

### Burning Clinical Question

Will intentional daily rounding combined with focused staff education reduce the incidence of Catheter Associated Urinary Tract Infections (CAUTI) on adult inpatients?

### Background/Trigger

- Indwelling urinary catheters (Foley catheters) are commonly used for Heart Failure (HF) inpatients
- Foley catheters are used in HF patients to monitor strict intake and output related to IV/PO diuretic administration
- Our 37 bed Heart Failure Department had the highest CAUTI rate in the health system related to our increased catheter utilization rates and number of device days
- We formed an Evidence Based Practice (EBP) team which included bedside nurses, nurse technicians, nurse secretary monitor technicians (NSMT), and department leadership
- The team identified inaccurate intake and output documentation, staff knowledge deficits, and an inconsistent use of the urinary catheter protocol

### Daily Rounding Tool

Data Collection Form: Catheter Use and Care Compliance						
Month _____	Year _____	Auditor _____			Department _____	
<b>Components of Care</b>						
Securement- Is the foley properly secured to the leg?	D-Yes/No	D-Yes/No	D-Yes/No	D-Yes/No	D-Yes/No	D-Yes/No
When the patient is in the bed, the drainage tubing is not coiled; no dependent loops and flows straight from patient to bag.	D-Yes/No	D-Yes/No	D-Yes/No	D-Yes/No	D-Yes/No	D-Yes/No
Drainage bag is secured to bed and is not lying on floor	D-Yes/No	D-Yes/No	D-Yes/No	D-Yes/No	D-Yes/No	D-Yes/No
A red seal is present from drainage bag to catheter (a closed system)	D-Yes/No	D-Yes/No	D-Yes/No	D-Yes/No	D-Yes/No	D-Yes/No
Patient Name, MRN, & Room #:						
Comments:						

### Evidence

- CAUTI is the most frequent hospital acquired infection which often leads to significant complications
- Risk factors for developing CAUTI:
  - Duration of catheter utilization
  - Female gender
  - Older age
  - Improper sterile technique during insertion
  - Failure to maintain a closed drainage system
- Strategies to prevent CAUTI:
  - Implement a quality improvement program to reduce Foley catheter use and associated urinary tract infection
    - Consider alternatives to avoid Foley catheter use
    - Limit the duration of catheterization
    - Develop a protocol allowing nursing to remove catheters for patients who meet specified criteria
    - Provide guidelines to manage urinary retention after catheter removal, which may include bladder scanners
  - Involve department leadership in providing feedback on unit-specific CAUTI rates and staff accountability
  - Staff Education to include:
    - Insertion, maintenance, and removal of urinary catheters
    - CAUTI prevention strategies including:
      - Securing indwelling catheters
      - Maintain sterile, continuously closed drainage system
      - Collect urine samples from cleansed port
      - Maintain unobstructed urine flow
      - Empty urine collection bag regularly
      - Keep urine collection bag below the level of the bladder

### Practice Change

- Our team decided to use the Iowa Model to examine the evidence on CAUTI prevention
- We incorporated these Evidence Based Practices to include the following:
  - Protocol driven care
    - Catheter removal within 24-48 hours
    - Perform and document proper peri-care
    - Catheter secured to leg
    - Tubing unobstructed
    - Drainage bag secured to the bed and not on the floor
    - Closed system maintained
    - Maintain sterile field during insertion
    - Utilize system wide urinary catheter guidelines for insertion and removal
    - Patient and family education
  - Institute intentional daily rounding by NSMT using standardized audit tool to monitor:
    - Identify all Foley catheters in use
    - Track device days and identify indications for continuous use
    - Bedside observations to monitor protocol compliance
    - Friendly reminders for Foley removal to RN and MD
  - Education provided to all nursing staff via “Blitz Day”
    - Skills demonstration of peri-care, Foley insertion, and sterile technique
    - CAUTI survey
    - CAUTI tips sheet
  - Post-education documentation was audited by leadership daily for 60 days with continued monthly audits conducted by the EBP team

### Evaluation

- Implementation of daily rounding combined with focused staff education dramatically reduced our rate of CAUTIs
- After seven (7) months CAUTI free, we had one (1) CAUTI that prompted the team to regroup to develop a case study to re-educate and focus staff
- Our daily rounding process continues to keep CAUTI prevention at the forefront of our minds



### Nursing Implications

- This EBP project has positively impacted nursing practice by:
  - Improving staff morale through teamwork
  - Increasing patient satisfaction
  - Decreasing Foley utilization
  - Promoting early removal of Foley catheters
  - Enhancing understanding of how evidence based practice impacts clinical practice
- Protocol driven care and increased staff awareness has dramatically reduced the incidence of CAUTI on our department
- The department received system wide and Magnet recognition for our successful initiatives

### References

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2. Greene, L., RN, MS, CIC, Marx, J., RN, MS, CIC, & Oriola, S., RN, CIC, COHN. (2008). Guide to the elimination of catheter-associated urinary tract infections (CAUTIs). *Association for Professionals in Infection Control and Epidemiology*, 1-42.
3. Lo, E., MD, Nicolle, L., MD, Classen, D., MD, MS, Arias, K. M., MS, CIC, Podgorny, K., RN, MS, CPHQ, Anderson, D. J., MD, MPH, ... Yokoe, D. S., MD, MPH. (2008). Strategies to prevent catheter-associated urinary tract infections in acute care hospitals. *Infection Control and Hospital Epidemiology*, 29(1), 41-50.

### Results

