

# **Empowering the Clinical Bedside Nurse: Using a Nurse Driven Protocol to Decrease Rate of**

# **Catheter Associated Urinary Tract Infections**

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### **OVERVIEW**

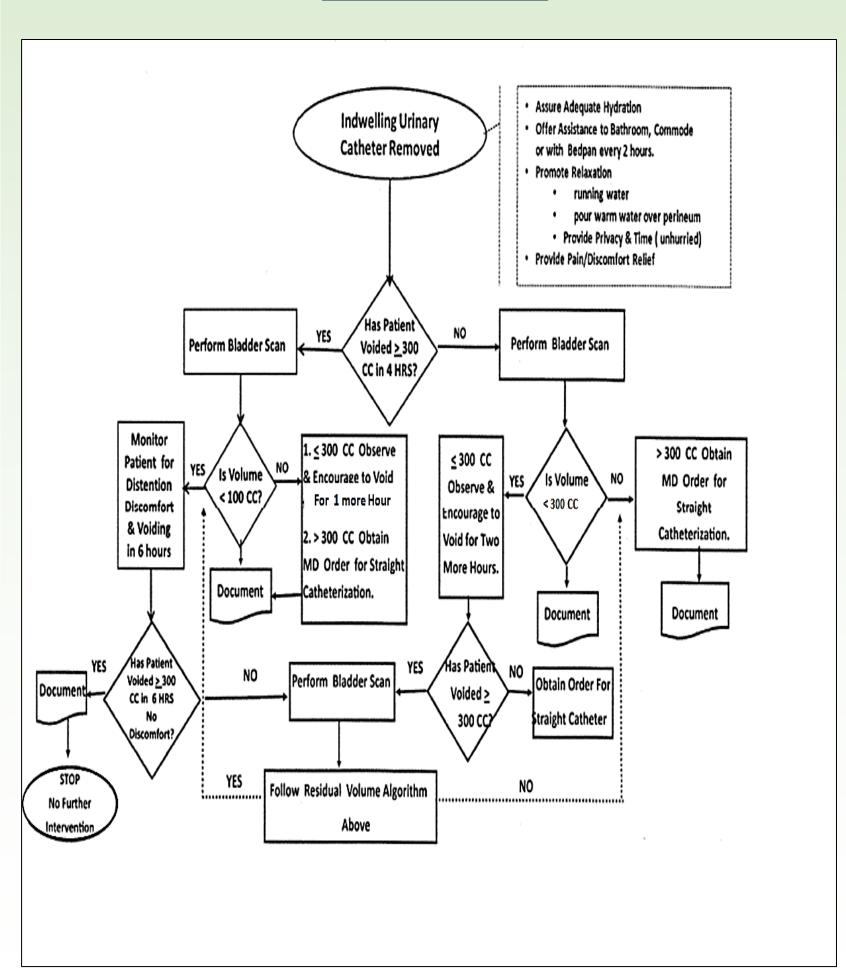
#### **Purpose:**

In 2012, despite a 3 year, multi-modal, interdepartmental effort to decrease indwelling urinary catheter associated urinary tract infections (CAUTIs), initial improvements threatened to stagnate without Nursing empowerment and ownership. The goal was to decrease CAUTIs by 50% over prior years.

#### **Relevance/Significance:**

Hospital acquired urinary tract infections account for approximately 30% of all hospital acquired infections with >75% associated with instrumentation of the urinary tract i.e. indwelling catheters. These infections can lead to complications such as prostatitis, cystitis, pyelonephritis, bacteremia, endocarditis, and meningitis. These complications are associated with discomfort to the patient, increased morbidity, mortality, prolonged length of hospital stay and increased cost.

# PROTOCOL FOR BLADDER SCANNING AND STRAIGHT CATHETER USE

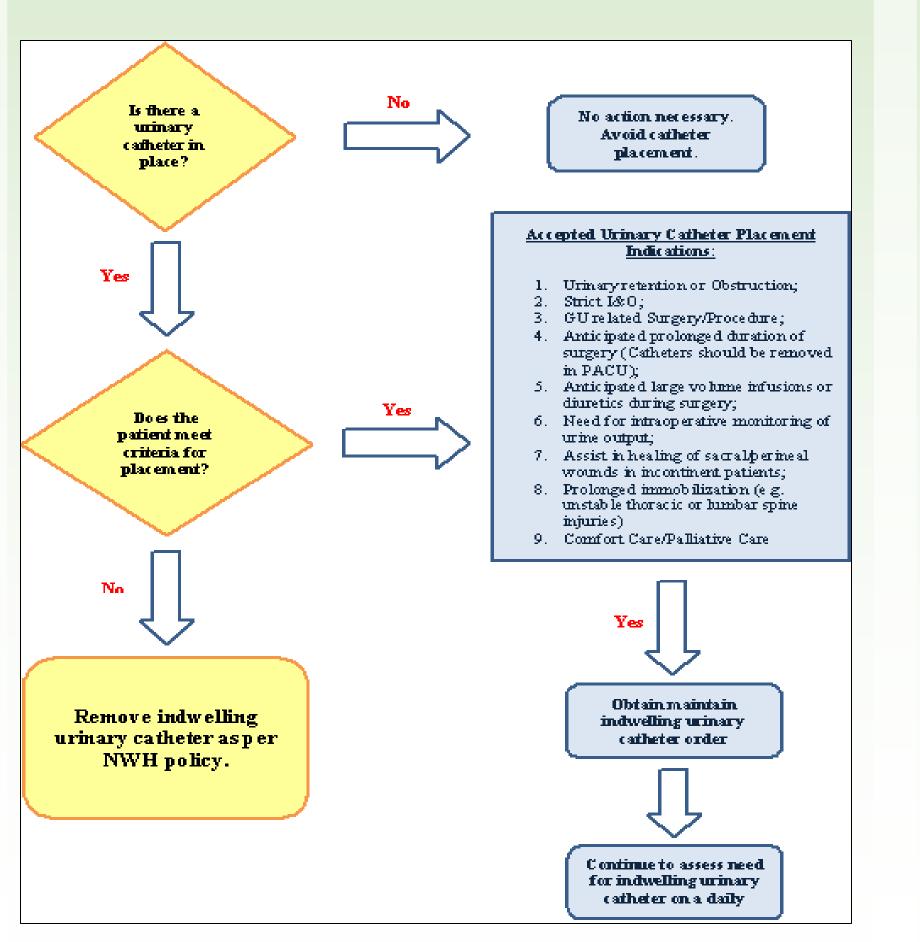


#### **STRUCTURE**

#### **Strategy and Implementation:**

Using the Plan, Do, Study, Act methodology, a multi-disciplinary team researched criteria for insertion, maintenance and removal based upon recommendations from professional organizations (SHEA and Agency for Healthcare Research & Quality-AHRQ). A process flow was developed to guide the clinical RN in the needs assessment for an indwelling urinary catheter. The use of physician order sets including an order to remove the catheter within 48 hours of insertion empowered the RN to remove the catheter in a timely fashion. The success of implementation was monitored through concurrent review by a clinical RN which provided supportive "Just in Time" education for both the nursing and physician staff. After protocol implementation, the data wa reviewed which revealed that a process flow for the use of bladder scanner to reduce catheter reinsertion would be beneficial. The focus on catheter removal was identified as a clinical priority in the organization's Performance Improvement plan, highlighting leadership and commitment.

# GUIDELINES FOR ASSESMENT OF URINARY CATHETER NEEDS



#### **PROCESS**

Catheter associated urinary tract infections (CAUTI) account for approximately 40% of all hospital acquired infections and 18% to 25% of all hospital acquired bacteremia. With an indwelling catheter in place, the daily risk of developing a urinary tract infection ranges from 3-7%. The best way to prevent CAUTIs is to avoid catheterization or, if needed, to remove as early as possible.

Alternative interventions to catheterization should be considered prior to inserting an indwelling urinary catheter.

These include:

- Utilization of a toileting protocol.
- Addressing pain issues.
- Encouragement of ambulation.
- Evaluating and trialing of toilet apparatus-bedpans, fracture pans, urinals, commode, condom catheter.
- Education of patient and family on the risk of infection regarding urinary catheterization.
- Intermittent catheterization in those patients with bladder emptying dysfunction.
- Use of ultrasound (BladderScan) to assess bladder volume thereby reducing need for catheter insertion.
- Indwelling urinary catheters should be placed for appropriate indications and criteria **only** and should remain in place only as long as one or more of the criteria continue to be met. A Physician order required for insertion of an indwelling urinary catheter with the reason for need indicated.

#### These criteria are:

- Need for accurate measurements of urinary outputs in critically ill patients.
- Acute urinary retention (documented by use of BladderScan) or bladder outlet obstruction.
- To assist in healing of open sacral/perineal wounds in incontinent patients.
- To facilitate care in patients who require prolonged immobilization (e.g. unstable thoracic or lumbar spine injuries)
- To improve comfort for end-of-life care.
- Perioperative use for selected surgical procedures:
- a. Urologic surgery or other surgery on contiguous structures of the genitourinary tract;
- b. Anticipated prolonged duration of surgery (catheters should be removed in PACU);
- c. Anticipated large volume infusions or diuretics during surgery

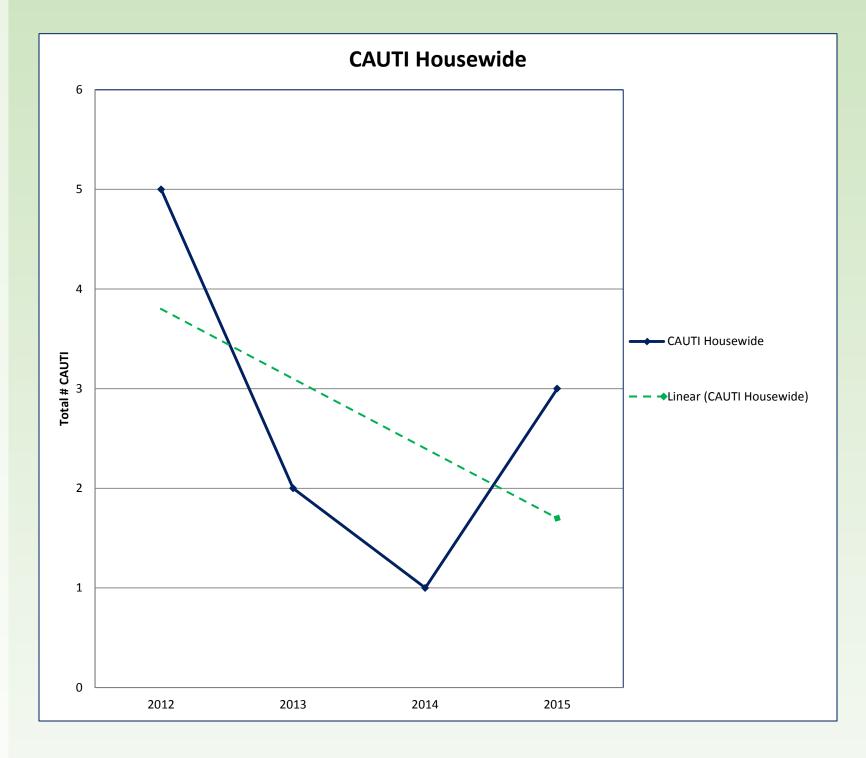
### **OUTCOMES**

#### **Evaluation:**

The data showed over the course of 24 months that a nurse driven indwelling urinary catheter discontinuation protocol was successful in decreasing the incidence of CAUTI with a concomitant reduction in Urinary Catheter Utilization.

#### **Implications for Practice:**

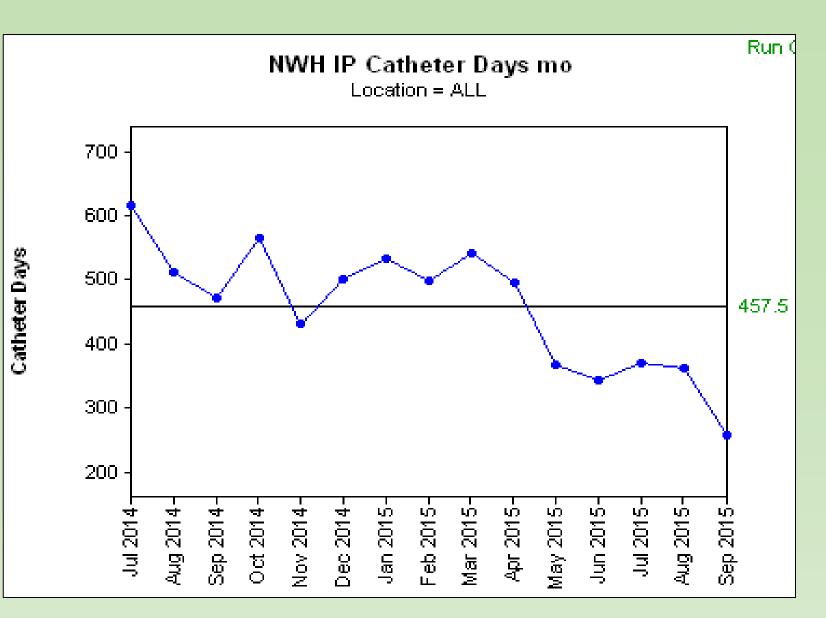
The empowerment of the clinical bedside nurse is pivotal to the success of this initiative. The implementation of a concurrent review process conducted by an RN ensured ongoing compliance and a process to monitor for the inevitable "drift" that occurs after time and changes in staff members.

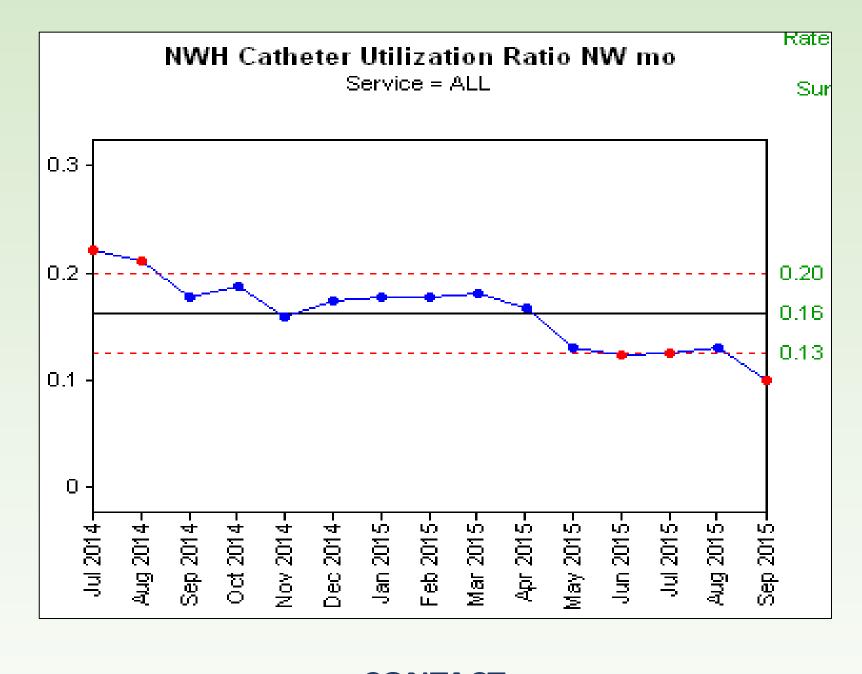


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- 3. SHEA/IDSA Practice Recommendation: Strategies to prevent catheter- associated urinary tract infections in acute care hospitals. October 2008; Vol. 29, Supplement 1.
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## **OUTCOMES**





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