

# Infection Prevention and Epidemiology

## Hospital Acquired Infection: Prevention of Catheter Associated UTI (CAUTI)

Oct 2, 2008

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# Start with Basics - Hand Hygiene

- Hand hygiene prior to and after Foley insertion
- Before and after Foley care
- Many people do not understand the necessity to handle catheters in an aseptic manner.
- Wear and dispose of gloves properly.

# Definitions for CAUTI

- Aim is to prevent indwelling catheter UTI associated with (Foley and Coude) type catheter
- Currently excluded but measures to prevent UTI should be observed for: I&O cath, self cath, Suprapubic cath, or nephrostomy tube
- Must document if catheter is present on admission and any signs or symptoms of UTI (dysuria, burning, odor, urgency, frequency, suprapubic tenderness)

# Major & Specific Events



**Table 1.** CDC/NHSN major and specific types of health care-associated infections

UTI	Urinary tract Infection	
	SUTI	Symptomatic urinary tract infection
	ASB	Asymptomatic bacteriuria
	OUTI	Other infections of the urinary tract
SSI	Surgical site Infection	
	SP	Superficial incisional primary SSI
	SE	Superficial incisional secondary SSI
	DIP	Deep incisional primary SSI
	DIS	Deep incisional secondary SSI
	Organ/space	Organ/space SSI. Indicate specific type
		<ul style="list-style-type: none"> <li>• BONE</li> <li>• BRST</li> <li>• CARD</li> <li>• DISC</li> <li>• EAR</li> <li>• LUNG</li> <li>• MED</li> <li>• MEN</li> <li>• ORAL</li> <li>• OSEF</li> </ul>

## UTI-URINARY TRACT INFECTION

### SUTI-Symptomatic urinary tract infection

A symptomatic urinary tract infection must meet at least 1 of the following criteria:

1. Patient has at least 1 of the following signs or symptoms with no other recognized cause: fever ( $>38^{\circ}\text{C}$ ), urgency, frequency, dysuria, or suprapubic tenderness *and* patient has a positive urine culture, that is,  $\geq 10^3$  microorganisms per cc of urine with no more than 2 species of microorganisms.
2. Patient has at least 2 of the following signs or symptoms with no other recognized cause: fever ( $>38^{\circ}\text{C}$ ), urgency, frequency, dysuria, or suprapubic tenderness *and* at least 1 of the following
  - a. positive dipstick for leukocyte esterase and/or nitrate
  - b. pyuria (urine specimen with  $\geq 10$  white blood cell [WBC]/ $\text{mm}^3$  or  $\geq 3$  WBC/high-power field of urine sediment)

# UTI Prevention Bundle

- 1. Document if catheter is present on Admission
- 2. Insert using Aseptic technique
- 3. Use a securement device to prevent catheter from irritating sensitive patient areas
- 4. Maintain Foley bag below level of pt bladder
- 5. Maintain closed system as Aseptic line
- 6. Pericare daily (using soap and water) and with fecal incontinence.
- 7. Use a dedicated container for measuring/emptying
- 8. MD and RN to assessment daily for Foley removal

# Foley Catheter Insertion

- Only when necessary
- Observe Aseptic technique (includes OR) sterile field, peri prep, use forceps to pick up prep sponges, not hands
- No attempts with same catheter after failed placement
- Literature states 85% Attending MD not aware their patient has Foley

# Develop Form for Insertion Criteria and Catheter Discontinuation

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- **Indwelling Urinary Catheter Criteria Documentation**
- Patient MRN: \_\_\_\_\_ Age: \_\_\_\_\_ Gender: M \_\_\_ F \_\_\_
- Service: \_\_\_\_\_ Diagnosis: \_\_\_\_\_
- Catheter Insert Date: \_\_\_\_\_ Catheter Insert Unit: \_\_\_\_\_
- Staff Name inserting cath \_\_\_\_\_
- Catheter type \_\_\_\_\_ Size \_\_\_\_\_
- Catheter needed for Procedure Y N
- Date procedure \_\_\_\_\_ Type Procedure \_\_\_\_\_
- Catheter to be removed by MD order Y N If No, RN may discontinue catheter on post op day \_\_\_\_\_
- Call MD for \_\_\_\_\_

\* Adapted from Michigan Keystone project

# Criteria for Insertion:

- Acute Renal Failure Y/N
- IV Analgesics/IV Sedation Y/N
- Inotropes Y/N
- High Dose Diuretics Y/N
- Urinary Obstruction Y/N
- Urinary Retention (Bladder scanner greater than Y/N
  - 300 ml-consider straight cath; if needed > 2-3x/day,
  - consider Foley)
- Urologic Procedures Y/N
- Patient/Family Request Y/N
- Terminally Ill/ DNR Y/N
- Incontinence with Pressure Ulcer Y/N
- Unable to Perform Voiding/ Self-Cath Y/N
- Neurologic Impairment Y/N
- Approved Surgical Procedure Y/N
  
- Reason for Insertion: \_\_\_\_\_

# Inappropriate Use of Catheters:

- 1. No clear reason for placement for urinary catheter
- 2. Continued use of Foley when no longer needed
- 3. No order or protocol for urinary catheter
- 4. Urinary incontinence without skin breakdown
- 5. Nursing convenience
- 6. Use of the catheter for reasons not defined as appropriate

# Plan for Early Foley Catheter Removal\*

- When the patient becomes ambulatory
  - Can tolerate bed pan or bed side commode
  - Can leave patient room for PT/OT
  - Transfer from ICU to lower level of care
  - When patient is no longer receiving IV Lasix
  - Reason for urinary retention resolved
  - Improvement in skin/wound condition in perineal area
  - Within 48 hrs post surgical procedure (if no urology factors)
  - Patient discharge
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- \* The physician should still evaluate Trauma, Maternity, Urology patients and patients with contraindications to Foley removal daily so that catheter may be discontinued as soon as possible.

# Recommendations for Catheter Removal

1. **Patient Post Op** - day 1-2 without urinary contraindication.
2. **Orthopedic procedures:**
  3. A. Hip fracture: Discontinue 24 hours postop
  4. B. Pelvic fracture: Prior to going to physical therapy department or when patient can tolerate bedpan
5. **Critically ill/hemodynamically unstable patient:**
  6. A. When Lasix is changed from IV to po and patient can tolerate bedpan
  7. B. Transfer out of ICU/evaluate need for continuation of Foley
8. **Reason for urinary retention resolved** (i.e. constipation, 24 hours postop)
9. **Skin breakdown issues resolved**
10. **Dyspnea on exertion/unable to tolerate minimal activity:**
  11. A. Progressed to bedpan, bedside commode, PT in department
12. **Anticipated patient discharge** – determine whether patient is to be discharged with Foley; if not, remove.

# Education & Documentation

- Ensure an initial order for Foley.
- Document catheter size and placement date/time
- Document patient symptoms (temp, dysuria, suprapubic tenderness, pulling at catheter)
- Foley irrigation only with MD order
- If urine culture is collected from the catheter, designate “Foley” on lab requisition.
- MD to include Catheter POA and UTI associated symptoms on H&P.
- Assess patient for discontinuation of catheter and remove at earliest opportunity.