CATHETER ASSOCIATED URINARY TRACT INFECTION PREVENTION AND BEST PRACTICES

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HealthSouth Deaconess Rehabilitation Hospital developed a comprehensive educational program for physicians and nursing staff to promote best practices in the prevention of CAUTIs. The program includes a nursing protocol to daily assess the need for continued use along with post-indwelling urinary catheter removal guidelines. The program also includes the proper techniques for insertion, maintenance, and removal as well as proper documentation, surveillance, education and training. Physicians are provided daily reminders for assessing the continued need for catheters.

Based on the implementation of evidence-based practices in 2012, HealthSouth Deaconess Rehabilitation Hospital has seen an improvement in the Foley catheter utilization ratio comparing 2011 and 2012. The CAUTI rate decreased comparing 2011 to 2012 from 1.09 to 0.49 infections/device days. The hospital continues to provide education, monitoring and surveillance in assuring that evidence-based practices continue.
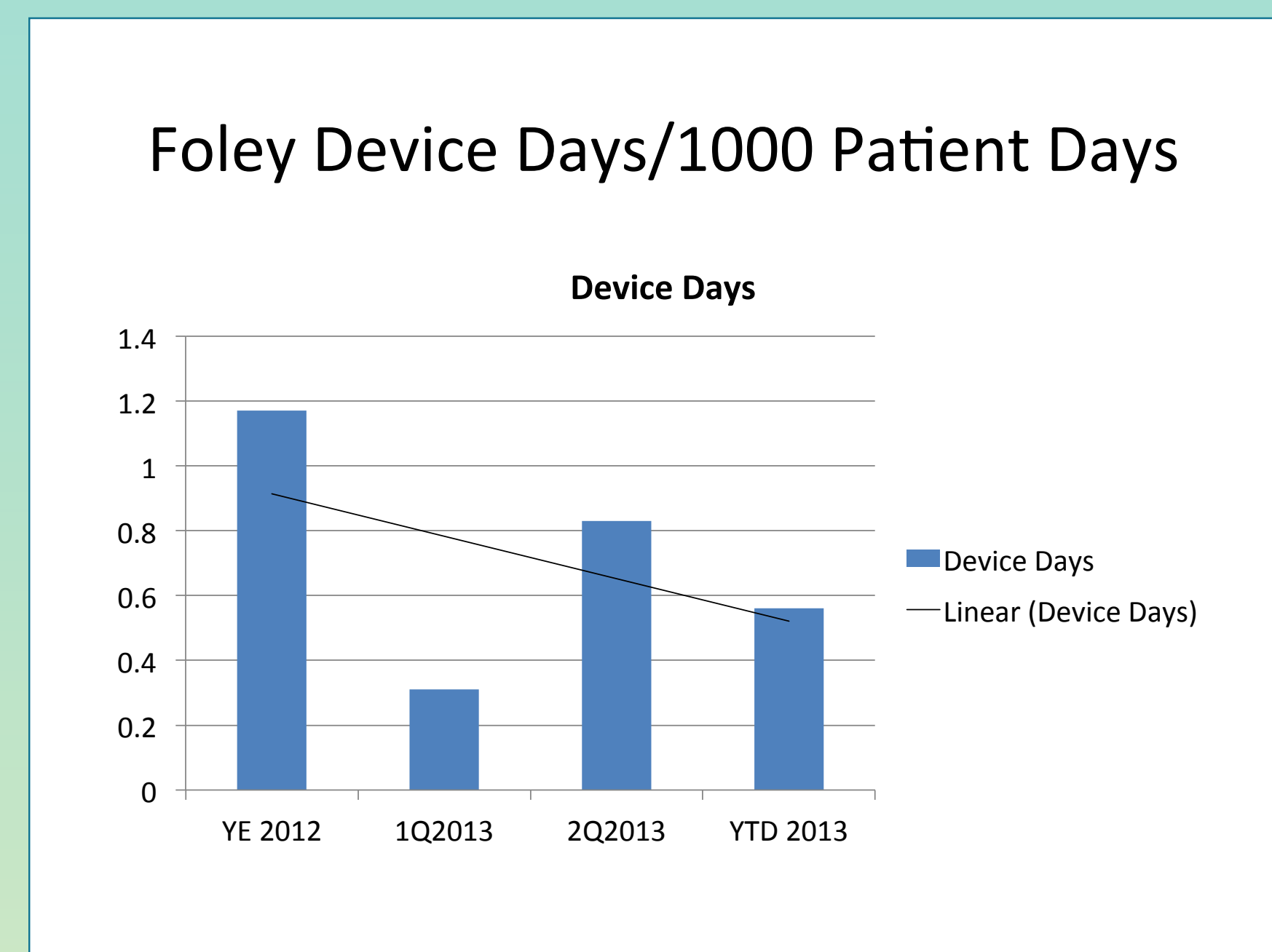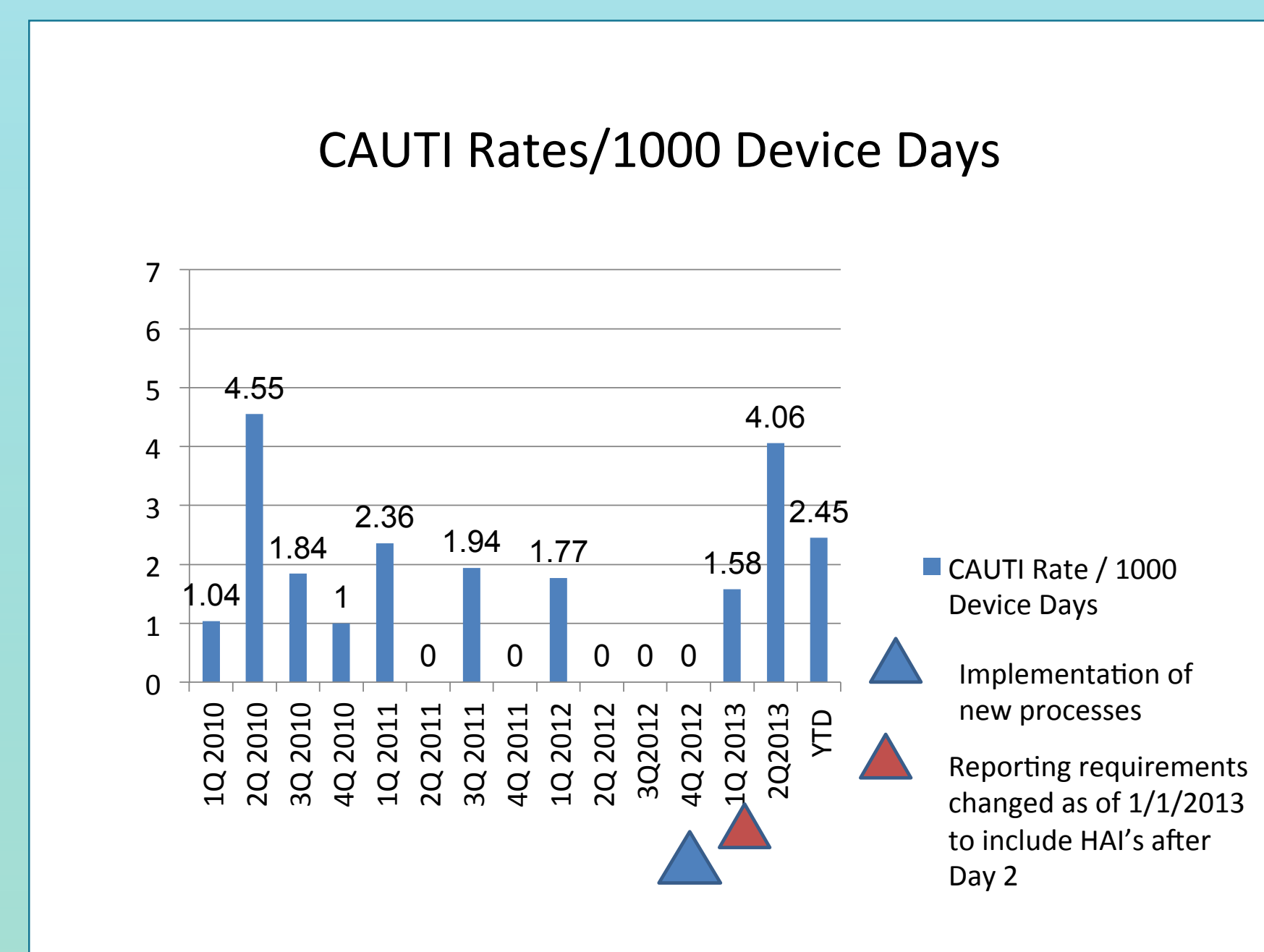
Supporting Data

- The urinary tract is the most common site of healthcare associated infections, accounting for >30% of all HAI's in the acute care setting.
- Most are associated with indwelling Foley catheter use.
- Between 12-25 % of all hospitalized patients receive urinary catheters during their hospital stay.
- Studies indicate only ½ of these have appropriate indications for use.
- CAUTIs have been associated with increased discomfort, prolonged stay, increased cost and mortality (estimated 13,000 attributable deaths/year).
- CMS focus on reporting for rehab hospitals began October 2012.
- More than 25% of patients with a urinary catheter for 2-10 days will develop bacteriuria, and 25% of these will develop a CAUTI.
- It is estimated that 17-69% of CAUTIs may be preventable with recommended infection control measures.
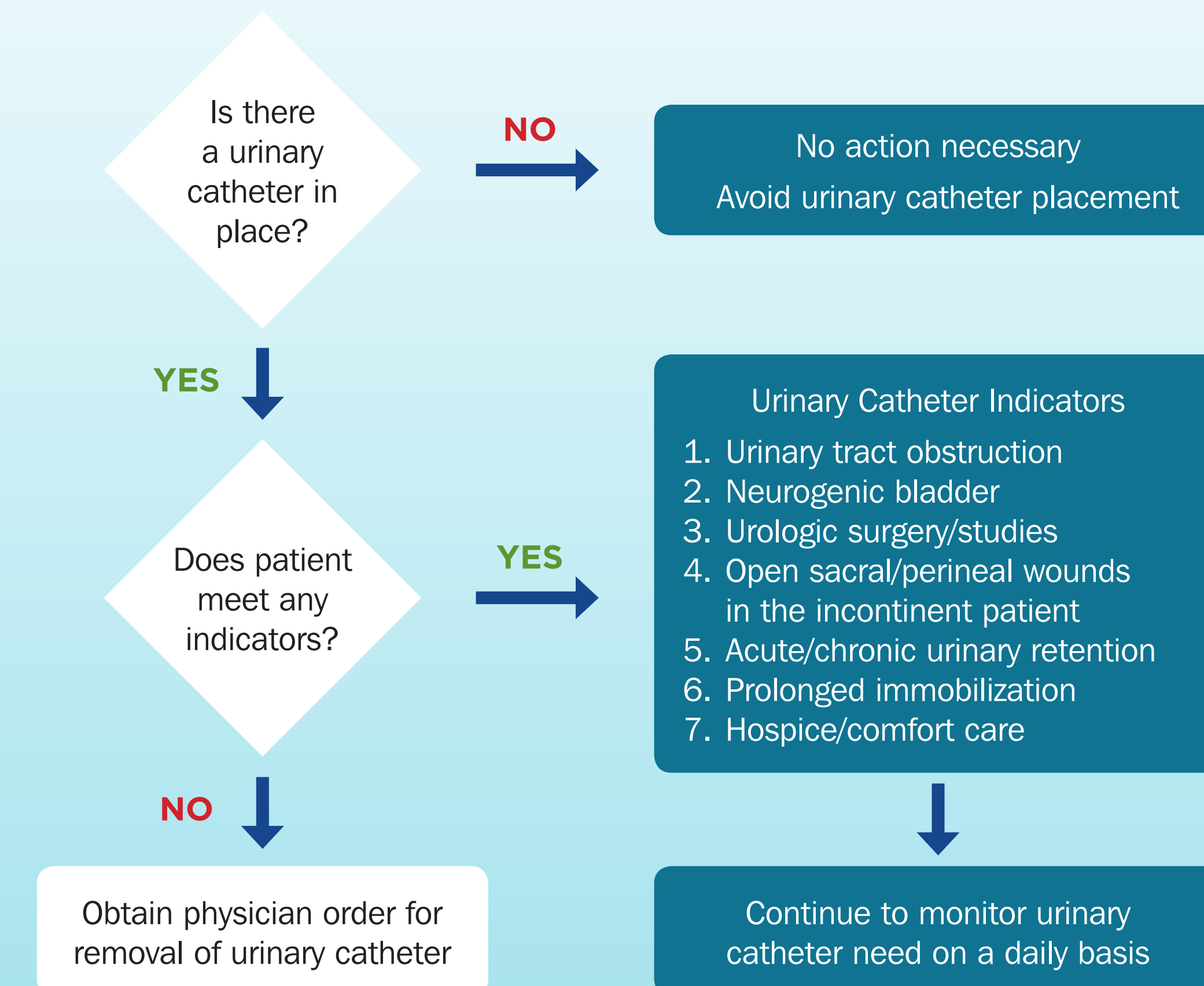- A 2012 National Patient Safety Goal from The Joint Commission.

References

- Gould, C. V., Umscheid, C. A., Agarwal, R. K., Kuntz, G., Pegues, D. A., & the Healthcare Infection Control Practices Advisory Committee (HICPAC) (2009). Guideline for Prevention of Catheter-Associated urinary Tract Infections 2009. Retrieved from www.cdc.gov/hicpac/pdf/CAUTI/CAUTIguideline2009final.pdf
- Lo, E., Nicolle, L., Classen, D., Arias, K. M., Pdogomy, K., Anderson, D. J. ...Yokoe, D. S. (2008). Strategies to Prevent Catheter-Associated Urinary Tract Infections in Acute Care Hospitals. Infection Control and Hospital Epidemiology, 29 (S41-S50). Retrieved from http://www.wsha.org/files/82/HAI-Catheter-AssocUrinaryTractStrategies.pdf.
- Gould, C. Catheter-associated Urinary Tract Infection (CAUTI) Toolkit. www.cdc.gov/HAI/pdfs/toolkits/CAUTItoolkit_3_10.pdf
- Aviles, M. R. (2011). Clinical Care Improvement Strategies: Preventing Catheter-Associated Urinary Tract Infections. The Joint Commission.

Intervention Plan

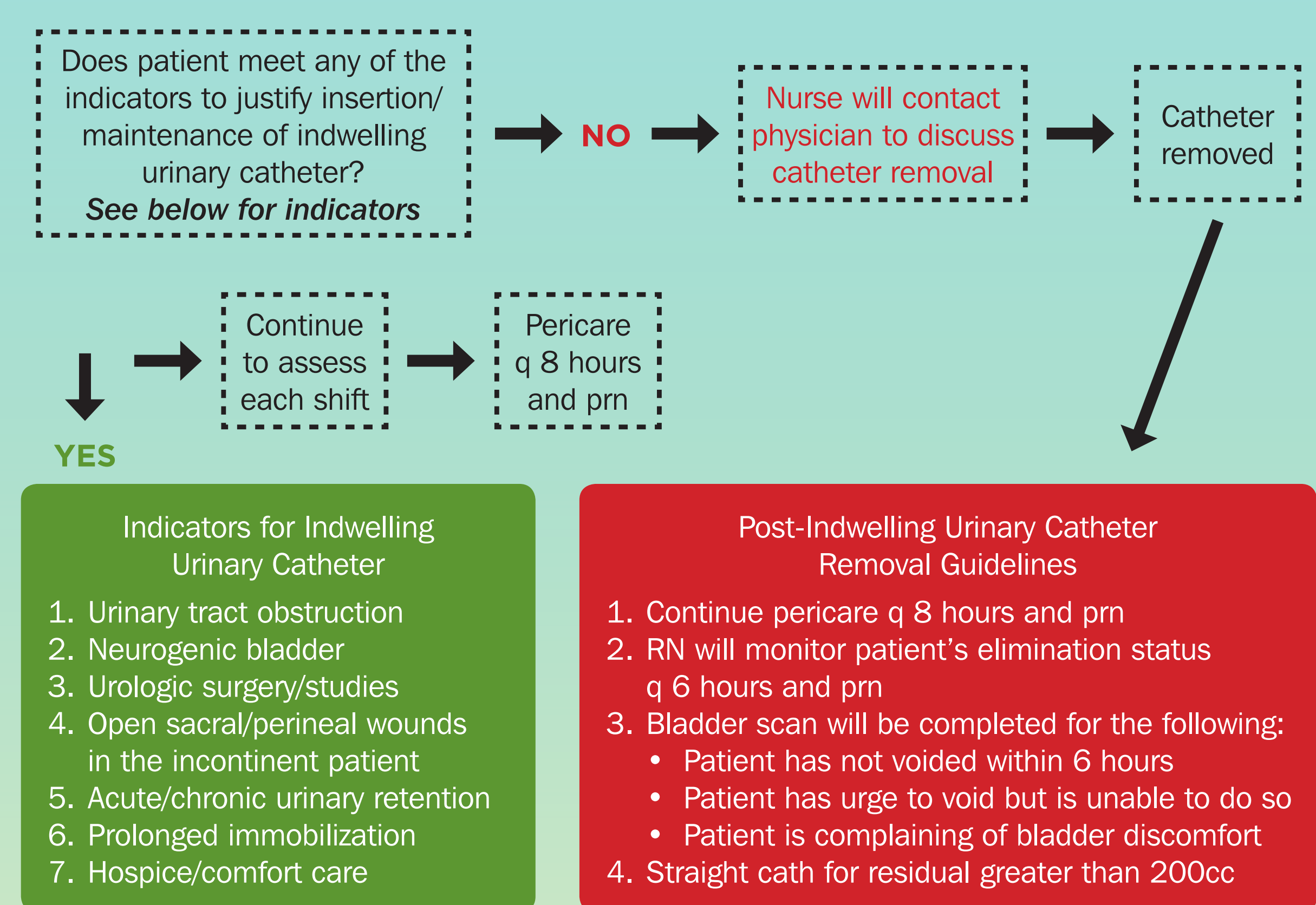| What	Who	When
Development of a task force to investigate best practices	HealthSouth Central Region CNOs Infection preventionists Risk managers	1Q 2012
Developed a plan to include educational materials and training	Central Region CAUTI Task Force	2Q 2012
Presented program to the HealthSouth National Nursing Board	Central Region CAUTI Task Force	2Q 2012
Presented the revised policy and procedure to the hospital's Medical Executive Committe	Infection preventionist	3Q 2012
Implementation of training and inservices to the nursing staff and physicians	Infection preventionist CNO Nursing staff Therapy staff	3Q 2012
Roll-out of new process	Infection preventionist CNO Nursing staff Therapy staff	3Q 2012
Monitoring of charts for compliance with labeling Posting CAUTIs and device days on the nursing units	Infection preventionist	3Q 2012
Continue monitoring and tracking of CAUTIs and device days	Infection preventionist CNO Nursing staff	3Q 2012 and ongoing

CAUTI Rates/1000 Device Days

Foley Device Days/1000 Patient Days

CAUTION
Guidelines for Indwelling Urinary Catheter Use

Is there a urinary catheter in place? — **NO** → No action necessary / Avoid urinary catheter placement

YES ↓

Does patient meet any indicators? — **YES** → Urinary Catheter Indicators
1. Urinary tract obstruction
2. Neurogenic bladder
3. Urologic surgery/studies
4. Open sacral/perineal wounds in the incontinent patient
5. Acute/chronic urinary retention
6. Prolonged immobilization
7. Hospice/comfort care

NO ↓

Obtain physician order for removal of urinary catheter

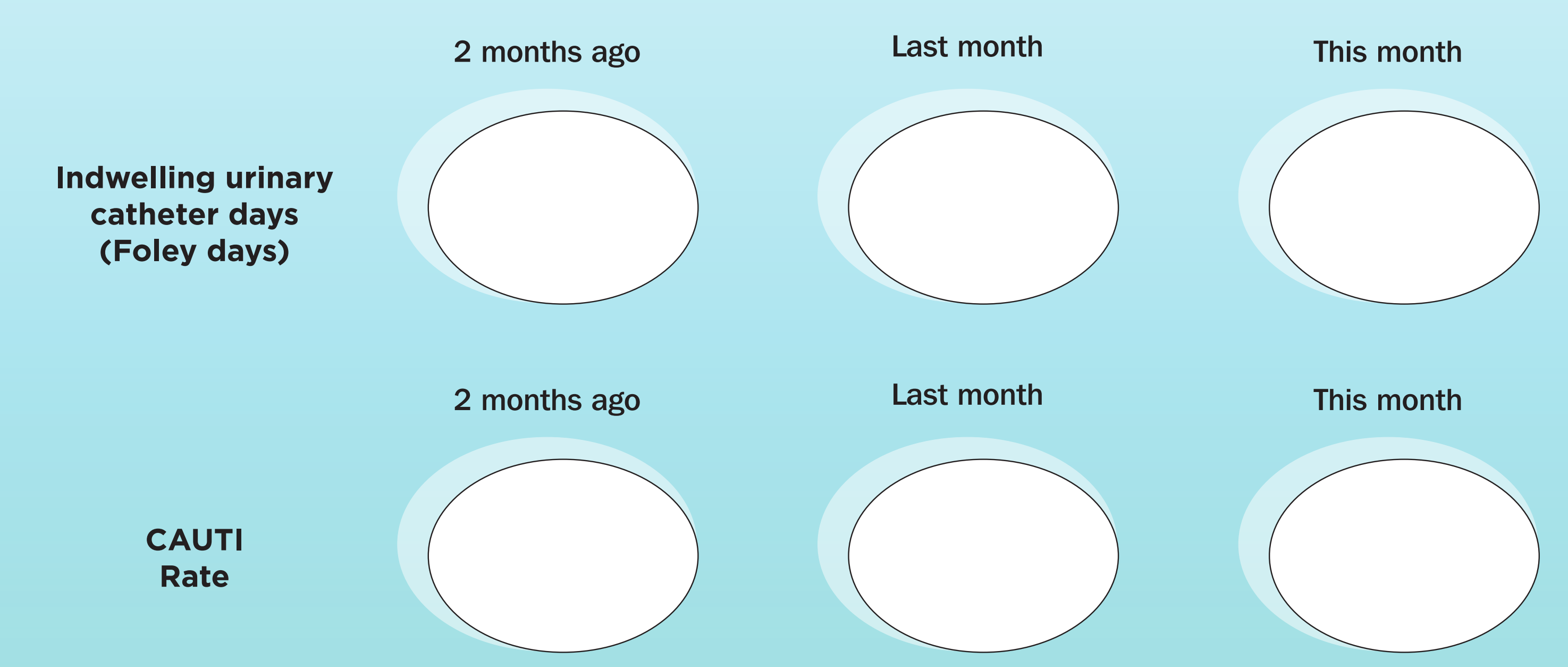Continue to monitor urinary catheter need on a daily basis

Urinary catheters NOT indicated for:
- Incontinence
- Decreased mobility
- Obtaining urine specimen
- Monitoring output

CAUTION
Nurse Driven Protocol For Removing Indwelling Urinary Catheter
Procedure to be completed daily until catheter removed

Does patient meet any of the indicators to justify insertion/maintenance of indwelling urinary catheter? *See below for indicators* — **NO** → Nurse will contact physician to discuss catheter removal → Catheter removed

YES ↓

Continue to assess each shift → Pericare q 8 hours and prn

Indicators for Indwelling Urinary Catheter
1. Urinary tract obstruction
2. Neurogenic bladder
3. Urologic surgery/studies
4. Open sacral/perineal wounds in the incontinent patient
5. Acute/chronic urinary retention
6. Prolonged immobilization
7. Hospice/comfort care

Post-Indwelling Urinary Catheter Removal Guidelines
1. Continue pericare q 8 hours and prn
2. RN will monitor patient's elimination status q 6 hours and prn
3. Bladder scan will be completed for the following:
   - Patient has not voided within 6 hours
   - Patient has urge to void but is unable to do so
   - Patient is complaining of bladder discomfort
4. Straight cath for residual greater than 200cc

CAUTION
Count to 10 Before You Cath!

1. Insert catheters only for appropriate indications.
2. Consider using alternatives to indwelling urethral catheterization.
3. Perform hand hygiene!
4. Have you been trained? Insertion of catheters is limited to trained personnel.
5. Insert catheters using aseptic technique and sterile equipment.
6. Properly secure catheter after insertion.
7. Maintain a closed drainage system.
8. Maintain unobstructed urine flow.
9. Do not clean periurethral area with antiseptics. Routine hygiene is appropriate.
10. Assess daily! Remove unnecessary catheters or document reason for extended use.

	2 months ago	Last month	This month
Indwelling urinary catheter days (Foley days)	◯	◯	◯
CAUTI Rate	◯	◯	◯

Urinary Catheter Indicators
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Urinary catheters NOT indicated for:
- Incontinence
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Conclusions

HealthSouth Deaconess Rehabilitation Hospital developed a comprehensive educational program for physicians and nurses to promote best practices in the appropriate use of urinary devices and prevention of CAUTIs. The program includes a nursing protocol to daily assess the need for continued use along with post-indwelling urinary catheter removal guidelines. The program also includes the proper techniques for insertion, maintenance and removal as well as proper documentation, surveillance and education/training. Physicians are provided daily reminders for assessing the continued need for indwelling catheters.