Driving CLABSI Rate to Zero: 
Building on Prevention With Strategic Practice and Cost-Saving Interventions
Tiffany Curtice, BSN, RN, VA-BC
Erika Anderson, MSN, RN, CRNI, VA-BC
Cheryl Bruns, BSN, RN, CRNI
Rebecca Hiester, BSN, RN, RN-BC
Nancy Davidson, MA, BSN, CNS-BC
Lavone Hastings, BSN, RN-BC, M.MGT

Porter Adventist Hospital, Denver, Colorado

Discussion and Conclusions
• Evidence-based nursing practices to improve patient outcomes have become the norm
• The IV Team sustains a culture of patient safety and contributes to CLABSI rate reduction with daily monitoring of central lines and just-in-time peer review
• Implementation and adherence to a prevention bundle can drive CLABSI rates to zero
• CLABSI rate decreased from 1.02 in FY12 to 0.00 from FY14 to present (July-June)
• 100% reduction in number of CLABSI
FY12: N=10
FY13: N=6
FY14: N=0
FY15: N=0
FY16TD: N=0
• 86% adherence to prevention bundle FY16TD (July-December)
• 923 CLABSI-free hospital days
• 1,032 CLABSI-free ICU days

$474,000 ESTIMATED COST AVOIDANCE
FY12 to FY16TD
FY12 $20,000/case x 10 cases = $200,000
FY13 $16,000/case x 6 cases = $96,000
FY14-FY16 $16-17,000/case x 0 cases = $0

Literature Cited

Contact Information
Tiffany Curtice, BSN, RN, VA-BC
tiffincycurtice@centura.org

Abstract
CLABSI is the most deadly hospital-acquired infection with mortality rates near 20%. Evidence-based nursing to improve CLABSI outcomes have become the cultural and practice norm. In 2012, an evidence-based CLABSI prevention bundle was implemented with daily audits. Evidentiary review identified CHG bathing as a second tier intervention and a decision was made to add CHG bathing to the bundle for all patients with a central line. In 2014, fully integrated protocol practices were implemented into new-hire and float pool orientation to enhance novice practitioner competence. Adherence to the prevention bundle has improved hospital-wide from 60% to currently 86%. CLABSI rates decreased from 1.02/1,000 catheter days in June 2012 to 0.001/1,000 catheter days in June 2013 and have continued through December 2014. Associated cost savings have exceeded $470,000 with accompanying avoidance of potential harm to patients. This 102% rate reduction reflects 923 CLABSI-free days hospital-wide and 1,032 CLABSI-free days in the ICU. Driving CLABSI to zero can be accomplished through evidence-based bundle implementation, communication-focused strategies, intentional evaluation of central line need/discontinuation, and integration of vascular access education and support responsibilities.

Materials and Methods

2011
• CLABSI evidence-based prevention bundle implemented
• Unit Champions
• Computer Based Training for Registered Nurses
• Standardized outcome metrics
• Cost analysis for antimicrobial PICCs

2012
• CLABSI rate target goal not achieved
• Education redesign
• Standardize intravascular catheter care
• Focus on intravascular catheter maintenance
• Daily audits conducted by IV Team to monitor adherence to prevention bundle
• Conduct just-in-time prevention bundle education
• Conduct just-in-time peer review including personal email
• Report unit specific outcome metrics monthly

2013
• CLABSI rate decreased but not at target goal
• Implement antimicrobial PICCs for specific at risk population
• Evidentiary review for second tier infection prevention interventions
• Implement CHG bathing for all central line patients

2014 to present
• Continue daily auditing of adherence to evidence-based infection prevention bundle
• Root Cause Analysis for any occurrence