

## 2016 American Nurses Association Annual Conference

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



### Get the Foley Out!

An Intensive Care Unit's Journey to Zero Catheter Associated Urinary Tract Infections for 386 days

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## The Benefits of Interdisciplinary Collaboration

“Teams make wise decisions when they have diverse and independent input”

“Too often in healthcare, we believe that your formal training is the only important domain of wisdom . . . And we forget that tacite knowledge, that is time with the patient, time with the disease, is as important a domain of wisdom, and those two hierarchies are completely reversed. The patient, or the family, leads the tacite one, not the physicians.”

-Dr. Peter Pronovost

Agency for Healthcare Research and Quality (2013). Teams make wise decisions with diverse and independent input. Retrieved from [http://www.ahrq.gov/professionals/education/curriculum-tools/cusptoolkit/videos/04g\\_diverseinput/index.html](http://www.ahrq.gov/professionals/education/curriculum-tools/cusptoolkit/videos/04g_diverseinput/index.html)



## Objectives & Take-Aways

- Apply a standardized, multi-modal approach to daily interdisciplinary intensive care unit practice to reduce catheter-associated urinary tract infections (CAUTI).
- Describe how the concept of positive interdisciplinary collaboration can aid in improving the culture of safety on the unit, as well as the reduction of hospital-acquired infections, such as CAUTI.



## Facts about CAUTI

### Statistics

- One of the most common healthcare-acquired infections
- 70-80% of UTIs are associated with a urinary catheter
- 12-16% of hospitalized patients will have a catheter
- Rate of CAUTI in ICUs nationally in 2011
  - 1.2 to 4.5 infections/1000 catheter days

### Associated complications:

- Can progress to blood stream infection, including resistant gram negatives
- Urethral strictures
- Inflammation
- Trauma
- Mobility impairment



## Risk Factors for CAUTI

- Single Greatest Factor:
  - Duration of Catheterization
- Others:
  - Female sex
  - Not Maintaining Sterile Drainage System
  - Older Age

Lo, E., Nicolle, L.E., Coffin, S.E., Gould, C., Maragakis, L. . . . and Yokoe D.S. (2014). Strategies to prevent catheter-associated urinary tract infections in acute care hospitals: 2014 update. *Infection Control and Hospital Epidemiology*, 35(5), p. 464-79. DOI: 10.1086/675718.



# Guidelines & Recommendations

## CDC Guidelines (2009)

- Appropriate Usage of urinary catheters
- Proper Technique for Insertion of Catheters
- Ongoing Maintenance & Care
- Create Organizational Quality Improvement Programs to Prevent CAUTI
  - Appropriate Usage
  - Identify & Remove Catheters if No Longer Needed
  - Education & training on appropriate use, and hygiene & catheter care
- Ensure Administrative Infrastructure to Support QI Efforts
- Ensure Surveillance using NHSN definitions

Gould et al. (2009)

## IDSA Guidelines (2014 Update)

- Provide infrastructure & written guidelines for use, insertion & maintenance
- Develop criteria for approved insertion indications
- Only trained personnel perform insertion
- Ensure supplies for aseptic technique are conveniently located
- Adequate & appropriate continuing surveillance
- Education, training, and competency
- Ensure catheters are properly secured with continuous closed drainage system
- Maintain unobstructed flow
- Implement an organization-wide program to assess & remove catheters when no longer indicated
- Many Others....

Lo et al. (2014)



## Interdisciplinary Collaborative Structures in Place in South Seminole ICU

- Interdisciplinary Critical Care Task Force
- Daily Interdisciplinary Rounds each morning including:
  - Attending Physician
  - Patient's Primary Nurse
  - Patient's Respiratory Therapist
  - Critical Care Pharmacy Specialist
  - Spiritual Care (when available)
  - Care Coordinator (when available)
  - Charge Nurse (when available)
  - Clinical Nurse Specialist (when available)



## South Seminole ICU Critical Care Task Force

- Meets Every Two Weeks
- **Purpose:** To provide a forum for open communication and establish solutions to interdisciplinary quality related issues in the ICU.
- Members
  - Physician Associate Director
  - The other two physicians who regularly practice in the unit whenever possible
  - Nursing Operations Manager
  - Clinical Nurse Specialist
  - Clinical Assistant Nurse Manager
  - Nursing Learning Specialist
  - Respiratory Therapy Manager
  - Rehab Manager
  - Critical Care Clinical Pharmacy Specialist
  - Infection Preventionist
  - Staff Nurse Representative – Unit Practice Council Chairperson





## Trigger for the Project

- In 2012, the unit CAUTI rate was 2.6/1000 catheter days
- In 2013, there was an increase to 3.4/1000 catheter days
- Overall in 2013, there were a total of 4 CAUTIs, most of which were determined to have been potentially preventable.



## Potential Contributing Factors Identified

- Concerns about insertion technique
- Catheters placed without orders present
- No process for ongoing daily review of necessity
- Catheters left unsecured
- Patients having frequent loose bowel movements & concerns over catheter care
- No place for physicians to document that they reviewed the catheter necessity in the progress note



## Multi-Modal Methods to Address

- **Nursing Education**
  - RNs required to demonstrate competency for catheter insertion as part of annual skills review in December 2013
  - All new RNs also required to demonstrate insertion competency during orientation
  - CAUTI prevention education included in new RN orientation process
- **Physician Education**
  - Included information on the need for an order with an appropriate indication for all catheters
  - Included information on need for daily review of necessity in collaboration with nursing during interdisciplinary rounds



## Multi-Modal Methods to Address

- **Informatics Solution**

- MDs worked with IS to add a checkbox to their progress note to indicate that they assessed need for the foley
- This addition also included an option for the continuing indication to be selected by the physician each day

- **Daily Care Process Solution**

- ICU interdisciplinary rounding checklist was changed in May of 2014 to a new format that simplified & standardized what was discussed
  - FASTHUGSBID (Vincent, 2009)
- “I” stands for indwelling catheters & devices



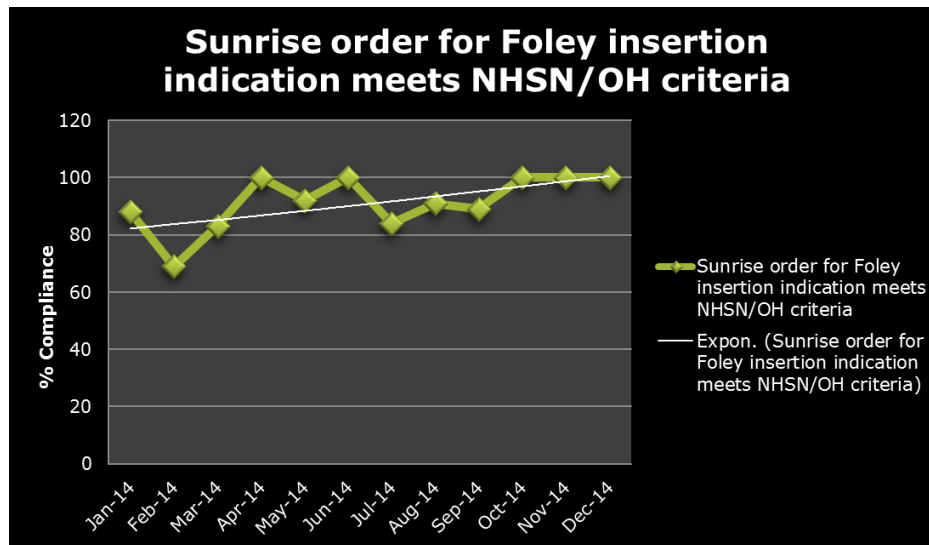
## Multi-Modal Methods to Address

- Weekly Auditing for Compliance
  - Presence of Order with Appropriate Indication
  - Foley care performed daily for duration of catheter dwell
  - Foley securement present at the time of the audit
  - Documentation of indication in most recent physician progress note



## Process Audit Results

Presence of physician order with appropriate indication



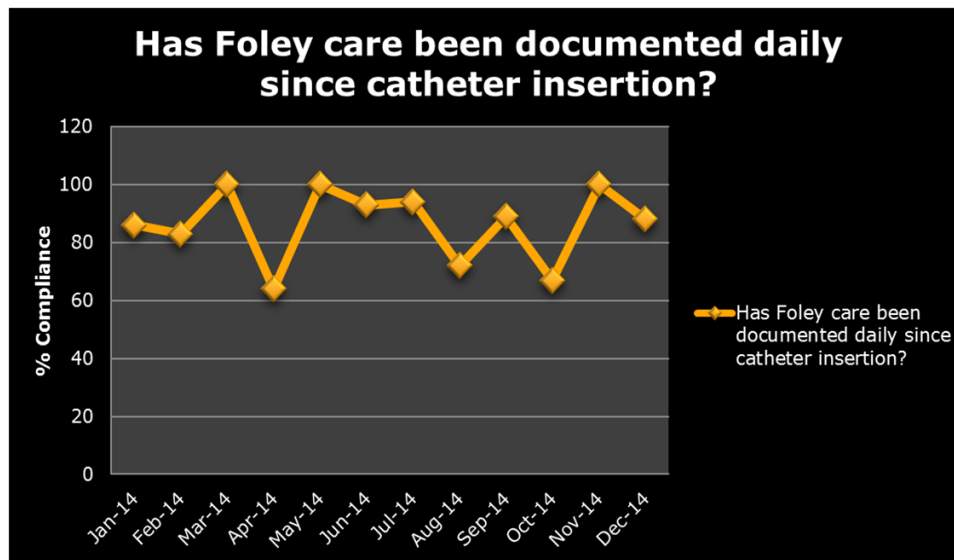
Physician order compliance ranged from 69% to 100% for quarters 1-3.

***4th quarter compliance was 100%.***



## Process Audit Results

Foley Care Documented Daily Since Insertion



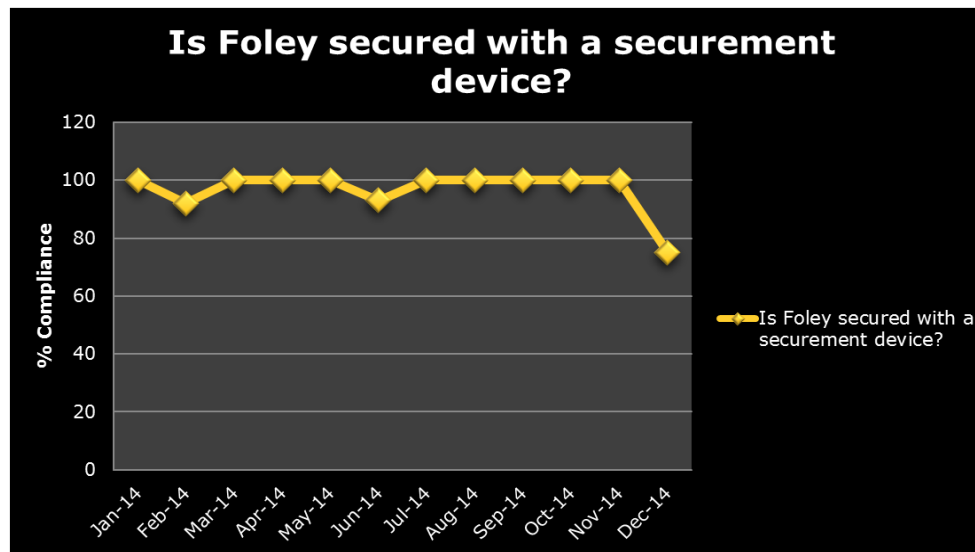
Foley care ranged from 63% to 100% throughout the year;

***Average for the 4<sup>th</sup> quarter was 85%.***



# Process Audit Results

Foley Secured at the Time of the Audit



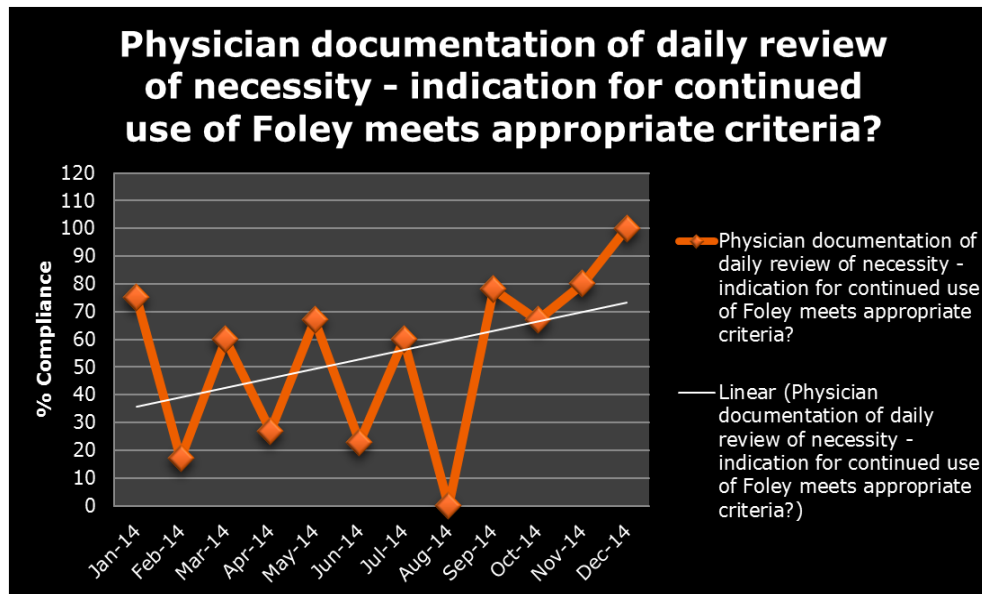
Compliance with presence of securement device was  
**100% for 9 out of 12 months of the year.**





# Process Audit Results

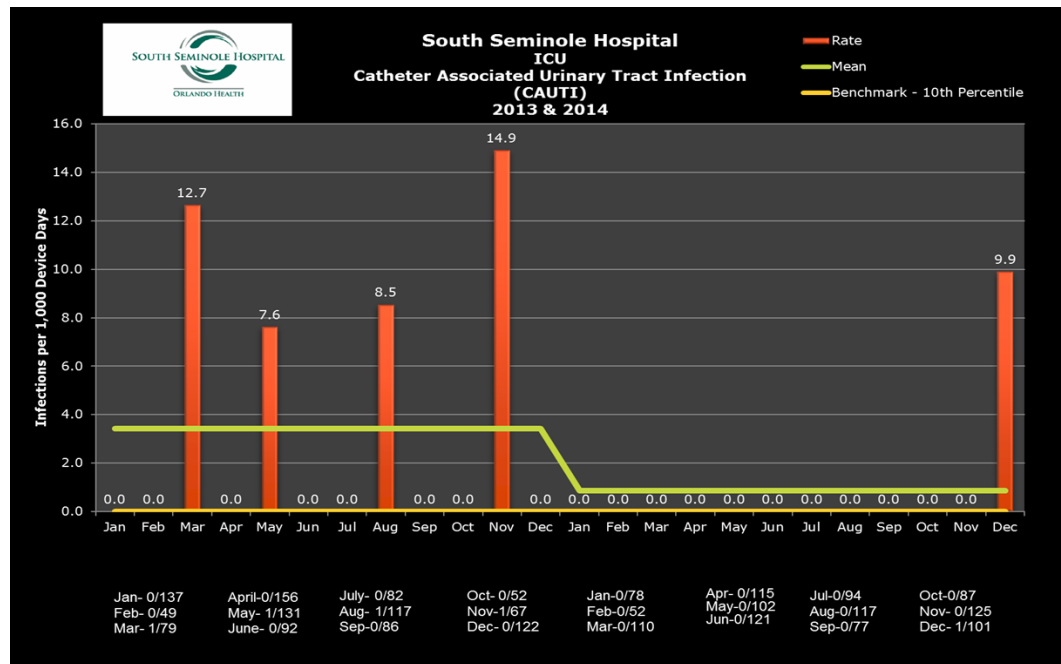
Daily Review of Necessity Documented in Most Recent MD Process Note



Physician documentation in progress notes ranged from 0% to 75% in quarters 1- 3  
***4th quarter average after informatics modification was 81%.***



# CAUTI Outcomes Using NHSN Surveillance Definitions



**No CAUTI for 386 days!!**



## Conclusions

- Our multi-modal, interdisciplinary approach to reducing CAUTI led to > 1 year with no infections
- We achieved a feasible, sustainable, standardized process for daily care to ensure CAUTI prevention measures are implemented on all ICU patients
- The benefits of our interdisciplinary collaborative model have extended well beyond CAUTI prevention to numerous other benefits to our staff, physicians, and patients.



## **Benefits Achieved Partly Due to Positive Interdisciplinary Collaboration**

- **Sources: Unit AHRQ Safety Survey & NDNQI Survey 2015 Results**
  - High perceptions of culture of safety/psychological safety
  - High ratings of nurses perceptions of relationships, teamwork, and collaboration with physicians
  - High perceptions that nurses feel treated with respect by everyone
  - High perceptions of nurse overall job satisfaction



## **Benefits Achieved Partly Due to Positive Interdisciplinary Collaboration**

- **Great patient outcomes:**
  - Achieved Orlando Health Triple Zero Award two years in a row in the ICU (2014 & 2015)
  - Achieved 10% decrease in Ventilator Length of Stay (2015)
  - Achieved 10% decrease in ICU delirium for ventilated patients (2015)
  - Low ICU transfer rates for existing inpatients compared to national benchmarks
  - Our Hospital Achieved LeapFrog Group's "Top 100 Best Adult Hospitals" in 2015



## References

- Agency for Healthcare Research and Quality (2013). Teams make wise decisions with diverse and independent input. Retrieved from [http://www.ahrq.gov/professionals/education/curriculum-tools/cusptoolkit/videos/04g\\_diverseinput/index.html](http://www.ahrq.gov/professionals/education/curriculum-tools/cusptoolkit/videos/04g_diverseinput/index.html)
- Gould, C.V., Umscheid, C.A., Agarwal, R.K., Kuntz, G., Pegues, D.A. and the Healthcare Infection Control Practices Advisory Committee (HICPAC) (2009). Guideline for prevention of catheter associated urinary tract infections 2009. Retrieved from <http://www.cdc.gov/hicpac/pdf/CAUTI/CAUTIguideline2009final.pdf>
- Lo, E., Nicolle, L.E., Coffin, S.E., Gould, C., Maragakis, L. . . . and Yokoe D.S. (2014). Strategies to prevent catheter-associated urinary tract infections in acute care hospitals: 2014 update. *Infection Control and Hospital Epidemiology*, 35(5), p. 464-79. DOI: 10.1086/675718
- Vincent, W.R. (2009). Critically ill patients need FASTHUGSBID (an updated pneumonic). *Critical Care Medicine*, 37(7), 2326-7. DOI: 10.1097/CCM.0b013e3181aabc29

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Thank You!!

**Questions???**