

UPMC St. Margaret

4th Annual NDNQI® Conference

The Impact of Clinical Decision Support (CDS)
Tools on Catheter Associated Urinary Tract
Infections (CAUTI)
January 22, 2010

UPMC St Margaret

Bonnie B. Anton, MN RN

antonbb@upmc.edu

Debra Wolf, PhD MSN BSN RN

Susan DiNucci, BSN RN

Sharon Rummel, BS

Barbara A Jordan MSN RN



Demographics UPMC St Margaret

- Acute care and teaching hospital
- 800 primary care and specialty physicians
- Magnet designated hospital
- One of 19 Hospitals in the UPMC system
- RN School of Nursing
- LPN School of Nursing
- 2004 implemented electronic health record



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Objectives

- Define electronic clinical decision support (CDS) tools
- Describe the impact of CDS tools on catheter associated urinary tract infections (CAUTI)
- Identify the important role the informatics nurse plays in solving patient outcome issues



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Electronic Clinical Decision Support (CDS) Tools

- Purposes
 - Means of providing knowledge
- Types
 - Order Sets
 - Alerts
 - Rules
 - Reference material

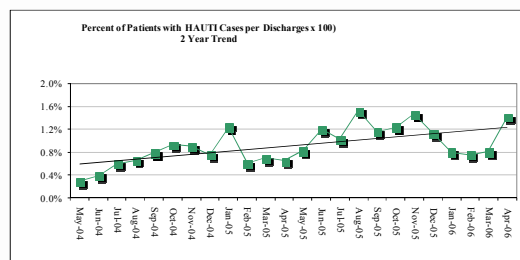


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Problem: CAUTI

2006 Increasing two year trend of UTIs

May 2004-April 2006
38% of hospital
acquired infections
were Catheter-
associated urinary
tract infections
(CAUTI)



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Goal and Objectives

To reduce and sustain a reduction in the number of hospital acquired catheter associated urinary tract infections (CAUTI) at UPMC St. Margaret

- Improve insertion technique and catheter management through education of staff
- Utilize electronic health record technology
- Implement improved product technology--silver alloy hydrogel coated catheters



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Solutions

Multidisciplinary team formed

Role:

- Analyze data, recommend practice/policy changes
- Determine education needs of the staff through direct observations of Foley ® insertions and care
- Literature searches
 - Greater risk for UTI if indwelling catheters in place longer than 4 days
 - Availability of improved catheter product technology (silver coated Foley® catheter)
- Use of eRecord technology
 - Clinical Decision Support Tool



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Solutions

Urinary Catheter

- Observation Tool
 - Insertion technique
 - Care of urinary catheters
- Electronic Decision Support Tools
 - Daily unit-based “Urinary Catheter List”
 - Correct documentation of I/O
 - Electronic prompts to the nurse-reassess daily catheter need
 - Notify medical staff to D/C catheter if not needed



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Solutions

Use of eRecord Technology:

- Daily unit list of patients with indwelling urinary catheters
 - Patients are listed if electronic documentation of I/O under “Catheter” vs “Voided”
- Prompts the Resource nurse to ask, “Can the catheter be removed?”
- Daily task/prompts for patient’s nurse to reassess criteria for catheter—received until catheter removed
 - Nurse documents validity of the need for the catheter
 - RN address need for removal



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Approved Foley Catheter Criteria List

- Close monitoring of urine output in critically ill patient
- Comfort measures only care (terminally ill)
- Continuous bladder irrigation
- Non-urologic surgery less than 24 hours ago
- Stage III or IV sacral/perineal pressure ulcer
- Surgical/trauma in perineal area
- Urinary retention
- Urologic surgery

Documentation occurs on Foley® Catheter
Necessity Form in eRecord



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Solutions

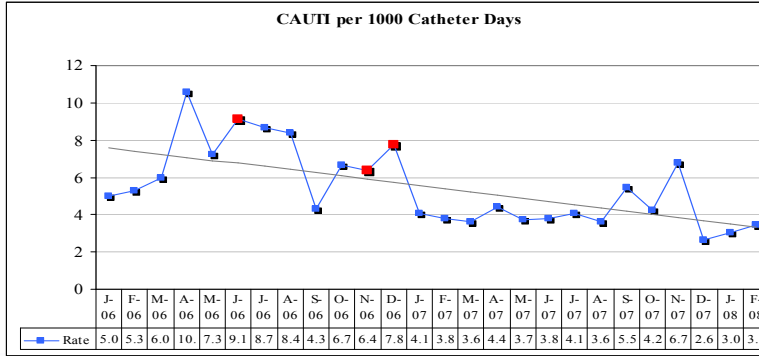
Silver Coated Urinary Catheters

- Evidence from research literature supports the use of silver alloy/hydrogel coated urinary catheters in a variety of clinical settings for short term use (less than 14 days)
- Cost analysis showed cost per catheter was approximately 2X that of non coated catheters. Savings projected according to infections prevented.

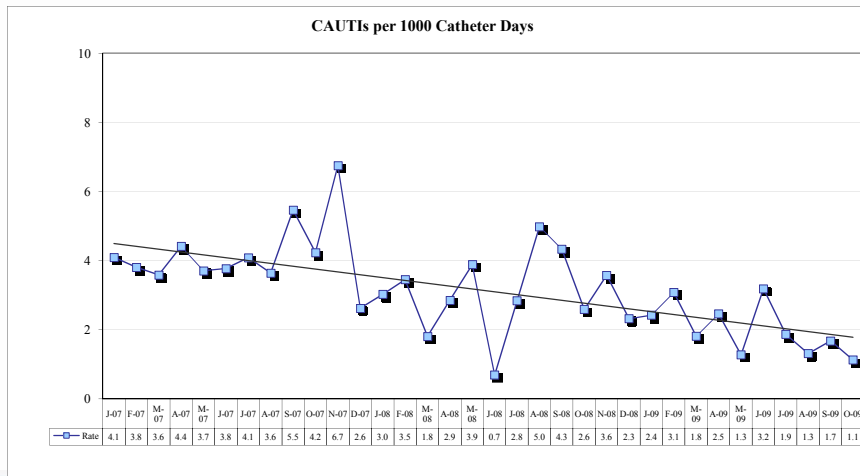


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June 1-30th 2006 Education of Staff
 June 30, 2006 eRecord Catheter List
 Nov 2006 eRecord Rule
 Dec 2006 Silver Coated Catheter



Results



Outcomes

Number of CAUTIs at UPMC St. Margaret:

- 2006: 102 CAUTI--Baseline year
- 2007: 66 CAUTI--35% reduction comparing
- 2008: 42 CAUTI--36% reduction comparing
- 2009: 29 CAUTI (Jan-Oct)

Decrease in rate of CAUTIs

7.2/1000 catheter days in 2006 to 2.0/1000
catheter days in 2009 (Oct)



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Lessons Learned

- Identify the problem
- Collaborative Teamwork
- Utilize the evidence available
- Let the eRecord work for YOU!



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Thank you

