



## **Practical Strategies for Addressing Foley-Associated Urinary Tract Infections**

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### **Learner Objectives**

- Identify processes/strategies based on evidence based practice in caring for patients with a foley catheter
- Identify methods used to decrease overall foley catheter use and associated infection rates



## CMS Quality Incentive

- On October 1, 2007, CMS announced a transformational change in the methodology for reimbursing hospitals for the treatment of inpatient care.
- Along with changes in the reimbursement of certain diagnosis, CMS also introduced quality incentives.
- CMS established a list of conditions found to be high volume/high cost and preventable with evidence-based guidelines.

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## Present on Admission (POA)

- Definition of present on admission
- Conditions that develop during an outpatient encounter
- Documentation of the condition
- Results of lack of identification and/or documentation of the condition

**Many of these conditions are preventable and CMS believes that by altering payment, behavior will be modified.**

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## Other Drivers

- Quality and safety practices of hospitals are increasingly judged less by hear-say and anecdote, and more by statistics and outcomes
- Increasing medical costs and higher expectations for better and less expensive care
- Job security and personal satisfaction

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Preventative strategies not only save healthcare dollars but most importantly, provide evidenced based, high quality care for our patients.

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## Foley-Associated Urinary Tract Infections

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### Significance of Urinary Tract Infections (UTIs)

- Approximately 4 million people receive an indwelling urinary catheter each year
- 5-20% of hospitalized patients who receive an indwelling urinary catheter will be diagnosed with a UTI
- UTIs account for the majority of nosocomial infections, 80% of these are associated with indwelling catheters
- Indwelling urinary catheter use is the most significant risk factor for developing nosocomial UTIs, especially in the elderly population
- The risk of developing a UTI increases 5% per day when an indwelling catheter is in place
- 2007: 44,000 foley-related catheter infections were related to deaths at a cost of \$12,000 each=

**528 MILLION DOLLARS**

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## Augusta Health's Initiatives

- We wanted to get a “head start” on this process
- Most importantly, we wanted to use this opportunity to make Augusta Health a safer place for our patients
- We chose to focus on our entire catheter program
- We identified the need for a multidisciplinary team approach

The logo for Augusta Health, featuring the word "Augusta" in a cursive script and "HEALTH" in a smaller, sans-serif font below it.

## Our Team

- Pathologist and ICC Chairperson
- Urologist
- Chief Medical Officer
- Hospitalist
- ICP Specialist
- HIM Data Quality Coordinator
- Information Systems Database Coordinator
- Nursing Managers
- Nursing Staff

The logo for Augusta Health, featuring the word "Augusta" in a cursive script and "HEALTH" in a smaller, sans-serif font below it.

## Where we started...

- In the first half of 2008, Augusta Health had 36 foley related UTIs. This represented 44% of all our health care associated infections and was the most frequent type of hospital acquired infections at Augusta Health.
- Augusta Health tracks UTIs related to 1000 foley days
- Our benchmark for general med/surg units is 3.7 per 1000 Foley days
- Our current average was 6.6 YTD (2008)

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## Program Goals

- Limiting use of catheters
- When catheter required, improve insertion technique, daily care, and use of appropriate type
- Obtain urinalysis prior to insertion of catheter
- Proper tracking and assessment of patients with an indwelling catheter
- Use of automatic stop orders in some areas
- Use of straight cath when deemed appropriate
- Catheters should not be used solely for the management of incontinence

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## How Did We Do It??

With the involvement of a multidisciplinary team and a two-pronged approach:

- Clinical
- Documentation/Use of Computerization

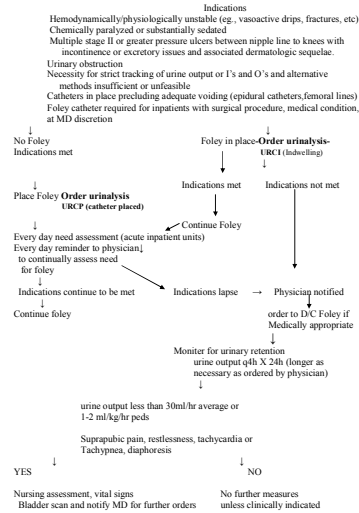
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## Clinical Approach

- Development of policy/standard of care
- Development and implementation of an algorithm to guide appropriate use
- Emphasis on critical thinking
- Institutional **culture change**

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# Foley Catheter Algorithm



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## Indwelling Catheter Present on Admission

- Does catheter meet criteria for indications for use?
- If not, discuss with the physician.
- Send urinalysis if not already completed.
- Continue with routine catheter assessment and documentation



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## Try Alternate Methods



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## Is Catheter Needed?

- Hemodynamically/physiologically unstable
- Chemically paralyzed or sedated
- Multiple stage II or greater pressure ulcers
- Urinary obstruction
- Necessity for strict tracking of I&Os
- Other devices in place
- Foley catheter required for certain procedures, medical conditions, or at MD discretion



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## Procedure for Insertion

- **Use silver silicone catheters for females age 70 and older**
- Reinforced education—sterile technique
- Use as small a catheter as possible to minimize trauma
- Ensure appropriate peri-urethral cleansing
- If the first attempt to place a catheter is unsuccessful, the sterile field is considered contaminated. Therefore, a new sterile insertion kit must be obtained.
- Establish clear, unobstructed flow. The collecting bag should be attached to the bed at a level below the bladder so that urine flows freely from the catheter into the bag.
- **Anchor the catheter with a non-adhesive catheter strap to the patient's leg.**

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## Specimen Collection

- All patients are to have a specimen sent for urinalysis when inserting an indwelling catheter (exceptions are Newborns, OB, and Pediatric patients)
- All patients with an indwelling catheter which is present on admission are to have a specimen sent for urinalysis

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## Catheter Care

- Every indwelling catheter should be checked by a licensed person at least every shift
- Wash the perineal area at least BID with either soap and water or a peri-hygiene disposable wipe
- Monitor urine for change in color
- Monitor peri area or penis for signs of irritation
- Ensure the catheter is secured with a non-adhesive catheter strap



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## Urinary Flow

- Empty bag routinely
- Draining spigot and non-sterile collecting container should not touch. Wipe spigot with alcohol before replacing.
- Collecting bag should always be below bladder level
- Keep tubing from kinking

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## Maintain Adequate Hydration

- Monitor normal urine output
- Monitor fluid intake
- Monitor concentration of the urine
- Assess for signs and symptoms of dehydration

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## Maintain Sterility

- Use a closed system with catheter attached to bag
- Maintain a closed system except in special circumstances
- Replace collecting system for breaks in technique, disconnection, or leakage
- Do not change catheters at arbitrary fixed intervals
- Foley irrigations are to be avoided unless by a physician's order

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## **Discontinuing Catheter**

- Document time of removal
- Teach patient signs and symptoms of retention and UTI
- Encourage fluids
- Monitor urine output
- Assess for signs and symptoms of infection
- If symptomatic, provide comprehensive nursing assessment

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## **Documentation/Computerization Approach**

- Order entry process
- Nursing electronic documentation
- Daily foley report
- Progress note stamp

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## Why Documentation Is Important

- Demonstrates evidence of care
- Provides a true picture of strengths and weaknesses for change management
- Assures our “report cards” reflect true data
- Assures correct reimbursement
- **GOOD DOCUMENTATION IS PART OF EVERY GOOD QUALITY and PATIENT SAFETY PROGRAM**

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## Admitted with Urinary Catheter

Nursing’s Admission Documentation...

Tubes Present on Admission	<input type="radio"/> Foley	<input type="radio"/> Other/List Below
Other Tubes Present on Admission	<input type="text"/>	

Links to Order Entry to add the following:

Category	Procedure	Procedure Name	Pri	Qty	Date	Time
1 PCS	UC	Catheter Care			T+	1126
→ 2 LAB	URC					

New mnemonic to be used for all Foley specimens

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## Order Entry Process

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## Nursing Electronic Documentation

Catheter Insertion	
Date of Catheter Insertion	<input type="text"/>
Catheter Type	<input type="radio"/> Foley - Inserted, U/A Sent <input type="radio"/> Foley - On Admit, U/A Sent <input type="radio"/> Silver - Inserted, U/A Sent <input type="radio"/> Other <input type="text"/>
Size	<input type="text"/> (French)
Catheter Care	
Catheter Patency/Action	<input type="checkbox"/> Patent/Draining <input type="checkbox"/> Discontinued <input type="checkbox"/> Clamped <input type="checkbox"/> Continuous Irrigation <input type="checkbox"/> Patient Removed <input type="checkbox"/> Undamped <input type="checkbox"/> Irrigated
Catheter Secured with	<input type="radio"/> Leg Strap <input type="radio"/> Other <input type="text"/>
Meatal Area Cleansed with	<input type="radio"/> Soap and Water <input type="radio"/> Comfort Bath <input type="radio"/> Other <input type="text"/>
Catheter Care Comment	<input type="text"/>
Irrigation	
Irrigation Solution	<input type="radio"/> Normal Saline <input type="radio"/> Sterile H2O <input type="radio"/> Other <input type="text"/>
Irrigation Amount	<input type="text"/> (mls)
Irrigation Findings	<input type="radio"/> Few clots <input type="radio"/> Lg. clots <input type="radio"/> Unable to Irrigate <input type="radio"/> Mod. clots <input type="radio"/> Sediment <input type="radio"/> Other <input type="text"/>

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## Daily Foley Report

- Generated from data entered by nursing into electronic medical record
- Broadcast to individual units daily
- Reviewed by a nurse who places stamp for attending MD in progress notes
- This report allows us to track who has a catheter, where it came from, and how long it has been in.
- Increases awareness!!

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## Progress Note Stamp

**Reminder: Patient has foley catheter.  
Write order to discontinue if appropriate**

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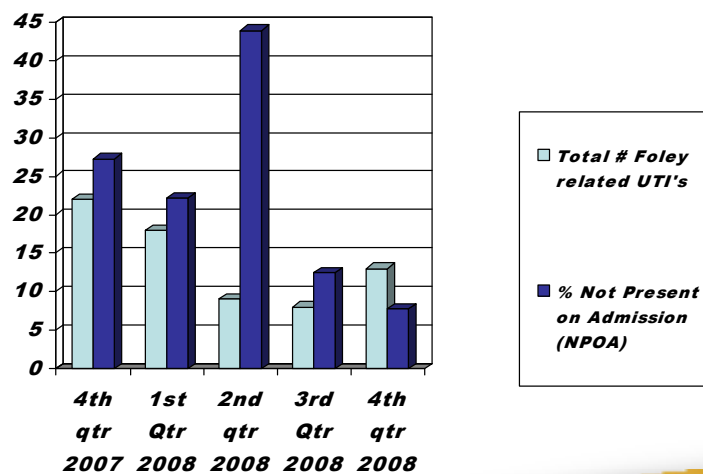
## Outcomes

### GREAT NEWS!

- 30% decrease in foley utilization in the ICU and a 23% decrease in Med/Surg foley utilization between 2007 and 1<sup>st</sup> qtr 2009
- 81.3% reduction in foley-related UTI rate for med/surg units (between 2008 and 1<sup>st</sup> QTR 2009) and 83.8% decrease since 2007
- Estimated cost savings of \$40-102,000
- No catheter related infections in the ICU YTD 2009
- No patterns or trends by patient care units
- With no control over the number of infections presenting on admission, a decrease reflects true improvement in the hospital acquired rate

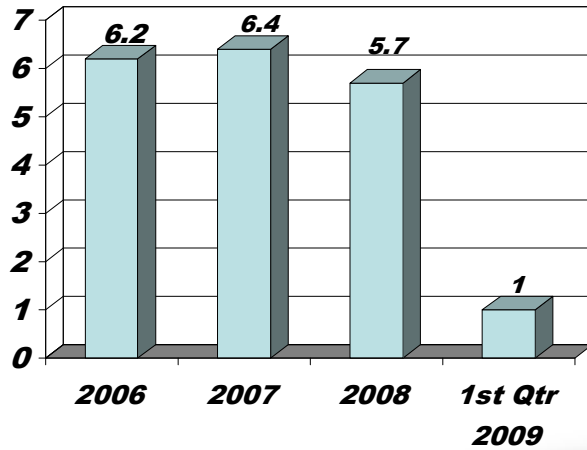
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## Augusta Health Foley Program



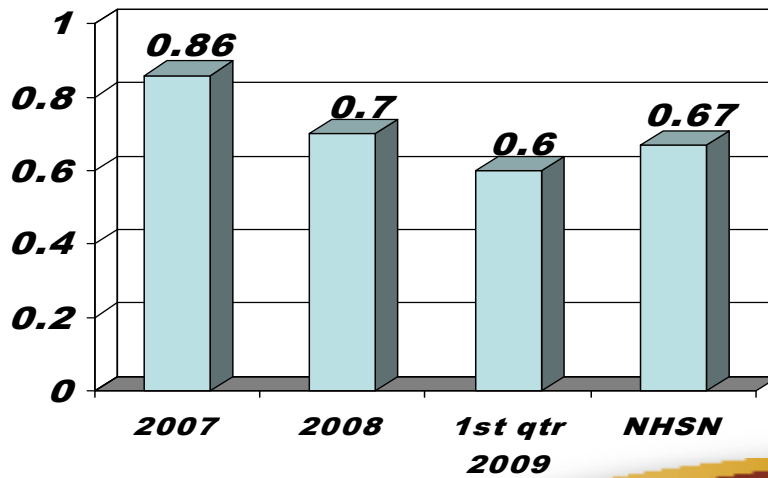
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### Augusta Health Foley Program Total UTIs per 1000 Foley Days



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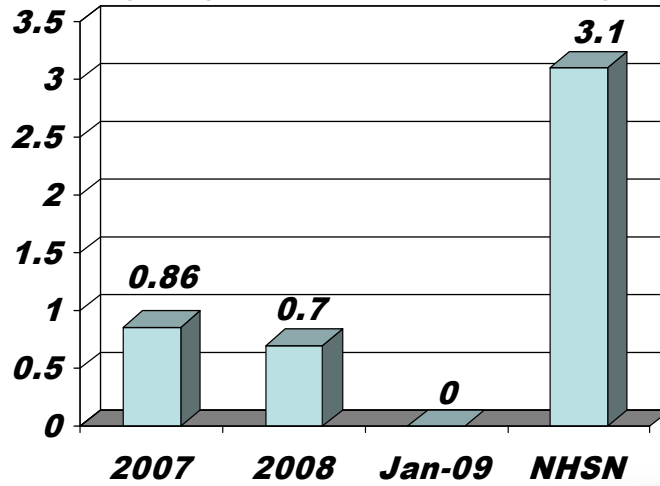
### Augusta Health ICU Foley Device Utilization Foley Days per 1000 Patient Days



NHSN-National Healthcare Safety Network (NHSN)

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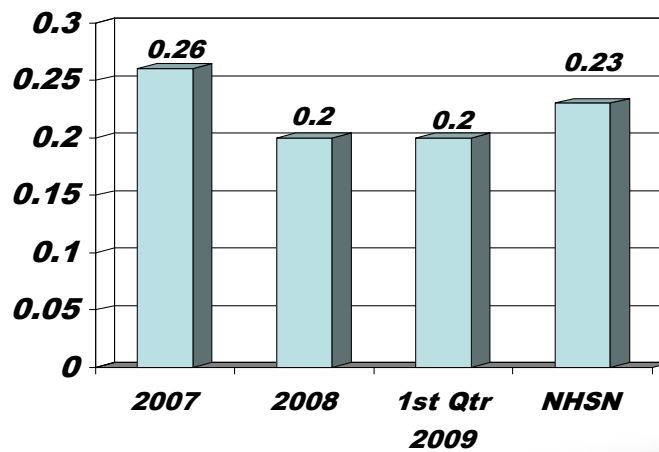
### Augusta Health ICU Foley Related UTIs Foley Days per 1000 Patient Days



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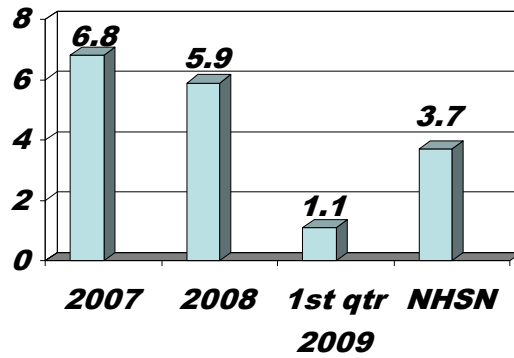
### AMC Med/Surg Foley Device Utilization Foley Days per 1000 Patient Days



NHSN-National Healthcare Safety Network (NHSN)



## Augusta Health Med/Surg Foley Related UTIs Foley Days per 1000 Patient Days

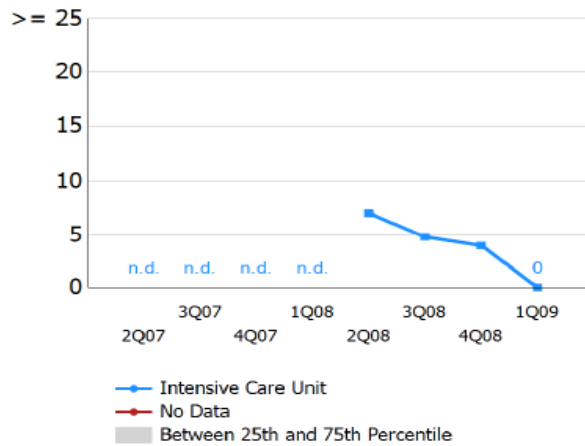


NHSN-National Healthcare Safety Network (NHSN)

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## NDNQI Data (ICU Only)

### Catheter Associated Urinary Tract Infections Per 1000 Catheter Days



2Q08	3Q08	4Q08	1Q09
7.04	4.78	3.95	0

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## Implications for Practice

- Being engaged in quality and patient safety initiatives at your hospital or facility is a win-win situation for patients, hospital, doctors and payers
- Quality and Patient Safety initiatives are now evidence-based and utilize a standard of care
- Failure to engage in these initiatives will result in any number of implications, including, but not limited to financial, legal, public relations, as well as negative patient outcomes
- When physicians, nurses, quality and risk management professionals, along with coding and IT, work together—solutions can be found!

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## Our patients are counting on us!



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## Ongoing Follow-Up

- Assure ongoing evaluation and multidisciplinary input
- Provide feedback, including data, to staff to promote success and continued support for program

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## References

- “Guide to the Elimination of Catheter-Associated Urinary Tract Infections (CAUTIs), Developing and Applying Facility-Based Prevention Interventions in Acute and Long-Term Care Settings”, APIC 2008
- “Guideline for Prevention of Catheter-Associated Urinary Tract Infections, 2009”, Department of Health & Human Services and the Center for Disease Control and Prevention

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# Thank You

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