Impact of Central Line Bundle Care on Reduction of Central Line Associated-Infections: A Scoping Review

Alisha James-Scott MSN, FNP-C, Rachel Savoy MSN, FNP-BC
Faculty Advisor: Dr. Donna Lynch-Smith & Dr. Tracy McClinton
College of Nursing - The University of Tennessee Health Science Center - Memphis, TN

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER
COLLEGE OF NURSING

Purpose

The purpose of this scoping review is to review the literature available for the following PICOT question: "In adult hospitalized patients requiring central venous catheter placement, does bundle care compared to not using bundle care impact central line associated blood stream infections (CLABSI)?".

Background

- Central venous catheters (CVCs) account for 250,000 – 500,000 central line associated bloodstream infections (CLABSIs) every year in the United States. (Perin et al, 2016)

- These infections increase mortality and morbidity, medical cost, and reduce hospital reimbursements. (Lee et al., 2018; Ormsby et al., 2020)

- Institute for Healthcare Improvement composed evidenced-based interventions to assemble a central line bundle to decrease number of CLABSIs and improve patient outcome. (Ormsby et al., 2020)

Operational Definitions

Central Line Associated Blood Stream Infection

A confirmed blood stream infection not related to another site within 48 hours of central line placement.

Institute for Health Care Improvement Evidence-based Central Line bundle:

- Maximum barrier precautions
- Chlorhexidine wash before insertion
- Antibiotic-impregnated catheter tips
- Daily assessment for need of central line
- Chlorhexidine impregnated dressing
- Dressing change every seven day.

Methods

- **Sources**

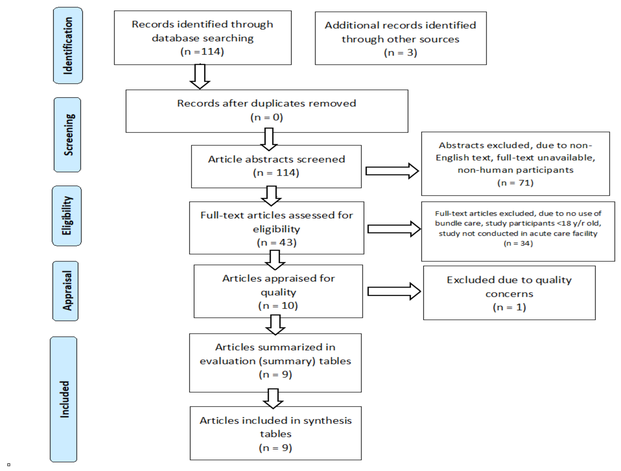
PubMed, CINAHL, Medline- UTHSC Health Science Library

- **MeSH headings**

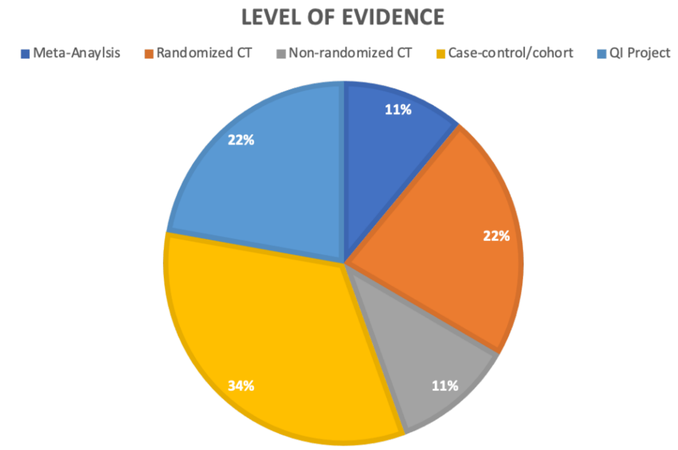
- (patient, hospitalized), OR (adult patients) AND
- (CLABSI) or (central line associated bloodstream infection), AND
- (central line bundle care).

- **Prisma Flow Chart**

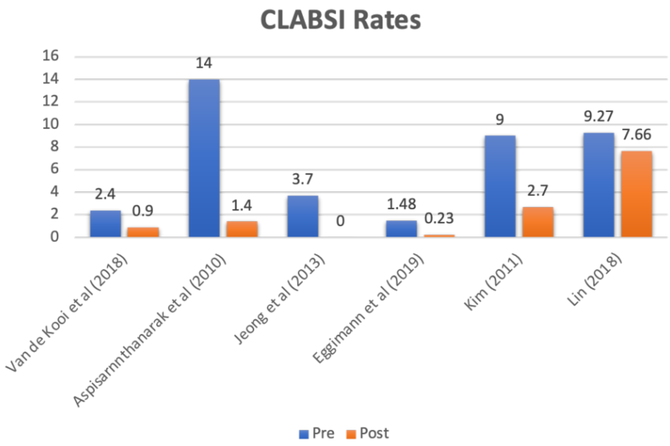
Chart utilized to narrow down keeper articles



Results



Results



Implications for Practice

- More research is needed to determine how to best implement this bundle care as a standard practice in the hospital setting.

- Implementing a standard central line bundle hospital-wide would help reduce CLABSI rates and should be utilized in settings where high CLABSI rates remain, and bundle practice is not utilized.

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