Abstract:

OBJECTIVE: We describe the use of implementation science at the unit level and organizational level to guide an intervention to reduce central-line-associated bloodstream infections (CLABSIs) in a high-volume, regional, burn intensive care unit (BICU).

DESIGN: A single center observational quasi-experimental study.

SETTING: A regional BICU in Maryland serving 300-400 burn patients annually.

INTERVENTIONS: In 2011, an organizational-level and unit-level intervention was implemented to reduce the rates of CLABSI in a high-risk patient population in the BICU. At the organization level, leaders declared a goal of zero infections, created an infrastructure to support improvement efforts by creating a coordinating team, and engaged bedside staff. Performance data were transparently shared. At the unit level, the Comprehensive Unit-
based Safety Program (CUSP)/ Translating Research Into Practice (TRIP) model was used. A series of interventions were implemented: development of new blood culture procurement criteria, implementation of chlorhexidine bathing and chlorhexidine dressings, use of alcohol impregnated caps, routine performance of root-cause analysis with executive engagement, and routine central venous catheter changes.

RESULTS: The use of an implementation science framework to guide multiple interventions resulted in the reduction of CLABSI rates from 15.5 per 1,000 central-line days to zero with a sustained rate of zero CLABSIs over 3 years (rate difference, 15.5; 95% confidence interval, 8.54-22.48).

CONCLUSIONS: CLABSIs in high-risk units may be preventable with the use of a structured organizational and unit-level paradigm.

Reference:


Thank you to our partners for supporting IVTEAM