The Impact of Champion Training on a Two-clinician Indwelling Urinary Catheter Insertion Technique to Prevent Catheter Associated Urinary Tract Infection (CAUTI)

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Introduction

- Approximately $53 billion are spent to treat Hospital Acquired Infections (HAI)
- Urinary Tract Infections (UTI) are the most common HAI
- 75% of UTI are associated with urinary catheter
- 15-25% patients receive indwelling urinary catheter (IUC) in the hospital
- Catheter Associated Urinary Tract Infection (CAUTI) is a common risk factor associated with IUC

(ANA, 2017; Briggs &Ross, 2017)

Background

- UTI accounts for 30% infections reported by hospitals
- 35% of patients with IUC develop CAUTI
- More than 560,000 patients develop CAUTI annually
- CAUTI is the second major problem identified by The Joint Commission (TJC) in 2019
- $1000 to 10000 dollars are spent on treating a CAUTI
- 17-69% CAUTI are preventable when evidence-based guidelines are followed

(CDC, 2021; Jones at al., 2021)

Problem Statement

- CAUTI remains as a top concern: it increases mortality and morbidity
  - increases length of stay in the hospital
  - additional cost to the hospital
- The hospital's CAUTI rate was 7.3 per 1000 calendar days in the year 2022
- The goal of hospital was ≤ 1.25
- The national benchmark was 0.8 per thousand calendar days

(AHRQ, 2022)

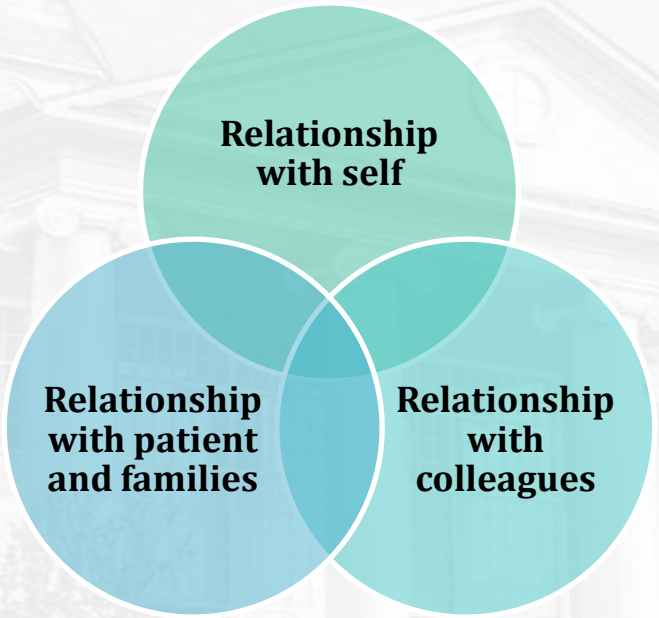
Purpose of the Project

Implement an evidence-based catheter bundle and analyze if there is a decreased incidence of CAUTI including two-clinicians urinary catheter insertion technique is implemented and champion training is conducted.

Clinical Question

How does one clinician versus two clinicians indwelling urinary catheter insertion technique affect CAUTI rate over a month time in one unit?

Theoretical Framework: Relationship-Based Care Model



Leask Capitulo & Olender, 2019

Evidence

- 12 high-quality studies met the inclusion and exclusion criteria
- 5 studies were done on two-clinicians champion training
- 3 out of 5 studies recommend champion training by using CDC's CAUTI bundle and champion training

Methodology

- Quasi-experimental quality improvement project
- CAUTI rate-dependent variable
- Teaching two-clinician IUC insertion technique to CAUTI prevention champions-Independent variable

(White et al., 2019)

Setting

- 800 bed level one teaching hospital system
- Serves over 67,000 enrolled veterans in northern and central California
- Affiliated to Stanford University School of Medicine
- Provides primary, tertiary, and long-term care

Population

- All patients with IUC in Spinal Cord Injury (SCI) Unit
- The exclusion criteria: patients with no IUC
- Informed consent was not required for data collection
- Convenience sample technique was used to select sample of all patients and registered nurses (RN)

Tools

ANA CAUTI Prevention Tool

- Indwelling Urinary Catheter Insertion (IUC)
- Indwelling Urinary Catheter Maintenance bundle

(Fletcher-Gutowski & Cecil, 2019)

IUC Insertion Bundle

Indwelling Urinary Catheter Insertion Bundle Compliance Checklist

Unit: _____ Month: _____

Please use Y or N for compliance/non-compliance. Exclude straight, condom and suprapubic catheters.

Observation Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Order written with indication on day of insertion by provider.																				
Hands washed by inserter																				
Sterile peri-urethral cleaning																				
Catheter properly secured by inserter																				
Total Number of (indwelling) foley catheters inserted in the unit for the month (optional):																				

IUC Maintenance Bundle

Indwelling Urinary Catheter Maintenance Bundle Compliance Checklist

Unit: _____ Month: _____

Please use Y or N for compliance/non-compliance. Exclude straight, condom and suprapubic catheters.

Observation Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Drainage system was sterile and continuously closed.																				
Catheter properly secured.																				
Collection bag below the level of the bladder.																				
Unobstructed urine flow.																				
Clinical indication written for continuance of indwelling catheter.																				
Daily Hygiene care is documented or observed.																				

Intervention

- Champion training
- Maintenance of catheter insertion and maintenance bundles
- Daily rounding
- Logbook

Measurable Outcomes

In the year 2022

- The unit's CAUTI rate was 7.3 per 1000 calendar days
- The CAUTI number was two
- The facility's goal was $\geq$ 1.25
- The goal of SCI Unit was zero
- The national benchmark was 0.80

Findings

- Project met the goals and objectives of the hospital
- Answered PICOT (clinical) question
- Two clinicians IUC insertion more effective than one person IUC insertion
- Data summary shows pre-post intervention results
- CAUTI rate is below the national average

(Ekert et al., 2018)

Implications for Practice/Future

- Decrease CAUTI rate and catheter days
- Improve patient outcomes and safety culture
- Make hospital high reliability organization (HRO)
- Adheres to the hospital's policy: Zero harm to patient

(Girio-Herrera et al., 2019)

Dissemination

- Results of the project shared with leadership
- Poster prepared and posted in the facility
- Poster shared with the hospital's system nationwide
- Findings will be shared in nationl conferences, seminars and journals

Permissions/IRB/CITI Training

- Received approval from LU IRB
- Received approval from project location
- Completed CITI training

Christian Worldview Integration

Plan, teach and analyze the cost of caring before and after implementing the project

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Any Questions?