Putting the patient first: re-examining an established vascular access surveillance platform to meet current needs

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1. Introduction

Implementation of a vascular access care bundle alongside hospital-wide routine surveillance is key to lowering rates of catheter associated infections, thereby improving patient’s safety and outcomes.

Financial year	Line-associated (CLABSI) MRSA BSI	Total MRSA BSI	MRSA CLABSI as proportion of total MRSA BSI	Line-associated (CLABSI) MSSA BSI	MSSA CLABSI as proportion of total MSSA BSI	Total MSSA BSI	Total submitted blood cultures	Total occupied bed-days
FY12-13	5	8	62.5%			35	23193	275319
FY13-14	5	13	38.5%			35	27012	315043
FY14-15	4	8	50.0%	9	31.0%	29	27704	350174
FY15-16	2	7	28.6%	13	41.9%	31	27906	349380
FY16-17	0	3	0.0%	7	23.3%	30	32798	349380

2. Method

The Trust took a multi-modal, multi-disciplinary approach to reducing the rates of catheter associated blood stream infections (CLABSI) which included i) evidenced based guidelines ii) central line insertion packs for maximal sterile barrier precautions, iii) aseptic non touch technique competency assessments, iv) standardising product around vascular access and infusion therapy across the complex multi-sited organisation, v) increasing education, vi) incorporating a multidisciplinary surveillance team, vii) adapting CDC guidelines and viii) entrenching surveillance into routine clinical duties. Surveillance data from 2008-09 to current 2017-18 was collated, alongside case reports, for MRSA and MSSA laboratory confirmed bacteraemia cases to analyse trends in catheter-associated rates.

3. Results

We have seen substantial decreases in the proportion of MRSA and MSSA Trust associated bacteraemia which are catheter-associated, from 63% of MRSA BSI cases in 2012-13 associated to catheters to 0% in 2016-17 and 31% of MSSA BSI cases associated to catheters in 2014-15 to 23% in 2016-17. The decrease in catheter-associated bacteraemias is even more significant given the year on year increase in blood cultures taken , with 9605 more taken in 2016-18 than 2012-13.

4. Discussion

The Trust took a multi-modal care bundle approach to reducing catheter-associated bacteraemia. The vascular access team alongside the infection control nurse where able to review bacteraemias and assist in the clinical areas making improvements in care as a result of the post infection reviews. The standardisation of equipment related to vascular access and infusion therapy ensures the Trust had evidence based product and procedures striving for excellence in this field and improving the patient experience.

5. Conclusion

Through the implementation of a multi-modal care bundle approach, alongside Trust wide surveillance, we have seen a reduction in catheter associated bloodstream infections

References

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