

Evidence-Based Practice (EBP) - E197

Oral Presentation

Abstract Title:

International Nursing Collaborative to Reduce Central Line Acquired Blood Stream Infections

Authors:

Karen A. McQuillan, MS, RN, CNS-BC, CCRN, CNRN, FAAN Kathryn Von Rueden, MS, RN, CNS-BC, FCCM Linda Byrne, MS, RN Rebecca Gilmore, RN

Background & Purpose:

Much work has been done in the United States of America (USA) to reduce the high incidence of central line acquired blood stream infections (CLABSI) in trauma patients. Other countries that are developing their trauma programs face similar challenges. The purpose of this study is to determine if forming a partnership between a USA trauma center and a large trauma center in India to provide ongoing advice on implementing an evidence-based (EB) approach to central venous catheter (CVC) insertion and management would change practice and decrease the CLABSI rates in the Indian center.

Study/Project Design:

An EB performance improvement initiative using pre- and post-intervention CLABSI rates.

Setting:

Major urban trauma centers in the USA and New Delhi, India.

Sample:

A convenience sample of trauma patients with CVCs placed at a New Delhi hospital.

Procedures:

Beginning in 2009 a nursing collaborative was formed between the two trauma centers to examine nurse driven initiatives aimed at improving patient outcomes. Decreasing CLABSI was selected as the initial focus of this collaboration due to the high number of blood stream infections (BSI) reported by the Indian facility. The Neurotrauma Intensive Care Unit (NTICU) was the pilot unit of the Indian hospital. The Indian hospital adopted the USA facility's CVC bundle, which included sterile technique for line placement, use of CVC insertion checklists and protocols for care of CVCs. Over 2011 and to date in 2012, nurses from the 2 facilities met monthly via phone and videoconference to exchange education materials, report trends, discuss barriers, track bundle compliance and CLABSI occurrences.

Findings/Results:

The CVC bundle and increased hand hygiene vigilance were implemented at the Indian trauma center in October 2011. Between January and July of 2012 there were a total of 147 CVC placements and 50 CLABSIs. Monthly trends showed an overall decrease in CLABSIs, from 11 in January, to 2 in June, and 1 in July. CLABSI rates decreased from 34.3 to 6.0 from January to July. Over these 7 months, sterile technique used during CVC insertion improved and full compliance with a line insertion checklist was approximately 56%. However, CLABSI rates consistently decreased over time in patients in whom the checklist was used. There were 0 CLABSIs associated with checklist use in July 2012. The EB interventions were subsequently being introduced to other units within the Indian trauma facility.

Discussion/Conclusions/Implications:

Collaborations where institutions share ideas and EB practices have proven effective to reduce healthcare associated infections. Our collaboration with a major trauma center in New Delhi, India demonstrates that established bundles such as those used to reduce CLABSI in the USA can be effectively implemented in other countries around the world. As our world becomes smaller through technological advances in communication and travel abroad, opportunities exist for professional nurses to engage in international collaboration and share best practices with trauma nurses around the world.