

Item 2.1.3a

~~Item 6~~

**Subject:** Report on Methicillin Sensitive Staphylococcus Aureus (MSSA) bacteraemias  
**Date of Meeting:** 6<sup>th</sup> January 2021  
**Prepared by:** Nicola Best/Infection Prevention Nurse Specialist  
**Presented by:** Dr Raphael Perry  
**Reason for Report:** To Note

BAF Ref	Impact on BAF
1.1,1.2	None

## 1. Executive Summary

Staphylococcus aureus bacteraemias (bloodstream infections) are monitored and reported via the mandatory surveillance system to Public health England This paper provides details on the patients who have been diagnosed with these types of infections during this year and explores some of the issues that have been identified.

## 2. Background

Patients can develop bacterial infections whilst in hospital and in certain circumstances these bacteria can enter a patient's bloodstream causing them to become severely unwell.

One type of bacteria that can be a common cause of healthcare associated infections and can cause bloodstream infections is Staphylococcus aureus. Different types of these bacteria can be distinguished by their susceptibility to common antibiotics and they are commonly subdivided for reporting purposes as; Methicillin sensitive Staphylococcus aureus (MSSA) or Methicillin resistant Staphylococcus aureus (MRSA). Both of these types of bacteraemia are reportable to the national mandatory surveillance system.

A target for the reduction of healthcare associated MRSA bacteraemias has been set for each Trust by NHS England (0 for this Trust). A national target for the reduction of all MSSA bacteraemias has not been set but the Trust itself has set an annual internal target of 7 or fewer Trust attributable cases.

In the time period April 1<sup>st</sup> – 30<sup>th</sup> November the Trust has had 0 patients with MRSA bacteraemias but 8 Trust attributable MSSA bacteraemias. Reviews of the patients' have been undertaken to identify the probable cause and any improvements in care

that could be made.

### 3. Patient Reviews

It is widely recognised that the review process is more robust and valuable if it is multi-disciplinary process and not solely the responsibility of an infection prevention team. Therefore a defined pathway for reporting and review of these bacteraemias has been developed (see appendix) and the reviews and outcomes are submitted to the relevant divisional meetings for discussion and implementation of any actions.

The table below provides a summary of the outcome of the reviews.

	Probable Cause	Review outcome and Issues identified	Actions taken
1	Chest Infection	Emergency admission for PPCI, the patient required ventilation and developed a lower respiratory tract infection. Review indicated some inconsistencies with documentation. Also a delay occurred in the chlorhexidine prescription when ventilated.	Gaps highlighted through critical care safety huddle.
2	Peripheral Cannula Infection	Urgent admission for heart failure management. The patient required a number of cannulas during his admission. Review showed that there were some gaps noted in documentation and VIP checks. The sepsis bundle was not utilised.	Audits of peripheral cannula undertaken. Changes to flowsheets. Improved dressings for cannula sites with raised VIP scores. Competency for staff removing cannula. Sepsis bundle training and audits undertaken.
3	Chest Infection	The patient was admitted for cardiac surgery, intra-operative complications occurred which required an extended stay on Critical care. He developed a lower respiratory tract infection. Review indicated that appropriate treatment was given, according to microbiology advice. However some inconsistencies in documentation noted.	Documentation highlighted in safety huddles. Audits of care bundles undertaken
4	Chest Infection	Urgent admission for cardiac surgery with complications post- operatively requiring an extended stay on Critical care .The patient developed a lower respiratory tract infection. Review showed that appropriate treatment was given as per microbiology advice. Care bundles for pneumonia were completed.	
5	Chest Infection	Elective admission for pulmonary valvuloplasty. Intra-operative complications arose during surgery which meant the patient required prolonged ventilation and stay on Critical Care. She developed a lower	Documentation highlighted during the safety huddles.

		respiratory tract infection. Review indicated that treatment was appropriate according to microbiology advice. SOFA scores not always documented. TOE documentation not clear	
6	Pneumonia	Emergency transfer from other Trust for PPCI. Respiratory deterioration with pulmonary oedema occurred and the patient developed pneumonia. Treatment was appropriate, according to microbiology advice, documentation was completed correctly.	
7	Pneumonia	Urgent transfer from another Trust for cardiac surgery. The patient became positive for COVID-19 and then developed a pneumonia related to this and also a secondary bacterial pneumonia. Treatment was given according to microbiology advice. Some gaps were noted in flowsheet documentation	Flowsheets highlighted in safety huddles. This case has been referred to the coroner.
8	Surgical Site Infection	Urgent transfer from other Trust for CABG. Review indicated that surgical site prevention undertaken was undertaken i.e. antibiotic prophylaxis given, appropriate skin prep documented, pre-op wash and hair removal performed and documented. Decolonisation however was not given, the patient was admitted late in the evening and went to theatre the next morning. Antibiotic treatment was appropriate	Highlighted through safety huddles to give decolonisation for emergency patients  For review by surgical site group.

#### 4. Summary

Reviews of patients with MSSA bacteraemias have been undertaken and the predominant cause appears to be patients who develop lower respiratory tract infections or pneumonia. The majority of these patients who develop a bacteraemia have been admitted as emergency or urgent cases.

Ongoing monitoring of bacteraemias and the review process for any new cases will continue through the Infection Prevention Committee and the Divisional Governance Committees.

## BACTERAEamia REPORTING AND REVIEW





