates in a laboratory model system'*
Journal of Hospital Infection, December 2018 (TRACE Investigators Group)
- In addition Dr Andrew Dodgson (infection control Doctor, ORC), Julie Cawthorne (Assistant Chief Nurse IPC/TV) and Dr Ryan George (HCAI Surveillance Officer) were invited to speak on *'Past and Present CPE Screening Strategies Employed in Central Manchester'* at the Clinical Services and Public Health Delivery Group Professional Meeting on Carbapenem resistant organisms in a healthcare setting (September, 2018).

SECTION 7: GRAM-NEGATIVE BLOODSTREAM INFECTIONS (GNBSI)

There is a national ambition to reduce healthcare associated Gram-negative blood stream infections by 50% by March 2021 by providers and commissioners working together across the whole healthcare economy. *E.coli* is the main cause with increasing numbers observed internationally. There is also a direct link to social deprivation with higher numbers in the North West and North East of England. Key risk factors include Urinary Tract Infection (UTI) catheter associated UTI and antibiotic therapy.

This section of the report provides an overview of the work undertaken locally and in partnership with other providers over the last 12 months towards achieving this ambition.

7.1 *Escherichia coli* (*E. coli*) Bacteraemias

There were 595 incidents of *E. coli* bacteraemia reported to PHE during the current reporting year for MFT. Of these, 152 (25.5%) cases were determined to be Trust-attributable and 443 were attributed to the community. Only 14% of Wythenshawe Hospital isolates were attributable (32 of 228 cases), compared to 32.7% of cases reported by ORC/Trafford Campus (120 of 367 cases). This represents an increase in the total number of cases reported last year (119 attributable cases), which was also observed nationally.

7.2 Review of incidents of *E.coli* Bacteraemia at Wythenshawe Hospital January – October 2018

A review of the above presented to the Group ICC in January 2019 indicated:

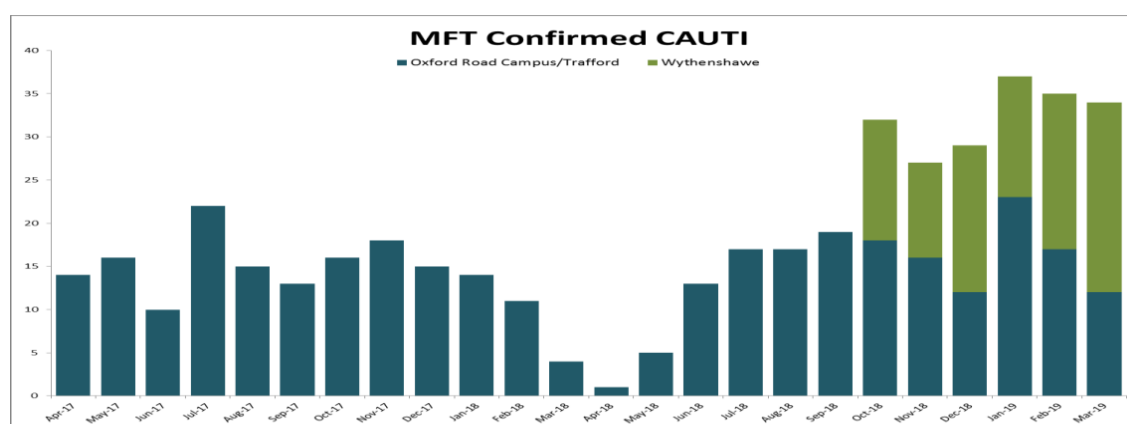
- There was an exponential rise in rate with increasing age
- 87% presented < 48hrs after admission but of these 24% were an inpatient in the previous 30 days
- 83% were admitted from their own home; 11% admitted from nursing or residential care home
- Source – 61% urosepsis (of these 24% Catheter associated urinary tract infection (CAUTI); 15% biliary; 9% intraabdominal sepsis
- Many of the patients had life threatening malignancy or frailty

The primary cause of GNBSI was identified as urosepsis (61%) of which 24% were attributed to CAUTI. Many of the patients with urosepsis had a urine sample sent to the laboratory for culture and sensitivity testing from their GPs in the month prior to admission. The review identified that the sample sent from the GP grew the same bacteria as caused the subsequent bacteraemia.

7.3 Surveillance of CAUTI across MFT

All positive catheter specimens of urine were investigated on a daily basis by the IPC/TV team and Continence Specialist Nurse. Fig. 10 details the number of confirmed CAUTI identified during 2017/2018. Surveillance of all incidents of CAUTI at the ORC/Trafford site commenced in 2014 and at Wythenshawe Hospital from October 2018.

Fig10 confirmed CAUTI Identified during 2017/18



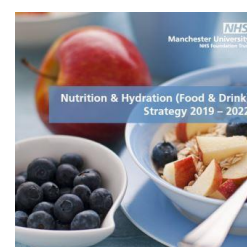
7.4 Actions to reduce the incidence of CAUTI across MFT

- All incidents of CAUTI that occur in patients across MFT were monitored, investigated and reviewed at Hospital/MCS Harm Free Care meetings. Lessons learned and actions were incorporated into local Infection Control work plans.
- Training and education regarding urinary catheterisation was delivered each month across all sites by the Urology specialist nurses at ORC and the practice educator at WTWA.
- The Bladder and Bowel Service (formerly Continence Specialist Nurse Team) also provided support and advice to develop a Trust-wide action plan to manage patients with a urinary catheter.

7.5 Working in partnership across the whole healthcare economy

There is an established Group of healthcare providers from across the whole healthcare economy which includes representatives from the Trust IPC Team to oversee the joint approach to achieving the objective to reduce the number of incidents of Gram-negative bacteraemia (GNBSI) by 50% by 2020. The focus points for action over the last year can be found below.

- **Investigation of incidents of GNBSI** - at MFT we reviewed all incidents of GNBSI to inform local action plans within each hospital/MCS. At the wider group the Surveillance Team from MFT have helped to develop a pilot of surveillance data from a cohort of patients who have developed a GNBSI in Primary and Community care.



- **Focus on reducing Urinary Tract Infection (UTI) and Catheter Associated UTI (CAUTI)** – There was a focus on prevention by raising awareness about hydration in the form of a Nutrition Hydration Week 11th – 17th March across MFT. Within the wider Health Economy there are plans to engage with United Utilities to facilitate Hydration messages to the Public. There are also plans to develop patient/public awareness sessions in Spring/Summer.



- **Antimicrobial Resistance** -The Trust Antimicrobial Stewardship Committee included representatives from Public Health England, CCG and Primary Care. This group liaised with Primary Care and the Community care teams to advise on the appropriate management of patients with recurrent urinary tract infection (UTI). The Trust Sepsis group also included representation from the CCG and a local General Practitioner. They are currently in the process of developing a diagnostic bundle that will facilitate early diagnosis and identification of microbial resistance in patients with sepsis, including GNBSI.

SECTION 8: TRAINING and EDUCATION

The IPC nursing Team delivered face-to-face training on the key principles of infection prevention and control to all new starters at corporate induction until September of 2018. From October 2018 and in line with other mandatory training fields, an 'e' learning package was introduced.

8.1 Aseptic Non-Touch Technique (ANTT) theory sessions

The IPC Team supported the delivery of the ANTT theory component and key principals of infection prevention and control to a wide range of new starters to the Trust. Sessions were delivered to all Medical staff and delivered sessions for Medical Students on placement in the Trust on the key principles of infection prevention and control as well as ANTT theory.

Following the theoretical training session all members of staff whose practice included ANTT were competency assessed in the clinical environment. Thereafter staff must complete an annual re-assessment of competency to practice.

8.2 Bespoke learning activities

The IPC nursing teams maintained learning activities bespoke to the individual sites of WTWA and ORC.

At Wythenshawe Hospital quarterly study days were provided for the Infection Prevention Link Workers, who acted as Champions in their wards and departments raising awareness on current infection prevention and control practices and supporting the implementation of policies, guidelines and best practice. The study days included practical sessions and lectures delivered by microbiologists, guest speakers and members of the IPC Team.

During the last year the IPC Team at Oxford Road/Trafford Campus welcomed nursing students on spoke placements to spend dedicated time with the IPC Team. The IPC Team at Wythenshawe Hospital provided 8-12 week placements for 1st and 2nd year nursing students. The feedback was positive and enabled the students to gain a valuable insight into the principles of infection prevention and control nursing.

The IPC Team at Oxford Road/ Trafford Campus continued to support the Universities of Bolton and Salford delivering the ANTT theory component to both Nursing students and the Trainee Nurse Associates. In addition, the IPC Team delivered a range of training /education sessions to the following staff groups:

- International Nurses recruited to Oxford Road/Trafford campus
- Hospital Volunteers
- Work experience Students
- Toolbox training for the Supervisors of the Sodexo Contractors working in the Trust

- Annual Young Peoples Open Day
- Staff working in areas when there was an increase/outbreak of infection
- Bespoke training on Ward/Departments

8.3 Hand Hygiene – Focus on practice



It is universally agreed that performing hand hygiene correctly and at the right time is the most effective measure in reducing Healthcare Associated Infections (HCAI). The Trust expects all staff to comply with good hand hygiene practice at all times.

Over the last 12 months the Infection Prevention and Control team supported the participation in two national initiatives focusing on infection prevention and control. These included the World Health Organisation (WHO) Save Lives: It's in your hands – prevent sepsis in healthcare where the emphasis was on using the WHO 5 moments to clean hands to avoid sepsis in healthcare and raising awareness in our patients to challenge staff regarding hand hygiene.

The second initiative was International Infection Control week in October 2018. During this week the Infection Prevention and Control/Tissue Viability team used a timeline developed by the team to highlight the changes in infection prevention and control over the last 100 years. The timeline was used in travelling roadshows across the Trust.

Both campaigns received positive feedback from both staff and members of the general public who participated.



The IPC Team also supported the hospitals/MCS across the Trust to refresh their local hand hygiene initiatives providing advice, training and a range of resources that involved staff in fun, interactive hand hygiene training sessions.

Section 9: MAINTAINING a CLEAN ENVIRONMENT

9.1 Governance Arrangements

Decontamination, Ventilation and Water services were governed by policies along with local operational plans. Each topic had group level committees and local safety groups that met quarterly and reported into the Group Infection Control Committee. All appropriate professional appointments, including Authorising Engineers, were in place and monitored through the Estates and Facilities Group Management Board. The services were assured by a programme of independent annual audits.

9.2 Decontamination Services

Sterilisation of re-useable surgical devices were undertaken centrally on site at the Oxford Road Campus in the Decontamination Services Department. The Department was

accredited to ISO 13485:2016 and was also assessed and certified as meeting the requirements of Directive 93/42/EEC on medical devices, Annex V.

Wythenshawe, Trafford and Withington Hospitals continued in partnership with Christies and North Cheshire to receive sterile services from Steris. This was monitored by the WTWA Estates & Facilities Decontamination Group through Positional Reports provided by the Contract Manager.

Decontamination of flexible endoscopes was undertaken on the Oxford Road Campus in satellite units within associated clinical areas and at Trafford, Wythenshawe and Withington in centralised units. The Endoscopy Departments at Trafford and Wythenshawe Hospitals were accredited by the Joint Advisory Group (JAG). The Manchester Royal Infirmary (MRI) Endoscopy Unit had its JAG Accreditation confirmed in year after the complete refurbishment and upgrade of this unit.

Achievements:

- The programme of works to upgrade the Trust's Endoscope Decontamination Suites continued; the Children's Hospital theatres, MRI Out Patients Department, Elective Treatment Centre and Main Endoscopy, and Withington Hospital Suites have all been completed. At the time of writing the Trafford Hospital Endoscope Decontamination Suite was being recommissioned after an upgrade programme.

Risks Identified:

- The Trafford Suite was commissioned with three machines. To achieve the recommended future capacity a fourth machine is required and awaits funding. This leaves the Wythenshawe suite which is in urgent need of upgrade as it's equipment is now time served. The manufacturer of the equipment has advised that they can no longer supply electrical components for maintenance beyond the end of the next fiscal year this is now on the Trust risk register awaiting funding.
- Nasendoscopes used in the Ear Nose and Throat (ENT) Department at Trafford and Altrincham are currently decontaminated by a manual wash followed by use of the Tristel Wipe System (this meets the Essential Quality Requirements (EQR) in HTM01-06). Spot audits were carried out on the process to maintain a minimum standard. Now the Trafford Decontamination Suite has been upgraded it is intended to move the Trafford ENT scopes into the upgraded unit but the lack of a fourth automated endoscope reprocessor has generated concerns for capacity and throughput.
- There is an ongoing work relating to Scopes, Blades and Probes which require either Decontamination or Sterilisation but cannot be reprocessed through the equipment the Trust currently has available. This is being reviewed with Procurement and the IPC & TV team for a resolution and will be added to the trust risk register.

9.3 Water Safety: Management of Risk for *Legionella*

Water sampling for *Legionella* was undertaken in accordance with L8 and Health Technical Memoranda (HTM-04). Remedial action was successfully undertaken on outlets that did not meet the required standard. All building and engineering projects were required to provide additional testing if they included modification or connection to the existing water system including the need to undertake Water Risk Assessments in line with the HTM.

9.4 Management of *Pseudomonas aeruginosa* from Water Outlets in High Risk Clinical Areas

Pseudomonas risk assessments for all augmented care areas were in place. Sampling for *Pseudomonas* continued in accordance with the addendum to HTM 04 with appropriate follow up on positive results.

Achievements:

- Comprehensive maintenance programme and water testing regime for WTWA which now includes an in-house pseudomonas water testing facility (IDEXX Pseudalert) which identifies positive results within 24 hours rather than 3 days.
- A Healthy Water Project that monitored water temperature and flow was undertaken at ORC. This identified areas of concern and timely resolution for low or no use outlets utilising new technology.

9.5 Ventilation

The management of Ventilation Systems was based upon monitoring the legal and mandatory requirements of ventilation systems in healthcare premises. This includes the design, maintenance and the operation of ventilation systems:

Annual performance and verification checks were undertaken on all critical ventilation systems including Ultra Clean Theatres for assurance purposes. A 2019 Theatre PPM planner was issued for all theatres and critical ventilation plant.

Critical Ventilations systems are currently under review across MFT to establish where investment is required to improve existing facilities in Theatre areas.

9.6 Cleaning Services

Contracting Arrangements: The Trust cleaning services were provided by both internal and external contractors/teams.

- Sodexo Healthcare was the main contractor for the provision of cleaning services across the Oxford Road Campus, including the Dental Hospital and Old Saint Mary's building and Wythenshawe Hospital.
- Withington, Trafford and Altrincham Hospitals and the Intermediate Care Units all had services provided by in-house teams.

9.7 Monitoring Arrangements

As part of the contracts Sodexo were required to self-monitor the performance of cleaning services against key performance indicators. These were reported to the Trust on a monthly basis for analysis and challenged where appropriate by the Estates and Facilities Team.

The services at Withington, Trafford and Altrincham Hospitals and the Intermediate Care Units were managed and monitored through internal in-house arrangements with the service managers and local users.

In addition, the standards of cleanliness were monitored and reported for all sites through the monthly Quality of Care Rounds, (see section 11), the Ward Accreditation Process and the Patient Experience Tracker (Oxford Road Campus/Trafford Hospital). These results informed areas of best practice and areas where additional focus was required.

9.8 The Role of the Infection Prevention and Control Team

The Infection Prevention and Control Team worked in conjunction with the Trust Estates and Facilities Teams, Clinical Divisions, Sodexo and internal providers to ensure cleaning standards were met across the Trust.

9.9 Cleaning Schedules

Cleaning schedules were publicly displayed in all clinical areas and processes were in place to report and escalate cleaning problems. These included an agreed process which provided users with information on what services should be delivered and how to escalate non-compliance and a cleaning matters/log book process which required clinical and cleaning staff to record the completion of tasks and log additional or amended requirements.

9.10 Infection Prevention and Control Training for Domestic Staff

All new employees attended a generic induction which included the principles of Infection Prevention and Control.

9.11 Patient Led Assessment of the Care Environment (PLACE)

The annual Patient Led Assessments of the Care Environment (PLACE Assessments) were carried out across the MFT Sites during April and May 2018. The assessors visited wards, outpatient departments and emergency departments, carried out food assessments, and undertook a review of the external and internal public areas on all sites. PLACE Assessment teams comprised Patient Assessors (who are required to make up 50% of each Assessment team), together with representatives from Nursing, Infection Prevention and Control Team and Estates and Facilities.

The scores for each of the eight assessment categories are shown in Fig 11:

Fig. 11 PLACE Assessments 2018

Category	Wythenshawe	Trafford	ORC
	%	%	%
	2018	2018	2018
Clean	99.05	99.43	99.29
Food	88.00	86.33	93.14
Organisational Food	83.81	87.62	86.83
Ward Food	89.09	85.15	94.41
Privacy, Dignity & Wellbeing	86.73	88.89	85.75
Condition, Appearance & Maintenance	94.48	98.20	97.49
Dementia	81.96	87.00	79.98
Disability	87.18	90.54	89.92

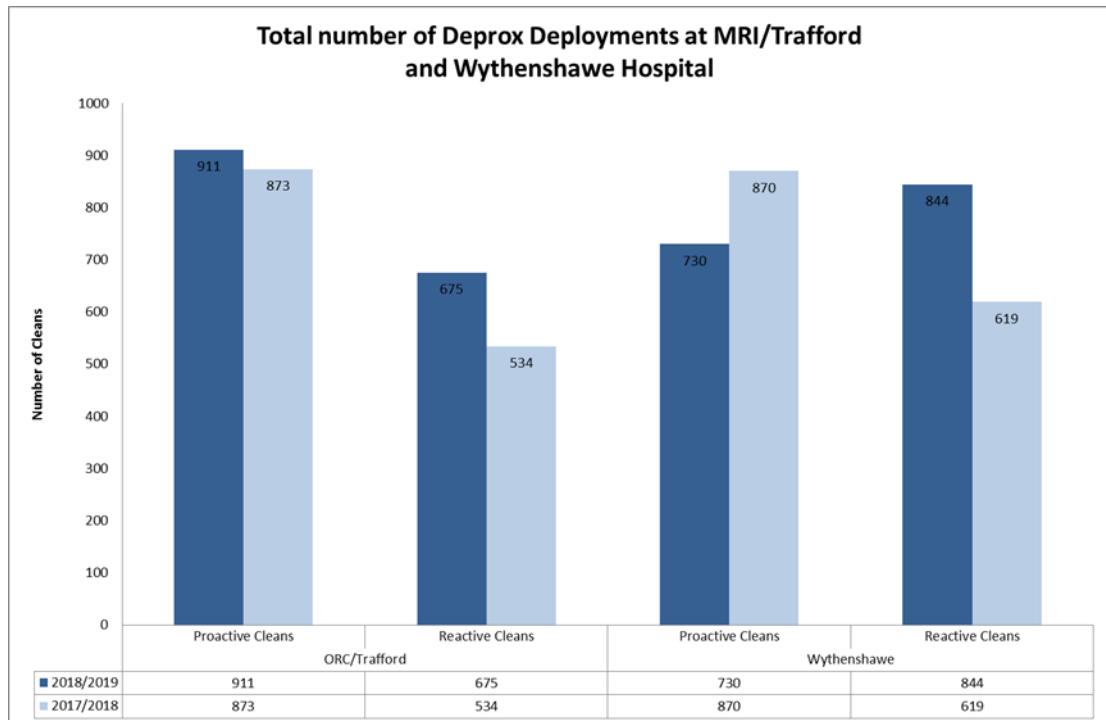
9.12 Contract for the use of Hydrogen Peroxide Vapour (HPV) with Hygiene Solutions (Deprox)

Hygiene Solutions provided a contract for a managed service for the Oxford Road/Trafford Campus and Wythenshawe Hospitals. Fig. 12 demonstrates HPV usage for this year compared to the previous year), by site;

- Reactively (red clean) to decontaminate an area following discharge of a patient with infection.
- Proactively (proactive clean) to decontaminate ‘high risk’ zones in clinical areas such as bathrooms/toilets where there were in-patients with infection.

The IPC team also worked with Hygiene Solutions to develop the use of Ultra – Violet technology (UV-C), as an adjunct to cleaning in areas where it is difficult to use HPV.

Fig. 12 Total Number of Deprox Cycles Deployed at Oxford Road/Trafford Campus and Wythenshawe Hospitals



SECTION 10: ANTIMICROBIAL STEWARDSHIP

10.1 Antimicrobial Stewardship Group

The Antimicrobial Stewardship Group was harmonised across all sites in the first quarter of 2018/19. The first priority was to synchronize antibiotic prescribing guidelines and stewardship activities.

Best practice prescribing principles to promote antimicrobial stewardship are described in national guidance including PHE Start Smart then Focus (March 2015), the national CQUIN and the Trust Medicines policy. These include documenting the rationale for starting antimicrobial therapy and regular review.

10.2 Antibiotic Audit

A monthly audit was undertaken to provide a regular snapshot of compliance with these standards with timely feedback to clinical areas so that actions could be rapidly implemented to achieve improvement if necessary.

The objectives of the audit were to perform a monthly audit collecting data for five patients selected at random, on all inpatient areas receiving a clinical pharmacy service within the Trust.

Actions following the Audit:

- Presented the data monthly at Hospital / MCS level as a Red (Compliance < 75%), Amber (Compliance 75-89%), Green (Compliance >90%) dashboard.
- Presented data quarterly to the Trust Antimicrobial Stewardship Committee
- The Trust Antimicrobial Stewardship Committee had an overview of the audit results and where necessary held Hospitals/MCSs to account for improvement plans.

Table 1: Trust wide data monthly performance

Antimicrobial Prescribing Standards:	April	May	June	July	August	September	October	November	December	January	February	March
Sample Size:	106	46	341	293	324	345	325	309	278	321	283	236
a Is the total antimicrobial duration or review date documented?	65%	63%	80%	76%	77%	78%	83%	79%	71%	79%	78%	75%
b Have all antimicrobials prescribed for 72 hours or longer been reviewed by the prescriber?	93%	86%	89%	92%	93%	93%	95%	88%	92%	96%	97%	93%
c Is the indication for treatment documented on the medication chart?	87%	87%	90%	85%	88%	87%	92%	91%	88%	91%	89%	86%
d Is or was the patient receiving IV antimicrobials?	83%	78%	73%	72%	71%	71%	71%	76%	69%	73%	71%	75%
e If on IV, was a blood culture taken?	58%	71%	78%	75%	73%	75%	84%	71%	76%	79%	84%	77%
Average % compliance :	76%	77%	84%	82%	83%	83%	89%	82%	82%	86%	87%	83%

Table 2: Results for 2018/19 for each Hospital/MCS

Antimicrobial Prescribing Standards:	Trust-wide	MRI - Medicine	MRI - SMS	MRI - Surgery	CSS	RMCH	SMH	MREH	Trafford	Wythenshawe
Sample Size:	3216	589	189	372	113	227	70	30	186	1440
a Is the total antimicrobial duration or review date documented?	77%	74%	69%	62%	100%	64%	74%	73%	82%	83%
b Have all antimicrobials prescribed for 72 hours or longer been reviewed by the prescriber?	93%	91%	91%	87%	100%	95%	94%	77%	90%	95%
c Is the indication for treatment documented on the medication chart?	89%	92%	88%	87%	100%	74%	54%	80%	81%	92%
d Is or was the patient receiving IV antimicrobials?	73%	73%	83%	87%	99%	81%	73%	30%	51%	68%
e If on IV, was a blood culture taken?	58%	77%	83%	62%	95%	94%	72%	n/a	61%	72%
Average % compliance :	79%	84%	83%	75%	99%	82%	74%	77%	78%	86%

Table 3: Staff completing antimicrobial review at 72 hours

Who was the review performed by?	Trust-wide	MRI - Medicine	MRI - SMS	MRI - Surgery	CSS	RMCH	SMH	MREH	Trafford	Wythenshawe
Sample Size:	2008	370	135	249	97	140	45	10	91	871
Microbiology/ID	22%	21%	24%	22%	19%	29%	7%	30%	19%	23%
ST3 Doctor or above	58%	55%	61%	48%	30%	62%	87%	60%	57%	62%
Antibiotic Pharmacist	0%	1%	0%	0%	2%	1%	0%	0%	1%	0%
Other	12%	11%	9%	9%	49%	6%	4%	10%	16%	11%
Not Documented	6%	9%	3%	19%	0%	1%	2%	0%	3%	4%

Table 4: Outcome of the 72 hour review

What was the outcome of the review?	Trust-wide	MRI - Medicine	MRI - SMS	MRI - Surgery	CSS	RMCH	SMH	MREH	Trafford	Wythenshawe
Sample Size:	2008	370	135	249	97	140	45	10	91	871
Continue NO review date	12%	12%	16%	23%	1%	9%	16%	50%	12%	8%
Continue with review date	54%	44%	59%	43%	49%	59%	40%	10%	46%	61%
IV to oral	16%	21%	10%	18%	15%	9%	24%	20%	8%	15%
OPAT	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%
Switch based on cultures	5%	7%	1%	3%	11%	6%	2%	10%	9%	3%
Treatment escalation	3%	5%	1%	4%	4%	2%	0%	0%	7%	2%
Treatment step-down	3%	1%	4%	2%	13%	4%	0%	10%	7%	1%
Stopped	7%	8%	6%	4%	5%	11%	16%	0%	9%	7%
Outcome not documented	0%	0%	0%	1%	0%	0%	2%	0%	0%	0%

10.3 World Antibiotic Awareness Week

In November 2018 The Antimicrobial Stewardship Group, supported by the IPC team and Microbiologists undertook a campaign to raise antibiotic prescribing awareness in line with World Antibiotic Awareness Week. A variety of promotional activities were implemented across both the ORC and Wythenshawe Hospital sites over a two week period. The events were participative and there was good staff engagement.



Fig. 13 Timetable for World Antibiotic Awareness Week

World Antibiotic Awareness Week @ MFT					
12 – 22nd November 2018					
	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1	<p align="center">Superbug Exhibition Venue - Atrium of Royal Manchester Eye Hospital, ORC Time - 10:00 – 16:00</p> <p>Meet the expert sessions and daily activities will take place between 12noon and 2pm, to include Microbiologists, Specialist in Infection, Antimicrobial Pharmacists and the Microbiology lab team</p>				
	<p>“The great infection bake off “</p> <p>Venue - Atrium of Royal Manchester Eye Hospital, ORC Time - 12:00</p>	<p>‘Never listen to your sister: the story of Action on Antibiotic Resistance: One Student, One Campus, One World.’</p> <p>Guest speaker Roger Harrison (from the University of Manchester) Venue - Pharmacy Seminar room, 4th Floor inpatient pharmacy, ORC Time - 13:00</p>	<p>Action on Antibiotics Information Stalls</p> <p>Venue – Stopford & Jean MacFarlane Buildings @UoM and various locations at MMU</p>	<p>‘Sepsis and AMR: Unrecognised Global Health Challenges’ and ‘The Movement of Antibiotics and Resistance for Local to Global to Local’</p> <p>Venue –Lecture Theatre A, University Place, UoM Time – 17:30</p>	
Week 2	<p>Follow us on twitter @antibioticangel</p>	<p align="center">Superbug Exhibition Venue - Education and Research Centre, Wythenshawe Tuesday – Thursday 11:00 – 14:00</p> <p>Meet the expert sessions and daily activities will take place between 12noon and 2pm, to include Microbiologists, Specialist in Infection, Antimicrobial Pharmacists and the Microbiology lab team</p>			
		<p>‘Meet the angels’</p> <p>Venue - Education and Research Centre, Wythenshawe Time – 11:00</p>	<p>‘The Super Bug Fight’ Infection Control Dr.</p> <p>Venue - Education and Research Centre, Wythenshawe Time – 12:00</p>	<p>Antibiotic Hero competition winners announced</p> <p>Venue - Education and Research Centre, Wythenshawe Time – 13:00</p>	<p>Make a pledge today and become an antibiotic guardian here</p>

SECTION 11: MONITORING CLINICAL PRACTICE STANDARDS

11.1 Care Quality Commission (CQC) Inspection

The Care Quality Commission (CQC) conducted a comprehensive inspection twelve months following the creation of MFT from the 2nd October to 8th November 2018. Following this inspection the trust received an overall rating of **'Good'**, with some areas of 'Outstanding' practice. The inspection identified many areas of good and outstanding practice:

"The trust had a comprehensive infection prevention and control action plan in place to reduce the risk of infection spread and maintenance of high standards. We saw that the action plan was regularly updated and actions were assigned to senior staff"

"The service controlled infections well and there were low infection rates" (MREH).

"We received positive comments from one feedback card left by a visitor on the level of cleanliness on the unit, stating 'cleaners doing a fine job always clean and hygienic' (Saint Mary's)

"Infection rates were monitored and reported to the infection control team and the Manchester critical care network. We saw that infection rates were low. The Intensive Care National Audit and Research Centre from 1 April 2018 to 31 June 2018 demonstrated that the cardiac and general critical care units had no unit acquired infections and were performing better than the comparators." (Critical care)

"We observed all staff followed 'bare below the elbow' and infection, prevention and control protocols. We observed staff using personal protective equipment and washing their hands before delivering patient care. The parents and carers we spoke with were happy with the cleanliness of the ward. "(RMCH)

Infection control audits took place monthly across the wards and theatre areas.....The high impact interventions are an evidence-based approach that relate to key clinical procedures or care processes (such as the insertion of catheter and cannulas). Wythenshawe Hospital

We observed good hand washing and infection control practices throughout.(Trafford)

Out of 14 compliance areas we reviewed in the health visiting audit in September 2018, only one hand hygiene area was not 100% compliant. (MLCO)

There were some areas that were identified as *requires improvement*; immediate action was taken following the inspection and actions are followed up through the Group and hospital/MCS ICC including action plans as part of the response to the CQC report:

"Hand hygiene audits were undertaken on a weekly basis. Records indicated that compliance during this period had varied between 92% and 100%. Areas of non-compliance had included staff not washing their hands or using hand gel after patient contact as well as before entering or exiting the department. However, we noted that the management team had implemented actions to make improvements to staff compliance with infection control." (MRI)

Whilst the CQC noted overall that infection rates were low they recommended a number of improvements relating to training staff, compliance with guidelines and cleanliness of the environment and some equipment.

Immediate actions and improvements have been put in place and include enhanced environmental monitoring, new processes devised for monitoring compliance to IPC policies and the development of a programme of surgical site infection surveillance to reduce HCAI.

All plans will be monitored and overseen through the Hospital/MCS ICC and the group ICC in addition to the monitoring of key infections and patient experience through the group Assurance reports, the Assurance Oversight framework and the Quality Care Round.

11.2 Audit of Hand Hygiene Practice

All clinical areas undertook a monthly audit of hand hygiene practice using a standard proforma. The frequency was increased to weekly during periods of increased risk of infection. Results were discussed at local ICC's and action taken as indicated.

11.3 Annual ANTT Competency Assessment

All clinical staff who practiced ANTT underwent an annual competency assessment. Records were maintained by the Ward Manager for nursing staff and the post-graduate centre for medical staff at ORC. Assessments of the seven stages of hand hygiene were included in the assessment process. Compliance figures were reported to the local ICC.

11.4 Quality Care Round (QCR) Data

The QCR and Ward Accreditation Process led by an Accreditation Team was undertaken by the Ward Manager/Matron to monitor compliance against standards of practice. This included standards related to infection prevention and control practice and the patient environment. Adverse results were addressed at the time of the audit. The results for infection prevention and control (averaged over 12 months) can be found in figures 14 and 15 below:

Fig. 14 Quality Care Round Indicators for Infection Control

Infection Control	Clinical & Scientific Services	Manchester Local Care Organisation	Manchester Royal Eye Hospital	Manchester Royal Infirmary	Royal Manchester Children's Hospital	St Mary's Hospital	Trafford General Hospital	Wythenshawe	MFT
Staff demonstrate the correct ANTT procedure?	99	100	100	98	99	100	98	99	99
Do staff adhere to the Dress Code Policy?	96	97	100	98	99	98	93	98	98
Is alcohol hand gel available at the point of care?	100	100	100	97	99	99	100	98	98
Staff demonstrate the correct procedure of cleaning their hands before direct patient contact?	97	99	98	97	96	99	94	95	96
Today have you seen ward staff washing their hands or using alcohol gel before treating you?	99	99	93	95	93	97	95	96	96
Staff demonstrate an awareness of the Trust policy for admitting and care management a patient with MRSA?	100	100	100	97	99	99	99	100	99
Staff demonstrate an awareness of the Trust policy for admitting and care management for a patient with known Carbapenamase Producing Enterobacteriaceae (CPE)?	100	100	93	98	99	98	100	99	99
Staff demonstrate an awareness of the Trust policy for admitting and care management for a patient with suspected/confirmed Clostridium difficile?	100	100	97	97	97	98	98	99	98
How would you manage infectious patients within the department, e.g. suspected infectious diarrhoea, known CPE, infectious TB, chicken pox, etc?	100	100	97	98	100	99	97	99	99
Observe staff members leaving an isolation facility. Were effective barrier practices observed?	100	100	96	96	95	100	97	98	97
Can staff explain the process for the procedure for decontamination of clinical equipment for both non infection and infection?	100	97	97	97	99	99	96	98	98
Are all commodes clean and labelled as clean?	97	94	97	95	97	98	81	93	93
Overall	99	99	97	97	97	99	95	97	97

Fig. 14 Quality Care Round Indicators for Ward Cleanliness

Cleanliness	Clinical & Scientific Services	Manchester Local Care Organisation	Manchester Royal Eye Hospital	Manchester Royal Infirmary	Royal Manchester Children's Hospital	St Mary's Hospital	Trafford General Hospital	Wythenshawe	MFT
Is environment tidy and clutter free?	98	93	100	96	98	98	94	96	96
Inspect bathrooms/shower rooms/toilets.	97	97	100	90	94	94	87	95	93
Is all patient shared equipment clean and labelled?	83	97	80	95	96	94	89	90	92
Inspect bed/trolleys spaces to ensure clean, tidy and equipment in full working order.	99	97	90	96	96	99	91	96	96
Inspect static mattress on patients bed as per policy.	56	86	88	87	82	89	87	85	85
Inspect curtains and tracking, blinds.	95	92	100	96	95	92	98	93	94
Inspect linen trolley/cupboard.	99	100	100	97	98	97	96	97	97
Inspect ceilings and vents.	86	97	80	85	88	93	94	87	88
Are all store rooms clean, tidy and all items well organised and easily accessible?	98	96	93	92	92	95	96	95	94
Overall	92	95	93	91	91	94	91	92	92

SECTION 12: CONCLUSION

The content of this report establishes the broad spectrum of activity associated with infection prevention and control across the Group. The outcomes of the practice and process described are evidence of the hard work and commitment of staff working across the organisation.

The formation of MFT has seen the consolidation of IPC practice across the Group and the merger and harmonisation of structures and committees which has required a great deal of focus by the IPC and management teams. The merger of the medical IPC teams remains outstanding and will be a priority for 19/20.

The Group has maintained its reputation for strong and effective prevention and management of Infection prevention and control and continues to be at the forefront of developing national as well as local policy for the management and control of patients with CPE. The IPC have showcased some of the hard work and lessons learned with other organisations and continue to be a source of expert advice and information to support IPC services across the region.

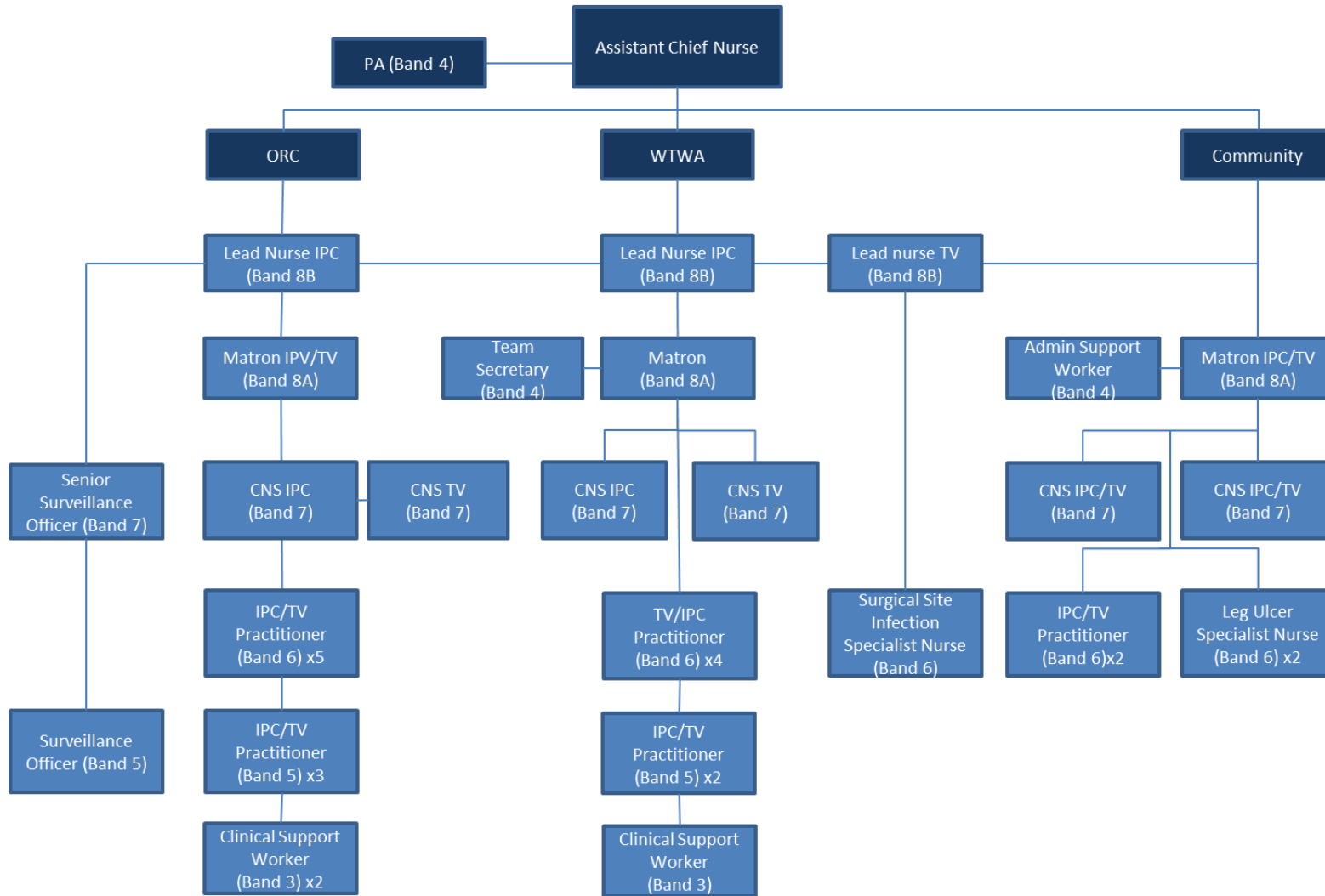
The content of this report reflects the breadth of activity and the enthusiasm to constantly improve and to develop new and innovative means of improving patient care. Moreover, this report demonstrates a culture of openness and transparency in regards to the internal and external review processes for key infections.

The Board of Directors are asked to receive this report for April 2018 to March 2019 and approve for publication.

Julie Cawthorne
Assistant Chief Nurse/Clinical Director of Infection Prevention and Control
April 2019

Appendix 1

MFT IPC/TV Nursing Team Structure 2018/19



Appendix 2

GROUP INFECTION CONTROL COMMITTEE TERMS OF REFERENCE

1. CONSTITUTION

1.1 The Group Management Board has established a Committee to be known as the Infection Prevention and Control Committee. The committee is an executive committee and holds the powers delegated to it in these terms of reference. The Infection Control Committee is chaired by the Chief Nurse/ Director of Infection Prevention and Control.

2. MEMBERSHIP

2.1 Membership shall consist of:

Chief Nurse/DIPC (CHAIR)
Consultant Microbiologist/Infection Control Doctors (Vice-Chair)
Deputy Infection Control Doctor
Directors of Nursing
Assistant Chief Nurse Clinical DIPC
Lead Nurses Infection Prevention and Control
Hospital/MCS Clinical Leads for Infection Control
Consultant in Communicable Disease (Public Health England)
MHCC Infection Control Lead
Antimicrobial Pharmacist
Director of Estates and Facilities
Clinical Audit representative
Director of Clinical Governance
LCO representative

All group executives have an open invitation to and may attend committee meetings

2.2 No business should be transacted at the meeting unless a minimum of ten members are present, which must include the Chair or Deputy Chair, four Hospital Clinical Leads, and either the Director of Nursing (Corporate) or the Assistant Chief Nurse/Clinical DIPC

3. ATTENDANCE AT MEETINGS

3.1 The Infection Control Committee may require the attendance of any Trust employee (or agent of the Trust)

4. FREQUENCY OF MEETING

4.1 The Committee will meet every three months (four times a year), but may be convened at other times as deemed necessary.

5. OVERVIEW

5.1 The Committee will set the strategic direction for infection prevention and control and seek assurance on an exception or as required basis

5.2 The Committee is responsible for developing the group organisational strategy and clinical standards for infection prevention and control in line with national/international evidence based practice and standards.

6. SCOPE AND DUTIES

- 6.1** Provide strategic leadership for infection prevention and control, including identifying priorities and setting performance targets.
- 6.2** Develop the strategy and agree the clinical standards for infection prevention and control across all the Trust sites.
- 6.3** Approve the programme of work of the Trust Clinical Infection Control committee.
- 6.4** Receive Hospital/MCS ICC performance and exception reports
- 6.5** Receive, review and ratify group policies, clinical pathways and reports, including the Annual Infection Control Report
- 6.6** Approve the annual audit calendar to provide assurance that standards are met and any required changes to practice, systems and processes are delivered.
- 6.7** To report to the Group Management Board on performance against infection control indicators and audits, including actions taken to address any areas for improvement.
- 6.8** To determine and commission programmes of work required to deliver the work programme of the Infection Control Committee
- 6.9** Oversee the Trust's involvement in and response to, internal and external assessments and inspections.
- 6.10** Agree the education and training framework for infection prevention and control for the Trust, ensuring compliance with infection prevention and control standards.
- 6.11** Approve the Trust's Annual Infection Control Report.
- 6.12** To describe, review and monitor the principle and significant risks related to infection control on behalf of the Trust and present these with the plan of controls to the Group Management Board and Risk Management Committee.
- 6.13** The Infection Control Committee will receive exception reports from the Hospital/MCS Infection Control leads where performance is out with the standards set out in the IPC strategy
- 6.14.** The Infection Control Committee will receive at each meeting a report from the Trust Infection Control Group to include:
 1. Policy and pathway development
 2. Infection Control Group activity
 3. Changes to national or local strategy
 4. Trust wide themes identified from adverse events

7. AUTHORITY

- 7.1** The Infection Control Committee is empowered to examine and investigate any activity within the Trust pursuant to the above scope and duties.

8. REPORTING

- 8.1** The Committee will report to the Group Management Board.

- 8.2** The Committee will work closely with relevant Group Committees and the Clinical Advisory Committee and will provide assurance to the Board of Directors in relation to infection prevention and control
- 8.3** The minutes and exception report (as required) will be considered at the next Risk Management Committee and Quality and Performance Scrutiny Committee

9. REVIEW

- 9.1** These terms of reference will be reviewed annually.

10. KEY PERFORMANCE INDICATORS

- 10.1** These Terms of Reference will be measured against the following key performance indicators:
 - 1. 75% attendance of all listed members or nominated deputy
 - 2. Presentation of the Annual Infection Control Report.

Reporting Framework for Infection Prevention and Control Group Structure 2018/19

