Implementing Catheter Associated Urinary Tract Infection (CAUTI) Prevention Evidence-Based Practices To Improve Nurses’ Knowledge Gain and Documentation Compliance

Kerlene T. Richards DNP RN CCRN

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PROBLEM STATEMENT

- High device utilization ratio (DUR)
- Lack of standardized education on EBP
- Gap in nursing documentation
- Cost of catheter associated urinary tract infection (CAUTI)
- Impact of federal agencies
- Center for Medicare and Medicaid’s role
### DESIGN & METHOD

- Community hospital
- Registered Nurses
- Surveys
- Chart reviews

### PROCESS

<table>
<thead>
<tr>
<th>Step</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td>REDCap Database</td>
<td>CAUTI bundle video module for documentation compliance</td>
</tr>
<tr>
<td>Invitations to all participants</td>
<td>CAUTI prevention web based education session</td>
</tr>
<tr>
<td>Demographic Data collection</td>
<td>Pre knowledge survey via email</td>
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<tr>
<td>Chart audits for documentation compliance</td>
<td>Post knowledge survey via email</td>
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<tr>
<td>Data Collection and Analysis</td>
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**Catheter Care Evaluation Tool**

<table>
<thead>
<tr>
<th>Indication Criteria Documented?</th>
<th>Assessment of Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient has acute urinary retention or bladder distension</td>
<td>Yes/No</td>
</tr>
<tr>
<td>Need for acute management of urinary output in critically ill patients</td>
<td>Yes/No</td>
</tr>
<tr>
<td>To minimize bleeding of open surgical or pressure wounds in patients who are incontinent</td>
<td>Yes/No</td>
</tr>
<tr>
<td>Patient requires prolonged mobilization (e.g., potentially unstable fracture, multiple traumatic injuries such as pelvic fracture)</td>
<td>Yes/No</td>
</tr>
<tr>
<td>To improve comfort for end-of-life care needed</td>
<td>Yes/No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Post-operative care for selected surgical procedures:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Patients undergoing urologic surgery or other surgery on contiguous structures of the genitourinary tract</td>
</tr>
<tr>
<td>2. Anticipated prolonged duration of surgery (catheter inserted for this reason should be removed in PACU)</td>
</tr>
<tr>
<td>3. Patients anticipated to receive large volume infusions or diuretics during surgery</td>
</tr>
<tr>
<td>4. Need for infra-operative monitoring of urinary output</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Physician documented reason Foley should remain greater than 2 pre-operative days:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes/No</td>
</tr>
</tbody>
</table>

| Patient Criteria for Foley not | Yes/No | Foley removal date documented | Yes/No |

**Knowledge-base Survey Tool**

**Urinary catheters are likely to be left in place too long in which patients?**

- A. Elderly with cognitive impairment, confusion and urinary incontinence
- B. Children with urinary incontinence, confusion and cognitive impairment
- C. Younger adults with urinary incontinence, cognitive impairment and confusion
- D. Immunocompromised patients with cognitive impairment and urinary incontinence

**What is the stance of CMS on CAUTIs?**

- A. The CMS no longer reimburses hospitals if the patient is admitted with a CAUTI.
- B. Patients are charged for CAUTIs.
- C. The CMS no longer reimburses hospitals for extra costs of CAUTIs.
- D. CAUTIs are considered unavoidable consequences of catheterization.

**Indwelling urinary catheters should be used:***

- A. To protect an open sacral/perineal wound if patient is incontinent
- B. When a patient cannot communicate a need to void
- C. To prevent wet bedding
- D. To save time for nurses

**What is the key CAUTI risk factor?**

- A. Old age
- B. Duration of catheterization
- C. Incontinence
- D. Female sex

**Nurses are in a position to decrease CAUTIs by:**

- A. Advocating for antibiotic-impregnated urinary catheters
- B. Performing routine bladder irrigations
- C. Implementing nurse-driven catheter removal protocols
- D. Inserting urinary catheters using strict clean technique
RESULTS

Paired Samples t-test on CAUTI Knowledge Scores

Paired Samples t-test on Documentation Compliance

\((Md = 1.08)\) \(p = 0.665\). CAUTI rate = 0

\((Md =48.14)\) \(p <0.0001\)
SUSTAINABILITY

1. Infection prevention taskforce
2. CAUTI prevention champions
3. Ongoing CAUTI prevention education & skills
4. Collaborate with Inter-professional teams
Implications & Recommendations

Implications for practice setting

• Evidence-based practice is the foundation of nursing practice
• Including frontline staff in change increases employee engagement
• Using evidence-based strategies improves patient outcomes.
• Inter-professional collaboration creates transparency, and increases accountability.

Recommendations

• Replicate study using all questions on original survey
• Standardized tool to audit EMR documentation
• Utilize electronic chart surveillance
• Ongoing staff education
Conclusion

1. Implement EBP CAUTI guidelines to standardize workflows
2. EBP can streamline nursing interventions
3. Ongoing education empower nurses
4. Electronic surveillance minimize gaps
5. Partnerships & leadership support facilitate quality outcomes
REFERENCES


