



Royal United Hospitals Bath  
NHS Foundation Trust

# Infection, Prevention and Control

Annual Report | 2022/23



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**Key:**

-  Target met, Trust meeting standards, increase in performance from previous year
-  Target not met by narrow margins, Trust not meeting standards but evidence of improvement, slight reduction in performance from previous year
-  Target not met, Trust not meeting standards, significant reduction in performance from previous year

## 1 Executive Summary

1.1 This is the annual report of the Director of Infection Prevention and Control (DIPC) and summarises the work undertaken at the Royal United Hospitals Bath NHS Foundation Trust to prevent and manage infections during the period 1 April 2022 to 31 March 2023.

1.2 The Trust is compliant with the Health and Social Care Act 2008: Code of Practice on the prevention and control of infections and related guidance which was updated in December 2022.

1.3 During 2022/23 8 MRSA bloodstream infections were reported by the Trust however there were no Trust apportioned MRSA bloodstream infections.

1.4 There were 103 cases of MSSA bloodstream infections reported, this was an increase of 8 cases on the previous year. There were 24 hospital onset cases; an increase of 1 case compared with 2021/22. There was 1 case reported on behalf of a community provider.

1.5 The Trust reported a total of 305 cases of *E coli* bloodstream infection in 2022/23. There were 60 hospital onset cases: this was an increase of 11 cases against last year's figures. There were 34 community onset healthcare associated cases, which was a decrease of 3 cases against last year's figures. In total, 94 healthcare associated cases were reported against the threshold of 76.

1.6 There were 75 *Klebsiella spp.* bloodstream infections were reported in 2022/23. There were 21 hospital onset cases were recorded; an increase in 5 cases compared with last year's performance. 12 community onset healthcare associated cases were reported. There was a total of 33 Trust apportioned infections against the threshold of 26.

1.7 There were 28 cases of *Pseudomonas aeruginosa* bloodstream infections reported: this was 10 cases less than the previous year. There was 10 hospital onset and 2 community onset healthcare associated cases reported, making a total of 12 cases against the threshold of 17.

1.8 There were 143 cases of *Clostridioides difficile* infection reported of which 72 cases were Trust apportioned; 17 more than were reported in the previous year. The Trust apportioned cases comprised of 51 hospital onset and 21 community onset healthcare associated cases. The threshold was 42 cases.

1.9 There were 85 ward or bay closures and 26 outbreaks of norovirus between April 2022 and March 2023.

1.10 There were 51 ward or bay closures and 4 outbreaks of influenza between April 2022 and March 2023. All but one of the closures was due to Influenza A which was the predominant strain locally; only one bay closed due to Influenza B.

1.11 The COVID-19 pandemic remained a key challenge for the Trust. National guidance has informed our local policies and protocols to support safe working and patient flow. Nosocomial transmission of COVID-19 has increased at times when the community rates have peaked.

1.12 Version 1.11 of the IP&C Board Assurance Framework (BAF) was published in September 2022, which included minor sentence additions and clarification updates. This review was

presented to Quality Governance Committee in February 2023. The Board Assurance Framework provides a review of current practice against the updated guidance and living with COVID-19. The gaps in the assurance process relate to existing identified risks which are on the risk register and include cleaning and our ability to provide the expected standards constantly, achieving the ventilation standard for all clinical areas and the number of isolation facilities available to meet demand. There is also gap identified around our ability to record all staff training onto ESR, which pertains to fit testing, however local records are maintained.

The BAF was current at the time of the review. There is not another IP&C COVID-19 specific BAF expected from NHSE. There will however be a Board Assurance Framework that supports the Health and Social Care Act, which is expected in early Spring 2023.

1.13 The antimicrobial stewardship programme has continued throughout the year. The antimicrobial consumption reduction targets have been met and work is continuing to reduce this further.

1.14. Surveillance of surgical site infections continued during 2022/23 however due to the temporary cessation of total hip and knee replacement surgery, due to lack of ring fenced beds, there were two quarters where limited surveillance took place on fractured neck of femurs.

1.15 Compliance with infection prevention and control Level 2 training did not meet the 85% target; there were 80.9% of staff trained by the end of March 2023, an improvement of 1.1% compared with the previous year.

1.16 The IPC team have been working collaboratively with Estates and Facilities to ensure improvement works are appropriately prioritised, which maintains patient safety and experience. This will be ongoing throughout 2023/24.

## 2 Key progress 2022/23

2.1 The Infection Prevention and Control Team (IP&C Team) have been instrumental in ensuring that any change in National guidance has been reflected in Trust guidance and in the revision of policies. The team have continued to support staff to work safely and to ensure that patient pathways are maintained to reduce the spread of infection. This included Mpox and Group A streptococcus outbreaks during 2022/23. There has also been collaborative working with colleagues in the Bath Swindon and Wiltshire Integrated Care Board (ICB) to enable sharing of local guidance and standardise the approach to preventing and managing infection across the three acute trusts: RUH, Great Western Swindon and Salisbury. The team have been part of the ICB collaborative working groups for reduction of *Clostridioides difficile* and Gram negative infections and also sustainability projects.

2.2 The IP&C Team continued to lead on outbreak prevention and management during the pandemic and were responsible for external reporting of these incidents and submission of other reports as required internally and externally.

2.3 The IP&C Team supported the adoption of the national IP&C eLearning package for all staff; testing it prior to implementation in autumn 2022. A half day infection prevention and control education package has been developed by the team, and this has been delivered face to face to a number of nursing staff. This programme will continue during 2023/24. Training has also been delivered to staff working in specific areas as part of their ward based educational programmes.

2.4 The IP&C Team have supported wards and departments who are going through bronze and silver accreditation. This work is essential to support the ward teams; audits, education and support with improving the environment for patients have been led by the IP&C Team.

2.5 Mandatory surveillance of health care associated infections has continued alongside the IP&C Team's key involvement with the COVID-19 Pandemic. All cases have been reviewed and reported through the United Kingdom Health Security Agency (UKHSA) data capture system. This includes reporting of infections for GPs and other provider organisations who use the RUH laboratory for processing specimens. A major challenge to this has been the delay in implementing the new generation version of ICNet which is used by the team to view results and undertake surveillance. The current system does not import certain results including those reported by the RUH laboratory which has meant that the team are using multiple systems to analyse data. It is anticipated that the new system will now be in place by Summer 2023.

2.6 The IP&C Team have worked closely with the Capital Projects Team to deliver a programme of ward improvements which has focussed on the provision of improved isolation facilities and increasing the number of bathrooms available for patient use. It is anticipated that in future this will reduce the spread of infection on the upgraded inpatient wards, as well as providing our patients a much improved care environment.

2.7 The Deputy DIPC has been part of the NHS England working group, supporting the development of the new national IPC Board Assurance Framework, which was published in April 2023.

2.8 Two members of the IP&C Team attended the national Infection Prevention Society conference in 2022. They have shared their experience and new ideas with the rest of the team which has led to the development of infection prevention projects utilising the knowledge that they gained whilst at the conference. One team member has commenced a master's in Infection Prevention and Control, with Dundee University, with a second team member completed a Public Health module with the University of West England and two team members commenced the Florence Nightingale leadership course, funded by NHSE, which was scheduled specifically for IPC nurses.

2.9 The IP&C Team have revised the following policies during the last year:

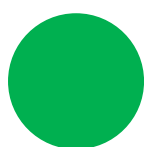
- Animals and pets in healthcare
- Antibiotic resistant micro-organisms
- Carbapenemase producing enterobacteriaceae
- *Clostridioides difficile*
- Management of diarrhoea and vomiting
- Influenza
- MRSA
- Sharps

2.10 Mpox (formally known as Monkeypox) and Group A *streptococcus* outbreaks were seen nationally. The IP&C Team were involved in local investigations and also provided regular updates to the Trust on these infections. There was also an increased risk of Diphtheria in the region, that was associated migration population and accommodation facilities being utilised in the South West area. The IPC team ensured clinical teams had information available to support diagnosis, testing and reporting.

2.11 The Infection Prevention and Control Team have continued to contribute to the paperless inpatient documentation project and have advised on revision of key documents that support patient care. These documents will replace some of the care plans that are currently paper based.

2.12 The IP&C Team have continued to support patient flow within the Trust by attending regular Clinical Site meetings throughout the day. The team have facilitated the reopening of closed beds safely to prevent further spread of infection and liaised with community colleagues to expedite discharge of patients with infections when they are medically fit.

### 3 Meticillin resistant *Staphylococcus aureus* (MRSA) bloodstream infections



The reporting of MRSA bloodstream infections is mandatory for all NHS Trusts. There is a national target of zero preventable MRSA bloodstream infections.

There were 8 cases reported by the Trust during 2022/23. All cases were community onset and were attributable to the designated ICB. There have been no hospital onset cases since February 2021.

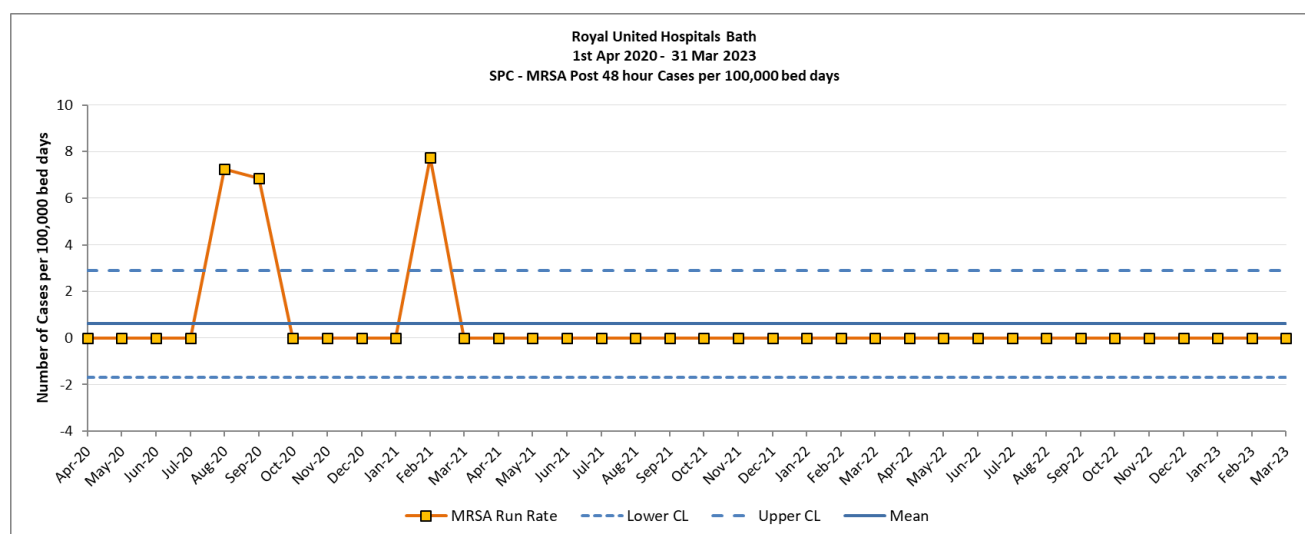
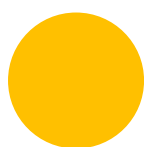


Figure 1: Trust apportioned MRSA bloodstream infections since April 2020

See Appendix 15.2 for further information on these investigations and regional MRSA rates.



## 4 Meticillin sensitive Staphylococcus aureus (MSSA) bloodstream infections



MSSA bloodstream infections have been part of mandatory surveillance since 2011. There are currently no national reduction targets or thresholds set for this infection.

In 2022/23 there were 103 cases of MSSA bloodstream infection reported; 79 taken within 2 days of admission and 24 hospital onset cases where the blood cultures were taken after 2 days. The number of hospital onset cases has increased by 1 case in comparison with the previous year.

*Included in the total number of cases was one case reported on behalf of Health Care Resource Group (HCRG).*

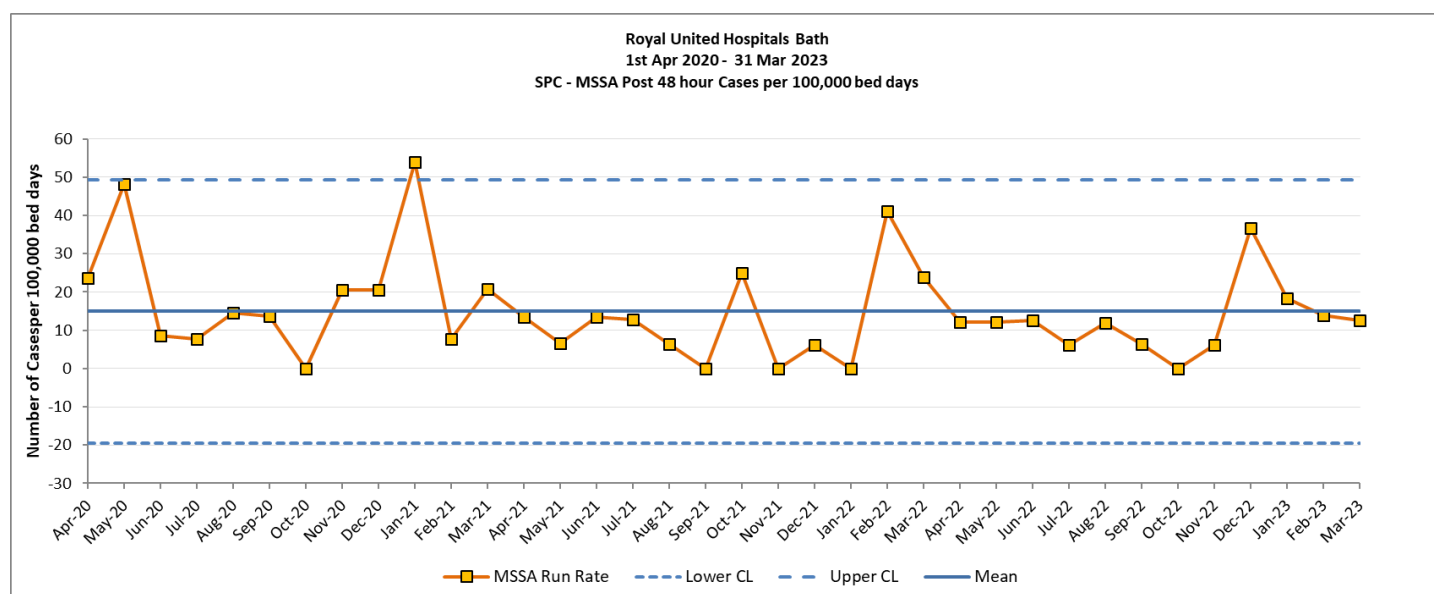


Figure 2: Trust apportioned MSSA bloodstream infections per 100,000 bed days since April 2020

### Actions taken

All cases of MSSA bloodstream infection are assessed by the microbiologists and on discussion with the relevant clinical team, they will identify the potential source of infection. This will include a physical examination of the patient where possible and a review of any radiological reports alongside other microbiological samples if appropriate. In some cases, affected patients have complex illness and histories where it is not possible to identify a clear source of infection, these are then reported as cause unknown. The microbiologists advise the clinical teams on treatment of all patients with MSSA bloodstream infections and continue to follow them up whilst they remain inpatients.

During 2022/23 Skin and soft tissue alongside vascular access devices, including long lines have been identified as a potential source for a number of Trust attributed MSSA infections. Work has been ongoing to prevent these infections through Skin prep, hand hygiene and line care. However, auditing has shown that documentation of insertion, removal and observation of cannula sites is inconsistent. The IP&C Team will be working with nursing teams to improve communication regarding aftercare of line sites with patients so that they are aware of potential signs of infection at

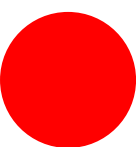


the site as early as possible so that prompt treatment can be sought. The IP&C Team also invited an external team from BD to undertake an independent audit of cannula insertion and maintenance; the findings from the audit have been shared with the clinical teams and has provided a basis on which improvements can be made.

See [Appendix 15.3](#) for further information on these investigations and regional MSSA rates.

## 5 Gram negative bloodstream infections

In April 2022 NHS England published Minimising *Clostridioides difficile* and Gram-negative Bloodstream Infections alongside the NHS Standard Contract for 2022/23. This document set infection thresholds for each NHS Trust, NHS foundation trust and clinical commissioning group (now ICBs). Hospital trust thresholds include all healthcare associated cases: both hospital onset and community onset where the patient has been discharged from hospital within a certain timeframe. The timeframe for community onset healthcare associated Gram-negative bloodstream infections is where the infection occurs within 28 days of discharge from the reporting trust.



### 5.1 *Escherichia coli (E coli)* bloodstream infections

During 2022/23 the Trust reported a total of 305 *E coli* bloodstream infections. This includes 3 cases reported on behalf of the community provider HCRG. There were 60 hospital onset and 34 community onset healthcare associated cases reported: a total of 94 trust attributed infections. The threshold was set at 76 cases for the year therefore the Trust did not achieve the reduction trajectory.

See [Appendix 15.4.1](#) for more information

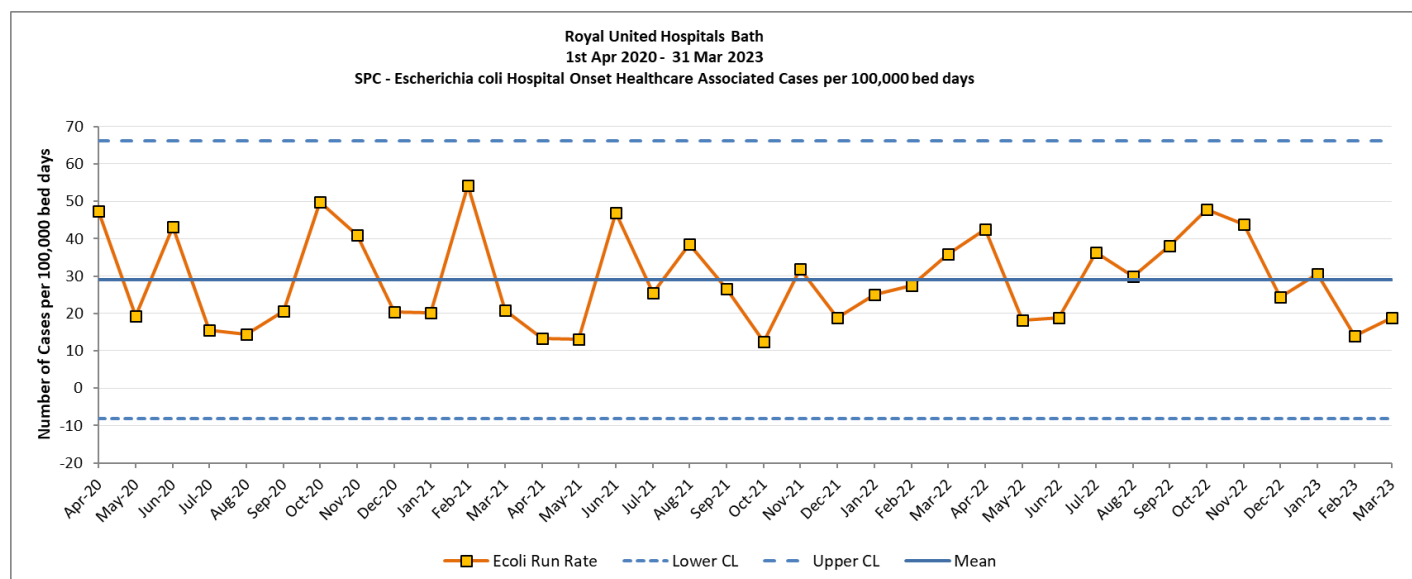


Figure 3: Hospital onset healthcare associated *E coli* bloodstream infections since April 2020

## Actions taken

The lower urinary tract in non-catheterised patients is the most common source of these infections overall (83 cases). For Trust attributable cases the most common source of infection was hepatobiliary (27 cases). These infections can be linked to underlying diseases of the liver and gall bladder, some of which are linked to lifestyle factors.

The IP&C Team are part of a multi-disciplinary collaborative with other organisations within the ICB to reduce Gram-negative infections with a focus on urinary tract infections. A large proportion of the work is around patient education and hydration with the aim to reduce the prevalence of these infections.

Actions taken to reduce *E coli* bloodstream infections will also have a positive impact on reducing infections from *Klebsiella spp.* and *Pseudomonas aeruginosa*.

### 5.2 *Klebsiella spp.* bloodstream infections

There were 75 cases of *Klebsiella spp.* bloodstream infections reported during 2022/23.

There were 21 hospital onset healthcare associated cases, 5 cases more than reported in 2021/22. There were 12 community onset healthcare associated cases reported making a total of 33 Trust apportioned cases against the NHS Standard Contract threshold of 26 cases.

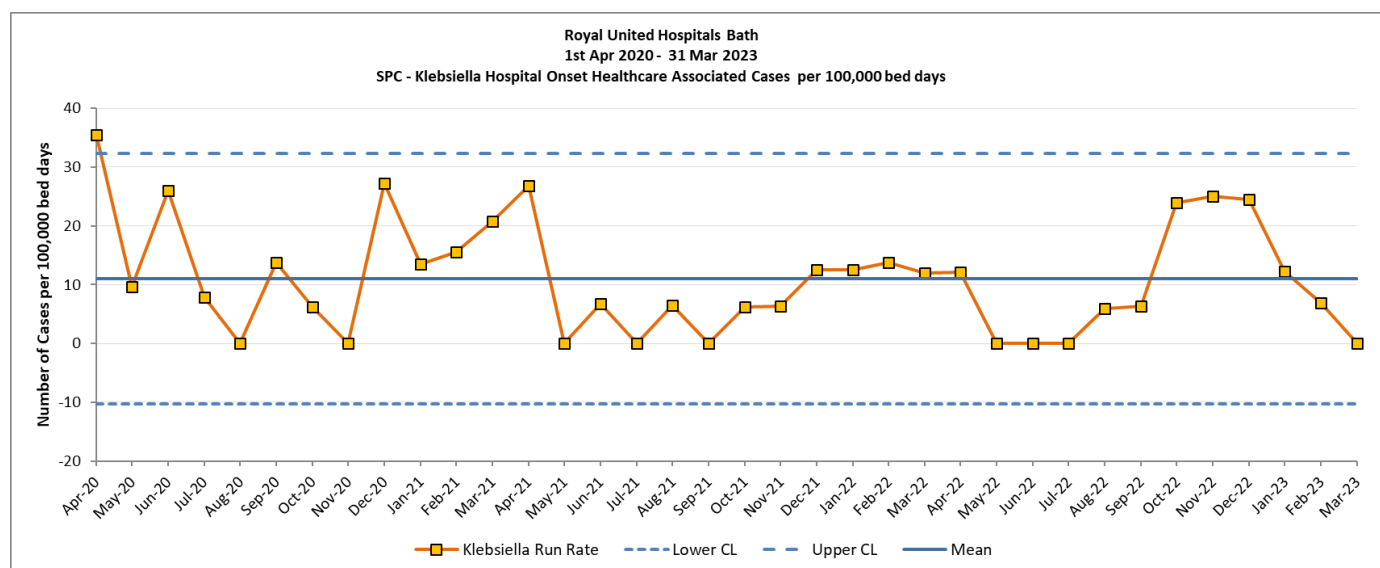


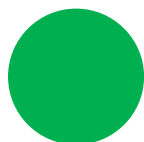
Figure 4: Hospital onset healthcare associated *Klebsiella spp.* bloodstream infections since April 2020

## Actions taken

All cases were reviewed by the microbiologists, or infection prevention and control nurses and the potential source identified. The most common source of infection was identified as hepatobiliary (17 cases) however, for Trust attributable cases, there were two sources that were identified as the most common, hepatobiliary and lower urinary tract infection, although these were in relatively low numbers.

See [Appendix 15.4.2](#) for more information.

### 5.3 *Pseudomonas aeruginosa* bloodstream infections



There were 28 cases reported during 2022/23, including one case reported on behalf of the community provider Wiltshire Health and Care. There were 10 fewer cases overall reported than in the previous year. There were 10 hospital onset and 2 community onset healthcare associated cases. The total number of Trust apportioned cases was 12 against the NHS Standard Contract threshold of 17.

#### Actions taken

As with the other Gram negative infections all cases were reviewed by the microbiologists and the source of infection identified where possible. The most common source of infection was the lower respiratory tract overall (7 cases) and this was also the most common source of Trust attributable cases.

See [Appendix 15.4.3](#) for more information.

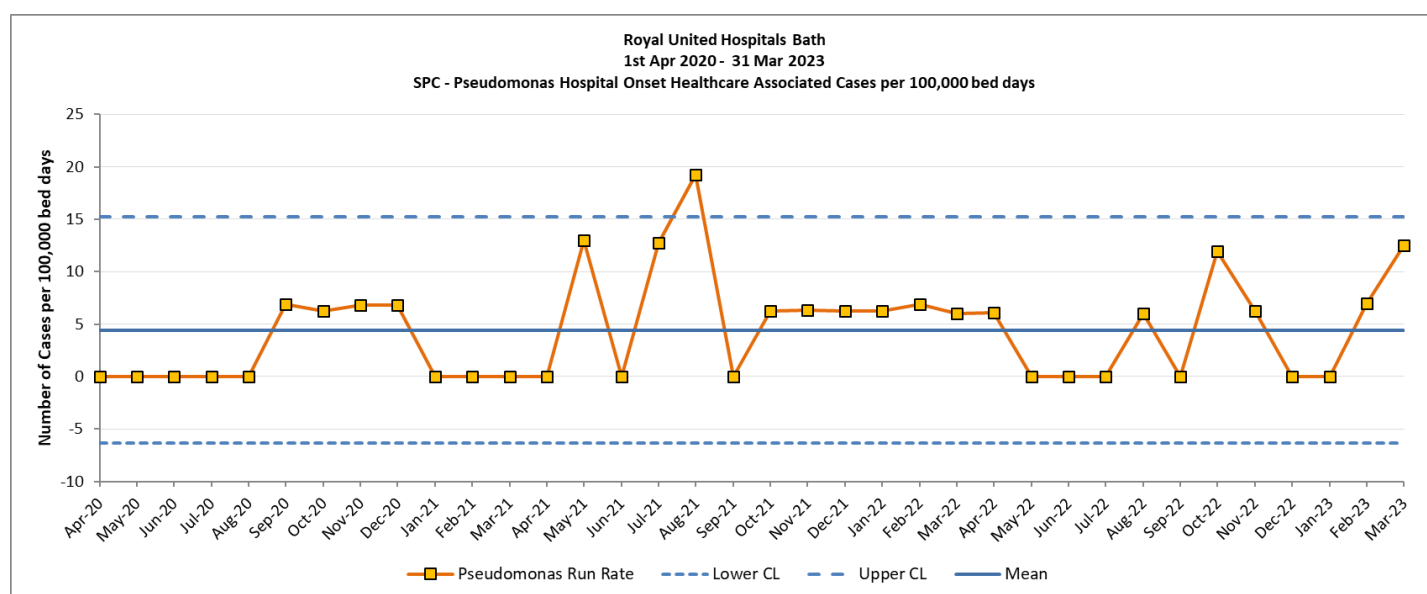
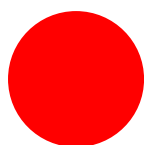


Figure 5: Hospital onset healthcare associated *Pseudomonas aeruginosa* bloodstream infections since April 2020

## 6 *Clostridioides difficile* infection (CDI)



National *Clostridioides difficile* thresholds were published within the 2022/23 NHS Standard Contract. The threshold for the Trust was set at 42 cases.

The Infection Prevention and Control team reported a total of 143 cases for the year which included 3 cases for other healthcare providers (HCRG and Wiltshire Health and Care). There were 51 hospital onset and 21 community onset healthcare associated cases reported therefore the total number of Trust apportioned cases was 72. This equated to 31 cases above the threshold set by NHSE.

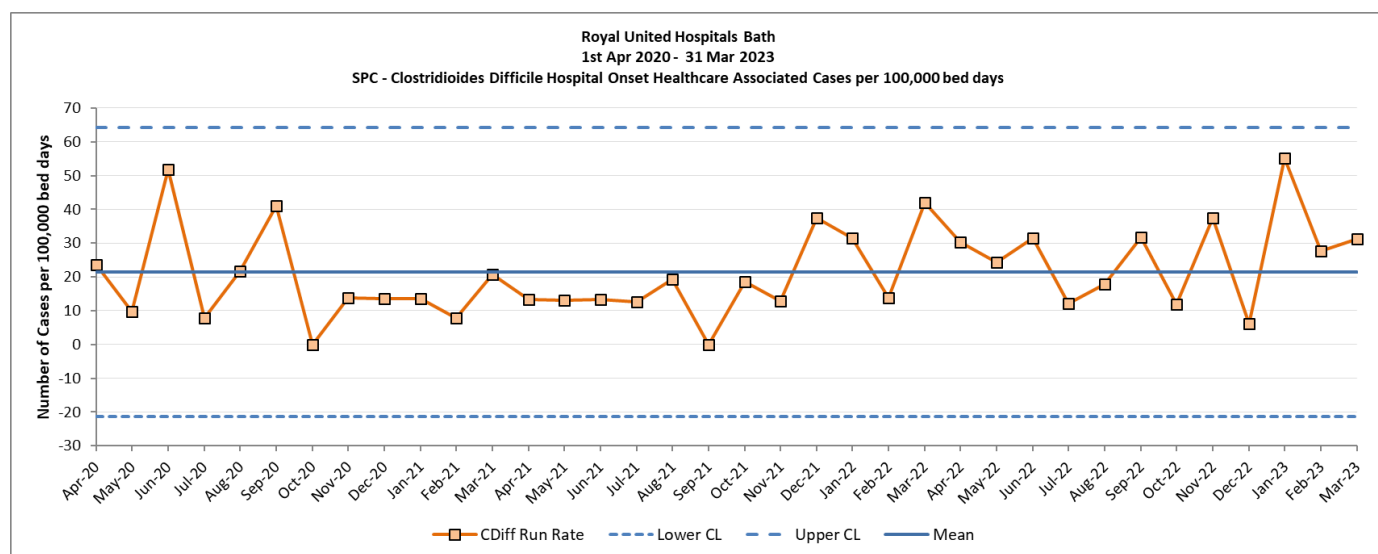


Figure 6: Hospital onset CDI infections since April 2020

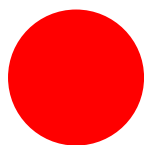
### Actions taken

Root cause analysis (RCA) is undertaken for all hospital onset *Clostridioides difficile* infections. These were being led by the senior sister and matron for the ward where the infection had been diagnosed, however as the RCAs were often not being fully completed, the IP&C Team took over this responsibility in February 2023. This has improved the turnaround time for completion of the investigations and action plans are produced in a timelier fashion. This provides improved opportunities for learning to be addressed. The RCAs and action plans are attached to the datix raised for the infection. The RCAs are designed in such a way that they can be presented to the divisional governance meetings who can then monitor progress against the action plans.

Nationally there has been a significant rise in cases of *Clostridioides difficile* infections and this reflects the situation at RUH. There have been periods of increased incidence of infection in some areas which have been investigated, no links of cross infection through ribotyping has been established between cases. A thematic review of all cases in the Trust has taken place and the findings shared at the Infection Control Committee. A *Clostridioides difficile* infection reduction work plan remains in place and the IP&C Team continue to support the clinical divisions to complete the actions as well as working as a collaborative across BSW and the South West IPC network.

See [Appendix 15.5](#) for further information and regional CDI rates.

## 7 Norovirus



During 2022/23 there were 85 bay or ward closures due to patients with diarrhoea and vomiting caused by norovirus; this includes 26 outbreaks where two or more patients had confirmed norovirus. In comparison last year there were only 3 outbreaks of norovirus infection.

This increase in infections is almost certainly due to the lifting of COVID-19 restrictions both within the community and hospital. Patients must be isolated as soon as symptoms commence in order to prevent spread of infection however due to the lack of available single side rooms and increased bed pressures this is challenging to achieve. The work to improve isolation facilities will provide more opportunity to separate either single cases of norovirus or a cohort within a bay from the rest of the clinical area.

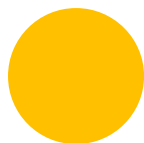
There were a total of 509 bed days closed for use in total: of which 368 were lost during the 26 outbreaks.

### Norovirus outbreaks 2022/23

Month	Location	Bed days lost
June 2022	Cardiac Bays 4&5	14
June 2022	Cardiac Ward	33
June 2022	Parry Ward	53
September 2022	Parry Ward	16
December 2022	Acute Stroke Unit	21
February 2023	Waterhouse Ward	44
February 2023	Combe Ward	51
February 2023	Midford Area A	7
February 2023	Cardiac Bay 3	5
February 2023	Midford Area B	5
February 2023	Midford Area A	9
March 2023	Midford Area C	5
March 2023	OPAU Bay 1	2
March 2023	Forrester Brown Ward	18
March 2023	Acute Stroke B Bay	9
March 2023	Cardiac Bay 5	8
March 2023	Cheselden Bay 2	4
March 2023	MAU Beds 10-14	0
March 2023	Cardiac Bays 1&2	8
March 2023	Combe Ward	13
March 2023	Cardiac Bays 4&6	20
March 2023	Waterhouse Bay 1	6
March 2023	Waterhouse Bay 3	10
March 2023	Cheselden Bay 3	3
March 2023	Cheselden Bay 2	4
March 2023	Cheselden Bay 1	0
<b>TOTAL</b>		<b>368</b>

All areas were cleaned thoroughly prior to admitting new patients after the end of each outbreak was declared.

## 8 Influenza



There were 51 bay closures due to confirmed cases of influenza during 2022/23. This includes 4 outbreaks of influenza within bays with the loss of 23 bed days. In the majority of cases the patients with influenza had positive tests within a few days of admission.

Early detection of influenza is essential in order for patients to be isolated appropriately therefore any patient with symptoms that could be attributed to a respiratory virus has been tested for both COVID-19 and influenza on admission. Point of care testing for influenza was introduced in the Emergency Department in late 2022 which has reduced the delays in waiting for laboratory results and in turn has ensured that patients are not admitted to bed spaces that are in communal bays.

The predominant strain detected was influenza A which accounted for all of the bay closures with the exception of one case where influenza B was detected.

### Influenza A outbreaks

Month	Location	Bed days lost	Confirmed cases of influenza A
May 2022	B9 & Respiratory Bay 5*	8	4
December 2022	Waterhouse Bays 2&4	4	3
December 2022	Charlotte Bay 9	3	3
December 2022	Cardiac Bay 6	8	2
<b>TOTALS</b>		<b>23</b>	<b>12</b>

\*Outbreak affected two areas as the index case had been transferred whilst asymptomatic but infectious from one area to another leaving patient contacts in both bays.

## 9 Antimicrobial Stewardship (AMS)

### 9.1 Staff update

There has been a nine month vacancy for the Senior Pharmacy Technician antimicrobials since June 2022. Three successful candidates were recruited in March 2023, these staff will rotate into AMS on a four monthly basis.

There is provision for two Consultant Microbiologists to share the AMS duties however there has been a six month vacancy. A successful candidate has joined the Trust in April 2023. However the other Consultant Microbiologist will leave the Trust in Mid-June 2023 and the post was readvertised, the new post holder is not able to start until May 2024.

### 9.2 Antimicrobial stewardship activities

AMS Activities	Description
Committee	<p>Quarterly meetings, report to IPCC and Medicine Assurance Committee. The medical director is the Chair.</p> <p>Membership has been expanded to include representation from areas of high consumption including</p> <ul style="list-style-type: none"> <li>• Respiratory</li> <li>• Haematology</li> <li>• Acute medicine</li> <li>• General Surgery</li> <li>• OPU</li> <li>• Trauma and Orthopaedics</li> </ul> <p>There is a ratified and updated Antimicrobial Stewardship Policy in place.</p>
AMS Rounds	<p>Microbiology rounds have been running since October 2021. These include: -</p> <ul style="list-style-type: none"> <li>• ICU- daily</li> <li>• Haematology/Oncology MDT- weekly</li> <li>• Cardiology/Infective Endocarditis MDT-weekly</li> <li>• <i>Staphylococcus aureus</i> bacteraemia weekly reviews</li> <li>• Complex patient review- weekly</li> <li>• OPAT virtual round - weekly</li> <li>• Carbapenem reviews- once weekly</li> <li>• Monthly Prosthetic joint infection meetings</li> <li>• MAU MDT- weekly</li> <li>• AMS rounds on Parry and Pulteney ward based on antimicrobial compliance audit data and complexity of patients on these wards.</li> </ul>
<i>C. difficile</i>	<p>Weekly rounds by Consultant Microbiologist</p> <p>Contribution to RCAs, data on potential causative antibiotic trends, primary care feedback of non guideline use of antibiotics.</p>
CQUIN/ MOP/Standard contract	<p>UTI CQUIN: in progress since April 2022 AMS team have updated adult guidelines.</p> <p>CAP CQUIN: in progress led by respiratory, AMS team are in process of reviewing adult CAP guidelines. Care plan on ePMA to be implemented in 2023</p> <p>IVOS CQUIN: data collection in progress, IVOS guideline updated and decision tool implemented on MicroGuide.</p>
Regional	<p>BSW AMS network.</p> <p>South West antimicrobial pharmacist network.</p> <p>HCAI collaborative workshops</p>
Training	<p>Level 2 AMS update complete and live on ESR.</p> <p>Full programme of face to face /hybrid teaching by AMS team underway since Summer 2021 including updates to: -</p> <ul style="list-style-type: none"> <li>• Acute medical team</li> <li>• Pharmacy team</li> </ul>



	<ul style="list-style-type: none"> <li>• Emergency Medicine medical team</li> <li>• Surgical junior doctors</li> <li>• Stroke team</li> <li>• Respiratory team</li> <li>• Primary Care teaching</li> <li>• Medical Nurse practitioner teaching</li> </ul>
Audit	<p>Trustwide compliance audit performed quarterly by AMS pharmacist and fed to Divisional and governance leads as well as Antimicrobial Stewardship Group Members. Areas that are underperforming are selected for AMS rounds and AMS education. Areas of good performance are now ranked in top 3 and celebrated.</p> <p>Teicoplanin audit pre and post prescribing plan implementation ongoing started in January 2023, results expected July 2023.</p> <p>Carbapenem review – weekly.</p> <p>Audit of <i>Staphylococcus aureus</i> bacteraemia led to adjustment of community acquired sepsis guidelines March 2022</p>
Guidelines	<p>Updated as required – with additional safety information and new recommendations.</p> <p>Paediatric guidelines have been separated out and are on MicroGuide. All paediatric guidelines have been reviewed by the paediatric team in Spring 2022 and are due for publication.</p> <p>Adult antimicrobial guidelines are currently being reviewed as of April 2023</p> <p>New Line infection Guideline in Adults currently under consultation</p> <p>New Betalactam continuous infusion in adult patients in Critical Care currently under consultation</p>
Safety	<p>Gentamicin prescribing process update – care plan now mandatory on ePMA</p> <p>Review of OPAT prescribing processes, clinical governance and structure ongoing.</p>
Comms	<p>World Antibiotic Awareness Week Nov 2022, Antimicrobial Stewardship Newsletter quarterly</p> <p>Updated guidelines highlighted on Workplace and staff brief</p>

### 9.3 Antimicrobial Consumption

#### a) Antibiotic Consumption

There is no longer a target to reduce **total** antimicrobial consumption but to reduce broad spectrum prescribing. To date in 2022-23 the RUH is using more antibiotics than in the previous 2 years and is the highest user of total antimicrobials in the region for Q2 2022/23.

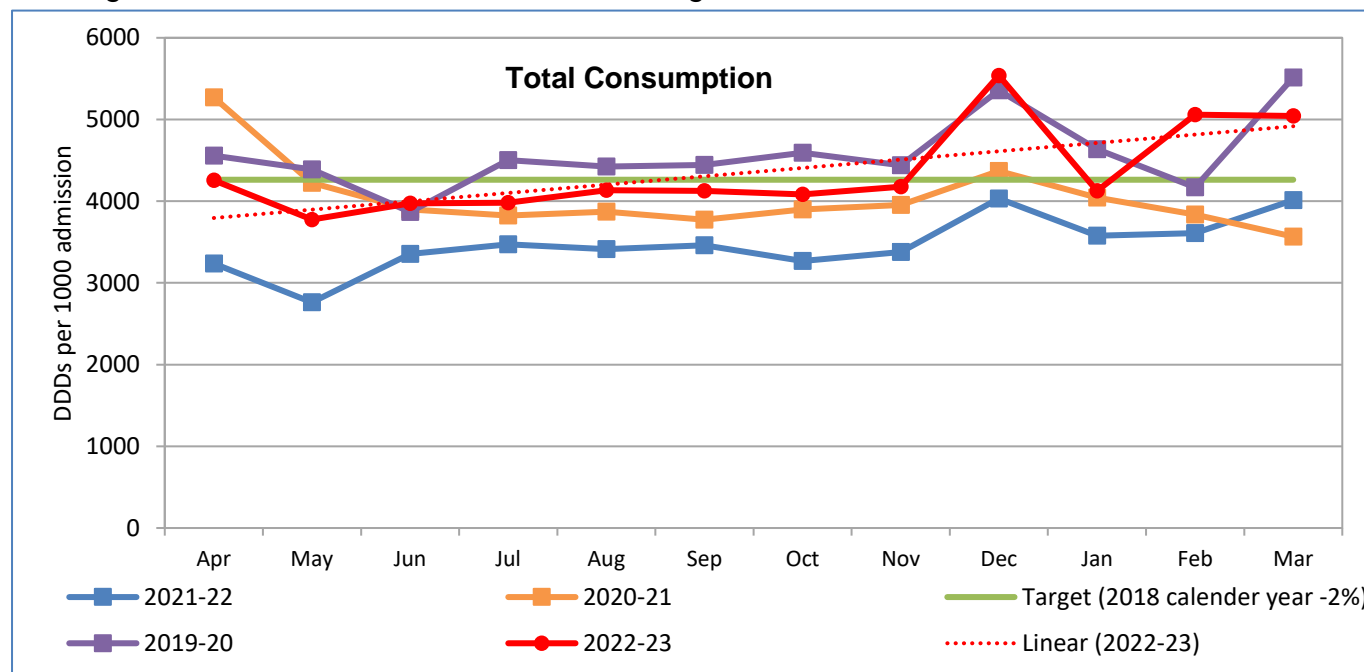


Figure 7: Total antibiotic consumption 2022/23

#### b) Carbapenem Consumption Carbapenem Usage

Although not a CQUIN target, the aim is to reduce Carbapenem consumption and reserve its use for patients who require it as per microbiology advice to avoid antibiotic resistance. There was a spike in Carbapenem usage at the RUH in August and December 2022. Overall total number of DDDs for the year is lower than 2021-22. In comparison to our region, the RUH is the lowest user of Carbapenems per 1000 admissions.

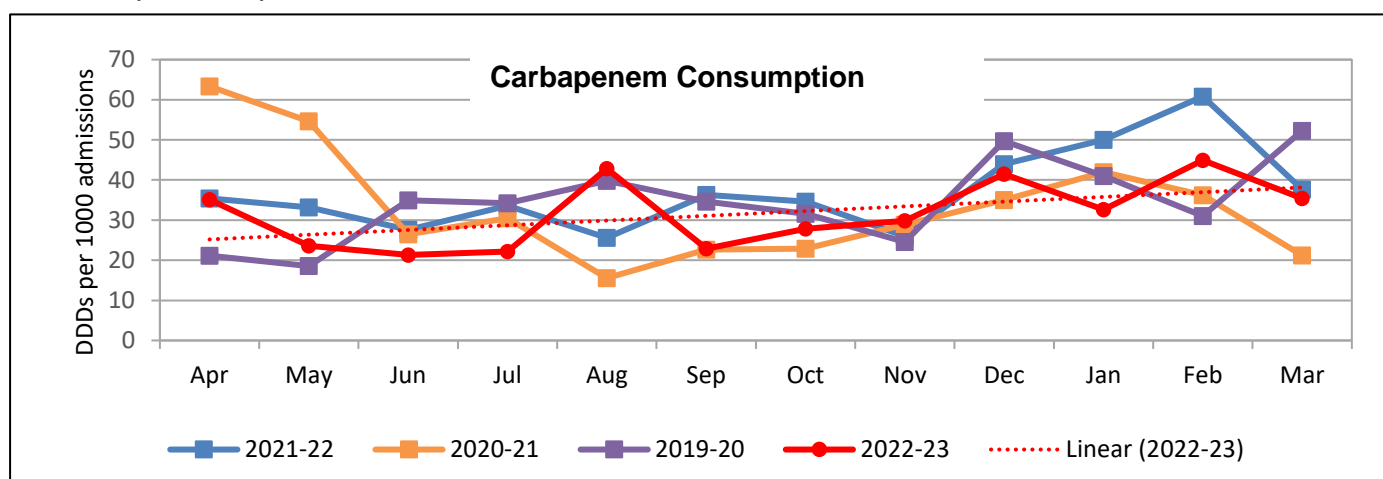


Figure 8: Carbapenem consumption 2022/23

### c) ACCESS Group

#### ACCESS Group Antibiotics

As a Trust we continue to monitor the proportion of antibiotics prescribed within the ACCESS group to help reduce antibiotic resistance and preserve the effectiveness of "last resort" antibiotics that are needed when all others fail. The overall proportion of Access group antibiotics prescribed for 2022/23 = 65%. In comparison to our region the RUH are the **highest** user of 'Access' group antibiotics, which is positive.

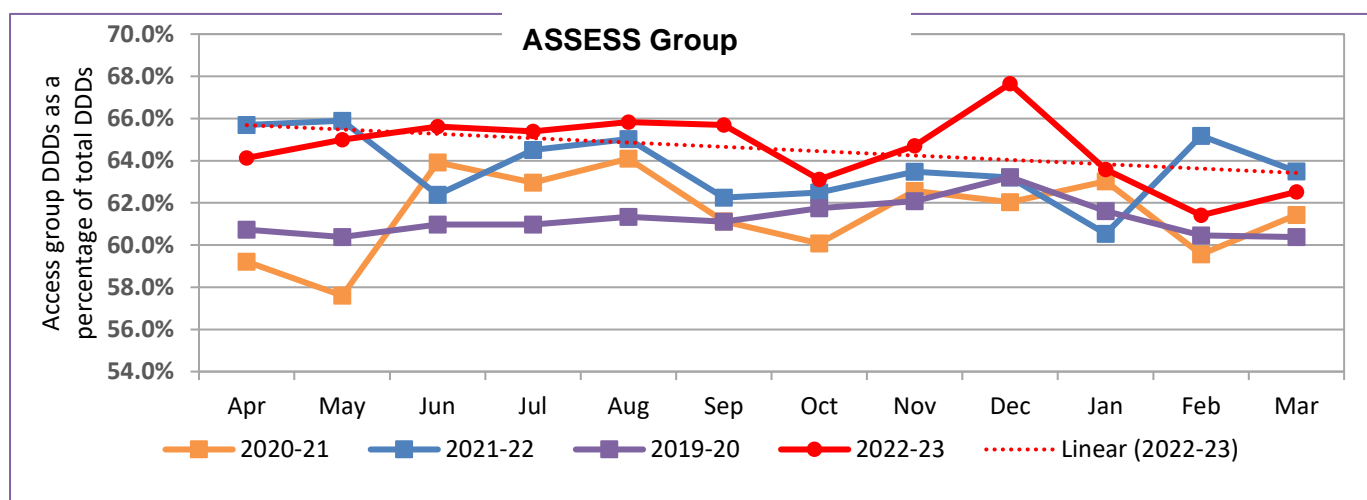


Figure 9: Access group antibiotic consumption 2022/23

### d) Broad spectrum prescribing from 'Watch' and 'Reserve'

#### Broad Spectrum Prescribing

The target for the RUH for 2022/23 is 1977 DDDs per 1000 admissions to achieve the 4.5% reduction in Watch and Reserve antimicrobial prescribing from our 2018 baseline. There was a spike in consumption in December 2023 due to the group A strep outbreak and high numbers of COVID pneumonia.

The RUH met this target with an overall average of 1636 DDDs. We continue to monitor broad spectrum prescribing and educate prescribers and pharmacists and carry out AMS ward rounds to ensure all antimicrobial prescribing is appropriate and course lengths are kept to a minimum. The RUH is currently the lowest user of broad spectrum antibiotics in our region.

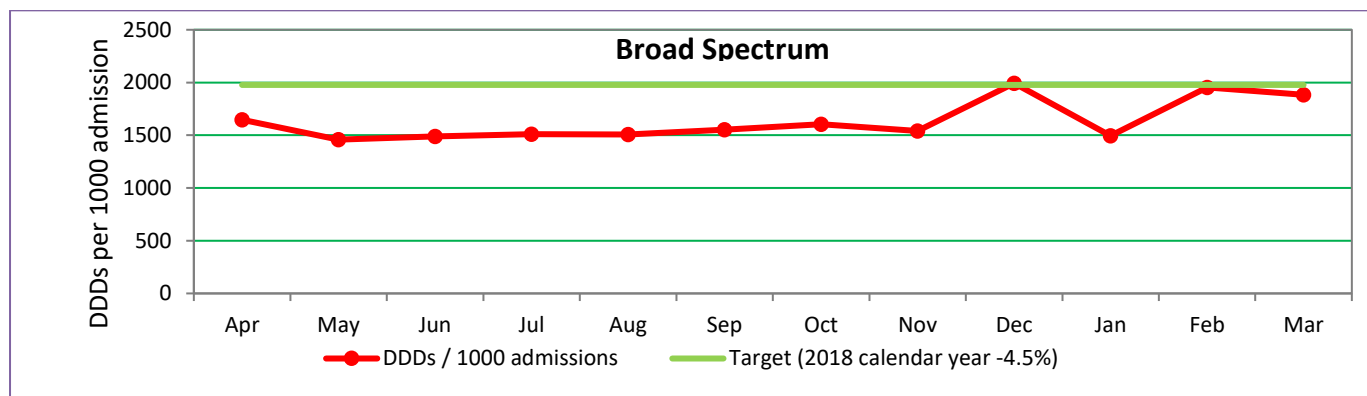


Figure 10: Watch and Reserve group antibiotic consumption 2022/23

## 9.4 Training Compliance

- AMS Level 1 = 88.7% (target 85%).
- AMS Level 2 = 60.6% lowest compliance amongst bank staff.
- ARK = 65% increasing according to projections.

Antimicrobial Stewardship at the RUH is important to improve antibiotic prescribing, protect individual patients and the local population from unintended harm from antibiotic overuse including HCAI's, and contribute to slowing antibiotic resistance.

The Trust is committed to following the principles outlined in the Department of Health (DH) guidance "Antimicrobial Stewardship: Start Smart then Focus" and follow the guidance and processes set out in NICE NG15 and the Public Health England 5 and 20 year action plans on AMR.

<https://www.gov.uk/government/collections/antimicrobial-resistance-amr-information-and-resources#strategic-publications>

# 10 Surgical Site Infection Surveillance

## 10.1 Mandatory Surveillance



The Trust takes part in the mandatory surveillance of surgical site infections which involves the reporting of infections post-operatively in patients undergoing certain types of orthopaedic surgery. This includes surveillance of patients prior to and post discharge and also patients who are readmitted with post-operative infections. If the infection has occurred within 30 days of the surgery, or in the case of implant surgery within one year, the incident will be reported as a surgical site infection.

The surgical site surveillance nurses are employed by the Surgical Division. They routinely report on surgical site infections in patients who had undergone a total hip replacement (THR), total knee replacement (TKR) and repair of a fracture to the hip. The surveillance nurses also collect and report data for colorectal surgery however this is not mandatory.

Reporting has continued for all periods for surgical site infections within the fractured neck of femur and breast surgery cohort.

The Trust has continued to report on total knee and total hip replacement surgery. The numbers involved are greatly reduced compared to pre-pandemic levels due to the impact of non-elective care on the ring fenced orthopaedic elective ward causing the cessation of TKR and THR surgery for periods over the past 12 months. The figures will be reset with UKHSA now that elective beds have been reduced. There have been a number of very high risk patients undoing THR who developed surgical site infections. A high outlier letter regarding this has been received and further improvement strategies are being developed within Orthopaedics.

The table below shows the surgical site infection percentage per reported pathway over the past 4 reported quarters for the RUH compared to all Trusts. The reporting period for comparison to all Trusts is 5 years.

Procedure	RUH	All Trusts
Total Hip Replacement (THR)	2.6%*	0.8%
Total Knee Replacement (TKR)	0.0%*	1.1%
Repair of Femur	0.6%*	0.9%

\* The figures are from Q2 Jul-Sept 2022 as this was the last quarter when surveillance was undertaken in all 3 categories. During the last 2 quarters electives were suspended so surveillance was sent to UKHSA on repair of fractured neck of femur only. Elective surgical site infection surveillance recommenced in April 2023.

The team are now undertaking surveillance on the THR and TKR from the modular theatre at Sulis. These are a completely separate patient cohort from the RUH patients and will generate their own set of reports from UKHSA.

## 10.2 'PreciSSion' project

It is recognised that surgical site infection is more common after colorectal surgery where wounds are frequently contaminated by bowel content and rates are reported between 8-30%.

Within the reporting period, the surgical site infection team have been working closely with the colorectal teams to support the 'PreciSSion' Project.

Measuring Surgical Site Infection from 30 day patient reported outcomes has now been successfully implemented and has been in place since May 2020.

From April 2023 the Trust will be collecting data for both we will be doing both the 'PreciSSion' Project and UKHSA surveillance for colorectal surgery. It will then be possible to benchmark performance in reducing infection rates in colorectal surgery with other providers.

## 11 COVID-19

### 11.1 SARS CoV-2

There were continued peaks of COVID-19 infections during 2022/23 both nationally, regionally and locally which increased hospital admissions significantly during these times.

The Trust has maintained an escalation plan for the periods of time when COVID-19 infections increase so that cohort areas can be utilised to accommodate patients to be cared for together whilst keeping a close on the local data are rates to pre-empt occupancy rates.

Changes in national policy started to step down our response to COVID-19, which was also reflected in the Trust guidance, whilst considering local risks and environmental challenges. Testing was also stepped down significantly, including staff testing in most areas. Daily outbreak or ward review meetings have continued during the peaks of infection with a membership that covers both clinical areas, staffing and cleaning.

The Infection Prevention and Control Team continued to support staff to adjust to changing guidance and developed standard operating procedures and action cards for staff to utilise, as we began to live with COVID-19.

Nosocomial transmission continues to spike during peaks of infection; however, this did not result in increased admissions to Intensive Care. COVID-19 infection has continued to be recorded on patients' death certificates; where nosocomial transmission is detected, the patient's history, journey and care is investigated. The divisional Patient Safety Teams leads continue to look for missed opportunities, gaps in care or links to known risks previously identified and being mitigated.

Nosocomial COVID infections continue to be categorised as follows:

- COVID detected between days 0-2 of admission – these are community acquired cases not nosocomial infections
- COVID detected between days 3-7 of admission – indeterminate nosocomial infection that could have been acquired in the community also
- COVID detected between days 8-14 of admission – probable nosocomial infection
- COVID detected on day 15+ of admission – definite nosocomial infection

The number of infections detected by month is summarised in the table below with the breakdown of the infections into nosocomial and community acquired categories. Those marked as 'requires checking' include cases where patients may have been tested within 90 days of a previous infection.

No. of confirmed COVID-19 cases - Admitted only

Possibility of hospital-acquired	2022									2023		
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
<b>Definite</b>	9.5%	6.8%	12.6%	21.9%	7.8%	16.3%	17.4%	9.0%	18.7%	16.1%	15.2%	9.9%
<b>Probable</b>	4.1%	4.1%	7.8%	13.5%	5.2%	10.6%	11.3%	4.5%	12.7%	16.1%	19.2%	7.2%
<b>Indeterminate</b>	10.9%	19.2%	13.2%	14.1%	12.2%	8.9%	8.9%	3.0%	8.4%	10.2%	4.8%	9.2%
<b>Community Acquired</b>	71.9%	69.9%	62.9%	47.9%	71.3%	64.2%	61.0%	79.1%	57.8%	56.2%	58.4%	69.1%
<b>Requires Checking</b>	3.6%	0.0%	3.6%	2.6%	3.5%	0.0%	1.4%	4.5%	2.4%	1.5%	2.4%	4.6%
<b>Total</b>	<b>221</b>	<b>73</b>	<b>167</b>	<b>311</b>	<b>115</b>	<b>123</b>	<b>213</b>	<b>67</b>	<b>251</b>	<b>137</b>	<b>125</b>	<b>152</b>

The Trust works collaboratively with the other acute NHS organisations within BSW CCG to align practices were practical regarding management of patients who are COVID contacts, testing and the length of time they require isolation.

The Trust invested 2.6million during 2022 as the COVID-19 investigation reports demonstrated the RUH estate did not have the facilities required to adequate isolate or contain infections. Many of the bays contained six or more beds, lacked en-suite facilities and doors on to corridors. This resulted in extensive mixing of patients and increasing the chances of infection spreading.

Phase 1 of the IPC plan was to increase the number of toilets and en-suite facilities for patients in four areas. This work started at the end of July 2022.

Within this report time frame, the RUH have installed an additional 23 Toilets, turned 12 side-rooms into en-suites and created 10 bays with en-suites on Haygarth, Forrester Brown and Pierce ward, and a smaller amount of improvement works on Acute Stroke. There is an ongoing appetite to improve the facilities on more over the coming years.



The images above provide an example of the en suite facilities created within a bay.



## 12 Carbapenemase producing *Enterobacteriaceae* (CPE) outbreak

In February 2023 the IP&C Team were alerted to an inpatient on one of our wards with known CPE colonisation. The patient had not been isolated and had been in hospital for a number of days when the team were made aware of the issue. On investigation it was noted that the patient had an active CPE infection alert on Millennium since October 2022, with a note stating that the patient must be isolated on admission. The investigation established that the initial risk assessment, which is completed on admission, had not acknowledged the patient was colonised with CPE, despite the alert on the system.

The patient was isolated as soon as the issue was identified, and the IP&C Team undertook contact tracing to identify any patients who could be at risk of acquiring CPE infection or colonisation, as a precaution, the contacts were isolated whilst awaiting results. During the period of screening, admissions to the ward were restricted temporarily to only patients with a clinical need for treatment on the ward.

Unfortunately, one of the patient contacts tested positive for CPE, all other patient contacts had negative screening results.

The positive isolates were ribotyped and the results revealed that the organisms from both patients were identical, therefore it is likely that one patient acquired CPE either from direct contact with the other patient or by indirect contact. The source was not able to be established but is likely to be shared equipment with a bay, or from the hands of staff who were caring for both patients.

An outbreak meeting was held, and the incident investigated. Enhanced cleaning was put in place. The root cause of the incident was the failure to identify a patient with an infection risk on admission as Millennium infection flags are not highly visible. Following the incident all admissions to the ward are now screened for CPE and there have been no further cases of cross infection.

The areas involved have received further training on identifying infection risks from admission and the IT Team are working on a solution to make the flags more visible. There will be increased training and audit in this area to ensure accurate assessments are undertaken. This is a concern that is on the Trust risk register and will require further focused improvement work.

## 13 Other infectious disease notifications during 2022/23

### 13.1 Mpox *(previously known as Monkeypox)*

In May 2022 UKHSA published notifications regarding Mpox outbreaks in the community which were primarily reported in the London area and subsequently spread to other regions within the UK. The IP&C Team were involved in preparedness meetings with UKHSA and community partners and provided briefings to the Emergency Department and worked alongside the Sexual Health Clinic who were the front line service for seeing and treating patients with possible infection.

The IP&C Team produced guidance on diagnosis of the infection, isolation of patients and the required personal protective equipment. This was updated regularly as more information was published by UKHSA. The team were also involved in outbreak meetings with UKHSA for patients who had been treated locally however there were no inpatient admissions at RUH due to Mpox.

### 13.2 Diphtheria

In November 2022 UKHSA alerted health care organisations to an increase in diphtheria infections. The cases seen were mostly travel related, with an association with an unvaccinated migrant population coming to the UK being at higher risk. This was being managed by a public health vaccination programme.

The IP&C Team published guidance for the Trust to aid recognition of potential cases and also to ensure that staff were aware of the management of cases, including the use of appropriate personal protective equipment.

### 13.3 Invasive Group A Streptococcus (iGAS) infections

There was a national increase in the number of scarlet fever and iGAS infections reported within the community during the winter months of 2022/23. As a result of this the IP&C Team published Trust wide guidance and advised that staff have a low threshold for considering iGAS in patients presenting with sepsis.

There were a number of patients admitted to the Trust with the infection, including children, however there were no cases of hospital acquired iGAS. All confirmed cases were notified to UKHSA who followed up with surveillance and treatment of contacts within the community.

## 14 Level 2 Infection Prevention and Control Training



Level 2 infection prevention and control training is mandatory for all patient-facing staff. This training has been delivered by e-learning since December 2019. The original e-learning package was replaced by a national package in 2022.

The Trust has a target of 85% compliance with Level 2 infection prevention and control training; this was reduced from 90% in April 2022. At the end of March 2023, the overall compliance with the Level 2 training was 80.9%; a slight improvement on 2021-22 when it was 79.8%. Four of the divisions achieved the 85% target.

Division/Department	Training compliance 2022-23	Training compliance 2021-22
Bank	62.7% (↓ 2%)	64.7%
Corporate	85.1% (↑8.8%)	76.3%
Emergency Medicine	75.6% (↑9.1%)	66.5%
Facilities	59.6% (↓16.9%)	76.5%
Family and Specialist Services	84.9% (↑2.5%)	82.4%
Medicine	87.6% (↑1%)	86.6%
Non-Paid and Recharge*	61.5% (↑7%)	54.5%
Research and Development	91.5% (↑7.1%)	84.4%
Surgery	87.3% (↑4.2%)	83.1%
<b>Trust</b>	<b>80.9% (↑1.1%)</b>	<b>79.8%</b>

\*N.B there are only 13 staff who are eligible for training in this department which affects the compliance significantly; 8 of the 13 staff are compliant with training.

## 15 Appendices

### 15.1 Infection Prevention and Control Team (IPCT) Structure and Arrangements

#### 15.1.1 The Infection Prevention and Control Arrangements

The Chief Executive holds the ultimate responsibility for all aspects of infection prevention and control within the Trust.

The Chief Nurse is the designated Executive lead; Director of Infection Prevention and Control (DIPC). The Chief Nurse reports directly to the Chief Executive and the Board and is the chair of the Infection Prevention and Control Committee (IPCC) supported by the Deputy DIPC/Associate Chief Nurse. The Deputy DIPC/Associate Chief Nurse reports directly to the Chief Nurse/DIPC.

The Infection Control Doctor (ICD) is a consultant microbiologist who provides expert microbiological advice and supports the DIPC. There are two consultant microbiologists who share this role; one is the lead ICD, and the other is the Deputy ICD.

The Senior Infection Prevention and Control Nurse is responsible for the operational management of the Infection Prevention and Control Team (IPCT) and for ensuring that the Infection Prevention and Control Strategy is embedded.

The Infection Prevention and Control Nurses (IPCNs) provide expert clinical advice and support to Trust staff in the delivery of the Strategy. The team covers all sites within the Trust including the community birthing centres, the Sexual Health Clinic and Sulis Hospital.

The team also provided cover via a service level agreement for the Independent Health Group.

#### 15.1.2 The Infection Prevention and Control Team

The team is made up of the following staff:

- 1 WTE Senior Infection Prevention and Control Nurse Band 8a
- 0.91 WTE Infection Prevention and Control Nurse Band 7
- 2.65 WTE Infection Prevention and Control Nurses Band 6
- 0.8 WTE Surveillance and Administration Assistant Band 3

#### 15.1.3 Infection Prevention and Control Committee governance and reporting structure

The Trust Infection Prevention and Control Committee reports to Quality Board and Quality Governance Committee, which in turn reports to the Board of Directors.

## 15.2 MRSA bloodstream infections

There were no hospital onset MRSA bloodstream infections during 2022/23. The Trust reported 8 community onset cases; these were investigated by the appropriate ICB leads and feedback on any issues identified were provided to the patients' GP and other healthcare services accessed by the patients.

### 15.2.1 MRSA bloodstream infection regional benchmarking

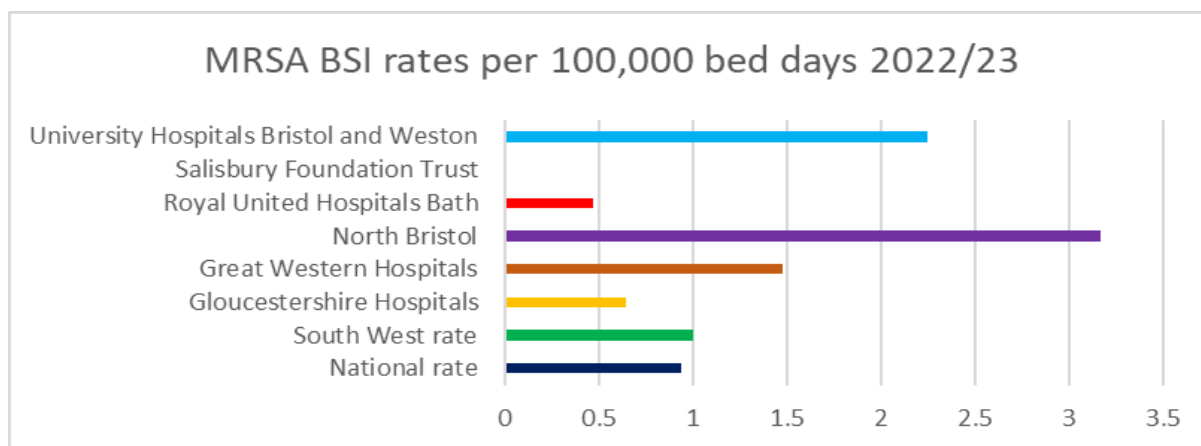


Figure 11: MRSA BSI (bloodstream infection) rates 2022/23

The Trust continued to have one of the lowest rates of hospital onset MRSA bloodstream infection within the region. The Trust has a rate of 0.47 against the South West average of 1.00.

On 31 March 2023 it had been 774 days since the last Trust apportioned case.

## 15.3 MSSA bloodstream infections

Line associated infections accounted for 37.5% of the hospital onset MSSA bloodstream infections. These infections are avoidable and remain of considerable concern.

The Trust Peripheral Cannulation Policy is under revision and is part of a bigger piece of improvement work that is taking place across the Trust. This will include further training requirements.

A new peripheral cannula was trialled in the Trust during 2022/23 however staff raised concerns that it was difficult insert which would increase the risk of infection. The cannula was also trialled at other sites within the ICB and there has been agreement that we would not change products unless a more suitable product can be sourced.

The IP&C Team commissioned BD who manufacture the current product to undertake a practice versus guidelines audit in August 2022. Clinical nurse practitioners undertook the audit and provided feedback both at the time of the audit and also in the form of a report. They audited all elements of cannula care including insertion, maintenance and removal. Key recommendations were listed within the report which have informed the actions that are needed to be put in place to prevent infection.

### 15.3.1 MSSA bloodstream infection regional benchmarking

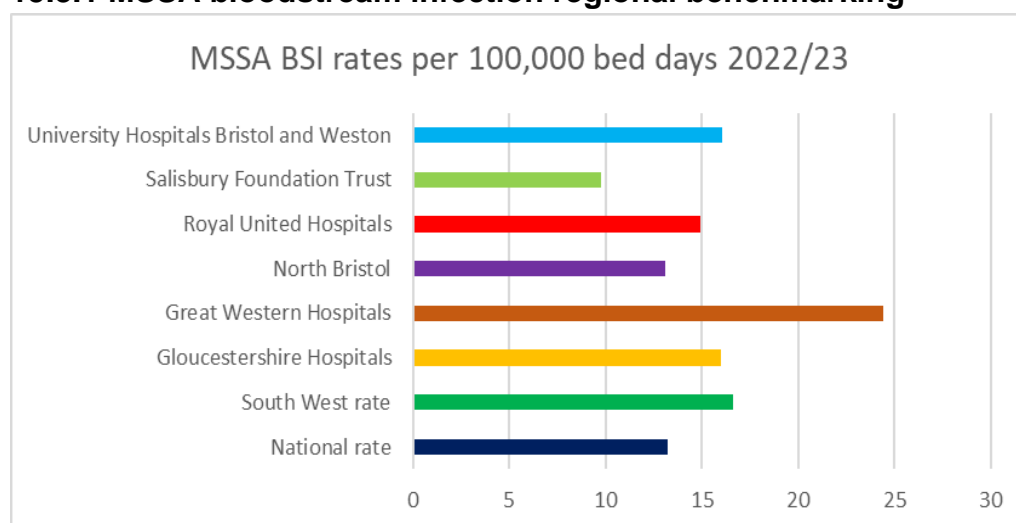


Figure 12: MSSA BSI (bloodstream infection) rates 2022/23

The practice versus guidelines report was presented to the Infection Prevention and Control Committee in September 2022 with the divisions leading on improvement strategies.

At the end of 2022/23 the Trust had a rate of 14.94, an improvement on the previous year. The average rate for the South West is 16.61. The Trust sits in the middle of the pack for the three trusts within BSW.

### 15.4 Gram negative bloodstream infections

In July 2021 quality requirements for minimising rates of Gram negative bloodstream infections to threshold levels were introduced for the first time as part of the NHS Standard Contract. Thresholds were set for each trust and clinical commissioning group in England.

#### 15.4.1 E coli bloodstream infections

The mandatory surveillance of *E coli* bloodstream infections commenced on 1 June 2011. From July 2017 the definitions for hospital onset and community onset cases changed. All hospital onset cases are defined as those where the positive blood culture is taken 2 or more days after admission and are recorded as healthcare associated.

Community onset cases are where the blood culture has been taken either in the community or within the first 2 days of admission to hospital. Community onset cases are further broken down into healthcare associated and non-healthcare associated infections. Community onset healthcare associated infections are defined as those where the patient has either been in the reporting hospital in the preceding 28 days. Non-healthcare associated infections are where the patient has not been in the reporting trust in the preceding 28 days.

Mandatory surveillance includes positive blood cultures taken at GP practices or community hospitals the IP&C Team report these on the United Kingdom Health Security Agency (UKHSA) Healthcare Associated Infections Data Capture System on behalf of primary care and provider organisations. There were 3 cases reported for the community provider HCRG during 2022/23.

	Hospital onset healthcare associated	Community onset healthcare associated	Community onset non-healthcare associated
Apr 2022	7	2	13
May 2022	3	2	25
Jun 2022	3	1	12
Jul 2022	6	4	19
Aug 2022	5	4	14
Sept 2022	6	7	23
Oct 2022	8	2	19
Nov 2022	7	3	16
Dec 2022	4	2	15
Jan 2023	6	3	17
Feb 2023	2	1	23
Mar 2023	3	3	15
<b>TOTAL</b>	<b>60*</b>	<b>34°</b>	<b>211</b>

\*There were 49 hospital onset cases reported in 2021/22.

°There were 37 community onset healthcare associated cases reported in 2021/22.

Figure 13: *E coli* bloodstream infections 2022/23

All patients who have a confirmed *E coli* bloodstream infection, including community onset cases, are reviewed by the microbiologists or infection prevention and control nurses who identify the most likely source of infection based on their review of the patient and their underlying pathologies. The source or cause of infection and any risk factors are reported via the UKHSA HCAI data capture system.

The most common cause of *E coli* bloodstream infection was lower urinary tract infection in non-catheterised patients which accounted for 83 (27%) cases.

The second most common source of infection was hepatobiliary which accounted for 68 (22%) cases however hepatobiliary cases were the most common source of infection in Trust attributed cases.

The Trust is working collaboratively with our colleagues in BSW on a Gram negative infection reduction plan. This work is being supported by the South West Antimicrobial Stewardship Lead.

There were 44 cases overall (14%) where the source of infection was unknown or there was no underlying source of infection identified.



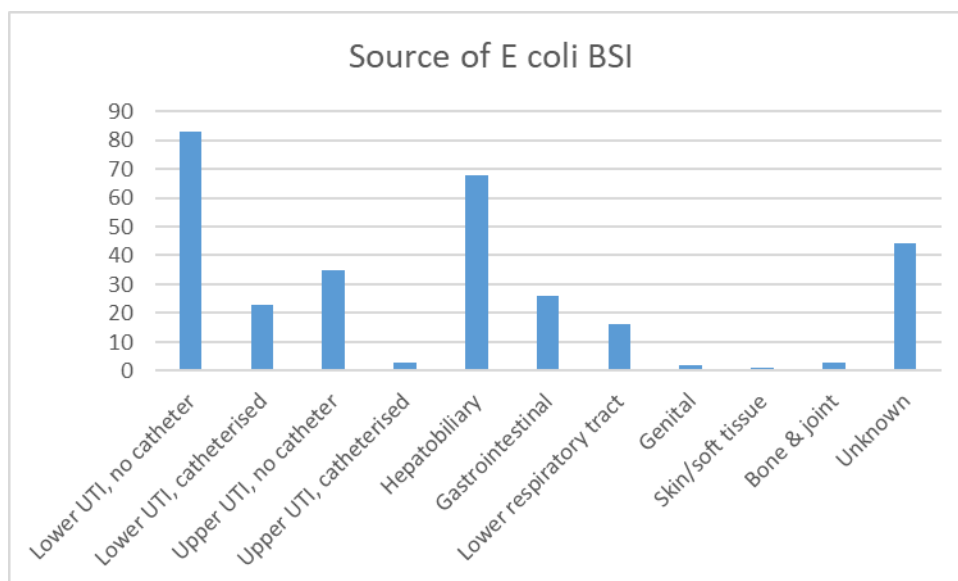


Figure 14: Source of E coli bloodstream infections 2022/23

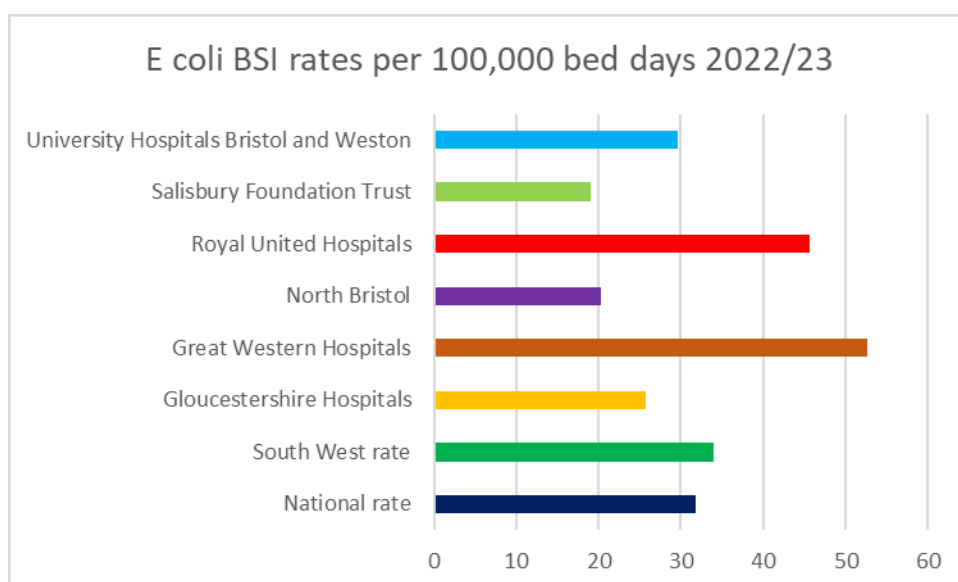


Figure 15: E coli BSI (bloodstream infection) rates 2022/23

The Trust has a rate of 45.62 for *E coli* blood stream infections; this is higher than the national and South West average of 33.92. The Trust sits in the middle of the pack for the three trusts within BSW.

### 15.4.2 *Klebsiella* spp. bloodstream infections

*Klebsiella* are Gram-negative bacteria that are found in the environment and also in the human intestinal tract. They commonly cause healthcare associated infections and are the second most frequently identified source of Gram-negative bloodstream infection after *E coli*.

The Trust has continued to report all *Klebsiella* spp. bloodstream infections the UKHSA data capture system as part of the mandatory surveillance programme during 2022/23. They are also identified as hospital onset healthcare associated, community onset healthcare associated and community onset non-healthcare associated cases.

A total of 75 cases were reported by the Trust in 2022/23 of which 21 were hospital onset and 12 cases were community onset healthcare associated; a total of 33 Trust apportioned cases, compared with 23 cases reported in 2021/22. The Trust has the highest rate within BSW.

*Klebsiella pneumoniae* was the most prevalent species isolated during 2022/23, making up 65% of cases reported.

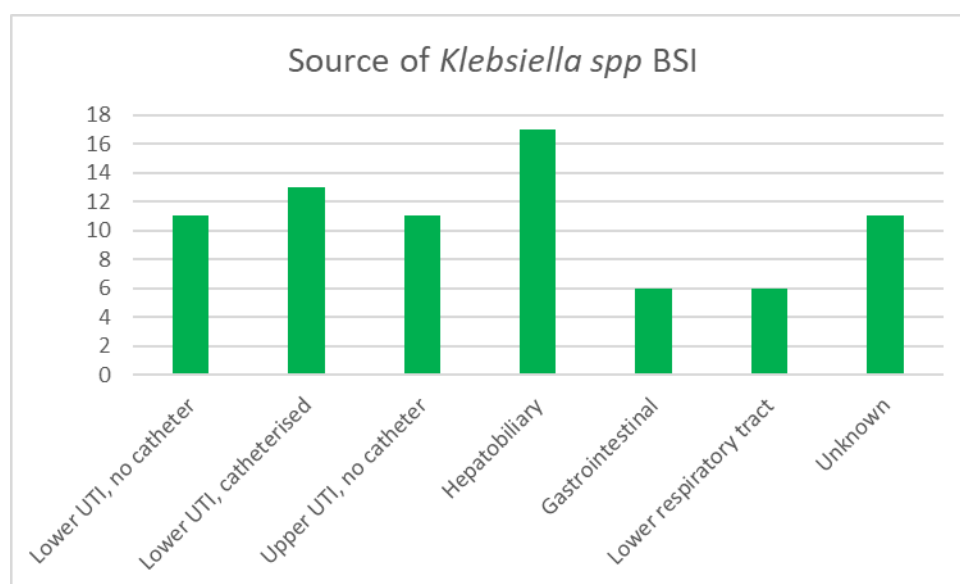


Figure 16: Source of *Klebsiella* spp. bloodstream infections 2022/23

The most common source of infection was identified as hepatobiliary and this accounted for 17 (23%) cases, the second most common source was the lower urinary tract in patients with indwelling urinary catheters at 13 cases (17%).

The most common source of infection in hospital onset cases was gastrointestinal (4 cases) which can occur following gastrointestinal surgery or in patients with acute intra-abdominal sepsis. Actions taken to reduce and prevent *E coli* bloodstream infections will also have an impact on *Klebsiella* spp.

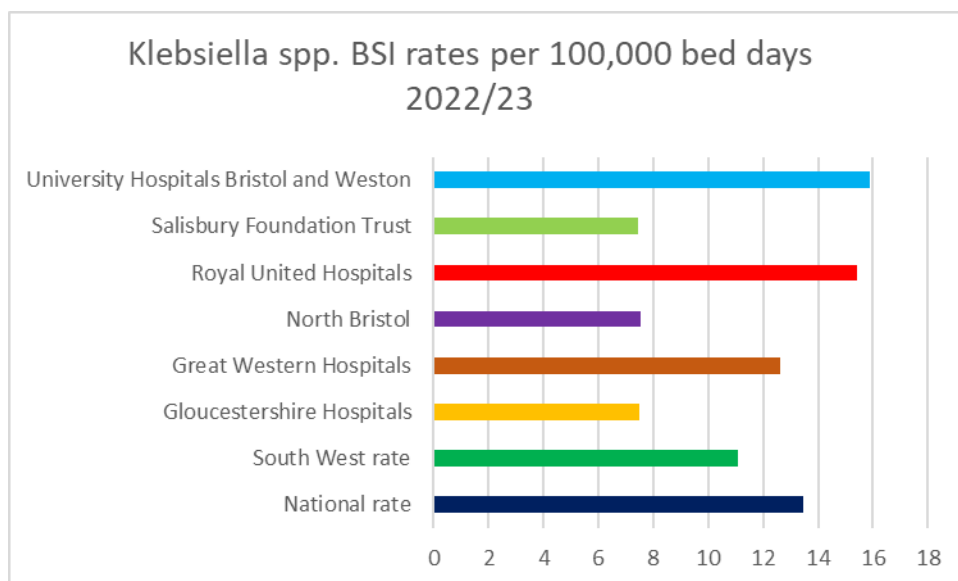


Figure 17: *Klebsiella spp.* BSI (bloodstream infection) rates 2022/23

The Trust has a *Klebsiella spp.* blood stream infection rate of 15.4 which is higher than the national and South West average of 11.09.

### 15.4.3 *Pseudomonas aeruginosa* bloodstream infections

*Pseudomonas aeruginosa* are Gram-negative bacteria found in soil and water. It is an opportunistic pathogen which can cause a wide range of infections, particularly in patients who are immunocompromised. The organism is known to cause infections by contaminating invasive devices such as urinary catheters.

The Trust has continued to report all *Pseudomonas aeruginosa* bloodstream infections via the UKHSA data capture system during 2022/23.

The same process is used as with the other Gram-negative bloodstream infections; each case is reviewed by a microbiologist; the most likely source and risk factors are identified, and antimicrobial treatment is adjusted accordingly.

A total of 28 cases were reported by the Trust in 2022/23 of which 10 were hospital onset and 2 community onset healthcare associated. The total number of Trust apportioned cases was 12 against the NHS Standard Contract threshold of 17; an improvement in performance compared with 2021/22. The Trust has the lowest rate of the three trusts within BSW.

The most common source of infection was the lower respiratory tract at 7 cases (25%) Two of the cases were attributed to ventilator associated pneumonia in patients who were in the Intensive Care Units. Lower respiratory tract was also the most common source of infection in Trust attributed cases although the numbers were low (4 cases). The Intensive Care Units use a preventative ventilator associated infection care bundle and have been working closely with the microbiologists to reduce these infections.

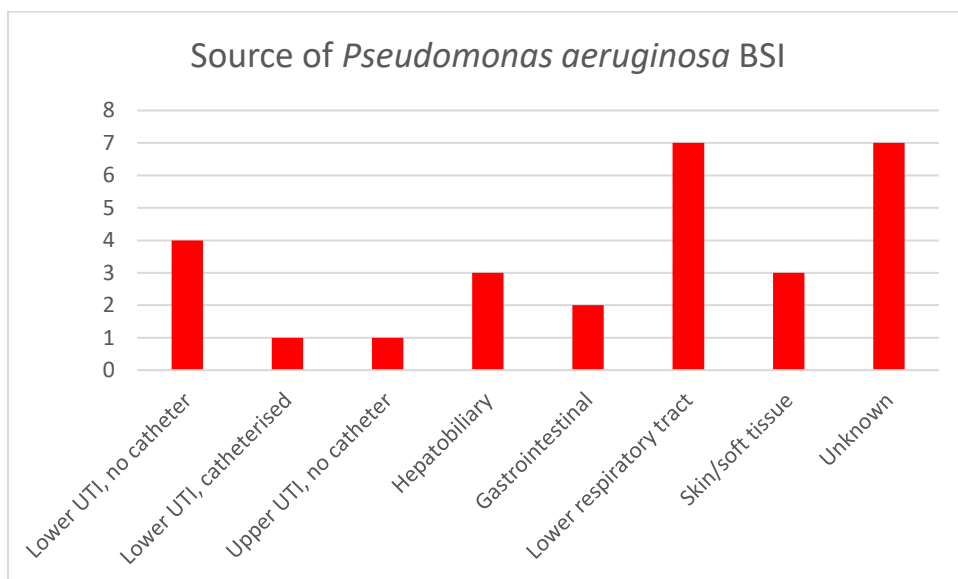


Figure 18: Source of *Pseudomonas aeruginosa* bloodstream infections 2022/23

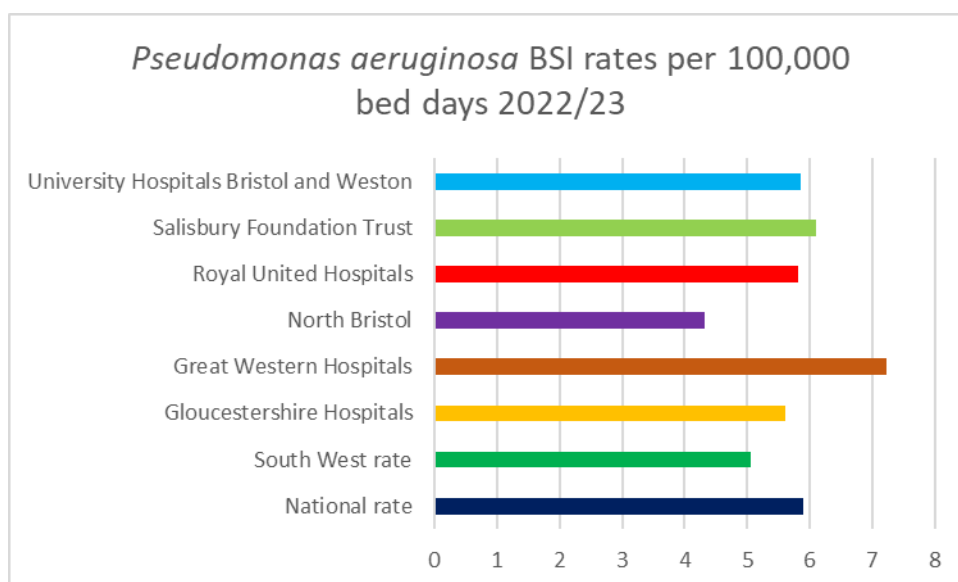


Figure 19: *Pseudomonas aeruginosa* BSI (bloodstream infection) rate 2022/23

The Trust has a *Pseudomonas aeruginosa* blood stream infection rate of 5.82 against the South West average of 5.05, however the Trust has lower rate than the national average.

### 15.5 *Clostridioides difficile* infections

The reporting of the number of cases of *Clostridioides difficile* (CDI) infections is mandatory for all NHS Trusts. All cases over 2 years of age must be reported. Both hospital onset and community onset healthcare associated cases, where the sample has been taken within 28 days of discharge, are attributed to the Trust.

In 2022/23 the NHS Standard Contract threshold for Trust apportioned *Clostridioides difficile* infections was set at 42 cases. A total of 143 cases were reported during this period of which 51 were hospital onset and 21 were community onset healthcare associated cases therefore there were 72 Trust apportioned cases: 31 over the threshold. In 2021/22 the total number of Trust apportioned cases was 55, 17 cases less than in 2022/23.

There has been a rise in *Clostridioides difficile* cases nationally however antimicrobial prescribing has improved and the spread of ribotypes has not changed. Experts have suggested that the increase may be linked to COVID-19 and the implementation of respiratory precautions and restrictions along with the extensive use of PPE.

A post infection review was carried out for all hospital onset cases and actions identified when required. The common issues identified during the reviews would not have prevented a patient from acquiring the infection but may have delayed diagnosis, for example delays in sampling and incomplete stool chart documentation. Cleaning standards have been variable across the Trust and this has been highlighted in most of the reviews. There is a Trust wide cleaning improvement action plan in place to raise the standards.

The Infection Control Doctor has undertaken a review of all of the cases in 2022/23 and will publish a report within the next few months. The cases include several periods of increased incidence on some wards however all of these were investigated, specimens were ribotyped and no links between cases were identified.

The IP&C Team continue to work collaboratively with primary care the other organisations within BSW to reduce the *Clostridioides difficile* infection rate in order to understand the wider issues that are driving our acute and community CDI rates.

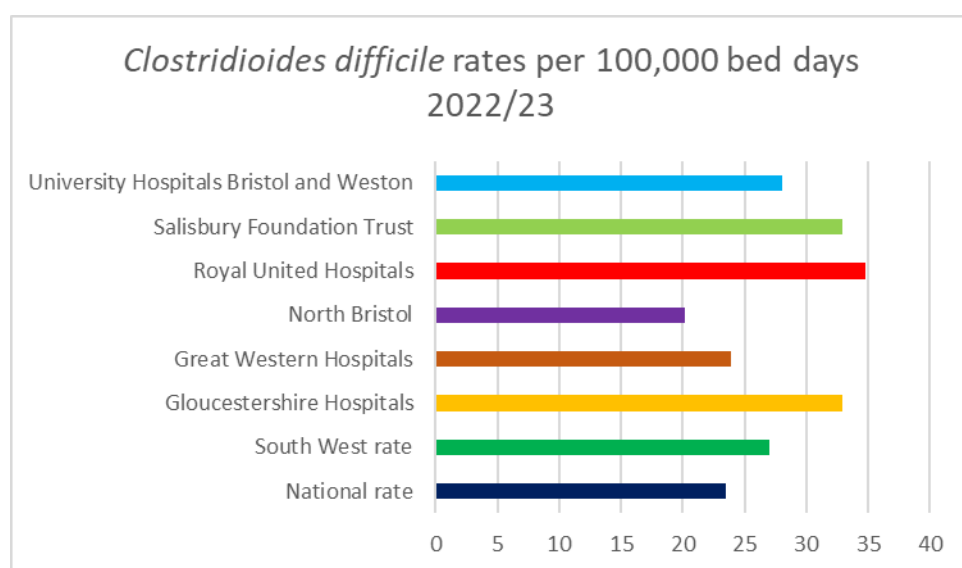


Figure 20: *Clostridioides difficile* infection rate 2022/23

The South West as a whole has a higher than average rate for the country, and the RUH are not alone in seeing high numbers of *C difficile* cases. However, the RUH have reported more cases than our two neighbouring Trusts with a rate of 34.77 per 100,000 bed days. The national rate is 23.47 and the South West rate is 26.99.

## 15.6 Cleaning

### Microfibre system

Following a significant investment, June 2022 saw the introduction of microfibre cleaning within the Trust, as opposed to the Kentucky mop system. The benefit of microfibre cleaning is that the system is more effective at lifting dirt off the floor, its light weight for the cleaning staff to use and does not require additional cleaning products. By not using chlorine for general floor cleaning (non-infections cleans) it will reduce the damage to surfaces that chlorine causes and will assist increase the life of the flooring.

### Cleaning standards

The Trust is committed to providing a clean environment for patient's staff and visitors. Cleaning is managed within the Estates and Facilities Directorate and is led by The Director of Estates and Facilities. The Cleaning Team is one of the biggest Teams within the Trust. The Team provide planned and reactive services twenty four hours per day, 365 days per year. The Team work very closely with the Infection, Prevention and Control Team. The Cleaning Team report their audit performance through the IPC Committee.

Following the implementation of National Standards of Cleanliness 2021, the Trust has introduced a strategic and operational review of cleaning standards, systems and processes. The standards, systems and processes need to support the operational needs of the Trust. Initial feedback from staff, patients and visitors was that the Cleaning provision was inconsistent, didn't always meet the needs of the wards / clinical services and staff. These concerns were escalated within the Trust to Board Directors.

There was opportunity to provide a better service, to ensure failures were minimised and introduce a refreshed service which was more responsive to the needs of the various clinical services. A Transformation Team has been established as a result.

This Senior Team is responsible for performance, quality, understanding the needs of each clinical team with regards to their environment, safety management, financial management, training and management of Teams. Evidencing Trust Values are fully implemented, compliance with legislation, standards and CQC regulations are high priorities.

The Cleaning Standards Group was re-established in October 2022 in response to trust wide concerns of cleaning standards thought-out Trust with the aim to have better oversight of the detail and challenges being faced. This also gave the department managers access to being their concerns to the table.

The overall cleaning scores for the year were as follows for 21/22 as a benchmark and 22/23:

2007 Standards	2021/22	2021 Standards	2022-23
Very High Risk – 98%	96.79%	FR1 – 98%	96.96%
High Risk – 95%	95.06%	FR2 – 95%	92.76%
		FR3 – 90%	92.23%
Significant Risk – 85%	94.61%	FR4 – 85%	90.24%
		FR5 – 80%	90.62%
Low risk – 75%	91.12%	FR6 – 75%	84.21%

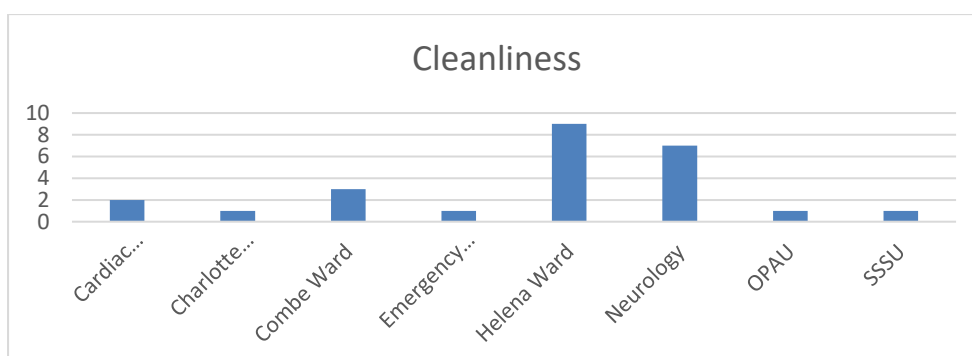
### The Patient Led Assessment of the Care Environment (PLACE)

The Patient Led Assessment of the Care Environment is an annual assessment and took place during November 2022. The assessment teams comprised of patient representatives, making up at least half of each team, and a multi-disciplinary staff team including Estates and Facilities, Nursing, and IPC staff.

The teams assessed how the environment supports the provision of clinical care, assessing such things as privacy and dignity, food, cleanliness, and general building maintenance and, more recently, the extent to which the environment is able to support the care of those with dementia or with a disability. PLACE assessments focus exclusively on the environment in which care is delivered and do not cover clinical care provision or how well staff are doing their job. The assessment is based on what the teams see on the day of inspection and may not reflect usual practice.

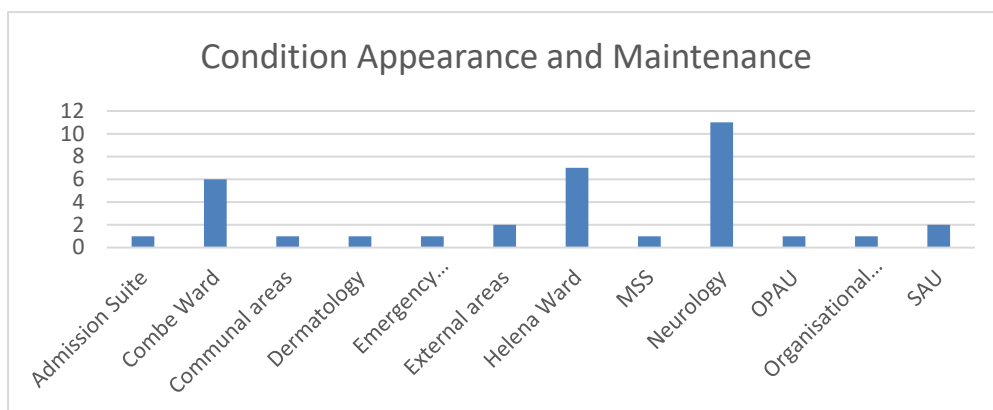
### Overall PLACE results and areas where a full pass was not achieved

**Cleanliness:** RUH: 98.54% National Average: 98.01%

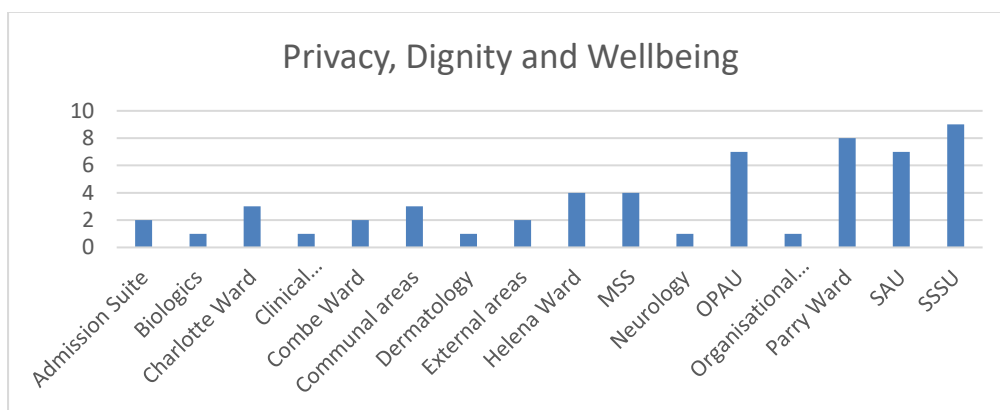




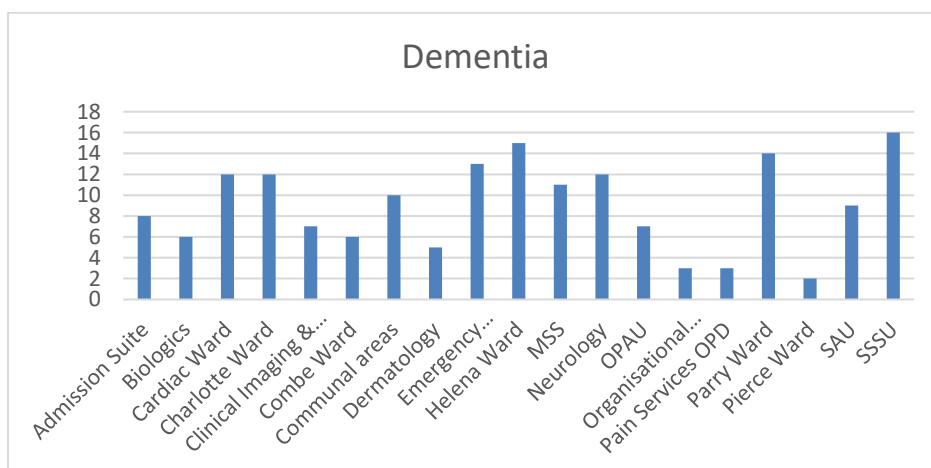
**Condition, Appearance and Maintenance:** RUH: 95.88% National Average: 95.79%



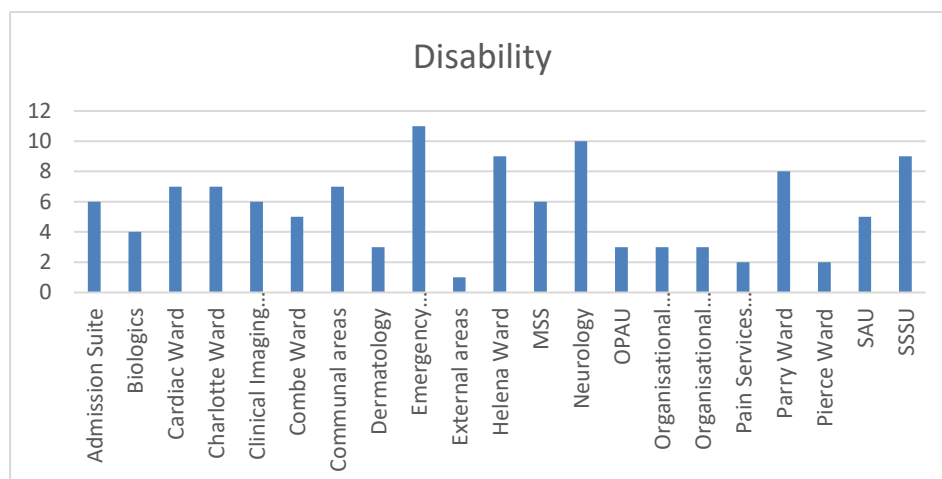
**Privacy, Dignity and Wellbeing:** RUH: 78.38% National Average: 86.08%



**Dementia:** RUH: 63.89% National Average: 80.60%



**Disability:** RUH: 63.71% National Average: 82.49%

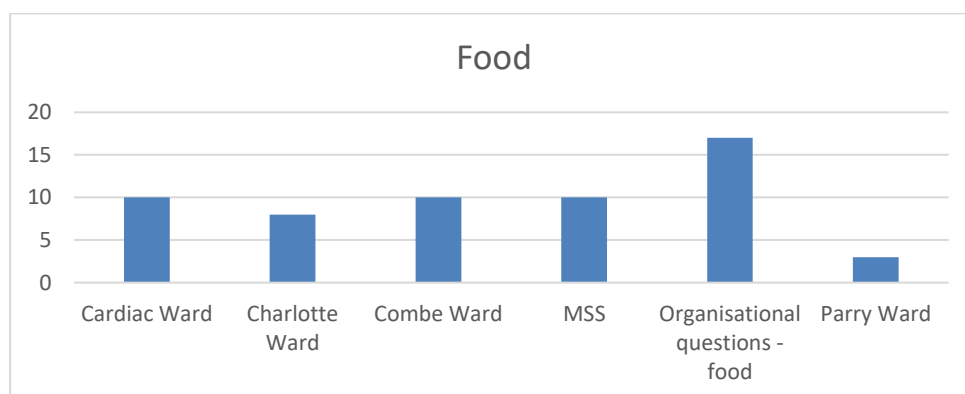


**Food:** RUH: 80.45% National Average: 90.23%

Food scores are also broken down into organisational and ward based scored:

**Organisational Food:** RUH: 66.31% National Average: 91.03%

**Ward Food:** RUH: 83.57% National Average: 90.26%



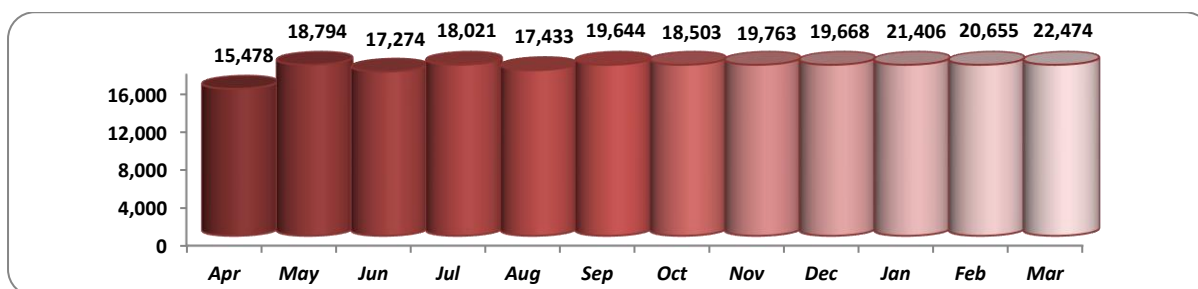
The is an action plan in place for catering, covering both patients and staff, and specifically an action to improve our provision in line with PLACE requirements. These plans are monitored through the Non-Clinical Governance Committee.

## 15.7 Decontamination of Medical Devices

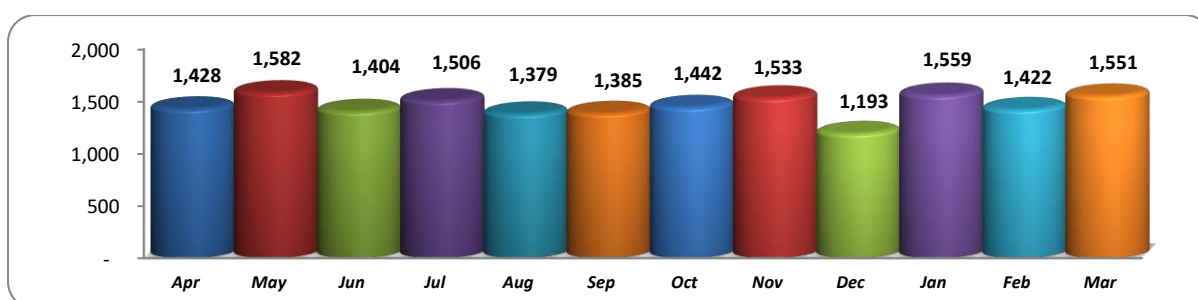
### 15.7.1 Central Decontamination

The Sterile Services Department (SSD) is accredited to BS EN ISO 13485:2016 and registered with the Medicines and Healthcare products Regulatory Agency (MHRA) for the assembly, supply and distribution of sterile packs and instrument sets for hospitals and other health care related establishments. SSD re-manufactures procedure packs, single instruments and theatre sets using the items which are mutually compatible and used in accordance with manufacturer’s instructions and users’ requirements – to meet the provisions of Regulation 14, clause 1 (points a & b) of the Statutory Instrument 2002 No. 618, Medical Device Regulations 2002, as amended and are in conformity with the UK designated standards BS EN ISO 13485:2016, BS EN ISO 14971:2019, BS EN ISO 14644-1:2015. The items are thermally disinfected and will be sterilised in accordance with Health Technical Memorandum (HTM) 01-01 guidelines.

Currently SSD supplies to 115 locations – internal & external to RUH. During 2022-23 SSD process 228,844 items which includes 2,122,568 instruments.



SSD also provides a comprehensive decontamination service to various Service Users for re-useable heat sensitive flexible endoscopes. High level disinfection service for flexible endoscopes is managed by SSD in accordance with the BSG Guidelines for Gastrointestinal Endoscopy and HTM 01-06.



Endoscope Dispatched per Month 2022-23

SSD is working to address increased work load due to post-COVID recovery plans and replacing aging infrastructure.

### 15.7.2 Local Decontamination

SSD and the IP&C Team are working with rest of the clinical colleagues to improve the local decontamination standards. Addressing pitfalls mainly on documentation (policies, SOPs, risk assessments & training records) is very important to give assurance on patient safety.

The following areas continue to undertake local decontamination:

- ENT OPD is using Tristel Trio to disinfect non-lumened nasendoscopes between the procedures.
- Milton solution is no longer in use for decontaminating lenses in Eye OPD, they are following Moorfields Eye Hospital NHS Foundation Trust's SOP; as per the SOP, the lenses are being cleaned with detergent wipes. This is carried out by the consultants after they have seen a patient in the individual clinic rooms.
- Transoesophageal Echocardiography Probes (TOE) are disinfected with the Tristel Trio system and traceability records are in use, however the department needs to improve storage of these probes.
- A few of the departments have moved to the Germitec Chronos UV system to disinfect transvaginal probes.

## 16 IPC Workplan 23/24

Action	Owner	Date
Submit mandatory infection reporting via the UKHSA data capture system, engage in incident control team (IMT) meetings as required with external partners.	IPC and Consultant Microbiologists	March 2024
Continue to work as with the local BaNES and South West network to reduce the <i>C.diff</i> and Gram negative infection rates in our population.	IPC and Consultant Microbiologists	April 2023
Review the IPC care bundle audits and engage the SW IPC network for alignment, to ensure purposeful audits of practice.	IPC	December 2023
Embed the Governance processes for post infection reviews within divisions and back through ICC, to develop improved learning opportunities.	Divisions	January 2024
Understand and implement The Patient Safety Incident Response Framework (PSIRF) for IPC, this is the new national system for reporting.	IPC and Clinical risk	December 2023
Using learning together methodology, improve the process for accurately identifying patients with known infections on admission, to ensure isolation facilities are provided.	IPC, matrons and ward leaders	June 2023
Support the implementation of an inpatient flu vaccination programme +/- COVID-19 vaccines to deliver on the national contract to vaccinate at risk patients.	IPC	October 2023
Partake in the National Antimicrobial Stewardship Audit.	Pharmacy and IPC	September 2023
Review skin prep for venepuncture as part of the SW collaborative, sustainability, and financial saving opportunity.	IPC and phlebotomy	February 2024
Partake in sustainability programme to reduce linen usage.	IPC and Estates	March 2023
Scope the purchase of hand hygiene training equipment for Trust staff use, to replace light boxes.	IPC	February 2023
Review the use of the One together tool kit to reduce surgical site infection rates. Complete initial one together audits and agree one to two areas to focus on to improve patient outcomes.	IPC and Theatre team	December 2023
Engage all clinical areas in regular mattress inspections and timely requests for replacement sections, to prevent whole mattress systems being condemned.	IPC, Medical Equipment, Matrons	December 2023
Ongoing collaboration with estates and facilities, and departments to ensure repair work is prioritised to ensure adequate and safe services are able to be provided, which includes cleaning. Links to risk register and ongoing IPC works programme for the year.	IPC, Estates and Matrons	March 2024