BEYOND THE CAUTI BUNDLE: ADDRESSING CULTURES AND PATTERNS OF CARE

December 6, 2016
11:00 a.m. – 11:50 a.m. CST
Welcome and Introductions

Kimberly King, Program Manager | HRET | 11:00 – 11:03 a.m.
UPCOMING EVENTS

- HRET HIIN Quality Improvement & Patient Family Engagement Fellowships Information Session
  - December 8 | 11:00 – 12:00 p.m. CT
- HRET HIIN Data Office Hours
  - December 8 | 1:00 – 2:00 p.m. CT
- Register today

View all upcoming events from HRET HIIN
WEBINAR PLATFORM QUICK REFERENCE

- Mute computer audio
- Download slides/resources
- Register for upcoming events
- Chat with participants

HRET HIIN VIRTUAL EVENT

Today’s presentation
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>11:00-11:03 a.m.</td>
<td><strong>Welcome and Introductions</strong></td>
<td>Kimberly King, MPH, Program Manager, HRET</td>
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<td></td>
<td>Open and housekeeping information, including review of CAUTI HIIN resources and Listserv®.</td>
<td>Kimberly King, MPH, Program Manager, HRET</td>
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<td>11:03-11:08</td>
<td><strong>CAUTI Results and Framing Paradoxes</strong></td>
<td>Richard Rodriguez, MPH, Data Analyst, HRET; Betsy Lee, RN, MSPH, Improvement Advisor, Cynosure Health</td>
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<td>Provide review of HEN 2.0 performance related to CAUTI rates and catheter utilization, including national percent reduction and percent reporting. Frame the complex issues of preventing CAUTI through posing a discussion of paradoxes.</td>
<td>Richard Rodriguez, MPH, Data Analyst, HRET; Betsy Lee, RN, MSPH, Improvement Advisor, Cynosure Health</td>
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<td>11:08-11:20</td>
<td><strong>Thinking Beyond the Bundle</strong></td>
<td>Kathleen M. Vollman, MSN, RN, CCNS, FCCM, FASN, Advancing Nursing, LLC, Subject Matter Expert</td>
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<td>Urinary catheter placement increases the potential for harm across multiple topics. Learn why, despite strong evidence, rates of CAUTI and catheter placement have remained flat. Discuss evidence-based solutions and practical considerations to challenge “usual practice” in your organization.</td>
<td>Kathleen M. Vollman, MSN, RN, CCNS, FCCM, FASN, Advancing Nursing, LLC, Subject Matter Expert</td>
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<td>11:20-11:30</td>
<td><strong>What’s Working and Why?</strong></td>
<td>Lisa Lavoie, MPH, RN, CIC, Director, Clinical Quality, Baptist Health, Pensacola, FL</td>
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<td>Review highlights of successful strategies from a hospital that achieved dramatic reductions in CAUTI during HEN 2.0.</td>
<td>Lisa Lavoie, MPH, RN, CIC, Director, Clinical Quality, Baptist Health, Pensacola, FL</td>
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<td>11:30-11:45</td>
<td><strong>Addressing Paradoxes in CAUTI Prevention</strong></td>
<td>Facilitated by: Betsy Lee, RN, MSPH, Jackie Conrad, RN, MBA</td>
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<td>Participants will discuss some of the paradoxes that get in the way of reducing CAUTI. Nurse and patient convenience and the “culture of culturing” will be explored as a starting point. What are your organization’s paradoxes? Come prepared to ask the tough questions and share what has and has not worked in your organization.</td>
<td>Facilitated by: Betsy Lee, RN, MSPH, Jackie Conrad, RN, MBA</td>
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<td>11:45 -11:50 a.m.</td>
<td><strong>Mapping the Path Forward for HIIN Action</strong></td>
<td>Kimberly King, Program Manager, HRET</td>
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<td>Polling questions to help design next steps for HIIN-level action. Participants will suggest ideas for necessary resources and ideas for future programming to support improvement.</td>
<td>Kimberly King, Program Manager, HRET</td>
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CAUTI Results and Framing Paradoxes

Rich Rodriguez, Data Analyst, HRET
Betsy Lee, Improvement Advisor, Cynosure Health | 11:03 – 11:08 a.m.
HEN 2.0 CAUTI RESULTS

CATHETER-ASSOCIATED URINARY TRACT INFECTIONS (CAUTI)

98% of Eligible Acute/CAH/Children’s Hospital Reporting Data

4% Reduction in CAUTI Measures

94% Percent of participants that stated information provided will promote higher quality work

What does that mean?

505 CAUTI HARM PREVENTED

$505,000 TOTAL PROJECT ESTIMATED CAUTI COST SAVINGS

10 states MEETING THE REDUCTION IN PREVENTABLE HARM GOAL

40%

Reaching Our Audience

595 LISTSERV SUBSCRIBERS

850 PARTICIPANTS ENGAGED IN EDUCATION

1,887 NUMBER OF VISITS TO THE CAUTI TOPIC ON THE HRET HEN 2.0 WEBSITE.
HEN 2.0 CAUTI RATE RESULTS

CAUTI Rate Per 1,000 Catheter Days

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<tbody>
<tr>
<td>All Inpatient locations excl.NICU</td>
<td>1.02</td>
<td>1</td>
<td>1.07</td>
<td>1.01</td>
<td>0.95</td>
<td>1.07</td>
<td>0.91</td>
<td>0.96</td>
<td>1.02</td>
<td>0.97</td>
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<tr>
<td>ICUs excl. NICUs</td>
<td>1.21</td>
<td>1.15</td>
<td>1.37</td>
<td>1.17</td>
<td>1.11</td>
<td>1.26</td>
<td>1.03</td>
<td>1.13</td>
<td>1.23</td>
<td>1.15</td>
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*Relative reduction from baseline to the three month period April-June 2016.
HEN 2.0 CATHETER UTILIZATION RESULTS

**Catheter Utilization Ratio**

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<tr>
<td>All Inpatient locations excluding NICUs</td>
<td>22.39</td>
<td>21.64</td>
<td>21.95</td>
<td>22.26</td>
<td>22.14</td>
<td>21.9</td>
<td>22.04</td>
<td>21.48</td>
<td>21.27</td>
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<tr>
<td>ICUs excluding NICUs</td>
<td>55.55</td>
<td>58.64</td>
<td>58.87</td>
<td>59.67</td>
<td>59.77</td>
<td>58.82</td>
<td>60.65</td>
<td>59.57</td>
<td>58.72</td>
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*Relative reduction from baseline to the three month period April-June 2016.*
PARADOX DEFINED – MERRIAM-WEBSTER

A statement that is seemingly contradictory or opposed to common sense, and yet is perhaps true
CAUTI PARADOXES IN YOUR ORGANIZATION - PICK YOUR TOP TWO ISSUES

• Strict I&O for critically ill patients vs. actual use of hourly data
• Over-culturing vs. catching true CAUTI on admission
• Catheter avoidance and early removal vs. risk of incontinence
• Task completion vs. nursing patient advocacy role to prevent harm
• Availability of supplies and catheter alternatives vs. cost-reduction pressures
• Other (please type in the chat)
DISCLOSURES FOR KATHLEEN VOLLMAN

- Consultant-Michigan Hospital Association HIIN
- Consultant/Faculty for CUSP for MVP—AHRQ funded national study
- Subject matter expert HIIN: CAUTI, CLABSI, HAPU, Safety culture
- Consultant and speaker bureau for Sage Products LLC
- Consultant and speaker bureau for Hill-Rom Inc
- Consultant and speaker bureau for Eloquest Healthcare
SESSION OBJECTIVES

• Create the link of patient advocacy to the basic nursing care to reduce harm
• Identify and dissect the challenge of catheter utilization for intake and output
• Provide practical evidence based strategies to address the risk benefit ratio
Notes on Hospitals: 1859

“It may seem a strange principle to enunciate as the very first requirement in a Hospital that it should do the sick no harm.”

Florence Nightingale

Advocacy = Safety
### CUSP & CAUTI INTERVENTIONS

#### Adaptive /Cultural

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

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<th>CAUTI</th>
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<tr>
<td>1. Insertion Limiting use Using aseptic technique for site prep, equip &amp; supplies</td>
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<td>2. Maintenance</td>
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<td>• Securing the catheter for unobstructed flow</td>
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<tr>
<td>• Maintaining the sterility of the urine collection system</td>
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<tr>
<td>• Replacing the urine collection system when required</td>
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<td>• Collecting urine samples</td>
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Isn’t this a patient safety issue, not just CAUTI?

WHAT IS CHALLENGING OUR ABILITY TO REDUCE CAUTI’S?
CDC, SHEA, IDSA AND NHS: INDICATIONS FOR PLACEMENT

- Perioperative use for selected surgical procedures
- **Urine output in critically ill patients**
- Management of acute urinary retention and urinary obstruction
- Assistance in pressure ulcer healing for incontinent patients
- At a patient request to improve comfort (SHEA) or for comfort during end of life care (CDC)

DISRUPTING THE LIFECYCLE OF THE URINARY CATHETER

1. Aseptic Insertion
2. Maintaining Awareness & Proper Care of Catheters
3. Prompting Catheter Removal

(Adapted Meddings. Clin Infect Dis 2011)
Mindful When Making the Decision for Placement
BEFORE PLACING AN INDWELLING CATHETER, PLEASE CONSIDER IF THESE ALTERNATIVES WOULD BE APPROPRIATE:

- *Bedside commode, urinal, or continence garments:* to manage incontinence.
- *Bladder scanner:* to assess and confirm urinary retention, prior to placing catheter to release urine.
- *Straight catheter:* for one-time, intermittent, or chronic voiding needs.
- *External catheter:* appropriate for cooperative men without urinary retention or obstruction.
NURSE DRIVEN PROTOCOL-ER/ICU/OR & FLOOR

- Assessment of criteria for insertion
- Use of the bedside bladder ultrasound to assess urinary retention (reduce rates by 30-50%)
  - If minimal or no urine found in the bladder alternative strategies should be considered prior to catheterization
- Examine alternatives to indwelling catheters
  - External condom catheters for male patients without urinary retention or bladder outlet obstruction*
  - Intermittent catheterization several times per day (post-op)

*Saint S, et al. J am Geriatr Sco. 2006;54(7)1055-1061
NURSE DRIVEN INTERMITTENT CATHETERIZATION PROGRAM

If retention is suspected before placement or post removal:

- If no voiding within 4-6 hours of removing the catheter, a bedside bladder scan ultrasound should be obtained.
- If the bladder volume is less than 500mL, encourage the patient to void by using techniques to stimulate bladder reflex (cold water to abdomen, stroke inner thigh, run water, flush toilet).
- Continue to assess the patient and repeat the bladder scan in 2 hours if the patient has not voided.
- If the bladder volume is greater than 500mL, and intake is less than 3/l a day-catheterize for residual urine volume rather than place an indwelling catheter.
- If volumes are greater/catheter goes back in 24hrs

STOP CAUTI Sample Policy and Procedure
University of Virginia Health System nurse driven intermittent cath program
MALE EXTERNAL DEVICES: COMMON CHALLENGES WITH CONDOM CATHETERS

• 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

BEFORE & AFTER QI PROJECT

• 60-day comparison
• Use of novel EMC device vs. indwelling catheter
• Inclusion criteria:
  – No restraints
  – No BPH
  – No neurogenic bladder
  – Cooperative
  – Hospitalized ≥ 2 weeks
• Monitored wear time, evaluated skin

Fitzwater M, IP Kindred Albuquerque, 2015
TYPES OF TREATMENTS REQUIRING CLOSE UO MONITORING

- Bolus fluid resuscitation
- Vasopressors
- Inotropes
- High dose diuretics
- Hourly urine studies to measure life threatening laboratory abnormalities

Are you responding hourly to the patient’s urine output??
I & O IN CRITICAL CARE: A DIFFERENT COLLECTION METHOD


33.3% reduction in average foley usage from time periods Jan 2012-July 2012 and Aug 2012 - Feb 2013

23.9% decrease in CAUTI rates per 1000 catheter days from time period Jan 2012-July 2012 and Aug 2012-Feb 2013
QUESTIONING THE PARADOX IS THE BEGINNING OF UNDERSTANDING THE SOLUTION
What’s Working and Why?
Lisa Lavoie, MPH, RN, CIC, Director Clinical Quality,
Baptist Health Care, Pensacola, Florida | 11:20 – 11:30 a.m.
Baptist Hospital
Pensacola, Florida

492 licensed beds
240 Average Daily Census
Level II Trauma Center
3 Critical Care Units
BAPTIST HOSPITAL
CAUTI/CATHETER UTILIZATION RESULTS

CAUTI Rate (Infections/Patient days*1000)

Foley Utilization Ratio (Foley days/Patient days)
WHERE YOUR JOURNEY BEGAN

• Most common reasons for indwelling catheters in the surgical ICU
  – I&O monitoring for critically ill patients
  – Immobility
  – Retention

• Cultural paradigm shifts
  – CAUTI CUSP survey
  – Patient Safety video assigned to every nurse
  – Visual demonstration of urine retention in bladder
  – Daily catheter review and utilization displayed on board in unit
  – Indications added to EMR in a drop down list
  – Indications added to daily multidisciplinary grand rounds report sheet
  – Stop sign on the door to remove catheter prior to transfer if appropriate
An indwelling urinary catheter is an invasive device used to manage a very specific medical indication. Being “sick” is not a medical indication for a catheter, nor is obtaining a urine specimen, incontinence or patient/family request.

### CDC Indications

- Acute urinary retention or bladder outlet obstruction
- Accurate measurement of urinary output in critically ill patients
- Assist in wound healing of open sacral or perineal wounds of incontinent patients
- Prolonged immobilization (e.g., unstable ne, multiple traumatic injuries such as pelvic fractures)
- Improve comfort for end of life care if needed
- Perioperative use for selected surgical procedures

### Valid Reasons

- Acute retention that cannot be managed by in&out cath
- Hourly I/O in CCU, SINU, PCU
- Patient has a sacral/peri wound AND is incontinent
- Imminent end of life, no labs
- No log rolling or movement whatsoever
- During prolonged surgery or after urologic/gyn surgery

### Documentation

- Bladder scan results; Straight caths; urology consult
- Hourly I & O MUST be documented
- Documented Stage III/Stage IV pressure ulcers or other severe wounds
- Palliative care or hospice consult in chart
- Documented order by surgeon performing procedure

### Invalid Reasons

- Chronic retention or patient with recent acute retention that has resolved
- Strict I/O out on the floor
- Prevention of skin breakdown
- Has DNR status but labs, procedures, etc. continue
- Unable to ambulate but can get to bedpan/urinal with assistance
- Post-surgical pt able to use bedpan/urinal/BSC

### Safer Alternatives for your patient:

- Frequent assistance to BSC or bathroom; condom catheter; in & out catheter; bedpan; urinal; briefs; bladder scan to rule out retention before catheterizing
PHYSICIAN LEADERSHIP

- Infectious Disease and Cardiothoracic surgeon champions
  - Discussion with peers regarding appropriate indications for catheter use
  - Reach out to providers who are resistant to remove urinary catheters based on nurse removal protocol
  - Educate providers about appropriate urine culturing practices
    - No “pan-culturing”
    - “UA, do if” orders
  - Recommendations for voiding trial for uncomplicated urinary retention
  - Urology consult required for females with retention
NURSING CRITICAL THINKING

• Nurse driven protocol
  – Policy and protocol developed by nursing and approved by physicians
  – Changes in nurse practice developed slowly...Wait for physician order → Ask for physician order → Remove based on protocol
  – Support and empowerment through rounding

• Accountability
  – Daily safety huddle
    • Total number of catheters
    • Unit-specific utilization ratio
    • Indications for catheters
INTEGRATION INTO DAILY WORK

• Daily update of Days Since Last CAUTI by unit
• Daily management board – Infection Prevention
  – Rounding for compliance with maintenance bundle
    • Tamper evident seal intact
    • No dependent loops
    • Label with insertion date and location
    • Bag off the floor
    • Securement device in place
    • Sheet clips in use
• Findings from daily rounds discussed with nurse at time of finding and weekly report sent to managers and directors.
INTEGRATION INTO DAILY WORK
OTHER CHALLENGING PARADOXES

• Acceptance of alternatives
  – Find a good condom catheter
  – Find good quality incontinence pads
  – Measuring accurate output without a catheter

• Culturing stewardship
  – Look for symptoms before culturing (no pan culturing)
  – Ask, “Will the results of the culture change the way I treat?”
  – Perform urinalysis first. If results indicate infection, proceed with culture
OTHER CHALLENGING PARADOXES

• Describe the work your infectious disease physician has done with intensivists and hospitalists to reduce inappropriate cultures (ex. for ASB as well as pan-culturing)
• Lead into “culture of culturing” discussion
• Goal is to help us start the conversation with the other participants about the paradoxes that present challenges in their institutions
Addressing Paradoxes in CAUTI Prevention

Group dialogue with participants and presenters, facilitated by Betsy Lee and Jackie Conrad, Cynosure Health | 11:30 – 11:45 a.m.
Bring It Home

Kimberly King, Program Manager | HRET| 11:45 – 11:50 a.m.
THANK YOU!

Find more information on our website: http://www.hret-hiin.org/

Questions/Comments: HIIN@aha.org