Infection Prevention & Control Annual Report 2020/2021

Board of Directors Approval date:	
Infection Prevention & Control Committee Submission date:	
Q&R Submission date:	

Contents

1. Introduction

All NHS organisations must ensure that they have effective systems in place to control healthcare associated infections (see Table 1). The prevention and control of infection is part of Royal Papworth's overall risk management strategy. Evolving clinical practice presents new challenges in infection prevention and control, which need continuous review.

Table 1: The requirements of the Health and Social Care Act (2008) updated in this report in line with revised guidance issued July 2015.

Compliance criterion	What the registered provider will need to demonstrate
1	Systems to manage and monitor the prevention and control of infection. These systems use risk assessments and consider the susceptibility of service users and any risks that their environment and other users may pose to them.
2	Provide and maintain a clean and appropriate environment in managed premises that facilitates the prevention and control of infections.
3	Ensure appropriate antimicrobial use to optimise patient outcomes and to reduce the risk of adverse events and antimicrobial resistance.
4	Provide suitable accurate information on infections to service users, their visitors and any person concerned with providing further support or nursing/medical care in a timely fashion.
5	Ensure prompt identification of people who have or are at risk of developing an infection so that they receive timely and appropriate treatment to reduce the risk of transmitting infection to other people.
6	Systems to ensure that all care workers (including contractors and volunteers) are aware of and discharge their responsibilities in the process of preventing and controlling infection.
7	Provide or secure adequate isolation facilities.
8	Secure adequate access to laboratory support as appropriate.
9	Have and adhere to policies, designed for individual's care and provider organisations that will help to prevent and control infections.
10	Providers have a system in place to manage the occupational health needs and obligations of staff in relation to infection.

The Trust has registered with the CQC and declared full compliance with the ten compliance criteria as detailed in Table 1 above.

The Trust puts infection control and basic hygiene at the heart of good management and clinical practice, and is committed to ensuring that appropriate resources are allocated for effective protection of patients, their relatives, staff and visiting members of the public. In this regard, emphasis is given to the prevention of healthcare associated infection, the reduction of antibiotic resistance and the sustained improvement of cleanliness in the hospital.

The issues that the Trust must consider include:

- The number and type of procedures carried out across the Trust and the systems in place to support infection control and decontamination.
- The different activities of staff in relation to the prevention and control of infection.
- The policies relating to infection prevention and control and decontamination.

- Staff education and training programmes.
- The accountability arrangements for infection prevention and control.
- The infection control advice received by the Trust.
- The microbiological support for the Trust.
- The integration of infection control into all service delivery and development activity.

This report has been written to provide information about infection prevention and control at Royal Papworth Hospital. This information is primarily aimed at patients and their carers, but may also be of interest to members of the public in general.

The report aims to reassure the public that the minimisation and control of infection is given the highest priority by the Trust.

In publishing this report we recognise that patients and the public are increasingly concerned about infection risks. Access to information about this aspect of hospital care is rightly needed in order to make informed decisions and choices about their health care needs.

2. Executive Summary – Overview of Infection Control Activities within the Trust

The Trust has a pro-active infection prevention and control team that is very clear on the actions necessary to deliver and maintain patient safety. Equally, it is recognised that infection prevention and control is the responsibility of every member of staff and must remain a high priority for all to ensure the best outcome for patients.

The hospital complies with the “Saving Lives” programme. High impact interventions (HII) were originally published in 2005 as part of ‘Saving Lives’. Since then, the tools have been updated in 2007, 2010 and 2017. The latest review was undertaken by a working party commissioned by the Infection Prevention Society (IPS) in 2017 in association with NHS Improvement. The infection prevention and control audit and surveillance programme incorporates this guidance and along with other audits such as the IPS audit tools, allows constant monitoring of all infection, prevention and control policies and procedures.

In February 2016 the National Institute for Health and Care Excellence (NICE) published Quality Standard 113 which covers organisational factors in preventing and controlling healthcare-associated infections in hospital settings. Royal Papworth is compliant with the standards in this document.

Royal Papworth continues to take part in mandatory surveillance of Methicillin Resistant *Staphylococcus aureus* (MRSA) bacteraemia, Methicillin-sensitive *Staphylococcus aureus* (MSSA) bacteraemia, *E.coli* bacteraemia and *Clostridioides difficile* infection via the national Public Health England healthcare associated infections Data Capture System (HCAI DCS). In addition, mandatory reporting of *P.aeruginosa* and *Klebsiella* species was introduced in 2017.

In response to a national ambition announced by NHS England to reduce healthcare associated Gram-negative blood stream infections (BSI) by 50% by March 2021, the Trust has developed and is following an *E.coli* reduction plan which aims to reduce the incidence of *E.coli* bacteraemia within the Trust. Overall, the rate of *E.coli* bacteraemia in the Trust year on year has been very low compared to the national rates. Since 2018/19 Royal Papworth Hospital continues to report low incidences of E.coli bacteraemias. The Trust reported a total of 14 cases for 2020/21.
Royal Papworth Hospital NHS Foundation Trust monitored incidence of C.difficile during 2020/21 and continuously strives to remain within our ceiling objective. The ceiling objective is

reset on a yearly basis. Since April 2013 this has been done by the Clinical Commissioning Group (CCG) however, these figures are now released by Public Health England (PHE). All C.Difficile cases are reported to the CCG.Root cause analysis, post incident reviews and scrutiny panel meetings are completed internally to review practice and evidence that we are following national and local policies and procedures,this helps promote action learning on each case. All C.diff incidences that occur three or more days into the patients admission are counted towards Royal Papworth Hopitals yearly objective.

Incidents and outbreaks were managed as they arose throughout 2020/21. The management of influenza and COVID 19 remains high on the Trust's agenda and local policies and procedures are continually updated and reviewed in line with national guidance.

3. Description of Infection Control Arrangements

3.1 Corporate Responsibility (Criterion 1)

The Chief Nurse has lead responsibility within the Trust for Infection Prevention and Control and reports to the Chief Executive and the Board of Directors. Following publication, by the Department of Health in December 2003, of the Chief Medical Officer's strategy for infection control (*Winning Ways: working together to reduce healthcare associated infection*) the Chief Nurse post has been designated as Director for Infection Prevention and Control (DIPC) for the Trust. As outlined in *the Health and Social Care Act (2008) updated in this report in line with revised guidance issued July 2015.*

The Executive Directors engage with patient environment rounds which include Infection Prevention and Control compliance. The Medical Director and the Heads of Clinical Governance and Risk Management, through their respective roles, also exert their influence at a corporate level in areas that have direct impact on infection prevention and control. Matrons and Heads of Nursing consider infection prevention and control issues when completing their rounds and provide in and out of hours support.

3.2 Infection Prevention & Control Team (Criterion 1)

Specialist advice is provided to clinicians throughout the hospital by the infection prevention and control team. A Consultant Microbiologist is the designated Infection Prevention and Control Doctor (IPCD), with the weekly allocation of 4.7 programmed activities (18 hours per week for 42 weeks of the year) of infection control doctor time. When needed, cover for leave of absence is provided by another Consultant Microbiologist at Papworth Hospital.
On-call cross cover arrangements are in place for Microbiologists from Royal Papworth Hospital Specialist advice in virology is provided by Cambridge University Hospital Consultant Virologists which Microbiologist call upon if advise is required.
The specialist infection, prevention and control nursing team provide education, support and advice to all Trust staff with regard to infection prevention and control matters and liaise regularly with patients and relatives to provide information on alert organisms, offering advice and reassurance when required.

The team liaise with clinicians and divisional managers together with managers who have responsibility for operational support, clinical governance and risk management. The remit of the team includes:

- To have policies, procedures and guidelines for the prevention, management and control of infection in place across the organisation.
- To communicate information relating to communicable disease to all relevant parties within the Trust.

- To ensure that training in the principles of infection control is accurate and appropriate to the relevant staff groups.
- To work with other clinicians to improve surveillance and to strengthen prevention and control of infection in the Trust.
- To provide appropriate infection control advice to key Trust committees, taking national guidance into account.
- To share information between relevant parties within the NHS when transferring the care of patients to other healthcare institutions or community settings.
- To ensure high standards of infection control are maintained across the Trust by carrying out regular audits and surveillance.

Full details of the infection prevention and control team are provided in the organisation chart shown on page 7 of this report.

3.3 Infection Prevention & Control Committee Structure and Accountability (Criterion 1)

The Infection Control and Pre and Perioperative Care (ICPPC) Committee is the main forum for discussion concerning changes to policy or practice relating to infection prevention and control. The membership of the Committee is multi-disciplinary and includes representation from all divisions and senior management. The Committee is chaired by the Director of Infection Prevention and Control (DIPC) or deputy, and meets every 8 weeks. The Committee has a link via the Clinical Governance Management Group and the Chief Nurse (DIPC) into the Quality and Risk Management Group (QRMG) and the Board of Directors. The DIPC provides a monthly report to the Board and QRMG.

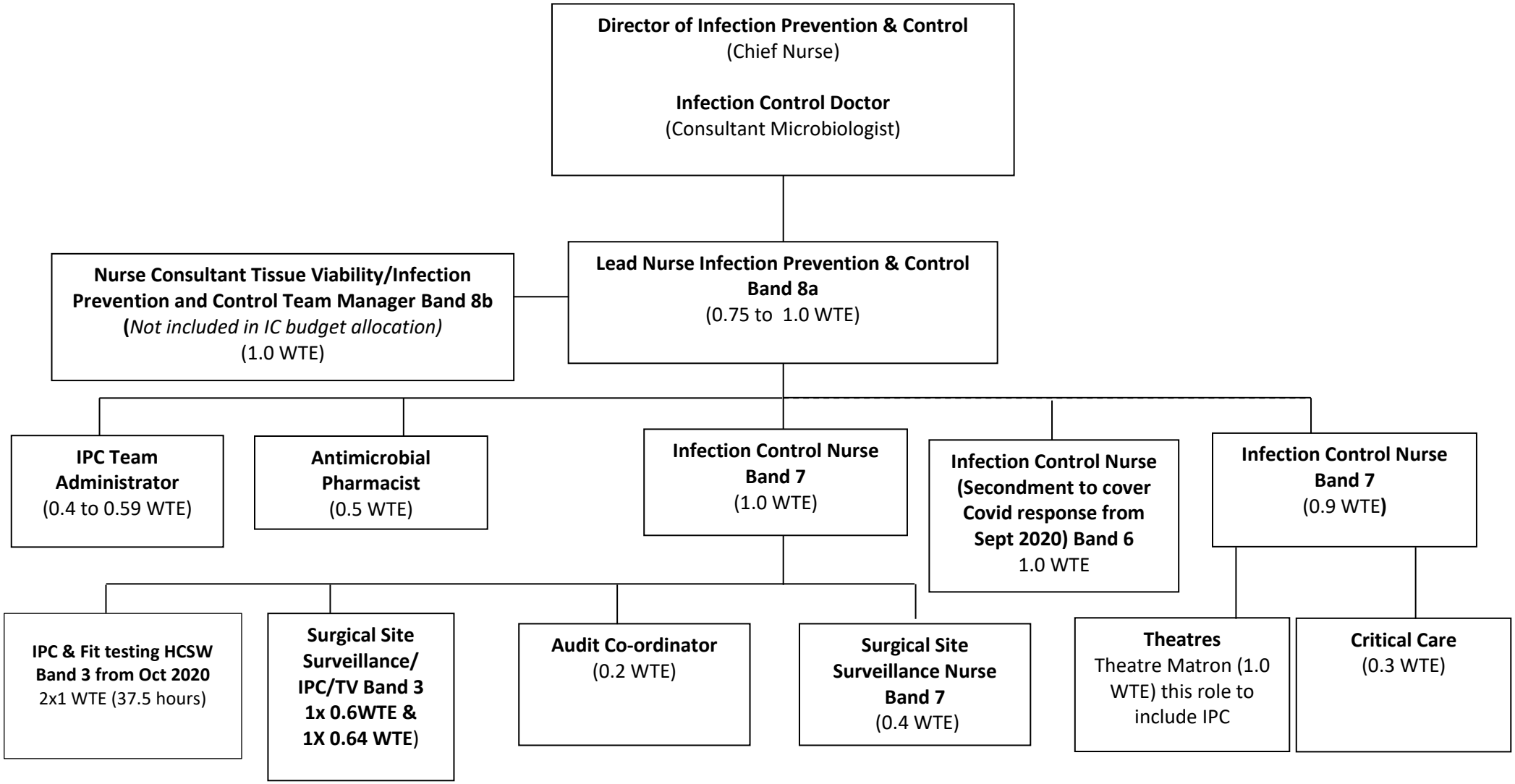
The Terms of Reference were revised and drawn up with due regard to the recommendations for the composition and conduct of infection control committees contained in Department of Health in December 2003, of the Chief Medical Officer's strategy for infection control (*Winning Ways: working together to reduce healthcare associated infection*).

Additionally, clinical champions have been identified in each area who come together as an "Infection Control Link Group". This group helps to facilitate best practice and acts as a forum for education and discussion. The relationship and reporting lines between the various committees showing Ward to Board arrangements are shown in the diagram on page 8.

Due to the COVID 19 pandemic some ICPPC and Infection Control link group meeting were postponed. This was due to the surge response to COVID 19 and inability for clinical staff to be able to attend meetings and IPC team to produce reports.

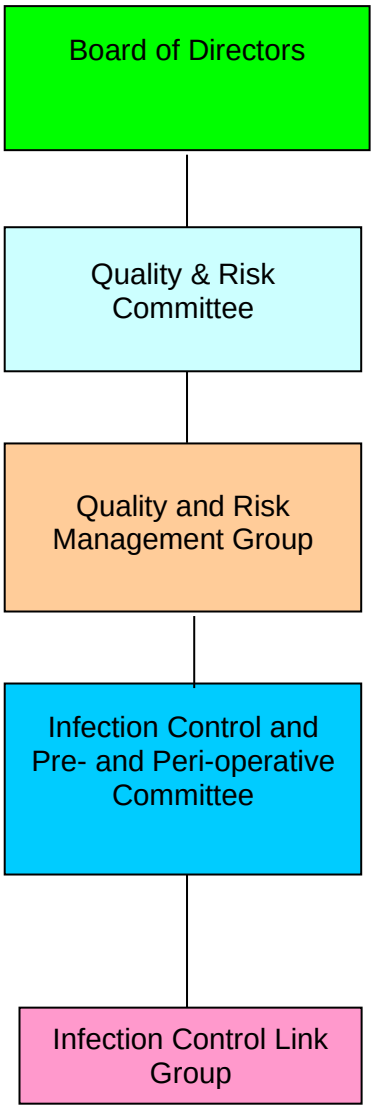
Royal Papworth Hospital
NHS Foundation Trust

Infection Prevention & Control Team (Criterion 1)



Position at March till April 2020/21
WTE = whole time equivalent.

Infection Prevention & Control Committee Structure and Accountability (Criterion 1)



Committee / Group Membership:

Director of Infection Prevention & Control					
Infection Prevention & Control Doctor					
Infection Prevention & Control Nurse					
Representatives from each Clinical Directorate					
Assistant Director of Operations					
Antimicrobial Pharmacist					

3.4.1 Infection Control Team Representation on Committees at Royal Papworth Hospital (Criterion 1):

- Antimicrobial Stewardship Group
- Quality and Risk Management Group
- Drugs & Therapeutics Committee
- Food and Nutrition Group
- Health & Safety Committee
- Infection Control and Pre- and Peri-operative Care Committee
- Water Safety Group
- Medical Advisory Committee
- Medical Devices Group
- Nursing Advisory Committee
- Pathology Management Group
- Product Review Group
- Waste Management Committee
- Command & Control Group

3.4.2 Infection Control Team Representation on External Committees

- East of England Regional Microbiology Development Group
- East of England Infection Prevention Society Branch Meetings
- Extra-ordinary network meetings with Cambridgeshire Commissioning Group and other Regional hospital IPCNs
- DIPC attends the STP IPC Board

3.5 Assurance, internal and external inspections (Criterion 1 & 2)

The assurance process includes internal and external measures. Internally, the accountability exercised via the committee structure described above ensures that there is internal scrutiny of compliance with national standards and local policies and guidelines. Furthermore, external assessments are also used. These include the "Controls Assurance" measures for infection control and decontamination standards, ISO, Care Quality Commission standards and the Patient-led assessments of the care environment (PLACE) review.

Progress in these areas during 2020/21 is summarised below.

Standards for Decontamination
Sterile Services Department is contracted to a private company Nuffield and has been audited and meets the requirements of disinfection, assembly, packing, moist heat and gas plasma sterilisation of theatre trays and procedure packs and supplementary instruments in accordance with ISO 13485:2003 and ISO 9001:2008. For moist heat and gas plasma sterilisation of theatre trays, procedure packs and supplementary instruments in accordance with Medical Devices Directive 93/42/EEC Annex V, Article 12 (Sterility Aspects Only)

Care Quality Commission Standards (Outcome 8)

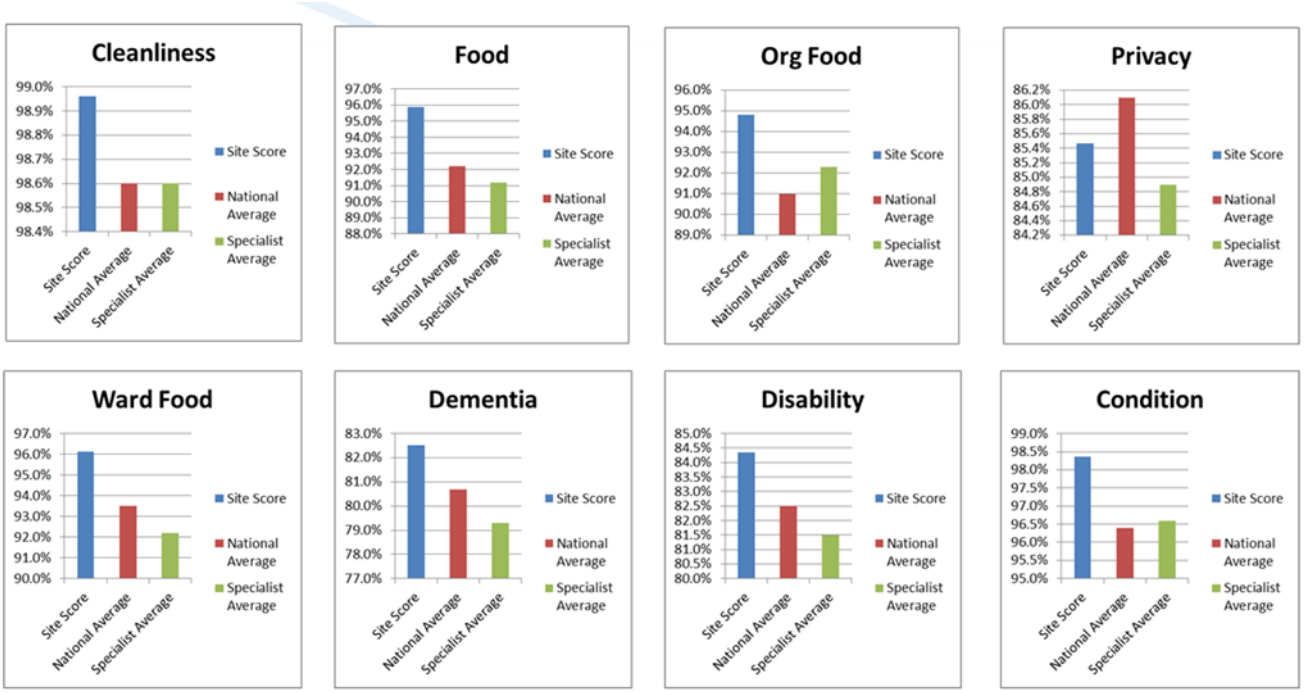
The Trust is registered with the CQC and declared full compliance with the ten compliance criteria.

PHE Data Capture Mandatory reporting (Criterion 1)

The Infection Control Doctor is responsible for mandatory reporting and enters the data onto the PHE Data Capture website when the results are available. The Trust then signs this off monthly.

The Trust reported the following for 2020/21: MRSA bacteraemia – 2, C.difficile - 8 cases (against a ceiling objective of 11).

PLACE Audit Results table 2019/20 inspection (Criterion 1 & 2):



Due to the COVID surge this was not implemented for 2020/21, but will recommence for 2021/22.

3.6 DIPC Reports to Board of Directors and QRMG (Criterion 1- 10)

The monthly DIPC report forms part of the patient safety agenda and reports on mandatory monitored healthcare associated infections (HCAIs) such as *C.difficile* and MRSA, as well as other healthcare associated infections. The report also highlights any topical infection prevention and control issues and incidents occurring in clinical practice. The DIPC annual report is submitted to the Board of Directors.

3.7 Budget Allocation (Criterion 1)

Budget allocation for infection control activities:

- 0.75 to 1.0 WTE Band 8 Lead Nurse in Infection Prevention and Control
- 1.0 WTE Band 7 Infection Control Nurse
- 0.9 WTE Band 7 Infection Control Nurse
- 1.0 WTE Band 6 infection control Nurse – secondment post due to COVID pandemic
- 4.7 PAs of Consultant Microbiologist time.
- 0.4 WTE Band 7 surgical site surveillance nurse time.
- 0.6 and 0.64 WTE posts Band 3 Health care support worker SSI/IPC
- 0.2 WTE Audit co-ordinator
- Scientific support and technical capability is funded within the contract that the Trust has with the Public Health England (PHE).
- 0.4-0.59 WTE Team Administrator
- Training and IT support are funded from corporate IT and Education budgets based on any case of need submitted by the infection control team.
- 1.0 WTE X2 Band 3- fit tester trainers.

3.8 Infection Control Report & Programme for 2020/21 (Criterion 1 & 4)

Work undertaken by the Infection Prevention and Control Team during 2020//21 covers the following areas:

- Compliance with the Health and Social Care Act 2008 *updated in this report in line with revised guidance issued July 2015.*
- Infection Prevention and Control Committee
- Link Practitioner Network
- Development and maintenance of policies and procedures
- Audit and Surveillance monitoring and reporting
- Education
- Compliance with Department of Health initiatives – High Impact Interventions / WHO 5 Moments for hand hygiene
- Outbreak and incident management
- HII monitoring is reported in the Royal Papworth integrated performance report.
- Infection Prevention and Control inputted significantly into the managing COVID 19 pandemic and living with COVID 19.
- Led a refreshed fit testing service to ensure staff were protected during the pandemic

3.9 High impact Interventions

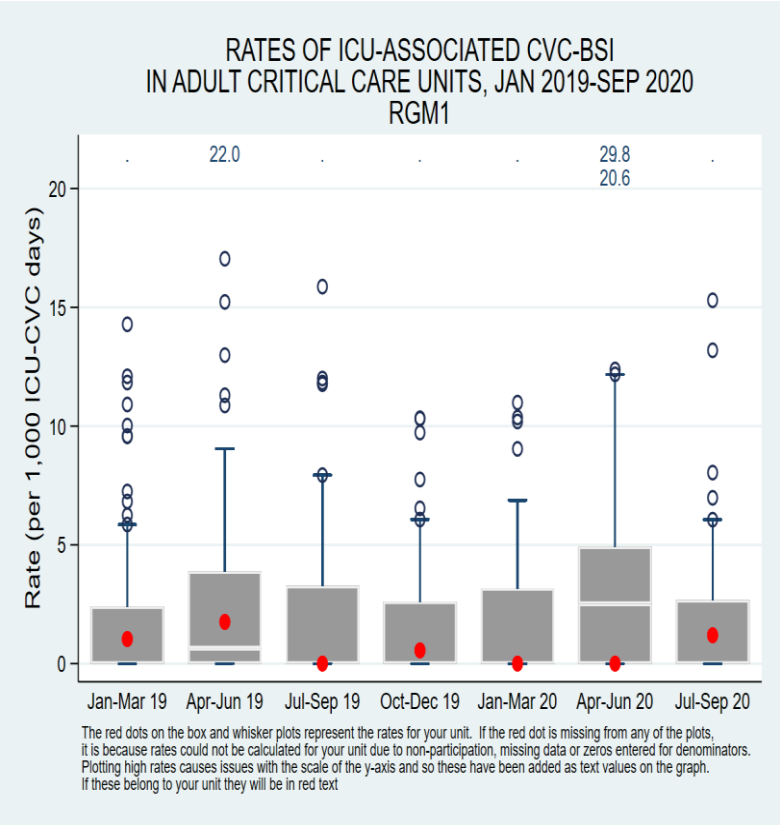
At Royal Papworth Hospital every month a designated Infection Prevention and Control link nurses carry out High Impact Intervention (HII) audits. The High Impact Interventions are an evidence-based approach to clinical procedures or care processes. The appropriate use of HII audits help to manage and reduce the risk of infection and identify areas for improvement. These audits include; HII1 Central Venous Catheter insertion and ongoing care, HII2 Peripheral Intravenous Cannula insertion and ongoing care, HII4 Surgical Site Infection pre-op, HII5 Ventilation-association Pneumonia, HII6 Urinary Catheter insertion and ongoing care and HII8 Cleaning and Decontamination. We also introduced a monthly audit on Aseptic non-touch technique (ANTT) to support our Surgical site data. At Royal Papworth Hospital the standard compliance rate required is greater than 95%. Areas that fall below this are required to complete an action plan to rectify any issues preventing them meeting the required standard. The Trust has achieved an overall rating above 98% for each month during 2020/21.

4 HCAI Statistics (Criterion 1, 4 & 9)

4.1 Infection in Critical Care Quality Improvement Programme (ICCQIP)

The ICCQIP board was set up in 2016 to address the concerns of hospital-associated Infections (HAI) in intensive care units (ICU) in England, following on from the publication of the successful 'Matching Michigan' study.

The ICU surveillance programme aims to characterise and monitor all ICU and central venous catheter (CVC) associated blood stream infections in order to identify concerns and support actions to reduce the infection rates. Data is collected and analysed on a quarterly basis and unit level reports are generated and sent to respective units.
The latest results for 2020/21 year can be presented in the form of a graph and they are as follows:



The Royal Papworth hospital is indicated by the red dot and, as it can be seen, it was within the national interquartile range in all periods.

4.2 Mandatory Reports (Criterion 1, 2, 4, 5, 7 & 9)

4.2.1 MRSA

MRSA bacteraemia figures for the past 14 complete years are represented in the table below.

Papworth Annual MRSA bacteraemia rates (from 1 April 2007)

01.04.07 to 31.03.08	01.04.08 to 31.03.09	01.04.09 to 31.03.10	01.04.10 to 31.03.11	01.04.11 To 31.03.12	01.04.12 To 31.03.13	01.04.13 To 31.03.14	01.04.14 To 31.03.15	01.04.15 To 31.03.16	01.04.16 to 31.03.17	01.04/17 to 31.03.18	01.04.18 to 31.03.19	01.04.19 to 31.03.20	01.04.20 to 31.03.21
5	1	2	1	1	2	0	1	0	0	5 (3 on trajectory)	2 (1 on trajectory)	0	2 (1 on trajectory)

The ceiling for MRSA bacteraemias set for Royal Papworth for 2020/21 by the CCG was zero. Compliance with MRSA screening in 2020/21 was 97.5%. Since the introduction of universal MRSA screening the numbers of patients who attend Papworth who are found to carry MRSA have reduced considerably because the screening has allowed early isolation and treatment of patients with MRSA.

4.2.2 *C.difficile*

C. difficile figures for the last seven years are represented in the table below. Following updated guidance from PHE all C.diff cases that occur three or more days into the patients admission are counted towards Royal Papworth Hopitals yearly objective, this is regardless of whether the scrutiny panel has found any learning outcomes. Scrutiny panel meetings are held for each case to identify any learning actions.

	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
C. difficile >65 yrs	4	5	2	4	6	6	5
C. difficile < 65 yrs	5	4	0	3	5	5	3
Total	9 (3 attributable)	9 (3 attributable)	2 (0 attributable)	7 (3 attributable)	11 (2 attributable)	11	8

The ceiling set for Royal Papworth by the CCG for 2020/21was 11 cases. All *C. difficile* cases had a root cause analysis carried out, and were reported to the Infection Prevention and Control Committee and via the Public Health England healthcare associated infections Data Capture System (HCAI DCS).

4.2.3 MSSA bacteraemia

Reporting of Methicillin Sensitive Staphylococcus aureus (MSSA) bacteraemia to the Department of Health through the MESS system has been compulsory since January 2011. There is no ceiling set by external authorities for these infections. The numbers given below include cases where the blood culture was taken within 48 hours of admission to the hospital (community acquired infections).

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Methicillin sensitive Staphylcoccus aureus bacteraemias (MSSA)	18	10	18	9	16	21	17	14	22	9	16	17

4.2.4 E. coli bacteraemia

Reporting of E. coli bacteraemia to the Department of Health through the HCAI DCS system has been compulsory since June 2011. These infections are reported to the Infection Prevention and Control Committee. There is no ceiling set by external authorities for these infections at present.

	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
E. coli bacteraemias	10	6	11	12	11	9	9	14

4.3 Other Surveillance Reports

4.3.1 GRE/VRE and ESBL bacteraemia

	2011/12	2012/13	2013/14	2014/15	2015/6	2016/17	2017/18	2018/19	2019/20	2020/21
Glycopeptide (or Vancomycin)-Resistant *Enterococcus* (GRE/VRE) bacteraemias	4	8	2	4	3	8	11	8	3	14
Extended spectrum B-lactamase producers (ESBL) bacteraemias	0	3	0	0	3	5	3	1	2	6

VRE bacteraemias and ESBL bacteraemias are reported to the Infection Prevention and Control Committee and to Public Health England quarterly. There are no ceilings set by external authorities for these healthcare associated infections. We saw an increase in all bacteraemias during the COVID 19 surge in 2020/21.

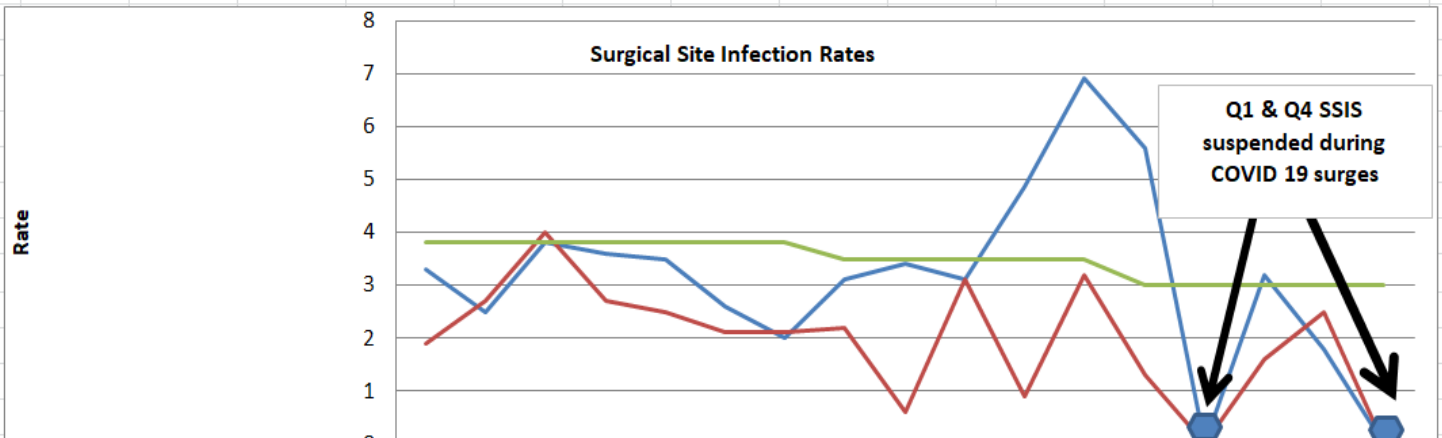
4.4 Surgical Site Surveillance (Criterion 1, 2, 3, 4, 5, 6, & 9)

From April 2009 we have undertaken continuous surgical site surveillance of Coronary Artery Bypass Graft (CABG) patients to monitor infections post-surgery using the Public Health England (PHE) surveillance protocol. Following a bundle of interventions in pre, intra and post op care in line with NICE guidance CG74 and WHO recommendations this has resulted in a fall in infection rates from 9.85% 2009-2010 to 2.75% for CABG in 2018-2019 for inpatient and readmissions only. Current national benchmark for inpatient and readmissions for SSI in CABG is 3.0% (PHE 2019). Following a challenging year in 2019/20, which covered the period of the move to new Royal Papworth Hospital, a rise in SSI above the national bench mark was recorded. The SSI surveillance team reports a return to infection rates below the national bench mark for this reporting year.

Reporting

Two quarters of valve and CABG infection rates were reported on this year. Quarter 1 and quarter 4 surveillance were suspended as members of the SSI surveillance team were redeployed to other duties in support of the COVID-19 surge and cardiac theatre activity was curtailed significantly.

We are pleased to report in quarter 2 and quarter 3 where surgical activity returned to near normal levels of activity, infection rates in both valve surgery and CABG surgery returned to sub-bench mark rates (Table 1).



	Q4 2016/17	Q1 2017/18	Q2 2017/18	Q3 2017/18	Q4 2017/18	Q1 2018/19	Q2 2018/19	Q3 2018/19	Q4 2018/19	Q1 2019/20	Q2 2019/20	Q3 2019/2020	Q4 2019/2020	Q1 2020/2021	Q2 2020/2021	Q3 2020/2021	Q4 2020/2021
CABG %	3.3	2.5	3.8	3.6	3.5	2.6	2	3.1	3.4	3.1	4.85	6.9	5.6	✖	3.2	1.8	✖
Valve %	1.9	2.7	4	2.7	2.5	2.1	2.1	2.2	0.6	3.1	0.9	3.2	1.3	✖	1.6	2.5	✖
PHE CABG cumulative incidence	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.5	3.5	3.5	3.5	3.5	3	✖	3	3	✖

SSI stakeholder group

The SSI stakeholder group was established in late 2019 to deliberate over the rise in deep wound infection rates and instruct and monitor actions aimed at reducing SSI following an increase in infection rates after the move to new Royal Papworth Hospital in May 2019. Engagement was sought from each department involved in the patient journey from admission to discharge.

Qualitative activities and considerations were reviewed by the group including pre-operative decolonisation practices, the theatre environment and theatre clinical practices, post-operative care and follow up. Pre-operative anti-microbial administration compliance standards were reviewed as a part of the project.
The consensus is that the rise in infections was likely due to multifactorial reasons. However, the only contributory quantitative data that could be identified as a part of the project was around the administration of pre-operative anti-microbial compliance. Audit data gathered during a period of elevated rates of wound infection noted compliance with standards in this respect was not optimal. On feedback to the lead anaesthetist for theatres, strong engagement was forthcoming with the stakeholder group. The most recent audit notes increasing compliance with the standards of administration and this coincides with a reduction in SSI rates to sub-bench mark levels (see table 2). It must be recognised that the interventions in response to audit data feedback in this respect were well led and executed. It is also likely that the raised awareness of infection rates in interested clinical groups and departments led to changes in qualitative practices which are more difficult to measure and, in all likelihood, contributed to a return to bench mark rates of surgical site infection. It is recognised that engagement from interested groups associated with qualitative practices was strong.

Aspects of measures	Standard	August 2020
Correct choice of Antibiotics for surgical prophylaxis	100%	100%
Correct dose of flucloxacillin administered	100%	95.72%
Correct dose of Gentamicin administered	100%	81.82%
Flucloxacillin or Vancomycin administered between 15minutes to 120 minutes of skin incision	100%	91.3%

Table 2: Pre-operative anti-microbial administration audit data August 2020

The SSI stakeholder group will continue to meet in the near term in view of the disruption to patient pathways caused by the most recent COVID-19 surge and evaluate if the disruption to patient flow and theatre activity impacts on SSI outcomes into 2021.

4.5 Antimicrobial Stewardship (Criterion 1, 3, 5 & 8)

Antimicrobial Stewardship 2019 - 2020

In 2019, the UK government set out its five-year national action plan to tackle Antimicrobial Resistance (AMR) within and beyond the UK borders. The plan has ultimately been designed to ensure progress towards the 20-year vision on AMR, in which resistance is effectively contained and controlled. It focuses on three key ways of tackling AMR:

1. reducing need for, and unintentional exposure to, antimicrobials;
2. optimising use of antimicrobials; and
3. investing in innovation, supply and access.

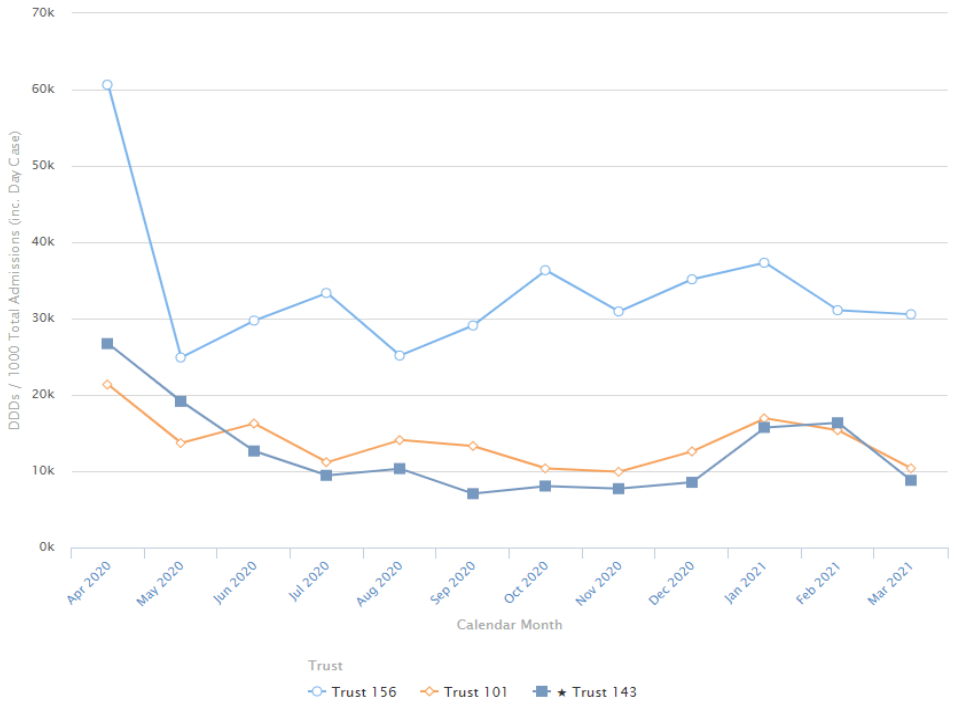
The plan also sets out four measures of success to ensure progress towards the 20-year vision. These include, among others, targets to:

- halve healthcare associated Gram-negative blood stream infections;
- reduce the number of specific drug-resistant infections in people by 10% by 2025;
- reduce UK antimicrobial use in humans by 15% by 2024;
- reduce UK antibiotic use in food-producing animals by 25% between 2016 and 2020 and define new objectives by 2021 for 2025; and
- be able to report on the percentage of prescriptions supported by a diagnostic test or decision support tool by 2024.

The Antimicrobial Stewardship Group updated its Antimicrobial Strategy to help the Trust meet the government's aims and objectives. Our Antimicrobial Strategy aims to provide a framework to enable appropriate and prudent antimicrobial use within Royal Papworth Hospital NHS Foundation Trust.
All Trusts in England are currently required to send PHE their antibiotic usage data. At RPH, this is supplied to PHE via a third party company (Rx-Info) from Pharmacy issue data and can be accessed via the Public Health England portal https://fingertips.phe.org.uk/profile/amr-local-indicators/ . The Antimicrobial Stewardship Team (AST) has been working with the third party company to ensure that the data supplied is as accurate as possible. This has allowed the AST to focus their time on other antimicrobial stewardship projects in the new Royal Papworth Hospital.

2020/21 has been a challenging time for all, with the on-going threat and management of Covid-19 (SARS CoV-2) infections.

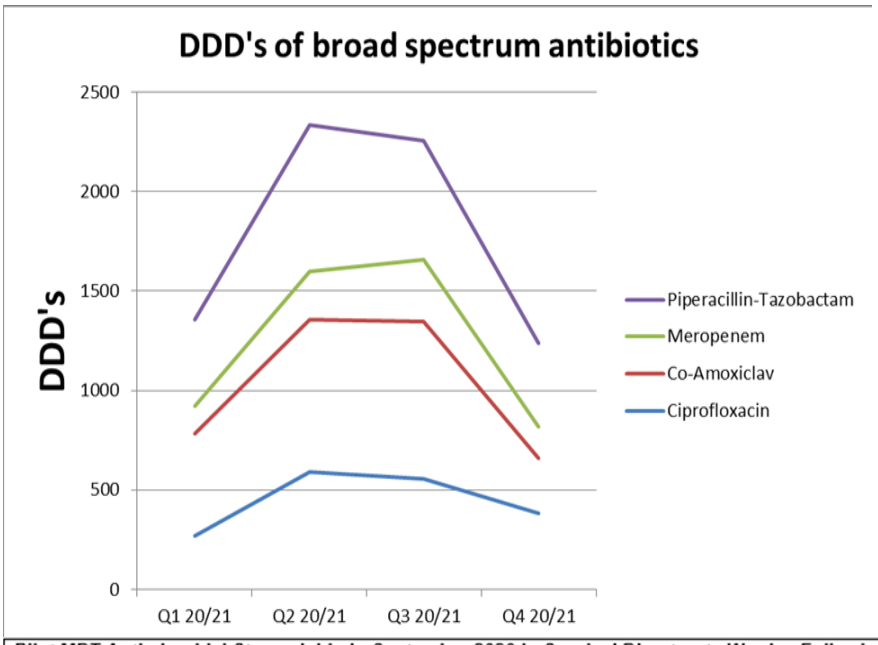
The RPH Trust Antibiotic Usage data is supplied by Rx-Info.co.uk using its Define® programme from issue data from the JAC Pharmacy system. RPH is Trust 143 and we are compared to 2 other Cardio-Thoracic Centres.



In 2020/21 we saw the re-introduction of twice weekly Multi-Disciplinary Team AMS Ward Rounds reviewing all Surgical Directorate patients on antibiotics. This was piloted in September 2020 and introduced fully in December 2020.

This has contributed to a significant reduction in broad spectrum antibiotic use and considerable financial savings to the Trust.

The graph demonstrates very well the AMS learning regarding Covid-19 (SARS CoV-2) infection in 2019/20. In the first Covid-19 surge in 2019, when little was known on how to manage the infection there was a lower threshold to start antibiotics for a suspicion of a secondary bacterial infection. In 2020/21, the AMS Team worked with a multidisciplinary team to develop robust and evidence based guidelines for the management of Covid-19 (SARS CoC-2) infection for prescribers and this has resulted in an overall reduction in antibiotic use (despite a "return to normal" in hospital activity).



Pilot MDT Antimicrobial Stewardship in September 2020 in Surgical Directorate Wards. Following the success of this pilot, regular MDT AMS ward rounds established in December 2020.

Drug Spend in Surgical Directorate in 2019/20 and 2020/21

	2019/20	2020/21
Q1	£15,526	£16,087
Q2	£12,376	£14,753
Q3	£13,776	£11,175
Q4	£20,431	£7,784
Total SPEND	£62,109	49,799

AMS Team input

62% DECREASE in spend in Q4 2020/21 compared to Q4 2019/20 and a 19.82% DECREASE in overall spend for Surgical Directorate in antibiotic spend between FY 2019/20 and FY 2020/21.

FY	cost/1000 admissions	FY	cost/1000 admissions
Q1 19/20	£20,509.26	Q1 20/21	£42,930.29
Q2 19/20	£13,360.23	Q2 20/21	£20,447.22
Q3 19/20	£15,760.23	Q3 20/21	£14,592.23
Q4 19/20	£25,489.92	Q4 20/21	£19,017.11

The MDT ward rounds have been well attended and well received. The AMS Team have identified learning opportunities and as such a prescriber's educational programme has been devised for 2021/22.

The AMS Team have met weekly to ensure that AMS work continued in 2020/21.

11 Clinical Audits were carried out ensuring compliance to Trust AMS guidelines, 13 Antibiotic Guidelines were reviewed and updated and 3 Formulary Applications approved by the Trust Drugs and Therapeutics Committee. Antibiotic shortages have been managed carefully including 2 antimicrobials (Ceftolozane/Tazobactam IV and Flucytosine IV) which have been temporarily withdrawn from the global market.

In 2020/21, the AMS Team has welcomed a new Consultant Microbiologist Dr Sumita Pai and AMS Specialist Pharmacist Cristiano Serra (0.5WTE fixed term) and bade a fond farewell to Dr Huina Yang (Consultant Microbiologist) and Holly Smith (0.5WTE fixed term).

4.6 Incidents and Outbreaks (Criterion 1-10)

Incident and outbreak investigations occurring in 2020/21 were managed and reported to the hospital Infection Control and pre- and peri-operative Committee throughout the year.

Influenza

Plans for the vaccination of health care workers and the management of patients with influenza were co-ordinated through the ICPPC and led by the Occupational Health Team. Leads from all directorates were involved with the planning. The fit testing program for FFP3 masks is on-going with support with the new role of the fit testing team.The seasonal flu vaccination programme continued during 2020/21 and staff were strongly encouraged to have the vaccine. The Occupational Health Department co-ordinated a successful programme and the Trustwide uptake rate was 83.79%.This was helped greatly by a mobile flu clinic.

During this period, Royal Papworth continued to be a registered ECMO (extra corporeal membrane oxygenation) centre. This is treatment used for patients who have respiratory difficulties including H1N1. The total number of flu cases within Royal Papworth was zero.

There were no influenza outbreaks in 2020/21.

Norovirus

There were no incidents of ward closures due to confirmed Norovirus during 2020/21.

Clostridium difficile

There were no outbreak incidents relating to Clostridium difficile infection in 2020/21

MRSA

There were 2 cases of MRSA bacteraemia in 2020/21. 1 on Trust trajectory and the other being from another NHS trust. There were no bed days lost for contact screening due to side room facilities at Royal Papworth Hospital NHS Foundation Trust.

M.abscessus in water

Royal Papworth Hospital (RPH) experienced an outbreak of Mycobacterium abscessus (*M.abscessus*) shortly after moving to newly commissioned, single-building accommodation in Cambridge in May 2019. Bacteria from the family *M.abscessus* were detected in broncho-alveolar lavage (BAL) fluid of 2 patients (on 5/8/19 and 15/8/19) after they had received a lung transplant in the new hospital. This was an unexpected finding and as a consequence the hospital declared this to be an ‘outbreak’. *M.abscessus* was found at BAL in a further 5 transplant patients by June 2020. In addition *M. abscessus* associated with hospital water was cultured from 15 patients with cystic fibrosis (CF) or bronchiectasis to date.
From the analyses that have been performed the most credible source of the outbreak was the hospital water. At this point in time it is not possible to know how the bacteria came to be in the water supply. There is no apparent evidence of poor practice in the provision of either facilities management or clinical care in the hospital.

Extensive remedial actions have been carried out and this was continuously monitored throughout 2020/21. Weekly water testing did not find *M.abscessus* anywhere in the hospital since January 2021. However, currently, the outbreak is ongoing. The last lung transplant positive patient was identified in June 2020. In addition, three more respiratory patients acquired *M.abscessus* associated with hospital water were found in 2020.

An *M.Abscessus* oversight group was established in January 2021 this is to ensure all risks and safety measure are continuously monitored. The trust is carrying out an epidemiological study in collaboration with PHE to look for possible causes of the outbreak.

Tuberculosis

There was one incident during 2020/21. This case was individually assessed and was followed up as appropriate.

Vancomycin Resistant Enterococcus VRE and Extended Spectrum Beta-Lactamases (ESBL)

Routine screening on CCA no longer takes place for VRE and ESBL, however all positive clinical site samples are monitored to enable the Trust to identify increases in these organisms and act accordingly. We saw an increase in VRE and ESBL which was related to the COVID 19 surge response. 21.

Carbapenemase Producing Enterobacteriacae (CPE)

Over the past decade large increases in Carbapenemase-producing Enterobacteriaceae (CPE) infections have been reported globally. Unless action is taken and lessons are learnt from experiences elsewhere in the world rapid spread of CPE will pose an increasing threat to public health and medical treatment pathways in the UK. As CPE infections are susceptible to only a small number of antimicrobials this situation compromises a major public health problem and priority. In March 2014 Public Health England launched the acute Trust toolkit to promote the early detection, management and control of CPE colonisation. In response to this the IPCT developed a procedure to manage diagnosis, isolation and treatment of patients with these organisms. In 2020/21 CPE was isolated from 8 patients at Royal Papworth Hospital, these were from routine screening and there was no ongoing spread of CPE. There has been no evidence of transmission or CPE outbreaks within the Trust in 2020/21. All cases were individual assessed and were followed up as appropriate.

COVID-19 Pandemic

COVID-19 is a new coronavirus disease, which causes respiratory symptoms. It was first identified in December 2019 in China and quickly spread around the world. The COVID-19 pandemic was officially declared on the 11th March 2020. During the early stages of the outbreak the Trust put together surge plans to prepare for the expected upturn in demand of patients who would be admitted or transferred to us. During March the Trust put these plans into place and extended the capacity of its Critical Care Unit (CCA) to house COVID-19 patients. It also substantially increased its capacity to treat severely ill patients with COVID-19, who required Extracorporeal Membrane Oxygenation (ECMO) as well as respiratory ward beds increased the bed capacity to support other regional NHS Hospital. This was managed with the regional cell group and a command & control approach. The national guidance changed throughout the year which Infection Prevention and control team adapted accordingly.

The COVID 19 vaccine was implemented in Jan 2021 and all staff were highly recommended to take this vaccine. The Trustwide uptake rate for January to March was 92% for first dose with ongoing work for second dose to be given.

There was a total of 3 nosocomial infection in April 2020 and once visiting was suspended or restricted there were no further nosocomial infections during this reporting time period. There were 3 staff outbreaks, which were all investigated and lessons learnt. All cases were reported internally and externally to CCG and NHSI and were associated with shared rest facilities.

The COVID-19 pandemic continues to be managed within the organisation through the Command and Control centre. Meetings are continuing, these will be stood up again as

required. The Clinical Decision Cell continues to meet regularly, these meetings monitor and contribute to the management of the current situation.

5 Estates & Facilities update for DIPC (Criterion 1, 2, 6 & 9)

5.1 Cleaning Services

OCS provides cleaning services to Royal Papworth Hospital.

- Within each department/ward of the hospital there are *"commitment to cleaning"* boards that display the roles, responsibilities and cleaning routines of that department; these also incorporate the required SLA for that specific department/ward
- As an output spec contract there are no specific staffing number requirements aligned to the cleaning contract, the service level that OCS are monitored against. is the frequency of work.
- The PFI contract is a self-monitoring contract which enables the contractor to take a lead in all cleaning audits in addition to this we have organised joint audits that take place weekly. In the event of an audit failing, OCS will rectify the failings immediately and the area will be audited again on completion.
- Any failures in cleaning audits are reported in the monthly performance report and managed through the PFI contractual management process.
- OCS & E&F are continuing to work to ensure sufficient staffing levels are maintained within the agreed contract.
- Levels of frequency for associated risk level are found in the data below.

Very High Risk		
Task	**Frequency**	**Responsibility**
Sanitary Areas		
Commodes	Daily / Between Use	Domestic / Nursing staff
Bathroom hoists	Daily / Between Use	Domestic / Nursing staff
Patient wash bowls	Daily	Nursing staff
Mirrors	Daily	Domestic
Dispensers	Daily	Domestic
Showers/baths	Daily / Between use	Domestic / Nursing staff
Toilets	3 x Daily & 1 x Checked	Domestic
Sinks	3 x Daily & 1 x Checked	Domestic
Bays/Bedrooms		
Medical equipment not attached to a patient	Daily	Domestic / Nursing staff
Medical equipment attached to a patient	Daily	Nursing staff
Medical gas equipment	Daily	Nursing staff
Patient fans (external clean)	As required	Nursing staff
Patient personal items	Daily	Nursing staff
Patient TVs	Daily	Domestic
Beds (frame only)	Daily	Domestic
Mattresses	Daily	Nursing staff
Lockers/tables	2 x Daily	Domestic
Weighting scales, manual handling	Daily / Between Use	Domestic / Nursing staff

equipment and drip stands		
Chairs	Daily	Domestic
Notes and drugs trolleys	Daily	Ward Housekeeper / Nursing staff
Kitchen Areas		
Dishwashers (external clean)	Daily	Ward Housekeeper
Fridge freezers (external clean)	Daily / Weekly (internal clean)	Ward Housekeeper
Ice machines/water boilers (external clean)	Daily	Ward Housekeeper
Kitchen cupboards	Weekly	Ward Housekeeper
Hand Wash Basin	Daily / Between Service	Domestic / Ward Housekeeper
Catering Sink	Daily / Between Service	Domestic / Ward Housekeeper
Microwaves	Daily / Weekly (internal clean)	Ward Housekeeper
Floors - polished/non-slip/soft	Daily/Between Service	Domestic /Ward Housekeeper
Floors/walls		
Switches/sockets	Daily	Domestic
Radiators/ventilation grills	Daily	Domestic
Walls	Spot check Daily / Dust Weekly	Domestic
Doors	Daily	Domestic
Floors - polished/non-slip/soft	2 x Daily	Domestic
Low / high surfaces	2 x daily / 2 x weekly	Domestic
Additional Equipment		
Waste receptacles	Daily	Domestic
Linen trolley	Weekly	Portering Staff

High Risk		
Task	**Frequency**	**Responsibility**
Sanitary Areas		
Commodes	Daily / Between use	Domestic / Nursing staff
Bathroom hoists	Daily / Between use	Domestic / Nursing staff
Patient wash bowls	Daily / Between use	Nursing staff
Mirrors	Daily	Domestic
Dispensers	Daily	Domestic
Showers / baths	Daily / Between use	Domestic / Nursing staff
Toilets	3 x Daily & 1 x Checked	Domestic
Sinks	3 x Daily & 1 x Checked	Domestic
Bays/Bedrooms		
Medical equipment not attached to a patient	Daily / Between use	Domestic / Nursing staff
Medical equipment attached to a patient	Daily / Between use	Nursing staff
Medical gas equipment	Daily	Nursing staff
Patient fans (external clean)	As required	Nursing staff

Patient personal items	Daily	Nursing staff
Patient TVs	Daily	Domestic
Beds (under)	Weekly	Domestic
Mattresses	Daily / Between use	Nursing staff
Chairs / lockers / tables	Daily	Domestic
Weighing scales and manual handling equipment	Daily / Between use	Domestic / Nursing staff
Drip stands	Daily / Between use	Domestic / Nursing staff
Notes and drugs trolleys	Daily	Ward Housekeeper / Nursing staff
Kitchen Areas		
Dishwashers (external clean)	Daily	Ward Housekeeper
Fridge freezers (external clean)	Daily / Weekly (internal clean)	Ward Housekeeper
Hand Wash Basin	Daily / Between Service	Domestic / Housekeeper
Catering Sink	Daily / Between Service	Domestic / Housekeeper
Ice machines / water boilers (external clean)	Daily	Ward Housekeeper
Kitchen cupboards	Weekly	Ward Housekeeper
Microwaves (external clean)	Daily / Weekly (internal clean)	Ward Housekeeper
Floors - polished / non-slip / soft	Daily	Domestic
Floors/walls		
Switches / sockets	Daily	Domestic
Radiators / ventilation grills	Daily	Domestic
Walls	Spot Check Daily / Dust Weekly	Domestic
Doors	Daily	Domestic
Floors - polished / non-slip / soft	Daily	Domestic
Low / high surfaces	Daily / Weekly	Domestic
Additional Equipment		
Waste receptacles	Daily	Domestic
Delivery linen trolley	Weekly	Portering Staff

Significant Risk		
Task	**Frequency**	**Responsibility**
Sanitary Areas		
Commodes	Daily / Between use	Domestic / Nursing staff
Bathroom hoists	Daily / Between use	Domestic / Nursing staff
Patient wash bowls	Daily / Between use	Nursing staff
Mirrors	Daily	Domestic
Dispensers	Daily	Domestic
Showers / baths	Daily / Between use	Domestic / Nursing staff
Toilets	Daily	Domestic
Sinks	Daily	Domestic
Bays/Bedrooms		
Medical equipment not attached to a patient	Daily / Between use	Domestic / Nursing staff
Medical equipment attached to a patient	Daily / Between use	Nursing staff

Medical gas equipment	Daily	Nursing staff
Patient fans (external clean)	As required	Nursing Staff
Patient personal items	Daily	Nursing staff
Patient TVs	Daily	Domestic
Beds (under)	Weekly	Domestic
Mattresses	Daily / Between use	Nursing staff
Chairs / lockers / tables	Daily	Domestic
Weighing scales and manual handling equipment	Daily / Between Use	Domestic / Nursing staff
Drip stands	Daily / Between Use	Domestic / Nursing staff
Notes and drugs trolleys	Daily	Ward Housekeeper / Nursing staff
Kitchen Areas		
Dishwashers (external clean)	Daily	Ward Housekeeper
Hand Wash Basin	Daily / Between Services	Domestic / Ward Housekeeper
Catering Sink	Daily / Between Services	Domestic / Ward Housekeeper
Fridge freezers (external clean)	Daily / Weekly (internal clean)	Ward Housekeeper
Ice machines / water boilers (external clean)	Daily	Ward Housekeeper
Kitchen cupboards	Weekly	Ward Housekeeper
Microwaves (external clean)	Daily / Weekly (internal clean)	Ward Housekeeper
Floors - polished / non-slip/soft	Daily	Domestic
Floors/walls		
Switches / sockets	Weekly	Domestic
Radiators / ventilation grills	Daily	Domestic
Walls	Spot check weekly, dust monthly	Domestic
Doors	Daily	Domestic
Floors - polished / non-slip/soft	Daily	Domestic
Low / high surfaces	Daily / weekly	Domestic
Additional Equipment		
Waste receptacles	Daily	Domestic
Delivery linen trolley	Weekly	Portering Staff

Low Risk		
Task	**Frequency**	**Responsibility**
Sanitary Areas		
Mirrors	Weekly	Domestic
Dispensers	Weekly	Domestic
Toilets	Daily	Domestic
Sinks	Daily	Domestic
Bays/Bedrooms		
Chairs	Weekly	Domestic
Floors/walls		
Switches / sockets	Weekly	Domestic
Radiators / ventilation grills	Monthly	Domestic
Walls	Monthly	Domestic

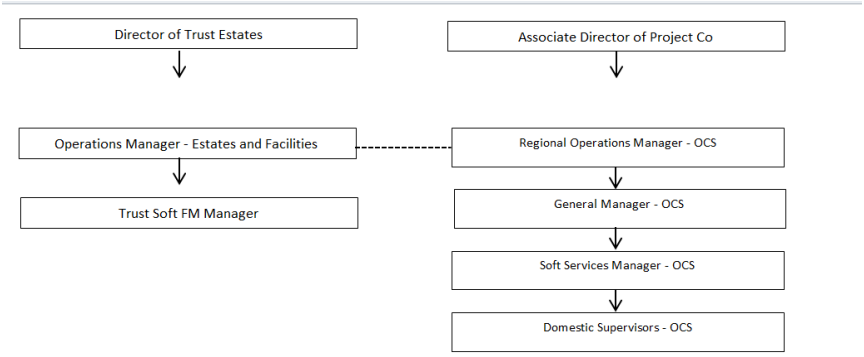
Doors	Spot Check Weekly / Full Clean Monthly	Domestic
Floors - polished / non-slip / soft	Weekly	Domestic
Low / high surfaces	Weekly	Domestic
Additional Equipment		
Waste receptacles	Daily	Domestic

5.2 Deep Cleaning Programme

A deep cleaning programme has been agreed in conjunction with OCS to be carried out throughout the year which would cover the hospital in full.

5.3 Management Arrangements

OCS is overseen by the Senior General Manager Project Co, the Director of Trust Estates and Operations Manager from the Trust, the OCS Regional Contracts Manager who visits the site regularly; together they oversee management of the cleaning contract. This management structure also supports the cleaning supervisors on a day to day basis.



5.4 Monitoring Arrangements

The contract is set up to be self-monitoring. OCS have implemented an audit system called iAuditor which uses the NHS 49 elements template to track and score audit scores. Trust Estates have access to the system which allows transparency in the data. The employment of OCS supervisors alongside Trust Estates monitoring Officers ensures consistent focus on both quality of service delivery and effective communication on monitoring results. The results of all cleans across the Trust are sent to the IPC team and Senior Nurses/Department Heads weekly, and any discrepancies are discussed at the ICPPC. OCS utilise the National Standards for Cleanliness audit tools and follow the recommendations as laid down by this national body. Out of hours cleaning provision is available from 22:00 – 06:00, by contacting the Helpdesk

QCs are undertaken at the following frequencies, and QC teams consist of a matron or nursing representative, OCS and Estates and Facilities; all results are captured on to the iAuditor system and are reported weekly and monthly.

Area	Frequency
Very High Risk	**Weekly**
High Risk	**Two-weekly**
Significant Risk	**Monthly**
Low Risk	**6-monthly**

5.5 Budget Allocation

The costs of all cleaning, including routine cleaning, deep cleans and ad-hoc cleans is included within the PFI contract.

5.6 Decontamination

The Trust has appointed two external leads for decontamination; Duncan Roper from Nuffield Health as Decontamination Manager and Tracey Miller from AVM as Authorising Engineer for Decontamination.

The only items we decontaminate on site are endoscopes. We have two endoscope washing machines, one in theatres and one in radiology, as well as a contingency process through Cambridge University Hospitals, if for any reason both scope washers are out of action. Room decontamination can be carried out by OCS using a variety of options, whatever is appropriate for the situation. They can use a chemical solution of Tristel or Actichlor, or if required a HPV machine. The trust also has a UV machine which is used in strategic areas to assist with the decontamination of rooms; these are used by HCAs.

5.7 Linen Service

The linen service is provided by Ellis, TBT and Saffron laundry; their contract is for clean linen to be delivered to site daily consisting of the following: sheets, draw sheets, pillow cases, towels, blankets, scrubs and patient gowns. These are stored in the linen room and dispatched to the wards by the portering team. Dirty linen is collected from the wards by porters and then collected by Ellis/Saffron for cleaning. The linen is cleaned in accordance with NHS standards.

5.8 Water Safety

The Trust has a Water Quality Steering Group, which reports to the Risk Management Group. The Water Quality Steering Group meets regularly to review any issues relating to water systems and control.

The Water Safety Group is the working group whose duties are to advise on and monitor the implementation and efficacy of all Legionellosis Management & Control and Safe Hot Water Management Programmes across all sites constituting the Trust Estate. The group consists of the Trust Responsible Person (water) and Deputies, Infection Control Doctor, Matron or Ward Based Representative, Risk Manager, Estates Operation Manager and the Trust Legionellosis Management & Control Consultants and Skanska Full. Details of the Trust's water safety procedures are documented in DN654 Water Safety Plan available on the Intranet.

6 Training Activities (Criterion 1, 4, 6, 9 &10)

Infection Prevention and Control training mandatory sessions were delivered as out-lined in the table below:

Teaching sessions	Frequency	Delivered by
Induction session for **all** new starters	Monthly	Presentation provided and reviewed by IPC team; supervised by education team
Training for Foundation and Core Medical Trainees	Three times yearly	Education
Update for qualified nurses in cardiac and thoracic directorate via e-learning	Annually	Standard e-learning package
Update for non-qualified nurses in cardiac and thoracic directorate via e-learning	Annually	Standard e-learning package

Hand hygiene update for all other clinical staff via Hand Hygiene week for practical plus e-learning	Annually	IPCT
Training session for Housekeepers via e-learning	Annually	IPC team

Infection Control & Hand Hygiene Training April 19 - March 20	
	Compliance
Hand hygiene training	Monitored on Education database
General training	Compliance is now linked to incremental progression and this will ensure that full compliance is obtained.

Compliance with Infection Prevention and Control yearly updates is a requirement for all staff for completion of their annual appraisals. Compliance is regularly monitored and reported back to the IPCC meetings on a quarterly basis. The Education Department follow up any non-compliance.

7. Annual Programmes (Criterion 1-10)

7.1 IC Annual Work Programme 2020/21

Action	Goal	Timeline	Responsible	RAG Rating
IPC team	Band 4 6 month secondment approved and appointed Business case for Band 3 TV/IC Specialist Support Nurse	Dec 2020 Jan 2020	SSI Nurse/IC Nurse Lead ICN/Lead TVN	 On hold
MRSA screening	Maintain and monitor screening compliance. Provide feedback on compliance to all areas via the ICPPC	Monthly Eight weekly	Matrons ICPPC	Continuous
Audit	Annual review of annual audit programme Including Care bundles. Take through ICPPC. Continuous application and monitoring of annual audit programme	Sept 2020 2020/21	Lead ICN/IC Doctor IPCT/Link nurses/ Antimicrobial	 Continuous

Action	Goal	Timeline	Responsible	RAG Rating
			pharmacist/ Audit department/ relevant others	
Review of new build projects, designs and estates during the settling in period of the New Hospital	Infection control input to New Papworth Hospital (NPH)	2015/20	IPCN/ IC Doctor	Completed
Onsite upgrades and new builds	Support and advise Estates as required.	2020/21	IPCN/IC Doctor	Ongoing
CQC monitoring	Ensure and measure compliance with CQC standards/ Health and Social Care Act 2008. Evidence review for shared drive in progress. Review annually.	2020/21	IPCN/ IC Doctor	
Education	Participation in the annual programme for FY1 + 2, and CMT run by the Education department Ad hoc training across the Trust Trust-wide induction – update annually Mandatory training provided via E-Learning with IPC support (Level 1 & 2), updates carried out annually. Hand Hygiene awareness week	2020/21 2020/21 On hold due to COVID. However, national campaign followed	IPC team (including IPC Doctor) IPC team IPC team	Ongoing
Deep Clean Programme	Continued monitoring of deep clean programme through IPCC. Data held with Estates/OCS and QC results reported via Matrons balanced score card and issues flagged to ICPPC. Submission of Estates Compliance report to ICPPC	2020/21 8 weekly to ICPPC 2020/21 8 weekly to ICPPC	OCS/Estates/ DIPC/Modern Matrons/ IPCN Estates/DIPC	

Action	Goal	Timeline	Responsible	RAG Rating
Surgical Site Infection Surveillance	Register for Year 10 PHE surveillance programme. Continuous SSI surveillance programme to cover CABG +/- valve. Data to be submitted to the PHE for one quarter only for CABG +/- valves Continued in-house surveillance of Valve only surgery Engagement with surgical teams/microbiologists to discuss deep/organ space infections and completion of RCA to identify common themes/learning	Q3 2020/20 (not submitted to PHE) 2019/20	Surgical Site Surveillance team Surveillance team, ICD	Continuous
Root Cause analysis of MRSA /MSSA bacteraemia's and Clostridium difficile cases	Completion of RCAs on all cases of MRSA bacteraemia's and C.difficile. Completion of MSSA RCAs according to criteria.	2020/21	IPCT/ IPC Doctor/Modern Matrons/Ward areas	Continuous
Monitoring *E.coli*, Klebsiella and Pseudomonas bacteraemias Rate reduction as advised for all NHS Trusts	Mandatory reporting of *E.coli* cases required from June 2011 and voluntary reporting of Klebsiella and Pseudomonas cases from April 2017 Review of plan- for the Trust to reduce *E.coli* bacteraemia and healthcare associated Gram-negative blood stream infections by 50% by March 2021	2020/21 2020/21 – not completed this year due to COVID-19 pandemic	IC Doctor/Lead IPCN IC Doctor/Lead IPCN	Continuous Continuous
CVC-BSI Monitoring in critical care and respiratory patients	Continue current CVC-BSI monitoring via Infection in Critical Care Quality Improvement Programme (ICCQIP) website. Continue submitting data on CVC-BSI in respiratory patients to the Matron for their own analysis.	2020/21	IC Doctor	Continuous
Routine tasks including managing	IPCNs ▪ Regular review of inpatients with	2020/21	IPCT	Continuous

Action	Goal	Timeline	Responsible	RAG Rating
patients on Lorenzo	IC issues/nursing ward round. ▪ Action positive results and advise on inpatient treatment/ send GP/hospital/patient letters ▪ Document advice on Lorenzo ▪ Alert positive patients on Lorenzo/Tomcat, this includes new categories of alerts on Lorenzo. ▪ Give patient advice leaflets and visit newly positive patients on the ward. Monthly isolation surveillance. IPCNs/ICDs ▪ Telephone advice ▪ DIPC Annual report ▪ Provide support to ward staff with IC matters. ▪ Management of patients with diarrhoea ▪ Outbreak management ▪ Review and create policies and procedures ▪ Participation in external audits and inspections ▪ Monthly QRMG DIPC report ▪ Monitoring of quarterly/CCG dashboard ▪ Providing figures for Matrons and Nursing scorecards ▪ Meeting attendance ▪ IPCNs-attend regular meetings. ▪ ICDs-attend upwards of 8 regular meetings. ICD ▪ CCA ward rounds ▪ Transplant ward rounds ▪ Respond to FOI requests and complaints ▪ Preparation of reports (e.g. SUI, alert organism monthly reports) and annual reports/plans ▪ Monthly Trust board reporting			
ED Environmental Rounds	To maintain a safe environment for patients and staff. Ensure a smooth running of the New Hospital from an Infection Control perspective.	2020/21	ICNs/Matrons/ DIPC/EDs/ISS	Continuous
Data analysis/	Monitoring and analysis of annual	2020/21	IPCT	Continuous

Action	Goal	Timeline	Responsible	RAG Rating
Monitoring of current national guidance (horizon scanning)	figures for MRSA, C. diff and bacteraemias Reviewing issued national guidance Monitoring current IC research.			
Water Safety Plan (including management at NPH)	Pseudomonas/Legionella Monitoring with Estates	2020/21	IPCT/IPC Doctor/Estates	
	Advising on water management at New Papworth Hospital NHS Foundation Trust. Regular attendance at Water Safety Group meetings.	2020/21	Estates	
CPE Management and prevention	Ongoing monitoring/ screening and incident management of CPE; includes additional screening of patients who have been in London and Manchester hospitals as well as patients who are resident or have had inpatient stays abroad.	2020/21	IPCT/IC Doctor	Continuous
Candida auris management and screening	Ongoing monitoring/ screening and incident management of C.auris; includes additional screening of patients who have been in Kings college Hospital and for patients who have been admitted to hospitals abroad especially hospitals that are deemed high risk. Refer to DN778.	2020/21	IPCT/IC Doctor	Continuous
M.abscessus outbreak management	Management of ongoing M.abscessus outbreak in post lung transplant, CF and Lung Defence patients.	2020/21	Trust wide, PHE, NHSE/I, CCG	Continuous
COVID-19 pandemic	Management of ongoing COVID-19 pandemic	2020/21	Trust wide/International	Continuous

Action	Goal	Timeline	Responsible	RAG Rating
Microbiological monitoring of the final rinse water of endoscope washer disinfectors in conjunction with Estates	Analysis of water testing results (TVC, Pseudomonas, Mycobacteria) and giving appropriate advice to Estates	2020/21	Estates with IPC Doctor input if necessary	Continuous
Microbiological monitoring of the water supply for heater coolers in conjunction with Estates	Analysis of water testing results (TVC, Coliforms, *E.coli*, Pseudomonas, Legionella, Mycobacteria) and giving appropriate advice to Estates with regard to decontamination process	2020/21	Medical Engineering	Continuous

7.2 IC Annual Audit Programme 2020/2021 (Criterion 1-10)

Title	Frequency
Hand Hygiene	Monthly
HII*	Monthly
ANTT	Bi Annual
MRSA Screening	Monthly
Isolation	Monthly
CPE	Monthly
Waste disposal	Annual
Mattress	Monthly
Social distancing and mask wearing**	Monthly
Covid Passport ***	Monthly

Title	Frequency
Commodes	Quarterly
Raised Toilet Seats	Quarterly

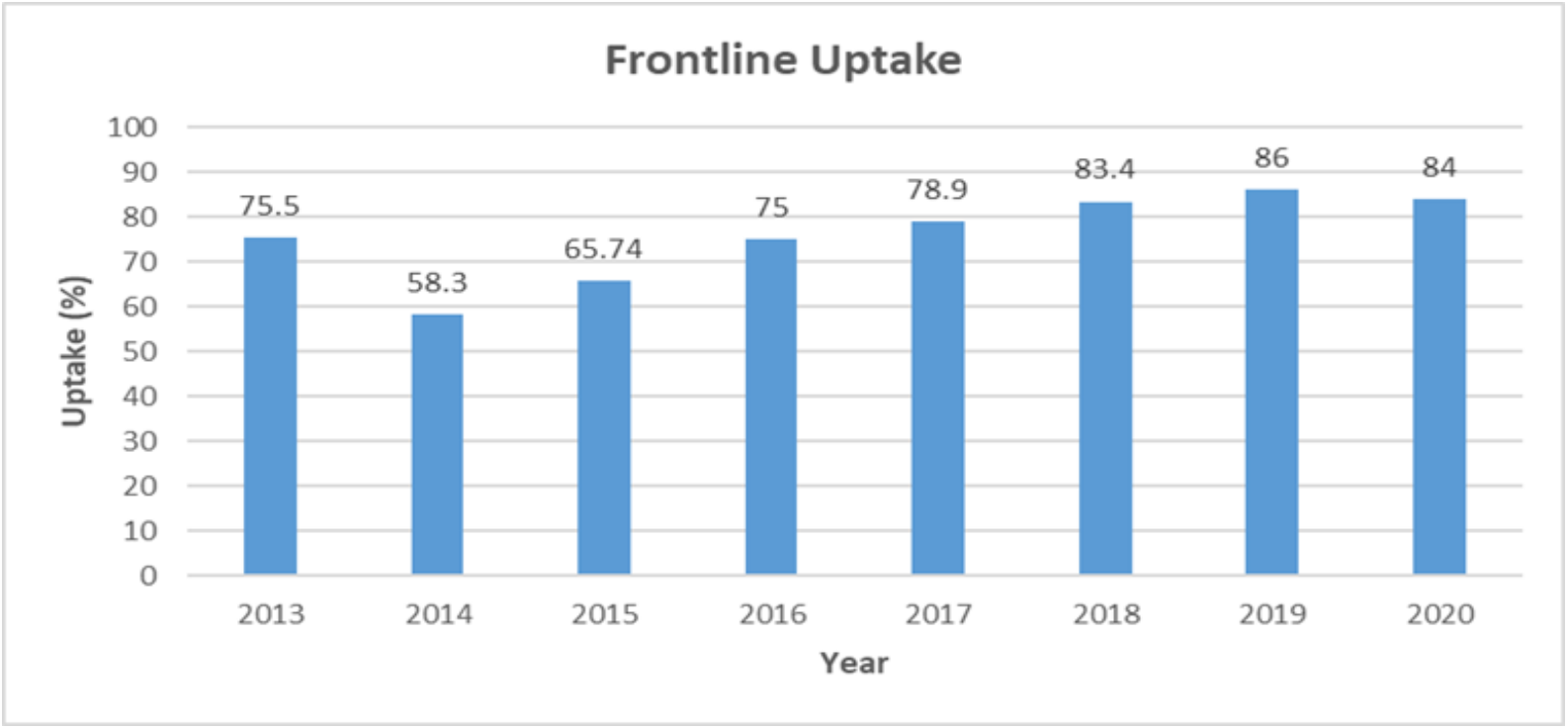
Title	Frequency
Sharps	Annual
Linen	Annual
Environment	Annual
Alcohol Gel	Annual
Hand Hygiene technique	Annual
The Spinal Hospital	Annual
Waste	Annual
CVC BSI	Rolling
Scrubbing and Gowning	Rolling
Skin Prep	Rolling
National Surgical Audit	Rolling

*High Impact Interventions
HII1 – CVC insertion and ongoing care
HII2 – PIV insertion and ongoing care
HII4 – Prevention of surgical site infection
HII5 – Ventilated patients
HII6 – Urinary catheter insertion and ongoing care
HII8 – Cleaning and decontamination of clinical equipment
** Commenced in October due to COVID pandemic
*** Commenced in September due to COVID pandemic

8. Influenza Vaccine uptake for 2019/20 Season (Criterion 1, 10)

8. Influenza Vaccine uptake for 2020/21 Season (Criterion 1, 10)

Staff Group	Number of Vaccines administered			Number in post			Number in post		
	2018	2019	2020	2018	2019	2020	2018	2019	2020
Doctors	152	179	201	216	230	245	70%	78%	82%
Nurses	497	525	613	651	673	728	76%	78%	84%
Other Professionally qualified Staff	253	225	260	268	243	295	94%	93%	88%
Support to Clinical Staff	323	540	335	334	562	416	97%	96%	81%
Frontline Staff	**1225**	**1469**	**1409**	**1469**	**1708**	**1684**	**83.40%**	**86%**	**84%**



Immunisation of frontline staff against influenza reduces the transmission of infection to vulnerable patients. This year's flu programme was delivered from 5 October 2020 to 26 November 2020 in advance of the Covid vaccination campaign. Drop in clinics were offered at specific floors (hot-spots), but also at central hospital locations. The flu data is uploaded to Public Health England via the ImmForm system each month. RPH have ordered their own vaccines have been ordered for next seasons programme. There has been a plateau in staff uptake from previous years. It is not clear why this is but may be due to Covid 19 and staff shielding and so not attending site for vaccination.

9. Inoculation injuries 2020/21

9.1 Annual quarterly figures

Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
2020/21	5	5	9	8	27

This year has seen the update of the Policy for Sharps injuries and Splash Incidents involving Blood or Body Fluids which has streamlined the process for managing blood exposures with high risk sharps requiring HIV post exposure prophylaxis accessing it via the CUH emergency department.

9.2 Areas reporting Incidents

Needlesticks incidents by directorate 2020/21	**20/21 Q1**	**20/21 Q2**	**20/21 Q3**	**20/21 Q4**	**Total**
Cardiology	0	1	1	2	4
Cath Labs	1	0	0	1	2
Surgical	0	2	3	0	5
Theatres, Critical Care and Anaesthesia	2	1	4	5	12
Thoracic	1	1	1	0	3
Transplant	1	0	0	0	1
Total	**5**	**5**	**9**	**8**	**27**

Numbering Additional Occupational Health Covid-19 activities

In 2020/21 the Occupational Health department provided considerable additional support for Covid work including the individual risk assessment process and guidance for staff with individual health vulnerabilities, advice for staff on reactions with personal protective equipment and skin assessments. There has also been an increase in general management referrals to occupational health.
In 2020/21 there were additional shielding assessment appointment organised with an occupational health doctor to advice on a return to work. This was completed for 60 staff with some requiring additional follow up appointments or transfer to formal management referral if they were unable to return to their normal role and alterative
The OH team were key in the implementation of a successful Pfizer BioNtech Covid 19 vaccination programme from December 2020 – April 2021 at CUH. The OH team helped prioritise RPH red risk staff access early in the vaccination campaign. All Covid 19 vaccination is was recorded on the NIVS system.

Immunisation and Infection Screening Policy
Occupational Health have proposed enhanced screening for Tuberculosis screening with a hard stop process so staff have tuberculosis screening completed prior to commencement. This is due to be implemented in 2021 with updates to the policy.

10. References and resources

IPS & NHS Improvement (Nov 2017) 4th Ed of Saving Lives: High Impact Interventions,

Department of Health (2015), Health and Social Care Act 2008, Code of practice on the prevention and control of infections and related guidance

Department of Health (2003), of the Chief Medical Officer's strategy for infection control (*Winning Ways: working together to reduce healthcare associated infection*)

NHS Improvement & Infection Prevention Society (2017) High Impact Interventions: Care processes to prevent infection. 4th Ed

Public Health England 2017. Guidance, Health matters: preventing infection and reducing antimicrobial resistance. [ONLINE] Available at: https://www.gov.uk/government/publications/health-matters-preventing-infections-and-reducing-amr/health-matters-preventing-infections-and-reducing-antimicrobial-resistance [Accessed May 2018]