**Chlorhexidine: Rub the Hub before You Plug! Eliminating CRBSI in MICU/MSICU**

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**Problem:**
A dangerous complication that can occur from a central line is a catheter-related bloodstream infection (CRBSI). Most of our patients in the medical intensive care unit/medical surgical intensive care unit (MICU/MSICU) have central lines. Our CRBSI rate averaged 3.98 from January-July 2009. Centers for Disease Control’s (CDC’s) goal for CRBSIs is zero. CRBSIs will increase cost of care, length of stay, and places a patient at risk of increased morbidity and death.

**Evidence:**
CRBSIs occur in 3-7% of ICU patients with central lines.1 These infections can cost up to $56,000 per event.2 CRBSIs occurring during hospitalization are no longer reimbursed by the Centers for Medicare and Medicaid.3 Mortality rate is 12-25% 2 which potentially could be avoided if the goal of zero events is achieved. Eliminating a CRBSI will cut healthcare costs and improve patient outcomes.

**Strategy:**
MICU/MSICU replaced alcohol with 2% Chlorhexidine (CHG) to aseptically clean IV catheter hubs. CHG is classified as a chemical antiseptic and is effective in killing most bacteria including gram positive bacteria, MRSA, VRE, C. diff., various fungi, and viruses.4

**Practice Change:**
MICU/MSICU staff was educated on the proper use of CHG to access IV catheter hubs in July 2009. Signage was also posted as visual aids: Rub the Hub before you Plug! Hospital policy was updated in December 2009.5

**Evaluation:**
Infection preventionists run monthly reports to determine if positive blood cultures are a hospital-acquired CRBSI. MICU/MSICU results are reported to staff during monthly meetings.

**Results:**
Our CRBSI rate decreased from 3.98 to 2.56 over the five month period after initiation of CHG usage to access IV catheter hubs. Zero events were recorded for November 2009-February 2010 in both units.

**Recommendations:**
MICU/MSICU staff needs to continue diligent management of central line catheters. Regularly update staff with current CRBSI results.

**Lessons Learned:**
Frontline nursing staff is making a huge impact utilizing evidenced-based practice to decrease healthcare costs and improve patient outcomes.
Reference List:


