

## Board of Directors (in Public) Item 2.6

**Subject:** Director of Infection Prevention and Control (DIPC) Quarterly report  
**Date of Meeting:** 30<sup>th</sup> January 2018  
**Prepared by:** Nicola Best/Infection Prevention Nurse Specialist  
**Presented by:** Dr Raphael Perry/Medical Director/DIPC

| BAF Ref | Impact on BAF |
|---------|---------------|
| 1.2,1.3 | None          |

### 1. Executive Summary

This paper provides information and an update on infection prevention and control issues for the time period 1<sup>st</sup> October – 31st December 2017. Previous reports have covered the period up to October 2017.

This paper provides assurances that surveillance systems and audit programmes are in place to monitor and prevent healthcare associated infections. An assessment of progress against the annual plan has highlighted that although a significant amount of work has been undertaken some actions have not been completed according to the target dates but work is on-going to ensure these are completed prior to the end of the financial year.

### 2. Background

High standards of infection prevention and control are essential to ensure that people who use health care services receive safe and effective care. The *Health and Social care Act 2008: Code of Practice on the prevention and control of infections* identifies that good organisational processes and a robust assurance framework are essential to ensure effective infection prevention.

In order to demonstrate that infection prevention is integrated into the assurance framework one recommendation is that the Board of Directors receives regular updates from the infection prevention and control team, including information on alert organisms, outbreaks, cleanliness standards and audit information. This report provides such an update.

### 3. Surveillance

#### 3.1 Mandatory reporting of Bacteraemias and C Difficile infections

There is a requirement that bacteraemias (blood stream infections) caused by certain bacteria and also *Clostridium difficile* infections are monitored and reported to Public Health England on a monthly basis. These cases are also reported to the Clinical Commissioning Group monthly.

Additional monitoring and reporting of 2 other types of bacteraemia have also been recently introduced i.e. *Pseudomonas aeruginosa* and *Klebsiella* species. Although this is voluntary reporting at the moment the Trust is participating with this programme.

|    |  | <b>April 17 – December 17<br/>(Year to Date)</b> | <b>Target</b>   |
|----|--|--|---|
| 1. | Trust attributable MRSA (Methicillin Resistant <i>Staphylococcus aureus</i> ) bacteraemias | 0 (1)  | 0   |
| 2. | Trust attributable MSSA (Methicillin Sensitive <i>Staphylococcus aureus</i> ) bacteraemias | 1 (7)  |   |
| 3. | Trust attributable E coli bacteraemias   | 2 (6)  | Regional target - 10% reduction from previous year i.e. 8 cases |
| 4. | Trust attributable <i>Klebsiella</i> species bacteraemias                                  | 0 (2)  |   |
| 5. | Trust attributable <i>Pseudomonas aeruginosa</i> bacteraemias                              | 1(2)   |   |
| 6. | Trust attributable <i>Clostridium Difficile</i> infection                                  | 0 (1)  | ≤ 4   |

Patient reviews have been carried out to ascertain what the probable cause of the infection was and if any actions could have been taken to prevent the infection. The probable causes could not be identified in all cases but some bacteraemias could be linked to peripheral cannula infections and surgical site infections. An audit programme is monitoring practice related to insertion and care of peripheral lines. A surgical site infection group is monitoring practices related to surgery (see section 3.4)

### **3.2 MRSA – all cases (Non- bloodstream)**

Cases of MRSA in the Trust are closely monitored to identify any increased incidence or outbreaks. This includes all patients and all isolates, including colonised and infected patients.

34 patients were MRSA positive in this time period but these were already known to be positive or MRSA was isolated from the admission screen. 1 patient identified with MRSA acquired whilst an inpatient in the Trust.

### **3.3 Carbapenemase Producing Enterobacteriaceae (CPE)**

7 new cases of CPE were identified. However only 2 were designated as Trust attributable. These patients were identified via the Critical care screening programme. The patients did not overlap and were not connected, no positive contacts were identified.

### **3.4 Influenza**

Two patients tested positive for influenza in December. These infections were not Trust acquired and the patients were nursed with appropriate precautions with no apparent transmission within the Trust.

### **3.5 Annual Programme**

An assessment of progress against the annual programme is included in Appendix 1. The actions have been assessed as: completed/on-going and up to date (green), partially completed (amber) or not completed (red). This programme is being monitored by the Infection Prevention committee.

### **3.6 Surgical site group**

The surgical site working group met in November and the action plan updated. A number of audits have been completed by members of the group, including: Pre-operative washing, Pre-operative hair removal, Screening, Decolonisation, Theatre ventilation, Theatre staff movement, Surgical Prophylaxis, Post-op dressing removal. Additional actions have been added to the plan because of audit results obtained and also to take account of proposed changes in the patient pathway e.g. same day admissions. The action plan is therefore not completed but will continue to be monitored by the Infection Prevention Committee.

### **3.7 Audits**

#### **3.7.1 Hand Hygiene**

Clinical areas carry out weekly observational audits of hand hygiene in their area, with 1 audit in a peer review ward each month. Some areas have not submitted all the peer audits, but this has been raised with the relevant managers and the results have been forwarded to the Heads of Nursing so they can monitor that the audits are performed according to the schedule.

|                                     | <b>October</b> | <b>November</b> | <b>December</b> |
|-------------------------------------|----------------|-----------------|-----------------|
| <b>Results of Compliance Audits</b> | 98.9%          | 99.9%           | 99%             |
| <b>No. of Observations</b>          | 704            | 709             | 539             |

#### **3.7.2 Other audits**

Audits have been performed by the infection prevention nurses on screening for CPE and screening on Critical care which have both demonstrated improvements in practice.

Antibiotic prescribing audits have been performed by the antimicrobial pharmacists, which demonstrated some improvements in practice but an action plan has been developed to address some areas highlighted.

The ward managers have performed audits of peripheral line insertion and care and urinary catheter insertion and care. Compliance with the audit programme has improved and actions have been taken to address any areas of non-compliance.

### **3.8 Cleanliness**

#### **3.8.1 Environmental Cleanliness**

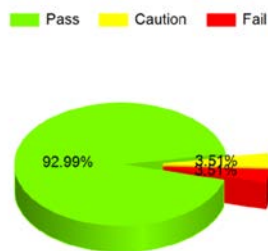
A standard monitoring tool is used by the Hygiene supervisors to assess environmental cleanliness. The target is an overall Trust score of 95%, with an individual score for clinical areas of 95% or above.

All clinical areas scored above the target score within this time period. Two of the public corridors scored below the target score in November (71% and 86%) this was due to staff being redeployed to clean bedspaces in the evenings due to high numbers of patient movements.

A new mopping system has undergone a trial by the Hygiene Service department and will be introduced in January 2018.

### **3.8.2 Monitoring of Equipment cleanliness**

The Clean Trace system helps to assess standards of hygiene and cleaning processes by using a swabbing system to monitor levels of contamination at the point of use. All wards are expected to complete an audit monthly.



All wards did complete the required number of audits in compliance with the schedule. The fails have been keyboards, bedrails, bedside tables and patient chairs. There has been an increase in fails for clean bed spaces. All equipment that failed was cleaned at the time and results fed back to improve cleaning processes for individual pieces of equipment.

## **4. Conclusion**

The surveillance of infections and routine audit data continue to be monitored and work is on-going to ensure the annual programme is fulfilled and a robust audit programme is in place.

## **5. Recommendations**

The Board is asked to note the contents of this report and request further updates on progress against the annual plan and outstanding action plans.

## Appendix 1

### Infection Prevention and Control – Forward Plan 2017-2018 Liverpool Heart and Chest hospital NHS Foundation Trust

|                 |  | Person(s) Responsible   | Target date   | Progress (updated January 2018)  |
|-----------------|--|---|---|--|
| 1. Surveillance | <ul style="list-style-type: none"> <li>To continue with continuous alert organism surveillance and generate monthly reports of figures against trajectories</li> <li>To report to mandatory surveillance scheme in accordance with national requirements</li> <li>To monitor bacteraemias caused by MSSA and E.coli and ensure patient reviews are performed</li> <li>To monitor bacteraemias caused by other Gram negative organisms</li> <li>To monitor central line related infections</li> </ul> | <p>IPT</p> <p>IPT</p> <p>IPT/Clinical staff</p> <p>IPT</p> <p>IPT</p> | <p>15<sup>th</sup> every month</p> <p>15<sup>th</sup> every month<br/>15<sup>th</sup> every month</p> <p>Monthly</p> <p>Monthly</p> <p>31<sup>st</sup> October 2017</p> | <p>Ongoing- data collected and submitted to all parties according to relevant timetables</p> <p>Although some data has been collected sufficiently robust and comprehensive data is not available. Discussions held with information team to automate collection of some of the data.<br/>New target Date:31<sup>st</sup> March 2018</p> |

|                                  |  |   |   |   |
|----------------------------------|--|---|---|---|
| 2. Surgical Site Infection (SSI) | <ul style="list-style-type: none"> <li>To continue the ongoing surveillance project on rates of SSI following coronary artery bypass graft surgery and valve replacement surgery</li> <li>To ensure that all audits and actions proposed by the Surgical site working group are completed</li> <li>To participate in research proposals regarding surgical site dressings and wound closure</li> </ul> | IPT/ Tissue viability nurses<br><br>Clinical staff/Theatre staff/IPT<br>Tissue Viability nurses/IPNs<br><br>IPN | Ongoing<br><br>30 <sup>th</sup> September 2017<br><br>31 <sup>st</sup> October 2017 | Ongoing<br><br>Partially complete – action plan has been updated and new actions added.<br>New target date: 31 <sup>st</sup> March 2018<br><br>Initial meetings held- project ongoing |
| 4.Assurance framework            | <ul style="list-style-type: none"> <li>To assess the Trust using the HCAI assurance framework and generate monthly reports to the Clinical Commissioning group</li> </ul>  | IPT   | 15 <sup>th</sup> of every month   | Ongoing- all information submitted  |
| 5. Environmental Hygiene         | <ul style="list-style-type: none"> <li>To continue system of monitoring environmental cleanliness</li> <li>To continue Clean Trace monitoring programme</li> <li></li> <li>To ensure a robust monitoring programme for ward/department managers</li> </ul>   | Support services manager<br><br>IPT/Ward Managers<br><br>Heads of Nursing                                       | Monthly<br><br>Monthly<br><br>31 <sup>st</sup> August 2017                          | Ongoing – reports done monthly<br><br>Ongoing – monthly reports circulated<br><br>Monitoring schedules developed by Heads of Nursing  |
| 6. Education and training        | <ul style="list-style-type: none"> <li>To provide training for all new staff and annual updates for staff in IP and C according to Trust's</li> </ul>  | IPT   | Ongoing   | Ongoing-  |

|                |  |                     |                             |   |
|----------------|--|---------------------|-----------------------------|---|
|                | Learning Needs Analysis  |                     |                             |   |
| 7. Policies    | <ul style="list-style-type: none"> <li>To review and update all policies as necessary</li> </ul>   | IPT                 | Ongoing                     | <p>Policies submitted to IPC: Management of Diarrhoea and Vomiting, Disinfection, Inoculation Incidents, MRSA, Standard IP&amp;C.</p> <p>2 policies (ANTT and Peripheral Cannulae) out of date, they have been discussed but some points require further clarification. Target date 31<sup>st</sup> January 2018.</p> |
| 8. Theatres    | <ul style="list-style-type: none"> <li>To ensure ventilation is monitored annually in each theatre and reported to the IPC</li> <li>To carry out planned preventative maintenance and replacement of air handling units as scheduled</li> </ul>  | Estates Manager     | 31 <sup>st</sup> March 2018 |   |
| 9 Water Safety | <ul style="list-style-type: none"> <li>To continue with the Water Safety plan and continue to monitor and improve compliance with flushing of outlets</li> <li>To ensure appropriate education is delivered to members of the water safety group</li> <li>To develop a robust annual water testing schedule</li> </ul> | IPT/Estates manager | Ongoing                     | <p>Schedule completed.</p> <p>Water safety plan, including education, currently under review. Audit to be repeated January 2018.</p> <p>New Target date: 31<sup>st</sup> March 2018</p>   |
| 10. Sepsis     | <ul style="list-style-type: none"> <li>To ensure comprehensive data is collected regarding compliance with sepsis screening and</li> </ul>   | Information team    | Monthly                     | Ongoing   |

|                            |   |                                       |                                      |   |
|----------------------------|---|---------------------------------------|--------------------------------------|---|
|                            | <p>management</p> <ul style="list-style-type: none"> <li>To improve compliance with the sepsis bundle</li> </ul>  | Sepsis lead                           | 31 <sup>st</sup> March 2018          |   |
| 11. Antibiotic stewardship | <ul style="list-style-type: none"> <li>To review and update the antimicrobial policy</li> <li>To review and update antimicrobial stewardship and audit programme</li> </ul>   | Consultant microbiologist/p harmacist | 31 <sup>st</sup> July 2017           | Updated   |
| 12. E. coli bacteraemias   | <ul style="list-style-type: none"> <li>To participate in regional programmes related to the reduction in E coli bacteraemias, as advised by Liverpool CCG</li> <li>To review all practices related to urinary catheter insertion and care.</li> </ul> | IPT                                   | 31 <sup>st</sup> March 2018          | No regional programme in place.   |
| 13. Audits                 | <ul style="list-style-type: none"> <li>To complete audits and submit to relevant committees according to defined programme</li> </ul>   | IPT                                   | Ongoing according to audit programme | Ongoing - Audits completed and submitted:<br>MRSA pathway, Screening for resistant organisms, Environmental and equipment cleanliness, Waste handling, Linen handling, Sharps disposal, Isolation practices, Pre-op practices, Surgical prophylaxis, Hand hygiene, Compliance with care bundles |