Interventional Patient Hygiene: Model for Sustaining Gains on Prevention of Health Care Acquired Injuries

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Disclosures

- Eloquest Healthcare
- Sage Products Speaker Bureau & Consultant
- Hill-Rom
Session Objectives

• Create the link of patient advocacy to the basic nursing care
• Define key fundamental evidence based nursing care practices that reduce harm
• Discuss strategies to overcome barriers
“It may seem a strange principle to enunciate as the very first requirement of a Hospital that it should do the sick no harm.”

Florence Nightingale

Advocacy = Safety
Advocacy Starts with Us
PROTECT THE PATIENT FROM BAD THINGS HAPPENING ON YOUR WATCH

Implement Interventional Patient Hygiene
Interventional Patient Hygiene

- Hygiene…the science and practice of the establishment and maintenance of health
- Interventional Patient Hygiene….nursing action plan directly focused on fortifying the patients host defense through proactive use of evidence based hygiene care strategies

Incontinence Associated Dermatitis Prevention Program
Achieving the Use of the Evidence

Factors Impacting the ability to Achieve Quality Nursing Outcomes at the Point of Care

### Why HAI's?
Protecting Patients From Harm

<table>
<thead>
<tr>
<th>Estimates: 183 Hospitals in 10 States</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAI:</td>
</tr>
<tr>
<td>HAI-related deaths:</td>
</tr>
<tr>
<td>Hospitalized patients develop infection:</td>
</tr>
<tr>
<td>Death due to sepsis/septic shock:</td>
</tr>
<tr>
<td>Money spent:</td>
</tr>
<tr>
<td>Increase risk of readmission:</td>
</tr>
</tbody>
</table>

# Health Care Associated Infection Data

<table>
<thead>
<tr>
<th>Measurement</th>
<th>NHSN 2012</th>
<th>Estimated # of Infections</th>
</tr>
</thead>
<tbody>
<tr>
<td>CA-UTI/per 1000 cath days</td>
<td>Range of pooled means 0.7 (Peds Surgical)-5.0 (Neuro ICU) 0.0 (Well Baby) – 4.1 (Peds rehab)</td>
<td>35,600</td>
</tr>
<tr>
<td>CLA-BSI/per 1000 cath days</td>
<td>Range of pooled means 0.8 (CVICU)-3.4 (Burn ICU) Step-down-Ward 0.3 (Adult Rehab)-2.4 (Burn)</td>
<td>15,600</td>
</tr>
<tr>
<td>VAP/per 1000 vent days</td>
<td>Range of pooled means 0.2 (Ped CVICU) -4.4 (Burn ICU)</td>
<td>49,900</td>
</tr>
<tr>
<td>HAP/per 1000 patient days</td>
<td></td>
<td>157,500</td>
</tr>
</tbody>
</table>

More Wards Than ICU’s

Improvement Seen Excepts CAUTI’s

- 44% ↓ in CLABSI’s between 2008-2012
- 20% ↓ in infections for 10 surgical procedures between 2008-2012
- 4% reduction in MRSA bacteremia’s 2011-2012
- 2% reduction in C-Diff between 2011-2012
- 3% ↑ in CAUTI’s 2009-2012

Preventing CA-UTI’s Through Evidence Based Fundamental Nursing Care Strategies
On the CUSP: Stop HAI
Website of the National Implementation of the Comprehensive Unit-based Safety Program to Eliminate Health Care-Associated Infections

On the CUSP: STOP BSI
On the CUSP: STOP CAUTI
About Us
### CUSP & CA-UTI Interventions

#### Adaptive /Cultural

<table>
<thead>
<tr>
<th>CUSP</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Educate on the Science of Safety</td>
</tr>
<tr>
<td>2.</td>
<td>Identify Defects (Staff Safety Assessment)</td>
</tr>
<tr>
<td>3.</td>
<td>Senior Executive Partnership</td>
</tr>
<tr>
<td>4.</td>
<td>Learn from Defects</td>
</tr>
<tr>
<td>5.</td>
<td>Implement Teamwork &amp; Communication Tools</td>
</tr>
</tbody>
</table>

#### Technical

<table>
<thead>
<tr>
<th>CLABS1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Insertion</td>
</tr>
<tr>
<td></td>
<td>Limiting use</td>
</tr>
<tr>
<td></td>
<td>Using aseptic technique for site prep, equip &amp; supplies</td>
</tr>
<tr>
<td>2.</td>
<td>Maintenance</td>
</tr>
<tr>
<td></td>
<td>• Securing the catheter for unobstructed flow</td>
</tr>
<tr>
<td></td>
<td>• Maintaining the sterility of the urine collection system</td>
</tr>
<tr>
<td></td>
<td>• Replacing the urine collection system when required</td>
</tr>
<tr>
<td></td>
<td>• Collecting urine samples</td>
</tr>
</tbody>
</table>
Hospital Engagement Networks

- State hospital associations, professional societies, more than 900 hospital units in 41 states across the country to reduce one of the most common healthcare-associated infection (HAI).
- CAUTI prevention
- Comprehensive Unit Safety Program
- Hospital units that participated 16% ↓ CAUTI’s
Catheter-Associated Urinary Tract Infection (CA UTI) Prevention

Details | Reasons & Implications | Resources

Overview
Prevent catheter-associated urinary tract infections by implementing four recommended components of care.

Elements
- Avoid unnecessary urinary catheters
  - Develop criteria for appropriate catheter insertion based on published guidelines and require verification prior to every insertion.
  - Ensure adequate supplies of alternatives to indwelling catheters (e.g., intermittent and external condom catheters) are available in high-insertion areas of the hospital such as the emergency department.
  - Check for presence of a urinary catheter at arrival to inpatient unit and verify necessity.
  - Assess suspected urinary retention with bladder ultrasound before using catheter.
- Insert urinary catheters using aseptic technique
  - Utilize appropriate hand hygiene
  - Insert catheters using aseptic technique
  - Use as small a catheter as possible that is consistent with proper drainage
- Maintain urinary catheters based on recommended guidelines
  - Maintain a sterile, continuously closed drainage system

Aims
- Safe

Domains
- Patient Care Processes

Process Attributes
- Cost to Implement
- Time to Implement
- Difficulty to Implement
- Level of Evidence
CA-UTIs: Reducing Load

- Use of catheter increases risk
- Daily risk of acquisition of UTI: 3% to 7%
- One of the most common HAI & 70-80% attributable to indwelling catheterization
- CAUTI: associated with ↑ morbidity, mortality (2.3%), hospital cost ($589.00) & 1 day LOS
- 13,000 deaths associated with CA-UTI
- 12-16% will have an indwelling catheter in acute care

Gould, CV et al. HICPAC Guideline for Preventing Catheter-Associated UTIs. 2009
CA-UTI Bundle
“Bladder Bundle”

• CA-UTI Bundle ( “Bladder Bundle”)  
  – Avoid unnecessary urinary catheters  
  – Insert urinary catheters using aseptic technique  
  – Maintain urinary catheters based on recommended guidelines.  
  – Review urinary catheter necessity daily and remove promptly

http://www.bestcare.org.za/docs/Prevent%20Catheter%20CA-UTI.pdf
National Healthcare Safety Network (NHSN)

- All HAI: on or after the 3rd hospital day. Hospital admission is day 1.
- Any CA-UTI occurring on day of discharge or 1 day post should be reported if aware.
- Symptomatic UTI (SUTI) and Asymptomatic Bacteremic UTI (ABUTI)
- Date of event is when the last element used to meet UTI infection occurs
## Updated HICPAC Categorization Scheme for Recommendations

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category IA</td>
<td>A strong recommendation supported by high to moderate quality evidence suggesting net clinical benefits or harms.</td>
</tr>
<tr>
<td>Category IB</td>
<td>A strong recommendation supported by low quality evidence suggesting net clinical benefits or harms, or an accepted practice (e.g., aseptic technique) supported by low to very low quality evidence.</td>
</tr>
<tr>
<td>Category IC</td>
<td>A strong recommendation required by state or federal regulation.</td>
</tr>
<tr>
<td>Category II</td>
<td>A weak recommendation supported by any quality evidence suggesting a trade off between clinical benefits and harms.</td>
</tr>
<tr>
<td>No</td>
<td>An unresolved issue for which there is low to very low quality evidence with uncertain trade offs between benefits and harms.</td>
</tr>
</tbody>
</table>
• Appropriate Urinary Catheter Use

– Insert catheters only for appropriate indications and leave in place only as long as needed. (1B)

– Avoid use of urinary catheters in patients and nursing home residents for management of incontinence. (1B)

– Use urinary catheters in operative patients only as necessary, rather than routinely. (1B)

– Consider using alternatives to indwelling urethral catheterization in selected patients when appropriate. (II)
Table 2. Appropriate Indications for Indwelling Urethral Catheter Use

<table>
<thead>
<tr>
<th>Patient has acute urinary retention or obstruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need for accurate measurements of urinary output in critically ill patients</td>
</tr>
<tr>
<td>Perioperative use for selected surgical procedures:</td>
</tr>
<tr>
<td>• Patients undergoing urologic surgery or other surgery on contiguous structures of the genitourinary 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 or diuretics during surgery</td>
</tr>
<tr>
<td>• Operative patients with urinary incontinence</td>
</tr>
<tr>
<td>• Need for intraoperative monitoring of urinary output</td>
</tr>
<tr>
<td>To assist in healing of open sacral or perineal wounds in incontinent patients</td>
</tr>
<tr>
<td>Patient requires prolonged immobilization (e.g., potentially unstable thoracic or lumbar spine)</td>
</tr>
<tr>
<td>To improve comfort for end of life care if needed</td>
</tr>
</tbody>
</table>

Indwelling catheters should *not* be used:
| • As a substitute for nursing care of the patient or resident with incontinence |
| • As a means of obtaining urine for culture or other diagnostic tests when the patient can voluntarily void |
| • For prolonged postoperative duration without appropriate indications |
| • Routinely for patients receiving epidural anaesthesia/analgesia |

Gould, CV et al. HICPAC Guideline for Preventing Catheter-Associated UTIs. Draft June 2009
HICPAC CA-UTI Guideline

- **Appropriate Urinary Catheter Use**
  - Insert catheters only for appropriate indications and leave in place only as long as needed. (1B)
  - Avoid use of urinary catheters in patients and nursing home residents for management of incontinence. (1B)
  - Use urinary catheters in operative patients only as necessary, rather than routinely. (1B)
  - Consider using alternatives to indwelling urethral catheterization in selected patients when appropriate. (II)

Gould, CV et al. HICPAC Guideline for Preventing Catheter-Associated UTIs. Final 2009
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- Insert urinary catheters using aseptic technique
  - Utilize appropriate hand hygiene
  - Insert catheters using aseptic technique
  - Use as small a catheter as possible that is consistent with proper drainage
- Maintain urinary catheters based on recommended guidelines
  - Maintain a sterile, continuously closed drainage system
  - Keep catheter properly secured

Aims
- Safe

Domains
- Patient Care Processes

Process Attributes
- Cost to Implement
- Time to Implement
- Difficulty to Implement
- Level of Evidence
Challenges with Current Appropriate Alternatives: External Male Catheters

1 out of every 200 men is born with what’s medically known as ‘micro-penis’
Buried Penis
Condom Catheter
Common Problems

Most common problems are:

- Skin irritation and maceration
- Difficult to keep the condom from falling off/retraction of the penis or decrease size
- Ischemia and penile obstruction/tightness
- Adherence: requires to secure on the shaft & adhesive mechanisms are challenging

A New Male External Catheter: ReliaFit

• Hydrocolloid alternative
  – Hydrocolloid wafer shaped adheres to the glans penis
  – Acts as a skin protectant
  – Protects the glans penis from excessive moisture
  – The seal is reinforced by a second hydrocolloid strip
  – Can be used with circumcised and uncircumcised males
  – Clean glans penis with a remover & alcohol
Evaluation of a New, Novel Male External Urinary Management Device

Lisa M. Lucas MSN, RN, ACNS-BC, Jackie Iseler MSN, RN, ACNS-BC, Lori Gale BS, RN, WOCN-BC
Spectrum Health Butterworth Grand Rapids, MI

- 31 RN’s/ 3 units
- 42 devices
- Mean wear time > 23hrs
- Easy to apply
- 72.8% of RN’s likely to advocate for its use
- No UTI’s reported in patients using the new male external catheter

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Alternative Male Urinary Catheter Device</th>
<th>No Preference</th>
<th>Condom Catheter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy to apply</td>
<td>59.1%</td>
<td>22.7%</td>
<td>18.2%</td>
</tr>
<tr>
<td>Satisfactory urine flow</td>
<td>50.0%</td>
<td>40.9%</td>
<td>9.1%</td>
</tr>
<tr>
<td>Stays on securely</td>
<td>45.5%</td>
<td>50.0%</td>
<td>4.5%</td>
</tr>
<tr>
<td>No urine leakage</td>
<td>45.5%</td>
<td>40.9%</td>
<td>13.6%</td>
</tr>
<tr>
<td>Wear time</td>
<td>40.9%</td>
<td>50.0%</td>
<td>9.1%</td>
</tr>
<tr>
<td>Does not cause skin redness/irritation</td>
<td>40.9%</td>
<td>50.0%</td>
<td>9.1%</td>
</tr>
<tr>
<td>Patient comfort</td>
<td>36.4%</td>
<td>59.1%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Patient acceptance</td>
<td>31.5%</td>
<td>68.2%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

Presented at Cleveland Clinic Conference March 2013
• Proper Technique for Urinary Catheter Insertion
  – Perform hand hygiene immediately before and after insertion or any manipulation of the catheter device or site. (IB)
  – Ensure that only properly trained persons who know the correct technique of aseptic catheter insertion & maintenance are given this responsibility. (IB)
  – Insert catheters using aseptic technique and sterile equipment (except chronic intermittent catheterization). (IC)
  • Further research is needed on the use of antiseptic solutions vs. sterile water or saline for periurethral cleaning prior to catheter insertion. (No recommendation/unresolved issue)
HICPAC CA-UTI Guideline

• **Proper Technique for Urinary Catheter Insertion**
  – Properly secure indwelling catheters after insertion to prevent movement and urethral traction. *(IB)*
  – Consider using the smallest bore catheter possible, consistent with good drainage, to minimize urethral trauma. *(II)*

• **Proper Techniques for Urinary Catheter Maintenance**
  – Maintain a sterile, continuously closed drainage system *(IB)*
  – If breaks in aseptic technique, disconnection, or leakage occur, replace the catheter and collecting system using aseptic technique and sterile equipment. *(IB)*
  – Key the collecting bag below the level of the bladder at all times *(IB)*
  – Urinary catheter systems with preconnected, sealed catheter-tubing junctions may reduce the risk of CAUTI compared to unsealed catheter systems. *(II)*
Securement Devices
HICPAC CA-UTI Guideline

- Proper Technique for Urinary Catheter Insertion
  - Properly secure indwelling catheters after insertion to prevent movement and urethral traction. (IB)
  - Consider using the smallest bore catheter possible, consistent with good drainage, to minimize urethral trauma. (II)

- Proper Techniques for Urinary Catheter Maintenance
  - Maintain a sterile, continuously closed drainage system (IB)
  - If breaks in aseptic technique, disconnection, or leakage occur, replace the catheter and collecting system using aseptic technique and sterile equipment. (IB)
  - Key the collecting bag below the level of the bladder at all times (IB)
  - Urinary catheter systems with preconnected, sealed catheter-tubing junctions may reduce the risk of CAUTI compared to unsealed catheter systems. (II)

Gould, CV et al. HICPAC Guideline for Preventing Catheter-Associated UTIs. 2009
Practices to Avoid

• Irrigating catheters, except in case of catheter obstruction
• Disconnecting the catheter from the drainage tubing
• Replacing catheters routinely
• If the collection system must be replaced, use aseptic technique

Gould, CV et al. HICPAC Guideline for Preventing Catheter-Associated UTIs. 2009
Proper Techniques for Urinary Catheter Maintenance

- Maintain unobstructed urine flow. (IB)
- Do not clean the periurethral area with antiseptics to prevent CAUTI while the catheter is in place. Routine hygiene (e.g., cleansing of the meatal surface during daily bathing) is appropriate. (1B)
- Avoid bladder irrigation unless obstruction is anticipated (II)
  - If obstruction is anticipated, closed continuous irrigation may be used to prevent obstruction. (II)
- The bladder or collection bag need not be irrigated with antimicrobials routinely to prevent CAUTI. (II)
- Clamping indwelling catheters prior to removal is unnecessary. (II)
How We Bathe May Impact CA-UTI’s

Why are there so many bugs in here?
Bath Basins: Potential Source of Infection

- Multicenter sampling study (3 ICU’s) of 92 bath basins
- Identify & quantify bacteria in patients basins
- Sampling done on basins used > 2x in patients hospitalized > 48 hours & preformed 2 hours post bath
- Cultures sent to outside laboratory
- Qualitative vs. quantitative measures used to exclude growth that may have occurred in transport
- Bathing practices not controlled & no antiseptic soaps used to bathe

The Evidence: Bath Basins
Potential Source of Infection

Multicenter Sample Study to Identify and Quantify Bacteria in Basins

- 98% grew bacteria

- Enterococci 54%
  - Gram negative 32%
  - S. aureus 23%
  - VRE 13%

- Less than 10% growth rates
  - MRSA 8%
  - P. aeruginosa 5%
  - Candida albicans 3%
  - E. coli 2%

Bath Basins
Potential Source of Infection

Large multi-center study evaluates presence of multi-drug resistant organisms

Total hospitals: 88
Total basins: 1103

- **Contaminated**: 686 basins/88 hospitals (62%)
- **Gram negative bacilli**: 495 basins/86 hospitals (45%)
- **Colonized w/ VRE**: 385 basins/80 hospitals (35%)
- **MRSA**: 36 basins/28 hospitals (3%)

Waterborne Infection

Hospital Tap Water
- Bacterial biofilm
- Most overlooked source for pathogens
- 29 studies demonstrate an association with HAIs and outbreaks
- Transmission:
  - Drinking
  - Bathing
  - Rinsing items
  - Contaminated environmental surfaces
- Immunocompromised patients at greatest risk

Reducing UTI’s Through Basinless Bathing

CA-UTI 7.5 per 1000 catheter days to 4.42 per 1000 catheter days, then to .46 per 1000 catheter days

Stone S, APIC 2010
Impact on UTI with Basin Bathing

UTI Rate - Removal of Prepackaged Bath Product QTR 3 FY05

The Effect of Bathing with Basin and Water and UTI Rate, LOS and Costs

<table>
<thead>
<tr>
<th>Unit Census: 14</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Phases</th>
<th>Product Cost/ (No. of UTI, Median LOS 17 Days, Median Cost (4857.00))</th>
</tr>
</thead>
<tbody>
<tr>
<td>I- Pre-Packaged Bathing Washcloths (9 months)</td>
<td>$10,530(^1) (25, 175, $117,175)</td>
</tr>
<tr>
<td>II- Basin/Water (9 months)</td>
<td>$3,510(^2) (48, 336, $224,916)</td>
</tr>
<tr>
<td>III- Additional Product Cost, UTI, LOS, COSTS</td>
<td>$7,020 (23(^3), 151, $107,741)</td>
</tr>
</tbody>
</table>

\(^1\)Based on 3 packages of 8 towels each  
\(^2\)Based on product cost of towels, soap, and basin  
\(^3\)Difference between phase I pre-package/phase II basin water  
Catheter Materials

- If the CAUTI rate is not decreasing with a comprehensive strategy, consider using antimicrobial/antiseptic impregnated catheters. (1B)

- Silicone may be preferable to other catheter materials to reduce the risk of encrustation in long-term catheterized patients who have frequent obstruction. (II)

Gould, CV et al. HICPAC Guideline for Preventing Catheter-Associated UTIs, 2009
• Specimen Collection
  – Obtain urine samples aseptically. (1B)
  – If a small volume of fresh urine is needed for examination (i.e., urinalysis or culture), aspirate the urine from the needleless sampling port with a sterile syringe/cannula adapter after cleansing the port with a disinfectant. (1B)

• If a CAUTI is suspected, the best practice is removal of the old catheter before obtaining the specimen in order to eliminate the confounding factor of possible catheter biofilm. (APIC Guidelines 2008)
Additional Recommendations: SHEA Compendium Update 2014

- Develop a protocol for management of post-op urinary retention
  - Bladder scanner
  - Intermittent catheterization
- Do not routinely use antimicrobial/antiseptic impregnated catheters
- Do not screen for asymptomatic bacteriuria in catheterized patients

Additional Recommendations: SHEA Compendium Update 2014

• Replace the catheter and the collecting system using aseptic technique when breaks in aseptic technique, disconnection, or leakage occur (quality of evidence: III).

• For examination of fresh urine, collect a small sample by aspirating urine from the needleless sampling port with a sterile syringe/cannula adaptor after cleansing the port with disinfectant (quality of evidence: III).

• Unresolved
  – Antiseptic or sterile saline foe meatal cleaning before insertion

How did your first Foley catheter insertion go?
Terrible!! I got so nervous that I put it in the wrong “opening”.

Don’t be so hard on yourself. It’s difficult to find the meatus on an old lady.

I know... but it wasn’t an old lady, it was a man!!
Oh...
THINGS TO CONSIDER
Cost-Benefit Ratio

CA-UTI vs. IAD & Pressure Ulcer
Moisture Injury: Incontinence Associated Dermatitis

• Inflammatory response to the injury of the water-protein-lipid matrix of the skin
  – Caused from prolonged exposure to urinary and fecal incontinence

• Top down injury

• Physical signs on the perineum & buttocks
  – Erythema, swelling, oozing, vesiculation, crusting and scaling

Brown DS & Sears M, OWM 1993;39:2-26
### IAD Assessment Tool

#### Hospital Survey on Incontinence & Related Skin Injury

**Instructions:**
This survey is limited to inpatient care areas and excludes the following: Labor & Delivery, Obstetrics, Nursery, Emergency Department & Operating Room. Note: Complete ONLY ONE form for each unit.

**Date of Survey:** __________/__________

Please check the unit specialty that best describes the care provided.

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burn</td>
<td>P. Inf &amp; Gen</td>
</tr>
<tr>
<td>CCU - General</td>
<td>Med/Surg</td>
</tr>
<tr>
<td>CDU - Interventional</td>
<td>NICU</td>
</tr>
<tr>
<td>ICU - Cardiovascular</td>
<td>ICU - General</td>
</tr>
<tr>
<td>ICU - General</td>
<td>ICU - Medical</td>
</tr>
<tr>
<td>ICU - Neuro</td>
<td>ICU - Neonatal</td>
</tr>
<tr>
<td>ICU - Pediatric</td>
<td>ICU - Surgical</td>
</tr>
<tr>
<td>ICU - Surgical</td>
<td>PED - General</td>
</tr>
<tr>
<td>Psychiatric - General</td>
<td>Telemetry - General</td>
</tr>
<tr>
<td>Telemetry - Surgical</td>
<td>Wound Care</td>
</tr>
</tbody>
</table>

**Section 1 - Complete for all patients surveyed**

**Demographic Information:**

<table>
<thead>
<tr>
<th>Patient Gender</th>
<th>Patient Age Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>0 to 12 months</td>
</tr>
<tr>
<td>Female</td>
<td>1 to 3 months</td>
</tr>
<tr>
<td></td>
<td>6 to 12 months</td>
</tr>
<tr>
<td></td>
<td>12 to 23 months</td>
</tr>
<tr>
<td></td>
<td>24 to 36 months</td>
</tr>
<tr>
<td></td>
<td>37 + years</td>
</tr>
</tbody>
</table>

**Incontinence Status:**

Check all that apply

- **Bladder:**
  - Damage
  - Infection
  - Medication
  - Neurologic
  - Trauma
  - Other

- **Stool:**
  - Damage
  - Infection
  - Medication
  - Neurologic
  - Trauma
  - Other

**Continuing Care:**

- **Meds:**
  - Anticholinergic
  - Beta blockers
  - Diuretics
  - Other

**Patient Censuses of Unit at Time of Survey:** __________

**Section 2 - Complete for Incontinent patients**

**Contributing Factors & Co-Morbidities:**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetic with recent hypoglycemia</td>
<td>5</td>
</tr>
<tr>
<td>Chronic obstructive pulmonary disease</td>
<td>4</td>
</tr>
<tr>
<td>Immunosuppressed</td>
<td>3</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
</tr>
</tbody>
</table>

**Incontinence Cleanup & Skin Protection:**

- **Collection Device:**
  - Panti/Chux
  - Diaper/Brief
  - Collection Device

- **Disposable plastic-backed:**
  - Reusable cloth
  - Disposable plastic-backed
  - Disposable air-backed

- **Towel Feeding:**
  - Reusable
  - Disposable

**Barrier Protection:**

- **Tubes, Bottles or Sprays:**
  - Saline
  - Water
  - Other

- **Pedicure/Bridges:**
  - Laminate
  - Non-Slip

- **Liquid Film Barrier:**
  - Plastic
  - Foam

- **All-in-one products:**
  - Disposable plastic-backed
  - Barrier cloth with skin protectant

**Section 5 - Complete only for incontinent patients with rashiness of buttock or perineal skin**

**Perineal Skin Injury:**

- **Condition:**
  - Infection
  - Associated Dermaitis
  - Erosion
  - Reddening

- **Area Affected:**
  - Lower Abdomen
  - Upper Thighs
  - Groin

- **Containment Products:**
  - Reusable cloth
  - Disposable plastic-backed
  - Disposable air-backed

---

Reminder Systems May Reduce Inpatient Catheter Use and Associated UTIs


### Reminder

<table>
<thead>
<tr>
<th>Study</th>
<th>RR (95% CI)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apisarnthanarak (2007)</td>
<td>0.24 (0.15, 0.37)</td>
<td>19.34</td>
</tr>
<tr>
<td>Crouzet (2007)</td>
<td>0.15 (0.01, 0.82)</td>
<td>11.09</td>
</tr>
<tr>
<td>Huang (2004)</td>
<td>0.72 (0.54, 0.96)</td>
<td>16.72</td>
</tr>
<tr>
<td>Jain (2006)</td>
<td>0.64 (0.33, 1.20)</td>
<td>10.35</td>
</tr>
<tr>
<td>Subtotal (P = 83.7%; P &lt; .001)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Stop Order

<table>
<thead>
<tr>
<th>Study</th>
<th>RR (95% CI)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topal (2005)</td>
<td>0.53 (0.25, 1.06)</td>
<td>11.09</td>
</tr>
<tr>
<td>Stephen (2006)</td>
<td>0.41 (0.19, 0.82)</td>
<td>13.55</td>
</tr>
<tr>
<td>Dumigan (1998)</td>
<td>0.65 (0.50, 0.84)</td>
<td>17.87</td>
</tr>
<tr>
<td>Subtotal (P = 0.0%; P = .403)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Overall (I² = 78.7%; P < .001)

0.48 (0.28, 0.68) 100.00

**NOTE:** Weights are from random effects analysis

Reminder 56% reduction
Stop Order 41% reduction
Reducing Use...Does it Reduce CA-UTIs

- Pre and post intervention study
- Unit clinicians developed indications for continued use of catheter (evidence-based)
- 6 month intervention period evaluated appropriateness of catheter daily
- 337 patients/1432 catheterization days were evaluated
  - Duration of use significantly reduced (236.6 d/mo vs. 311.7 d/mo)
  - CA-UTIs went from 4.7 per 1000 days to 0 per 1000 catheter days for the intervention period
  - Only 11% inappropriate days

---

**Appropriate indications**

- Urinary tract obstruction
- Urinary retention
- Patient to undergo prolonged (>2 hours) procedure
- Recently underwent surgical/invasive procedure
- Epidural catheter in place
- Frequent monitoring (every 1-2 hours) of urinary output required
- Deep sedation/paralysis
- Stage III or IV skin ulcers
- Surgical repair of decubitus ulcer
- Movement intolerance due to terminal illness or severe impairment

**Inappropriate indications**

- Incontinence without any of the appropriate indications
- Diuresis
- Frequent, but nonessential, determination of urinary output
- Nurse’s concern about patient’s discomfort
- Diarrhea, without any of the appropriate indications
- Patient’s preference

Nurse Directed Catheter Removal

- 300 bed community teaching hospital
- Implementation of a nurse directed urinary catheter removal protocol
  - Protocol linked to physician catheter order
  - Physician documentation of catheter insertion criteria & device specific charting in progress notes
  - Bi-weekly unit specific feedback
- Results: 50%↓ in catheter use & 70%↓ in CAUTI

Parry MF, et al. AM J Of Infect Control, 2013;41:1178-81
Implement a Documentation Structure

• Physician order for placement
• Indications for insertion
• Date & time of insertion
• Who inserted the catheter
• Nursing documentation
  – Placement, daily presence, maintenance care, date and time of removal
  – Criteria for removal & justification for continued use

Advocacy Starts with Us
On the CUSP: Stop CA-UTI

- Determine which groups are already engaged, if others need greater involvement.
- Verify that CAUTI prevention has a high-profile/priority within the organization’s safety program.
- Active, visible participation by senior leaders and institutional champions (all levels).
- Teach and reinforce correct indications for catheter use, insertion, maintenance.
- Reinforce previous practices that should be discontinued.
- Teach, reinforce organization standards for documentation.

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On the CUSP: Stop CA-UTI

- Consider use of a CAUTI checklist as part of a CAUTI bundle approach.
- Determine need for alerts to physician and nurses re: potential catheter removal/ Employ computerized order entry
- Add catheter review to daily rounds. Consider nurse removal protocols to support timely discontinuation
- Bladder scanner program
- Identify measures of success, report progress per schedule.
- Investigate errors, lapses as opportunity to improve.
- Display data
- Include patients/families in evaluation process.
- Communicate, celebrate success.

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Forbid yourself to be deterred by poor odds just because your mind has calculated that the opposition is too great. If it were easy, everyone would do it.