# Board of Directors' Meeting
# 14 December 2023

The Shrewsbury and Telford Hospital NHS Trust

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|---|---|---|---|---|
| **Agenda item** | | 156/23 | | |
| **Report Title** | | Report from the Director of Infection Prevention and Control Q2 23-24 | | |
| **Executive Lead** | | Hayley Flavell, Executive Director of Nursing | | |
| **Report Author** | | Janette Pritchard Infection Protection and Control Lead Nurse | | |
| | | | | |
| **CQC Domain:** | | **Link to Strategic Goal:** | | **Link to BAF / risk:** |
| Safe | √ | Our patients and community | | BAF Risk 1 |
| Effective | √ | Our people | | |
| Caring | √ | Our service delivery | √ | **Trust Risk Register id:** |
| Responsive | √ | Our governance | √ | 438,440,443,444,481,722 |
| Well Led | √ | Our partners | | |
| **Consultation Communication** | | IPCOG 10.07.2023<br>IPCAC 17.07.2023 | | |
| | | | | |
| **Executive summary:** | | 1. The Board's attention is drawn to sections 2.1, 2.2 and 4.0.<br><br>2. The risks to the organisation are increased health costs, prolonged hospital stays, potential legal implications.<br><br>3. We are currently working with each Division on:<br><br>• C diff Trust wide action plan<br>• Surveillance and monitoring of infections<br>• Ensure screening and testing takes place early to identify infections so that appropriate precautions can be actioned. | | |
| **Recommendations for the Board:** | | The Board of Directors is asked to:<br><br>**Note** the report, particularly with regard to the increasing rate of C diff and other HCAI'S | | |
| **Appendices:** | | Appendix 1 - Summary Table for Outbreaks/Period of Increased Incidence | | |

## 1.0 INTRODUCTION

This report is the Infection Prevention and Control Quarter 2 (July - September 2023) update against the 2023/24 objectives for Infection Prevention and Control.
The paper includes updates on:

- Hospital acquired infections: Methicillin-Resistant *Staphylococcus aureus* (MRSA), Clostridioides Difficile (CDI), Methicillin-Sensitive Staphylococcus (MSSA), Escherichia Coli (E. Coli), Klebsiella and Pseudomonas Aeruginosa bacteraemia for July – September 2023 is provided.
- Covid-19 outbreaks, guidance, and management
- IPC initiatives
- IPC incidents.
- IPC BAF

## 2.0 KEY QUALITY MEASURES PERFORMANCE

### 2.1 MRSA Bacteraemia

The target for MRSA bacteraemia remains 0 cases for 2023/24. There was one case of MRSA Bacteraemia in Quarter 2 2023-24 which was reported as a Serious Incident. This case had been discharged from an admission in the Trust in the 28 days prior to their positive sample. A post infection review has been undertaken; the learning points identified are:

- The patient had a wound which was not swabbed in ED as per policy for a full MRSA screen and therefore it is unclear if the MRSA was present prior to surgery.
- Nursing documentation regarding wound care was non-existent therefore unable to ascertain if dressings were appropriately changed and if there was any sign of infection prior to discharge.
- The patient had a cannula with VIP score of 2 which was not removed in a timely manner and may have contributed to the infection.
- On discharge appropriate arrangements were not made for the ongoing care of his wound and therefore he did not appear to have any wound care/ dressing changes in the week between discharge and readmission.

The last MRSA bacteraemia attributed to the Trust was February 2023.

### 2.2 Clostridioides Difficile

The Trust trajectory for C diff cases in 2022-23 is no more than 32 cases.

There was a total of 20 cases of C diff for Quarter 2 2023/24 against a target of no more than 8 cases per Quarter.

15 of these cases occurred greater than 48 hours after admission (post 48) and the remaining 5 cases had recent contact in the Trust in the 28 days prior to the positive sample (recent contact).

This is a rate of 29.6 per 100,000 bed days and slight decrease on last quarter (31.8 per 100,000 bed days- previously reported as 32.9 in error).

Root cause analysis investigations are undertaken on all C. diff cases. Common

themes being identified and reported were:

- Delay in collection of stool sample
- Delayed isolation
- Inappropriate antimicrobial prescribing
- Lack of stool chart/ documentation relating to stool type

There were also lapses in terminal disinfection of the environment where HPV cleans have not been undertaken on discharge and cases where hand hygiene and IPC training compliance have been below the expected standard.

As part of the RCA process, action plans for each case include sharing of the cases with the relevant clinical division in their governance meetings so that lessons learnt can be shared and improvements can be made, and good practice can be identified and shared with other clinicians. Learning from the RCA's are also shared as part of the divisional reports in IPCOG.

There is now a system wide C. diff reduction action plan that is discussed at the ICB IPC AMR group.

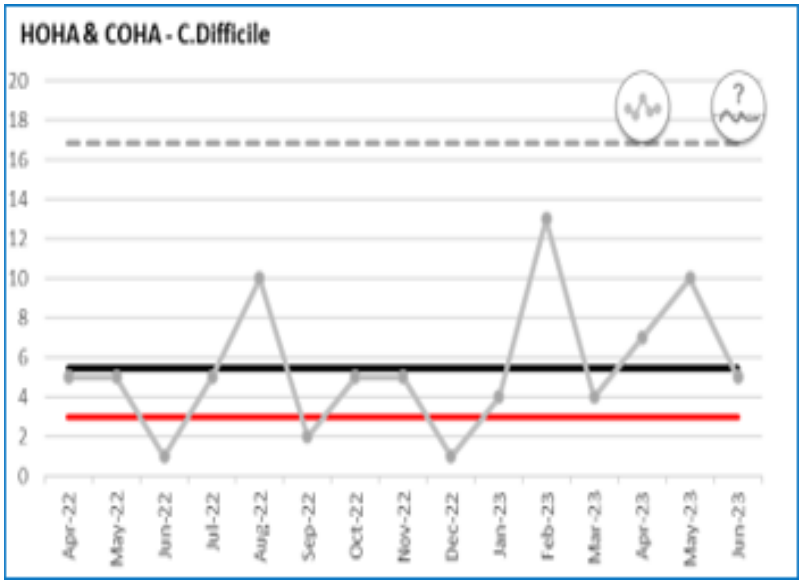
Actions include:

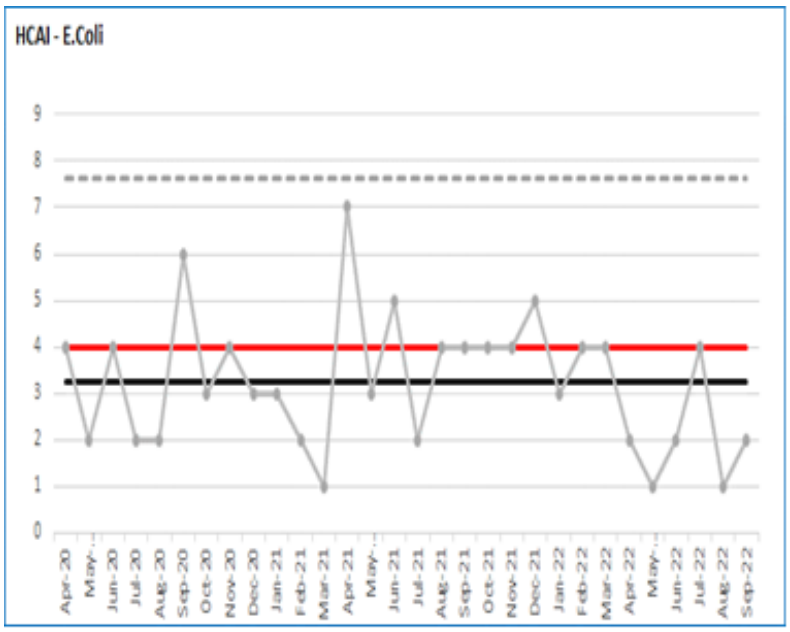
- Review of antimicrobial Stewardship/ AMR Group
- 72hr review ABX
- Cleanliness – Environment and sanitary equipment /Deep cleaning programme
- Management of patients with diarrhoea needing isolation

Peer Review visit of wards 24 and 25 will take place on 13th December 2023 with IPC ICB colleagues.

**2.3 E. coli Bacteraemia**

The target for 2023/23 is no more than 90 cases. The number of E. Coli cases are shown:






In Q2 there were 32 cases attributed to the Trust. 11 of these cases were post 48 hours of admission, and the remaining 20 cases had recent contact with the Trust in 28 days prior to the infection.

Cases which are deemed to be device related or where the source cannot be identified have an RCA completed. Only one of the cases in Q2 were considered to be device or intervention related with the source being a CAUTI. There are seven cases awaiting review by microbiology to determine the source.

**2.4 MSSA Bacteraemia**

There is no nationally set target for the Trust for MSSA. The number of MSSA cases are shown:

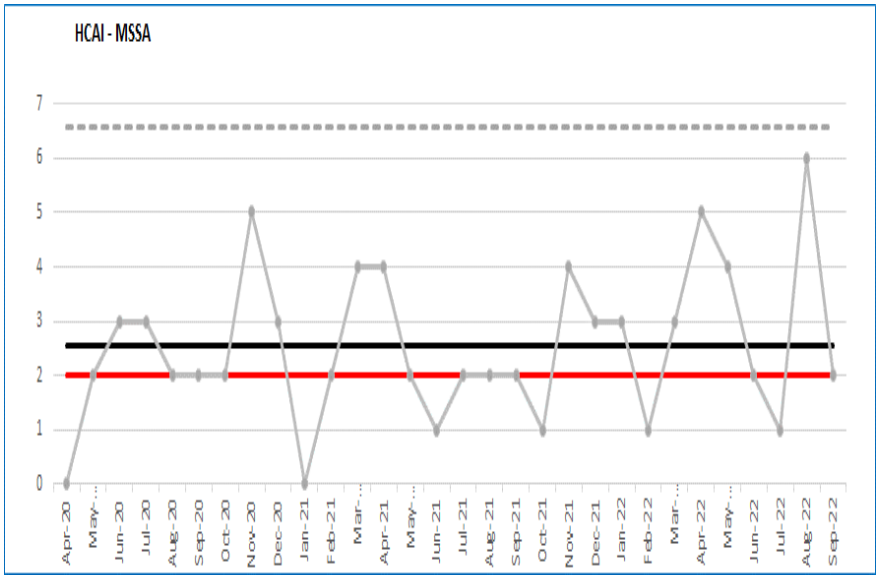
In Q2 2023/24 there were 17 cases identified that were attributed to the Trust. 7 of these cases were post 48 hours, and the remaining 10 cases had been in hospital in the 28 days prior to the positive sample.

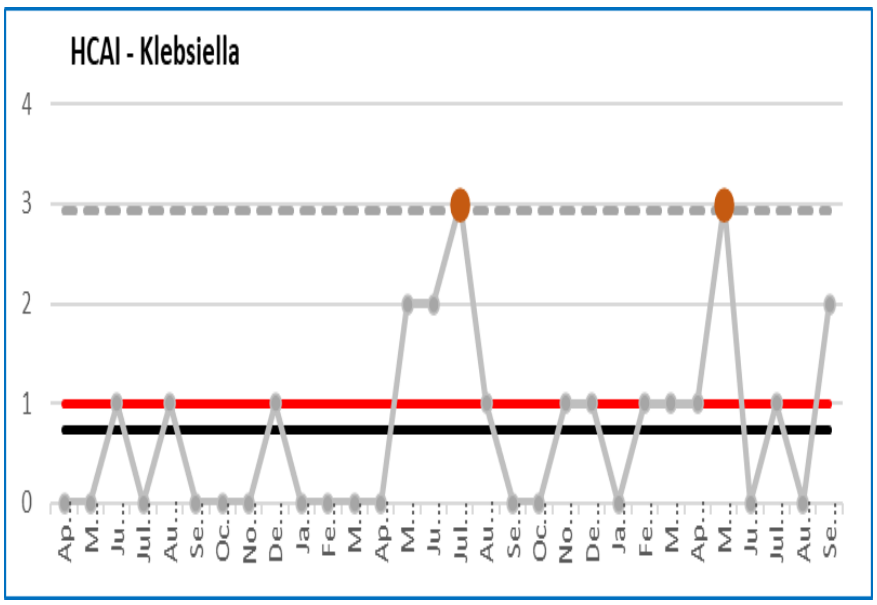
All cases deemed to be device or intervention related have an RCA completed. In Q2 of 2023/24 this concerned 2 of the 17 cases. The sources were identified as

- 1 Peripheral cannula
- 1 PICC line

**2.5 Klebsiella Bacteraemia**

The target for 2023/24 is no more than 22 cases. The number of cases of Klebsiella are shown:




In Q2 2023/24 there were 10 cases of Klebsiella Bacteraemia attributed to the Trust.

4 of these cases were post 48, and the remaining 6 cases had been an inpatient in the Trust within 28 days of the infection.

1 of the 10 cases was considered to be a HCAI, with the source of the infection identified as a catheter associated urinary tract infection.

**Quality Improvement Initiatives**
The Trust's Quality team are supporting the wards with education on the use of G-strap fixation devices whilst the patients are in hospital and in preparation for the discharge into the community. The G-strap in designed to securely hold the catheter in place by fixing to the leg.

Education to the teams is ongoing about the care of their catheter whilst in hospital and how to care for it at home.
The education includes:

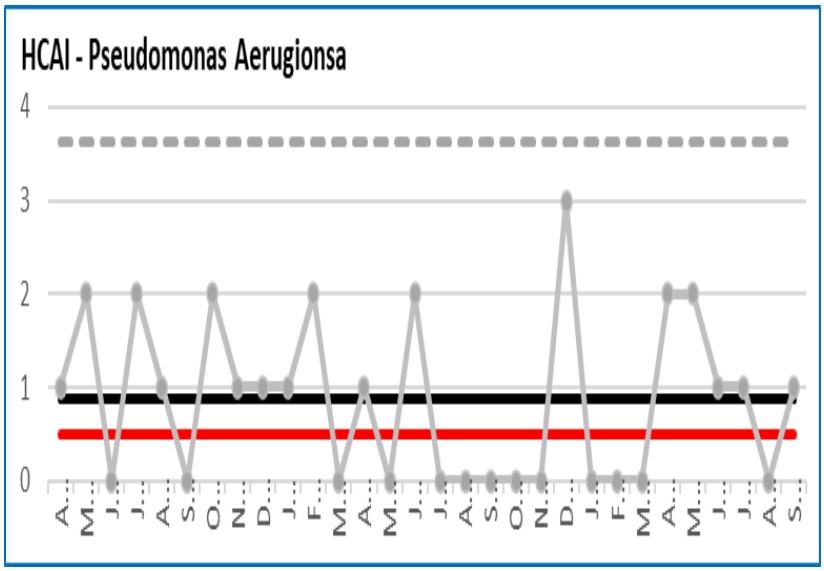
- Why they have a catheter.
- Maintaining hygiene
- Good fluid intake
- Diet and bowels
- Securing the catheter
- Securing the leg bag
- Drainage bags and how to dispose of them
- How often or when the next catheter is due to be changed
- Intercourse

Hospital to homecare packs are given to the patients prior to their discharge and the patient passport completed for replenishment of products in the community.

There is a working group that includes Quality Matron, procurement, and our community teams. This group meets monthly to discuss further improvement, new products and we also discuss incidents.

A booklet has been developed for patients with indwelling catheters and every patient has this on leaving the hospital. This contains the above information and is an excellent resource for advice and support and contains key contact details.

**2.6 Pseudomonas Aeruginosa**
The target for 2023/24 is no more than 18 cases. The number of cases per month in Q2 are shown.



In Q2 2023/24 there were 5 cases of Pseudomonas Aeruginosa attributed to the Trust, 2 of which were post 48, and 3 had recent contact with the Trust.

None of the cases were considered to be a HCAI.

**2.7 Root Cause Analysis Infections for MSSA and E. Coli Bacteraemia**
All MSSA and E. coli post 48-hour bacteraemia are reviewed by the microbiology team. Those deemed to be device related, or, where the source of infection cannot be determined are expected to have a Root Cause Analysis (RCA) completed.

In Quarter 2:

- 17 MSSA bacteraemia's were identified, of which 2 required an RCA as they were deemed to be device related.
- 31 E. coli bacteraemia's were identified, one of which was deemed to be device related.

Learning from completed RCAs include:

- Lapses in the management of cannulas, including dating of dressing and recording on VitalPac
- Incomplete documentation surrounding the insertion and review of urinary catheters, including the documentation lacking reason for insertion or the plan for removal of the catheter.
- Lack of appropriate follow-up investigation to identify source of infection after blood culture result where necessary inc. repeat cultures, Echocardiograms etc.

Actions implemented in relation to improvements include:

- Lessons learned from all cases cascaded to staff in huddles, handovers, and clinical governance meetings.
- Discussion and practise during IPC and induction training in July 2023 with FY1's regarding Blood culture best practice. Blood culture 'top tips' poster distributed to all clinical areas to highlight best practice.
- Ward managers and nurses in charge monitor the VIP scores and compliance monitored at monthly nursing metrics meetings, these being reported by division through their IPCOG reports.
- Urology specialist nurses now linking with clinical practice educators to provide catheter care training as part of the statutory training requirement.
- Training on unnecessary use of gloves provided to various staff groups.
- Education on hand hygiene provided to staff members.

**2.8 MRSA Elective and Emergency Screening**
**Elective MRSA Screening**: MRSA Elective screening compliance has been above the 95% target throughout Q2 2023/24. Average monthly compliance in Q2 was 97.73%.

**Emergency MRSA Screening**: The MRSA emergency screening compliance has not reached the required 95% in any month in Q2 2023/24. Average monthly Q2 compliance was 94.00%.

## 3.0 PERIODS OF INCREASED INCIDENCE/OUTBREAKS

### 3.1 COVID

During the period July-September 2023 20 COVID outbreaks were declared by SATH.

The most common issues identified during the outbreak management are:

- Asymptomatic, intentionally unscreened patients creating contacts, who then tested positive.
- Delayed isolation

In June 2023, the Trust implemented the new national guidance for COVID, this included no automatic testing of patients with symptoms of COVID, no staff testing and removal of mask mandate in clinical areas. This means moving forward it will now be difficult to identify a source or cause of an outbreak as further mitigations for transmissions have been removed.

In October 2023, the Trust implemented mask wearing in specific areas of the trust following a letter received from NHSE advising trust risk assessments were reviewed. Masks are now worn in:

- ED (all areas)
- SDEC
- AMA
- AMU
- Ward 22 SS
- SAU
- CAU
- GATU
- Ward 24 and Ward 17 Respiratory
- Ward 23 Oncology/Haematology, Chemo Day Centre, Lingen Davies, Haematology clinics and Paediatric Oncology/Haematology
- Areas with COVID-19/Flu/RSV outbreaks

The details of the Covid outbreaks are shown for Quarter 2 2023/24 in Appendix 1.

### 3.2 C.diff

In Quarter 2 there were 3 Period of Increased Incidence of C. diff declared for Ward 37, 11 and 26. The ribotyping of the cases involved in each PII, were all different which means that these were not outbreaks.

### 3.3 Serratia

The Trust reported 1 outbreak of Serratia on the Neonatal unit involving 3 babies. This was declared an outbreak as we were unable to type all cases and could not rule out transmission.
The learning identified includes:

- Breast/formula milk/enteral feeds must not be disposed of down sinks
- The integrated baby bath basins are to be removed from all bays
- The ventilators must not all be set up with circuits- current agreement is to prepare 2 ventilators in case of emergency.
- Outbreak was not declared when the initial 2 cases (twins) were identified- IPC not aware of these cases due to type of organism.

- Information given to parents to be reviewed by NNU

Actions raised during previous outbreaks on NNU were also reviewed as part of the process

Sadly, 1 Baby died in New Cross hospital. This is subject to PMRT and has been declared has a Serious Incident.

On request from the Director of Nursing a supportive visit was undertaken by Kirsty Morgan (Assistant Director of Infection Prevention and Control, NHS England) of the neonatal unit on 29.11.23. Feedback was provided to Director of Nursing and key members of the Trust team. Key points from the visit were:

- In the ITU area the trough sink were observed to splash onto the Aseptic trollies
- Suggestion for review of sinks to potentially take some sinks out
- Incubators/ resusitair collecting dust /Had been cleaned but sheet was contaminated/Resus equipment set up
- Some equipment found to be dusty after being cleaned
- Estates work to be completed
- Family room contaminated mattress /cleaning in rooms bottom shower not clean and rusty
- Washing machine linen room clean and tidy

### 3.4 Pertussis

In August there was one contact tracing incident due to a case of Pertussis (whooping cough) in Childrens Assessment Unit, Inform and advise letters were sent to other contacts considered high risk. No further cases were identified as a result of this.

## 4.0 SERIOUS INCIDENTS (SI) RELATED TO INFECTION PREVENTION & CONTROL REPORTED IN QUARTER 2 2023-24

**I Serratia Marcescens** An outbreak of Serratia Marcescens was declared on the neonatal unit in September /October 2023. Serratia is an opportunistic pathogen that can also cause infections in humans, particularly those who are immunocompromised.

3 cases of Serratia marcescens were identified on the Neonatal Unit.

Baby 1 & 2, Twins, born via C- section at 32 weeks. Both eye swabs positive for Serratia marcescens

Baby 3, singleton, born before arrival into a toilet at 27 weeks. Blood culture positive in PRH, transfer to New Cross, CSF also positive.

Sadly, Baby 3 died in New Cross hospital. This is subject to PMRT and has also been declared an SI.

We were unable to type all 3 cases (to see if they were the same) as the 2 eye swabs were disposed of by the lab (correct procedure), all 3 cases had very similar antibiotic sensitivity patterns

The learning identified from this case is in section 3.0

**1 MRSA Bacteraemia**

An MRSA Bacteraemia attributed to ward 37 - the detail learning identified can be seen in section 2.1.

## 5.0 IPC INITIATIVES

The IPC team conducted 57 full Quality Ward Walks (QWW) in Q2 2023/24.Y:\InfectionControl\Quality Walks\APRIL23-MARCH24

The accepted standard is for QWW compliance of 90% and above. Where compliance is between 100% and 90% the area will be re-audited quarterly in line with current schedule and the action plan should be returned to the IPC team within two weeks. Where the compliance achieved is between 80-89%, the area will be reviewed in 1 month, and the action plan should be returned to the IPC team within a week. Where an area scores less than 80%, a repeat audit will be completed in a week and action plan should be returned immediately.

**Quarter 2 2023-24 Compliance scores ranged from 67% - 100%.**

Of the 57 QWWs completed,

- 29 areas (51%) were over 90% compliant,
- 20 audited areas (35%) scored between 80% - 89%
- 8 areas (14%) achieved a score below 80%.

The areas with compliance below 80% were SAMA, TMLU, SED, S Endoscopy, S27, S31, Paediatrics wards and TED. All of these areas had action plans put in place. Most of the areas have been reaudited by IPC on an increased schedule, are now above acceptable standards.

During the same period, IPC team has also conducted weekly QWWs in 20 areas where there have been COVID outbreaks and 3 areas where there were C. diff PIIs and one area where there was a Serratia Outbreak.

The most frequently non-compliant elements were:

- Management or urinary catheters.
- Cleanliness of equipment and environment.
- Cleanliness of sanitary equipment including commodes, toilet seat frames and bed pans.
- Lack of hand hygiene and inappropriate use of PPE.
- Inconsistent completion of ventilation and cleaning checklists.

Action - As of October 2023, matrons will be expected to complete QWWs and report back to IPC.,

## 6.0 RISKS AND ACTIONS

The Risk register for IPC is held by the Director of Nursing as the Director for Infection Prevention and Control (DIPC) and is updated monthly.

There are 7 risks on the risk register. Of the 7 risks, after application of the risk controls and mitigations.

1 is rated “Extreme”.

Risk 443, lack of assurance in relation to decontamination of devices outside of endoscopy and sterile services. Review of decontamination will be undertaken by facilities lead who plans to complete this by 15th December. Discussions are taking place around appointing a decontamination lead with DIPC and Director of finance.

4 risks are rated “High”

Risk 772, increasing numbers of HCAIs. A C. diff reduction action plan is in place for SaTH and is now also in place for the system. This will be monthly at IPCOG. A deep dive into Gram- negative blood stream infections (GNBSI) will be undertaken to inform a GNBSI reduction action plan, this is in addition to our annual programme of work.

Risk 438, Lack of isolation facilities

Risk 481, Lack of negative pressure isolation

Risk 444, Lack of deep clean programme

2 risks are rated “Moderate”

Risk 773, Lack of Named Control of Infection Officer in relation to decontamination according to HTM 01-01 *New October 2023*

Risk 440, Risk of transmission of Covid-19 Which has now been closed at IPCAC 13TH November 2023

## 7.0 IPC BOARD ASSURANCE FRAMEWORK

The Infection Prevention and Control Board Assurance Framework had an update published at the end of September 2022. The 10 domains remain, with a total of 99 lines of enquiry. This is reviewed regularly and reported to the Trust Infection Prevention and Control Operational Group and Assurance Committee on a quarterly basis.

The BAF has a total of 99 Key Lines of Enquiry. 83 of which are rated as Green, 16 are rated as Amber, and 0 rated as Red.

## 8.0 HEALTH AND SOCIAL CARE ACT COMPLIANCE UPDATE

The Health and Social Care Act (2008) Code of Practice on the prevention and control of infections, applies to all healthcare and social care settings in England. The Code of Practice was updated in February 2023. The document sets out 10 criteria with 268 elements against which the Care Quality Commission (CQC) will judge a registered provider on how it complies with the infection prevention requirements, which is set out in regulations. To ensure that consistently high levels of infection prevention (including cleanliness) are developed and maintained Trusts complete a self-assessment.

The Health and Social Care Act (previously known as Hygiene Code) is reviewed quarterly by the IPC team and presented at the IPC Operational Group. Following the full review, the Trust is currently 97.0% compliant, being RAG rated ‘Green’ for 248 elements, ‘Amber’ for 19 and RAG rated ‘Red’ for 1.

The Trust self-assessment compliance against each of the 10 domains and the current gaps are shown:

# Health and Social Care Act 2008: code of practice on the prevention and control of infections and related guidance

## Self Assessment Tool

## Shrewsbury and Telford Hospitals NHS Trust

| Criterion | Statement of Compliance | Compliance Score | Score | Potential Score |
|---|---|---|---|---|
| **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 an other users may pose to them. | 95% | 120 | 126 |
| **Criterion 2** | Provide and maintain a clean and appropriate environment in managed premises that facilitates the prevention and control of infections. | 93% | 75 | 81 |
| **Criterion 3** | Ensure appropriate antimicrobial use and stewardship to optimise service user outcomes and to reduce the risk of adverse events and antimicrobial resistance. | 79% | 19 | 24 |
| **Criterion 4** | Provide suitable accurate information on infections to service users, their visitors and any person concerned with providing further health and social care support or nursing/ medical care in a timely fashion. | 100% | 66 | 66 |
| **Criterion 5** | Ensure that people who have or at risk of developing an infection are identified promptly and receive the appropriate treatment and care to reduce the risk of transmission of infection to other people. | 100% | 6 | 6 |
| **Criterion 6** | Systems to ensure that all care workers (including contractors and volunteers) are aware of and discharge their responsibilities in the process of preventing and controlling infection. | 100% | 18 | 18 |
| **Criterion 7** | Provide or secure adequate isolation facilities. | 92% | 11 | 12 |
| **Criterion 8** | Secure adequate access to laboratory support as appropriate. | 100% | 15 | 15 |
| **Criterion 9** | The service provider should have and adhere to policies designed for the individual's care, and provider organisations that will help to prevent and control infections. | 99% | 405 | 408 |
| **Criterion 10** | The registered provider will have a system or process in place to manage health and care worker health and wellbeing and organisational obligation to manage infection, prevention and control. | 100% | 48 | 48 |
| **Total Compliance** | | **97%** | **783** | **804** |

## 9.0 CONCLUSION

This IPC report has provided a summary of the performance in relation to the key performance indicators for IPC in Quarter 2 of 2023/24.

The Trust continues to see high numbers of C. diff. In Quarter 2 we report 20 cases, 29.6 per 100,00 bed days, compared to 31.8 per 100,000 bed days in quarter 1, this is a slight decrease in rate of C. diff.

The Trust has continued to see a number of COVID 19 outbreaks, and in line with a letter from NHSE we have reviewed our mask wearing guidance to reduce risk of transmission in higher risk settings.

There have been 2 Serious incidents declared, 1 relating to an MRSA bacteraemia and 1 relating to an outbreak of Serratia contributing to the death of a pre-term infant.

**APPENDIX 1:**

| | Ward | Infective Organism | Typing | Contributing factors |
|---|---|---|---|---|
| **July 23** | S27 | COVID | NA | Contact converted to positive |
| | S18 | COVID | NA | Contact converted to positive |
| | S25 | COVID | NA | Delay in isolation of index cases |
| | S24 | COVID | NA | Index cases admitted to bays whilst symptomatic |
| | S26 | COVID | NA | Contacts became positive |
| **August 23** | T10 | COVID | NA | Symptomatic index admitted to a bay |
| | S26 | COVID | NA | Several symptomatic patients, contacts became positive |
| | S23 | COVID | NA | Contacts became positive |
| | S26 | C. diff | Different | Delay in samples and isolation, contaminated equipment, low training compliance |
| | S37 | C. diff | Different | Contaminated sanitary equipment, environmental decontamination not undertaken as per policy |
| | T11 | C. diff | Different | Non compliance with PPE and hand hygiene. Contaminated equipment |
| **Sept 23** | T9 | COVID | NA | Positive visitors of one patient |
| | S27 | COVID | NA | Contacts became positive |
| | T7 | COVID | NA | 2 symptomatic patients, unsure of index case |
| | T6 | COVID | NA | Contacts became positive |
| | S24 | COVID | NA | Resp consultants concerned re severity- whole ward screened and asymptomatic staff identifying several new cases |
| | S23 | COVID | NA | Contacts became positive- possible staff involvement |
| | S28 | COVID | NA | Contacts became positive |
| | S27 | COVID | NA | Contacts became positive |
| | S22ss | COVID | NA | Contacts became positive |
| | S18 | COVID | NA | Contacts became positive |
| | T7 | COVID | NA | Contacts became positive |
| | T9 | COVID | NA | Contact became positive |
| | T23NNU | Serratia | Unable to type | Detailed in section 3.0 |