

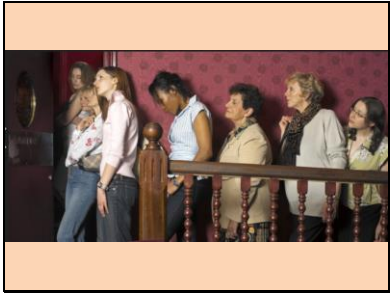
Slide 1

Bladder Management and Preventing CAUTI

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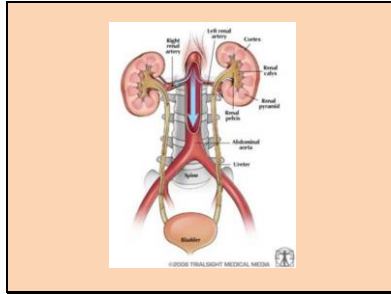
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Slide 3

**Bladder management
CAUTI prevention standards**

Slide 4



Slide 5

Normal Bladder Functioning

- Anatomical integrity
- Neurological intact components for voluntary control
- Predictable pattern
- Physical & mental ability & willingness for toileting tasks

This slide features a list of four bullet points describing the components of normal bladder functioning. To the right of the text is a smaller version of the anatomical diagram from Slide 4, showing the kidneys, ureters, bladder, and associated vessels and nerves.

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Possible Causes

- Cerebral palsy
- Multiple sclerosis
- Stroke
- Alzheimer's disease
- Dementia
- Parkinson's disease
- Spinal cord injury
- Gullain-Barre
- GU traumatic injury, GU birth defects
- Traumatic brain injury
- Cancer
- Enlarged prostate
- Weakened bladder muscles (pregnancy, age-related)
- Urinary stones
- Bladder infection

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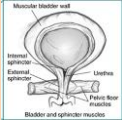
Factors that increase development of incontinence

- Family history of incontinence
- Caucasian women more likely than Hispanic, Asian, African American women
- Menopause (reduced hormone that keeps bladder and urethra healthy)
- Physical inactivity
- Obesity
- Chronic coughing
- Damage to muscle and nerves during childbirth
- Pelvic organ prolapse
- Older age

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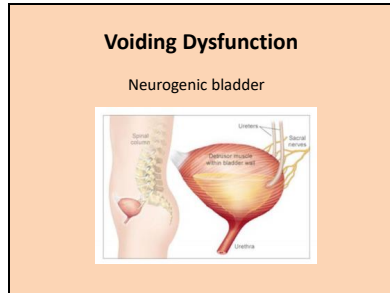
Types of Urinary Incontinence

- Stress
- Urge (overactive bladder)
- Functional
- Mixed

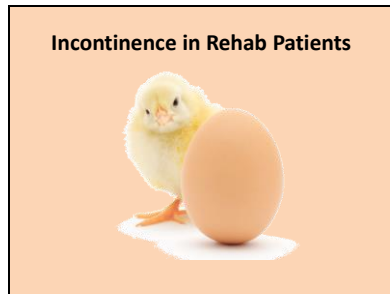


Transient or Persistent

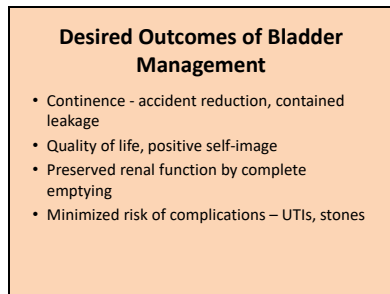
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Management
All types

- Dietary modification (avoid caffeine, alcohol, carbonated beverages, citrus, artificial sweeteners, spicy foods)
- Maintain hydration 1.5 - 2 L per day.
- Adjust fluid intake to increments of 250-300 ml 8-10 times a day
- Limit night fluids to small sips after 8pm
- Promote perineal hygiene, prevent skin breakdown
- Smoking cessation

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Management
Urge Incontinence

- Medications – oxybutynin (Ditropan XL®), tolterodine (Detrol®), imipramine (Tofranil®), sikufebacub (VESicare®), mirabegron (Myrbetriq®)
- Condom catheter at night
- Timed voiding program (every 2-3 hours while awake, every 3-4 hours at night)
- Bladder training
- Biofeedback, Urgency suppression
- Weight loss

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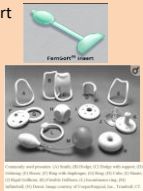
Management
Stress Incontinence

- Pelvic floor muscle physiotherapy or Kegel exercises (10 followed by 30 sec of rest)
- Bladder supports – Poise Impressa®, Apex® M
- Leakage protection

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Medical Devices

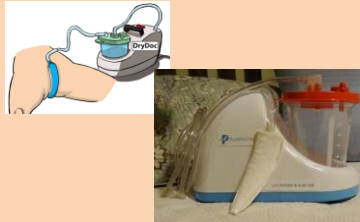
- Urethral insert
- Pessary



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PureWick®



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Coping with Leakage

- Liners, Pads
- Waterproof underwear
- Adult diapers
- Skin cleaners and creams



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Management
Functional Incontinence

- Modify environment to reduce obstacles
- Adapt clothing to permit easy access
- Provide bedside devices as appropriate – urinal, bedside comode
- Toileting schedule every 2hr during day, every 3-4hr during night
- Timed voiding with helper

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Management
Neurogenic Bladder

- Bladder training with intermittent catheterization (pelvic floor muscle training, use double voids for PVR >150ml)
- Intermittent catheterization (4-6x day, keep volumes <500)
- Leakage – condom catheter
- Indwelling catheter
- Suprapubic catheter

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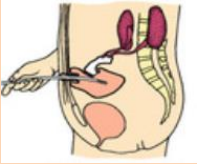
Management
Advanced Interventions

- Botox® injection into bladder (increases storage capacity)
- Nerve stimulation – InterStim®, Nuro®, TENS
- Surgery – bladder augmentation, urinary diversion

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Urinary Diversion
Continent Urostomy

- A pouch is made using part of the intestine.
- The stoma on the abdomen allows a catheter to pass into the pouch to drain urine.
- Urine is removed from the pouch with a catheter at regular intervals.



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Financial Implications of Incontinence


- Supplies – briefs, pads, towelettes, skin cleanser, topical moisture barrier, gloves, toilet paper
- Linen
- Nurse

\$40 – \$50 per incidence
6 patients, average incontinence for each 5 times/day
\$1200 - \$1500 per day
\$8400-\$10,500 per week
\$436,800-\$546,000 per year

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Continence Care is Key!

- *Clinical Tools for Continence Care: An Evidence-based Approach* by Christine Cave



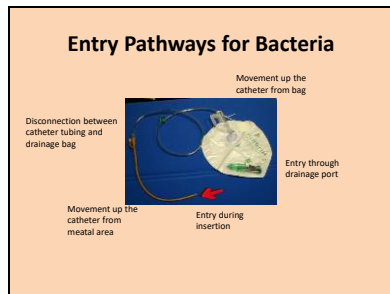
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Catheter Associated Urinary Tract Infections

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- Background**
- UTIs are 40% of all hospital-acquired infections
 - Risk of CAUTI increases 3%-10% each day catheter stays in place
 - Over 900,00 hospitalized patients develop CAUTI each year
 - Over 13,000 deaths annually associated with CAUTI
 - Nurse led interventions can reduce incidence of CAUTI


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Challenges


- Long-term indwelling catheter may be indicated for some individuals with neurogenic bladder
- Some individuals may have resident bacteria in bladder and no symptoms of UTI
- Fever for unrelated cause and bacteriuria may trigger CAUTI diagnosis



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Challenges

- Closed system often compromised to change between leg and bedside collection bags
- Hand hygiene practice varies
- Differing catheter insertion techniques
- Perineal care not consistently done
- Current practice does not always reflect current EBP



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Attention to CAUTI

- October 2008 Medicare ceased payments for certain hospital-acquired infections
- January 2017 National Patient Safety Goals (NPSG) for hospitals required focus on preventing CAUTI
- NPSG refined further for 2018

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Goal 7
Reduce the risk of health care–associated infections.

- 07.06.01 Implement evidence-based practices to prevent indwelling catheter-associated urinary tract infections



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Elements of Performance

- Staff education
- Patient education
- Written evidence-based criteria for placement of catheter
- Written evidence-based procedures for insertion & maintenance
- Measure & monitor process

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Staff Education


- Educate on the use of indwelling urinary catheters, CAUTI and the importance of infection prevention.
- Provide education upon hire.
- Conduct ongoing education and competence assessment at intervals established by the organization.



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Patient/Caregiver Education


- Provide education on CAUTI prevention and the symptoms of a urinary tract infection.



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Education Resources


- Generic CDC/SHEA handout – *CAUTI: FAQs for Pts & Families* www.catheterout.org
- Catheter insertion kit
- Local facility
- Krames
- X-Plain
- GetWell Network



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Written Criteria for Insertion

- Develop written criteria, using established evidence-based guidelines, for placement of an indwelling urinary catheter.



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Criteria for Catheter Placement

- Critically ill patients needing accurate urinary output measurement
- Patients with acute urinary retention or bladder outlet obstruction
- Patients requiring prolonged immobilization
- Incontinent patients with open sacral or perineal wounds
- Perioperative use for selected procedures (urologic, GU, long duration)
- End of life care
- Neurogenic bladder

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Written Procedures for Insertion and Maintenance


- Follow written procedures based on established evidence-based guidelines for inserting and maintaining an indwelling urinary catheter



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Hand Hygiene

- Wash hands before & after glove use
- Use clean gloves to:
 - Handle catheter
 - Empty drainage bag
 - Perform perineal/catheter care
- Use sterile technique to insert indwelling catheter



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Best Practice Insertion Tips

- Maintain sterile technique during insertion
- If aseptic technique is compromised, stop procedure and start again with new set up & catheter
- Do not pre-test the catheter balloon
- Use a second person if needed to assist with keeping patient in position
- Set up a closed system, tape connection site to remind others not to open

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Best Practice Maintenance Tips

- Use securement device to minimize catheter movement



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Best Practice Maintenance Tips

- Maintain sterility of urine collection system
- Keep urine collection device below level of bladder
- Do not allow collection device or tubing to be in contact with the floor
- Keep tubing free of kinks
- Empty leg bag/drainage bag when no more than 1/2 to 2/3 full to reduce trauma to urethra

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Best Practice Maintenance Tips

- Perineal care: Wash meatus with soap & water once a shift and after bowel movements
- Clean catheter tubing with soap & water once a shift & after bowel care



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Best Practice Maintenance Tips

- Assess need for continued indwelling catheter
- Daily catheter irrigation is not recommended due to uroepithelium denuding
- Change long-term catheters at least monthly to prevent encrustation of catheter

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Best Practice Maintenance Tips

- For specimen collection: Remove old catheter, Collect specimen using sterile technique when new catheter is inserted

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Compliance & Outcomes

- Measure and monitor catheter-associated urinary tract infection prevention processes and outcomes



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Monitoring

Compliance with evidence-based guidelines related to maintenance?

- Checklists
- Observations
- Random monitor
- Periodic monitor

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Effectiveness Measures

CAUTI's
CAUTI rate

- (Number of infections/number of catheter days) * 1000
 - (2/300)*1000 = 6.67
 - (2/150)*1000 = 13.3

Days since last CAUTI
