CAUTI Strategies for Improvement: Mining the Most Recent Evidence

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Objectives

- Discuss the most recent evidence related to CAUTI prevention
- Identify common barriers to CAUTI prevention practices
- Identify best practices to overcome barriers
What’s in Recent Literature?

- More data on ED - most catheters are inserted here
- Appropriateness and early removal
- Correct insertion
- Meatal care
- Culturing stewardship
- Patient and family engagement
- Socio- adaptive aspects

Evidence-Based Guidelines to Reduce CAUTI

http://nursingworld.org/ANA-CAUTI-Prevention-Tool
Avoiding Unnecessary Placement

A 68-year-old male with a history of Alzheimer’s dementia and incontinence presents with failure to thrive. A Foley catheter is placed due to the patient’s incontinence and fall risk. Three days after admission while awaiting placement in a skilled nursing facility (SNF), he develops a urinary tract infection (UTI) complicated by delirium delaying his transfer to the SNF. What could have been done to prevent this complication?

What's wrong with this story?
Nurse-directed interventions to reduce catheter-associated urinary tract infections

Kathleen S. Oman RN, PhD, FAEN, FAAN^a,b,1, Mary Beth Flynn Makic RN, PhD, CNS, CCNS^a,b,1, Regina Fink RN, PhD, AOCN, FAAN^1, Nicolle Schraeder RN, MS^1, Teresa Hulett RN, BSN^1, Tarah Keech MA^1, Heidi Wald MD, MSPH^1

^aUniversity of Colorado Hospital, Aurora, CO
^bUniversity of Colorado College of Nursing, Aurora, CO
^cNursing Intensive Care Unit, University of Colorado Hospital, Aurora, CO
^dDivision of General Internal Medicine, University of Colorado Denver, Denver, CO

Steps

Examine the following:

- (a) IUC materials, sizes, kits, drainage bags;
- (b) catheter securement devices;
- (c) urinals and bedpan availability;
- (d) commodes (availability and size);
- (e) bladder scanners; and
- (f) alternatives (incontinence pads, condom catheters, and others).
The diagnoses with the greatest variability in practice regarding whether an IUC is necessary, unnecessary, or dependent on the situation were:

- congestive heart failure
- immobility
- hip fracture
- incontinence
- patients admitted to the surgical service but not immediately bound for the operating room
- trauma

DOI: 10.1016/j.ajic.2014.12.008
Other indications for urinary catheter:
- Urinary retention/obstruction?
- Immobilization needed for trauma or surgery?
- Incontinent with open sacral/perineal wounds?
- End of life/hospice?
- Chronic or existing catheter use?
  - Re-evaluate need and discuss with provider

Insert catheter and treat signs of shock:
- Hypotension
- Decreased cardiac output/function
- Decreased renal function
- Hypovolemia
- Hemorrhage

Re-assess after intervention

Do NOT insert
Explore alternatives

Still critically ill, requiring accurate output measurement?

Insert or maintain catheter

Remove catheter prior to admission

Implications for Clinical Practice

- Catheter associated urinary tract infections (CAUTIs) put an unnecessary burden on patients and health care systems
- Identification of interventions with the greatest positive impact on CAUTI rates would be an asset to healthcare professional caring for patients with an indwelling catheter and nurse clinicians developing policies
- CAUTIs cause an increased financial burden on health care facilities
- This integrative review has shown that studies with interventions that included daily review of catheter necessity or early discontinuance of urinary catheters (less than seven days) were successful in decreasing the CAUTI rates with statistical significance.
- Evidence supports that ICU patients should have urinary catheters removed when no longer medically necessary
- A multidirectional approach that includes evidence-based practices recommended by the Centers for Disease Control and Prevention, the implementation of the Institute of Healthcare Improvement’s bladder bundle and increasing the knowledge base of patient care providers is essential to decrease CAUTI events
### Studies

| Authors | To develop a nurse driven protocol to decrease CAUTIs | Design: Quasi-experimental Setting: Neurosurgical intensive care unit (NSICU). Sample: n = 183 patients with urinary catheters n = 107 NSICU nurses | Protocol developed/interventions included: (1) Criteria based discontinuation of catheters (stop orders). (2) Bladder ultrasonography to prevent needless catheterizations. (3) Use of intermittent catheterization to reduce indwelling catheter days. (4) Computer based education provided to nurses prior to protocol implementation to assess competency with performing sonograms and interpreting results. a written multiple choice scenario-based test to measure knowledge acquisition of the protocol, and a 15 item checklist used during simulation to assess proficiency in performing bladder ultrasound procedures. | Catheter duration decreased by 2.5 days. Average catheter utilization increased from 74.1% to 76.2%. CAUTI rate decreased from 3.85 to 3.06 per 1000 catheter days (20%). CAUTIs per month decreased 14.1%. Average cost of medications and supplies associated with CAUTI decreased by 40.7%. Average LOS for patients with CAUTI increased by 8.14% during. Nurses: 86% (n=96) completed simulation with a 100% proficiency in sonogram technique. 92% (n=102) received a post education test score of 90% on sonogram procedure and interpretation. 85% (n=95) completed exam measuring knowledge acquisition of protocol with an average test score of 95%. |

<p>| Authors | To determine if a reminder approach reduces use of urinary catheters and incidence of CAUTIs | Design: Random Control Trial (RCT) Setting: 2 respiratory ICUs Sample: n = 278 patients | Intervention group – use of a criteria-based reminder to remove the catheter. Control group – no reminder | Utilization rate of indwelling catheter decreased by 22%. The intervention decreased the median duration of catheterization (7 days verses 11 days for the control group). The success rate for removing the catheter in the intervention group by day 7 was 88%. |</p>
<table>
<thead>
<tr>
<th><strong>Conway et al., Am J Infect Control, 2012</strong></th>
<th><strong>Design:</strong> Secondary data analysis data retrieved from the National Healthcare Safety Network (NHSN) data.</th>
<th><strong>None</strong></th>
<th>41.2% was from North East region of the US. 42.2% (n=174) ICUs reported having at least 1 of the 4 CAUTI policies in place: Bladder ultrasonography 26%, condom catheter use 20%, catheter removal reminders 12%, nurse initiated discontinuation 10%. ICUs in larger hospitals &gt;500 beds were half as likely to have adopted at least 1 policy (odds ratio, 0.52; 95% confidence interval: 0.22-0.86). ICUs in hospitals where the infection control director had access to key decision makers for planning were more than twice as likely as those with less access to have adopted a policy (odds ratio, 2.41; 95% confidence interval: 1.56-3.72).</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Navoa-Ng et al., J Infect Public Health, 2013</strong></td>
<td><strong>Design:</strong> Quasi-experimental. <strong>Setting:</strong> 4 adult ICUs in 2 hospitals in Philippines. <strong>Sample:</strong> ICU patients (n = 3183).</td>
<td><strong>Implementation of the infection control bundle:</strong> (1) To perform hand hygiene before insertion and manipulation of UC. (2) Keep collection bag lower than the level of the bladder. (3) Maintain unobstructed urine flow. (4) Empty collection bag regularly and avoid allowing the draining spigot to touch the collection container. (5) To monitor CAUTIs using standardized criteria to identify patients with CAUTIs and to collect UC days as denominators.</td>
<td>A total of 8720 UC days were recorded: 819 at baseline and 7901 during intervention. The rate of CAUTI was 11.0/1000 UC-days at baseline and was decreased by 76% to 2.66/1000 UC-days during intervention [rate ratio (RR), 0.24; 95% confidence interval (CI), 0.11-0.53; P value, .0001].</td>
</tr>
<tr>
<td>Study</td>
<td>Design</td>
<td>Setting</td>
<td>Sample</td>
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<tr>
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<tr>
<td>Leblebicioglu et al., <em>Am J Infect Control</em>, 2013</td>
<td>Quasi-experimental</td>
<td>13 ICUs in 10 hospitals in Turkey</td>
<td>ICU patients ($n = 4231$)</td>
</tr>
<tr>
<td>Kanj et al., <em>Int J Infect Dis</em>, 2013</td>
<td>Quasi-experimental</td>
<td>Tertiary University Medical Centre in Lebanon</td>
<td>ICU patients ($n = 1506$)</td>
</tr>
</tbody>
</table>
Chasing Zero Infections: Strategies to Reduce CAUTI & CLABS

Summary

- Multi-faceted campaign
- Focus on engagement of nursing and physician staff
- Significant decrease in rates and device utilization
Appropriateness Criteria

Annals of Internal Medicine 2015; 162: S1- S34

Meddings

- 15 member multidisciplinary panel
- 299 scenarios
- Rated 105 Urinary Catheter (UC) scenarios:
  43 appropriate, 48 inappropriate, 14 uncertain
Criteria

Reviewed and rated criteria when:

- Appropriate measuring and collecting cannot be assessed by other means
- UC’s may be appropriate to manage urinary incontinence in select patients

Appropriate Indications

<table>
<thead>
<tr>
<th>Criterion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute urinary retention without bladder outlet obstruction (i.e. medication related urinary retention)</td>
</tr>
<tr>
<td>Acute urinary retention with bladder outlet obstruction due to non infectious, non traumatic causes</td>
</tr>
<tr>
<td>Chronic urinary retention with bladder outlet obstruction</td>
</tr>
<tr>
<td>Stage 3 or 4 or unstageable pressure ulcers or otherwise similarly severe wounds that cannot be kept clear of incontinence despite wound care and other urinary management strategies</td>
</tr>
<tr>
<td>Urinary incontinence in patients who nurses find it difficult to provide skin care despite other urinary management strategies and available resources (i.e. turning causes hemodynamic or respiratory instability, strict prolonged mobility such as unstable spine or pelvic fracture, strict temporary immobility such as vascular catheterization, or excess weight (&gt; 300 lb) from severe edema or obesity)</td>
</tr>
<tr>
<td>Hourly measurement of urine that is needed to provide treatment and cannot be assessed by other urine collection methodologies</td>
</tr>
</tbody>
</table>
### Inappropriate Indications

<table>
<thead>
<tr>
<th>Indication</th>
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</thead>
<tbody>
<tr>
<td>Urinary incontinence when nurses can turn/provide adequate skin care</td>
</tr>
<tr>
<td>including intact skin, dermatitis, stage 1 or 2 pressure ulcer and closed</td>
</tr>
<tr>
<td>deep tissue injury</td>
</tr>
<tr>
<td>Routine use in ICU without indication</td>
</tr>
<tr>
<td>Foley placement due to risk for fall</td>
</tr>
<tr>
<td>Post-void residual urine volume assessment</td>
</tr>
<tr>
<td>Random 24 hour urine collection samples for sterile or unsterile specimens</td>
</tr>
<tr>
<td>Patient/family request with not other urine difficulties in non-dying patient</td>
</tr>
<tr>
<td>Patient ordered bedrest without strict mobility criteria</td>
</tr>
<tr>
<td>Preventing urinary tract infection in patients with fecal incontinence or</td>
</tr>
<tr>
<td>diarrhea; or painful urination in patients with urinary tract infection</td>
</tr>
</tbody>
</table>

### External Catheter

**Guide for external catheter use in medical patients**

**Appropriate Indications**

<table>
<thead>
<tr>
<th>Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 3 or 4 unstageable pressure ulcers or severe wounds that cannot be</td>
</tr>
<tr>
<td>managed by other means</td>
</tr>
<tr>
<td>Moderate to severe incontinence associated dermatitis that cannot be kept</td>
</tr>
<tr>
<td>clear of urine despite other methods</td>
</tr>
<tr>
<td>Urinary incontinence in patients who nurses find it difficult to provide</td>
</tr>
<tr>
<td>skin care despite other urinary management strategies and available</td>
</tr>
<tr>
<td>resources (i.e. turning causes hemodynamic or respiratory instability,</td>
</tr>
<tr>
<td>strict prolonged mobility such as unstable spine or pelvic fracture,</td>
</tr>
<tr>
<td>strict temporary immobility such as vascular catheterization, or excess</td>
</tr>
<tr>
<td>weight (&gt; 300 lb) from severe edema or obesity)</td>
</tr>
<tr>
<td>Daily <strong>not hourly</strong> measurement of urine that is needed to provide</td>
</tr>
<tr>
<td>treatment and cannot be assessed by other urine collection methodologies</td>
</tr>
<tr>
<td>Patient request to manage urinary incontinence while hospitalized</td>
</tr>
<tr>
<td>Improvement in comfort when urine collection by catheter addresses patient</td>
</tr>
<tr>
<td>and family goals in a dying patient</td>
</tr>
</tbody>
</table>
External Catheter

Guide for external catheter use in medical patients

Inappropriate uses

- Any use in uncooperative patient expected to be frequently manipulated due to delirium or dementia
- Any type of urinary retention, acute or chronic with or without bladder outlet obstruction
- Urinary incontinence of patients with intact skin when nurses can turn / provide adequate skin
- Routine use in ICU without indication
- External catheter to reduce the risk of falls to prevent patients from getting up to void
- Convenience for transfer or during tests or procedures
- Patient or family request when there are no expected difficulties managing urine by commode or other means
- Preventing urinary tract infection in patients with fecal incontinence or diarrhea; or painful urination in patients with urinary tract infection

Key findings:

- Education limited to didactic with no competency
- Discussion about the need for a catheter before placement happened was reported by participants less often than would be expected.
- Nurses in this sample reported making the clinical decision that the patient condition warranted a catheter, and then obtaining the provider order after insertion.
- Providers are described as accepting the clinical judgment of emergency nurses with regard to catheter placement. The emphasis on nursing judgment as the primary driver.
When to obtain or not obtain a urine culture in a patient with an indwelling urinary catheter

<table>
<thead>
<tr>
<th>Discourage Urine Culture Use</th>
<th>Appropriate Urine Culture Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urine quality: color, smell, sediments, turbidity (do not constitute signs of infection)</td>
<td>Part of an evaluation of sepsis without a clear source (CAUTI is often a diagnosis by exclusion)</td>
</tr>
<tr>
<td>Screening urine cultures (whether on admission or before non-urologic surgeries)</td>
<td>Based on local findings suggestive of CAUTI (example, pelvic discomfort or flank pain)</td>
</tr>
<tr>
<td>Standing orders for urinalysis or urine cultures without an appropriate indication</td>
<td>Prior to urologic surgeries where mucosal bleeding anticipated or transurethral resection of prostate</td>
</tr>
<tr>
<td>“PAN” culturing (mindfulness in evaluating source is key)</td>
<td>Early pregnancy (avoid urinary catheters if possible)</td>
</tr>
<tr>
<td>Obtaining urine cultures based on pyuria in an asymptomatic patient</td>
<td></td>
</tr>
<tr>
<td>Asymptomatic elderly and diabetics (high prevalence of asymptomatic bacteruria)</td>
<td></td>
</tr>
<tr>
<td>Repeat urine culture to document clearing of bacteruria (no clinical benefit to patients)</td>
<td></td>
</tr>
</tbody>
</table>

Fakih, Improving the Culture of Culturing

NHSN CAUTI vs. CAUTI Treated by Clinicians


- 90.8% of those diagnosed with NHSN CAUTI had a temperature >38°C
- Only 18/387 (4.7%) of patients had one or more focal signs or symptoms documented
- 91.4% of patients with NHSN CAUTI fit criterion 1
- \( T >38°C \) + positive urine culture= NHSN CAUTI; important to obtain urine cultures when clinically indicated
Color or Odor
(Hooton, Clin Infect Dis 2010; 50:625–663)

• IDSA guidelines:

“In the catheterized patient, the presence or absence of odorous or cloudy urine alone should not be used to differentiate CA-ASB from CA-UTI or as an indication for urine culture or antimicrobial therapy.”

Applying Mindful Evidence-Based Practice at the Bedside: Using Catheter-Associated Urinary Tract Infection as a Model

Hiroko Kiyoshi-Teo, PhD, RN;1,2,3,4
Sarah L. Krein, PhD, RN;1,2,3,4
Sanjay Saint, MD, MPH1,2,3

Kiyoshi-Teo et al. Infect Cont Hosp Epid 2013
Basic Practice; Proper Insertion

Milisa Manojlovich, PhD, RN, CCRN
Associate Professor University of Michigan School of Nursing.

Study purpose:

- Determine if changes (in the hospital and nationwide) have contributed to improved catheter insertion practices
- Explore barriers and facilitators to adherence of urinary catheter insertion guidelines

Manojlovich et al. Infect Control Hosp Epidemiol. 2015

Methods

- 2 teams of nursing students
- 0630 – 2100, in 4 or 8 hour blocks of time
- January 29 – June 30, 2014
- Observation, checklists, field notes
Results

- 65 patients and 81 insertions were observed
- In only 11% of cases was no one else present (buddy system in use)
- Mean insertion time: 6 minutes (range 2 – 22)
- No hand hygiene prior to 74% of insertions
- No hand hygiene in 91% post insertion
- 59% of insertion attempts were associated with a major break in sterile technique

Categories and Frequencies of Major Breaks in Sterility

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency (%)</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contamination of sterile field</td>
<td>22 (27%)</td>
<td>• Nurse touched items on sterile field with bare non-sterile hands</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Stethoscope/garment/torso touched sterile field</td>
</tr>
<tr>
<td>Contamination of the catheter</td>
<td>25 (31%)</td>
<td>• Patient’s labia closed over the catheter during insertion and contaminated the catheter; nurse did not get a new one</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Catheter tip touched genitalia before being introduced into urethra</td>
</tr>
<tr>
<td>Breach of sterile barrier</td>
<td>31 (38%)</td>
<td>• Sterile gloved hand used to swab genitalia (without tongs); same hand used to insert catheter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Nurse inserting catheter ripped her sterile gloves, did not get new ones</td>
</tr>
</tbody>
</table>
Chasing Zero Infections: Strategies to Reduce CAUTI & CLABSI

March 9, 2016

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**Maintenance**

- Properly secure indwelling catheters after insertion to prevent movement and urethral traction
- Maintain a sterile, continuously closed drainage system
- Replace the catheter and the collecting system using aseptic technique when breaks in aseptic technique, disconnection, or leakage occur
- Maintain unobstructed urine flow (quality of evidence)
- Keep the collecting bag below the level of the bladder at all times; do not place the bag on the floor

Lo E et.al *ICHE* May 2014;35;4: 464-479

**Maintenance Issues**
Veterans Integrated Service Network
No. 11 CAUTI Prevention Journey
[7 acute care hospitals, 29 outpatient clinics in MI, OH, IN, & IL]

- Demonstrates efficacy of the collaborative model
- Mixed methods approach; quantitative & qualitative
- ICUs lagged non-ICUs

Process & Outcome Focused Intervention

Medical & Surgical ward locations; 28 beds each U. WI Hospitals & Clinics – Madison

Interventions:
- Catheter removal and bladder mgmt.
- Standardization
- Linkage with EMR order entry
- Awareness icons, EMR
- Unit-based champions + monthly score card
- Daily rounds
- Monthly

Tackling CAUTIs in the ICU Patient Population

CAUTI rate/1000 U.C. days

Medical, Surgical & Cardiac ICUs
CAUTI rate paradox; decreased utilization = increased rate

Know when you need it (indications)  Know how to place it (insertion)

Know your catheter

Know how to care for it (maintenance)  Know when it is no longer needed (continued use)
So What Have We Learned From The Evidence?

*No Magic Bullet*

- Ensure insertion technique is aseptic
- Avoid over culturing
- Interdisciplinary collaboration
- Hardwire insertion protocols
- Don’t forget about the ED
- Disseminate data
- Removal protocols
- Alternatives to catheterization

Identify Gaps

<table>
<thead>
<tr>
<th>Indications</th>
</tr>
</thead>
<tbody>
<tr>
<td>2a. The facility has a process in place to consider the use of alternatives to urinary catheter placement, including:</td>
</tr>
<tr>
<td>- Use of condom catheters</td>
</tr>
<tr>
<td>- Straight catheterization</td>
</tr>
<tr>
<td>2b. The facility uses a portable ultrasound device to assess the patient’s urine volume to reduce unnecessary catheter insertions prior to making a decision regarding catheter placement.</td>
</tr>
<tr>
<td>The facility’s indwelling catheter placement practices include the following indications for appropriate placement:</td>
</tr>
<tr>
<td>3a. Management of acute urinary retention and urinary obstruction (consider use of bladder scan to assess urinary retention)</td>
</tr>
<tr>
<td>3b. Strict urine output monitoring in critically ill patients (consider alternatives other than indwelling catheters to measure urine output).</td>
</tr>
<tr>
<td>3c. Perioperative use for selected surgical procedures such as:</td>
</tr>
<tr>
<td>- GU surgery or other surgery on contiguous structures of the GU tract</td>
</tr>
<tr>
<td>- Anticipated prolonged duration of surgery (catheters inserted for this reason should be removed in PACU)</td>
</tr>
<tr>
<td>- Patients anticipated to receive large-volume infusions</td>
</tr>
<tr>
<td>- Diuretics during surgery</td>
</tr>
<tr>
<td>- Need for intraoperative monitoring of urinary output</td>
</tr>
<tr>
<td>3d. Patients requiring prolonged immobilization (e.g., potentially unstable thoracic or lumbar spine, multiple traumatic injuries such as pelvic fractures).</td>
</tr>
<tr>
<td>3e. Incontinent patient requiring assistance in healing of open sacral or perineal wounds.</td>
</tr>
<tr>
<td>3f. Improving comfort of care at end of life.</td>
</tr>
<tr>
<td>The facility sets clear expectations that indwelling catheter placement is not appropriate for the following reasons:</td>
</tr>
<tr>
<td>5g. Incontinence</td>
</tr>
<tr>
<td>6b. Urinary infection</td>
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</tbody>
</table>
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#### March 9, 2016

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#### Insertion

**The facility’s indwelling core prevention strategies for catheter insertion practices include the following:**

1. Using as small of a catheter as possible to minimize bladder neck and urethral trauma.
2. Practicing hand hygiene immediately before insertion.
3. Practicing aseptic technique and use sterile equipment for insertion.
4. Securing indwelling catheters to prevent movement and urethral traction.
5. Have all elements needed for the procedure in one kit.
6. Consider adopting 2-person catheter insertions.

**The facilities indwelling enhanced insertion practices for catheter insertion practices include the following:**

4g. If the CAUTI rate is not decreasing after implementing a comprehensive strategy to reduce rates of CAUTI, a process is in place to evaluate and implement antimicrobial/antiadherent impregnated catheters as appropriate.

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#### Maintenance

**The facility’s catheter maintenance practices include the following:**

1. Daily review of catheter necessity.
2. Practicing hand hygiene immediately before and after any manipulation of the catheter site or apparatus.
3. Maintaining a sterile, continuously closed drainage system.
4. Maintaining unobstructed urine flow keeping the catheter and tubing free of kinking.
5. Keeping the collecting bag below the level of the bladder at all times.
6. Emptying the collecting bag regularly using a clean, collecting container for each patient, avoiding splashback, and preventing contact of the drainage spigot with the non-sterile collecting container.
7. Securing indwelling catheters to prevent movement and urethral traction.
8. Discontinuing the catheter from the drainage tube only if the catheter must be irrigated.
9. Using aseptic technique if the collecting system needs replacement.
10. Obtaining a urine sample:
   - Through the sampling port with a sterile syringe using disinfectant to clean the port prior to obtaining the sample.
   - For larger samples using aseptic technique to remove sample from drainage bag.
11. Cleaning the mental area using routine hygiene procedures.
12. Evaluate current policies and processes and for obtaining urine cultures.
13. Avoid the practices of:
   - Screening culture on admission
   - Standing orders for urine cultures
   - UA/UOC for patients without clinical symptoms of UTI
   - Pain curtail
   - Reflex orders for urine cultures based on urinalysis results of asymptomatic patients
   - Screening of catheterized patients without UTI symptoms and treatment of asymptomatic bacteriuria
### Removal

<table>
<thead>
<tr>
<th></th>
<th>Y</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily review of necessity for line</td>
<td></td>
<td></td>
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<tr>
<td>HH prior to removal</td>
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<td></td>
</tr>
<tr>
<td>Bladder scanner to assess retention post insertion</td>
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<td></td>
</tr>
<tr>
<td>Policy in place to define how bladder scanner is used</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of nurse driven protocols, automatic stop orders or other automated reminders</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Gap Analysis Questions

<table>
<thead>
<tr>
<th>Gap Analysis Questions</th>
<th>Yes</th>
<th>No</th>
<th>If answered question “No” – identify the Specific Action plan(s) including persons responsible and timeline to complete.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Documentation</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>The facility’s required medical record documentation includes:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7a) Alternatives attempted</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7b) Indications for catheter insertion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7c) Date and time of insertion/removal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7d) Daily review of continued need for catheter use</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>7e) Ongoing catheter maintenance</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>7f) Names of all health care personnel (HCP) and prescribers providing catheter care</td>
<td></td>
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</tbody>
</table>

| **Staff education**                     |     |    |                                                                                                                  |
| 6a) The facility has education in place for all HCP and prescribers allowed to insert/remove urinary catheters which includes: |     |    |                                                                                                                  |
| • Appropriate adherence to aseptic technique for insertion |     |    |                                                                                                                  |
| • Appropriate use of catheters        |     |    |                                                                                                                  |
| • Identification and removal of catheters that are no longer needed |     |    |                                                                                                                  |
| • Adherence to hand hygiene           |     |    |                                                                                                                  |
| • Proper maintenance of catheters    |     |    |                                                                                                                  |
| • Appropriate urine culture practices |     |    |                                                                                                                  |
| 8b) Catheter insertion/removal education is conducted as part of the orientation process |     |    |                                                                                                                  |
| 8c) Ongoing competency assessment for catheter insertion/removal is conducted at least annually |     |    |                                                                                                                  |
CAUTI GPS Discussion

CAUTI Guide to Patient Safety (GPS) www.catheterout.org

1. Do you currently have a well-functioning team (or work group) focusing on CAUTI prevention?
   - Yes
   - No

2. Do you have a project manager with dedicated time to coordinate your CAUTI prevention activities?
   - Yes
   - No

3. Do you have an effective nurse champion for your CAUTI prevention activities?
   - Yes
   - No

4. Do bedside nurses assess, at least daily, whether their catheterized patients still need a urinary catheter?
   - Yes
   - No

5. Do bedside nurses take initiative to ensure the indwelling urinary catheter is removed when the catheter is no longer needed (e.g., by contacting the physician or removing the catheter per protocol)?
   - Yes
   - No

6. Do you have an effective physician champion for your CAUTI prevention activities?
   - Yes
   - No

7. Have physicians fully embraced CAUTI prevention activities?
   - Yes
   - No

8. Is senior leadership supportive of CAUTI prevention activities?
   - Yes
   - No

9. Do you currently collect CAUTI-related data (e.g., urinary catheter prevalence, urinary catheter appropriateness, and infection rates) in the unit(s) in which you are implementing?
   - Yes
   - No

10. Do you routinely feed back CAUTI-related data to frontline staff (e.g., urinary catheter prevalence, urinary catheter appropriateness, and infection rates)?
    - Yes
    - No

Catheterout.org

Observation

<table>
<thead>
<tr>
<th>Component</th>
<th>YES</th>
<th>Yes after correction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hand Hygiene before and after</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All items contained in sterile</td>
<td></td>
<td></td>
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<tr>
<td>tray</td>
<td></td>
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<tr>
<td>Aseptic insertion technique</td>
<td></td>
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<tr>
<td>Proper securement</td>
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<tr>
<td>Closed drainage</td>
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<tr>
<td>Patient Education</td>
<td></td>
<td></td>
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</tbody>
</table>
Observation: Why Are Seals Broken?

- Irrigation
- Specialty catheter does not come pre-connected
- Need to change to a urimeter
- Defect in catheter

Rounding (continued)
Summary

Appropriate indications for catheter placement:
- Derived from expert guidance with strong clinical rationale
- Can be modified based on local consensus

Reducing inappropriate catheter use requires:
- Focus on both placement and continued use
- Understanding the clinical and economic impact of inappropriate catheter use
- Adequate resources for alternative methods of voiding

Reminders and stop orders can disrupt the catheter “lifecycle” at all stages