

**2016 American Nurses
Association Annual Conference**

Connecting **Quality, Safety**
and **Staffing** to Improve Outcomes



CAUTI: Chasing Zero in Critical Care

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South Miami Hospital (SMH) Demographics

SMH a part of Baptist Health South Florida, is a not-for-profit, acute care hospital with 452 licensed beds. The hospital has an excellent reputation for quality care in many areas, including:

- Award-winning maternity services
- Help for infants and children with developmental delays and disabilities
- Robotic surgery
- Addiction treatment
- Weight-loss surgery
- Comprehensive cancer program
- A wide range of outpatient services
- Cardiovascular services

Awards/Certifications:





Objectives:

1. Discuss methods used to identify common reasons that contribute to Catheter Associated Urinary Tract Infections (CAUTI)
2. Identify most common reasons that contribute to Catheter Associated Urinary Tract Infections (CAUTI)
3. Describe processes to reduce CAUTI rate



Background/Problem:

- Higher CAUTI rates lead to increase length of stay, cost & mortality:
 - According to CDC*, urinary tract infections (UTIs) are the 2nd most common type of healthcare-associated infection (HAI) & account for more than 15% of infections reported by hospitals.
 - CAUTI can lead to complications such as prostatitis, cystitis, pyelonephritis, bacteremia, endocarditis, and meningitis.
 - An estimated 13,000 deaths are associated with UTIs each year.
- Q4 2014, SMH Critical Care CAUTI rate was above the national mean

Hospital	4Q14
SMH	4.8
NHSN Mean	2.2

*CAUTI Device Module, 4/2015



Goals:

Goals:

1. Reduce indwelling catheter utilization ratio
2. Reduce CAUTI Rates to ZERO



Methods:

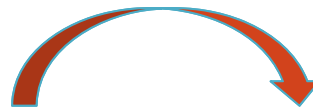
- Root Cause Analysis: 10/2014
- Gap Analysis: 11/2014
- Teams Refocus Image Measure (TRIM) Analysis:
12/2014 (BHSF Lean Six Sigma)



Method #1: Root Cause Analysis – CAUTI (10/2014)

Analyzed CAUTIs and identified trends:

- Location of Foley insertion:
 - 79% placed in Critical Care / ED
- Date of infection/event:
 - Median: Day 3
- Catheter type/sizes:
 - 16F Only
- Inserter:
 - ED techs
- Catheters placed during emergencies
- Bathing practices
 - Basin baths



Interventions:

10/2014	Removed basin baths
11/2014	Gap Analysis – Product Consultant
12/2014	<u>T</u> eams <u>R</u> efocus <u>I</u> mage <u>M</u> easure (TRIM) Analysis



Interdisciplinary Team

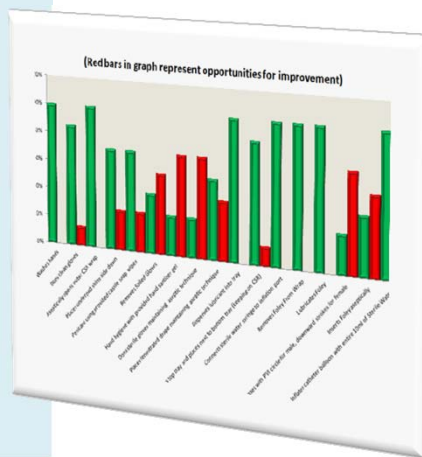
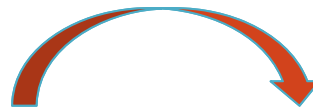
Team Members & Credentials	Title	Department
Vernon Bartholomew, RN	Director of Nursing	Critical Care
Aimee Green-Blumstein, RN	Patient Care Manager	Critical Care
Edwin Vides, RN	Clinical RN Educator	Critical Care
Rosy Canete-Yoham, ARNP	Nurse Practitioner	Critical Care
Jorge Murillo, MD	Infectious Disease Physician	Infectious Disease
Yola Duhaney, MPH, RN	Manager of Infection Control	Infection Control
Cam Kha, RN	Infection Control Nurse	Infection Control
Andrea Bloomfield, RN	Infection Control Nurse	Infection Control
George Gordon, RN	Patient Care Manager ED	Emergency Department
Katie Modzelewska, MBA	Manager of Business Op	Emergency Department
Yasmin Rivera-Hernandez, RN	Clinical RN Educator	Emergency Department
Jacqueline Ruiz, PharmD	Antibiotic Stewardship	Performance Improvement
Debra Witherspoon, RN, MSN	Nursing Quality & PI Coordinator	Performance Improvement
Eduardo Garcia, RN	Proficient RN	Critical Care
Luba Kinal, RN	Proficient RN	Critical Care
Sasha Topping, RN	Proficient RN	Critical Care
Yvonne Maxwell, RN	Proficient RN	Critical Care
Michelle Munro, RN	Proficient RN	Critical Care
Silvia Clark, RN	Proficient RN	Critical Care
Chloris Garcia	Manager Medical Tech	Laboratory



Method #2: Gap Analysis – Indwelling Catheter Placement (11/2014)

Top opportunities for improvement:

1. Identified variability in insertion and maintenance techniques.
2. Culture of errors unique to each department
3. No onboarding screening or training on foley insertions.



Interventions:

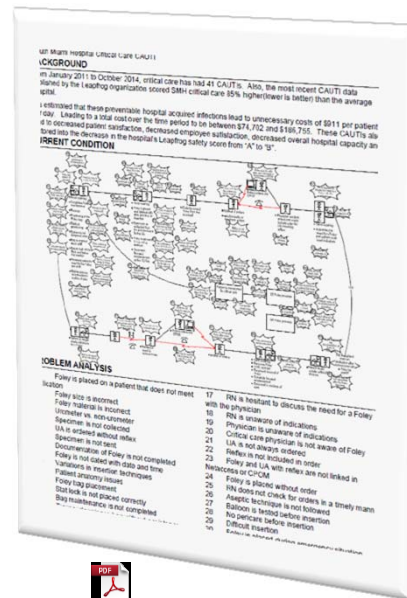
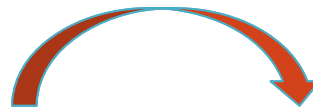
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|--------|---|
| 1/2015 | Added new Foley Tray System |
| 2/2015 | RN Re-education; Indwelling catheter placement competency & orientation requirement |



Method #3: Teams Refocus Image Measure (TRIM) Analysis: 12/2014

TRIM Analysis:

- Placement of indwelling catheters lacked:
 - Indication for use
 - MD order (during emergencies)
 - Securement devices
- MD orders without:
 - criteria or timeframe to discontinue
 - UAs with reflex
- Inconsistent practice:
 - hand washing; pericare; insertion & aseptic technique; placement of catheter bag; documentation of date, time of insertion
- Limited indwelling catheter size (only 16F)




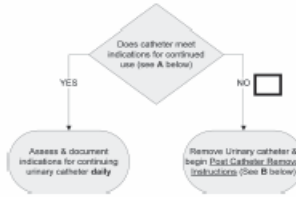
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Interventions:

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|---------|--|
| 12/2014 | Implemented Targeted Solutions Tool to increase compliance with hand hygiene |
| | Piloted new cleansing wipes with colloidal silver |
| 1/2015 | Added <u>new ARNP role</u> in CC with focus on quality outcomes |
| | Implemented Nurse Driven Protocol (indwelling catheter removal) |
| | Revised MD orders to include UA w/Reflex |
| 2/2015 | RN / CP Re-education |



SMH Nurse Driven Protocol

 <p>South Miami Hospital <small>BAPTIST HEALTH SOUTH FLORIDA</small></p> <p>Insertion of indwelling catheter</p> <div style="border: 1px solid black; width: 100%; height: 100%; text-align: center; padding: 20px;"> Place Insertion label here </div> <p>RN Name: _____ Department: _____</p> <p><input type="checkbox"/> Obtain order for UA with reflex and send to the lab. RN initials: _____</p> <p>A. Indications for continuing urinary catheter</p> <ol style="list-style-type: none"> Acute urinary retention or bladder outlet obstruction. Need for hourly measurements of urinary output in critically ill patients. Urologic surgery or other surgery on contiguous structures of genitourinary tract Catheter placed by urologist/urology consulted patient Assist in healing of stage III/IV sacral or perineal wounds of incontinent patients Patients requiring prolonged immobilization (e.g. potentially unstable thoracic or lumbar spine, multiple traumatic injuries such as pelvic fracture.) Improve comfort for end of life 	<p>NURSE DRIVEN STANDARD OF CARE FOR REMOVAL OF INDWELLING URINARY CATHETER</p> <p>Removal of indwelling catheter <i>Criteria for appropriateness</i></p> <div style="text-align: center;">  </div> <p>RN Name: _____ Date: _____ Time: _____</p> <p>B. Post Catheter Removal Instructions</p> <ol style="list-style-type: none"> Document date and time of catheter removal Assess for spontaneous voiding without difficulty. Assess need for bladder scanning if: <ul style="list-style-type: none"> Patient is uncomfortable whether voiding or not Patient has not voided in greater than 6 hours or output totals less than 30 mL/hr in 6 hours Patient is incontinent at anytime Contact Physician to obtain order for a straight catheter if: <ul style="list-style-type: none"> Post void residuals is greater than 250 mL on bladder scan Non-voiding patient has greater than 400 mL of retained urine on bladder scan Document output volume and the time of first void after removal. Discuss with physician the need for an indwelling catheter for patients who require a 3+ straight catheterization in a 24 hour period.
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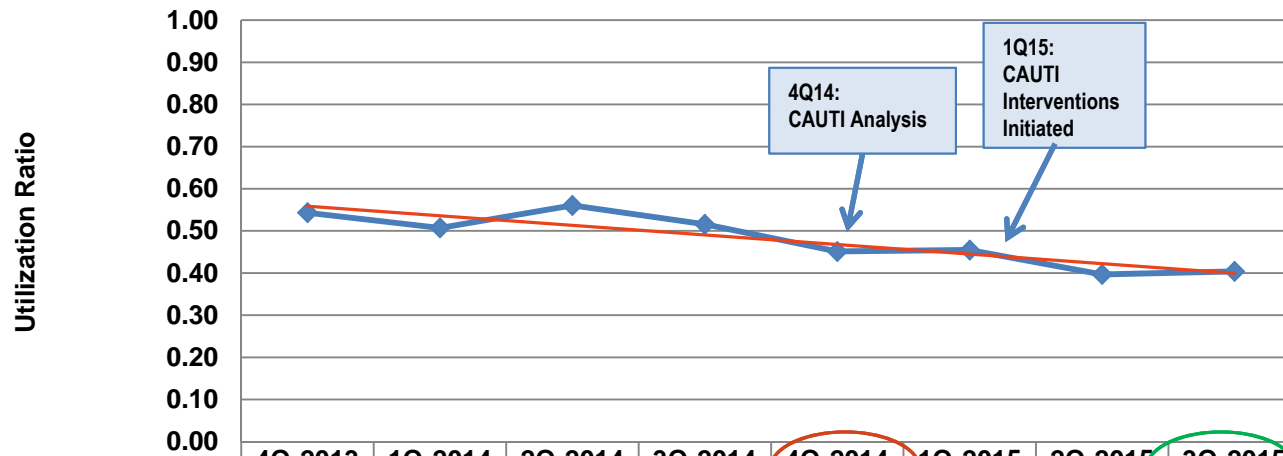


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Outcomes: Goal #1 Reduce indwelling catheter device days

South Miami Hospital Critical Care Foley Utilization Ratio (4Q13-3Q15)



	4Q-2013	1Q-2014	2Q-2014	3Q-2014	4Q-2014	1Q-2015	2Q-2015	3Q-2015
◆ Foley Utilization Ratio	0.54	0.51	0.56	0.52	0.45	0.45	0.40	0.40
# Foley Days	976	968	998	808	734	814	703	679
# Patient Days	1797	1909	1781	1567	1627	1791	1772	1681

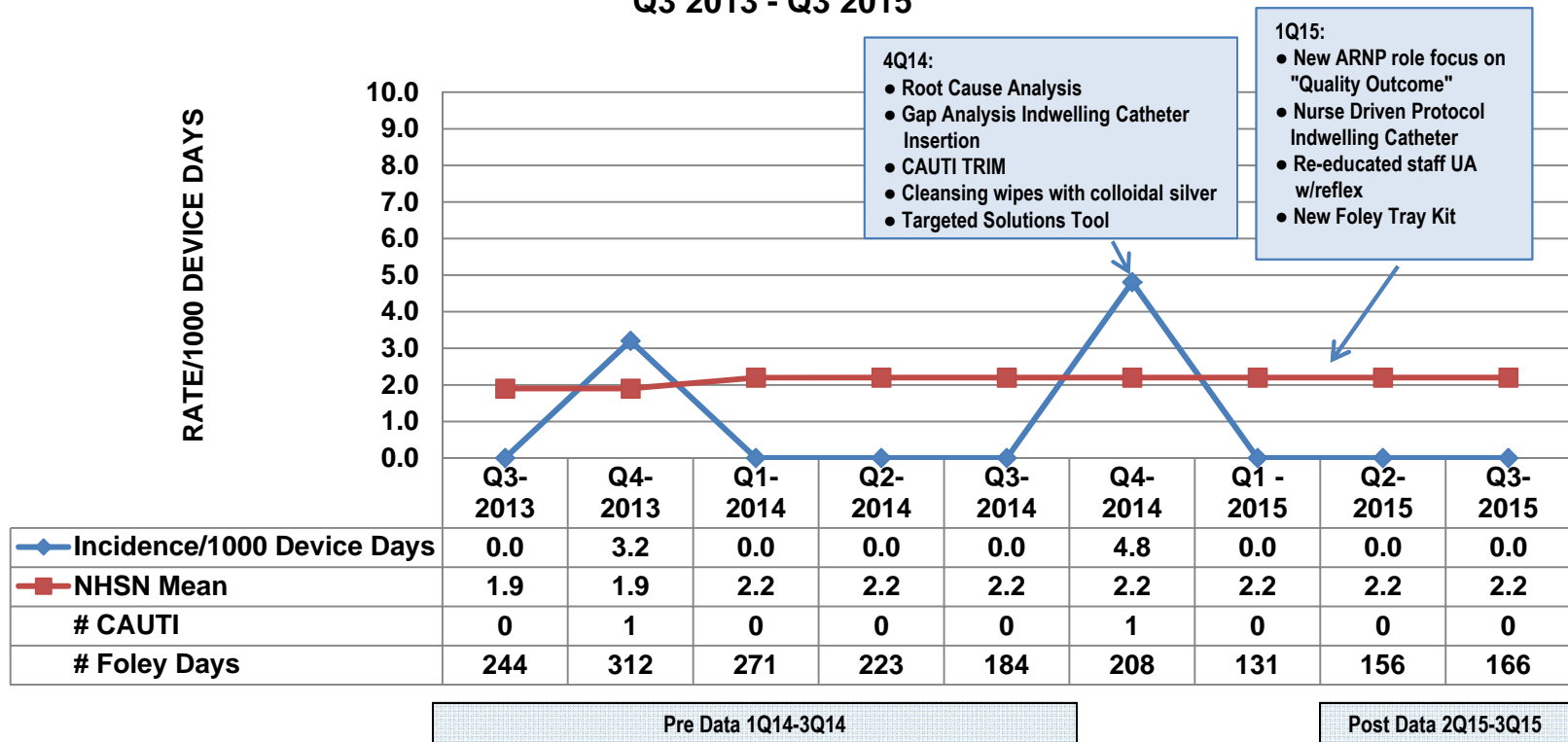
Pre Data 1Q14-3Q14

Post Data 2Q15-3Q15



Outcomes: Goal #2 Reduce CAUTI Rate to Zero

South Miami Hospital: Critical Care CAUTI Rate
 Q3 2013 - Q3 2015



- 4Q14:**
- Root Cause Analysis
 - Gap Analysis Indwelling Catheter Insertion
 - CAUTI TRIM
 - Cleansing wipes with colloidal silver
 - Targeted Solutions Tool

- 1Q15:**
- New ARNP role focus on "Quality Outcome"
 - Nurse Driven Protocol Indwelling Catheter
 - Re-educated staff UA w/reflex
 - New Foley Tray Kit



Conclusion:

- Reduce indwelling catheter utilization ratio from 0.45 to 0.40
- Reduced CAUTI Rate = **“ZERO”** for over a year
- Estimated annual cost savings between \$13,182 and \$32,955 due to the measures implemented

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Questions?

Don't forget to exfoley-ate daily!

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