The Shrewsbury and Telford Hospital NHS Trust

Board of Directors' Meeting
10 February 2022

Agenda item	013/22			
Report	Infection Prevention and Control Report			
Executive Lead	Hayley Flavell, 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	√	561, 1771	
	For decision / approval		**Link to risk register:**	
	For review / discussion			
	For noting			
	For information			
Executive summary:	This report provides an overview of the Infection Prevention and Control key metrics for Quarter 3 (October to December 2021). Key points to note by exception are: • The Trust continues to perform well in relation to the national targets for Healthcare Acquired Infections and against a majority of our locally agreed improvement targets, with the exception of E.Coli which is higher than our local target • There have been no IPC Serious Incidents in Q3 • There has been an increase in Covid-19 outbreaks in Q3 • The revised NHSE/I IPC BAF was issued at the end of December 2021. The Trust has completed another gap analysis and updated its IPC BAF, and is 91.5% compliant with actions/mitigation in place for the 11 Amber rated items • The NHSE/I IPC sustainability visit took place on 18th January 2022 and the Trust has maintained its GREEN status • The Trust remains 96% compliant against the Hygiene Code (2008) • Lateral Flow Screening for staff compliance is low and actions are ongoing to improve this across the Trust.			
Appendices	IPC BAF Jan 2022			
Lead Executive				

1.0 INTRODUCTION

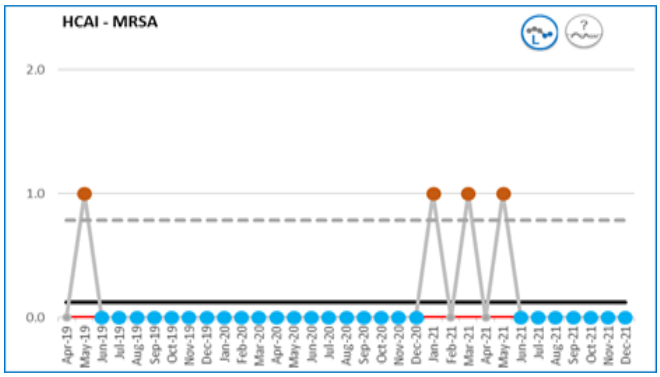
This paper provides a report for Infection Prevention and Control for Quarter 3 (October to December 2021) against the 2021/2022 objectives for Infection Prevention and Control. Trust performance in relation to healthcare associated infections, and the Covid-19 pandemic, is presented. The report also outlines any recent IPC initiatives and relevant infection prevention incidents. The updated IPC BAF (NHSE/I December 2021), Trust compliance against the Hygiene Code (Health and Social Care Act 2008), and a summary of the recent NHSE/I IPC visit is also provided.

2.0 KEY QUALITY MEASURES PERFORMANCE

The Trust performance relating to 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 Quarter 3 is provided against the nationally set targets for the Trust and the Trust local improvement targets.

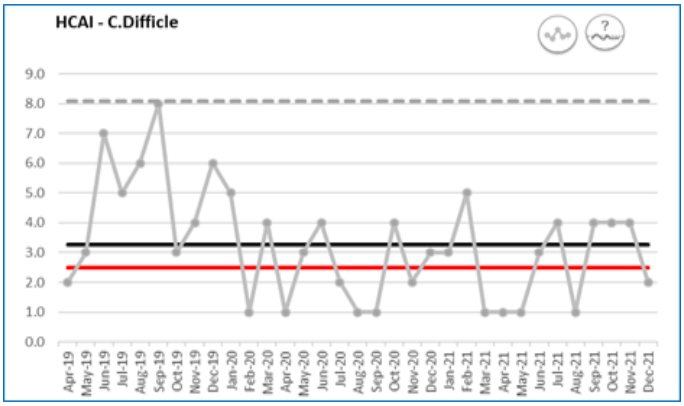
2.1 MRSA Bacteraemia

The target for MRSA bacteraemia remains 0 cases for 2021/22. There were 0 cases in Q3 2021/22



2.2 Clostridioides Difficile

The Trust trajectory for Clostridioides Difficile cases in 2021-22 is no more than 49 cases. Total number of C-Diff cases reported per month is shown:



There have been 10 cases of C.Diff attributed to the Trust in Quarter 3 (October December 2021). Seven cases were post 48 hours of admission and three cases had been inpatients in the last 28 days prior to the positive sample.

Year to date there has been a total of 24 cases against the nationally agreed target of no more than 49 cases and a local improvement target of no more than 30 cases for 2021/2022 .

Root cause analysis investigations are undertaken on all C.Diff cases. During this period, 14 RCAs for C.Diff cases have been completed.

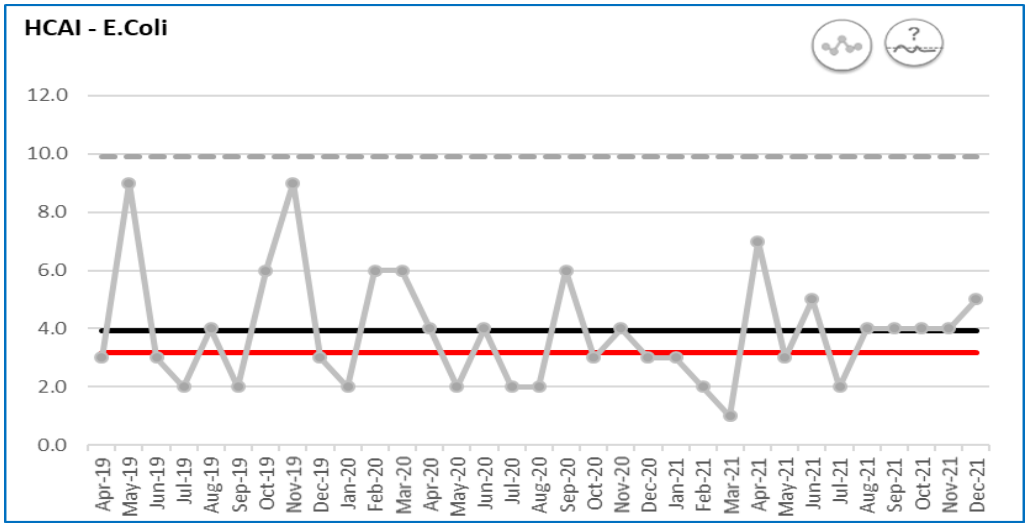
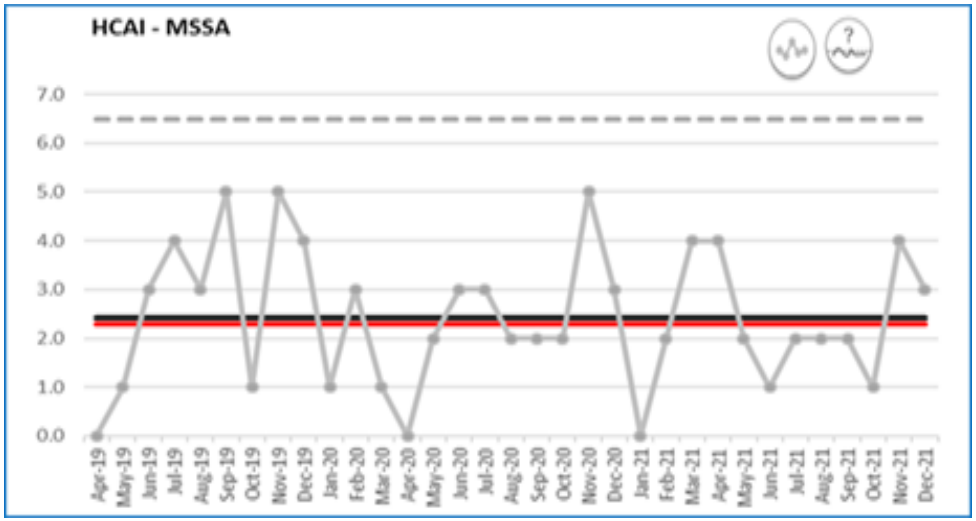
Common themes being identified and reported were:

- The timely manner of isolating a patient who was experiencing 2 or more episodes of unexplained diarrhoea.
- In general there was evidence of appropriate antibiotic prescribing, however, there were some examples where the choice of antibiotic had not been clear and no discussion recorded with microbiology consultant.
- The delay of commencing a stool chart at the second episode of unexplained diarrhoea, and the lack of documentation in nursing notes regarding the patient's current bowel habit.

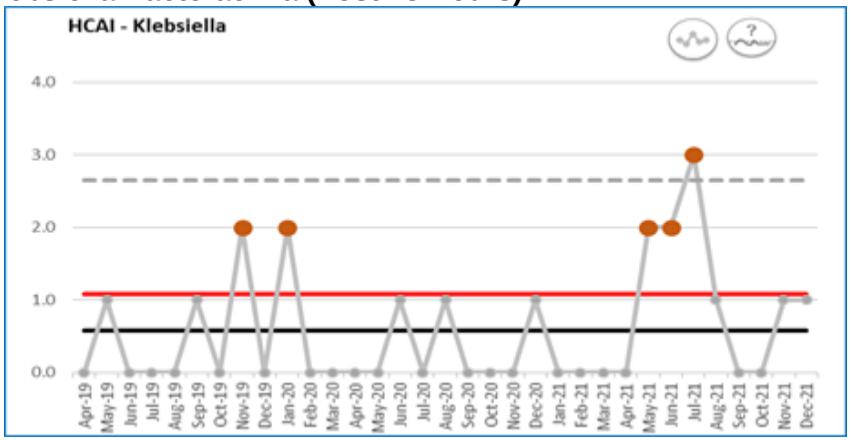
All actions agreed as part of the RCA are shared with the relevant clinical governance team and Divisions, and also with an action for the patient's consultant or the doctor who attends the RCA meeting to share the learning and findings with his medical team colleagues. Ward managers are requested as part of their actions to share the learning with the ward team. Learning from the RCA's are also shared as part of the Divisional report into the IPC Operational Group.

Actions include:

- Reminded staff of the importance of timely taking of stool samples and prompt isolation
- Escalation when patients cannot be isolated in a timely manner due to lack of isolation facilities
- Use of Redi-rooms to isolate patients when side rooms unavailable

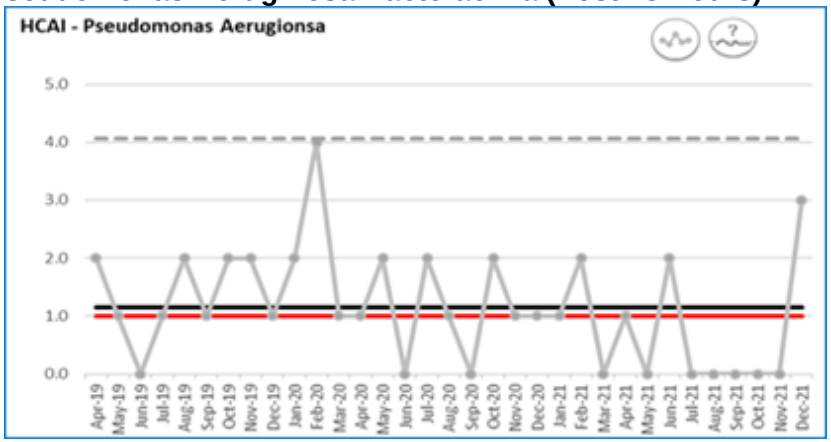
2.3 E.Coli Bacteraemia	2.4 MSSA Bacteraemia
The Number of E.Coli cases are shown: 	The number of MSSA cases are shown: 
There have been 10 cases of post 48 hour E.Coli bacteraemia in Quarters 3 (October to December 2021) and a total of 38 cases YTD. This is below the nationally agreed target for 2021/2022 of no more than 122 cases but above the Trust local target of no more than 38 cases in the year. All cases which are deemed to be device related or in which the source cannot be identified have an RCA completed. In the majority of cases the source of the infection was not considered to be related to a device. YTD, in 9 cases the source of the bacteraemia was considered to be a catheter associated urinary tract infection (CAUTI), 1 was considered to be related to biliary stents and 1 was due to a post-operative infection.	There has been no national target set for MSSA bacteremia cases in 2021/22. In Q3 there were 8 cases of MSSA bacteraemia, this is higher than the numbers reported for Q1 and Q2. YTD there have been 21 cases against a local Trust target of no more than 28 cases. All cases deemed to be device or intervention related have an RCA completed. Of the 21 cases of post 48 hour MSSA bacteraemia, 7 were considered to be device or intervention related, and 1 is still under investigation. Of these, 5 were considered to be line infections, 1 was a fracture of a prosthetic and 1 was a fractured PEG tube.

2.5 Klebsiella Bacteraemia (Post 48 Hours)



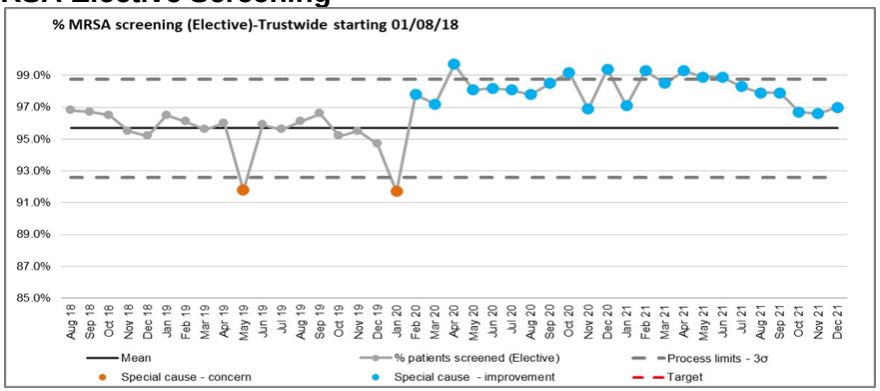
The target for 2021/2022 is no more than 24 cases. There were 10 cases of post 48 hour Klebsiella in Q1 – Q3, 4 of which were considered to be device or intervention related. Two cases was deemed to be device related due to catheter associated urinary tract infections, one case was sepsis post procedure, and one was a central line infection.

2.6 Pseudomonas Aeruginosa Bacteraemia (Post 48 Hours)



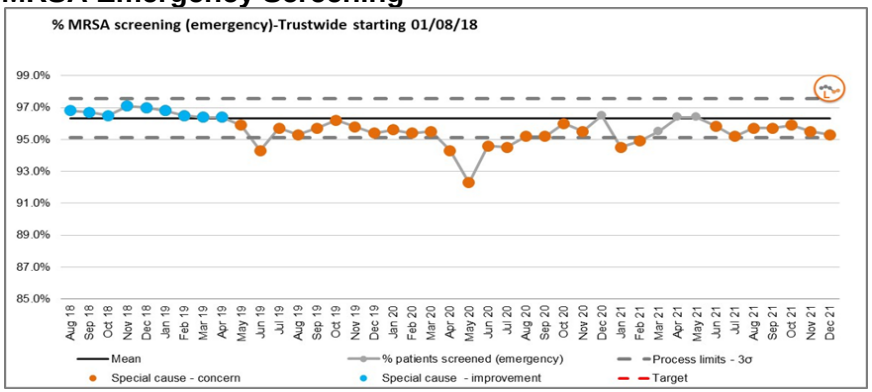
The target for 2021/22 is no more than 10 cases. There have been 6 cases of Pseudomonas Aeruginosa YTD. Of the 6 post 48 cases, 4 were considered to be device or intervention related. 1 was a CAUTI, 1 was a ventilator associated pneumonia, and 2 were line infections.

2.7 MRSA Elective Screening



MRSA Elective screening compliance has been above the 95% target throughout Q1 – Q3 of 2021-22. YTD performance is 97.8%.

2.8 MRSA Emergency Screening



The MRSA emergency screening compliance has been above the 95% in Q1 – Q3 of 2021/22. YTD is performance is 95.8%.

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 3, there were 10 RCAs completed
:

- 5 E.coli cases for RCA
- 5 MSSA cases for RCA

Learning from completed RCAs include:

- Documentation in relation to blood cultures does not always include the reason the culture was taken, who took the sample and where the sample was taken from. Also whether other specimens were requested e.g. If querying urosepsis, was an MSU/CSU obtained.
- Difficulty in taking the cultures due to the patient's general condition
- Urinary Catheters not always reviewed and removed in a timely manner

Actions implemented in relation to improvements include:

- The sharing and discussion of the RCA and its finding through the relevant clinical governance teams
- 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 monitor the VIP scores and compliance monitored at monthly nursing metrics meetings, these being reported by the Division through their IPCOG reports
- Urology specialist nurses now linking with clinical practise educators to provide catheter care training as part of the statutory training requirement.

3.0 PERIODS OF INCREASED INCIDENCE/OUTBREAKS

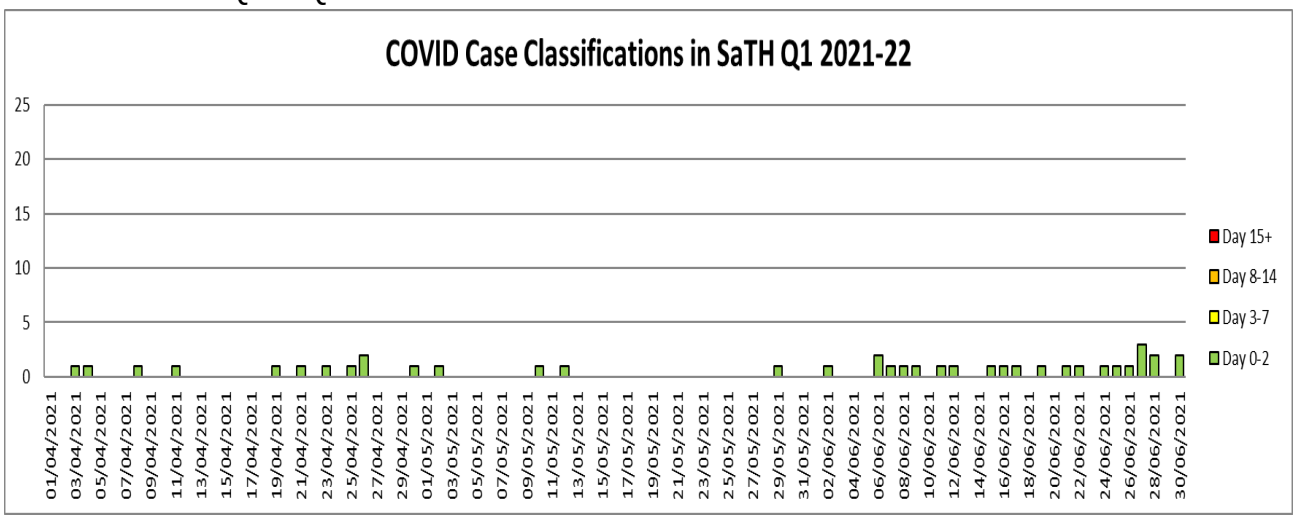
The periods of increased incidence are shown for Quarter 3 2021/2022. The majority of these are due to Covid-19.

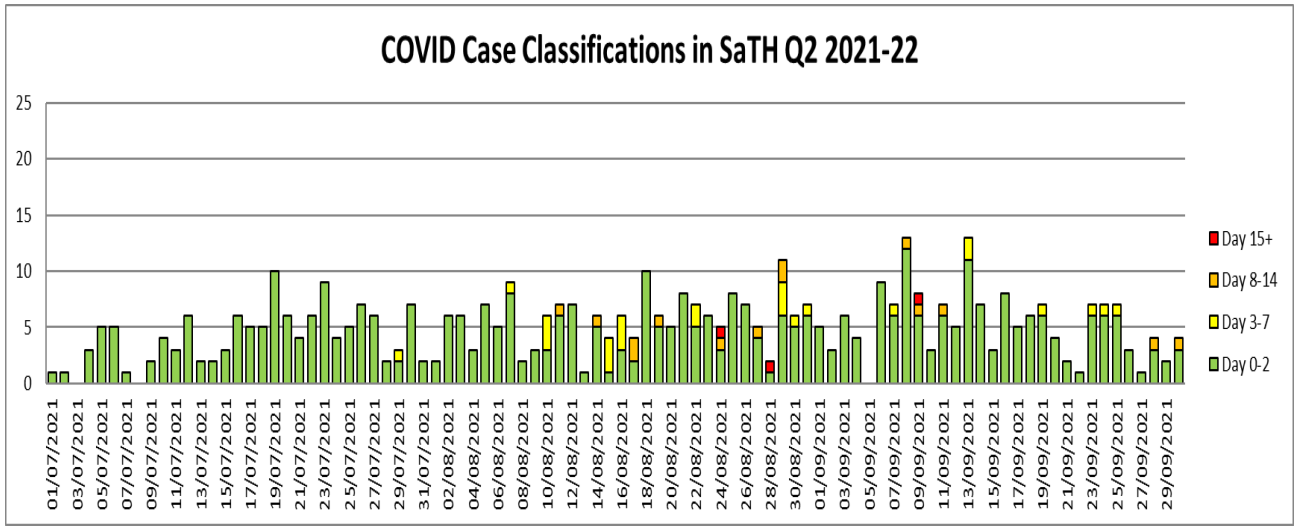
	Ward	Infective Organism	Typing	Learning
October 2021	T11	COVID	NA	Positive admission case in Bay- contacts converted
	T10	COVID	NA	Lapses in good IPC practice
	T14	COVID	NA	No clear curtains in place as was a green /low risk pathway, then escalated with medical patients
	TAMU	COVID	NA	Staff outbreak. Non-

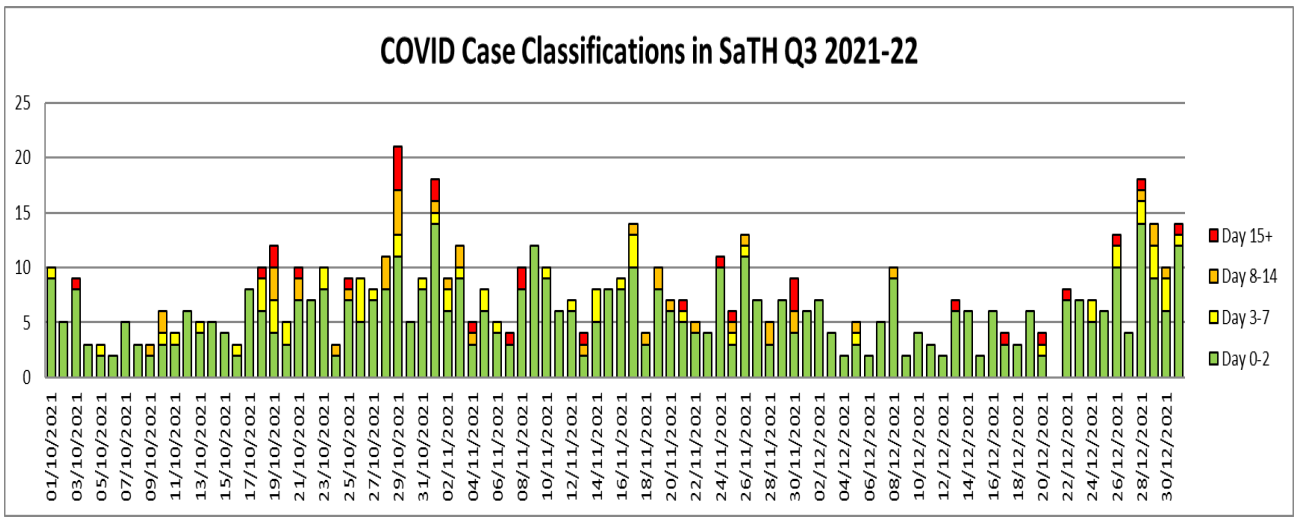
				compliance with PPE
	S Estates	COVID	NA	Staff outbreak- PPE non-compliance
	S24	COVID	NA	Confused patients wandering- unable to social distance
	S25	COVID	NA	Positive admission case in bay- contacts converted
November 2021	T7	COVID	NA	Positive admission case in Bay- contacts converted
	S24	COVID	NA	Positive admission case in Bay- contacts converted. Investigation undertaken in SAMU as 2 patients had been in contact with a positive case. Lapses in good IPC identified
	S26	COVID	NA	2 nosocomial cases- did not appear to be linked
	S22RE	C. diff	2/ 3 different- unable to type case 3	Lapses in good IPC practice and environmental cleanliness issues
	S35	VRE	2/3 Same	2 cases had been together in Bay- Renal patients
December 2021	T9	COVID	NA	Initially positive admission case in Bay- contacts converted then a further cluster- Lapses in good IPC practice identified
	T11	COVID	NA	LFT compliance in staff poor, initial positive cases in a Bay, where contacts have then converted
	T36	COVID	NA	2 staff attending work whilst should have been self-isolating/ brought back on risk assessment due to household contacts
	HHD	COVID	NA	2 patients in same bay- no clear curtains in place
	S23	COVID	NA	Positive admission case in Bay- contacts converted
	TDSU	COVID	NA	Positive admission case in Bay- contacts converted
	S28	COVID	NA	Poor IPC compliance noted

4.0 COVID 19 UPDATE

The number of Covid-19 cases in the Trust in Quarter 3 (October to December 2021) has continued to increase since Quarters 1 & 2, with the emergence of the new Omicron variant which is more transmissible. The graphs below demonstrate the increases in cases between Q1 – Q3.







In October 2020 NHSEI provided definitions of apportionment of COVID 19 in respect of patients diagnosed within hospitals as below:

- **Community Onset** – Positive specimen date <=2 days after hospital admission or hospital attendance
- **Hospital-Onset Indeterminate Healthcare-Associated** – Positive specimen date 3-7 days after hospital admission
- **Hopsital-Onset Probably Healthcare-Associated** – Positive specimen date 8-14 days after hospital admission
- **Hospital-Onset Definite Healthcare-Associate** – Positive specimen date 15 or more days after hospital admission

In Quarter 3 there were 41 'Probable' Healthcare-Associated, an increase from the 14 cases reported in Q2 and 30 'Definite' Healthcare-Associated cases, an increase from 3 in Q2. Most of these cases have been involved in COVID outbreaks on the wards, however any case that tests positive after day 8 of admission that is not involved in an outbreak will have an RCA completed.

Ongoing actions to reduce any transmission in the hospital remain in place and include:

- Ongoing patient screening on admission, Day 3, Day 5-7, Day 13 then every 7th day of admission after this.
- Plastic curtains around bed spaces
- Ensuring PPE compliance and social distancing by all staff
- Encouraging patients to wear face masks at all times but particularly when mobilising to the bathroom
- Robust cleaning of the ward environment with Tristell twice daily

Covid-19 Staff Lateral Flow Testing

There is an expectation that staff will undertake lateral flow tests twice weekly and report the results through on the Trust lateral flow app. The results are shown below and highlight there is further work required across all staff groups to encourage compliance with this.

Division	% Yes Reporting Results	% No Not Reporting Results	Total Frontline Headcount
Trust	**21%**	**79%**	**5660**
Medicine and Emergency Care	20%	80%	1609
Surgery, Anaesthetics and Cancer	23%	77%	1955
Women and Children's	14%	86%	836
Clinical Support Services	27%	73%	919
Corporate	17%	83%	341
Bank Workers	6%	94%	982

Managers now receive this information weekly.

This has been discussed at the weekly senior nurses meeting and escalated to the Covid-19 Silver meeting for discussion and escalation to the Covid-19 Gold meeting.

5.0 SERIOUS INCIDENTS (SI) TO INFECTION PREVENTION & CONTROL

There were no IPC serious incidents reported in Quarter 3 of 2021/2022.

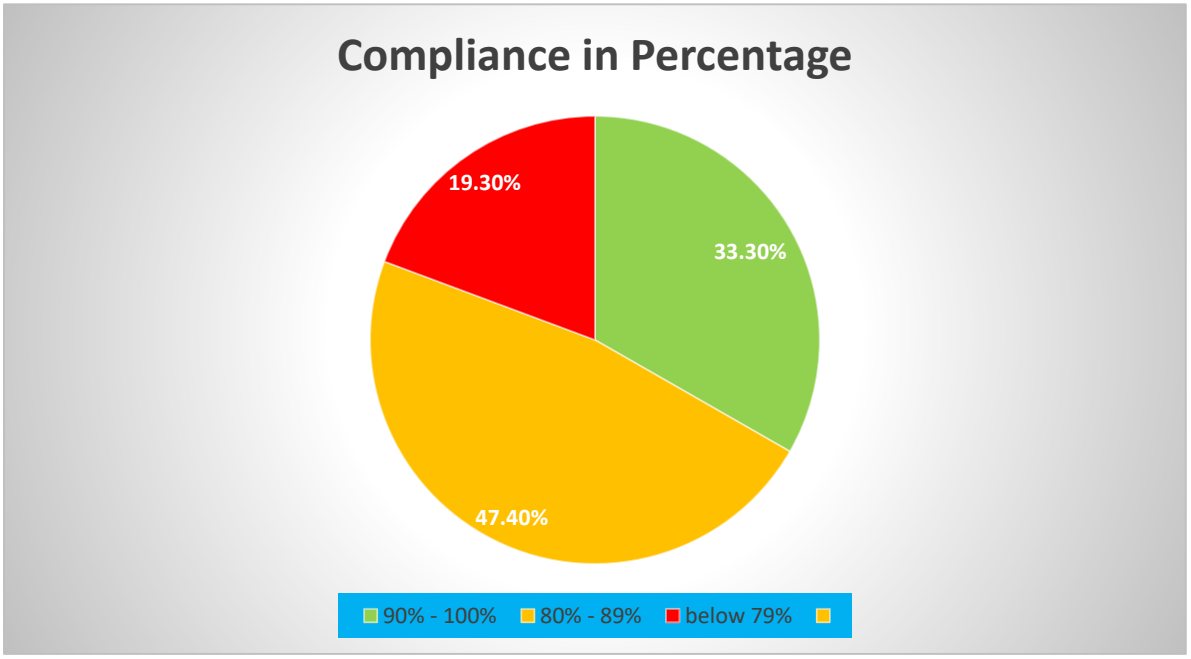
6.0 IPC INITIATIVES

The IPC team conducted 57 full QWW in Q3 (October-December 2021).

The accepted standard is compliance of 90% and above. If compliance is between 90-100% the area will be re-audited quarterly in line with current schedule. If the compliance achieved will be between 80-89%, the area will be reviewed in one month. If an area scores less than 80%, a repeat audit will be completed in a week.

Compliance scores ranged from 58% - 100%.

Of the 57 QWWs completed, 19 areas were over 90% compliant, 27 audited areas scored between 80% - 89% and 11 areas achieved a score below 80%.



The six most frequently non-compliant elements were:

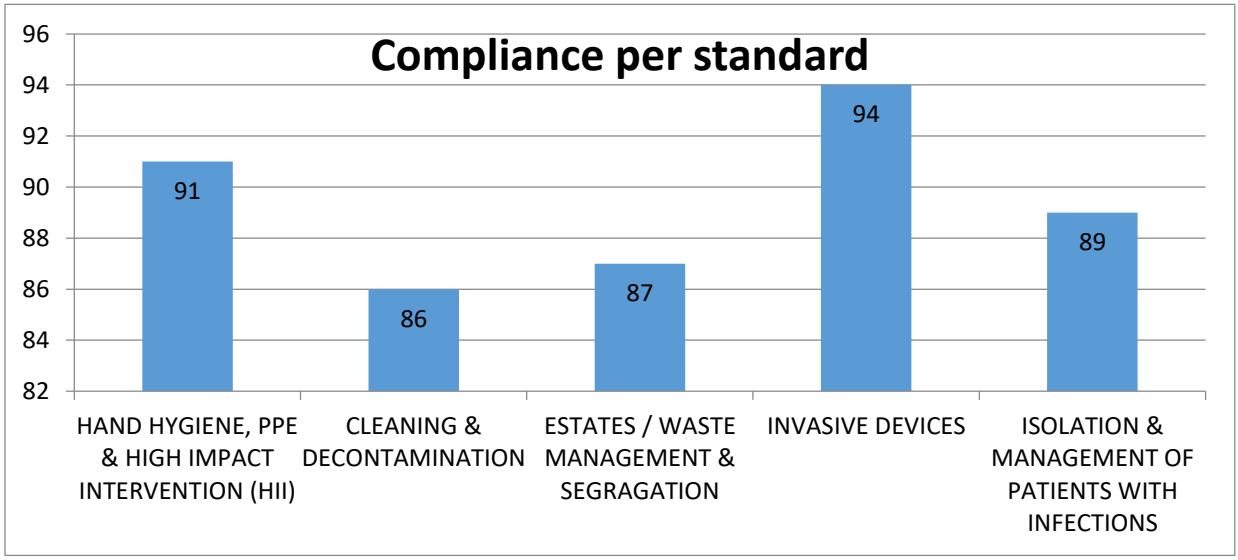
- Estates issues - 46% of all audits
- Cleanliness of the general ward environment - 44%
- Compliance with patients wearing face masks and supporting documentation - 42%
- Appropriate storage of equipment, supplies and linen – 32%
- Cleanliness of sanitary equipment including commodes, toilet seat frames and bed pans – 30%

- PPE not being worn according to current guidelines – 30%

These issues have also been identified as part of outbreak investigations.

The IPC QWW tool is sectioned into five standards:

- Hand hygiene, PPE & high impact intervention (HII)
- Cleaning and decontamination
- Estates / waste management & segregation
- Invasive devices
- Isolation & management of patients with infections



7.0 IPC NHSE/I REVIEW

An IPC sustainability review visit by NHSEI took place on the 18th January 2022. This sustainability review visit was planned following the successful visit in 2021 where the Trust was de-escalated from Red to Green on the NHSEI internal escalation matrix. The visit identified the Trust had made ongoing and sustained infection prevention progress. It was also noted that the culture in the organisation felt different; more energized despite the pandemic and a strong belief in what staff had undertaken to benefit patients and provide effective infection control.

Following this sustainability review the Trust has maintained its GREEN status. A report has been provided to the Trust and areas for improvement at both service and Trust level will be included in the updated IPC action plan.

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 11 risks on the register, one risk remains red after mitigating controls have put in place as outlined below:

Risk 2077: Decontamination assurance for medical devices

This risk was identified following a TRUS probe decontamination incident last year. An external review of decontamination was undertaken by University Hospital Birmingham NHS Foundation Trust and a full action plan was developed and monitored through the Decontamination Group.

There were no new risks added to the risk register in Quarter 3.

9.0 IPC BOARD ASSURANCE FRAMEWORK

This Prevention and Control Board Assurance Framework (IPC BAF) was last updated by NHSE/I in December 2021 and consists of 10 domains and 130 key lines of enquiry (See Appendix 1). The Trust is RAG rated green for 119 of the key lines of enquiry, amber for 11 items.

Actions continue to be implemented to increase compliance with many of the key lines of enquiry currently rated as amber. Actions include a gap analysis business case which has been approved internally for additional cleaning hours, between 10pm and 6am, but is now with the ICS for approval (since October 2021), Pharmacy continue to request engagement from clinicians in relation to the antimicrobial group.

10.0 HYGIENE CODE 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 monthly by the IPC team and presented at the IPC Operational Group. The Trust is 96% compliant, being RAG rated 'Green' for 233 elements, and 'Amber' for 10 elements. The Trust self-assessment compliance against each of the 10 domains and the current gaps and actions are shown:

	What the Trust must demonstrate	Current compliance	Current Gaps	Actions Required/Target date
1	Systems to manage and monitor the prevention and control of infection. These systems use risk assessments and consider how susceptible service users are and any risks that their environment and other users may pose to them.	97%	IPC arrangements & responsibilities policy in place and found in every JD. All staff should receive Mandatory update & induction training. Contractors receive IPC training via estates (part of their induction to the Trust) Uptake of training for 2020-21 was 84% which is the same as 2019-20	Continue to monitor attendance and report quarterly to IPCOG Care Groups to report compliance with training on report to IPCOG monthly
			There is a lack of an efficient automated surveillance system that triangulates data on outbreaks.	Work streams now in place covering: Infrastructure Interface Change/Transformation/Training Configuration/Testing ICNET is now in place in the Trust
2	Provide and maintain a clean and appropriate environment in managed premises that facilitates the prevention and control of infections.	95%	Daily Cleaning Checklists are completed by Cleanliness Technicians and housekeepers. These are reviewed by Ward managers and reported monthly through the ward assurance reports. Ward Managers complete (at least) Monthly verification checks that are also reported. IPCC Minutes. It is noted that these were inconsistently applied and the NHSE/I visit found failings in compliance	Daily cleaning checklists implemented Oct 2019 Meeting with Facilities & IPC to have one check list for both technician & ward manager/matron to complete Agreement with facilities that cleanliness technicians will raise estate concerns when they complete audit" Clarify process for monitoring cleaning checklists
			Decontamination of the environment – including cleaning and disinfection of the fabric, fixtures and fittings of a building (walls, floors, ceilings and bathroom facilities) or vehicle.	This is currently not in the remit of the Decontamination Group and therefore Decontamination Lead (AD Estates). The TORs have been agreed to exclude these items which remain in the remit of IPC group.
			a record-keeping regime is in place to ensure that decontamination processes are fit for purpose and use the required quality systems	Following TRUS probe investigation (following outbreak) an audit is underway of all invasive devices requiring all departments to ensure they have adequate decontamination records, SOPs and training records.

	What the Trust must demonstrate	Current compliance	Current Gaps	Actions Required/Target date
				The responsibility is with the departments to ensure they have adequate processes and share information with the Decontamination Group to ensure satisfactory assurance is provided.
3	Ensure appropriate antimicrobial use to optimise patient outcomes and to reduce the risk of adverse events and antimicrobial resistance	94%	All antibiotic prescriptions are reviewed by a pharmacist. Overall antibiotic usage is lower than average see Fingertips Portal. No e-Prescribing system Proactive work being undertaken relating to sepsis with appointment of sepsis nurse and development of sepsis boxes to speed up access to critical antibiotics.	Sepsis E-prescribing system required
4	Provide suitable accurate information on infections to any person concerned with providing further support or nursing/medical care in a timely fashion.	100%	None	None
5	Ensure that people who have or develop an infection are identified promptly and receive the appropriate treatment and care to reduce the risk of passing on the infection to other people.	100%	None	None
6	Systems to ensure that all care workers (including contractors and volunteers) are aware of and discharge their	100%	None	None

	What the Trust must demonstrate	Current compliance	Current Gaps	Actions Required/Target date
	responsibilities in the process of preventing and controlling infection.			
7	Provide or secure adequate isolation facilities.	83%	The Trust has a relatively low percentage of side rooms such that patients requiring isolation may exceed the numbers of side rooms available. Patients may need to be cohort nursed if demand is high for example at outbreaks of norovirus or influenza during high activity periods. On risk register risk level 12.	Long term solution = Isolation facilities to be considered as part of planning regarding "Future Fit" and moving to possibly 50% of capacity being side rooms. May 20 risk register score 15 lack of -ve pressure isolation rooms. Estates currently looking at the feasibility of having drop in pod to ITU & also side-room capacity. Bioquell Pods now installed in ITU and redi-rooms.
8	Secure adequate access to laboratory support as appropriate.	100%	None	None
9	Have and adhere to policies, designed for the individual's care and provider organisations that will help to prevent and control infections.	99%	The Trust has a relatively low percentage of side rooms such that patients requiring isolation may exceed the numbers of side rooms available. Require assurance from CPE's that competency based assessments for aseptic technique are in place	None
10	Providers have a system in place to manage the occupational health needs and obligations of staff in relation to infection	100%	None	None

11.0 CONCLUSION

This IPC report has provided a summary of performance in relation to the key IPC performance indicators for Quarter 3 (October to December 2021). Overall performance in relation to many of these KPIs remains positive, and within the locally set improvement trajectories and nationally set targets with the exception of E.Coli cases with 38 reported YTD against a local target of 38 for the full year, however the Trust is well below the national target for E.Coli bacteraemias for 2021/22. All cases HCAI cases deemed to be device related continue to have RCA completed so areas of improvement can be identified and learning shared at IPCOG.

The number of COVID 19 cases being seen in the Trust has increased in Quarter 3 with outbreaks seen across several wards and departments. Outbreak meetings are held twice weekly, with the involvement of PHE and NHSEI.

The updated NHSE/I IPC BAF was issued to Trusts in December 2021, this has been updated by the IPC team for our Trust and the Trust is 91.5% compliant against this.