Insert with Competence!
Make perfect catheter insertion the easy thing to do

A CAUTI Action Network Prevention Series Webinar
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CAUTI Prevention Pillars

Avoidance
Removal
Insertion
Maintenance
Patient Story

69 Female w/ metastatic breast cancer & recurrent pleural effusions

1/10 D/C from hospital after thoracentesis and chest tube placement

1/11 Chemo treatment

1/16 Admitted w/ SOB, arrhythmias
Patient suggests “Foley catheter might be a better option”
RN gets order and inserts Foley

1/21 Worsening hypoxia, increased tachycardia, fever 100.5
Urine culture grows ecoli & enterococus faecalis, both > 100,000 CFU/ML
Hospital acquired CAUTI

Defect Analysis: What could have prevented this CAUTI?
Guiding Principle

Insert urinary catheter using aseptic technique

• If you did a catheter insertion shadow audit today, what would you find?

Best Practice in Insertion Technique

1. Utilize appropriate hand hygiene practice
2. Insert using aseptic technique & sterile equipment
   – Gloves, a drape, and sponges
   – Sterile/antiseptic solution for cleaning urethral meatus
   – Single-use packet of sterile lubricant jelly for insertion
3. Use as small a catheter as possible
4. Catheter secured
5. Sterile closed drainage system

Education, Training, & Assessment

- Train and verify competency of all clinical staff who may insert urinary catheters
- Do not assume staff are competent
- Standardized education/training materials
- Periodic re-training or assessment

Approach at St. Joseph Regional Medical Center (SJRMC)
ST. JOSEPH REGIONAL MEDICAL CENTER
Lewiston, Idaho

URINARY CATHETER BUNDLE

PURPOSE
Establish a standardized methodology of insertion and maintenance of urinary catheters in order to gain better control over the variables that influence complications associated with urinary catheters, especially urinary tract infections, and to improve the urinary tract infection outcome performance at St. Joseph Regional Medical Center.

BACKGROUND
A comprehensive literature search has been completed associated with management of urinary catheters. Policies and procedures of the Medical Center have been reviewed to evaluate their consistency with the best practice standards represented in the literature.
SJRMC Story Highlights

- Catheter bundle implemented > 5 yrs ago; CAUTIs have decreased >83%
- Online nursing education and testing
- Monthly reports to units
- Case review process, as events are rare
- OR/ER place most, perform well
- Culture of safety among frontline staff
- Ascension Health activities
Preventing Catheter-Associated Urinary Tract Infections

By inserting with competence

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UTI Reduction:
Yes, ZERO is Possible

MultiCare Health System

4 Hospitals – Pierce County
- Tacoma General 334 beds
- Mary Bridge Children’s Hospital 72 beds
- Allenmore Hospital 75 beds
- Good Samaritan 278 beds
Change using PDSA: Six-Sigma

- Deming cycle, or PDSA cycle:
  - **PLAN**: Plan ahead for change. Analyze and predict the results
  - **DO**: Execute the plan, taking small steps in controlled circumstances
  - **STUDY**: Check, study the results
  - **ACT**: Take action to standardize or improve the process.
**P: 5R was the target!**

**D: Intervention: 5R Starting 9/1/07**

- IC Practitioner met with Clinical Director of 5R then staff
- **Strategy developed:**
  - **ID all active infections at admit (ASAP <48 hrs)**
  - Collect urines for culture if suspected UTI ASAP – Use the UTI Algorithm. Order from physician ASAP after collection (48hr “golden period”)
  - DO NOT culture everyone, only those who meet S&S.
- **Heightened awareness by all staff**
  - Cultures started earlier
  - Antibiotics started earlier
  - Patients discharged earlier
- **Increased vigilance for HAI**
  - Unit level goals
  - Post infection rate charts on the unit
  - Monitor performance/provide feedback

<table>
<thead>
<tr>
<th>Month</th>
<th>UTI Rate</th>
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<tbody>
<tr>
<td>Jan 07</td>
<td>10</td>
</tr>
<tr>
<td>Feb 07</td>
<td>8</td>
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<tr>
<td>Mar 07</td>
<td>6</td>
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<td>Apr 07</td>
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<td>Jun 07</td>
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</tr>
<tr>
<td>Jul 07</td>
<td>2</td>
</tr>
<tr>
<td>Aug 07</td>
<td>4</td>
</tr>
</tbody>
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For patients in multiple locations or the estimated acquired date, the UTI rate is counted once for each of the locations.
S: Initial Success!

1st intervention

![Graph showing decrease in infection rate after intervention.]

A: Report results

- Staff meetings
- Post chart in unit!
- Explain changes
- Whoo Hooo! Success! Party!
- Ask staff.....what’s next? Next steps?
- Keep going.....get to ZERO!

PDSA! All over again
Creating the “UTI Bundle”

• Identify infections on admit
• Avoid unnecessary urinary catheters
  – NO “convenience” Foleys
• PERFECT Foley insertion technique (much unit-based education provided!)
• PERFECT Foley Care
• GET THEM OUT ASAP!

UTI Bundle Education

• In-services: power point education WITH a post test (Copy included)
• Bard video- Preventing UTI: Care and Catheterization Technique
• Skills day (competency verification) with RNs demonstrating insertion techniques
• RCAs
• Case reviews at staff meetings
• Now a required competency for all new staff
From the ED PP: Prior to Insertion: Is this catheter truly necessary?

- **Studies:**
  - 21% of catheters not indicated at insertion
  - 41-58% in place found to be unnecessary
- **Catheters**
  - Are uncomfortable for patients
  - Decrease mobility, which may impair recovery and contribute to other complications (e.g., pressure ulcers, deep vein thrombosis)

From the ED PP: Indications for Indwelling Urinary Catheters

**ONLY to be placed for medical reasons**
- **Hemodynamic:** Critically ill or post-op patients who need urine output measured accurately
- **Obstruction:** Anatomic or physiologic outlet obstruction
- **Retention:** Surgical, postpartum
- **Neurological:** Debilitated, paralyzed, or comatose patients
From the ED PP: Catheters and UTIs

• 3 “Ports of Entry”
  – Catheter / Meatal Junction
  – Catheter / Tube Junction
  – Outlet Tube

From the ED PP: Appropriate technique for catheter insertion

• Utilize appropriate hand hygiene practice.
• Insert catheters using aseptic technique and sterile equipment, specifically using:
  – gloves, a drape, and sponges;
  – sterile or antiseptic solution for cleaning the urethral meatus; and
  – single-use packet of sterile lubricant jelly for insertion.
• Use as small a catheter as possible that is consistent with proper drainage, to minimize urethral trauma.
From the ED PP:
Tips to remember

- Prepare all items “in the boxed kit” prior to touching patient
- Use the tongs provided and **not your hands** when both preparing cotton balls and cleaning patient on initial insertion
- Obtain assistance for heavier patients - to ensure adequate room between legs and aseptic technique for cleaning and insertion of the catheter

From the ED PP:
More tips....

- Do not inflate balloon with more than 10cc on initial insertion (can cause further urethral trauma and blockage of periurethral glands)
- Do not inflate balloon to “test” prior to insertion
  - All catheters have passed QC prior to packaging
  - This practice actually **creates micro tears in balloon fiber that can cause urethral irritation and provide places for bacteria to grow**
- Silver impregnated foley catheters have been proven to reduce CAUTIs by reducing Biofilm formation **, BUT......**
From the ED ppt:

NOTHING takes the place of good Nursing and Foley care!

Skills Day

- (2) 8 hr days – different start times to accommodate all 3 shifts
- Mandatory
- Nearly 100% participation
- Used female/male pelvic mannequins for return demo in simulated environment.
- Identified and addressed misconceptions and wrong practices:
  - Breaks in aseptic technique
  - “we’ve always done it this way”
  - Convenience Foley
  - “testing” the balloon before the insertion
ADVANCE Peri-Care Prior To Catheterization

- Because Proper Hygiene Can Vary From Patient To Patient, The Clinician May Need To Clean The Patients Perineal Area.

- New Tray Will Feature A Packet Of 3 Aplicare Castile Soap Wipes To Allow For Proper Cleansing Prior To Catheterization.

- Castile Soap Is An Effective Cleaning Agent Long Known For Its Purity And Mildness.

ADVANCE Protection for the patient and health care worker

Antiseptic Gel Hand Rinse Included In The BARD ADVANCE Foley Tray

- Used After Peri-urethral Cleansing

- Aplicare Packet: 62% Alcohol Gel Hand Rinse.
ADVANCE  Convenience For The Health Care Worker

- 3 Pre-saturated Applicare Povidone-iodine Swab Sticks In A Single Package
- To Be Used For One Pass Over The Insertion Site Each & Then Discarded

5R Success and Sustainability

5R From the start

# Days since last UTI= 403
(as of 1/30/12)

Intervention #1
education, start bundle

Intervention #2
Bundle work + reeducation

Intervention #3
Re-education, urine tubes, refining bundle

Continuous Education/updates
Statistically Significant Results*:

- Pre-intervention:
  - UTI rate = 1.91/1000 patient days (PD)
- Post-intervention 2008:
  - UTI rate = .70/1000 PD
- Current 2011:
  - UTI rate 0.0215/1000 PD
- The intervention provided a 98.87% decrease*
  - (p< 0.000001)
Discussion

• What excited you about what you heard?
• What can you do “by next Tuesday”
• What might get in your way?
• Any offers/requests?

Next Up in the Series

- Avoidance: Jan 19, 2012
- Insertion: Feb 16, 2012
- Maintenance: Mar 15, 2012
- Removal: Apr 26, 2012
Thank You

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