Stomping Out Catheter Associated Urinary Tract Infections

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INTRODUCTION

Project Description

Immediately following the NC Prevent CAUTI Collaborative kickoff meeting in March 2010, a **multidisciplinary team** was formed at Catawba Valley Medical Center (CVMC). This 258-bed, not-for-profit, Magnet hospital located in the foothills of the Blue Ridge Mountains offers a full range of medical services and specialties to a 5-county region. Stakeholders, representing a variety of disciplines, joined together to "stomp out," i.e., eliminate, CAUTIs in the organization.

Since the General Medical Unit had a total of 10 CAUTIs in 2008 and 2009, efforts were focused on this patient population to start. The NCHA's CAUTI Collaborative **routine orders tool** was adapted and approved for implementation within one week. Next a **daily line review process** was developed, which included a shared spreadsheet for utilization reviewers (UR), who both review and advocate for removal at the earliest point appropriate in the patient's catheterization. Efforts proved successful as the Medical Unit experienced only a 0.9 CAUTI rate (N=2) in 2010, and has experienced no CAUTIs in 2011 through September.

Project Aims

The multidisciplinary team set an initial goal of **reducing CAUTIs by 25%** in its first year. In addition, a stretch goal of **achieving zero infections** was established.

MULTIDISCIPLINARY TEAM

Team	Members
Administration	• Eddie Beard, Senior VP & CNO
Medical	• Sandra Beckler, Patient Care Coordinator • Sandra McCallum, Patient Care Coordinator • Carla Macijewski, Clinical Development Coordinator • Joelle Calloway, Resource Coordinator
Infection Prevention	• Michelle Mace, Administrator
Risk Management	• Starr-Nell Bowman, Analyst
Clinical Resource Management	• Lisa Yount, Case Manager
Inpatients Units, ED and OR	• Staff nurse representatives • Danielle Thurman, ED Patient Care Coordinator • Michele McGlamery, OR Director

MEASURES

- Evaluated CAUTIs by
  - Raw numbers of infections
  - Rates = (# infections / # device days) x 1000
- Monitored device days in
  - Medical Unit – primary focus, year one
  - Hospital-wide
- Tracked ED Foley insertion in admitted patients
- Determined compliance with Foley order implementation within 24 hrs
- Assessed two balancing measures
  - Bathroom-related falls
  - Skin issues

CHANGES IMPLEMENTED

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|================================================================
|                         Wounds:
|VS: VS: MEDICAL ROUTINE  LAST:98.8 65  18 152/67  O2 Sat: 98%
|Equip:
|DVT Prophylaxis? Y N Type: ____________  Coumadin:
|IV: ____________________
|Intake: ___________________  Output: Foley: 10/25  1 Days
|Tubes/Drains:
|
| CODE BLUE STATUS: FULL CODE
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Foley Routine Orders (left)

- Implemented within 24 hrs
- Revisions due to staff and MD input

Bedside Interdisciplinary Team Rounds (above)

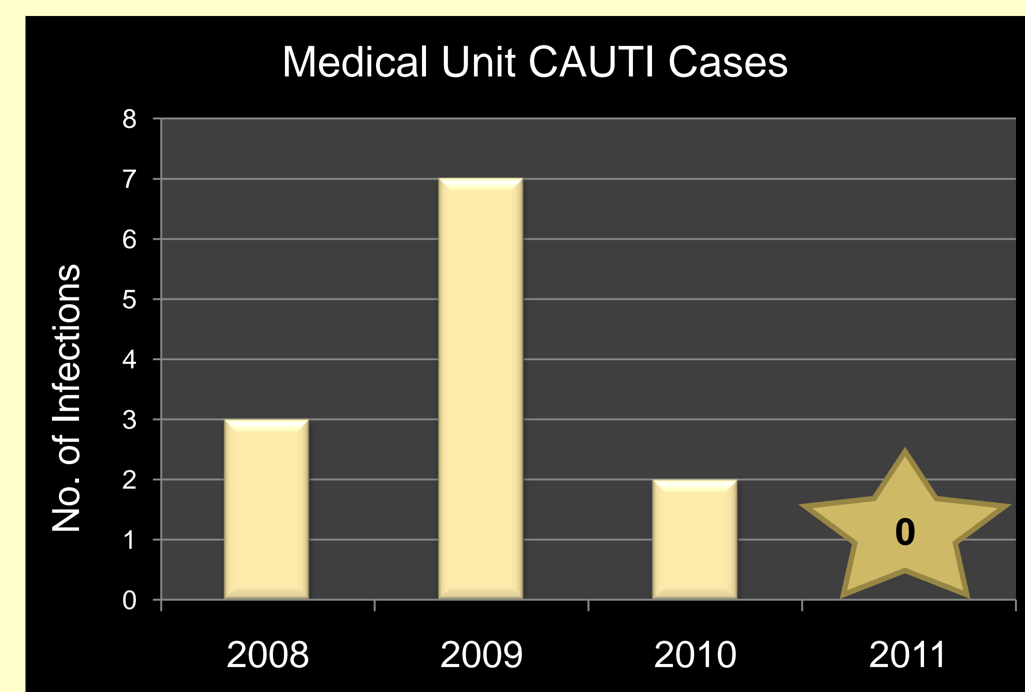
- Conducted daily

V #	Last Name	Unit Inserting Foley	Date Foley Inserted	Time Inserted	Date Foley D/C'd	UR daily line review complete (Y/N)	Insertion Criteria Documented within 24 hrs (Y/N)	Insertion Criteria Selection	Comments	Unit Follow-up	U/R Follow-up
		Surgical	10/14	1901	10/20	y	y	Retention	Handwritten order r/t retention but RO sheet marked for Post-op.	RN accidently marked wrong box.	UR had originally documented post-op but I explained problem with order and they went back and corrected.
		OR	10/19		10/21	Y	y	Prolonged Immobilization			
		Surgical	10/21	1700	10/23	Y	Y	Strict I&O	RO for Foley not on chart until 10/22 am by UR nurse but within 24 hours	Pt was transferred to unit at 1814, NP at bedside gave orders for Foley and said she would write orders but did not. RN missed getting RO on chart before transferring. Reported to CCU nurse Foley was inserted but they did not check for the order.	

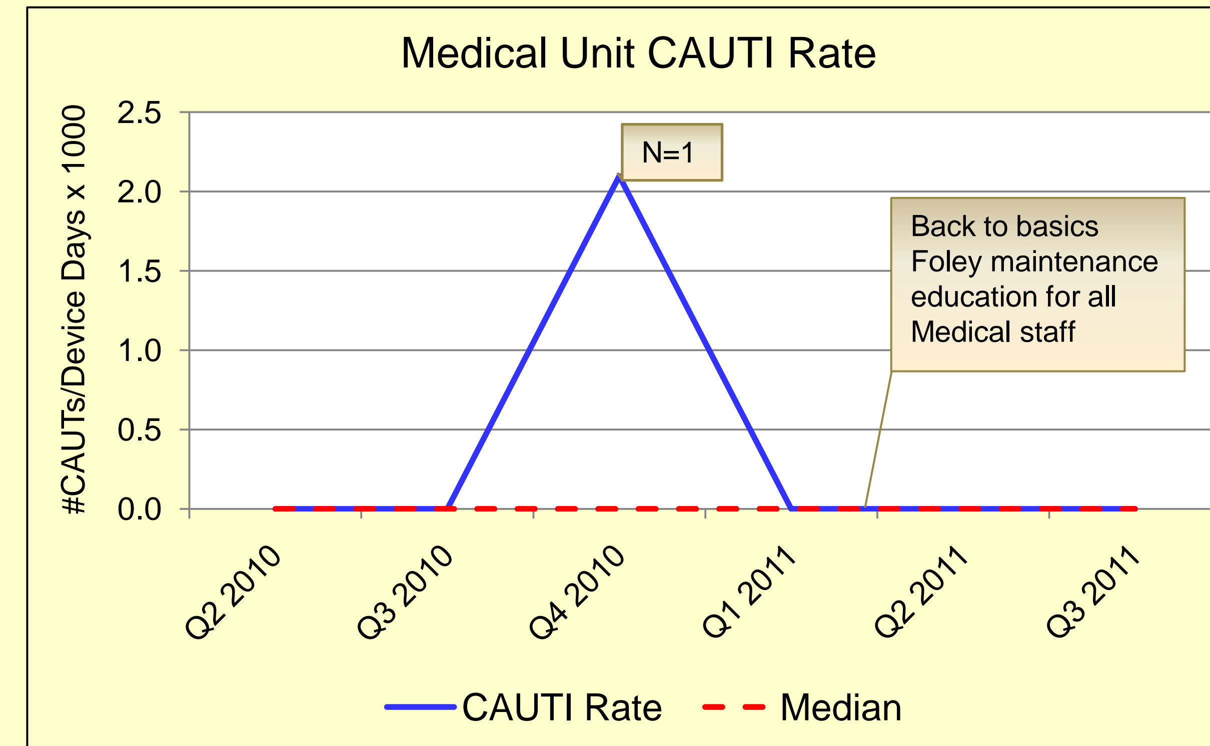
Multidisciplinary Daily Line Review Shared Spreadsheet

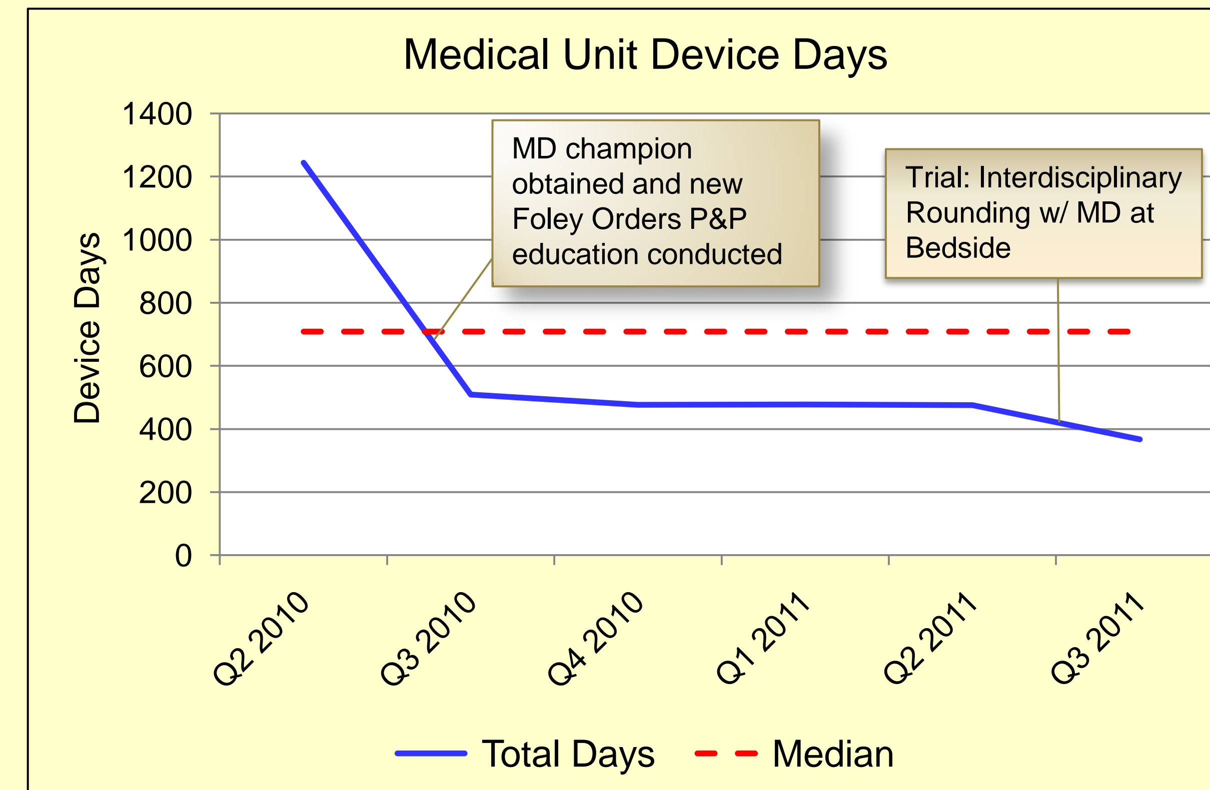
- Utilization Reviewers (URs) assess daily for continued necessity of Foley: 7 days/wk
- URs advocate for catheter removal at earliest appropriate point
- Team Chair also uses Spreadsheet for weekly audits

REDUCED CAUTI INCIDENCE OVER TIME

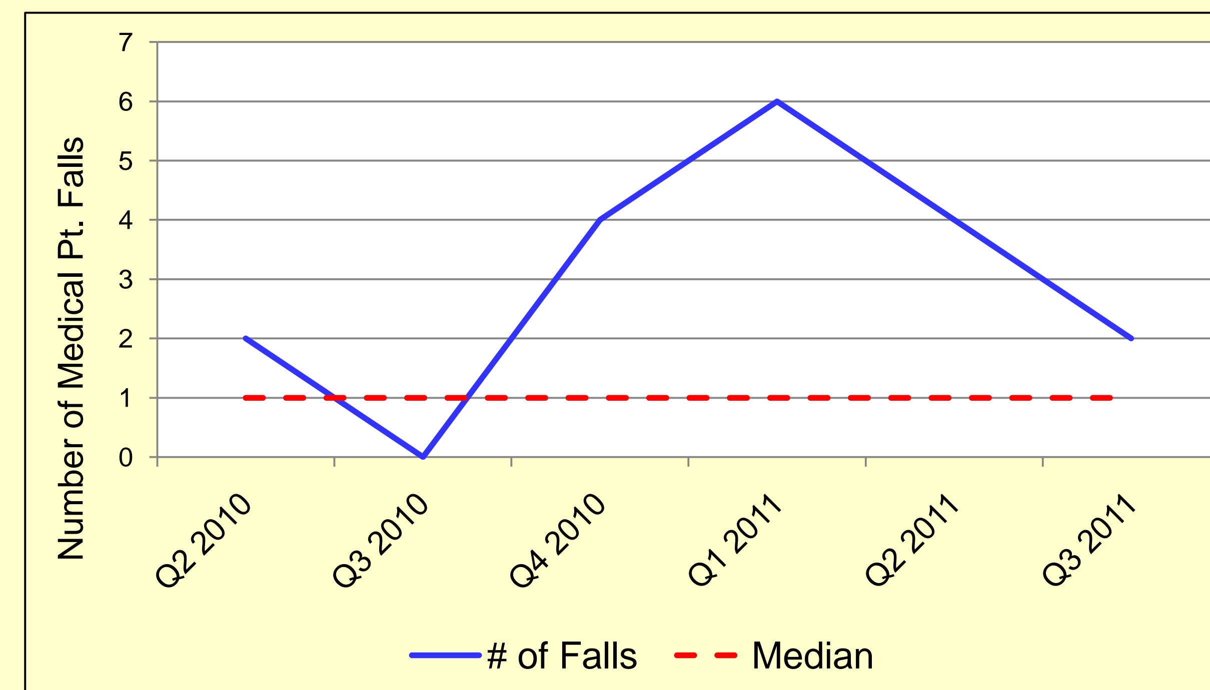


CAUTI RATES and DEVICE DAYS OVER TIME



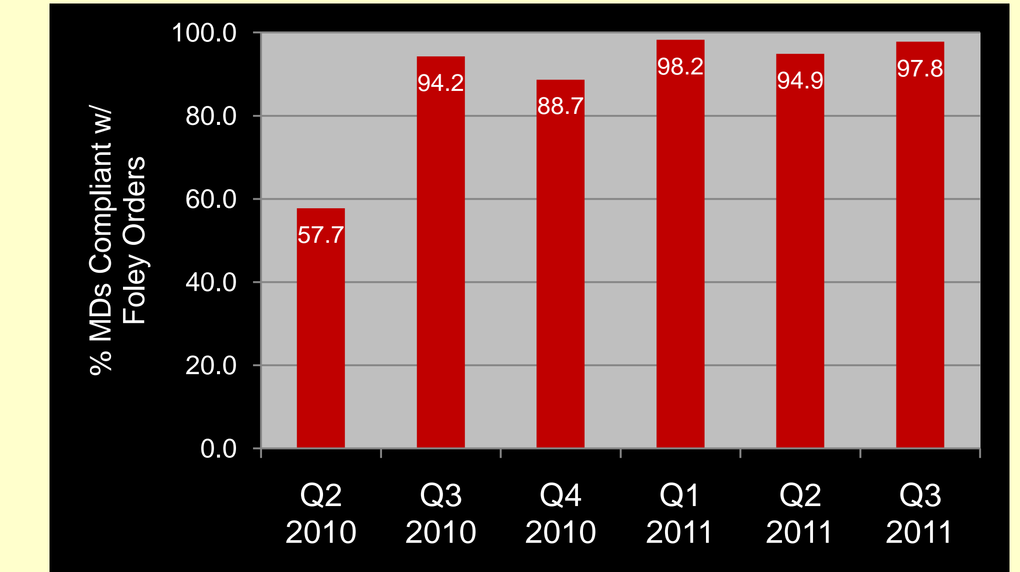


BALANCING MEASURE: TOILETING-RELATED FALLS



- Falls associated with toileting were not diminished
- No changes with skin issues related to incontinence have been observed (data not shown)

MD-DRIVEN MEDICAL UNIT FOLEY COMPLIANCE



- MD compliance with Foley orders jumped **36.5** percent points in the third quarter of 2010 compared with the previous quarter
- Strong physician compliance has continued over 5 quarters with an average of **94.8%** medical Foley patients having routine orders in place
- How was this accomplished?
  - Secured MD champion from CVMC Hospitalists in June 2010
  - Revised Foley Routine Orders based on MD input
  - Finalized Foley policy and procedures (P&P) in mid-July
  - "Meet & Greet" in physician lounge to educate on new P&P

LESSONS LEARNED

- Ensure all stakeholders are involved from the beginning
- Seek out a physician champion
  - He/she can positively influence the practice of his/her peers
- Establish a realistic timeline
  - Initial plan for implementation was too aggressive requiring postponement and reevaluation of timeline
- Agree on intra-departmental expectations early in the process
  - CAUTI Prevention Team established a goal of 100% compliance with daily Foley review, without a complete understanding of the barriers within the Utilization Review Department related to staffing

SUMMARY

Conclusions & Keys to Success

- Exceeded and met goals
  - Reduced CAUTIs by over 71% in year one
  - Eliminated CAUTIs in 2011 through September, thus meeting the stretch goal
  - Reduced catheter days resulting from daily utilization review
- Multifaceted approach and heightened awareness among staff
  - Strict insertion criteria, shift huddles, Bathroom Blitz, Bedside Interdisciplinary Team, Bedside Nursing Shift Report, Utilization Review

Spread & Sustainment

- Foley routine orders now in use throughout the organization
  - Achieved through a staggered roll out utilizing PDSA cycle: Jun - Oct 2011
- Next steps include implementation of a urinary retention protocol
  - Currently being trialed on the Ortho-Neuro Unit
  - Protocol developed with input of the urology hospitalists based on research regarding postoperative urinary retention

CONTACT INFORMATION

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