Innovations in Engagement: Sustained Improvements Through Data Driven Education

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Providence Health & Services: Oregon Region
By the end of the presentation, the CNS attendees will be able to:

- Describe approaches to review best scientific evidence and best practices;
- Describe approaches to collection and analysis of baseline data;
- Summarize development of clinical reference guidelines;
- Explain the value of ongoing multi-step education, coaching, peer review and data analysis.

Timeline:
- **2013** Baseline Data
- **2014** Guideline Development
- **2015 Q 1** Education & PEARLS
- **2015 Q 2** Practice Validation via Survey
- **2015 Q 3** Gap Remediation Education
- **2015 Q 4** Competency & Peer Review Re-survey
Background

- Regional data within and between 8 hospitals suggested a wide practice variation for:
  - CAUTI
  - CLABSI
  - Falls
  - Pressure Ulcers

- Opportunity existed to standardize practice by:
  - Introducing EB *Clinical Reference Guidelines* based on best evidence (one-stop):
    - Practice Bundles
      - Procedure, Protocol & Documentation Reference tools
      - Patient/Family Education tools
      - Staff Competencies and Peer Review tools

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**Catheter Associated Urinary Tract Infection (Cauti) Prevention in Adult in Patients**

**Policy**

**Historical Number:**

PO-018-09-V6

**POLICY STATEMENT:**

A. Urinary catheters should only **be inserted when medically necessary, and should be removed as soon as possible. Criteria for appropriate indwelling catheters are:**

1. Obstruction of the urinary tract distal to the bladder or acute urinary retention.
2. Alteration in the blood pressure or volume status requiring continuous, accurate urine volume measurement
3. Preoperative catheter insertion for patients going to the OR as **indicated by procedure.**
4. Patients with an epidural catheter should only be catheterized if ordered by anesthesia or attending surgeon based on nature of patient’s condition and/or surgical procedure.
5. Placed or ordered by Urologist, Gynecologist. (e.g. Continuous bladder irrigation for urinary tract hemorrhage or catheter placement by specialist listed.)
6. Urinary incontinence posing a significant risk to the patient (e.g. major skin breakdown or protection of nearby operative site)
7. Patient requires prolonged immobilization (e.g. potentially unstable thoracic or lumbar spine, multiple traumatic injuries such as pelvic fractures).
8. To permit urinary drainage in patients with Neurogenic bladder dysfunction.
9. If needed for comfort in end-of-life

B. UTI Bundle, the following bundle of interventions should be followed to decrease Catheter Associated Urinary Tract Infections:

1. Daily assessment of continued need for catheter
   a. Assess daily. If no longer medically necessary, request order to discontinue.
Urinary Catheter Removal Algorithm (format 1)

Remove Urinary Catheter

Nursing Care Plan
Encourage po intake
Ensure patent IV if applicable
Encourage prompted voids (q2 hours)
If able, have patient get up to bathroom or on BSC to void every 1-2 hours

No void within 6 hours or if patient has urge to void, but unable to do so at anytime, perform bladder scan:
- a. If Post Void Residual (PVR) is < 300 ml, monitor q hour for spontaneous void for 2 more hours, if still no void, rescan
- b. If PVR is ≥ 300 ml, obtain order for straight catheter

If patient voiding frequently (every hour), perform scan for PVR:
- If > 300 ml, obtain order for straight catheter.

Spontaneously voids < 300 ml within 6 hours or is incontinent, perform bladder scan:
- a. If PVR is ≥ 300 ml, obtain order for straight catheter.
- b. If PVR is < 300 ml and patient is voiding q2, continue with Nursing Care Plan and monitor q 4 hours x 24 hours

Spontaneously voids > 300 ml within 6 hours, continue to monitor q4h x24 hours

Addendum B

Urinary Catheter Removal Algorithm (format 2)

Step 1: Remove Urinary Catheter

Step 2: Nursing Care Plan
- Encourage po intake
- Ensure patent IV if applicable
- Encourage prompted voids (every 2 hours) during routine rounding
- If able, have patient get up to bathroom or on BSC to void every 1-2 hours

Step 3: No void within 6 hours or if patient has urge to void, but unable to do so at anytime, perform bladder scan:

NOTE: Determine straight catheter frequency by comfort and to maintain total bladder volume < 300 ml. Minimize frequency of straight catheters to minimize infection risk. Limit number of straight catheter procedure to 3.

Call MD if:
- Patient not making adequate amount of urins (≥ 30 ml/hour)
- Patient has not spontaneously voided in 8 hours
- PVR remains < 300 ml and patient is unable to void after two bladder scans
- PVR remains > 300 ml after 2 voids and 2 bladder scans
Catheter-associated urinary tract infections: Preventing harm

**Important points to remember:**

- CAUTI are largely preventable through application of effective strategies to reduce infection.
- Success in reducing CAUTI include changing both practice patterns and the establishing a culture of prevention and safety for patients.

**Pre-insertion checklist:**

- Consider lower-risk straight catheterization or condom catheters and/or female urinals.
- Place under sterile conditions and for only when indicated:
  - Perioperative procedure of continuous bladder irrigation
  - Obstruction/retention when lower risk interventions not effective
  - Prolonged immobilization when lower risk interventions not effective
  - Open perirectal wounds
  - Need hourly output for critically unstable patient
  - End-of-life care

**Daily management checklist:**

- Strict hand washing before manipulation of catheter
- Ensure securement device is in place
- Pericatheter care BID; keep drainage system closed, free of kinks, and bag lower than insertion level and off the floor.
- Remove catheter if no longer meets criteria per protocol
Methods

- Introduced Practice Bundles
- Initial practice validation survey
- Tailored education to missing bundle practices from survey
- Nurse Educators in each nursing unit to re-inforce missing bundle components
- Analysis of CAUTI rates previous 12 months to determine
  - Who would participate in Competency vs Peer Review?
- Implemented Competency Assessment and Peer Review
- Repeat practice validation survey
- Follow infections through root and common cause analysis
Outcome Data from Prevalence Survey

- Gaps found in Bundles during prevalence study: EMR Review and interview of nursing staff
  - Appropriate use and removal of indwelling catheters
  - Peri-care documentation absent
  - Orders missing for Foley from ER and PACU
Targeted Education

- Re-educated to bundle gaps only
- Bed-side coaching and modeling in how to close bundle gaps (PEARLS)
- Immediate root cause analysis with each catheter associated infection
- Common cause analysis of all catheter associated infections for practice problem sharing across the region
PEARLS
CAUTI Prevention (HTPP)

Observer: ______________________  Facility: ______________________  Unit: ______________________  Date: ______________________

Directions:
1. Ensure staff member knows the survey is evaluating the education, not the nurse (responses to confidential names aren’t tracked).
2. Read the ask questions and record their response. If there are notes, please include them below and associate the notes with the nurse’s number (e.g., RN 3 said the presentation wasn’t clear but they took it a long time ago and didn’t remember the answer).

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
<th>RN 1</th>
<th>RN 2</th>
<th>RN 3</th>
<th>RN 4</th>
<th>RN 5</th>
</tr>
</thead>
</table>
| **ASK:** Have you completed the Healthstream module on the Hospital Transformation Performance Program (HTPP)? If not, have you heard of this program?  
  - It is not important that they know this program by the name – HTPP. They may recall the Healthstream or they may recall it being mentioned in one of the clinical practice advisories. | Yes – they appear familiar with the HTPP program |     |     |     |     |     |
| **ASK:** Can you name at least 4 of the 6 criteria that should be met prior to Foley Catheter insertion?  
  - Pre-surgical procedures or continuous bladder irrigation  
  - Obstruction/Retention when other lower risk interventions not effective  
  - Prolonged immobilization when lower risk interventions are not effective  
  - Open per-rectal wounds when other interventions are unsuccessful  
  - Need for hourly urine output for critically unstable patients  
  - End of life care (avoid urinalysis & cultures) | Answered correctly (all points) |     |     |     |     |     |
| **ASK:** Can you identify at least 4 of the 8 daily practices which reduce the risk of catheter associated infection?  
  - Sterile technique including hand hygiene prior to insertion & in daily | Answered correctly (all points) |     |     |     |     |     |
Embedding Practice

- Competency evaluation
- Considering Peer to Peer review of daily practice
- Embedding check-lists into daily huddles and optimizing nurse driven protocol
- Weekly coaching with at risk units
- Hard-stops to prevent inappropriate use of catheters seeping into inpatient settings from ER, PACU, and other specialty areas
### HTPP Check-In Tool for Charge Nurse

<table>
<thead>
<tr>
<th>Foley Catheter</th>
<th>Central line/PICC</th>
<th>Help at home</th>
<th>New medication side effects</th>
<th>Safety</th>
<th>Critical incidents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who has a Foley?</td>
<td>Who has a CL/PICC?</td>
<td>Have you asked if your patient will need help when they go home?</td>
<td>Are you giving any new medications today to patients?</td>
<td>Who is a risk to fall?</td>
<td>In the last 24 hrs. Is there an issue we need to know about to be safe?</td>
</tr>
<tr>
<td>How long has been in?</td>
<td>How long has been in?</td>
<td>Have you contacted care management for needs?</td>
<td>Have you introduced the side effect sheet?</td>
<td>List:</td>
<td>List:</td>
</tr>
<tr>
<td>Do they meet criteria?</td>
<td>Do they meet criteria?</td>
<td>When patients do not have a solid transition plan they are often re-admitted.</td>
<td>When new drugs are started there often are safety issues, i.e. increased risk of falling, bleeding, acute confusion, dizziness, associated with those drugs.</td>
<td>Risk for violence?</td>
<td>Is there a safety issue I need to raise for the next shift?</td>
</tr>
</tbody>
</table>

- peri-surgical procedure
- continuous bladder irrigation
- obstruction/retention
- prolonged immobilization
- need for peri-rectal wound healing
- patient requires hourly urine outputs in critical care & data will drive plan of care
- End-of-life care.
If no, initiate removal protocol per order

<table>
<thead>
<tr>
<th>Manager/Charge Nurse Verification</th>
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<th>Manager/Charge Nurse Verification</th>
<th>Manager/Charge Nurse Verification</th>
</tr>
</thead>
<tbody>
<tr>
<td>In room:</td>
<td>In room:</td>
<td>Verify with patient &amp; family that we are meeting their needs when transitioning care to home.</td>
<td>Round on Unstable or at risk patients.</td>
<td>Follow-up with staff and patient/family</td>
</tr>
<tr>
<td>1. MD order</td>
<td>1. Central Line need verified &amp; documented in EMR</td>
<td>1. Start with first dose of medication and have every other nurse who follows reinforce the SE (include in Handover)</td>
<td>1. *F/U in room with patient that they got information.</td>
<td></td>
</tr>
<tr>
<td>2. Valid reason documented</td>
<td>2. Transparent dressing clean, dry, intact; CHG disc in place/dated</td>
<td>2. Know who helps the patient with medications/incl</td>
<td><strong>Manager/Charge Nurse Verification</strong></td>
<td></td>
</tr>
<tr>
<td>3. Securement device in place</td>
<td>3. End Caps &amp; Tubing changed every 96 hours or 24 with lipids/TPN &amp; after blood products or when blood is visible</td>
<td></td>
<td><strong>Manager/Charge Nurse Verification</strong></td>
<td></td>
</tr>
<tr>
<td>4. Patient not laying on device</td>
<td>4. Hand hygiene &amp; gloves prior to manipulation</td>
<td></td>
<td><strong>Manager/Charge Nurse Verification</strong></td>
<td></td>
</tr>
<tr>
<td>5. Bag &amp; tube placed to prevent backflow</td>
<td>5. Scrub the Hub with juicing motions 15 seconds; allow to dry before each access</td>
<td></td>
<td><strong>Manager/Charge Nurse Verification</strong></td>
<td></td>
</tr>
<tr>
<td>6. Bag closed, off floor</td>
<td>6. Central Lines Days Tracked on</td>
<td></td>
<td><strong>Manager/Charge Nurse Verification</strong></td>
<td></td>
</tr>
<tr>
<td>7. Catheter days tracked on white board</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>8. Patient/family education</td>
<td></td>
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<tr>
<td>Assign peer coaching as indicated to observe</td>
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</tr>
</tbody>
</table>

- At Risk Patients: Notable:
# Expectations About Check List

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Regional Bundle</th>
<th>Indicator</th>
<th>Bundle</th>
</tr>
</thead>
</table>
| **CAUTI**   | MD order with associated protocol acted upon  
Valid reason for Foley documented  
Catheter securement device in place and patient not laying on device  
Bag & tub placed to prevent backflow into bladder on bag closed and not on floor  
Perineal cleansing documented every 12 hours  
Dwell time tracked                                                                                                                                 | **Side Effects** | Start with first dose of medication and have RN who follows reinforce the SE  
Know who helps the patient with medications/including family in teaching  
Focus on PRNs that puts the patient at risk if unsure, like hypnotics, narcotics, coags  
Side effects tool does not substitute for conversation with patients |
| **CLBSI**   | Central line verification of need  
Transparent Dressing C,D & I:  
CHG disc in place  
End-cath & tubing changed q 96 hrs, 24 with lipids, filter blood products or when visible  
Hand-hygiene prior to touch  
Scrub the hub  
Central line days tracked                                                                                                                                                        | **Discharge Questions** | Start early about asking and include family members/care takers  
Use during usual care  
Don’t be afraid of the answer  
Reinforce the s/s that place patients at risk |
Introducing Tools

<table>
<thead>
<tr>
<th>Name of Facility</th>
<th>Name of Unit</th>
<th>Date</th>
</tr>
</thead>
</table>

**What we are doing currently**

<table>
<thead>
<tr>
<th>CLABS</th>
<th>CAUTI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content goes here</td>
<td>Content goes here</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Discharge information</th>
<th>Communication about Meds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content goes here</td>
<td>Content goes here</td>
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</table>

**Title of Chart**

<table>
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<tr>
<th>Content goes here</th>
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</table>

**What we caused ...**

<table>
<thead>
<tr>
<th>We caused a ...</th>
<th>What we should have done?</th>
<th>What did we miss?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content goes here</td>
<td>Content goes here</td>
<td>Content goes here</td>
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</tbody>
</table>

**Lasting impact**

<table>
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**Staff assigned to ...**

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</table>
### Single Point Lessons

#### Hospital Transformation Performance Program

**Patients' understanding of new medications and possible side effects: Keeping patients safe**

**Important points to remember:**
- Make sure the patient is aware of the medication and its purpose.
- Provide education on the side effects and appropriate use.
- Follow up with the patient to ensure understanding.

#### Role of the direct care nurse

The direct care nurse is responsible for the supervision of the nursing care for each patient. A registered nurse must evaluate the care for each patient upon admission and on an ongoing basis. Evaluation would include assessing the patient's needs, patient health status, and the potential harms due to the medication. The registered nurse will then coordinate with other healthcare providers to ensure the patient receives the appropriate care.

#### Role of the care manager

The care manager works collaboratively with patients, direct care nurses, the interdisciplinary team, caregivers, and other community resources and agencies. They are responsible for ensuring a smooth transition to the next level of care. Specifically, this includes:
- Assessing the patient's needs and prioritizing care.
- Coordinating care with various healthcare providers.
- Communicating effectively with the patient and their caregivers.

#### RN discharge screening components

The following additional discharge needs screening data are collected within 24-hours of patient admission:
- Functional and mental capacity
- Living arrangements
- Equipment currently used
- Medication administration
- Transportation
- Follow-up appointment
- Medication reassessment

#### CM discharge screening components

All patients are screened for the need for care management intervention within 24 hours of admission (MI) and an initial assessment is performed on patients meeting the following criteria:
- No MCI
- Diagnoses: COPD, CHF, COVID, Diabetes, CVA
- Trauma, substance addiction, new cancer diagnosis
- Patient age > 75
- No insurance
- Homeless/lack of support system
- Change in functional status
- Admitted with tubes, ostomies, or lines
- Referral from any source

### Payment for Performance Penalties (not meeting quality metrics)

One HTPP focus is on care transitions management. Needing help at home. Understanding of DC instructions and medication adherence.
Infection Outcome Data

REGIONAL CAUTI RATE

- 2013 Baseline Data
- 2014 Guideline Development
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Next Steps for Improvement

- Guideline for managing Fecal Incontinence when Foley in place
- Improve comfort level with alternatives such as straight catheterization
- Population based interventions: NCCU and use of impregnated catheters
- Posting Critical Incidents with result of the infection on affected unit. Includes RCA, lasting impact to patient, and staff who cared for the patient
Questions?

Thank You!