Engaging Clinicians in CAUTI Prevention: Tales from the Trenches

Sanjay Saint, MD, MPH
George Dock Collegiate Professor of Internal Medicine
University of Michigan Medical School
Ann Arbor VA Medical Center
Catheter-Associated Urinary Tract Infection (CAUTI)

- UTI causes ~ 35% of hospital-acquired infections
- Most due to urinary catheters
- ~20% of inpatients are catheterized
- Leads to increased morbidity and healthcare costs
- CMS no longer reimburses for the additional costs of hospital-acquired CAUTI
Satisfaction survey of 100 catheterized VA patients:

- 42% found the indwelling catheter to be uncomfortable
- 48% stated that it was painful
- 61% noted that it restricted their ADLs
- 2 patients provided unsolicited comments that their catheter “hurt like hell”

(Saint et al. JAGS 1999)
How Can We Implement Changes to Reduce Indwelling Catheter Use?
A Technical Solution: Timely Removal of Indwelling Catheters

- 14 studies have evaluated urinary catheter reminders and stop-orders (written, computerized, nurse-initiated)
  - Significant reduction in catheter use (~2.5 days)
  - Significant reduction in infection (~50%)
  - No evidence of harm (ie, re-insertion)

Regularly Using to Prevent CAUTI: 2005 vs. 2009
U.S. National Data
(Krein et al. J Gen Intern Med 2011)
Implementing Change

- Across the State of Michigan
- At Home
Hospital Outcomes Program of Excellence (HOPE)  
(http://va-hope.org)

• Systems redesign grant to Ann Arbor VAMC  

• Behavioral lab for interventions to improve quality and efficiency of care  

• CAUTI prevention one of many initiatives: nurse-initiated reminder
Prevalence of Urinary Catheters

Urinary Catheter Point Prevalence

% of Patients with a Catheter

CAUTI Initiative
Indication for Catheter Placement

Patients with Foley Not Indicated

Percent of Catheterized Patients

Sep-10 Oct-10 Dec-10 Mar-11 Jun-11 Oct-11

Percent of Catheterized Patients

0% 5% 10% 15% 20% 25% 30% 35%
Average CAUTI Rate Before and After Implementation of CAUTI Initiative

45% decrease in CAUTI Rate
A key ingredient for success is figuring out how to engage the clinicians in your hospital.
Outline

• CAUTI & Timely Removal of the Catheter

• Engaging Clinicians

• Future Directions
Physicians…

(Following slides courtesy of Dr. Fakih)

- Play a significant role in shaping care in the hospital
- Tend to be fairly autonomous; may not be employed by the hospital
- Primarily interested in treating illness – typically not trained to focus on improving safety and preventing harm
- Likely unaware of safety efforts in the hospital; most have limited time to volunteer for supporting the safety agenda
- Change may not be readily embraced
How to Engage Physicians?
(James Reinertsen, IHI innovation Series White Paper, 2007)

1. Develop a common purpose (patient safety, efficiency)

2. View physicians as partners (not barriers)

3. Identify physician champions early

4. Standardize evidence-based processes

5. Provide support from leadership for the efforts of the physician champion
The Physician Champion & Physician Supporters

CAUTI Physician Champion

- Emergency Medicine Physicians
- ID specialists/Hospital Epidemiologist
- Urologists
- Intensivists
- Hospitalists
- Surgeons
- Geriatricians
- Rehabilitation Medicine specialists
Physician Supporters: Reasons for Them to Support the Champion (or Become One...)

<table>
<thead>
<tr>
<th>Infectious Disease Specialists</th>
<th>Urologists</th>
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<tbody>
<tr>
<td>• Reduce CAUTI</td>
<td>• Reduce trauma (mechanical complications):</td>
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<tr>
<td>• Reduce antibiotic use</td>
<td>1. Meatal and urethral injury</td>
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<tr>
<td>• Reduce potential of increased resistance and <em>Clostridium difficile</em> disease</td>
<td>2. Hematuria</td>
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<tr>
<th>Hospitalists</th>
<th>Geriatricians</th>
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<tr>
<td>• Infectious and mechanical complications</td>
<td>• Many elderly are frail</td>
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<tr>
<td>• Potential catheter complications prolonging length of stay</td>
<td>• Urinary catheters are placed more commonly in elderly inappropriately</td>
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<tr>
<td>• Often salaried physicians with incentives based on hospital-based quality and efficiency</td>
<td>• Urinary catheters increase immobility and deconditioning</td>
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<tr>
<td>Rehabilitation Specialists</td>
<td>Surgeons</td>
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<tr>
<td>• The urinary catheter reduces mobility in patients: “one-point restraint”</td>
<td>• Surgical Care Improvement Project: Remove catheters by postop day 1 or 2</td>
</tr>
<tr>
<td>• Rapid recovery (improvement in ambulation) may be hampered by the catheter</td>
<td>• Inappropriate urinary catheter use may negatively affect the surgeon’s profile</td>
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<td>• Risk of infection and trauma related to the catheter</td>
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<tr>
<th>Intensivists</th>
<th>Emergency Medicine physicians</th>
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<tr>
<td>• Intensivists can support the evaluation of catheter need before transfer out of the ICU</td>
<td>• Up to half of the patients are admitted through the emergency department (ED)</td>
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<td>• Inappropriate urinary catheter placement is common in the ED</td>
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<td>• Promoting appropriate placement of urinary catheters in the ED will reduce inappropriate use hospital-wide</td>
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How to Engage Nurses?

1. Develop a common purpose (patient safety)

2. View nurses as partners (not barriers)

3. Identify nurse champions early

4. Standardize evidence-based processes (and make the right thing to do, the easy thing to do)

5. Provide support from leadership for the efforts of the nurse champion
Attention to Urinary Catheters: Workload

• Nursing workload can be an issue …

• A nurse: “…convenience unfortunately is a high priority …especially with urinary catheters…the workload will be increased if you have to take [patients] to the bathroom or you have to change their bed a little more often ….”

(Saint et al. Infect Cont Hosp Epid 2008)
Overcoming Barriers

• Nurse buy-in is key to success

• A physician administrator: “Because the nurses on the geriatrics unit wanted to have their patients regain mobility…they viewed mobility as very important …versus the other units where the nurses didn’t necessarily feel that was a real goal..”

• A nurse champion is critically important!
Identifying the “Champion”

Successful champions tend to be intrinsically motivated and enthusiastic about the practices they promote

“I have a certain stature in this hospital…People know that I’m very passionate about patient care so…I get positive reinforcement from them…they’re happy to see me…because …they know that I’m thinking about what’s best for the patient…”

(Damschroder et al., Qual and Safety in Healthcare 2009)
The Bedside Nurse...and Supporters

Nurse (Bedside) Champion

- Infection Preventionists
- Post-operative, Recovery Nurses
- Case Managers
- Emergency Medicine Nurses
- Nurse Educator/Manager/DON
- Wound Care Nurses
- Physical Therapists
- Intensive Care Nurses
- Post-operative, Recovery Nurses
## Nurse Supporters: Reasons for Them to Support the Champion

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<tr>
<th>Nurse educator/ Unit manager/Director of nursing (DON)</th>
<th>Case managers</th>
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<tr>
<td>• Leader and supporter to the bedside nurse</td>
<td>• Less complications (mechanical or infectious) = lower cost</td>
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<td>• Makes appropriate urinary catheter use a priority and a safety issue</td>
<td>• Early removal of catheter may reduce length of stay</td>
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<td>• Helps to address any barriers encountered by the bedside nurse</td>
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### Nurse Supporters: Reasons for Them to Support the Champion

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<th>Intensive care unit (ICU) nurses</th>
<th>Wound care nurses</th>
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<td>• A significant opportunity is present upon transfer from the ICU to discontinue no longer needed urinary catheters</td>
<td>• Urinary catheter use increases immobility, which in turn results in an increased risk of pressure ulcers</td>
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<td>• ICU nurse may evaluate catheter need before transfer out of the unit and discontinue unnecessary catheters</td>
<td>• Wound care nurses may help in advising the bedside nurse on methods to reduce skin breakdown in patients with incontinence without using urinary catheters</td>
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<th>Post-operative recovery nurses</th>
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<td>• Up to half of the patients are admitted through the emergency department (ED)</td>
<td>• Urinary catheters are commonly placed preoperatively for fluid management</td>
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<td>• Inappropriate urinary catheter placement is common in the ED</td>
<td>• Post-operative recovery nurses evaluate the catheter for continued need and promptly remove unnecessary catheters</td>
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<tr>
<td>Role or Responsibility</td>
<td>Example of Personnel to Consider</td>
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<tr>
<td>Project coordinator</td>
<td>Infection preventionist, quality manager, nurse manager</td>
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<tr>
<td>Nurse champion (engage nursing personnel)</td>
<td>Nurse educator, unit manager, charge nurse, staff nurse</td>
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<tr>
<td>Physician champion (engage medical personnel)</td>
<td>Urologist, ID physician, hospital epidemiologist, hospitalist</td>
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<tr>
<td>Data collection, monitoring, reporting</td>
<td>Infection preventionist, quality manager, Utilization manager</td>
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(Modified from www.catheterout.org)
Outline

• CAUTI & Timely Removal of the Catheter

• Engaging Clinicians

• Future Directions
The Future...

- Sustainability
- Mindfulness
A Dilemma

• Much of what we do in healthcare – especially in the hospital – is reflexive

  – If a patient is hypoxemic: we give oxygen
  – Low BP: IV fluids
  – Positive blood cultures: antibiotics
  – Frequency, urgency, and dysuria: dx UTI
A Dilemma

• These rote responses are usually helpful

• However, this reflex-like approach can lead to problems
  – Pt sick enough to be admitted from the ED: Foley catheter
  – Asymptomatic catheterized patient has a “dirty” urine: antibiotics
One Possible Solution: “Medical Mindfulness”
Outline

✓ CAUTI & Timely Removal of the Catheter

✓ Engaging Clinicians

✓ Future Directions