Significantly Decreased Rate of Catheter-Related Bloodstream Infections (CR-BSIs) After Discontinuation of a Luer Access Device (LAD) At an Academic Medical Center

C Moore, RN, MBA, CIC; R Landreth, RN; C Maschmeier,MT, (ASCP) SM; K Snyder, RN, MS, CCRN, CCNS; G Priestley, RN, MSN,CCRN; S Elliott, MD, FAAP

There are no Financial Disclosures

ABSTRACT

Significantly Decreased Rate of Catheter-Related Bloodstream Infections (CRBSIs) After the Discontinuation of a Luer Access Device (LAD) at an Academic Medical Center

Background: Catheter-related bloodstream infections (CRBSI)s are among the most serious patient complications during hospital stays. Between 2004 and 2007 we found a steady increase in catheter-related bloodstream infection rates to be temporally associated with the switch to a new luer access device (LAD).
Objective: Compare rates for CRBSI after removal of the device and returning to our original LAD.
Methods: In October 2003 a new LAD was introduced, and total house implementation of the device was complete in January 2004. CRBSIs were identified using CDC-NNIS (NHSN) definitions. There were no changes in policies, procedures regarding access device, or surveillance methods at the time. The rate of CRBSIs increased in the ICUs and the Blood and Marrow Transplant unit from our baseline of 3.13 infections per 1,000 central line catheter days to 5.95 infections per 1000 central line catheter days Based on this trend, a comparison was made with the data during the use of the original LAD.
Results: The decision was made, in consultation with the Infection Prevention Committee and Quality and Safety Board, to return to using the original LAD in the fourth quarter of 2007. The rate of catheter related blood stream infections decreased to 2.83 infections per 1000 central line catheter days after: 1) removal of the device from use, 2) improved compliance with hand hygiene and 3) compliance with the Institute for Healthcare Improvement (IHI) Central Line Bundle.
Conclusions: Our findings are consistent with recent publications stating a significant association between the increase in CRBSIs and the use of a LAD.

BACKGROUND

Catheter-related bloodstream infections (CR-BSI)s are among the most serious patient complications during hospital stays. Between 2004 and 2007 we found a steady increase in catheter-related bloodstream infection rates to be temporally associated with the switch to a new luer access device (LAD).

OBJECTIVE

Compare rates for CRBSI after removal of the device and returning to our original LAD.

Clave (Original LAD)

ICU Medical, Inc.

METHODS

In October 2003 a new LAD was introduced, and total house implementation of the device was complete in January 2004. CRBSIs were identified using CDC-NNIS (NHSN) definitions. There were no changes in policies, procedures, or surveillance methods regarding access of device at the time. The rate of CRBSIs increased in the ICUs and the Blood and Marrow Transplant unit from our baseline of 3.13 infections per 1,000 central line catheter days to 5.95 infections per 1000 central line catheter days Based on this trend, a comparison was made with the data during the use of the original LAD.

RESULTS

The decision was made, in consultation with the Infection Prevention Committee and Quality and Safety Board, to return to using the original LAD in the 4th quarter of 2007.
The rate of catheter related blood stream infections decreased to 2.83 infections per 1000 central line catheter days in 2008 after: 1) removal of the device from use, 2) improved compliance with hand hygiene and 3) compliance with the Institute for Healthcare Improvement (IHI) Central Line Bundle.

CONCLUSIONS

Our findings are consistent with recent publications stating a significant association between the increase in CRBSIs and the use of a LAD

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