Board of Directors' Meeting
9 February 2022

The Shrewsbury and Telford Hospital NHS Trust

Agenda Item	012/23			
Report Title	Quarterly Report from the Director of Infection Prevention and Control			
Executive Lead	Hayley Flavell, Director of Nursing			
Report Author	Kara Blackwell, Deputy Director of Nursing			
	Link to strategic pillar:		**Link to CQC domain:**	
	Our patients and community	√	Safe	√
	Our people	√	Effective	√
	Our service delivery	√	Caring	√
	Our partners		Responsive	√
	Our governance	√	Well Led	√
	Report recommendations:		**Link to BAF / risk:**	
	For assurance			
	For decision / approval		**Link to risk register:**	
	For review / discussion		1847,1359,1456,1749,2077, 1994,1809	
	For noting	√		
	For information			
	For Consent			
Executive summary:	This report provides an overview of the Infection Prevention and Control key metrics for Quarter 3 2022/23 (October to December 2022). The key points to note are: • The Trust has breached the nationally set target of zero MRSA bacteraemia and is also over its target for C.Diff cases • The Trust had 39 Covid-19 outbreaks in total in Q3. • The Trust management of the isolation period for Covid positive patients, screening and management of contacts has changed in Q3, in line with national guidance. • IPC improvement work has been ongoing in Quarter 3, resulting in a "Green" RAG rating from the NHSE/I IPC inspection undertaken in December 2022. • The NHSE/I updated BAF has been reviewed and the Trust rated as green for 82 lines of enquiry, amber for 16, and 1 is still under review. • There are 6 IPC risks on the IPC Risk Register with no new risks added in Q3			
Appendices	IPC BAF - contained within Information Pack			
Exec Lead				

1.0 INTRODUCTION

This paper provides a report for Infection Prevention and Control for Quarter 3 (October to December 2022) against the 2022/23 objectives for Infection Prevention and Control. An update 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 October – December 2022 is provided. An update in relation to Covid-19 is also provided. The report also outlines any recent IPC initiatives and relevant infection prevention incidents. The updated IPC BAF is also included.

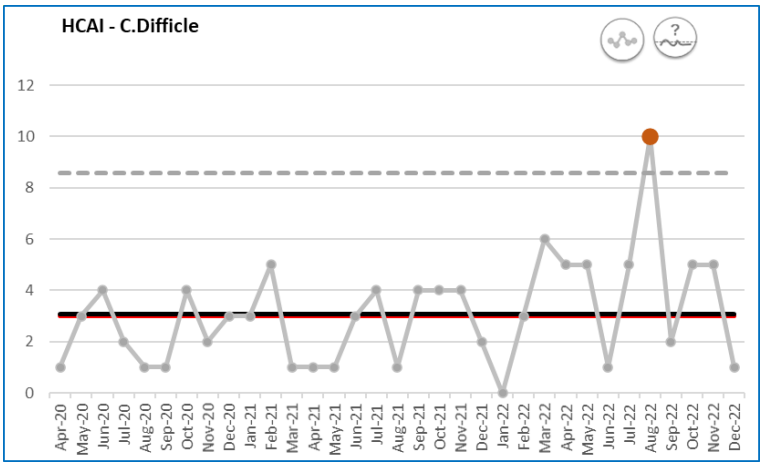
2.0 KEY QUALITY MEASURES PERFORMANCE

2.1 MRSA Bacteraemia

The target for MRSA bacteraemia remains 0 cases for 2022/23. There was 1 case of MRSA bacteraemia in Q3 2022/23. A full Post Infection Review is taking place as per Trust Policy, initial findings identified included routine MRSA swabbing as per Trust policy was missed for this patient. The last MRSA bacteraemia attributed to the Trust prior to this was May 2021.

2.2 Clostridioides Difficile

The Trust trajectory for C diff cases in 2022-23 is no more than 33 cases.



There was a total of 11 cases of C.Diff for Q3 2022/2023 against a target of no more than 8 cases for the Quarter.

There have been 39 cases of C. diff attributed to the Trust YTD (April to December 2022) against an annual target of no more than 33 cases. 31 of these cases were post 48 hours of admission and 8 cases had been an inpatient in the 28 days prior to the positive sample

Root cause analysis investigations are undertaken on all C. diff cases. During Q3 ,11 cases of C. diff are being reviewed.

Common themes being identified and reported were:

- Delays in taking a sample from patients experiencing episodes of unexplained type 5, 6, or 7 stool.
- Delays in commencement of a stool chart at the second episode of an unexplained type 5,6, or 7 stool.
- Delays in isolation of patients experiencing 2 or more episodes of unexplained type 5, 6, or 7 stool.
- Documentation not completed consistently

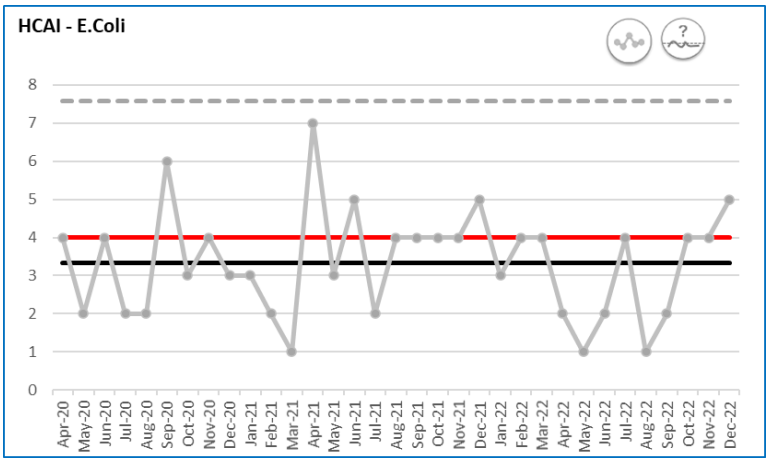
As part of the RCA process, action plans for each case include sharing of the cases with the relevant clinical division in their governance meetings so that lessons learnt can be shared and

findings of practise which could be done better, 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.

A C.Diff gap analysis has been undertaken by the IPC team and action plan developed for implementation across the Divisions.

2.3 E.Coli Bacteraemia

The Number of E.Coli cases are shown:



The target for 2022-23 is no more than 96 cases. YTD (April to December 2022/23) there have been 25 cases of post 48 E.coli bacteraemia.

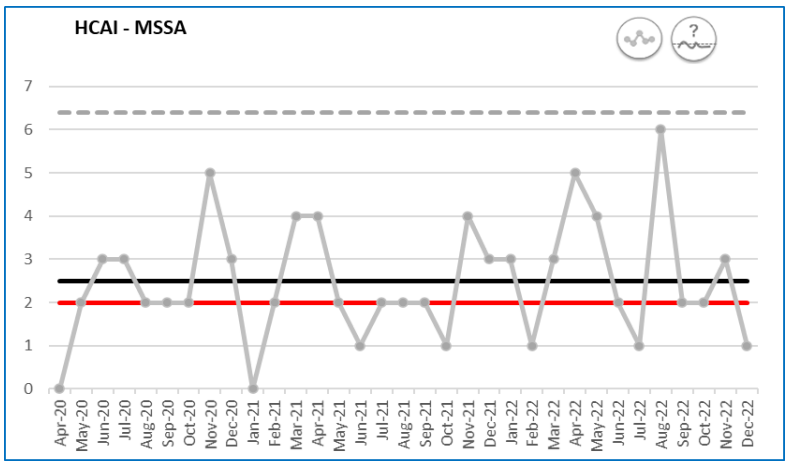
All cases which are deemed to be device related or in which the source cannot be identified have an RCA completed.

In total YTD, there were 6 cases which were considered to be device or intervention related, with the sources being:

- Four cases of catheter associated urinary tract infections (CAUTI)
- One case related to a PICC Line
- One case related to an Infected TPN Hickman Line
- The remaining 19 cases were considered not a HCAI.

2.4 MSSA Bacteraemia

The number of MSSA cases are shown:



There has been no national target set for MSSA bacteraemia cases in 2022/23. YTD there have been 25 cases of post 48-hour MSSA bacteremia against the Local Trust target of no more than 28 cases.

All cases deemed to be device or intervention related have an RCA completed,

- 10 were device or intervention related
- The source was considered to be an intravenous cannula infection in 7 cases, a central line case in 1 case and a PICC line in 1 case
- 1 case related to a surgical site infection
- The remaining 15 cases were considered not to be a HCAI.

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 have a Root Cause Analysis (RCA) completed.

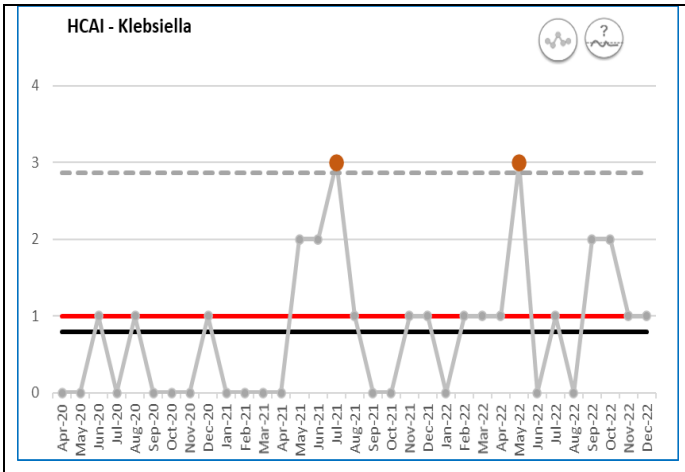
Learning from completed RCAs include:

- Management of urinary catheters including documentation and plans for removal is poor in E. coli bacteraemia
- Lapses in management of peripheral cannula – regarding consistency between inflammatory signs and VIP scores signs, identified in MSSA bacteraemia
- Multiple cannulations
- Other conditions predisposing patient to the infection e.g., neutropenia
- Skin integrity issues (preadmission) documented consistently and accurately in E. coli bacteraemia

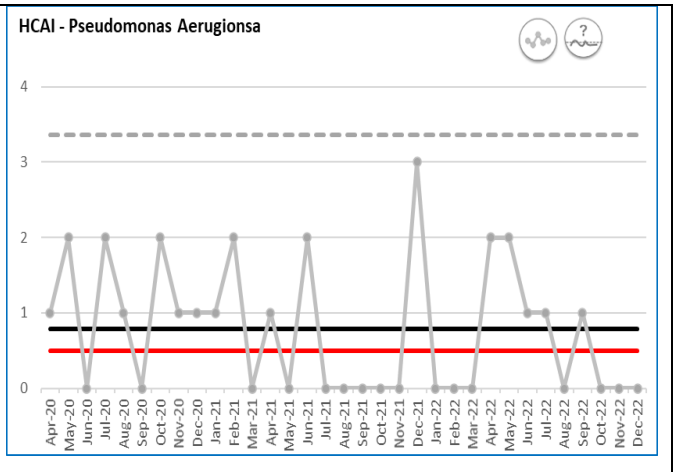
Actions implemented in relation to improvements include:

- Lessons learned from all cases cascaded to staff in huddles, handovers, and clinical
- Discussion and practise during IPC and induction training 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 practise educators to provide catheter care training as part of the statuary training requirement.
- HOUDINI care plan implemented to better guide catheter care and accurate documentation

2.5 Klebsiella and Pseudomonas Aerugionsa Bacteraemia



The target for 2022/23 is no more than 23 cases. There



The target for 2022/23 is no more than 19 cases.

were 5 cases of post 48-hour Klebsiella Bacteraemia in Q3 and a total of 12 cases YTD. YTD, five cases were considered to be a HCAI with the sources in 3 cases being a CAUTI, a Central Line in one case and a PICC line in one case. The remaining 7 cases were not considered to be a HCAI	There were no cases of post 48 Pseudomonas Aeruginosa in Q3 and a total of 7 cases YTD. YTD, two cases were considered to be HCAI with the sources in one case in a patient who had an ERCP, and the other cases related to a PICC line The other 5 cases were not considered a HCAI.

2.6 Elective and Emergency MRSA Screening

Elective MRSA Screening

MRSA elective screening compliance has been above the 95% target throughout Q1 to Q3 in 2022/23. Q1 compliance was 96.9%, Q2 97.3% and Q3 97.0%. YTD overall compliance is 97.1%

Emergency MRSA Screening

The MRSA emergency screening compliance has not reached the required 95% in either Q1, Q2 or Q3 in 2022/23. The average performance in Q1 was 94.0%, Q2 93.6% and Q3 92.5%. YTD overall is 93.4%.

3.0 PERIODS OF INCREASED INCIDENCE & OUTBREAKS

3.1 Outbreaks

During Quarter 3 (October to December 2022) there have been 39 COVID outbreaks declared across the Trust.

The most common issues identified during the outbreaks are:

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

The COVID outbreaks are shown for Quarter 3 2022/2023 in the table below:

	Ward	Learning
Oct 22	S27	Unclear. Likely patient admitted with Covid and spread through bay as no admission screening.
	S23	Likely patient admitted with Covid and infected others
	S24	Delay in isolation. Visitor declined to wear PPE. Positive visitor.
	T11	Visitors attending whilst known to be positive
	T10	Visitors attending whilst known to be positive
	T7	Visitors attending whilst known to be positive
	S25	Unclear. Possible index case for one bay.
	S26	Unclear
	T6	Unclear
	T17	Unclear
	S35	Positive asymptomatic staff.
	T4	Positive visitor
	S29	Likely patient admitted with Covid and infected others. Potential spread through a positive visitor
Nov 22	S28	Possible index case in each affected bay
	T15	Delay in isolation of index case
	T6	Transmission within bay
	S24	Delay in isolation of index case
	S26	Possibly positive staff member
	S28	Unclear index case. Possible visitor involvement.
	S25	Positive asymptomatic staff and visitors
	T7	Screening without consultation with micro/IPC.
	T11	Reprocessing of specimen. First reported as negative then as positive. Led to delay in isolation.
	S21	Staff and patients positive. Index unclear
	T14	Index and second positive patient socialising together
	T10	Possible index case in each bay
Dec 22	S27	Possible untested index case in each bay.
	T9	Index case unclear
	T6	Asymptomatic screens prior to procedures
	S23	Staff and patients positive. Index unclear
	S26	Staff and patients positive. Index unclear
	T36	Unclear
	T10	Delay in isolation
	S28	Asymptomatic index case screened for discharge
	T15	Contacts created by index case.
	T7	Contacts created by index case.
	S25	unclear
	T11	unclear
	S24	Index case unclear. Staff and patients positive.
	T16	Contacts created by index case.

3.2 Period of Increased Incidence

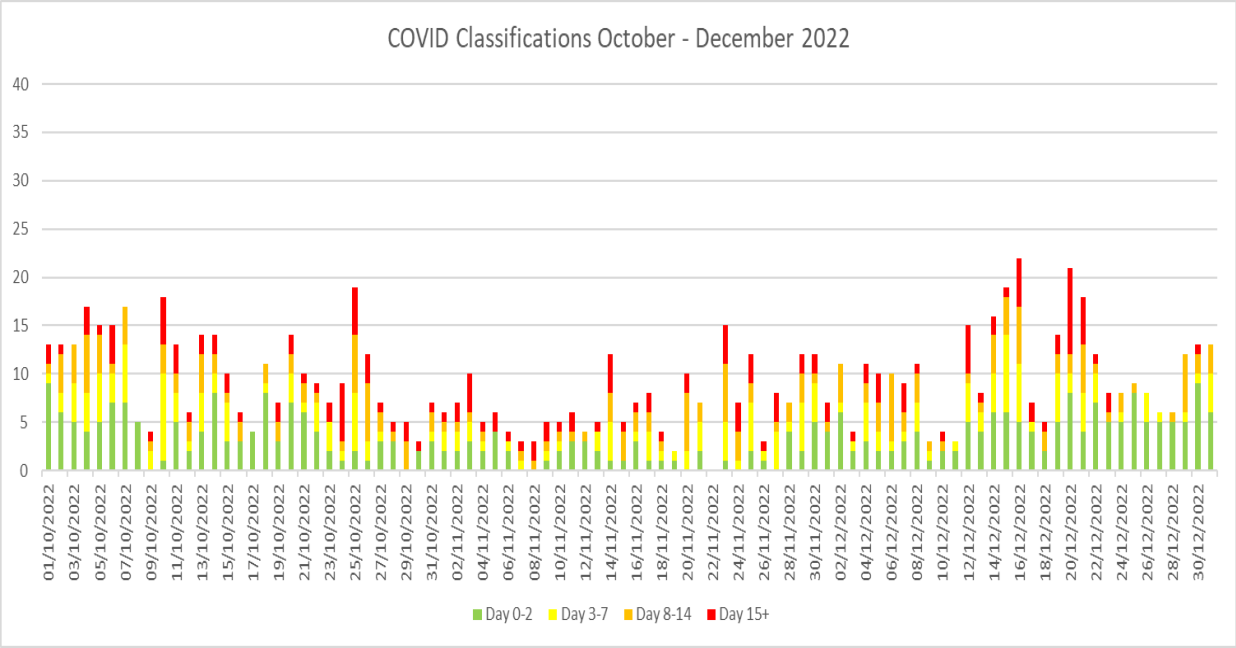
2 periods of increased incidence are shown for Quarter 3 2022/2023 in the table below:

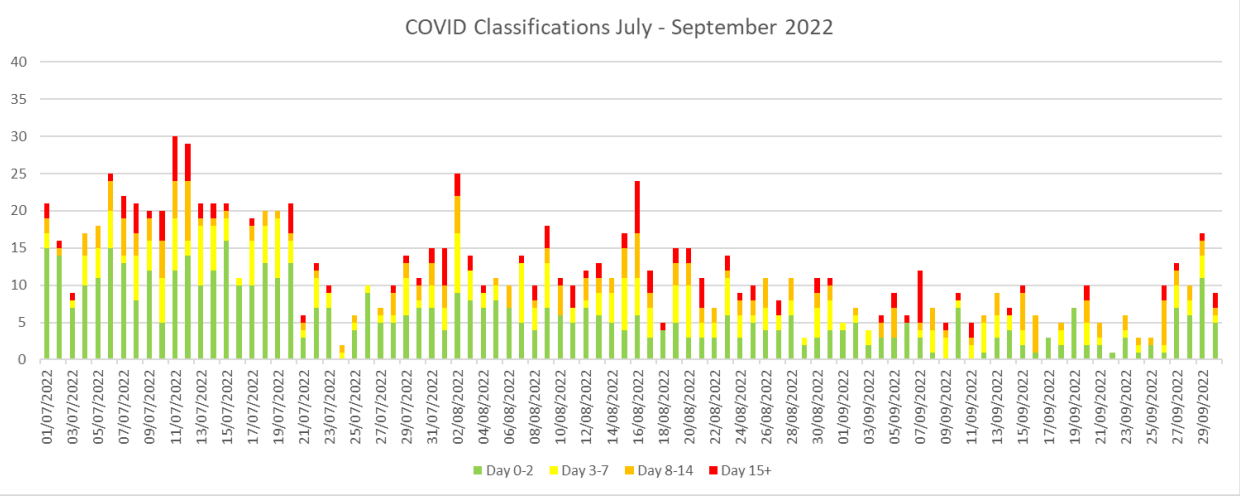
	Ward	Infective Organism	Typing	Learning
Dec 2022	S27	C Diff	Awaited	Investigation still underway
	SITU	Pseudomonas	Different (Unique)	Improved communications between Estates and IPC needed regarding Pseudomonas testing of water.

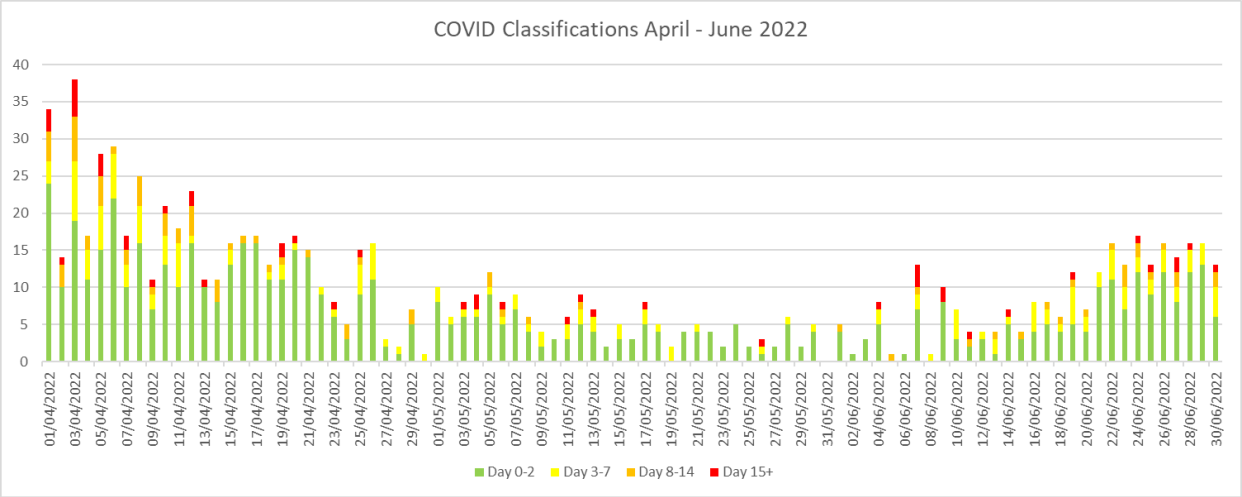
4.0 COVID-19 UPDATE

The number of Covid-19 cases in the Trust in Quarter 3 (October to December 2022) dropped slightly in November 2022 but then increased slightly in December 2022.

The graphs below demonstrate the trends of cases seen in the Trust per Quarter. Nb In September 2022 the vast majority of asymptomatic COVID-19 testing paused in line with new national guidance from NHSE/I.







NHSEI provide definitions of apportionment of COVID 19 in respect of patients diagnosed within hospitals as below:

Indeterminate – diagnosed at 3 - 7 days

Probable Healthcare Onset – diagnosed at 8 - 14 days

Definite Healthcare Onset – diagnosed at 15+ days

In Q3 2022/23 there were 186 'Probable' Healthcare onset, and 155 'Definite' Healthcare onset cases. Most of these cases had been involved in COVID outbreaks on the wards.

The Trust management of the screening patients for Covid contacts during outbreaks and staff testing during outbreaks has changed in Q3, as part of our ongoing assurances in relation to the management of these outbreaks and in line with national guidance and discussions with NHSE/I and UKHSA colleagues.

In January 2023 a brief review of patient timelines in outbreaks was carried out and compared to December 2021. In December 2022 32% of the patients in outbreaks had been identified as being a contact, compared to January 2023 where 56% of patients in outbreaks were identified as contacts.

5.0 INFECTION PREVENTION & CONTROL RELATED SERIOUS INCIDENTS (SI)

There has been one Serious Incident reported in Quarter 3 of 2022/23. This is being led by the Women and Children Division with the involvement from IPC following the MRSA bacteraemia reported in December 2022.

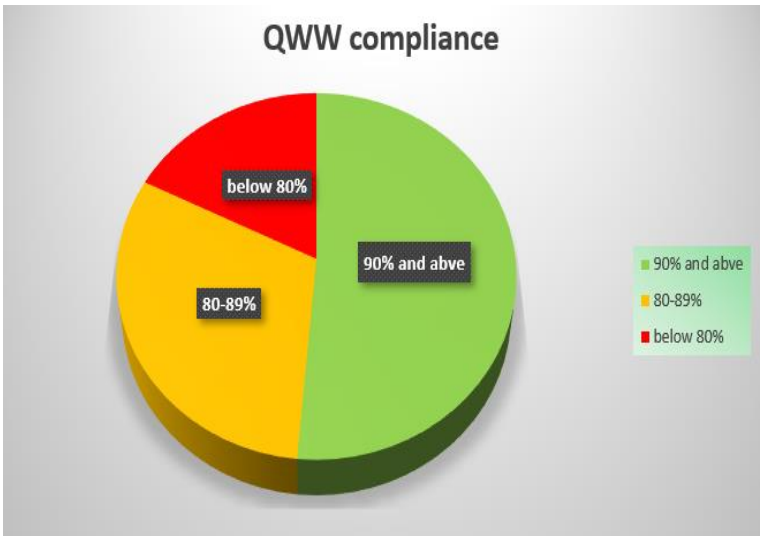
There were no IPC serious incidents reported in Quarter 1 or 2 of 2022/23.

6.0 IPC INITIATIVES

The IPC team conducted 42 full QWW in Q3 (October to December 2022).

The accepted standard is for QWW compliance of 90% and above. If compliance is between 90-100% 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. If 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. If an area scores less than 80%, a repeat audit will be completed in a week and action plan should be returned immediately. Compliance scores ranged from 55% - 98%.

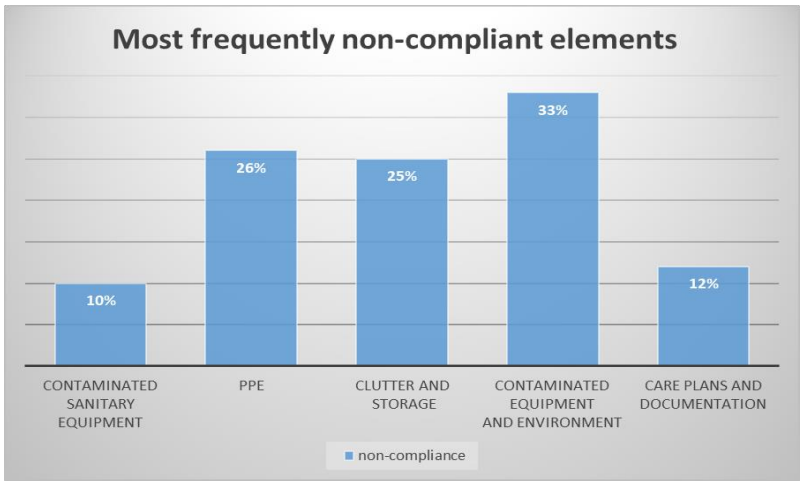
Of the 42 QWWs completed, 19 areas (55%) were over 90% compliant, 14 audited areas (33%) scored between 80% - 89% and 8 areas (19%) achieved a score below 80%.



During the same period, IPC team has also conducted 130 outbreak QWWs related to Covid-19 outbreaks and C diff PIIs

The most frequently non-compliant elements were:

- Storage and clutter
- Care plans and documentation
- Cleanliness of sanitary equipment including commodes, toilet seat frames& bed pans
- Cleanliness of the general ward environment and equipment
- PPE not being worn according to current guidelines



Contaminated equipment and environment on the wards were identified as a most frequent issue. Several failings also related to non-compliances with PPE usage and disposal, this was closely followed by inappropriate storage and clutter on the wards. Lastly, non-compliances regarding the care plan and documentation completion and contaminated sanitary equipment have decreased in this Q3.

Following each QWW Assurance Audit conducted by IPC the Action plan is sent to Ward Managers, Matrons and Heads of Nursing. Depending on the compliance the time scale for completion of the action plans is set and communicated to departments.

Unfortunately, only small number of all action plans are returned within the given time and most of the actions that are completed did not include details of the processes that are implemented to ensure the issue identified will be resolved.

7.0 IPC NHSE/I REVIEW

The Trust was downgraded from RAG rating Green to Amber by NHSE in July 2022 following a peer review, issues identified during a masterclass and concerns raised in relation to compliance with IPC practices on an external COVID Outbreak meeting.

NHSEI revisited the Trust on 6th December 2022 and performed a reinspection and assessment of the Trusts RAG rating. Following this visit, the Trust were de-escalated from Amber to Green on the NHSE IP risk matrix, with a request for a sustainability visit to be undertaken in March 2023.

The Trust continue to address all actions included on the action plan which includes this and previous visits to ensure continued improvement across the Trust in relation to IPC.

8.0 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 6 risks on the risk register. Of the 6 risks, 3 risks are RAG rated Red prior to risk controls. Following application of the risk controls and mitigation one risk remains rated as red after mitigation:

Risk 2077: Decontamination assurance for medical devices

Ongoing work continues in relation to decontamination including progressing the recommendations from the review previously undertaken by the University Hospitals Birmingham NHS Trust which includes a proposal to centralise all decontamination services under one management structure and the appointment of a decontamination clinical lead.

9.0 IPC BOARD ASSURANCE FRAMEWORK

The Infection Prevention and Control Board Assurance Framework had an update published at the end of September 2022. As part of this update there were 46 updated or new lines of enquiry. The 10 domains remain, with a total of 99 lines of enquiry.

Following this update, the BAF was fully reviewed to reflect these changes and there are now a total of 82 lines of enquiry rated as Green, 16 rated as Amber, 0 rated as Red, and 1 is still under review.

10.0 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 sets out the 10 criteria with 243 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 Hygiene Code is reviewed quarterly by the IPC team and presented at the IPC Operational Group. The Trust is 97.0% compliant, being RAG rated ‘Green’ for 233 elements, ‘Amber’ for 10 and RAG rated ‘Red’ for 0. The Trust self-assessment compliance against each of the 10 domains and the current gaps are shown:

Code of Practice for health and social care on the prevention and control of infections and related guidance
Self Assessment Tool
Balanced Scorecard: Self Assessment Summary

Shrewsbury and Telford Hospital NHS Trust	
Self Assessment carried out	*18/01/2023*
Overall Status	
97.0%	

Key		
	100%	Full compliance
	71% - 99%	Action required
	50% - 70%	Urgent action required
	=< 49%	Trust priority

Criterion 1		Criterion 2		Criterion 3	
Systems to manage and monitor IPC		Provide and maintain clean and appropriate environment		Ensure appropriate antimicrobial use	
18/01/23	97%	18/01/23	96%	18/01/23	94.4%

Criterion 4		Criterion 5		Criterion 6	
Provide suitable and accurate information to service users		Ensure those with infection are identified promptly and treated appropriately		Staff Involvement	
18/01/23	100%	18/01/23	100%	18/01/23	100.0%

Criterion 7		Criterion 8		Criterion 9	
Secure adequate isolation facilities		Secure adequate access to lab support		Have and adhere to policy	
18/01/23	83.3%	18/01/23	100.0%	18/01/23	99.5%

Criterion 10	
Staff are protected from exposure to infection, and appropriate training provided	
18/01/23	100.0%

11.0 CONCLUSION

This IPC report has provided a summary of the performance in relation to the key performance indicators for IPC in Quarter 3 of 2022/23.

In relation to HCAIs, the Trust has breached the nationally set target of zero MRSA bacteraemia and is also over its target for C.Diff cases with 39 cases YTD against a target of no more than 33 cases.

The Trust has continued to see a number of COVID 19 outbreaks, with 39 outbreaks in total in Q3.

IPC improvement work has been ongoing in Quarter 3, resulting in a “Green” RAG rating from the NHSE/I IPC inspection undertaken in December 2022.