U.S. Hospitals Reduce CRBSI Using New Technology

Clinicians from three U.S. hospitals today reported significant progress in the fight against deadly IV catheter-related bloodstream infections (CRBSI). Data analyzed and presented by clinicians from St. Joseph’s Mercy Hospital in Hot Springs, Ark.; Bethesda North Hospital in Cincinnati, Ohio; and VA Medical Center Seattle showed that the hospitals virtually eliminated such infections, which annually kill some 62,500 hospital patients nationwide.

These new finding are noteworthy because few U.S. hospitals have been able to achieve greater than an 80 percent reduction in CRBSI rates. The findings of the clinical research, presented Sept. 25 at the annual meeting of the Association for Vascular Access, document the effectiveness of the CareFusion MaxPlus Clear Positive Displacement Needleless Access Connector in combination with clinical practices. These new clinical research results further support the use of MaxPlus® technology to assist in CLABSI reduction efforts; eight additional research reports, either published or presented, show virtually the same results.

CareFusion’s MaxPlus Clear technology provides a visual cue to perform best practices more thoroughly including priming, disinfection and flushing and therefore helps promote the performance of best practices. In addition, the smooth top provides an optimal surface for easy disinfection.

Annually, CRBSIs affect 250,000 U.S. hospital patients; about 25 percent of such cases result in death. In addition to the human toll, the financial costs to the health care system are staggering. These preventable infections typically increase a patient’s hospital stay by anywhere from 10 to 24 days. 1 The U.S. Centers for Medicare and Medicaid Services have identified CRBSI as a “never event,” implementing more stringent reimbursement requirements for care related to such cases. A single incident of CRBSI can cost as much as $56,000 to treat, based on the costs associated with pharmacy charges, catheter changes, lab tests and an additional day in the ICU. 2

Clinical findings Patricia Gould, RN, Infection Preventionists at St. Joseph's Mercy Health Center reported dropping from 4.08 central line-associated bloodstream infections (CLABSIs) per 1000 catheter days to zero and maintaining the rate of zero for a total of 20 months with the implementation of a evidence based “bundle,” including the use of the MaxPlus Clear connector.

Similarly, Tim Royer, retired nurse manager of vascular access, discussed interventions that led to the elimination of CRBSIs in the Intensive, Medical-Surgical, Spinal Cord Injury and Transitional Care Units for 17 months at the VA Medical Center Seattle.

“Blood and debris are a growth media for bacteria,” said Royer. “An impressive continued drop to zero CRBSI rate was noted through the implementation of a clear, swabable, positive displacement needleless connector as a cue to clean, flush and change the valve. If the valve is opaque, it does not trigger or reinforce the process to keep blood and debris out of the catheter.”

In addition, Jennifer McCord, BSN, RN, PCCN, CCRN, CCNS of Bethesda North Hospital reported 12 less CRBSIs in 2009 vs. 2008 and rates dropped from 1.955 to 0.369 per 1000 catheter days representing an 81 percent reduction in CRBSIs. The hospital implemented a nurse-driven peripherally inserted central catheter (PICC) team, along with the CareFusion MaxPlus Clear connector. These protocols are estimated to save the hospital up to $600,000 per year.

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