

# *Catheter-associated Urinary Tract Infection*

*Indiana: Committed to Prevention*

October 30, 2015



# *Webinar Objectives*

- ▶ Describe Catheter-associated Urinary Tract Infections (CAUTI) related Indiana statistics
- ▶ Define 2009 Healthcare Infection Control Practices Committee or HICPAC criteria for appropriate placement of indwelling urinary catheter
- ▶ Explore methods to engage patients and families in the prevention of CAUTI
- ▶ Compare different manners to conduct performance feedback to healthcare personnel

# *Indiana's Bold Aim*



To make Indiana the  
safest place to receive  
health care in the  
United States...  
*if not the world*

*Inaugural Indiana Patient Safety Summit – March 2010*

# *Why Focus on CAUTI in Indiana?*





HEALTHCARE ASSOCIATED INFECTIONS  
**PROGRESS**



## INDIANA

**Healthcare-associated infections (HAIs)** are infections patients can get while receiving medical treatment in a healthcare facility. Working toward the elimination of HAIs is a CDC priority. The standardized infection ratio (SIR) is a summary statistic that can be used to track HAI prevention progress over time; lower SIRs are better. The infection data are collected through CDC's National Healthcare Safety Network (NHSN). HAI data for nearly all U.S. hospitals are published on the Hospital Compare website.



### CLABSIs

↓ 31% LOWER COMPARED TO NAT'L BASELINE\*

#### CENTRAL LINE-ASSOCIATED BLOODSTREAM INFECTIONS

When a tube is placed in a large vein and not put in correctly or kept clean, it can become a way for germs to enter the body and cause deadly infections in the blood.

- Indiana hospitals reported no significant change in CLABSIs between 2012 and 2013.

**12%** Among the 58 hospitals in Indiana with enough data to calculate an SIR, 12% had an SIR significantly worse than the national SIR of 0.54.

### CAUTIs

↑ 23% HIGHER COMPARED TO NAT'L BASELINE\*

#### CATHETER-ASSOCIATED URINARY TRACT INFECTIONS

When a urinary catheter is not put in correctly, not kept clean, or left in a patient for too long, germs can travel through the catheter and infect the bladder and kidneys.

- Indiana hospitals reported a significant increase in CAUTIs between 2012 and 2013.

**9%** Among the 70 hospitals in Indiana with enough data to calculate an SIR, 9% had an SIR significantly worse than the national SIR of 1.06.

### MRSA Bacteremia

↓ 19% LOWER COMPARED TO NAT'L BASELINE\*

#### LABORATORY IDENTIFIED HOSPITAL-ONSET BLOODSTREAM INFECTIONS

Methicillin-resistant *Staphylococcus aureus* (MRSA) is bacteria usually spread by contaminated hands. In a healthcare setting, such as a hospital, MRSA can cause serious bloodstream infections.

- 5%** Among the 43 hospitals in Indiana with enough data to calculate an SIR, 5% had an SIR significantly worse than the national SIR of 0.92.

### SSIs

#### SURGICAL SITE INFECTIONS

When germs get into an area where surgery is or was performed, patients can get a **surgical site infection**. Sometimes these infections involve only the skin. Other SSIs can involve tissues under the skin, organs, or implanted material.

**SSI: Abdominal Hysterectomy** ↓ 16% LOWER COMPARED TO NAT'L BASELINE

- Indiana hospitals reported a significant increase in SSIs related to abdominal hysterectomy surgery between 2012 and 2013.

**0%** Among the 17 hospitals in Indiana with enough data to calculate an SIR, 0% had an SIR significantly worse than the national SIR of 0.86.

**SSI: Colon Surgery** ↑ 7% HIGHER COMPARED TO NAT'L BASELINE

- Indiana hospitals reported no significant change in SSIs related to colon surgery between 2012 and 2013.

- Several changes to the NHSN 2013 SSI protocol likely contributed to an increase in the national and some state-specific colon surgery SIRs compared to 2012.

**9%** Among the 53 hospitals in Indiana with enough data to calculate an SIR, 9% had an SIR significantly worse than the national SIR of 0.92.

### C. difficile Infections

↓ 9% LOWER COMPARED TO NAT'L BASELINE\*

#### LABORATORY IDENTIFIED HOSPITAL-ONSET C. DIFFICILE INFECTIONS

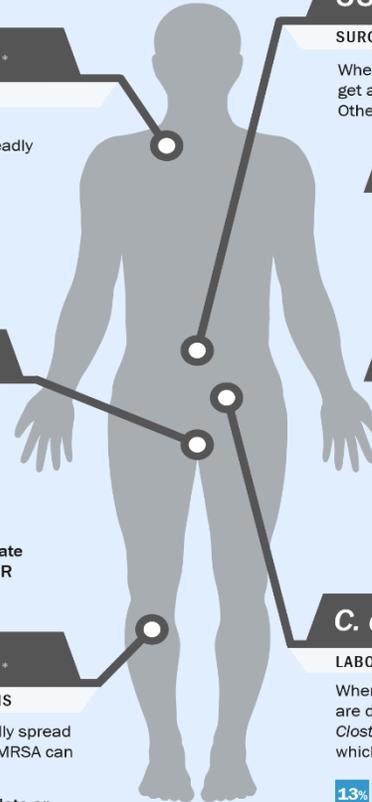
When a person takes antibiotics, good bacteria that protect against infection are destroyed for several months. During this time, patients can get sick from *Clostridium difficile* (*C. difficile*), bacteria that cause potentially deadly diarrhea, which can be spread in healthcare settings.

- 13%** Among the 94 hospitals in Indiana with enough data to calculate an SIR, 13% had an SIR significantly worse than the national SIR of 0.90.



\* Statistically significant.

THIS REPORT IS BASED ON 2013 DATA, PUBLISHED JANUARY 2015





# INDIANA

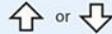
HEALTHCARE ASSOCIATED INFECTIONS PROGRESS



### LEGEND



2013 state SIR is significantly lower (better) than comparison group in column header



Change in 2013 state SIR compared to group in column header is not statistically significant



2013 state SIR is significantly higher (worse) than comparison group in column header



2013 state SIR cannot be calculated

**HEALTHCARE-ASSOCIATED INFECTION (HAI) DATA** give healthcare facilities and public health agencies knowledge to design, implement, and evaluate HAI prevention efforts.

Learn how your hospital is performing: [www.medicare.gov/hospitalcompare](http://www.medicare.gov/hospitalcompare)  
 For additional information:

- 2013 HAI Progress Report: [www.cdc.gov/hai/progress-report/](http://www.cdc.gov/hai/progress-report/)
- NHSN: [www.cdc.gov/nhsn](http://www.cdc.gov/nhsn)
- HAIs and prevention activities in Indiana: [www.in.gov/isdh/25479.htm](http://www.in.gov/isdh/25479.htm)
- Indiana validation efforts: [www.cdc.gov/hai/pdfs/state-progress-landscape.pdf](http://www.cdc.gov/hai/pdfs/state-progress-landscape.pdf)



HAI TYPE	# OF INDIANA HOSPITALS THAT REPORTED DATA TO CDC'S NHSN, 2013 Total Hospitals in State: 148 <sup>†</sup>	2013 STATE SIR vs. 2012 State SIR <sup>‡</sup>	2013 STATE SIR vs. 2013 Nat'l SIR	2013 STATE SIR vs. Nat'l Baseline <sup>‡</sup>	2013 STATE SIR	2013 NAT'L SIR
<b>CLABSI</b> Nat'l Baseline: 2008	104	↑ 5%	↑ 30%	↓ 31%	0.69	0.54
<b>CAUTI</b> ★ Nat'l Baseline: 2009	110	↑ 16%	↑ 16%	↑ 23%	1.23	1.06
<b>SSI, Abdominal Hysterectomy</b> Nat'l Baseline: 2008	98	↑ 61%	↓ 2%	↓ 16%	0.84	0.86
<b>SSI, Colon Surgery</b> Nat'l Baseline: 2008	101	↑ 2%	↑ 16%	↑ 7%	1.07	0.92
<b>MRSA Bacteremia</b> Nat'l Baseline: 2011	102	2012 SIR not available	↓ 12%	↓ 19%	0.81	0.92
<b>C. difficile Infections</b> Nat'l Baseline: 2011	102	2012 SIR not available	↑ 1%	↓ 9%	0.92	0.90

<sup>†</sup>Not all hospitals are required to report these infections; for example, some hospitals do not use central lines or urinary catheters, or do not perform colon or abdominal hysterectomy surgeries.

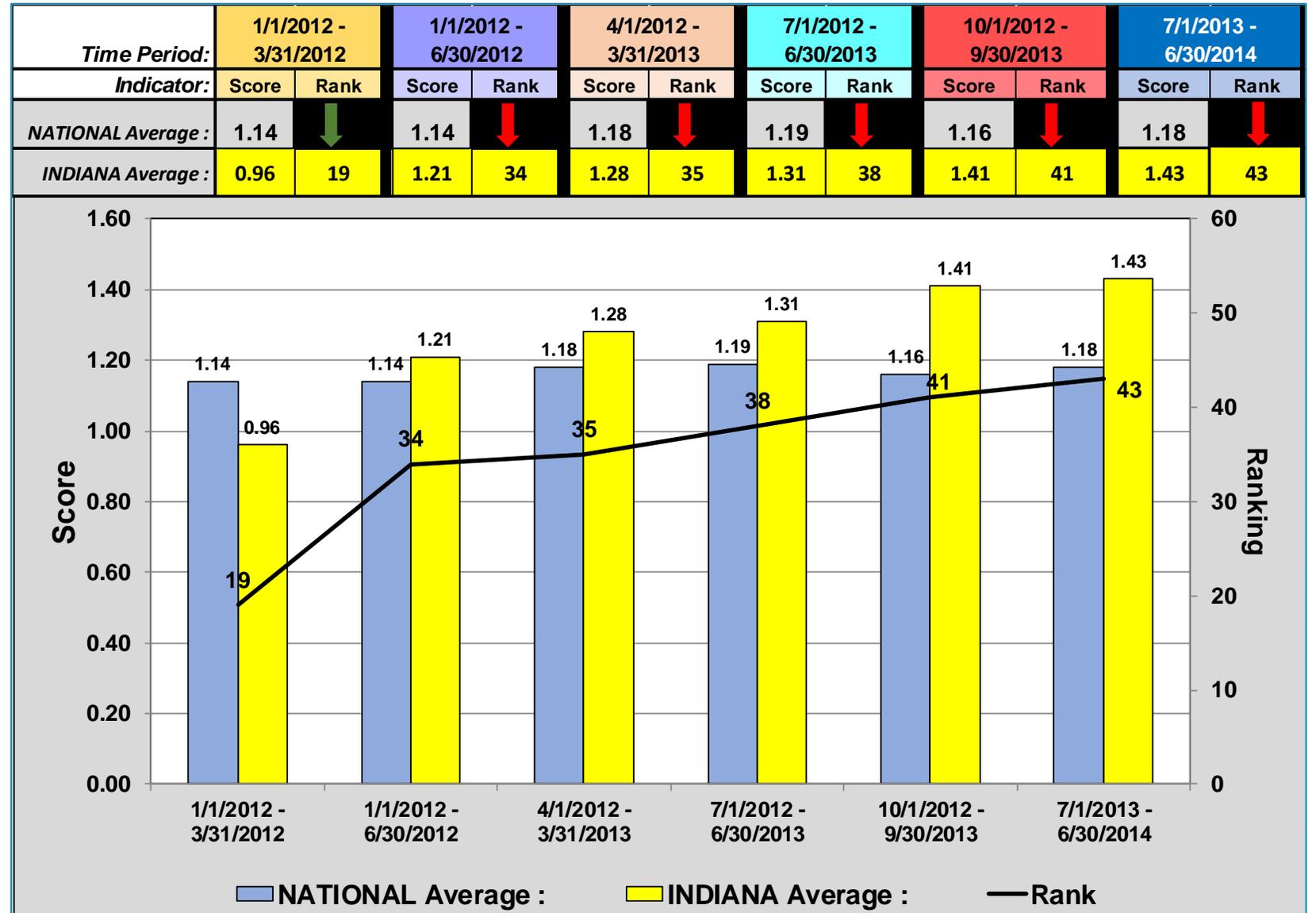
<sup>‡</sup>The state's 2012 SIR can be found in the data tables of this report.

<sup>‡</sup>Nat'l baseline time period varies by infection type. See first column of this table for specifics.

WHAT IS THE STANDARDIZED INFECTION RATIO?

WHAT IS INDIANA DOING TO PREVENT HEALTHCARE-ASSOCIATED INFECTIONS?

## Catheter Associated Urinary Tract Infection (CAUTI) SIR – All Units



Source: Hospital Compare

## SIR=Standardized Infection Ratio

$$\text{SIR} = \frac{\text{Observed (O) HAIs}}{\text{Expected (E) HAIs}}$$

Summary measure used to track healthcare-associated infections (HAIs) at a national, state or local level over time. The SIR adjusts for patients of varying risk within each facility.

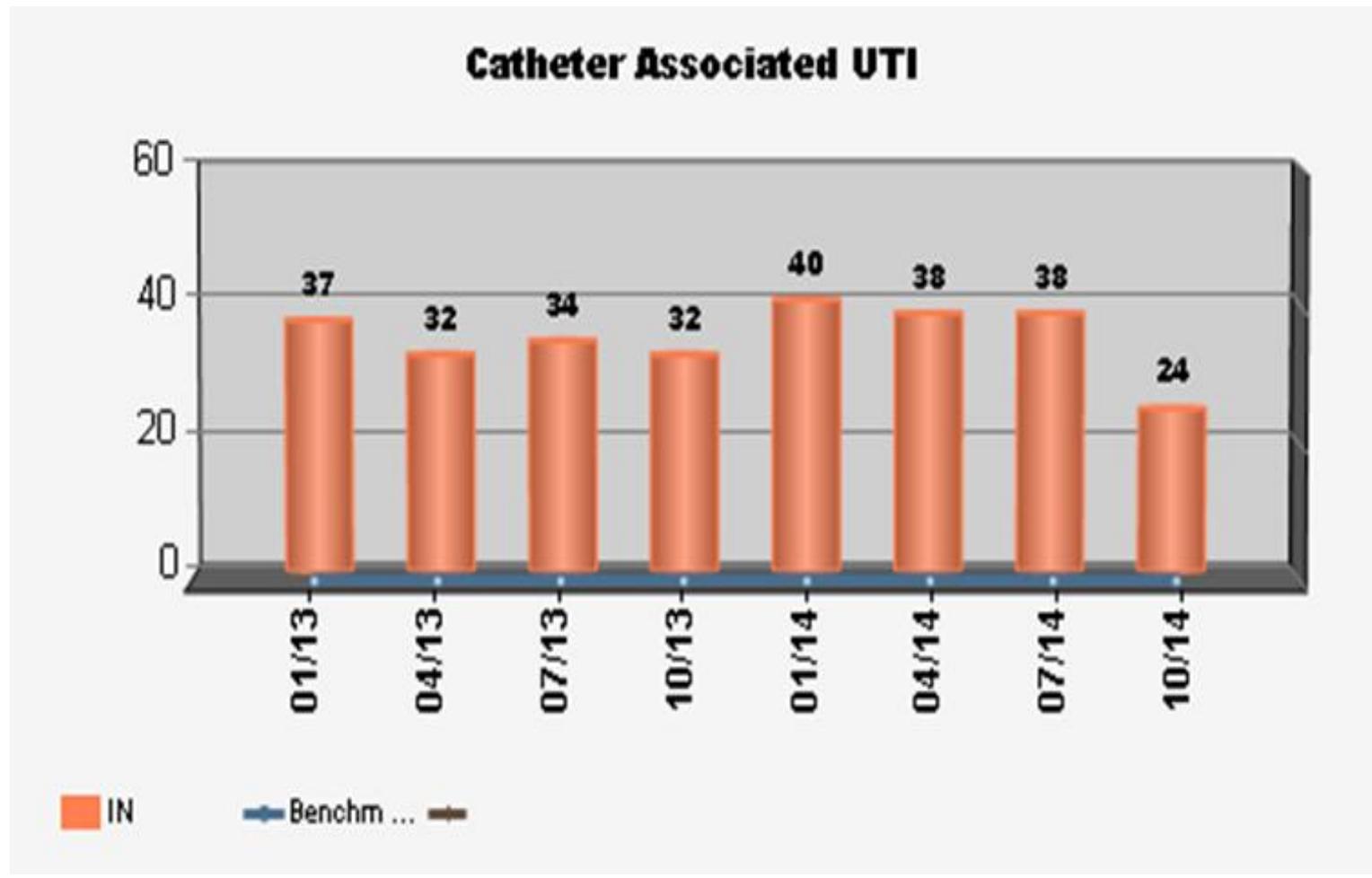
In HAI analysis, the SIR compares the actual number of HAIs reported with the baseline U.S. experience.

A SIR < 1.0 indicates that fewer HAIs were observed than predicted

Conversely,

A SIR > 1.0 indicates that more HAIs were observed than predicted





Tying our work to lives touched



2013=135  
 2014=140

Source: Inpatient Discharge Study (IDS)

# *Sharing Best Practices Past, Present & Future*

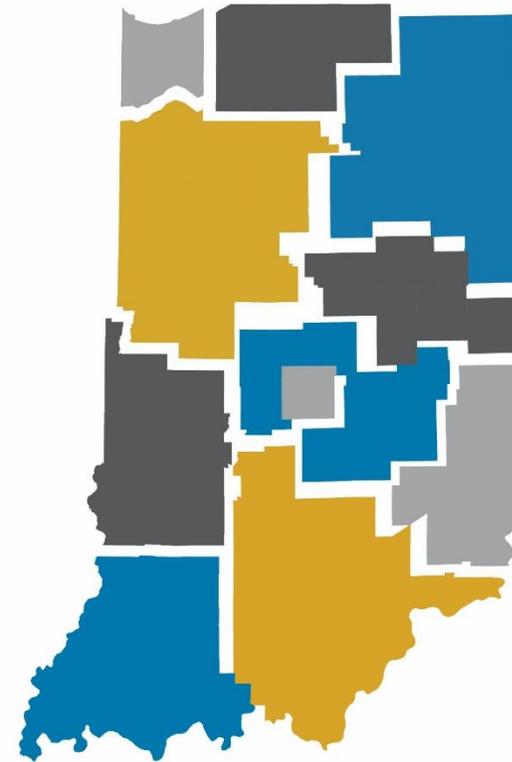
# Eleven Regional Patient Safety Coalitions

**Members agree not to compete on patient safety**

**Layered model** of regional coalitions and affinity groups supports transformation, learning and spread

**Benefits:**

- Innovate at the front lines
- Align with state and national efforts, and standardize when beneficial
- Builds local and hospital-specific capacity for improvement and innovation
- Encourages safety leadership at all levels across multiple professions



*11 Regional Patient Safety Coalitions*

# *Indiana Patient Safety Center*

## *2015 Strategic Plan to Impact Areas of Focus*

### **First Step: Create state-wide faculty**

Harvest talents and passion from Indiana hospitals from various disciplines

▶ Collaborate

\*Review national and statewide trends

\*Consensus around best practices

\*Methods for practical application across the health care continuum

▶ Assist with educational event planning and presentations

▶ Disseminate best practices

▶ Evaluate impact of recommended practices throughout Indiana

# Thank You to Our CAUTI-Prevention Faculty!

Ann Batagianis	Infection Control Coordinator	Porter Regional Hospital
Claire Sutherby	Clinical Educator/Oncology Nurse Navigator	Deaconess Hospital
Gina Croxford	Infection Preventionist	Johnson Memorial Hospital
Michele Gonser	Infection Preventionist	Parkview Regional Medical Center
Diana Greathouse	Infection Preventionist	Richard L. Roudebush VA Medical Center
Jeanette Huntoon	VP of Physician Network & Quality Director	Logansport Memorial Hospital
Della Sennett	Director, Quality & Patient Safety, Risk & Compliance	Clark Memorial Hospital
Brandee Wornhoff	Clinical Nurse Specialist	Hendricks Regional Health

Additionally, we extend our gratitude to content experts within each of our faculty organizations who have shared their insight

# *CAUTI Faculty Recommendations*

To decrease Indiana's catheter-associated urinary tract infection rate, it is recommended that all Indiana hospitals:

- Screen every patient admitted to a health care facility for the appropriate placement of an indwelling catheter according to HICPAC guidelines
- Engage patients and families regarding appropriate placement and maintenance (brochure template created)
- Provide performance feedback to staff caring for patient with an indwelling catheter (creating a toolkit of sample methods)

# Screening for Appropriateness

# Criteria for Appropriate Indications for Indwelling Urethral Catheters



## **GUIDELINE FOR PREVENTION OF CATHETER-ASSOCIATED URINARY TRACT INFECTIONS 2009**

Carolyn V. Gould, MD, MSCR<sup>1</sup>; Craig A. Umscheid, MD, MSCE<sup>2</sup>; Rajender K. Agarwal, MD, MPH<sup>2</sup>; Gretchen Kuntz, MSW, MSLIS<sup>2</sup>; David A. Pegues, MD<sup>3</sup> and the Healthcare Infection Control Practices Advisory Committee (HICPAC)<sup>4</sup>

<sup>1</sup> Division of Healthcare Quality Promotion  
Centers for Disease Control and Prevention  
Atlanta, GA

<sup>2</sup> Center for Evidence-based Practice  
University of Pennsylvania Health System  
Philadelphia, PA

<sup>3</sup> Division of Infectious Diseases  
David Geffen School of Medicine at UCLA  
Los Angeles, CA



<b>Table 2.</b>
<b>A. Examples of Appropriate Indications for Indwelling Urethral Catheter Use<sup>1-4</sup></b>
Patient has acute urinary retention or bladder outlet obstruction
Need for accurate measurements of urinary output in critically ill patients
Perioperative use for selected surgical procedures: <ul style="list-style-type: none"> <li>• Patients undergoing urologic surgery or other surgery on contiguous structures of the genitourinary tract</li> <li>• Anticipated prolonged duration of surgery (catheters inserted for this reason should be removed in PACU)</li> <li>• Patients anticipated to receive large-volume infusions or diuretics during surgery</li> <li>• Need for intraoperative monitoring of urinary output</li> </ul>
To assist in healing of open sacral or perineal wounds in incontinent patients
Patient requires prolonged immobilization (e.g., potentially unstable thoracic or lumbar spine, multiple traumatic injuries such as pelvic fractures)
To improve comfort for end of life care if needed
<b>B. Examples of Inappropriate Uses of Indwelling Catheters</b>
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 (e.g., structural repair of urethra or contiguous structures, prolonged effect of epidural anaesthesia, etc.)

Note: These indications are based primarily on expert consensus.

# Engaging Patients & Families

## ~How to Begin the Conversation~

# Engaging Patients & Families

## Claire Sutherby

### POTENTIAL PROBLEMS FROM HAVING A URINARY CATHETER

**Bloody Urine**—You may see blood in the urine bag if the catheter was difficult to place or if there is an infection.

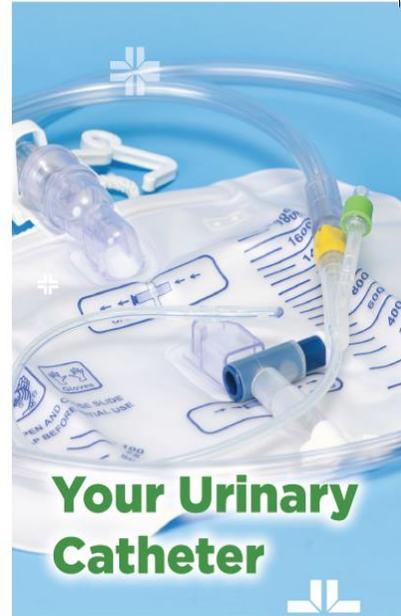
**Infection**—Signs of a bladder or urinary tract infection include:

- fever or chills
- belly or back pain
- bladder pain

These signs of infection may occur several days after the catheter has been removed:

- burning when urinating
- frequent urination
- urinating in small amounts

Tell your nurse or doctor if you notice any of these problems.



### Your Urinary Catheter

Important information about managing your catheter



[www.deaconess.com](http://www.deaconess.com)

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### YOUR URINARY CATHETER

A urinary catheter, often called a “foley catheter,” is a small, flexible tube inserted into your bladder and held in place by a balloon. The tube collects and drains urine into a bag.

### A CATHETER IS AN IMPORTANT PART OF YOUR HOSPITAL CARE

Catheters can also be a source of infection. Here are things you can do to help reduce your risk of infection:

- You should perform peri care twice daily with soap and water while the catheter is in place. Your nursing staff may need to help to ensure proper technique.

- Do not pull or kink the catheter tubing. Staff will secure the tubing to your leg to help prevent accidents.

- The drainage bag of your catheter should stay below the level of your bladder (lower than your hips) at all times. Watch closely when you’re out of bed or being moved to another part of the hospital.

- Your catheter bag will be emptied at least once every eight hours (or more frequently if necessary) and before you are moved to another area of the hospital.

- The catheter should be taken out as soon as possible. If it has been in place for more than two days, ask your doctor or nurse when it will be removed.

### OTHER HELPFUL TIPS

Remember to drink plenty of liquids, if your diet allows, to keep yourself hydrated.

If you are able to get up and walk to the bathroom or bedside commode, ask for the catheter to be taken out. While convenient at times, it’s in your best interest to remove it as soon as possible to avoid infection.

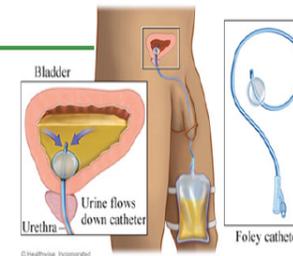
### IMPORTANT NOTE FOR FAMILIES

If your loved one is unable to speak for himself or herself, you may ask for the catheter to be taken out for them.

### MORE INFORMATION

If you have questions, please talk to a member of your nursing staff.

Your doctor has ordered a urinary catheter to closely monitor your progress during your hospital visit.



**DATE YOUR CATHETER WAS PLACED:**

# Customizable CAUTI Brochure Template Available

## POTENTIAL PROBLEMS FROM HAVING A URINARY CATHETER

**Bloody Urine** – You may see blood in the urine bag if the catheter was difficult to place or if there is an infection.

**Infection** – Signs of a bladder or urinary tract infection include:

- Fever or chills
- Belly or back pain
- Bladder pain

These signs of infection may occur several days after the catheter has been removed:

- Burning when urinating
- Frequent urination
- Urinating in small amounts

Tell your nurse or doctor if you notice any of these problems.



**If you have additional questions, please feel free to contact Infection Prevention and Control**

**Facility Name**  
IPC Phone or Contact Info



## Your Urinary Catheter

**Important information about managing your catheter**

**Your Hospital Name**

## YOUR URINARY CATHETER

A urinary catheter, often called a "Foley catheter," is a small, flexible tube inserted into your bladder and held in place by a balloon. The tube collects and drains urine into a bag.

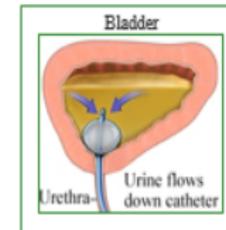
## A CATHETER IS AN IMPORTANT PART OF YOUR HOSPITAL CARE

Catheters can also be a source of infection; which may increase the length of a hospital stay and increase the cost of care. Here are things you can do to help reduce your risk of infection:

- The catheter should be taken out as soon as possible. If it has been in place for more than two days, ask your doctor or nurse when it will be removed. The longer a catheter is in place, the greater the risk for a catheter related infection.

**Your doctor has ordered a urinary catheter to closely monitor your progress during your hospital visit.**

- You, or your nursing staff, should perform *peri* care regularly with soap and water while the catheter is in place. Cleansing the perineum and the catheter tubing from the point of insertion toward the collection bag.
- Do not pull or kink the catheter tubing. Staff will secure the tubing to your leg to help prevent accidents.
- The drainage bag of your catheter should stay below the level of your bladder (lower than your hips), and should stay off the floor, at all times. Watch closely when you are out of bed or being moved to another part of the hospital.
- Your catheter bag will be emptied at least once every eight hours (or more frequently if necessary) and before you are moved to another area of the hospital.
- The tubing of your catheter should allow urine to travel downward or straight ahead. Prevent loops that require urine to travel upward to the collection bag.



## OTHER HELPFUL TIPS

Remember to drink plenty of liquids, if your diet allows, to keep yourself hydrated.

If you are able to get up and walk, to walk to the bathroom, or use a bedside commode, ask for the catheter to be taken out. If needed, ask about other options such as an external catheter or intermittent catheterization. While convenient at times, it is in your best interest to remove the Foley catheter as soon as possible to avoid infection.

## IMPORTANT NOTE FOR FAMILIES

If your loved one is unable to speak for himself or herself, you may ask for the catheter to be taken out for them, or ask about other options such as an external or intermittent catheter.

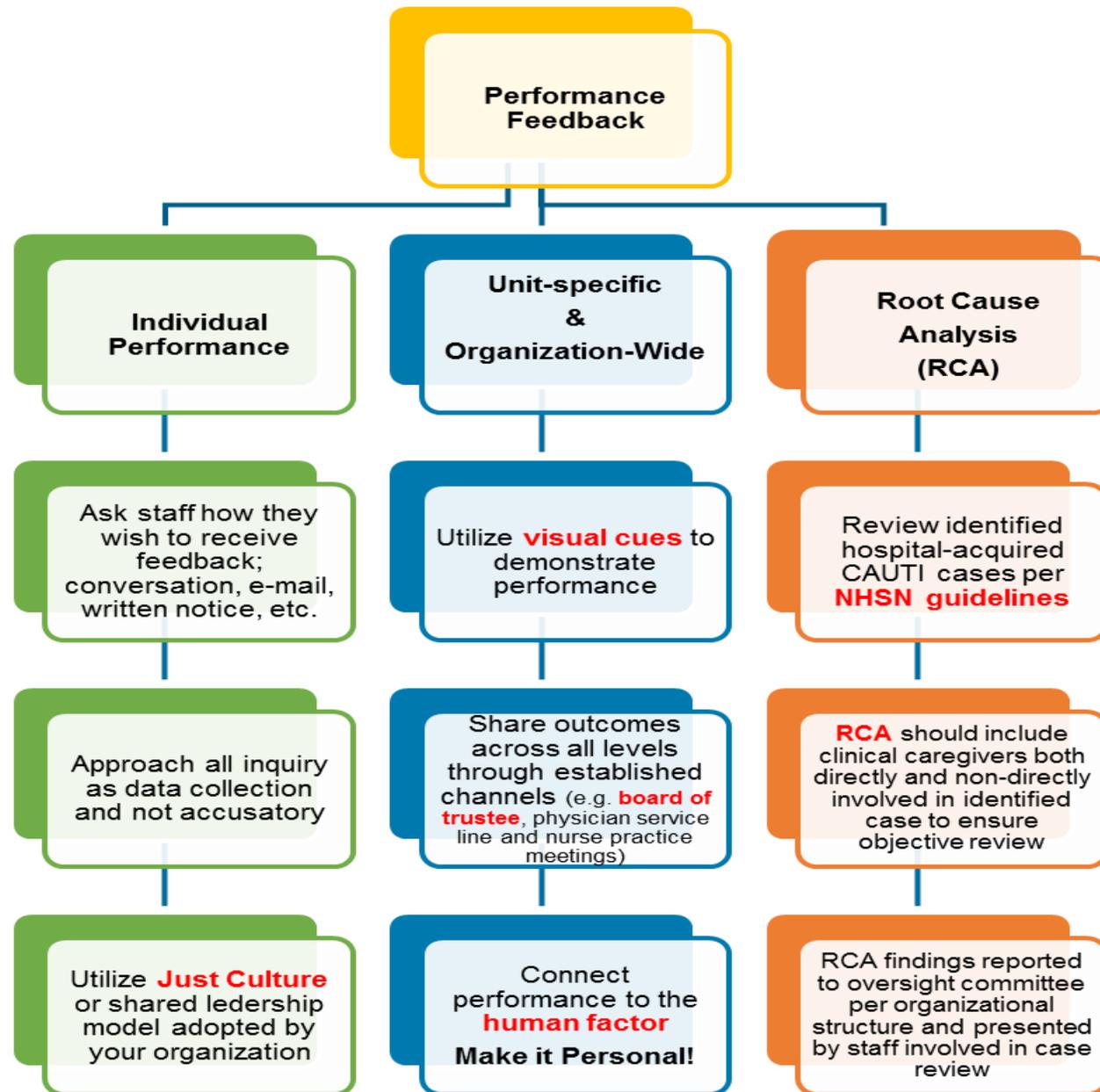
## MORE INFORMATION

If you have questions, please talk to a member of your nursing staff.

**DATE YOUR CATHETER WAS PLACED:**

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# Communicating Outcomes & Meaningful Performance Feedback





## Companion Resources

Listed below are supportive resources intended to provide links to tools and materials to aid with strengthening your team's practice and culture to eliminate CAUTI

### Just Culture

- Institute for Healthcare Improvement home page

### Visual Cues

- CAUTI prevention bundle steps (wheel diagram)

### Board of Trustees

- CAUTI Cost Calculator

Human Factor-a separate PowerPoint slide template is posted

### NHSN guidelines

- Surveillance for Urinary Tract Infections + Resources for NHSN users already enrolled (cdc.gov)

### RCA-Root Cause Analysis

- Root cause analysis description with a description of how to use the tool—also lists advantages and disadvantages

### Team huddles

- Unit Based Improvement Teams description on American Hospital Association website

### Surveillance

- Surveillance for Urinary Tract Infections + Resources for NHSN users already enrolled (cdc.gov) – same as NHSN guidelines hyperlink

# Resources

- ▶ On the CUSP: Stop CAUTI



<http://www.ahrq.gov/professionals/quality-patient-safety/hais/tools/cauti-hospitals/index.html>

- ▶ CatheterOut.org



<http://catheterout.org/>

- ▶ Association for Professionals in Infection Control and Epidemiology (APIC)

<http://www.apic.org/>



- ▶ CDC Device-associated module: CAUTI

[http://www.cdc.gov/HAI/ca\\_uti/uti.html](http://www.cdc.gov/HAI/ca_uti/uti.html)



# Resources

▶ NHSN Guidelines (Modified April 2015)

<http://www.cdc.gov/nhsn/pdfs/pscManual/7pscCAUTIcurrent.pdf>



▶ Healthcare Infection Control Practices Advisory Committee HICPAC  
Guideline for Prevention of Catheter-Associated Urinary Tract Infection 2009

<http://www.cdc.gov/hicpac/pdf/CAUTI/CAUTIguideline2009final.pdf>



▶ Health and Educational Research Trust Hospital Engagement Network

<http://www.hret-hen.org/topics/cauti.shtml>



## *Next Steps*

### 2016 Quarterly CAUTI Webinars

Potential topics:

Staff Engagement

Public Awareness

Acute Care & Long-term Care Partnerships

We welcome your suggestions and  
organization's CAUTI initiative stories

Please forward to [ahandy@IHAconnect.org](mailto:ahandy@IHAconnect.org)

## *Evaluation of Today's Webinar*

Your feedback is very important to our team in creating meaningful programs to meet your needs

Please take a few moments to complete a brief 5-question survey which can be accessed through the link below

<https://www.surveymonkey.com/r/103015CAUTlwebinar>

# Your IPSC Team

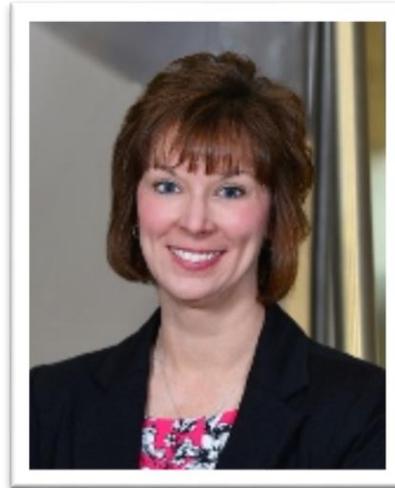


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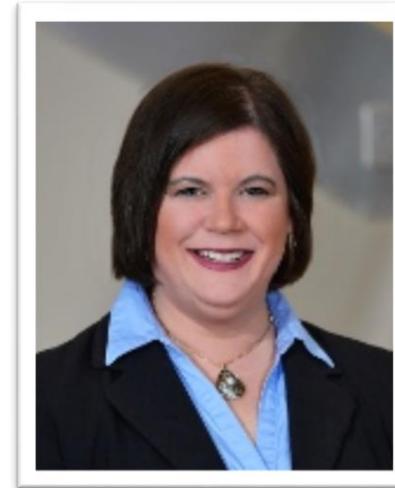


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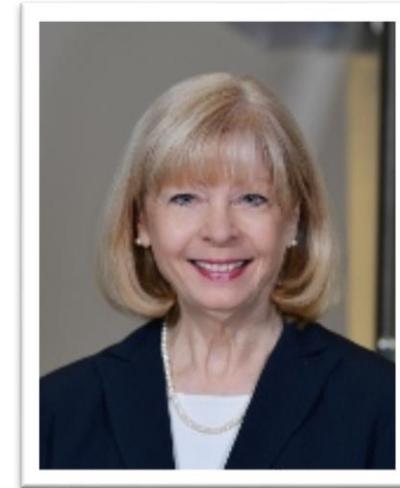


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# *Thank you!*

