AHA/HRET HEN 2.0 CAUTI WEBINAR
ELIMINATING CAUTI: THE USE OF ALTERNATIVES

July 12, 2016
11:00AM - 12:00PM CST
WELCOME AND INTRODUCTIONS

Marina Levin, Program Manager | HRET | 11:00-11:05 AM
## AGENDA FOR TODAY

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenter/Notes</th>
</tr>
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<tbody>
<tr>
<td><strong>11:00-11:05 AM</strong></td>
<td>Welcome and Introductions</td>
<td>Marina Levin, MPH, Program Manager, HRET</td>
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<tr>
<td></td>
<td>Open and housekeeping information, including review of relevant HRET HEN resources, change packages and Listserv®.</td>
<td>Marina Levin, MPH, Program Manager, HRET</td>
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<tr>
<td><strong>11:05-11:10 AM</strong></td>
<td>HEN Data Update</td>
<td>Mark Plunkett, Data Analyst, HRET</td>
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<td>Topic-specific data update – not limited to national percent reduction and percent reporting.</td>
<td>Mark Plunkett, Data Analyst, HRET</td>
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<tr>
<td><strong>11:10-11:35 AM</strong></td>
<td>Reducing Unnecessary Catheter Use - Alternatives to the Urinary Catheter</td>
<td>Linda Greene, RN, MPS, CIC, Infection Prevention Manager, UR Highland Hospital, Rochester, NY</td>
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<td></td>
<td>Describe alternatives to the urinary catheter, discuss indications for urinary catheter alternatives and identify strategies for implementation of catheter alternatives.</td>
<td>Linda Greene, RN, MPS, CIC, Infection Prevention Manager, UR Highland Hospital, Rochester, NY</td>
</tr>
<tr>
<td><strong>11:35-11:55 AM</strong></td>
<td>Reducing CAUTI, One Foley at a Time</td>
<td>Connie Faircloth, RN, BSN and Kelly Henry, RN, MSN, Infection Prevention Nurses, University Hospital, Augusta, GA</td>
</tr>
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<td></td>
<td>Foley alternatives and the barriers associated with them.</td>
<td>Connie Faircloth, RN, BSN and Kelly Henry, RN, MSN, Infection Prevention Nurses, University Hospital, Augusta, GA</td>
</tr>
<tr>
<td><strong>11:55AM -12:00 PM</strong></td>
<td>Bring it Home</td>
<td>Marina Levin, MPH, Program Manager, HRET</td>
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<td>Action items and tying together of didactic, hospital-level and improvement science information.</td>
<td>Marina Levin, MPH, Program Manager, HRET</td>
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SIGN UP TODAY: INFECTIONS LISTSERV®

- INFECTIONS Analytics Listserv® is available for:
  - Sharing of:
    - HRET resources
    - Publicly available resources
    - Best practices
    - Learnings from subject matter experts
  - Troubleshooting for data reporting and analysis

Sign Up Here
HEN DATA UPDATE

Mark Plunkett, PH.D, Data Analyst | HRET | 11:05-11:10 AM
HEN DATA UPDATE

- Data pulled: 6/30/2016
- Follow up period: Feb - Apr 2016
- Three measures
  - CAUTI SIR
  - CAUTI Rates per 1,000 Urinary Catheter Days
  - Urinary Catheter Utilization
CAUTI STANDARDIZED INFECTION RATIO (SIR)

- Standardized Infection Ratio (SIR) – All Inpatient locations excluding NICUs
- Standardized Infection Ratio (SIR) – ICUs excluding NICUs
CAUTI RATES PER 1,000 URINARY CATHETER DAYS

CAUTI Rate (per 1,000 catheter days) – All Inpatient locations excluding NICUs

CAUTI Rate (per 1,000 catheter days) – ICUs excluding NICUs
URINARY CATHETER UTILIZATION

- Urinary catheter utilization ratio - All Inpatient locations excluding NICUs
- Urinary catheter utilization ratio - ICUs excluding NICUs
Reducing Unnecessary Catheter Use: Alternatives to the Urinary Catheter
Linda Greene, RN, MPS, CIC, FAPOIC, Infection Prevention Manager | UR Highland Hospital | 11:10-11:35 AM
OBJECTIVES

• Describe alternatives to the urinary catheter.

• Discuss indications for urinary catheter alternatives.

• Identify strategies for implementation of catheter alternatives.
BACKGROUND

• UTI:
  – Second-most common health care-associated infection.
  – 80 percent attributable to an indwelling urethral catheter.\(^1\)
• 15 to 25 percent of hospital inpatients will have a urinary catheter during admission.\(^2\)
  – Most have urinary catheters two to four days.
• Daily risk of acquisition of bacteriuria:
  – 3 to 8 percent per day of urinary catheterization.
  – ~100 percent at 30 days.
  – Duration of catheterization = biggest risk factor.

SCOPE OF THE PROBLEM

• Urinary catheters are often placed unnecessarily, in place without physician awareness and not removed promptly when no longer needed.¹

• 17 to 69 percent of catheter-associated urinary tract infections (CAUTI) may be preventable with recommended infection prevention measures.²
  - Up to 380,000 infections and 2,225 to 9,031 deaths related to CAUTI per year could be prevented.

Disrupting the Life Cycle of a Catheter Device

THE LIFE CYCLE

Step 0: AVOID INDWELLING CATHETER

Ensure Aseptic Placement

Indwelling Urinary Catheter

Maintain Awareness and Proper Care of Catheters in Place

Prompt Removal of Unnecessary Catheters

Replacement
ASSESS THE PATIENT’S NEEDS

Does my patient really need a urinary catheter?

OR

Is there an alternative to the catheter that could be used?
ALTERNATIVES

• Consider alternatives based on a patient’s individual care needs.

• Alternative devices and procedures provide a much lower risk of infectious complications.
  – Can reduce or eliminate noninfectious complications.
BARRIERS

• Time.

• Perception that the patient must have a urinary catheter for accurate intake and output.

• Nursing reluctance.

• Lack of physician support.

• Lack of available or appropriate supplies.

• Lack of knowledge related to infectious and noninfectious complications of urinary catheter use.
STRATEGIES TO OVERCOME BARRIERS

• Work with the multidisciplinary team to implement and evaluate alternatives to the urinary catheter.

• Ensure that alternate strategies are implemented correctly.

• Develop champions to coach and mentor health care workers.

• Consider more than one champion on a unit.
Does this patient need a urinary catheter?

**Reflexive vs. Mindful Approach**

<table>
<thead>
<tr>
<th>Mindful Evidence-Based Model</th>
<th>Example: Urinary catheter placement decision</th>
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</thead>
<tbody>
<tr>
<td>Careful consideration of therapeutic and behavioral alternatives/options</td>
<td>Possible consequences, alternatives, catheter placement decision</td>
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<tr>
<td>Synthesis of patient specific conditions &amp; context</td>
<td>Infection risk, skin risk, availability of staff</td>
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<tr>
<td>Consideration of essential patient factors</td>
<td>Disease process, incontinence, mobility, cognition, patient requests</td>
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<tr>
<td>Consideration of evidence-based recommendations</td>
<td>Appropriate catheter indications</td>
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<tr>
<td>Awareness of the issue</td>
<td>Indwelling catheter increases the risk for urinary tract infection</td>
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<tr>
<td>Professional skills and knowledge</td>
<td>The benefits and risks of indwelling catheter placement</td>
</tr>
<tr>
<td>Individual values and experience</td>
<td>Perceptions related to urinary catheter placement</td>
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</table>

Kiyoshi-Teo et al. Infect Cont Hosp Epid 2013
AVAILABLE ALTERNATIVES: ACCURATE I AND 0

- In **males**, consider a urinal or condom catheter if the patient is not restless or combative.

- In **females**, consider the bedpan or female urinal.

- For the incontinent patient, consider absorbent pads, which can be weighed.
INDICATIONS FOR USE OF EXTERNAL CATHETERS

- Stage III or IV or unstageable pressure ulcers.
- Incontinence-associated dermatitis.
- Daily measurement of urine volume.
- Single 24-hour or random urine sample.
- Reduction in acute, severe pain.
- Patient request for external catheter.
- Comfort in dying patient.

TIPS FOR CONDOM CATHETER

- One size does not fit all (correct sizing is important).

- Evaluate products.

- Get patient feedback when possible.

- The health care worker should demonstrate the ability to apply and remove the catheter correctly.

- Some patients are not appropriate for the condom catheter.
INAPPROPRIATE USE OF EXTERNAL CATHETERS

- Uncooperative or combative patient.
- Any type of urinary retention.
- Hourly measurement of urine volume required.
- Urinary incontinence when nurses can turn/provide skin care.
- Routine use to manage incontinence.
- Reduce risk for falls.
- For convenience of urinary management during transport.
- Patient/family/staff request when there are no expected difficulties managing urine.
- To prevent urinary tract infection.
FEMALE URINAL

- Different types and brands on the market.
- Acceptable alternative for specific conditions.
- Trial and test different brands.

TIPS:
- Present the device to the patient; explain that it is a device to collect urine.
- Assist the patient in placing the urinal flat side down, handle up between the patient’s legs flush to the perineum.
- Adjust the patient’s head to an upright position for comfort.
TOOLS TO AVOID UNNECESSARY PLACEMENT

Tools:
• Require appropriate indications for catheter placement.
• Require physician order for placement.
• Require bladder scanners to evaluate/confirm urinary retention.

Catheter Orders with Decision Support:
• Embed reminders for appropriate indications.
• Embed reminders about alternatives to indwelling catheter use.

ALTERNATIVES TO INDWELLING URINARY CATHETER

Straight Catheters
INDICATIONS FOR USE OF STRAIGHT CATHETER

- Acute urinary retention without bladder outlet obstruction.
- Chronic urinary retention with or without bladder outlet obstruction.
- Stage III or IV or unstageable pressure ulcer if ISC is adequate to manage the type of incontinence.
- Urinary incontinence that is treated and can be managed by ISC.
- Urine volume measurements.
- Random urine sample collection.

ALTERNATIVES TO INDWELLING URINARY CATHETERS

Bladder Scanner
BLADDER ULTRASOUND

• **Primary use:**
  – Measuring post-void residual in persons with incomplete bladder emptying.

• **Target population:**
  – Urinary retention.
  – Neurogenic bladder.
  – Postsurgical urinary retention with incontinence.

• **Advantages:**
  – Noninvasive and more comfortable than catheterization.
  – Less infection and trauma risk than catheterization.
  – Compared to radiographic study – no risk of contrast dye or radiation exposure.
  – Easy to use.
  – Faster than in-and-out catheterization.

• **Disadvantages:**
  – Mild discomfort.
  – Obese body habitus.
TOOLS TO IMPROVE KNOWLEDGE ABOUT APPROPRIATE USE OF URINARY CATHETERS

Annals of Internal Medicine

The Ann Arbor Criteria for Appropriate Urinary Catheter Use in Hospitalized Medical Patients: Results Obtained by Using the RAND/UCLA Appropriateness Method

Streamlined Evidence-Based RN Tool: Catheter Associated Urinary Tract Infection (CAUTI) Prevention

Nurse-Driven CAUTI Prevention: Saving Lives, Preventing Harm and Lowering Cost.

Key Practice Strategies to Reduce CAUTI: 1) Fewer Catheters Used, 2) Timely Removal and 3) Insertion, Maintenance and Post-Removal Care.
Assess for Adequate Bladder Emptying

A. If Patient HAS urinated (voided) within 4-6 hours follow these guidelines:
   - If minimum urinated volume ≤ 180 ml in 4-6 hours or urinary incontinence present, confirm bladder emptying.
     - Prompt patient to urinate/check for spontaneous urination within 2 hours if post-void residual (PVR) < 300-500 ml
       - Recheck PVR within 2 hours.*
     - Perform straight catheterization for PVR per scan ≥ 300-500 ml.
       - Repeat scan within 4-6 hours and determine need for straight catheterization.
       - Report to provider if retention persists ≥ 300-500ml.
       - Perform ongoing straight catheterization per facility protocol to prevent bladder overdistension and renal dysfunction (CDC, 2009), usually every 4-6 hours.
   - If urinated >180 ml in 4-6 hours (adequate bladder emptying), use individual plan to promote/maintain normal urination pattern.

B. If Patient HAS NOT urinated within 4-6 hours and/or complains of bladder fullness, then determine presence of incomplete bladder emptying.*
   - Prompt patient to urinate. If urination volume ≤ 180 ml, perform bladder scan.*

*Perform bladder scan (CDC, 2009) to determine PVR. If no scanner available, perform straight catheterization.
INCONTINENCE PRODUCTS

• Use the one that is right for your patient.

• If an incontinence pad is used, test the quality.

• If the patient requires regular intake and output monitoring, pads can be weighed.
WEIGHING PADS

Wet Pad - Dry Pad = Output (Grams)
INTAKE AND OUTPUT – OTHER STRATEGIES

- Bedpans and commodes
- Daily weights
SUMMARY STRATEGIES TO OVERCOME BARRIERS

Need for Accurate Intake and Output

• In males, consider a urinal or condom catheter if the patient is not restless or combative.
• In females, consider the bedpan or female urinal.
• For the incontinent patient, consider absorbent pads, which can be weighed.

Lack of Available or Appropriate Supplies

• Involve the supply chain/materials management.
• Collaborate with product representatives.
• Ask for staff to provide feedback on products.
• Involve the front-line staff.
STRATEGIES FOR SUCCESS

Communication

People

Supplies

Communication

People

Supplies
KEY POINTS

• Ensure adequate resources to limit the use of urinary catheters for inappropriate indications.
  – People:
    • Lift teams
    • Care assistants
    • Physical therapy
  – Supplies:
    • Alternatives to urethral catheters.
    • Bedside commodes, urinals, hats and daily weights.
    • Incontinence pads.
    • Skin care and barrier creams.
  – Communication
    • On transfer from ER ➔ floor or ICU ➔ floor
MOVING FORWARD

• Create a “shared mental model.”
  – Implement multidisciplinary catheter rounding.
• Stop and think critically about whether your patient needs a urinary catheter or if there are alternatives that may be appropriate.
• Accurate intake and output can be achieved without the use of a urinary catheter.
• Educate staff on the use of alternatives and include them in the trialing and selection process.
CASE STUDY: HOSPITAL STORY
Connie Faircloth, RN, BSN and Kelly Henry, RN, Infection Prevention Nurses | University Hospital | 11:35-11:55 AM
University Hospital is a nonprofit 581-bed private hospital located in downtown Augusta, Georgia.

Established in 1818, it is the second-oldest hospital in Georgia.
UNIVERSITY HOSPITAL

- Non-profit community acute care hospital.

- Consumer Choice Award for overall quality and image for 17 consecutive years.

- Only Magnet hospital in the region.

- Acute admissions (annualized): 21,000.

- ED visits (annualized): 77,000.
WHAT WE ACHIEVED

<table>
<thead>
<tr>
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<th>2014 Total</th>
<th>2015 Total</th>
<th>2016Q1</th>
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<tbody>
<tr>
<td>House wide Foley Usage</td>
<td>22.6%</td>
<td>17.3%</td>
<td>17.5%</td>
</tr>
<tr>
<td>Total CAUTI (count)</td>
<td>52</td>
<td>30</td>
<td>5</td>
</tr>
<tr>
<td>TOTAL UTI General Units</td>
<td>43</td>
<td>26</td>
<td>5</td>
</tr>
<tr>
<td>TOTAL UTI Critical Care</td>
<td>9</td>
<td>4</td>
<td>0</td>
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Foley Utilization by Quarter 2014-2016

- **Order sets**
- **Safety call, alternatives**
- **BPA, ED foley**

Utilization by quarter

- 2014Q1: 23.61%
- 2014Q2: 22.01%
- 2014Q3: 21.30%
- 2014Q4: 23.33%
- 2015Q1: 23.68%
- 2015Q2: 19.51%
- 2015Q3: 17.56%
- 2015Q4: 16.95%
- 2016Q1: 17.48%
HOW WE DID IT: TESTS OF CHANGE AND WHAT WE LEARNED

• Order set changes:
  – Stopped reflex culture testing.
  – Implemented “acute” and “chronic” urinary management orders.
• Curtailed placement in the ED.
• BPA for daily assessment (physicians).
• Daily foley report at safety call.
• Critical care intensivists incorporated foley assessment into daily metric.
• New and improved diapers.
• Purchased more bladder scanners and simplified bladder scan orders.
• Diaper scales (June 2016).
• CAUTI drill-down with each event.
• Incorporated foley used into our employee achievement scorecard- a financial reward system for meeting specified hospital wide goals.
• Foley usage is on hospitalist and intensivist incentive plan.
FOLEY ALTERNATIVES

• The acute urinary management set lists alternatives:

- Bladder scan
- Condom Cath
- In and Out Cath
- Continue foley catheter
- Insert foley catheter
FOLEY ALTERNATIVES

- Bladder scan with straight catheterization:

<table>
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<tr>
<th>Prompt</th>
<th>Answer</th>
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<tbody>
<tr>
<td>1. If volume is less than 250 ml</td>
<td>Notify MD</td>
</tr>
<tr>
<td>2. If volume greater than 250 ml but less than 500 ml rescan</td>
<td>Hourly Every 2 hours</td>
</tr>
<tr>
<td>3. Then, if volume greater than 500 ml</td>
<td>Insert Foley and enter</td>
</tr>
<tr>
<td></td>
<td>Insert Foley order from</td>
</tr>
<tr>
<td></td>
<td>Acute Urinary Management</td>
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<tr>
<td></td>
<td>order panel: medical</td>
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<tr>
<td></td>
<td>justification Obstruction/Acute</td>
</tr>
<tr>
<td></td>
<td>In and Out Cath Notify MD</td>
</tr>
<tr>
<td>4. If In and Out Cath chosen from question 3, rescan in</td>
<td>4 hours 8 hours</td>
</tr>
<tr>
<td>5. If total bladder volume is greater than 500 ml a second time</td>
<td>Insert Foley and enter</td>
</tr>
<tr>
<td></td>
<td>Insert Foley order from</td>
</tr>
<tr>
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<td>Notify MD</td>
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6 hours post foley removal or if patient has never had a foley and has not voided in 6 hours, or is uncomfortable. Follow parameters for repeat scan (s) and urinary tract management.
FOLEY ALTERNATIVES

• Condom catheter:
  – Use for male patients who are cooperative and do not have an obstruction.
  – Currently researching a better condom catheter for more compliance.

• Diaper weights for adults:
  – New alternative.
  – Similar to use in neonatal intensive care units.
  – 1 gram of weight equals 1 mL of urine.

• Female urinal:
  – Continued education of its availability.
BARRIERS

• Costs of new products.
• Coordination of product trials.
• Time-consuming to get approval at necessary committees.
• EHR build of order sets and documentation fields.
• Implementation of new products:
  – Storage.
  – Policy and EHR changes.
• Education (nurse and physician).
• Buy-in by physicians, nurses and sometimes even family!
RESOLUTIONS TO BARRIERS

- Costs:
  - Need justification of costs vs. benefit.
  - Obtain estimates.
  - Evaluate purchase as either “capital” expense or unit expense.

- Coordination of trials:
  - Delegate one person to “own” the process and keep everyone on track.
  - Communicate with key players.
  - Don’t plan trials around major events (either community or within facility).

- Committee approval.

- EHR build.
RESOLUTIONS TO BARRIERS

- Implementation:
  - Storage.
  - Process.
  - Coordination of product supply and distribution with policy changes, EHR and education.

- Education:
  - Physician newsletter, departmental committees and email notices.
  - Nurses: Flyers, “Read and Sign,” email notices with return receipt.

- Buy-in from physicians and nurses.
ADVICE FOR OTHERS

• Be patient, especially if you are in a larger facility.
• Be prepared for resistance.
  – Plan ahead for potential obstacles.
• Educate, educate, educate.
  – Then educate some more.
• Engage front-line staff, even if they are not able to consistently attend meetings.
  – Seek their input for product evaluation as well as EHR changes.
WRAP UP AND NEXT STEPS

In the works:

• New product evaluation- noninvasive device for females that wicks urine away from the body into a suction canister.
• Searching for an improved condom catheter.
• Roll out “days since last CAUTI” for each unit during shift “huddles.”

Future plans include:

• Reducing foley usage for acute obstruction/retention.
• Urologist champion.
CONTACT INFORMATION

• Connie Faircloth – cfaircloth@uh.org

• Kelly Henry – kellyhenry@uh.org
BRING IT HOME

Marina Levin, Program Manager | HRET | 11:55 AM-12:00 PM
PHYSICIAN LEADER ACTION ITEMS

What are you going to do by next Tuesday?

- Implement multidisciplinary catheter rounding.

What are you going to do in the next month?

- Educate staff on the use of alternatives and include them in the trialing and selection process.
What are you going to do by next Tuesday?

- Work with the multidisciplinary team to implement and evaluate alternatives to the urinary catheter.

What are you going to do in the next month?

- Implement multidisciplinary catheter rounding.
HOSPITAL LEADERS ACTION ITEMS

What are you going to do by next Tuesday?
- Develop champions to coach and mentor health care workers.

What are you going to do in the next month?
- Engage front-line staff, even if they are not able to consistently attend meetings.
THANK YOU!

Find more information on our website: www.hret-hen.org

Questions/Comments: hen@aha.org