Ashford and St. Peter's Hospitals
NHS Foundation Trust

TRUST BOARD
30th September 2021

AGENDA ITEM	15.3	
TITLE OF PAPER	DIPC Annual Report 2020/2021 and Appendices	
Confidential	**NO**	
Suitable for public access	**YES**	
PLEASE DETAIL BELOW THE OTHER SUB-COMMITTEE(S), MEETINGS THIS PAPER HAS BEEN VIEWED		
Control of Infection Committee Quality of Care Committee, 23 September 2021		
STRATEGIC OBJECTIVE(S):		
Quality of Care		/
People		/
Modern Healthcare		/
Digital		/
Collaborate		/
EXECUTIVE SUMMARY		

This annual report from the Director of Infection Prevention and Control (DIPC) provides the Board with an annual summary of assurance of Healthcare–Associated infection performance for Ashford and St Peters NHS Trust (ASPH) for the period 1st April 2020 to 31st March 2021. The report is in line with the requirements of the Health and Social Care Act 2008: Code of Practice for the NHS on the prevention and control of healthcare associated infections and related guidance (updated July 2015).

This year has provided unprecedented challenge to Infection Prevention and Control (IPC) with the ongoing challenge of the COVID – 19 pandemic. The Annual report is a summary of the challenges and achievements made in Infection Prevention and Control.

Achievements:
The Infection Control Team provided support throughout the COVID-19 Pandemic, including working 7 days per week. This continued during the "second wave" that hit this region in November 2020 despite the IPC nursing team resource being reduced by 50%.

The Trust maintained its performance as being one of the ten Trusts having the lowest number of "nosocomial" COVID cases in England.
When benchmarked against all 137 English Trusts (using data from PHE Data capture system), this Trust has the 31st lowest rate of MSSA bacteraemia.

There was a 33% decrease from previous year for C.diff cases and the rate is 5.44 per

	100 000 bed days. This places the Trust rate as 5th lowest (i.e. best) of the 137 Trusts in England. The Infection Control Nursing Team recruited additional staff so that in 2021-22 it is fully resourced. New technologies in cleaning and ventilation were trialled successfully during the COVID-19 pandemic
RECOMMENDATION:	The Board is asked to read and discuss the report and to approve the Infection Prevention and Control Annual Performance and Audit Plan 2021-22
SPECIFIC ISSUES CHECKLIST:	
Quality and safety	
Patient impact	
Employee	
Other stakeholder	
Equality & diversity	
Finance	
Legal	
Link to Board Assurance Framework Principle Risk	This Infection Prevention and Control Strategy sets out those principles to be followed in order to deliver the NOM's ambitious North-star objective
AUTHOR	Amanda Walker Associate Director in Infection Prevention and Control
PRESENTED BY	David Fluck, Medical Director and Director for Infection Prevention and Control
DATE	24 September 2021
BOARD ACTION	Approve

Ashford and St. Peter's Hospitals
NHS Foundation Trust

Infection Prevention and Control Annual Report 2020- 21

Dr David Fluck, Director of Infection Prevention and Control

Director of Infection Prevention and Control Annual report 2020-21

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1.0 Introduction

This annual report from the Director of Infection Prevention and Control (DIPC) provides the Board with an annual summary of assurance of Healthcare–Associated infection performance for Ashford and St Peters NHS

Trust (ASPH) for the period 1st April 2020 to 31st March 2021. The report is in line with the requirements of the Health and Social Care Act 2008: Code of Practice for the NHS on the prevention and control of healthcare associated infections and related guidance (updated July 2015).

This year has provided challenges in Infection Prevention and Control (IPC) with the ongoing challenge of the COVID – 19 pandemic. The Annual report is a summary of the challenges and achievements made in Infection Prevention and Control.

Infection Prevention and Control Strategy 24 June 2020

In light of the Covid-19 pandemic, Ashford and St Peters Hospitals NHS Foundation Trust (ASPH) has identified a New Operating Model (NOM) that has Infection Prevention and Control (IPC) principles at the fore. This Infection Prevention and Control Strategy sets out those principles to be followed in order to deliver the NOM's ambitious North-star objective:

Within the next 12-18 months to end health and care acquired infections for the team, patients and the community we serve, in order to deliver the Trust mission.

The NOM clearly states that 'Infection Prevention and Control guidance must be followed'. Therefore this IPC strategy must be followed in order to achieve the North Star Objective. This strategy articulates the key principles and provides a framework for decision making. All operational decisions must conform to this strategy and be ratified by the Infection Control (IC) committee.

The Key Principles

- Personal Ownership and Responsibility for all 'on site'
- Minimise Human Density
- IPC Precautions and Practice are Followed
- Effective Decontamination is Undertaken
- A Safe Environment is Provided

Achievements:

The Infection Control Team provided support throughout the COVID-19 Pandemic, including working 7 days per week. This continued during the "second wave" that hit this region in November 2020 despite the IPC nursing team resource being reduced by 50%. The Trust maintained its performance as being one of the ten Trusts having the lowest number of "nosocomial" COVID cases in England.

When benchmarked against all 137 English Trusts (using data from PHE Data capture system), this Trust has the 31st lowest rate of MSSA bacteraemia.

There was a 33% decrease from previous year for C.diff cases and the rate is 5.44 per 100 000 bed days. This places the Trust rate as 5th lowest (i.e. best) of the 137 Trusts in England.

The Infection Control Nursing Team recruited additional staff so that in 2021-22 it is fully resourced.

New technologies in cleaning and ventilation were trialled successfully during the COVID-19 pandemic

Priorities for next year:

To ensure learning from Post Infection review so that future cases may be prevented

To continue to build on the work to further improve attendance at the Water Safety and Environment Group

To have zero tolerance for MRSA bacteraemia cases

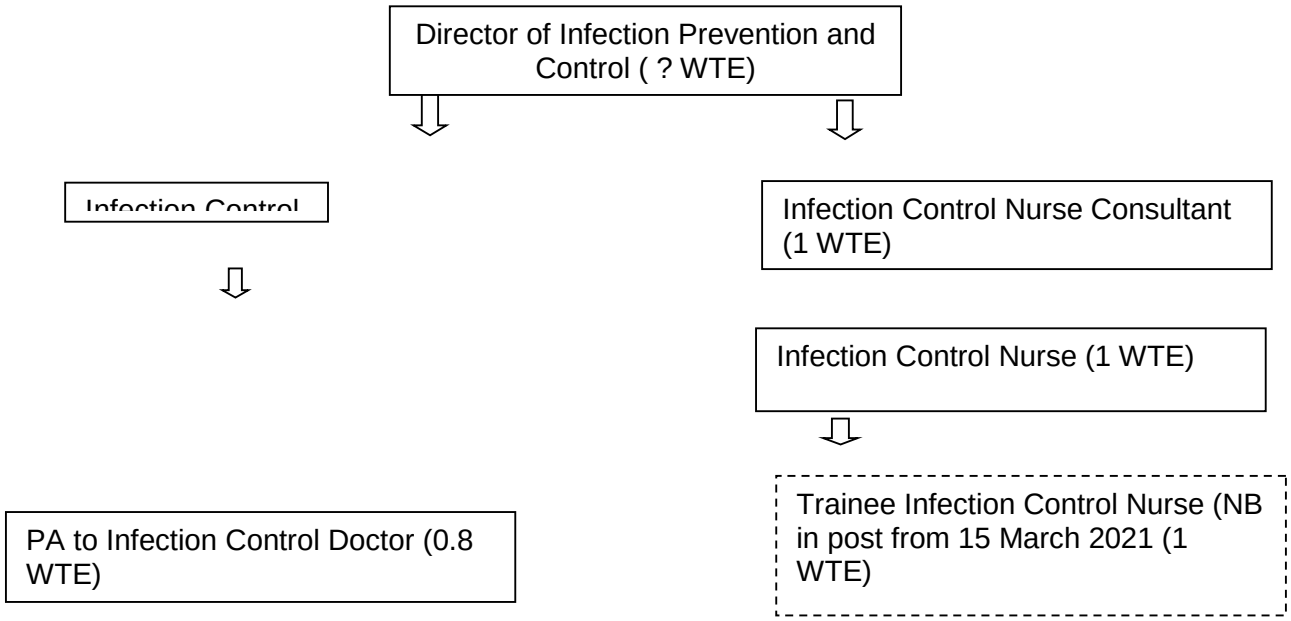
To build the Integrated Infection Prevention and Control Team across North West Surrey

2.0 Compliance with the Health and Social Care Act 2008

Criterion 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

Infection Control Team and Budget allocation 2020-21

Ashford and St Peters Infection Prevention and Control Team



The above structure is further supported by the following staff who come under the Infection Prevention and Control Department Budget

IV Specialist Nurse	Clinical Practice Education Department	1.0 WTE
Surgical Site Surveillance Nurse	Surgery	1.0 WTE

The Infection Control budget for 2020-21 was :
£189031 (pay)
£15116 (non pay)
The Infection Prevention and Control Department does not hold its own training budget. Outbreak budgets are held by Emergency Planning.

Infection Prevention and Control Reporting Arrangements 2020/21
Control of Infection Committee (COIC)
The Terms of Reference and membership is attached as Appendix 1. These are updated annually and were last ratified at the January 2021 committee meeting.

COIC: Links to other areas

The Director of Infection Prevention and Control is a member of the following Trust committees:

- Trust Board

Sub Board Committees

- Strategic Change
- Quality of Care
- Modern Health
- People
- Integrated Digital
- Quality Board
- Joint Local Negotiating Committee
- Information Governance Steering Group
- Council of Governors
- Risk Scrutiny Committee
- Safety & Quality Committee
- Joint Digital Committee
- Joint Programme Board
- Surrey Safe Care Joint Committee

The Infection Prevention and Control Doctor is a member of the following committees:

- Surgical site Infection surveillance oversight committee meeting
- Outbreak meetings
- Decontamination meeting
- Theatre ventilation meeting
- Blue /green Theatre pathway meeting
- Covid-19 Clinical Reference group
- Covid Silver Command
- Flu and Covid Bronze group
- Partnership Pathology Infection Control operational group
- Water Safety and Environment Group
- Decontamination Committee

The Infection Prevention and Control Nurses are members of the following committees:

- Nursing, Midwifery and Allied Health Professionals Board
- Major Incident/Business Continuity Planning
- Professional development Committee
- Risk Scrutiny Committee
- Clinical Product Review Group
- Care Quality Commission Oversight Committee
- Flu and Covid Bronze group
- Covid Silver Command
- Surrey Safe Care groups
- BSPS Partnership Pathology Infection Control operational group
- Water Safety and Environment Group
- Decontamination Committee
- Safety and Quality Committee
- Quality Account Assurance Committee
- Quality Board
- Covid-19 Clinical Reference group

And externally

- Surrey Infection Prevention and Control Committee
- South East Infection Prevention and Control Network
- Infection Prevention Society
- Healthcare Infection Society
- Links with CCGs, Surrey County Council and external partners from Healthcare Associated Infection and outbreak review and feedback .

Infection Prevention and Control reporting Schedule:

Date	Committee	Report Type
May 2020	Quality Committee	2-monthly report from COIC
May 2020	Report from the Director of Infection Prevention and Control	Annual report
July 2020	Quality Committee	2-monthly report from COIC
September 2020	Quality Committee	2-monthly report from COIC
October 2020	Risk Scrutiny Committee	Risk Exception report
November 2020	Quality Committee	2-monthly report from COIC
December 2020	Risk Scrutiny Committee	Risk Exception report
December 2020	Trust Board	IPC Board Assurance Framework
January 2021	Quality Committee	2-monthly report from COIC
January 2021	Trust Board	IPC Board Assurance Framework – framework update
March 2021	Risk Scrutiny Committee	Risk Exception report
March 2021	Quality Committee	2-monthly report from COIC
March 2021	Trust Board	IPC Board Assurance Framework– framework update

The post of DIPC is held by the Medical Director who is also the executive lead for IP&C.
Control of Infection Control Committee (COIC) is chaired by the DIPC or Deputy DIPC and meets every two months. The committee includes divisional, estates and facilities, medical, nursing, occupational health and pharmacy representation. Key Issues from the COIC are escalated to the Quality Committee after every meeting.

The day-to-day coordination of the IP&C nurses is managed by the IP&C Nurse Consultant who is also the Deputy DIPC. There is 1 IPC Nurse, with some administration support from Microbiology/Virology (BSPS). There are three consultant microbiologists who are employed by BSPS, one leads for IP&C as Infection Control Doctor. There is an antibiotic pharmacist who is employed by Pharmacy Department.

Healthcare Associated Infection: results of Mandatory Surveillance and reporting

Mandatory reporting of Healthcare Associated Infections via the PHE Mandatory data Capture System is carried out by the Infection Control Nurses Team (with advice from the Medical Microbiologists and Antimicrobial Pharmacist if required). The requirement for timely and correct collection and reporting of these data, and ensuring readiness for “lockdown” by the Chief Executive before the 15th of each month continued throughout 2020-21 – despite the additional challenge of the Covid Pandemic.

Terminology:

Bacteraemia	Bacteria identified in a blood culture
Hospital-onset	Bacteraemia cases are classed as hospital-onset if the positive blood culture is taken on or after the third day of admission (with the day of admission being day 1). Cdiff cases are apportioned to this Trust from the following two categories: the first are cases that are detected in the hospital two or more days after admission, and the second are cases that occur either in the community or within two days of admission (when the patient has been an inpatient in the Trust reporting the case in the previous four weeks).
Community-onset	These cases are apportioned to the CCG based on the patients GP location, and include cases set from the GP, Outpatient Department or within the first 2 days of admission to the Acute Trust.

Healthcare Associated Infection Summary 2020-21

Healthcare Associated Infection (HCAI)	Objective 2020-21	Total Trust apportioned cases 2020-21	Comparison to 2019-20
MRSA bacteraemia	0	2	No change – although all unavoidable
MSSA bacteraemia	NA	10	33% reduction (from 15)
Clostridiodes difficile infection (Cdiff)	28	18	33% reduction (from 27)
E Coli bacteraemia	The national objective is to deliver a 25% reduction in healthcare associate Gram negative bacteraemia by 2021/22, and a 50% reduction by 2023/24. For ASP the 2016 baseline is 206 cases and the reduction objective is therefore to reduce cases to 130 by 2024	20	4% reduction in Trust cases (from 24)
Klebsiella spp bacteraemia		26	117% increase from previous year (from 12)
Pseudomonas aeruginosa bacteraemia		6	50% increase from previous year (from 4)

<u>Staphylococcus aureus bacteraemia</u>

Staphylococcus aureus (S. aureus) is a bacterium that commonly colonises human skin and mucosa without causing any problems. It can also cause disease, particularly if there is an opportunity for the bacteria to enter the body, for example through broken skin or a medical procedure.

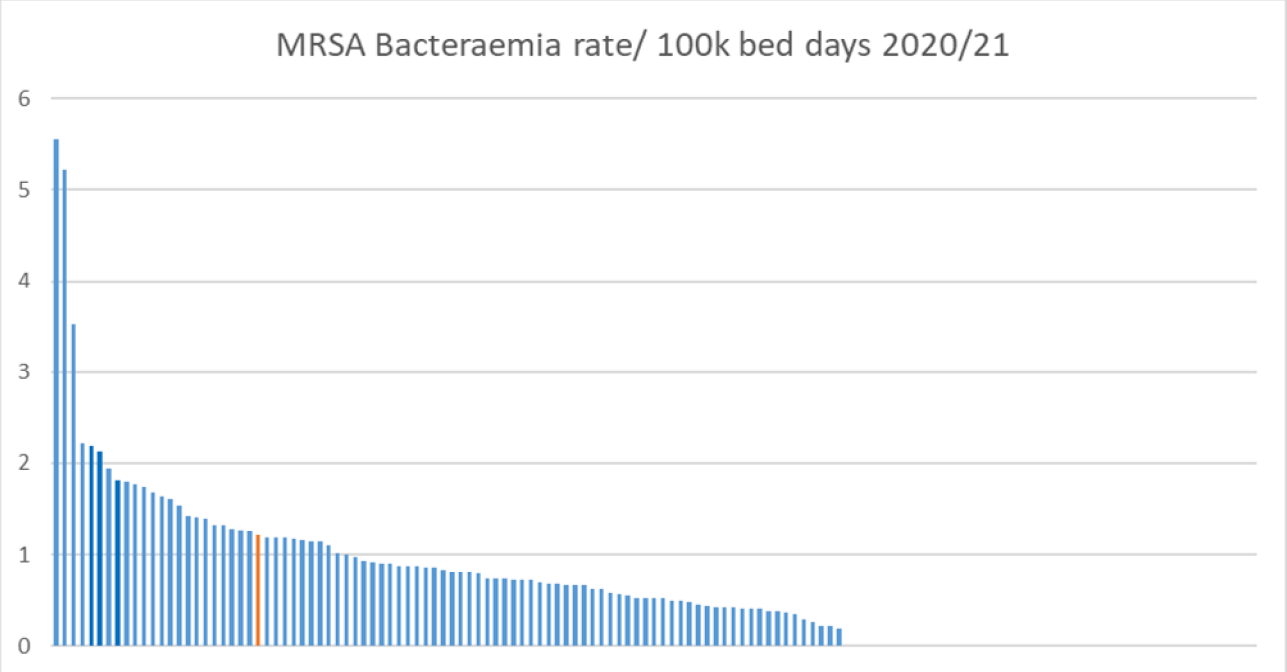
If the bacteria enter the body, illnesses which range from mild to life-threatening may then develop. These include skin and wound infections, infected eczema, abscesses or joint infections, infections of the heart valves (endocarditis), pneumonia and bacteraemia (blood stream infection). A 20% Mortality rate from these infections has been reported.

Most strains of S. aureus are sensitive to the more commonly used antibiotics, and infections can be effectively treated. Some S. aureus bacteria are more resistant. Those resistant to the antibiotic meticillin are termed meticillin resistant Staphylococcus aureus (MRSA) and often require different types of antibiotic to treat them. Those that are sensitive to meticillin are termed meticillin

susceptible Staphylococcus aureus (MSSA). MRSA and MSSA only differ in their degree of antibiotic resistance – this is the only real difference between them.
National objectives are not set for MSSA bacteraemia, while the objective for MRSA is 0 cases. Since 2019 there has been an additional requirement to report the organisms Staph argentueus and Staph schweitzeri along with Staph aureus
There has been 1 Trust apportioned MRSA bacteraemia during January 2021 and 1 in February. This is equal to the number of cases when compared to the previous year. Formal Post Infection Review (PIR) is not required to take place unless the rate of MRSA bacteraemia for a Trust is above 1.7 per 100 000 bed days. The rate for MRSA bacteraemia for Ashford and St Peters Hospitals NHS Trust for 2020-21 is 1.21, while for the previous year it was 1.20. Post Infection review cases were held to ensure learning from these cases.
Learning from Root Cause Analysis of cases has highlighted the need assess whether we should rescreen patients for MRSA prior to surgery in the event of their initial surgery being delayed, as well as ensuring all wounds are swabbed as part of routine MRSA screening. This Trust MRSA policy has been updated to reflect the requirement for screening wounds

Month	Ward	Source	Learning from Post Infection review
January 2021	Kingfisher	Unknown	Patient surgery was delayed due to an unforeseen and highly unusual issue with intubation. First screened positive for MRSA on routine ITU screening and the result not known until after rescheduled surgery. This case was agreed unavoidable. The MRSA screening policy was reviewed to consider rescreening prior to surgery if it has been delayed.
February 2021	May	Multiple pressure sores that were colonised with MRSA and present on admission.	This case was agreed to have been unavoidable and the patient had a Safeguarding review in light of the pressure sores on admission. Fucidin was prescribed by the GP prior to admission (which is not best practice) and this was fed back to the prescriber by the antibiotic Pharmacist.

Benchmarking
When benchmarked against all 137 English Trusts (using data from PHE Data capture system), this Trust has the 25th highest rate of MRSA bacteraemia. Ashford and St Peters Hospitals NHS Trust is denoted by the red line below.

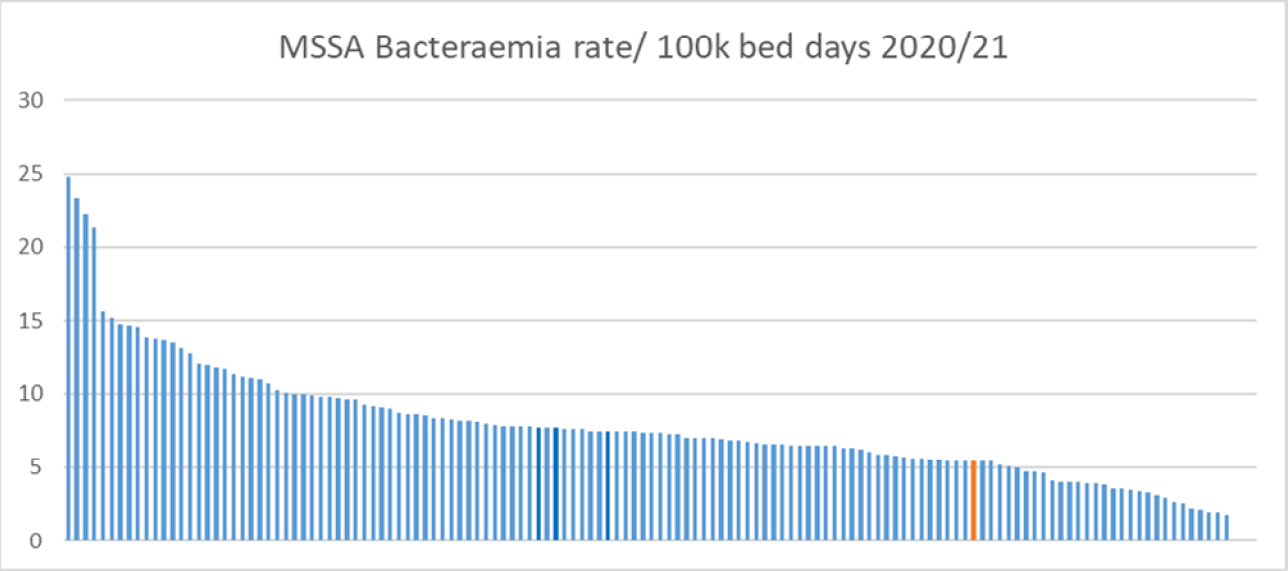


There were 3 community-onset cases (an increase from 2 the previous year). The IPCNs assist the individual CCG reviews of the Community onset cases, one of which was sourced to lower respiratory tract, one to endocarditis and the third to skin/soft tissue lesions.

MSSA
There were 10 hospital-onset cases in 2020-21. This was a 33% decrease from the previous year. No trend was apparent related to the source or the clinical area.

Source	Number of cases
Lower respiratory	3
CVC	1
Lower urinary	1
Skin/soft tissue	1
Unknown/unclear source	4

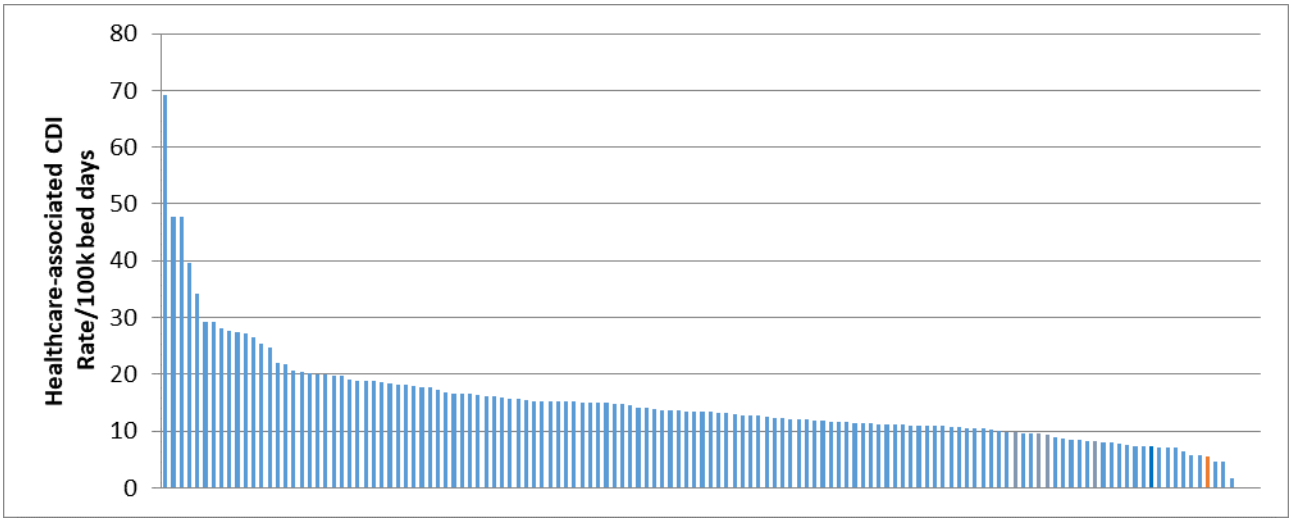
Benchmarking
When benchmarked against all 137 English Trusts (using data from PHE Data capture system), this Trust has the 31st lowest rate of MSSA bacteraemia. Ashford and St Peters Hospitals NHS Trust is denoted by the red line below.



Clostridiodes difficile Infection (Cdiff)

Cases are apportioned to this Trust from the following two categories: the first are cases that are detected in the hospital two or more days after admission, and the second are cases that occur either in the community or within two days of admission (when the patient has been an inpatient in the Trust reporting the case in the previous four weeks). There have not been objectives set for 2020-2021 but the Trust New Operating Model has set the target at no more than 28.

There were 18 Trust-apportioned cases in 2020-21. 9 of the cases were Hospital onset, and 9 were “community onset, healthcare associated”. This is a 33% decrease from previous year and the rate is 5.44 per 100 000 bed days. This places the Trust rate as 5th lowest (i.e. best) of the 137 Trusts in England. Ashford and St Peters Hospitals NHS Trust is denoted by the red line below.



Wards with Trust-apportioned Cdiff cases 2020-21

Falcon	3
Cherry	2
Holly	1

AMU	1
Kingfisher	1
Swift	1

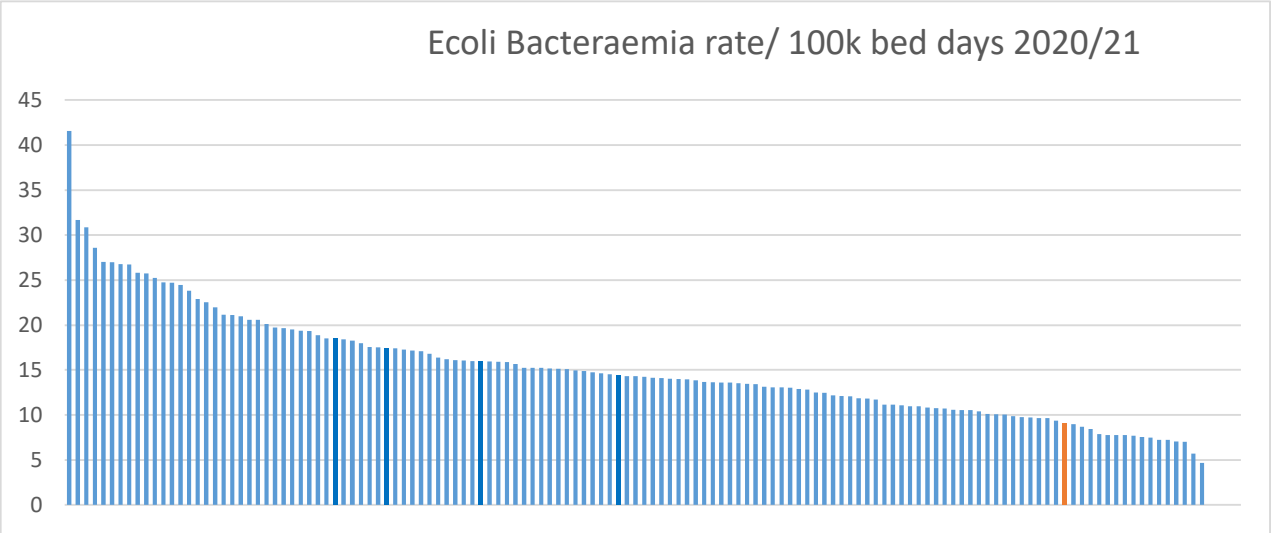
Due to staff resource, formal Root Cause Analysis meetings to agree lapses in care were not possible during 2020-21. Weekly Cdiff ward rounds were also not carried out during the Pandemic. These will be reintsated in 2021-22.
"*Clostridioides difficile infection: how to deal with the problem"* (last updated 2019) defines a period of increased incidence (PII) of Cdiff as "two or more new cases (occurring >48 hours post admission, not relapses) in a 28-day period on a ward". It defines an outbreak of *C. difficile* infection as "two or more cases caused by the same strain related in time and place over a defined period that is based on the date of onset of the first case".
There were no Cdiff Periods of Increased Incidence (PII) triggered during 2020-21.

Learning from review of cases has included ensuring samples that are sent are correctly labelled to esnsure they are able to be tested.

Gram negative Bacteria
As outlined in "Tackling Antimicrobial Resistance 2019-2024. The UKs 5-year national action plan", the national objective for reducing healthcare assocaite gram negative blood stream infections by 50% by 2024. The baseline for this Trust was 260 cases (in 2016).

E Coli
Escherichia coli (E. coli) bacteria are found in the intestines of humans and animals. There are many different types of E. coli, and while some live in the intestine quite harmlessly, others may cause a variety of diseases.
The bacterium is found in faeces and can survive in the environment. E. coli bacteria can cause a range of infections including urinary tract infection, cystitis (infection of the bladder), and intestinal infection. E. coli bacteraemia (blood stream infection) may be caused by primary infections spreading to the blood. E. coli infections – which represent 65% of what are called Gram-negative infections were thought to be responsible for more than 5,500 NHS patient deaths in 2015 and cost the NHS £2.3 billion by 2018.

There were 223 cases in 2020-21 – a 9% increase from the previous year. When the Trust apportioned cases are compared to the previous year, there has been a 4% reduction. The rate is 9.06 per 100 000 bed days. This places the Trust as 19th lowest out of the 137 Trusts in England. Asford and St Peters Hospitals NHS Trust is denoted by the red line below.



Root cause analysis of cases is carried out by the Infection Control team. Urinary tract infections account for the root cause for the majority (61%) of these blood stream infections. Other root causes are intrabdominal (17%), hepatobiliary (13%) and the remaining cases have an unknown cause. One of the Trust apportioned cases in January was related to a long term urinary catheter that was present on admission to the Trust. The new IPC structure and links with Community colleagues will enable joined together working to reduce these infections in the coming year.

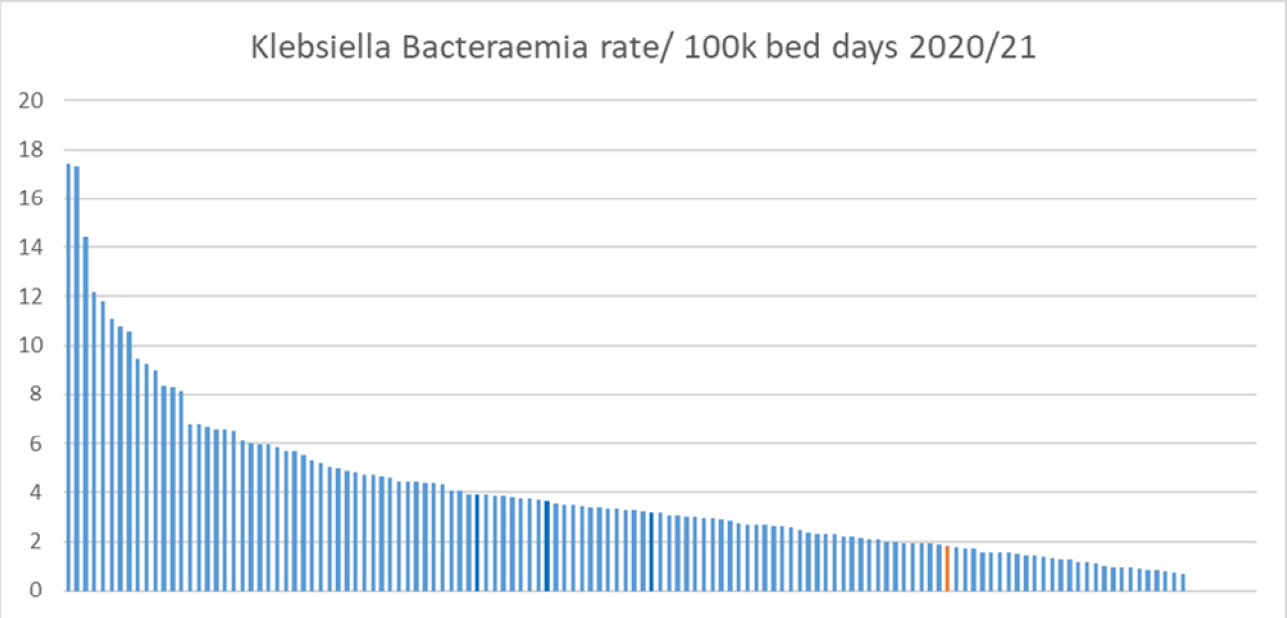
Klebsiella species

Klebsiella species are commonly found in the environment and in the human intestinal tract. These species can cause a range of healthcare-associated infections, including pneumonia, bloodstream infections, wound or surgical site infections and meningitis. Acquired endogenously (from the patient's own gut flora) or exogenously (from the healthcare environment) and vulnerable patients, such as those who are immune compromised, are most at risk. Infections can be associated with use of invasive devices or medical procedures.

Klebsiella spp. can become resistant to a wide range of antibiotics through a variety of mechanisms for example, production of Extended-Spectrum Beta-lactamases or carbapenemase.

The Trust reported 26 cases in 2020-21 (3 of the cases for 2020 are on the same patient who has had repeated positive samples tested more than 14 days apart which means they must be reported again). This is an 117% increase from the previous year. The increase was noticed from Dec 2020 and the root cause of these cases has been confirmed as infections related to respiratory and IV lines. This has been mirrored at other Trust nationally as an unexpected (and unavoidable) consequence of the complex care required for COVID patients in ITU, specifically "proning" which can risk respiratory secretions contaminating IV lines in the neck, and also prevents patients being nursed sitting up at 30 degrees (which is best practice for prevention of hospital associated pneumonia). Many of these patients have long stays in ITU with multiple prescriptions for antibiotics, which also increases their risk of blood stream infection with multi resistant organisms. Finally there were simply more ITU patients in the Trust during the "second wave" of the pandemic – with patients spread across three areas.

The rate is 1.81 per 100 000 bed days. This places the Trust as having the 34th lowest rate out of the 137 trusts in England. Ashford and St Peters Hospitals NHS Trust is denoted by the red line below.



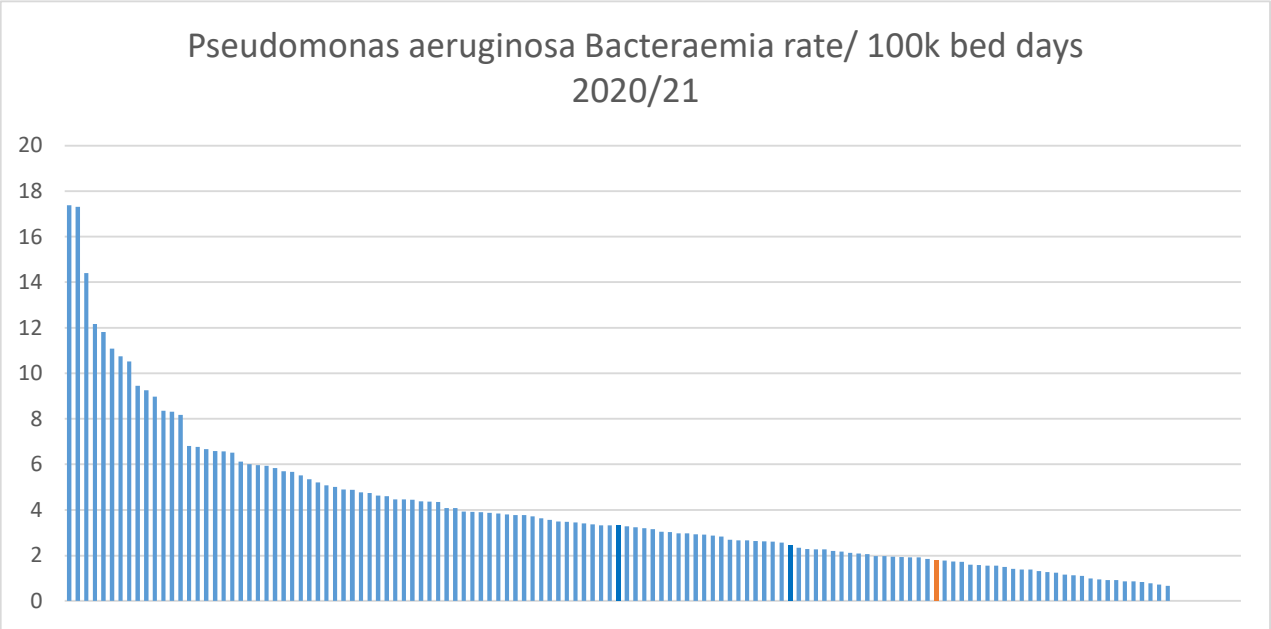
As action to reduce these infections further, the High Impact Intervention audits have been relaunched with a focus on improving hand hygiene while reducing blood stream infections.

Training videos confirming best practice in Infection Prevention and hand cleaning have been filmed and are available for staff on the Trust info-net. These include the correct/safe way to put on and take off Personal Protective Equipment with the aim to reduce cross contamination, and PPE and hand cleaning posters are now available on the info-net Infection Control "Poster hub".

Pseudomonas aeruginosa

Pseudomonas aeruginosa is a Gram-negative bacterium often found in soil and ground water. *P. aeruginosa* is an opportunistic pathogen and it rarely affects healthy individuals. It can cause a wide range of infections, particularly in those with a weakened immune system such as cancer patients, newborns and people with severe burns, diabetes mellitus or cystic fibrosis. *P. aeruginosa* infections are sometimes associated with contact with contaminated water. In hospitals, the organism can contaminate devices that are left inside the body, such as respiratory equipment and catheters. *P. aeruginosa* is resistant to many commonly-used antibiotics. There were 6 Trust apportioned cases for 2020-21 – a 50% increase from the previous year- and the issues surrounding the care required for COVID patients in the unit as discussed in the Klebsiella section above also apply to these cases.

The rate is 1.81 per 100 000 bed days. This places the Trust as having the 34th lowest rate out of the 137 trusts in England. Ashford and St Peters Hospitals NHS Trust is denoted by the red line below.



Glycopeptide Resistant Enterococci

Glycopeptide-resistant Enterococci (GRE) are resistant to glycopeptide antibiotics (vancomycin and teicoplanin). Infections caused by GRE mainly occur in hospital patients, particularly those who are immuno-compromised, have had a prolonged hospital stay or antibiotic treatment or who are in specialist units such as intensive care or renal units. These cases are not apportioned to Trusts by PHE, no objective has been set and case details are not reported. The number of cases only are reported as part of the Quarterly Laboratory Mandatory return. These cases are monitored at this Trust by the Infection Control Team to ensure that they are not related to practice issues or cross infection. There were 5 cases reported in 2020-21. One was in a patient known to have previously tested positive for GRE, 2 were patients in Critical Care Unit and 2 were from blood cultures taken on admission to A&E (ie were not hospital acquired).

COVID

The COVID-19 pandemic was the greatest threat to the Trust during 2020-21. From the start of the Pandemic, 1748 people received care as in patients at the Trust due to COVID. The first wave of the Pandemic in the UK started in March 2020. It was characterised by a peak in infections and then a steep and continuing decline in infections that was demonstrated until the beginning of August. During the first wave elective admissions were reduced and the Infection Control Team were involved in planning “Covid” and “non Covid” pathways, ensuring staff were clear on what Personal Protective Equipment they required (and that they were trained to put it on and remove it safely), confirming which patients required single rooms and which could be cohorted with others, confirmed testing protocols, keeping up to date with frequently updated guidelines, carrying our contact tracing for every patient who has tested positive and providing daily data for sit reps and Board assurance. They also reacted to telephone and email queries.

Additional staff were seconded to support the Infection Prevention and Control Team during the first wave. At this time the team comprised 1 Nurse Consultant, 1 Band 7 IPCN, 1 Band 6 IPCN and they were supported by a Senior Agency IPCN and the Band 6 Surgical Site Surveillance Nurse.

At the end of August infections steadily rose as the UK experienced the second wave of the Pandemic.

The increase in cases was linked to a new variant that first came to light in late November when PHE was investigating why infection rates in Kent were not falling despite national restrictions. Backwards tracing using the genetic evidence suggests this variant emerged in September 2020 and then circulated at very low levels in the population until mid-November when it was discovered a cluster linked to this variant spreading rapidly into London and Essex. This Trust also saw a rise in cases requiring admission due to this variant. Data from Whole Genome Sequencing, epidemiology and modelling suggest the new variant 'VUI – 202012/01' (the first Variant Under Investigation in December 2020) transmitted more easily than other strains.

National IPC recommendations were updated on 20 August 2020. The 18 June 2020 ('COVID-19: Infection Prevention and Control Guidance') was superseded by Version 1 'COVID-19 Guidance for the Remobilisation of services within health and care settings: infection prevention and ongoing pandemic situation across the UK; Version 1.1: COVID-19 Guidance for maintaining services within health and care settings: infection prevention and control (IPC) recommendations'. The challenge that faced this Trust (and the NHS as a whole) was to maintain healthcare services and manage capacity during the second wave, whilst providing a safe and equitable service for staff, visitors and patients/individuals including those presenting with COVID-19, those who have recovered from COVID-19 and those with no history of COVID-19 until public health strategies such as mass vaccination were complete.
The main amendments to the guidance were:
1. Minimising Sessional use of single use PPE
2. The use of facemasks for staff and patients (if tolerated) became a requirement across all care pathways in the UK, in addition to social distancing and hand hygiene for staff, patients/individuals and visitors in both clinical and non-clinical areas to further reduce transmission risk.
Messages to ensure the Trust kept abreast of the many updates were provided at the twice-weekly Bronze and Silver Command, with posters and training videos and on the Trust infonet. The work that was carried out during the first wave continued during the second wave, while the IPCN team was depleted to only comprise 1 Nurse Consultant and 1 Band 7 IPCN. This resource was further impacted by sickness but the team continued to provide cover 7 days per week. In March 2021 an Agency nurse was recruited to support the team (to cover the weekends).

Healthcare Associated COVID cases
All screens that test positive for SARS-CoV-2 (2019-n-CoV) are monitored by the Infection Control team using definitions provided from *NHSEI CNO Letter (Ref No 001559) 19 May 2020: Interim data collection – hospital-onset COVID-19.* This letter defines a definite HCAI case as having illness onset (or first positive specimen date) 15 or more days after admission.

There were 96 cases for the year that fulfilled this criteria, placing Ashford and St Peters Hospital NHS Trust as one of the 10 lowest (best performing) Trusts in England.

Number of "Definite" Healthcare acquired SARS-CoV cases 2020-21

Apr 20	May 20	Jun20	July 20	Aug 20	Sep 20	Oct 20	Nov 20	Dec 20	Jan 21	Feb 21	Mar 21
8	4	7	1	2	3	10	17	20	18	2	4

COVID deaths
Monitoring the number of deaths due to COVID-19 is a vital part of tracking the pandemic. It is critical to ensure death data are as accurate, comprehensive and timely as possible. Deaths linked to outbreaks (with Covid recorded on the death certificate) are recorded in the "comments" column of the next table.

22 patients defined as “definite” hospital onset COVID-19 (using the PHE definition above) died within 28 days of the positive test. 47 patients defined as “probable” hospital onset (i.e. having first positive specimen 8 -14 days after admission) died within 28 days of the positive test.

COVID outbreaks

Outbreak criteria is defined in the document COVID-19: Epidemiological definitions of outbreaks and clusters in particular settings (GOV.UK 17/09/2020) as “Two or more test-confirmed or clinically suspected cases of COVID-19 among individuals (for example patients, health care workers, other hospital staff and regular visitors, for example volunteers and chaplains) associated with a specific setting (for example bay, ward or shared space),where at least one case (if a patient) has been identified as having illness onset after 8 days of admission to hospital”.
The Infection Control Nursing Team surveillance and contact tracing of all patients who test positive for SARS-CoV-2 (Covid) will demonstrate when the outbreak definition has been fulfilled

Ashford and St Peters Hospitals NHS Trust reported the following COVID outbreaks.

Ward	Site	Outbreak Reference	Positive Cases	Date first positive	Date Last positive	Comments
Cherry	St Peters	OUT10569			8/11/20	
Aspen	St Peters	OUT0567	10 patients		23/7/20	HCAI Patient deaths within 28 days*: 15/11 “Lower respiratory Tract infection”
Holly	St Peters	OUT10545	20 patients		20/12/20	HCAI Patient deaths within 28 days*: 24/12/20 “Broncho pneumonia” 26/12/20 “Covid 19 pneumonia” 11/12 “C-19”
Ash	St Peters	OUT10038	5 staff		13/12/20	
Chestnut	St Peters	OUT10419	8 patients & 3 staff		3/11/20	HCAI Patient deaths within 28 day*s: 26/11/20”Voci-19” 22/11/20 “Covid-19 pneumonia”
Swift	St Peters	OUT10445	18 patients & 1 staff	13/11/20	10/12/20	HCAI Patient deaths within 28 days*: 29/11/20 “Covid-19” 18/11/20 “Covid-19 COPD”

						1/12/20 “Covid pneumonia”
Swift	St Peters	OUT10490	4 staff		12/6/20	
May	St Peters	OUT10578	1 patient		2/9/20	Mis reported – did not fulfil criteria for an outbreak
Chestnut	St Peters	OUT10585	3 patients		10/9/20	
Bradley Unit	Woking Community Hospital	OUT10587	4 patients (false positives)		14/10/20	Confirmed by Virology as false positives
Birch	St Peters	OUT10588	4 patients & 1 staff		9/10/20	
Swan	St Peters	OUT10568			6/11/20	
May	St Peters	OUT10887	3 patients	28/12/20	2/1/21	HCAI Patient deaths within 28 days*: 10/1/21 “Covid pneumonia”
Wordsworth	Ashford	OUT10889	29 patients	28/12/20	11/1/21	HCAI Patient deaths within 28 days*: 10/1/21 “Covid pneumonia” 12/1/21 “Covid-19 pneumonia” 25/1/21 “Covid-19”
Swan	St Peters	OUT11948	12 patients	6/1/21	3/2/21	HCAI Patient deaths within 28 days*: 25/1/21 “Covid-19”
Kingfisher	St Peters	OUT11950	3 patients	12/1/21	16/1/21	
Cedar	St Peters	OUT12680	5 patients	1/2/21	12/2/21	
Dermatology Clinical Office	St Peters	OUT12955	2 staff	2/2/21	8/2/21	
Wentworth Medical	Runnymede	OUT13318	5 patients	25/2/21	6/3/21	HCAI Patient deaths within 28 days*: 2/3/21 “Chest infection”
Holly	St Peters	OUT13376	4 patients	4/3/21	9/3/21	

*NHSEI CNO Letter (Ref No 001559) 19 May 2020: Interim data collection – hospital-onset COVID-19. This letter defines a ‘probable’ healthcare associated infection (HCAI) as having illness onset (or first positive specimen date) between 8 and 14 days after admission. A definite HCAI case has illness onset (or first positive specimen date) 15 or more days after admission.

Learning from outbreaks has been fed back to care groups and has informed changes to practice:
-All ward bays and single rooms to be “fogged” after patient discharge. Side room cleaning is enhanced by the use of UV light. ATP is used to monitor cleanliness.
-Ensuring staff maintain 2m distance from each other at hand-over and in office areas.

-Promoting hand hygiene in line with the World Health Organisation “5 moments for hand hygiene” and supporting patients to clean their hands before eating and after using the toilet
-Ensuring staff from other units do not use outbreak wards as a “cut through” to other clinical areas
-Reinstating the process of frequent cleans of “frequently touched surfaces” based on the “when you hear the bell it’s time for Clinell” initiative
-Remove 20 beds throughout the Trust to ensure wards have 2m social distancing
- Reminding staff that patients should wear surgical masks (if tolerated) during day time.
-Ensuring staff wear eye protection goggles/visors when in the ward area as per updated PHE guidelines for PPE (and auditing compliance with this)
-Screening all “exposed” patients in the bays when a patient tests positive within the bay
-Ensuring “exposed” patients in bay remain isolated for 14 days – either in the bay where exposure occurred, or in single rooms
-Informing patients as part of Duty of Candour requirements
-Ensuring staff are aware of need to avoid working when symptomatic for COVID-19. Staff should also be alert to mild symptoms that they may not assume to be related to COVID (i.e. “just a cold”, or abdominal discomfort)
-During outbreaks an Infection Control Nurse visits ward to ensure staff clear about actions, and to ensure best practice for Infection prevention in place (this includes ensuring 2m physical distancing is adhered to), that PPE is available and worn correctly, posters updated and ensuring ward tidy so that enhanced cleaning can take place .
- Ensure BAME risk assessment has been completed for Agency staff on ward
-Ensuring that hand sanitiser is available at the point of patient care, and if replacements have been sourced due to supply issues, ensuring that they are in containers that are suitable for clinical staff.
- Increasing screening frequency for patients who were negative on admission. At this Trust these patients are now screened every 48 hours (with patients in green elective wards screened daily
-Improving ventilation by opening windows as a minimum for 10 minutes/three times daily and providing Hepafiltres if windows cannot be opened and there is no mechanical ventilation.
-PPE posters updated to ensure staff are aware that only their face masks may be worn sessionally
-Trust policy to avoid more than 3 ward moves for any patient (unless clinically unavoidable) and a Datix to be completed if more than 3 moves occur.
-Monitor Agency staff to ensure high standards of Infection Control including correct wearing of PPE, and ensuring gloves are removed between patient contacts to allow hand cleaning to take place.
-Staff and communal areas deep cleaned and fogged on a regular schedule
-Extending the use of technologies including Hydrogen peroxide and UVC light to enhance cleaning of patient, staff and public areas (including lifts).
-Chief Executive has written a letter to all staff on Aspire to remind them of the need to be careful and vigilant both in the workplace, and at home.
-The Board Assurance Framework has been updated to ensure alignment with national [policy and best Infection prevention practice.

NHSEI IPC team carried out a support visit at St Peters Hospital on 18th December 2020. The report was positive and had only minor suggestions for actions. Please find attached as an Appendix to this report.

Infection Prevention and Control Board Assurance Framework 2020

Using this framework is not compulsory, however its use as a source of internal assurance supports organisations to maintain quality standards. Ashford and St Peters Hospital NHS Trust have used the framework to assess the measures taken in line with current guidance and has been presented to assure the trust board following each framework update or revision.

Outbreak Assessment Tool that was part of the "Every Action Counts" package has been used for all in-patient areas to inform the IPC of any areas where gaps have been identified.

The "Key Actions: infection prevention and control testing" (23 Dec 2020) document has been used to ensure compliance with national guidelines and includes requirements for staff screening, paient screening, environmental controls – and that assurance is available. This document has been used at Ashford and St Peters Hospital NHS Trust to guide decision making and ensure safe pathways including PPE.

The Outbreak Assessment Tool (one of the suite of tools provided as part of the "Every Action Counts" programme) has been used so the Infection Prevention and Control Team can support Directorates with any issues identified. There were no major issues identified.

Burkholderia aenigmatica.

A national outbreak was reported related to aqueous fluids and PHE issued information and best practice advice (titled "B.aenigmatica_BN_24122020"). A patient was confirmed positive for *Burkholderia aenigmatica* on 29/1/.2020 while on NICU at St Peters Hospital. The child has been in other Trusts (Frimley Health and the Evelina) and as part of a national investigation on possible transmission via fluids, the Infection Control Team and NICU Teams were asked to:

- gather any liquid, gel or cream that would have been used in NICU
- complete a questionnaire
- Act upon the "Good Infection Control Practice – using ultrasound gel" document from PHE

The PHE team held a meeting with the Infection Prevention and Control Team to discuss the case. No potential cause related to liquids, creams or gels was identified and no further actions was requested.

Mandatory Surgical Site Surveillance (summary provided by A. Thompson – Surgical Site Surveillance Nurse)

Since Jan 2020 this Trust has carried out continuous data collection and submission to Public Health England. Surveillance of Hip and Knee replacements were added in October 2020 and in April 2021 Breast Surgery Procedures were added to the list. In house data has also been collected continuously for Jan 2020 up to date for Caesarian Sections (as there is no platform on PHE to submit to this data)

Public Health England sent a "High Outlier" letter to inform the Trust that from Jul-Sep 2020 Repair of neck of femur was above the National average at 4.1%.

As part of an awareness campaign, the first SSIS newsletter was published in January 2021 (this will be published quarterly). Every issue focuses on a Care Bundle, exciting developments and introduces a member of the SSIS Committee.

The SSIS webpage has been launched on Trustnet and is an area where staff can access policies, quality improvement projects, and Guidance on SSIS.

The patient information leaflet has also been completed and ratified. It is available on Trustnet and all patients that we are collecting data for receives one. We hope to supply every patient who undergo a surgery in the Trust by the end of 2021.

Mr Shashi Irukulla has presented to G's about the programme of surveillance and also to invite them to the dialogue of how and when to treat and SSI , when and where to refer the patients back . As part of this presentation, GPs were asked for their help in reporting the SSI's back to the Trust.

Tea Trolley teaching session has proven to be extremely successful and we will continue with the format. Online teaching videos are being filmed and will be available on the SSIS page on Trust net in the near future.

The Project Management Office (PMO) has assisted in guiding the quality improvement processes and support data interpretation since late 2020. This has made an enormous difference to the program.

The Surgical Site Infection Surveillance Oversight committee (SSISOC) was created in November 2020 and TOR's were established. All the members were introduced to the Trust on Trustnet and Aspire January 2021

Incidents and Complaints

There have been 72 incidents reported via Datix under the heading "Infection".
Analysis of the Datix incidents shows that the majority were recorded by wards on receipt of results: 41 were Covid, 5 Cdiff, 1 EColi Blood stream infection and 1 CPE – all of these were reported as per Trust policy. In addition 2 specimens were reported to be incorrectly labelled.

5 incidents concerned staff behaviour such as not maintaining social distance in a staff room, failing to get their temperature checked on arrival to the Hospital, not being "bare below the elbows" or failing to remove PPE correctly. One of these referred to ambulance staff visiting A&E.

5 were related to PPE not being found in a clinical area when required.

2 were related to patients failing to follow treatment requests (to remain in quarantine and refusing a Covid swab)

The remainder involved identification of sepsis and waste disposal.

There have been no complaints where Infection Control was a primary issue.

Death Certificates with MRSA or Cdiff recorded as part 1 or II

Death certificates where MRSA or Cdiff is recorded as primary or secondary cause are monitored. This is a national recommendation following outbreaks in Stoke Mandeveille and Maidstone and Tunbridge Wells Trusts where it was noted that a number of death certificates recorded Cdiff and this indicated an issue within the Trust.
There has been no death certificate with MRSA recorded as Part I or II in 2020-21. There has been one death certificate where Cdiff is recorded as part II (in July 2020).

Criterion 2: Provide and maintain a clean and appropriate environment in managed premises that facilitates the prevention and control of infections

A hospital built environment includes the fabric of the building, related fixtures and fittings, and services such as ventilation and water supplies.

Hand Hygiene facilities (sinks and alcohol hand sanitiser)

As recommended by the World Health Organisation, Hand sanitisers must be available at the "point of Care" to enable staff to clean their hands effectively in line with the "5 moments for hand hygiene". This sanitiser is also then easily accessible for patients and their visitors.
Hand sanitiser availability is checked as part of the programme of ward audits completed by ward staff, and by the Infection Control Team.
During the COVID-19 Pandemic supplies of the preferred products used at this Trust were replaced with alternatives. Some of these were less than desirable due to the range of bottles, and the way in which they were dispensed (for example some of the bottles had "flip top" lids that were likely to become contaminated by the users hands during use). The Trust Procurement Team ensured this was escalated to the Southeast Procurement hub so that the preferred hand sanitiser could be sourced as soon as practicable. This took a number of weeks.
An ongoing programme for replacement of sensor taps is in place. This is to ensure the flow of water is maximised and therefore bacterial counts reduced.
Hand washing sinks should only have a soap and paper hand towel dispenser above them, and a programme to remove any additional dispensers (i.e. hand sanitiser or hand moisturising cream) is in place. This is to ensure compliance with Health Technical Memorandum 04-01: Addendum *Pseudomonas aeruginosa – advice for augmented care units.* To date, this work has been completed in Assessment Units, Radiology and Outpatient areas at St Peters Trust. The programme will continue until all outstanding areas have been corrected.

Cleaning services

These services are provided in-house by Trust –trained staff. Cleaning scores are audited and every week and scores updated on the IPC dashboard. The IPC dashboard shows the cleaning scores collated from each of the areas and any low scores or any issue of concern identified is reported at the Control of Infection Committee.

In order to ensure cleaning is of a high standard, new technologies have been used throughout the Trust. ATP Cleaning Verification System is a rapid cleaning monitoring system used to help hospitals and other healthcare organizations achieve optimal standardized cleaning levels. The system uses bioluminescence technology to identify and measure adenosine triphosphate – an indicator that confirms effective environmental cleaning. ATP testing is used as an addition to cleaning audits at this Trust and this has demonstrated improvement in cleaning of frequently touched items such as patient call buttons, telephones, keyboards, computer mouse, workstations, telephone handsets and key pads.

The Trust has carried out a trial of ZOONO® Surface Sanitiser Spray. This is a water based system that does not replace regular cleaning protocols, but is intended to enhance cleaning of critical surfaces and touch points. During the COVID-19 pandemic, this was initially used in public areas and the Infection Control Doctor supported the cleaning team in testing the effectiveness of this product. As Environmental sampling demonstrated its effectiveness an additional kit was then purchased to use on wards.

Prior to the Pandemic a routine programme of fogging using Hydrogen Peroxide had been carried out on Thursday and Sunday each week and during the Pandemic this programme was increased to include staff areas and offices, and any area where outbreaks had been reported.

UV light is also used to enhance cleaning (for example as part of the deep clean of theatres that is undertaken at nights and during weekends). A robot is currently being trialled to complete this work and this will extend for 2021-22.

Work to ensure COVID safe flow and clear signage was completed to allow In house retail services, the Post Graduate Education Centre restaurant and Coffee shop (in the main entrance) allowing these to open in October 2020.

The Routine programme of Curtain change is carried out every 6 months and is reported to the COIC as assurance that it has been carried out across both sites.

Waste Disposal

The Trust uses the services provided by Grundon and the contract has been extended with that company until April 2022.

During the Pandemic all waste was managed in line with the "COVID-19 waste management standard operating procedure" April 2020. An independent company has carried out an "upstream" waste audit to ensure compliance with the Waste legislation and the best practice. There were no issues identified requiring action and there were no problems with waste disposal during the pandemic at this Trust.

The frequency of night services increased to deal with additional waste during the Pandemic, particularly when the number of ITU beds increased during the first and second waves.

Laundry supplies

The Trust uses the services provided by Synergy and the contract with that company did not require review during 2020-21.

During the Pandemic there was an Increased demand for scrubs at this Trust and there were national supply issues related to this. There was also increased demand on linen but this did not impact patient care.

Estates (including Theatre ventilation)

The Authorised engineer for air is Lee Kowalascki.

Maintenance and improvement work follows a rolling schedule and Air validation reports are completed annually. A programme of Capital Work has been undertaken in theatres to try to reduce the potential for infections.

Chestnut ward ventilation work (including maintenance of 2 negative pressure isolation rooms and improvement to the air handling unit) was carried out so that the area could be used as an additional ITU "pop up" bed area during the COVID pandemic

The Authorised Engineer has completed audits on the ventilation and the theatre ventilation system requires upgrade due to its age.

Decontamination

The Decontamination committee is chaired by Steven Hill (Health and Safety Lead) has approved £50,000 that has been spent on improvements to Decontamination throughout 2020-21.

One risk is on the risk register regarding the clean standards with the clean room in Sterile Services and there were two more risks around air handling units in theatres.

- Sterile Services department have done work to look at controlling airborne pathogens.

- Extra washers have been installed in the main area.

- Additional work on the medical equipment policy which has gone out for comment.

Improving ward ventilation
This Trust has purchased air-cleaning devices where the primary principle of operation is based on fibrous filtration. These devices are recommended for settings where the ventilation is poor and it is not possible to improve it by other means (*"Potential application of Air Cleaning devices and personal decontamination to manage transmission of COVID-19"* SAGE-EMG 4th November 2020) and as it was identified that some wards and clinical areas did not have access to windows that could be opened The IPC Team also advised that units should be used in wards where there were COVID outbreaks, and including staff areas.

Capital report
The Infection Prevention and Control Team provide specialist advice on building work and refurbishments. The following projects have taken place during 2020-21:
-A new AMU ward opened.
-Reengineering of Chestnut ward (as discussed previously in the "Estates section).
-Additional theatre at Ashford provided and updated ventilation system to allow three fully compliant theatres.
-Elliot ward at Ashford has commenced upgrade to allow it to be used as an elective surgical ward that will accept Level 2 patients
-A 62 bed Pan Assessment ward has been constructed and is on site – due to open in late July 2021. It is built to comply with HBN standards (although the room sizes are 30 cm less than standard)
-Emergency Department and Abbey works are progressing through feasibility study and option assessment.

Minor works have taken place to segregate ward bays from corridors in Aspen ward

As ongoing action for the coming year, a process needs to be agreed on how to refurbish wards from an IPC perspective and to agree a standard sanitaryware used in the Trust

Water Safety
To improve attendance and engagement the Water Safety and Environment Quality Group was held immediately before the COIC and was chaired by the Deputy Director of Infection Prevention and Control.

Water sampling is carried out by a company called DSW. A more cohesive approach to the water-sampling programme has been put into place and work is ongoing to ensure that areas which have high counts are retested, and that this is clinically supported. The plan is to enlarge the team in the coming year to allow more comprehensive temperature testing to take place.

Mervyn Phipps (an authorised engineer) has completed an audit of water systems and Paul Headon (the Competent Person) and his team have undertaken a major programme of work to improve water system safety and to reduce the risk of *Legionella* from dead legs and poor fittings has taken place on both sites. This programme is dependent on access availability to wards and clinical areas.

Criterion 3: Antimicrobial stewardship

The biannual antimicrobial PP audit in December 2020 resulted in recommendations made to drive quality improvement in antimicrobial prescribing and AMS practices within the Trust including:

- Review of stewardship program and reinstate what we can / develop other methods for teaching and sharing information
- Communicate with prescribers the national rates of co-infection in COVID in the hopes that we can drive down “just in case prescribing”
- Continue to review guidelines and be explicit with the need for investigations and microbiological sampling
- Continue to drive the need for formal review at 72hrs for all antimicrobial prescriptions.
- Review of antimicrobial protocols including use of antibiotics for colitis and gastroenteritis
- Publication of key messages from this audit in new ways (in context of COVID)
- Targeted audit and quality improvement in the poorer performing areas
- Investigate learnings from wards who have demonstrated good compliance and if this can be applied elsewhere
- Feedback and dissemination of results to drive improvement
- Feedback to the pharmacy team undertaking the audit to improve the standard of data collection.

The AMS team have made efforts to action these recommendations by reinstating key activities such as resuming face-to-face teaching in April, to aid further reinforcement and uptake of the Trust Antimicrobial Prescribing Policy to mandate and support the Antimicrobial stewardship prescribing requirements and incorporating drug chart endorsement requirements, which was noted to have not impacted prescribing practices as significantly as expected in this audit. SHO teaching on A&E has also been undertaken to reiterate the importance of undertaking appropriate investigations, after previous observation of a strong local culture to initiate antimicrobials in non-septic patients without the appropriate investigations. Attendance to these sessions via Microsoft Teams has facilitated key information being delivered to as many individuals as possible within the constraints of COVID-19.

Feedback on specific PP audit results for each division have been shared within the pharmacy and AMS team in addition to all divisional leads at the Trust to drive improvement. Results have also been shared with junior doctors as part of their Grand Round antimicrobial teaching session, where key stewardship concepts such as principles of good antimicrobial prescribing (e.g. Start Smart, Then Focus, 72 hr review etc.) were also reinforced.

A guideline for use of gentamicin in surgical prophylaxis has been published in MicroGuide™ in collaboration with the Surgical Site Infection working group, which is hoped will encourage a standardised, safer approach to antimicrobial prescribing in surgical prophylaxis amongst all surgical specialities at the Trust. Other areas of surgical prophylaxis guidelines are currently being reviewed to drive improvement of antimicrobial use and care in the perioperative period including reduction in rates of post-operative infection, whilst reducing emergence of antimicrobial resistance. Updated guidelines for use with Obstetrics and Gynaecology speciality have also been published and guidance for other indications with poorer audit outcomes or paucity of guidance are currently under review.

AMS team ward rounds have been reinstated to aid improve of antimicrobial prescribing practices and enable sharing and learning of key information. AMS ICU ward rounds are taking place regularly and face-to-face where possible, and *C.difficile* ward rounds will also be resuming

imminently in collaboration with the Infection Prevention and Control team, to improve patient care and encourage and educate staff on prevention and management of these infections.

Criterion 4 – Provide suitable and accurate infection on infection

The Trust infonet site has been the site where IPC Information for staff, visitors and patients – and this has been updated frequently though the year as updated COVID-19 advice and guidance was released from Public Health England. A Poster Hub is easily accessible and allows for staff to obtain relevant posters and updated information.

Patient information leaflets are available on topics such as MRSA, Cdiff and norovirus. These will be reviewed in 2021.

Criterion 5 – Ensure prompt identification of people who are at risk of developing and infection

Surrey Safe Care consists of "a series of software applications that bring together and digitalise clinical and administrative data to replace paper based records". The system has involved both Ashford and St Peters and Royal Surrey County NHS Trusts and the Infection Prevention and Control Nurse has consultant has been involved in a number of pathways as part of the system preparation. Meetings and discussions to ensure the system is fit for purpose, and to link the Infection Control Care Pathways, policies and care plans across both Trusts has been a considerable drain on the Nursing team resource throughout the Pandemic. The system is due to go live at the end of 2021.

Criterion 6 – Systems to ensure that all care workers are aware of and discharge their responsibilities on the process of preventing and controlling infection

Training (including hand hygiene)
During the Pandemic most annual mandatory training was provided electronically while the IPC Team supported clinical teams by providing training on correct "donning" and "doffing" of PPE in ward and clinical areas. Due to the cancellation of face to face training sessions the percentage of staff recorded as up to date with Mandatory Infection Control Training fell to below 70%.

A teaching video that confirmed best practice in IPC, hand hygiene and demonstrated the correct hand cleaning technique was created featuring the IPC Nurse Consultant to enhance the on line training that was used during the Pandemic. This was made available to all staff on the Trust info net.

A monthly "IPC Key Points" newsletter was also used to ensure learning from Post Infection Review of Healthcare Associated Infections, and from Outbreaks, was fed back to all staff.

The Clinical Practice Educator Team further supplemented the Hand Hygiene training by visiting wards to use the UV light training box, and to confirm best practice in glove use.

The programme of Infection Control training (used for induction, and as part of the Annual Infection Control Training updated) has been reviewed and is ready for relaunch in May 2021.

The Trust Audit programme

Audits are uploaded by clinical staff to a central database as part of the "Perfect Ward" platform. Regular audits include Hand Hygiene and IPC practice. During the Pandemic the programme was changed to include a COVID "Spot check" and COVID ward assurance tool.
The High Impact Intervention audit tools were refreshed and added to the programme of regular audits in September 2020. There have been some administrative difficulties and a result of areas changing from surgical to medical as the COVID pandemic proceeded.
The programme of Ward Environment audits (using the Infection Prevention Society audit tool) recommenced in January 2021 and wards are audited annually as part of a rolling programme. These audits cover a wide range of areas and a section to assess COVID safety has been added. Although this is primarily an audit of the ward environment, practice issues such as Hand Cleaning, PPE wearing and cleaning techniques are included.
In 2021-22 audit results will be included for discussion in Post Infection Review discussions.

Criterion 7 - **Provide or secure adequate isolation facilities**
The number of single rooms with *en-suite* bathroom and toilet facilities is audited yearly and this number will increase as new Capital builds come into use.
There are two rooms with specialist negative pressure ventilation on Chestnut ward. These are used for high risk respiratory illnesses such as Tb. Additional rooms with specialist ventilation are included in the new Pan Assessment Unit currently under construction.
The Infection Prevention and Control Team work with the Clinical Site Team to ensure patients are safely placed in single rooms. A Prioritisation scoring tool is used.
As a result of the COVID-19 Pandemic the number of patients requiring isolation rooms outstripped the supply, and so patients with COVID were segregated in cohort bays or wards in line with Emergency Plan for escalation.
At the peak of the second COVID wave main ITU, the pop up ITU bays on Chestnut and theatre Recovery were used for "red"/Covid positive patients who required ITU care. Chestnut, Swift, Holly, Cherry, May, Chaucer wards were used for "red" COVID positive patients and cohorted in bays in Wordsworth.

Criterion 8 –Secure adequate access to laboratory support as appropriate
The laboratory service is provided by Berkshire and Surrey Partnership Pathology (BSPS) - a fully accredited service. There are three Consultant Medical Microbiologists and one Virology Consultant on site.
Quarterly BSPS IPC Operational meetings are held where any issues or concerns can be raised. These are attended by the IPC Nurse Consultant and Infection Control Doctor.

Criterion 9 – Have and adhere to polices that will help to prevent and control infections
The Trust has the polices in place as required by the "*Health and Social Care Act 2008: code of practice on the prevention and control of infections".* Due to the strain on the IPC team resource due to the COVID-19 pandemic, and 50% reduction in the team during 2020, many of these have passed their review date. This has been highlighted on the IPC Risk Register. The polices will be updated in 2021-22 when additional staff are in post.
Frequent changes to PHE COVID-19 guidance took place during 2020-21. The Infection Control Nurse Consultant took part in weekly South East Network IPC Teams meetings where new advice and guidance was issued and discussed and this was communicated to staff at the twice weekly Bronze and Silver Command meetings. Updates are also available for staff on the info-net,"Coronavirus" section. The key changes were also included in monthly "Key Actions" newsletters that were emailed to senior ward staff, and delivered by hand to the nurse in charge of each ward during IPC daily ward rounds.

Criterion 10 – Manage the occupational health needs and obligations of staff in relation to infection

A representative from the Trust Occupational Health (OH) Team attends the COIC to give an update on key issues and progress. The Primary focus for the Occupational Health Team during the COVID-19 pandemic was continuing to support Lateral flow testing, PCR testing, monitoring of outbreaks for the household associations and work place risk assessments. The Occupational Health (OH) team supported Trust staff who tested positive for COVID and complied with NHS Track and Trace requirements. They extended to 7 day working to support staff.
The number of positive cases reduced noticeably in March 2021

Flu vaccination overall (including non-front line healthcare workers) was up from the previous year so that 80% off all staff on site were vaccinated.

FFP3 mask Fit -testing for staff takes place as part of a rolling programme and during local indication to areas such as ITU, theatres and respiratory wards. Testing records are held on the ESR Electronic Training System spreadsheet. In line with National guidance the focus in 2021 has been to ensure staff are fit tested for one of the seven British manufactured masks (to avoid supply issues in the future). A South East NHSEI fit tester has supported this Trust during 2021.

Appendix 1: Report from NHSEI IPC support visit 19 Dec 2020

IPC POST VISIT FEEDBACK

NHSEI IPC support visit to St Peters Hospitals NHS FT
on 18th December 2020

Thank you for accommodating the NHSEI IPC support visit last week by Lisa Beaumont, Director of Nursing, and Niamh Whittome, Head of Infection Prevention and Control. It was great to meet so many of you face to face and have the opportunity to visit some wards and departments. Verbal feedback was given to Andrea Lewis, Chief Nurse, David Fluck MD & DIPC, Suzanne Rankin CEO and Amanda Walker Lead Nurse IPC, at the end of the visit.

We visited A&E- adults and paediatrics, Chestnut Ward and Swan Ward.

Overall it was a very positive visit with several systems and practices in place to support good infection prevention and control across the Trust. These included:

- • Excellent greeters at the front door handing out masks and asking visitors to clean their hands. Very friendly and approachable, with a clear understanding of how to manage visitors that presented with a raised temperature.

- • There is agreed patient pathways in place on arrival to A&E for adults and children – both walk in and by ambulance. Both senior nurses could articulate in detail these pathways. The A&E department had some newly furbished areas that support good infection prevention principles. Paediatric A&E is small; however staff have created COVID-19 pathways as best as they can within this environment. The environment appeared clean and tidy. Work is planned for a new build in 2021 which will be a great asset for the Trust.

- • Good use of decontamination technology, HPV, UVC, Zoono technology and ATP testing. In house cleaning services on sites. ‘Ring the bell for clinell’ in place on wards where staff stop to clean down their workstation/area, a great initiative.

- • Several beds have been removed to promote social distancing and you have managed to keep these beds out of use and manage flow and capacity. There was one-time last week where you needed to reinstate some of those beds for a short period of time to support capacity and patient safety.

- • You are managing one open outbreak at the moment. Over the last few weeks you have done very well to get your outbreaks under control, supported by effective IPC measures.

- • We visited the staff rest area in the education centre before meeting at 10.30. This is a great space that adheres to social distancing.

- • Good progress has been made on staff winter flu vaccination uptake at over 77%. We encourage you to push this performance further to safeguard staff and patients over winter.

- • We visited Swan Ward, a surgical ward where staff were IPC focussed and showed good IPC understanding. We noted the bays did not have doors and were informed that an estates request had been submitted.

Other findings:
Risk assessments have been undertaken for BAME workforce which did lead to some staff being relocated.
Updated BAF reviewed and taken to Board monthly.
Discussions and plans to move to a Northwest Surrey Integrated IPC service with plans to expand the team, great to hear.
In-house cleaning team member received a new year's honours BEM.
Hepa filters in place within ED and other ward areas. Estates reviewing air changes and ventilation throughout Trust.
A handful of staff not always wearing their mask appropriately, but on the whole, good compliance.
One linen trolley in the corridor near education centre uncovered.
Multiple audits undertaken and hand hygiene audits peer reviewed.
Waste contractors struggling with volumes of waste disposal – Niamh Whittome will raise within NHSEI.
Recommendations:
• • Review the actions and recommendations following the ventilation review, which may require investment for further mechanical ventilation.

• • Ensure all non-clinical rooms have signs up displaying maximum numbers of staff that can be in the room at any one time.

• • Remind staff of the importance of wearing masks correctly even when outside of the clinical area.

• • Ensure linen trolleys are always covered to prevent contamination in corridors.

• • Recommend the installation of doors on the bays on Swan Ward, in light of emerging new variant COVID19 transmission data.

End.

Appendix 2: Control of Infection Committee (COIC) Terms of Reference

Control of Infection Committee

Terms of Reference

Name of Group	Control of Infection Committee
Accountable to	Chief Executive
Reporting to	Patient Safety & Risk Committee
Date ratified	20/01/2021
Review date	30/01/2022
Purpose	• Strengthening the performance management of Healthcare-associated Infections (HCAI) and cleanliness across the Trust and to provide assurance to the Board for Directors that policy, process and operational delivery of infection prevention & control results in improved patient outcomes. • Making recommendations, as appropriate, on Infection prevention & control and antimicrobial stewardship matters to the Board. • Formally review risks related to infection prevention and control and ensure risks are escalated and monitored accordingly. • To deliver the Trust-wide strategy for infection prevention and control, and antibiotic stewardship.
Objectives	• Provide assurance that the environment is safe for patients, visitors and staff as regards infection prevention & control. • Responsible for developing the Trust's IPC strategy, including the identification of resource needs for service development. • To ensure corrective action has been initiated and managed where gaps are identified in relation to risks. • Review and monitor Trust healthcare-associated infections (HCAI) Objectives. • To provide assurance that all appropriate measures are being taken to assist the Trust with achievement of national and local infection prevention & control targets. • Responsible for overseeing the implementation of the Trust's IPC annual programme and audit plan and monitoring progress against agreed timescales • Ensure that national policy and evidence-based guidance are embedded in healthcare delivery, with the overall aim of improving clinical practices and reducing healthcare-associated infections (HCAI) • Promote and facilitate engagement, education and training of all grades of

	hospital staff in matters of infection prevention-control and antibiotic stewardship • Monitor compliance with, and effectiveness of, IPC policies, procedures and guidelines • Responsible for ensuring the Trust is fully compliant with its responsibilities in relation to the Code of Practice for Infection Prevention & Control (2008) reviewed 2015. • Convene as the Outbreak Control Group in the event of a significant infection control/HCAI incident • Monitor progress of surveillance and audit activities undertaken by the IPC Team and the divisions
Membership of the Group	• Director of Infection Prevention and Control (Chair) • Chief Nurse or Deputy • Consultant HCAI leads for the divisions • Lead Doctor and for Infection Prevention and Control and Consultant Microbiologist • Nurse Consultant Infection Prevention and Control/ Deputy Director of Infection Control • Infection Prevention & Control Specialist Nurse • Non-Executive Director HCAI Lead • Lead Microbiologist for antibiotic stewardship • Antibiotic pharmacist • Public Health Representative • Sterile services manager (for Decontamination Group) • Facilities Lead • Estates Lead • Directorate Lead Nurse for each division (or deputy) • Quarterly attendance by the Heads of Quality (or deputy) for the CCGs Other members may be co-opted to attend the committee for specific items.
Frequency of meetings	The Group meet 2-monthly. The Facilities Department, Estates Department and Occupational Health will give verbal report to the group at each meeting. The meeting must be quorate with: • DIPC (or deputy) • Chief Nurse or deputy • Lead Doctor for Infection Control • A representative (or deputy) from at least three Divisions Agendas and papers will be circulated at least one week before meetings.

Appendix 3: Annual Antibiotic Point Prevalence audit

ANTIBIOTIC AUDIT: POINT PREVALENCE SURVEY

10th Dec 2020

Nicki Lewis, Antimicrobial Pharmacist & Clinical Lead Pharmacist

1. Introduction:

The UK Five Year Antimicrobial Resistance (AMR) Strategy (DH, 2013) and the UK Guidance for Antimicrobial Stewardship in Hospitals, ANTIMICROBIAL STEWARDSHIP: "START SMART - THEN FOCUS" (DH, 2011), provide guidance on prudent antimicrobial use and how to comply with the Criterion 9 of The Health and Social Care Act 2008. Documentation of 48-72 hour review formed parts of the national Antimicrobial CQUIN programs and should now be embedded into practice.

Auditing compliance to local Trust antimicrobial stewardship guidelines and empirical treatment and prophylaxis guidelines are recommended. ASPH currently audit the appropriateness of prescribing biannually and this is supported by further local monitoring and specific auditing where indicated.

2. Standards:

The ASPH Trust Antimicrobial Stewardship guidelines (available via MicroGuide™)
The ASPH Hospital Formulary
The ASPH Prescription Charts
ASPH Antimicrobial guidelines (available via MicroGuide™) for Adults, and ASPH Antimicrobial guidelines for Paediatrics (including surgical prophylaxis).
Compliance to antimicrobial guidelines is set at 90%
(The scoring system is a Strategic Health Authority (SHA) colour coded traffic light system in judging compliance (Green ≥ 90%, Amber 85-89%, Red < 85%).

3. Methods:

Data was collected by the Pharmacy team during normal working hours for the 24hr period of 00.00hrs to 23.59hrs on 10th December 2020 using a simple excel datasheet collection tool for each ward. Information was gathered for all patients on all the general medical and surgical wards, ICU, AMU maternity and paediatrics wards. Theatres, A&E and Clinical Decisions Units were excluded from audit. We also included all the escalation areas to which a clinical pharmacy service is provided.

For prescriptions without an indication on the chart, pharmacists were asked to check the healthcare notes. Where there was still no clear documented indication, these were deemed to be non-compliant to guidelines.

4. Summary of Results:

4.1 SUMMARY OF RESULTS	
total number of inpatients	**405**
total number of inpatients audited	**273**
total number of patients on an antibiotic	**124**
Total number of antibiotic prescriptions	**172**
Percentage of inpatients audited	**67**
PREVALENCE OF PRESCRIBING (%)	**45**
RATE OF PRESCRIBING (No of abx per pt)	**1.4**

4.2 Percentage prescribing compliance	%
Percentage of prescriptions with an indication	68
Percentage of prescriptions with a stop/review date	47
Percentage of prescriptions in line with guidelines/micro	81
Percentage of prescriptions reviewed within 72hrs	54

4.3 Percentage compliance to prescribing standards by **ward: See appendix A**

4.4 Specific Reasons for non-compliance with guidelines

- Clear indication not documented – unable to assess compliance
- User of inappropriate terminology e.g.
    - Indication "post op", where an infection description is needed such as peritonitis.
    - ? raised inflammatory markers
    - "LRTI" rather than Pneumonia / IE COPD etc.
- Use of co-amoxiclav
- Restricted antimicrobials being used outside of existing guidelines and without prior authorisation from Microbiology. E.g. ciprofloxacin for colitis.
- Use of co-amoxiclav for COVID CAP (where NICE guidelines recommend doxycycline)
- Use of non-recognised indications: e.g. haematuria
- Routine surgical post-op doses not in line with guideline (single dose)
- Prescribing of co-amoxiclav for mild CAP or prescribing for severe but without the macrolide.

5.0 Summary Discussion and Conclusion:

- In comparison to previous audits the prevalence of prescribing has increased. The overall prevalence of prescribing remains increased at **45%** (40%, Dec '19) and is above the national prevalence of antibiotic prescribing figures which is estimated around 30%.
- Whilst we are prescribing more antibiotics to our inpatients we are not necessarily using multiple agents as seen in some previous audits. The rate of prescribing is stable at **1.4** (1.3, Dec'19) antibiotics per patient.
- Indication completion remains poor at **68%** (67%**,** Dec '19). In the past we have achieved compliance has been over 90%.
- The lack of stop and review date documentation remains similar and a significant concern at **47%** (47%, Dec '19). To address this, the new versions of the adult inpatient drug charts were been amended to facilitate with compliance to this, but adoption to this has been poor since the changes were introduced in late 2018/ early 2019.
- The DoH recommend that all antimicrobial prescriptions are reviewed with 72hrs. Compliance to this standard was only **54%** and has declined slightly from previous audits.
- Overall compliance to either the guidelines, microbiology advice or sensitivity data has declined to **81%** (89%, Dec '19).

6.0 Commentary

Antibiotic point prevalence audits are usually carried out biannually. Due to the pressures on workforce we were unable to carry out the audit in the Spring of 2020. Reports from public health suggest that the rate of prescribing national had dropped significantly. There was a general feeling from our team that stewardship practices were poor and general concern that prescribing rates were high and so it was felt that an audit was necessary before pressures increased again over winter.
The proportion of patients who were audited remains consistent despite the fluctuating bed base and fluctuant staffing. Unfortunately due to these pressures data could not be collected for all wards on this single day and thus the prevalence is not a TRUE prevalence but a representative figure.

ASPH remains an outlier for having some of the highest levels of antimicrobial prescribing locally and nationally. The previously reported national average was 30% prevalence. It was previously thought that the high consumption was linked to the high rate but this is not supported from the data in this audit.

It was hoped that the introduction of the new drug charts with specific areas dedicated to the documentation of indication and stop/review dates would facilitate this information being documented but the uptake of this remains poor despite teaching efforts, although these have been limited by COVID.
It was also hoped that the publication, launch and dissemination of the Trust Antimicrobial Prescribing Policy to mandate and support the Antimicrobial stewardship prescribing requirements, incorporating drug chart endorsement requirements would have some impact. We are not clear why this has not had the impact it should have. Behaviour change does take time and focus has been elsewhere. Some stewardship activities have been put on hold due to COVID including Antimicrobial stewardship ward rounds and face to face teaching, so reinforcement has been limited.
We previously observed a strong local culture to initiate treatment prior to performing appropriate investigations in non-septic patients – if indeed performed at all, which then severely impedes de-escalation decision making. We have revised key guidance (including but not limited to pneumonia and UTI) to include more explicit guidance on culture taking (see recommendations)
Where we also previously reported / observed a lack of standardisation within given specialities for the same indication (particularly clear in surgical prophylaxis) we have been working with the Surgical Site infection group to develop and review guidelines.

7.0 Recommendations

- Review of stewardship program and reinstate what we can / develop other methods for teaching and sharing information.
- Communicate with prescribers the national rates of co-infection in COVID in the hopes that we can drive down “just in case prescribing”.
- Continue to review guidelines and be explicit with the need for investigations and microbiological sampling.
- Continue to drive the need for formal review at 72hrs for all antimicrobial prescriptions.
- Review of antimicrobial protocols including use of antibiotics for colitis and gastroenteritis.
- Publication of key messages from this audit in new ways (in context of COVID).
- Targeted audit and quality improvement in the poorer performing areas.
- Investigate learnings from wards who have demonstrated good compliance and if this can be applied elsewhere.
- Feedback and dissemination of results to drive improvement.
- Feedback to the pharmacy team undertaking the audit to improve the standard of data collection.