NHS
The Shrewsbury and Telford Hospital
NHS Trust

Board of Directors' Meeting:
11 July 2024

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<tr><td>Executive Lead</td><td colspan="4">Hayley Flavell, Director of Nursing</td></tr>
<tr><td>Report Author</td><td colspan="4">Sara Bailey Deputy Chief Nurse
Janette Pritchard, Lead Nurse IPC</td></tr>
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<tr><td colspan="2">CQC Domain:</td><td colspan="2">Link to Strategic Goal:</td><td>Link to BAF / risk:</td></tr>
<tr><td>Safe</td><td>√</td><td>Our patients and community</td><td>√</td><td rowspan="2">BAF Risk 1</td></tr>
<tr><td>Effective</td><td>√</td><td>Our people</td><td></td></tr>
<tr><td>Caring</td><td>√</td><td>Our service delivery</td><td>√</td><td>Trust Risk Register id:</td></tr>
<tr><td>Responsive</td><td>√</td><td>Our governance</td><td>√</td><td rowspan="2">438,440,443,444,481,722</td></tr>
<tr><td>Well Led</td><td>√</td><td>Our partners</td><td></td></tr>
<tr><td colspan="2">Consultation Communication</td><td colspan="3">Infection Prevention Control Operational Group, June 2024
Infection Prevention Control Assurance Committee, June 2024</td></tr>
<tr><td colspan="5"></td></tr>
<tr><td colspan="2">Executive summary:</td><td colspan="3">This report provides an update on Infection Prevention and Control (IPC) for Quarter 4 (January – March 2024) against the 2023/24 objectives.
• It covers hospital acquired infections, including MRSA, Clostridioides Difficile (C:Diff), E. coli, Klebsiella, and Pseudomonas Aeruginosa bacteraemia, as well as an update on COVID-19.
• The report outlines IPC initiatives, relevant infection prevention incidents, and the updated IPC Board Assurance Framework (BAF).
• Key findings include MRSA Bacteraemia: 1 case reported in Q4, with identified learning points for improvement.
• C:Diff: 22 cases reported which initiated setting up a working group session to review our C. diff action plan.
• E. coli Bacteraemia: 42 cases reported, with Root Cause Analyses conducted for relevant cases.
• MSSA Bacteraemia: 20 cases reported, with action points for device-related cases.
• Klebsiella Bacteraemia: 13 cases reported, none deemed to be healthcare-associated.
• Pseudomonas Aeruginosa: 4 cases reported, 2 post-48 hours and 2 with recent contact.
• Periods of increased incidence/outbreaks are detailed, with identified issues and lessons learned.
• IPC initiatives such as Quality Walk Rounds (QWWs) are included.
• Risk and actions are highlighted, including extreme and high-risk ratings, with corresponding mitigation plans</td></tr>
<tr><td colspan="2">Recommendations for the Board:</td><td colspan="3">The Board of Directors is asked to:

Note the information in the report and mitgitations in place to further strengthen the organisations commitment to Infection Prevention and Control.</td></tr>
<tr><td colspan="2">Appendices:</td><td colspan="3">Appendix 1: Quarterly summary of infective organism and contributing factors</td></tr>
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1.0 INTRODUCTION

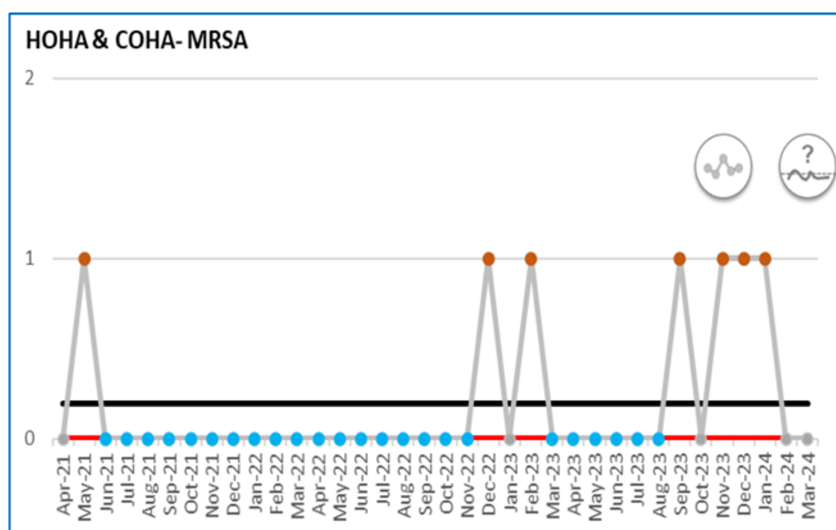
This paper provides a report for Infection Prevention and Control for Quarter 4 (January – March 2024) against the 2023/24 objectives for Infection Prevention and Control. An update on hospital acquired infections: Methicillin-Resistant *Staphylococcus aureus* (MRSA), Clostridioides Difficile (CDI), Methicillin-Sensitive Staphylococcus (MSSA), Escherichia Coli (E. Coli), Klebsiella and Pseudomonas Aeruginosa bacteraemia for January – March 2024 is provided. Further updates included in the report are: 1) Covid-19 2) IPC initiatives and relevant infection prevention incidents and 3) IPC BAF.

2.0 KEY QUALITY MEASURES PERFORMANCE

2.1 MRSA Bacteraemia

The target for MRSA bacteraemia remains 0 cases for 2023/24. The end of year total was 4 cases. There was 1 case of MRSA Bacteraemia in Q4 2023-24. This case occurred greater than 48 hours after admission. A full post infection review has been undertaken with the below learning points identified.

- Issue with documentation related to cannula: incorrect VIP score documented, rationale for insertion and removal of consecutive cannulas not documented,
- Issues with documentation related to removal of urinary catheter.
- Lack of wound swab after identification of inflamed cannula site
- Indication for prescribed antibiotics not documented.



2.2 Clostridioides Difficile

The Trust trajectory for C diff cases in 2023-24 is no more than 32 cases. The end of year total was 97 cases.

There was a total of 22 cases of C diff for Quarter 4 2023/24 against a target of no more than 8 cases per Quarter.

12 of these cases occurred greater than 48 hours after admission (post 48) and the remaining 10 cases had recent contact in the Trust in the 28 days prior to the positive sample (recent contact).

This is a rate of 30.2 per 100,000 bed days and is a decrease since the last quarter (46.2 per 100,000 bed days).

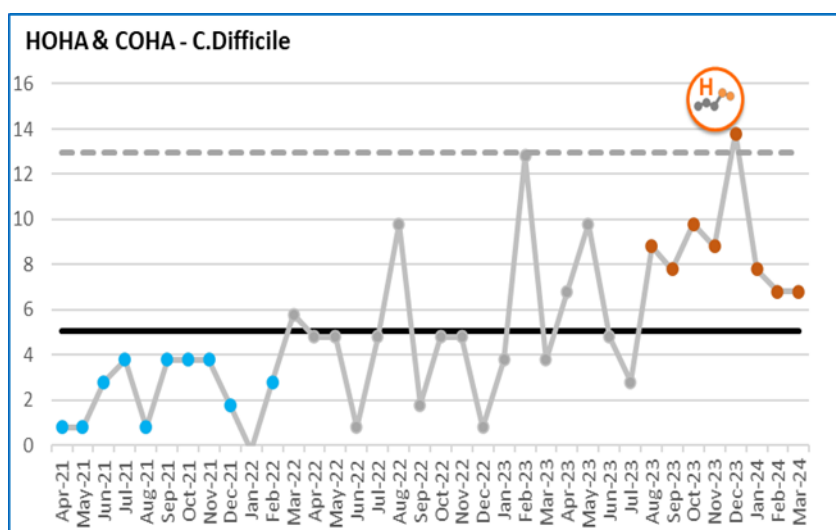
The Trust organised a comprehensive review of C. difficile (April 24), led by Hayley Flavell, to address

the increasing cases within the Trust. The primary goal of the meeting was to have a collaborative approach to reducing C diff. Kirsty Morgan, Associate Director for Infection Prevention and Control (IPC) in the Midlands, supported the event and provided insights into the Trust's current standing within the region.

Dr. Jones (IPC doctor) & Janette Pritchard, Lead Nurse IPC, delivered presentations on the Trust's position, prevailing challenges, and emerging themes related to C. difficile management. Significant progress was made through the formation of five working parties to develop 5 key actions:

- Review and identify improvements within Ward Processes and Early Identification
- Review and identify improvements within Hand Hygiene for staff and patients.
- Review and identify improvements within Micro and pharmacy.
- Review and identify improvements within ED.
- Review and identify improvements within Decontamination.

Following the workshop, the Trust's C diff Action plan is currently under review and a further update will be provide in Q1's 20224/25 report.

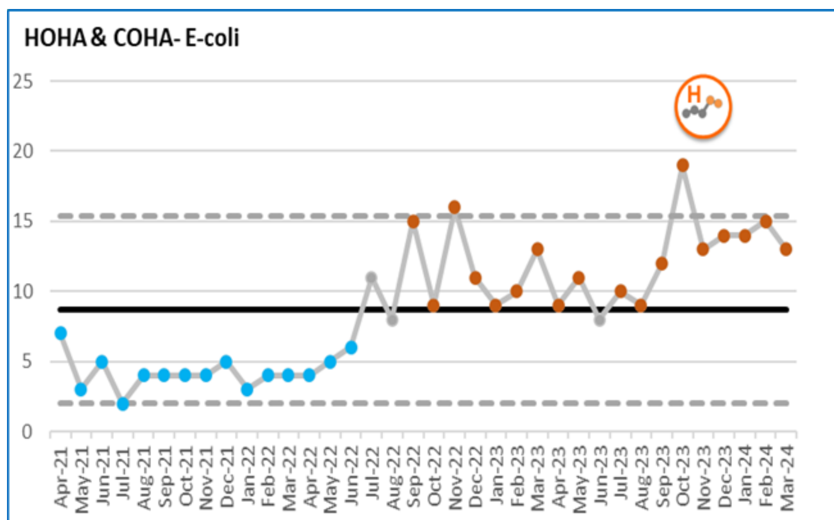


2.3 E. coli Bacteraemia
The target for 2023/24 is no more than 90 cases. The end of year total was 147 cases.

The number of E. Coli cases are shown:

In Q4 there were 42 cases attributed to the Trust. 11 of these cases were post 48 hours of admission, and the remaining 31 cases had recent contact with the Trust in 28 days prior to the infection.

Post 48 cases which are deemed to be device related or where the source cannot be identified have an RCA completed. Only 2 of the cases in Q4 were considered to be device or intervention related with the source in both being CAUTIs. Further review of these cases is underway by the Trust's IPC Doctor and will be reported to IPCOG and IPCAG in Q1 2024/25.

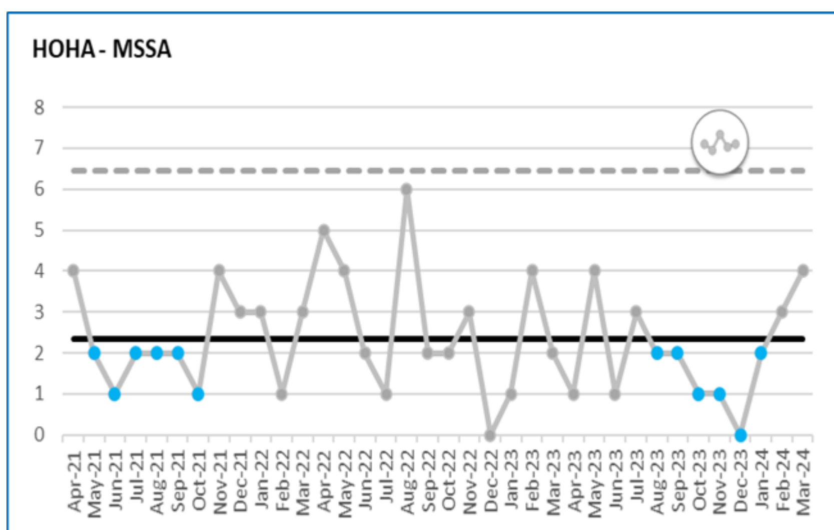


2.4 MSSA Bacteraemia
There is no nationally set target for the Trust for MSSA. The end of year total was 62 cases.

The number of MSSA cases are shown:

In Q4 2023/24 there were 20 cases identified that were attributed to the Trust. 9 of these cases were post 48 hours, and the remaining 11 cases had been in hospital in the 28 days prior to the positive sample.

All post 48 cases deemed to be device or intervention related have an RCA completed. In Q4 of 2023/24 this concerned 4 of the 9 post 48 cases. In all 4 cases the source was unknown.



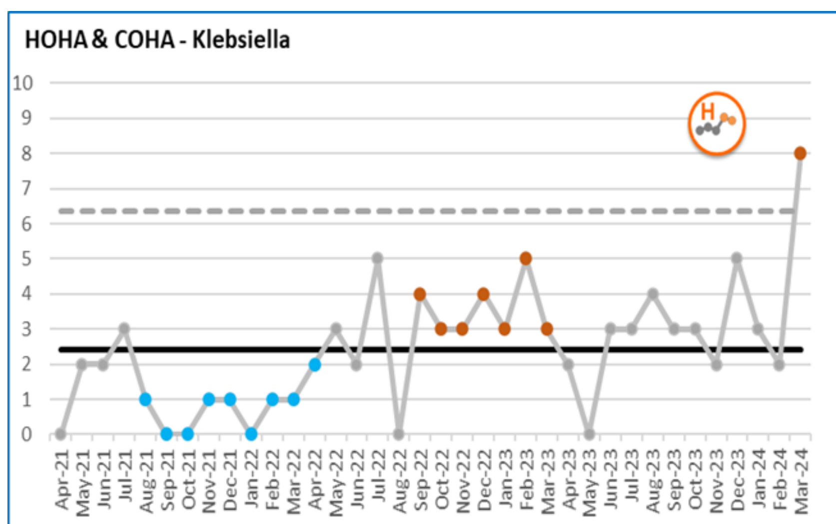
The IPC doctor has undertaken a review of these cases :

None of these 4 cases have identifiable HCAI risks for S.aureus bacteraemia, such as IV line infection or invasive soft tissue infection. There is indication, in at least two cases, that that MSSA lung infection may have been the source. There was no evidence of hospital acquisition or relationship to a hospital outbreak.

2.5 Klebsiella Bacteraemia
The target for 2023/24 is no more than 22 cases. The end of year figure was 38.

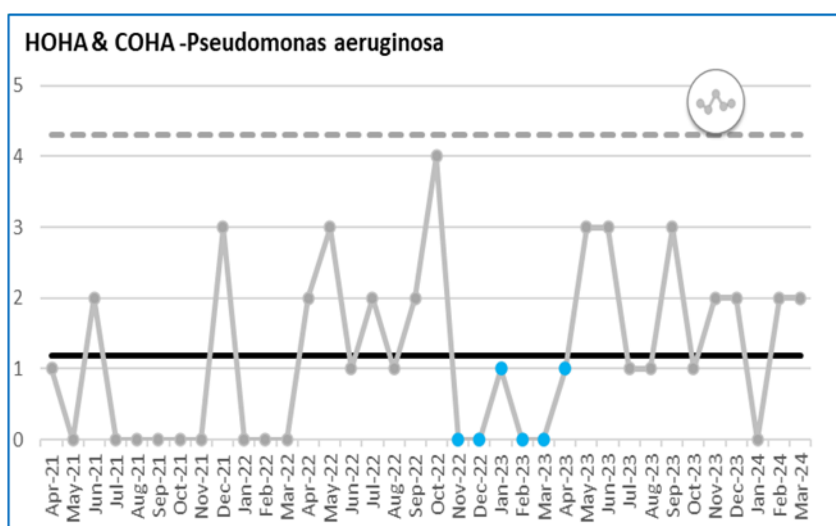
In Q4 2023/24 there were 13 cases of Klebsiella Bacteraemia attributed to the Trust. 8 of these cases were post 48, and the remaining 5 cases had been an inpatient in the Trust within 28 days of the infection.

The microbiologists reviewed the cases and none of the post 48 cases were considered to be a HCAI.



2.6 Pseudomonas Aeruginosa
The target for 2023/24 is no more than 18 cases. The end of year total was 21 cases.

In Q4 2023/24 there were 4 cases of Pseudomonas Aeruginosa attributed to the Trust, 2 of which were post 48, and 2 had recent contact with the Trust.



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 4:
- 20 MSSA bacteraemia's were identified, of which 4 required an RCA.
- 27 E. coli bacteraemia's were identified, 2 of which were deemed to be device related.

Learning from completed RCAs include:
- Lapses in the management of cannulas,
- Incorrect recording of VIP scores
- 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 cases were shared with staff during huddles, handovers, and clinical governance meetings.
- A gap analysis identified several issues: inadequate ongoing training for non-medical venepuncture/cannulation, poor line care and dressings on wards, untrained HCAs completing VIP scores, lack of a line care policy, and no audits of complications related to vascular access. Documentation of cannula insertion was also found to be poor, especially among the medical workforce. This analysis will be presented to address these issues.
- IPC statutory training now includes discussions on these issues.
- VIP score posters were created and distributed to divisions.
- IPC induction training for FY1s in July 2024 will cover blood culture best practices.
- Blood culture 'top tips' posters were distributed to all clinical areas.
- Ward managers and nurses monitor VIP scores, with compliance reported at monthly nursing metrics meetings.
- Training on the unnecessary use of gloves and hand hygiene education has been provided to staff.

2.8 MRSA Elective and Emergency Screening

Elective MRSA Screening: MRSA Elective screening compliance has been above the 95% target throughout Q4 2023/24. Average monthly compliance in Q4 was 97.3%.

Emergency MRSA Screening: The MRSA emergency screening compliance has not reached the required 95% in any month in 2023/24. Average monthly Q4 compliance was 92.2%.

3.0 PERIODS OF INCREASED INCIDENCE/OUTBREAKS

During the period January to March 2024, 17 COVID outbreaks were declared by SATH.

The most common issues identified during the outbreak management were:
- Asymptomatic, intentionally unscreened patients creating contacts, who then tested positive.
- Delayed isolation

The details of the COVID outbreaks are shown for Quarter 4 2023/24 in Appendix 1.

There was one confirmed outbreak of C. diff at PRH, 3 patients were involved. Typing confirmed that these cases were of the same type, this demonstrates transmission in the ward environment. Learning identified included lack of hand hygiene for patients, contaminated sanitary equipment and overuse of gloves.

There was one confirmed outbreak of VRE at RSH. There were 8 potential patients included in the investigation. 3 of the cases were confirmed as the same type. Learning identified included contaminated sanitary equipment and overuse of PPE.

There was one PII of C. diff at RSH. Typing confirmed that these 2 cases were not linked. Therefore, not and outbreak.

4.0 INCIDENTS RELATED TO INFECTION PREVENTION & CONTROL

There were no IPC PSIIs in Q4.

5.0 IPC INITIATIVES

Quality Ward Wards (QWWs)

QWWs continue to be completed by matrons using the audit tool available on Gather. This is to encourage matrons to effect change and to identify opportunities for improvement in their area.

This initiative requires the matron to complete and score the QWW, add relevant issues to their IPC action plan, and plan, complete and evaluate relevant actions. This should be shared with IPC.

QWWs were conducted in response to outbreaks, most commonly for Covid-19. In Q4 there were 42 outbreak associated QWWs.

The actions following the QWWs were:

- Ward managers to address inconsistent completion of ventilation and cleaning checklists.
- Ward managers/Matrons to address hand hygiene and inappropriate use of PPE.
- Ward manager/Matron to monitor and address cleanliness of sanitary equipment especially raised toilet seats.
- Ward manager & matron to ensure management of urinary catheters is undertaken.

Change from Root Cause Analysis for Cdiff infection (CDI)

Until December 2023, each case of C.diff infection (CDI) attributable to the Trust was investigated using the Root Cause Analysis (RCA) tool. This involved the Ward Manager gathering information, completing an RCA form and attending a meeting with a microbiologist, the consultant in charge of pt care, an IPC nurse, an antimicrobial pharmacist and the matron for the area.

In December 2023, a trial 'After Action Review' (AAR) form was introduced. This was in response to a number of C. diff reviews that recognised that no new learning was identified through the RCA process. The same areas for improvement were repeatedly recorded.

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

3 risks are rated "Extreme".

- Risk 443, lack of assurance in relation to decontamination of devices outside of endoscopy and sterile services. Discussions are taking place around appointing a decontamination lead. In Q1

2024/25 the decontamination group's Terms of Reference and work programme will be reviewed.

- Risk 923 (previously 438), lack of isolation facilities. The risk rating was increased due to the national increase in numbers of Measles and Whooping Cough. This was approved by IPCOG and IPCAC in April 2024.
- Risk 444, Lack of deep clean programme, the risk rating was increased in light of the continually overcrowded ED and increased length of stay. This was approved by IPCOG and AC in March 2024. Mitigations:
  - There is 24-hour general cleaning in ED.
  - There are weekly enhanced cleaning of rooms in ED.
  - There is additional support for ED and AMU during the afternoon to support additional cleaning and support for nursing elements.
  - There is an annual programme of deep clean of toilets and bathrooms across wards.
  - When there are ward moves, the opportunity is taken to deep clean/HPV the ward
  - HPV/Deep Cleaning is available at the request of wards/departments.

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. 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 481, Lack of negative pressure isolation, this is recommended for certain airborne pathogens. There is a plan to have some negative pressure in the new Critical Care unit as part of HTP.
- Risk 855, Risk of transmission of Measles in Hospital. This is being reviewed regularly in view of regionally increasing numbers.
- Risk 814, IPC team low staffing. We have 1 WTE vacancy for a band 3 secretary, this role has been vacant for 1 year, it has recently been put on hold again due to the recruitment freeze.

7.0 IPC BOARD ASSURANCE FRAMEWORK

The Infection Prevention and Control Board Assurance Framework had an update published at the end of March 2024, the IPC team are currently updating this version to use in 2024/25. The update in this report is from the previous version as this was in use at the end of 2023/24.

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. Issues include:

- Lack of lead for AMR group
- Isolation capacity low especially in PRH ed
- Decontamination currently being reviewed and work plan being developed.

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% 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 4 of 2023/24.

APPENDIX 1:

	Ward	Infective Organism	Typing	Contributing factors
Jan	RSH AMA	COVID	NA	Contacts became positive
	RSH 32	COVID	NA	Contacts became positive
	PRH 11	COVID	NA	Index case not isolated, contacts became positive.
	PRH 4	COVID	NA	Use of PCR instead of LFT, result delayed, isolation delayed. Contacts became positive
	PRH Day ward	COVID	NA	Confused patient index case, visited other patients.
	RSH 24	COVID	NA	Contact became positive
	RSH 23	COVID	NA	Contacts became positive. Contact with relatives who were positive, staff involvement, possibly driven by staff positives.
	RSH 27	COVID	NA	Contacts became positive, index case not isolated
	RSH 28	COVID	NA	Contacts became positive
	PRH 9	C. diff	The same (020)	Hand hygiene, patients not encouraged to clean their hands before meals. Overuse of gloves.
	RSH SAU	C. diff	Different	NA
Feb	RSH 25	COVID	NA	Contacts became positive
	RSH 37	VRE	Same	3 of the 8 patients were of the same type. Contaminated sanitary equipment, overuse of gloves.
Mar	RSH 29	COVID	NA	Contact became positive
	RSH 26	COVID	NA	Unable to isolate index case, contacts became positive
	PRH 10	COVID	NA	Index case not isolated, contacts became positive
	PRH 11	COVID	NA	Contacts became positive, possible transmission from staff to patients
	PRH 6	COVID	NA	Contacts became positive
	PRH Day ward	COVID	NA	Contacts became positive