

# CAUTI Prevention Project Proposal

Student Name

Grand Canyon University

NUR-590 Evidence based practice project

Professor's Name

Due Date

# Introduction

- ▼ Catheter-associated urinary tract infection (CAUTI) is a significant issue in healthcare systems
- ▼ It is a major recurrent device-related infection mostly acquired in hospitals
- ▼ CAUTI has increased mortality and morbidity rates due to bloodstream infections (Atkins et al., 2020; Whitaker et al., 2022)
- ▼ CAUTI affects other vital organs like kidneys, prostate, bladder, and urethra in severe incidences (Kolstad, 2020).
- ▼ Further, CAUTI leads to high healthcare costs, increased risk of hospitalization, significant patient discomfort, and increased hospital stays
- ▼ The study discusses on how CAUTI affects the healthcare system and possible interventions
- ▼ to implement

PICOT question: *In an acute care unit inpatient with indwelling urinary catheters (P), how does using multi-modal evidence-based practices (I) compared with the current indwelling catheter care (C) impact the prevention rate of CAUTIs (O) within six months? (T)*

# Organizational Culture and Readiness

- ▼ Most health organizations have adopted EBPs to ensure improved patient care
- ▼ This is mostly patient-centered and focuses on quality (Randall et al., 2019)
- ▼ Organizational culture regulates healthcare processes and systems which influence workforce in attaining facility care goals and objectives.
- ▼ Culture and readiness influence performance due to empowerment (Runtu et al., 2019)
- ▼ The current organizational culture is value based, thus, supporting change
- ▼ Its operations are patient-focused, culturally centered, collaborative, teamwork, and stewardship core values
- ▼ The facility has embraced interprofessional collaboration and team engagement which is crucial in change implementation (Willgerodt et al., 2020).
- ▼ This is fostered by effective communication using IT systems (Melnik & Fineout-Overholt (2022)

# Cont'd

## - Organizational Readiness Tool

- ▼ The project will utilize the Partnership Assessment Tool for Health (PATH) as the organizational readiness tool.
- ▼ PATH enhances organizational natural analysis and stakeholder partnerships in change implementation initiatives (Larson et al., 2022)
- ▼ Its 4 main components include: internal and external relationships, workflow and service delivery, data outcomes, and funding and finance
- ▼ A facility must be well-equipped to adapt EBPs in reducing CAUTIs
- ▼ A proactive and feasible culture is necessary to support EBP changes (Kaiser et al., 2022)
- ▼ Interprofessional collaboration is essential in attaining change goals: empowerment, efficient workflow, efficient communication, and shared healthcare goals.

## Cont'd - Healthcare processes & Systems and Strategies to facilitate readiness

- ▼ Recommended healthcare processes and systems enhance quality improvement, cost-effectiveness and safety during EBP implementation
- ▼ Such entails: interprofessional collaboration, communication, patient management systems and continuous improvements in CAUTI eradication
- ▼ Processes and systems improve trust and understanding among nurses, improve patient-centered care, and care tracking (Kaiser et al.,
- ▼ Essential strategies to foster readiness include change approaches including PDCA cycle (Atki

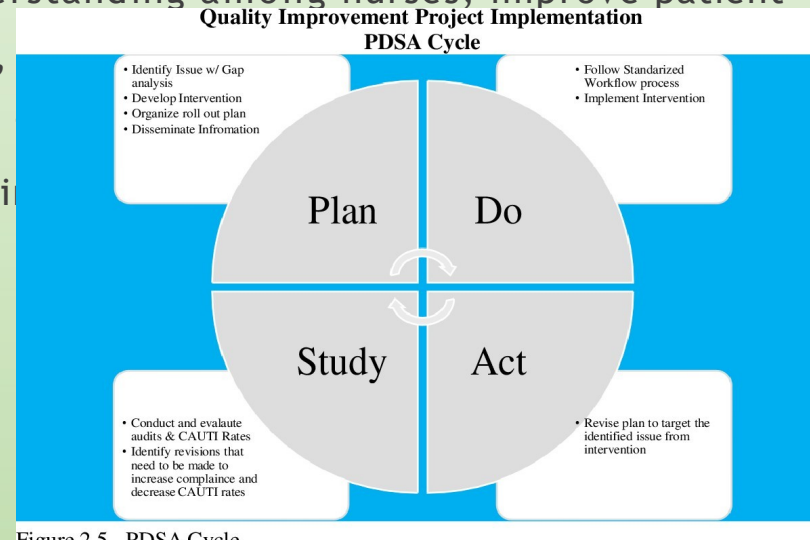


Figure 2.5 PDSA Cycle

# Cont'd - Stakeholders & team members and ICT

- ▼ Stakeholders and team members for this project will include patients, leadership team, acute care nurses, and IT personnel
- ▼ Stakeholder inclusion foster efficient project execution through resource allocation, change regulation, communication, and data collection
- ▼ ICT components essential for the change implementation include consumer health IT applications
- ▼ Their integration will include EMRs, clinical email communication, interactive communication tech, and health information literacy
- ▼ These will foster communication, speedy care through patient monitoring, and timely intervention.

# Problem Statement

- ▼ CAUTI is a growing healthcare problem in acute care units causing major health complications for patients and facilities
- ▼ Bacterium causes most CAUTIs (Whitaker et al., 2022)
- ▼ Common symptoms include fever, chills, burning sensation in genitalia, pain or pressure in the abdomen, bloody/cloudy urine etc.
- ▼ CAUTIs have led to high mortality and morbidity rates, extended hospital stays, high care costs, and high readmission rates (Whitaker et al., 2022).
- ▼ The study aims at implementing EBPs in reducing or preventing CAUTIs among acute care in-patients using the PICOT question.

# Literature Review

- ▼ There are various barriers and facilitators of CAUTI behaviors and prevalence.
- ▼ They are related to resources, social influences, environment, and nursing knowledge (Atkins et al., 2020)
- ▼ Common barriers to CAUTI prevention: lack of awareness and training among nurses, staff shortages and high workloads, and time constraints to focus on patients (Fasugba et al., 2021).
- ▼ Teamwork, nursing practice competencies, and positive workforce culture will enhance CAUTI prevention
- ▼ Further, hand hygiene, augmented use of aseptic techniques, and systemic bundled interventions reduce CAUTI incidences (Frödin et al., 2022).



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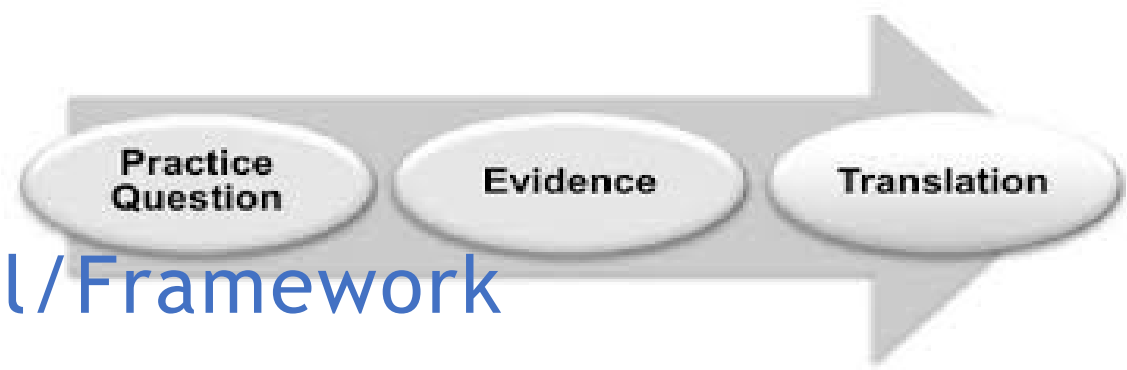
- ▼ Common factors influencing CAUTI incidences are related to patient, hospital/CAUTI catheter, caregivers, environment, and economic (Kafayat et al., 2019)
- ▼ Patient related factors include compromised immune systems, diabetes mellitus, renal dysfunction, and female gender
- ▼ Examples of CAUTI catheter factors include insertion technique, catheter care, and catheterization duration
- ▼ Using BIP and NMA-coated Foley Catheters enhances CAUTI reduction (Kai-Larsen et al., 2021).
- ▼ These specific EBP recommendations for CAUTI prevention
- ▼ Other EBPs include
  - Using daily checklists such as Bundle ABCDE in catheterization care (Kolstad, 2022)
  - Utilizing professional working skills and knowledge among nurses (Teshager et al., 2022)
  - Using aseptic techniques during indwelling catheter insertion and removal (Saint et al., 2019).

# Selected Model and its Relevance to the Project

- ▼ Models and frameworks for implementing EBPs function by being linked with the main research action
- ▼ Selected model for this project implementation is the John Hopkins Evidence-Based Practice Model (Loma Linda University, 2022).
- ▼ The model is useful in problem-solving and clinical decision-making
- ▼ It uses user-friendly tools for guidance at individual and organizational
- ▼ level. This practice model is designed to meet nursing practice and research
- ▼ needs
- It contains three essential steps in use: Practice question, evidence,
- ▼ and translation (PET) (Dang et al., 2022).
- PET ensures latest research findings and practices are incorporated in
- patient care

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## a) Stages of the Change Model/Framework



### Step 1: Practice question

- Guidance for the study towards attaining its aims and objectives
- Helps in identifying the specific health issue existing, needed change, and project tools/resources to enhance its execution
- The PICOT question has been used to identify research elements like study

### Step II: Evidence problem

- It entails searching, appraising, and synthesizing quality evidence to support or clearly answer the practice question (White, 2016).

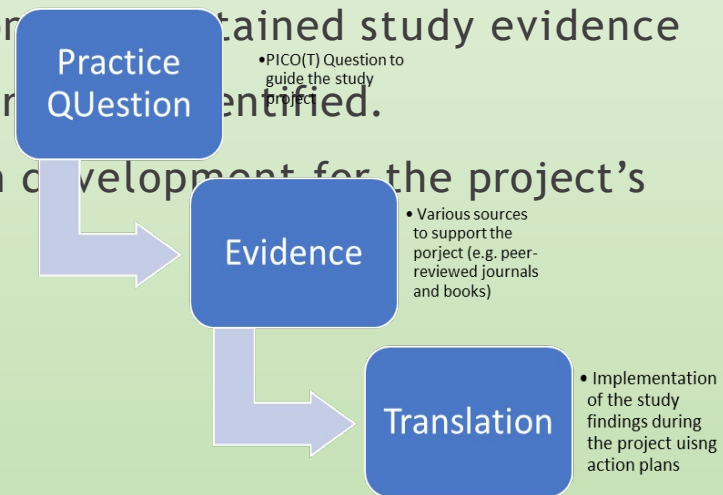
### Step III: Translation

- Entails taking action on evidence collected by ensuring its efficient use in practice
- This ensures action plans are developed to foster change execution (Dang et al., 2022)

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## Applicability of each Stage of the Model during the Implementation & Concept Map for the Conceptual Model

- ▼ The practice question include the already developed PICOT question.
- ▼ This defines the study's population, interventions, comparison, outcomes, and timelines for project implementation
- ▼ The evidence phase includes project execution and identification of relevant study evidence to support the intervention chosen and fill care gaps identified.
- ▼ Translation step includes implementation plan development for the project's systemic execution.



# Implementation Plan

- ▼ Study setting - Hospital's acute care inpatient unit with post-surgical patients
- ▼ Potential subjects - Include children and adults admitted in the health facility
- ▼ Their medical records will be used for provision of information to support the study question on CAUTI prevention
- ▼ The information will provide a pattern and trend of CAUTI elimination, a review on the need to implement multimodal EBPs
- ▼ No consent to health information access but there is need to attain nurse leaders' permission for the researcher to access EMRs.
- ▼ The project will be implemented within 6 months
- ▼ This is enough for implementation of project activities and making modifications

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- ▼ Furthermore, the implementation plan must include budget and resources
- ▼ Essential resources needed: human, financial, and material
- ▼ The human resources - skilled nursing workforce, IT experts, and catheterization specialists
- ▼ Material resources - equipment such as writing materials, projectors etc.
- ▼ Financial resources - useful for system upgrades, participant incentives, buying material resources, and miscellaneous
- ▼ Estimated budget for the project's implementation is \$35, 000
- ▼ Data collection design utilized is qualitative research - affordable, timeliness
- ▼ It uses non-numerical approaches in understanding specific experiences (Busetto et al., 2020).
- ▼ Questionnaires, and random observations will enhance project implementation monitoring

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- ▼ Intervention delivery process includes various steps namely:
  - i. Prioritizing the intervention implementation sequencing for specific process action
  - ii. Efficient identification of stakeholders involved in the intervention process
  - iii. To determine and develop a schedule to deliver the intervention
  - iv. Conducting a needs assessment to identify skills and knowledge gaps in intervention implementation
- ▼ Planning an intervention delivery process ensures efficient timelines are created
- ▼ This guides project milestones for easy progress tracking (Khalil & Kynoch, 2021)
- ▼ Training is essential among participants to enhance their competencies in influencing CAUTI prevention trends (Lehane et al., 2019)
- ▼ Stakeholders needed - nurse leaders, nurses, physicians, and IT personnel in acute care
- ▼ Potential barriers - Stakeholder resistance, inadequate support, and time constraint

# Evaluation Plan

- ▼ The expected outcome for the EBP project proposal includes
  - i. Reduced healthcare costs for patients and care facility
  - ii. Reduced hospitalization and health complications incidences
  - iii. Improved readmission rates (Schweiger et al., 2020).
  - iv. Enhanced education among nurses and physicians in acute care
  - v. Facilitated advocacy for alternative toileting options (Potugari et al., 2020)
  - vi. Promotion of proper use of aseptic techniques in catheter insertion and removal
- ▼ Data collection tool to be used - Electronic medical records (EMR)
- ▼ It is valid, reliable, and applicable on providing CAUTI prevention trends.
- ▼ Statistical tests for the project - Chi-square test to determine differences between the observed and anticipated data on CAUTI prevention (Collins, 2021)



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- ▼ The research will utilize document analysis and record review methods in data collection under qualitative research (Taherdoost, 2021)
- ▼ These will provide essential experiences and patterns on CAUTI prevention
- ▼ They are affordable, timely, and available tool to use causing limited disruptions to daily routines of the participants
- ▼ The project change implementation outcomes will be measured and evaluated using the urinary catheterization impacts among inpatients
- ▼ If the outcomes are negative, there will be need to re-evaluate or restart the whole project process
- ▼ Any action after project implementation will depend on the leadership support, communication, and modifications (Cullen et al., 2022)

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