Clinical Components of the CMS Interpretive Guidance for Urinary Incontinence and Indwelling Catheters

Diane K. Newman, RNC, MSN, FAAN

Co-director
Penn Center for Continence and Pelvic Health
Division of Urology
University of Pennsylvania
Philadelphia, Pennsylvania
215-615-3459
Website - www.seekwellness.com

Used by CMS for UI Guidance
Available @ www.amazon.com

Web Page www.seekwellness.com

Intent of F315

Intent is to ensure that:

- Incontinent residents are identified, assessed and provided appropriate treatment to maintain as much normal urinary function as possible.
- Indwelling catheter is not used unless there is medical justification; if not justified removed as soon as clinically warranted.
- Residents receive the appropriate care to prevent urinary tract infections.

Urinary Incontinence Assessment & Treatment

Assessment

- A complete assessment is essential to an effective UI and catheterization prevention and treatment program
- A resident should be evaluated at admission and whenever there is a change in cognition, physical ability, or urinary tract function
- Regardless of the admission status, a comprehensive assessment should address those factors that predispose the resident to the development of UI and the use of an indwelling urinary catheter

Assessment

A comprehensive individual evaluation helps the facility to:

- Identify the resident at risk of declining in continence status and the level and nature risk(s)
- Identify the complications from the use of an indwelling urinary catheter

UI Evaluation
(based on practice guidelines & CMS narrative guidance)

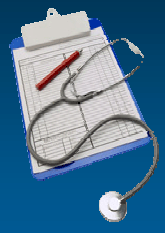
AHCPR	AMDA	CMS
History	• History	• History
Bladder record	• Bladder record	• Bladder record
Physical exam	• Physical exam	• Physical exam
Urinalysis	• Urinalysis*	• Urinalysis
PVR	• PVR†	• PVR†

*Only those with new or worsened UI, or suspected UTI.
†Only those at risk—men, neurologic disorders, DM.

Goals of Assessment

- Determine if the resident is incontinent,
- nature of lower urinary tract symptoms, and
- type of incontinence
- Determine the type of assessment conducted of the resident's incontinence status before admission and any interventions
- Determine reversible factors
- Determine conditions that may require further evaluation
- Implement a prompted voiding trial
- Determine resident's risk for complications and preferences for treatment

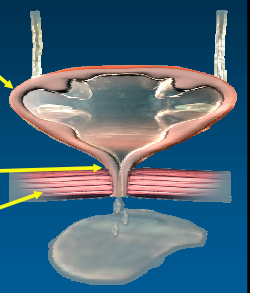
Basic Evaluation



- History
- Voiding diary
- Focused physical examination:
  - ✓ Abdomen
  - ✓ Pelvic (women)
  - ✓ Genitalia (men)
  - ✓ Rectal
  - ✓ Neurologic
  - ✓ Mental status
  - ✓ Functional
  - ✓ Environmental
- Urinalysis
- Postvoid urine residual

Lower Urinary Tract

- Bladder Muscle - Detrusor
  - ✓ *A hollow sac of muscular and connective tissue*
  - ✓ *Stores urine produced by the kidneys*
  - ✓ Capacity is 12 – 16 oz (360 - 480 mL)
- Urethra
  - ✓ Male 8 inches length
  - ✓ Female 1.5 cm
- Pelvic Floor Muscle
  - ✓ Supports pelvic organs
  - ✓ Surrounds external sphincter



Normal Voiding Patterns

Under Age 60

- Every 4-5 hours
- No waking at night to void

Over Age 60

- Every 3-4 hours
- Awakens once or more to void

Age-Related Changes in the Kidneys & Bladder

- More urine is produced during the night or when lying flat
- Bladder capacity is less
- Amount of urine left in the bladder after urinating may be greater
- Bladder contractions occur more frequently (bladder overactivity)
- Desire to urinate or “urge sensation” is delayed

Basic Evaluation History

Urinary Symptoms

- Duration (months, years
- Timing (daily)
- Amount (small, large)
- Precipitants (triggers)

Lower Urinary Tract Symptoms (LUTS) in Men and Women

Emptying symptoms

- Weak stream
- Hesitancy
- Incomplete emptying
- Urinary retention
- Dribbling after voiding
- Pain

Storage symptoms

- Urinary frequency
- Urgency
- Incontinence
- Nocturia
- Pain

Types of Urinary Incontinence Definition

Unwanted leakage of urine

- Urge – urine loss on the way to the bathroom following urgency
- Overactive bladder
  - ✓ Urgency - intense/sudden desire to void
  - ✓ Frequency - >8 voids/24 hours
  - ✓ Nocturia - awakening (2 or more) at night to void
- Stress -urine leakage with activity such as coughing or laughing
- Mixed – combination of stress and urge

Types of Urinary Incontinence Definition

Unwanted leakage of urine

- Functional – urine loss because of mobility or mental impairment
- Overflow – urine loss because of a blockage in the urethra

Basic Evaluation History

Associated Factors

- Current medical conditions (neurologic disease, BPH)
- Surgical history (bladder or prostate surgery)
- Previous treatments for UI (medications)
- Use of absorbent incontinence pads, catheters or other products

Basic Evaluation History

Associated Factors

Fluid intake

Associated symptoms

- (fecal incontinence)

Bowel function

- (constipation)

Basic Evaluation History

- Environmental factors
- Cognitive impairments (dementia)
- Resident/family expectations and motivation

Basic Evaluation History

Functional Impairment

- Risk rises with severity of immobility
  - Walks with support
  - Walks with assistance
  - Wheelchair or bedridden

Basic Evaluation

Observation of toileting

- Usual routine for toileting
- Resident's self performance of toileting
- Amount of assistance needed for toileting

Basic Evaluation

Observation of toileting

- Ability to communicate toileting need
- Ability to delay voiding
- Awareness of being wet
- Difficulty during voiding

Assessment Specifics

Transient causes include:

- Delirium
- Urinary tract infection (UTI)
- Atrophic urethritis or vaginitis
- Certain medications that can have an adverse effect on bladder causing urinary retention and/or UI
- Excessive urine production
- Restricted mobility
- Fecal impaction

Medications that Increase Resident's Risk for UI

- ***Medications:***
- ***Diuretics***
- ***Narcotics***
- ***Anticholinergics***
- ***Psychotropics*** *(*Sedatives, Hypnotics, Antipsychotics*)*
- ***Calcium channel blockers***

Bladder and Bowel Record

Time	Conscious Void (√)	Aware of urge to void (circle one)	Saturation of pad if incontinent (circle one)	Pad changes (√)	Activity when incontinence occurred	Bowel Movement (√)
6am		Y N	S M L			
7am		Y N	S M L			
8am		Y N	S M L			
9am		Y N	S M L			
10am		Y N	S M L			
11am		Y N	S M L			
12noon		Y N	S M L			
1pm		Y N	S M L			
2pm		Y N	S M L			

Saturation of Incontinent Pad
S = Slightly Wet M= Wets Most of Pad L=Outside of Clothing Wet

Physical Assessment: General & Abdomen

Nursing Staff Assessment

- Edema
- Masses
- Suprapubic distension

Exam by NP or MD

- Congestive heart failure (CHF)
- Gait abnormality
- Supraprubic distension or tenderness

Physical Assessment: Perineal - Women

External Perineal/Genitalia

- Color
- Odor
- Integrity
- Discharge
- Atrophic changes or vaginitis
- Prolapse protrusion

If catheter present, assess urinary meatus for:

- Trauma
- Tearing
- Erosion

Perineal Skin Problems

- Irritant dermatitis
- Inflammation of water-protein-lipid matrix of skin
- Caused by prolonged contact with moisture
- Early: edema, erythema
- Advanced: blistering, erosion, exudate
- Secondary infections; most common is yeast

Perineal Assessment in Women

Exam by NP or MD

- Atrophic vaginitis
- Pelvic muscle exam
- Presence of pelvic organ prolapse
  - Urethrocele
  - Cystocele
  - Uterine prolapse
  - Rectocele
  - Enterocele

Perineal Assessment in Men

Genitalia assessment in men

- Skin condition
- Penis and urethral meatus
- Condition/retraction of foreskin
- Scrotum

Physical Assessment: Rectal

Nursing Staff Assessment

- Skin Condition
- Fecal Staining
- Hemorrhoids
- Masses
- Fecal Impaction

Examination by (NP or MD)

- Perineal Sensation
- Sphincter tone
- Size/contour of prostate in men

Physical Assessment: Neurologic

Nursing Staff Assessment

Mental Status

- Ability to determine dryness
- Able to sense urinary urge

Manual Dexterity

Mobility – Gait

Examination by (NP or MD)

- Lower Extremity Reflexes
- Anal Wink
- Bulbocavernosus Reflex

Laboratory Tests

Urine Check – Urinalysis – clean catch

- Blood
- Infection (bacteria)
- Glucose or sugar (seen in diabetes)
- Protein (seen in kidney failure)

•Nursing home residents should not be catheterized to collect a urine specimen unless it is an urgent situation
•Testing to exclude a UTI should only be done if the incontinence is new or worsening, or other symptoms of UTI

Determination of Urinary Tract Infection

Review several test results in combination with clinical findings:

- Microscopic urinalysis showing the presence of pyuria; or
- Positive urine dipstick test for leukocyte esterase (indicating significant pyuria) or
- Nitrites (indicating the presence of Enterobacteriaceae)

Determination of Urinary Tract Infection

Nonspecific symptoms, look for:

- Hematuria,
- Fever or
- Evidence of pyuria

Urinary Tract Infection Prevention Strategies

- Infection control policies and procedures
- Identification of high risk residents
- Perineal hygiene, especially for women with fecal incontinence
- Hydration
- Treatment of atrophic vaginitis

Postvoid Residual (PVR) Determination

PVR is the amount of urine remaining in the bladder immediately (within 10 to 20 minutes) following voiding

Elevated PVR is ≥ 200 mLs

Elevated PVRs can present as overflow UI

Signs & symptoms

- ✓ Dribbling
- ✓ weak urinary stream
- ✓ intermittency
- ✓ hesitancy
- ✓ dysuria
- ✓ frequency
- ✓ nocturia

Postvoid Residual (PVR) Determination

Residents at Risk for Urinary Retention

- Diabetics
- Men (BPH, prostate cancer)
- Neurologic conditions (eg, CVA, MS, spinal cord injury)
- History of urinary retention or elevated PVR

Think Outside the *Bladder* ! Treatments

Habit Training/Scheduled Voiding

- Requires scheduled toileting, at regular intervals, on a planned basis, and match the resident's voiding habits
- Maintain record of resident's voiding patterns

Habit training

Research -

- 82% of voiding episodes occur during the same hourly blocks of time
- No expectation a normal voiding pattern will occur
- Match toileting to voiding habits and patterns
- 86% improvement—in cognitively impaired—institute visual cues for toileting & bathroom location

Prompted Voiding

Active communication so as the person takes an active part in their incontinence and toileting behavior

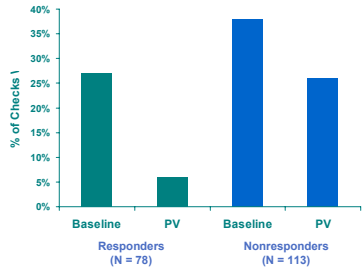
- Components
  - ✓ Toileting schedule
  - ✓ Verbal feedback
  - ✓ Positive reinforcement of the successful toileting

Prompted Voiding

Five Major Elements

- Check & Monitoring—checked by caregiver on regular basis and asked to report verbally if wet or dry
- Talking—discuss UI problem
- Prompting—asked to try to use the toilet
- Praising—told when they will be toileting again
- Correction—*GOAL IS DRYNESS!*

Prompted Voiding



Prompted Voiding

Reduces severity of UI by about half provided:

- They are at least are able to say their name or
- Reliably point to one of two objects

25% to 40% of frail nursing home patients respond well during the day

- Incontinence episodes decrease from 3 to 4 per day to 1 or less

Responsive patients can be easily identified during a 3-day trial

Individualize care at night

Use principles of continuous quality improvement

- Periodic wet checks of responsive patients

Behavioral Programs

- Required skills for residents:
  - *Usually assessed as having urge or mixed incontinence*
  - *Ability to comprehend and follow education and instructions*
  - *Identify urinary urge sensation*
  - *Learn to inhibit or control urge to void*
- Pelvic floor muscle (Kegel) exercises

Bladder Training

Strategies for Controlling Urgency and Frequency

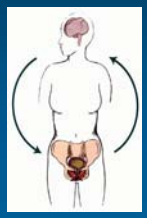
Education program

Resident must be capable of self-management

Scheduled voiding

Urge control techniques

- No rushing—relax, sit down, and rest
- Practice slow, deep breathing
- Use distraction till urge passes and bladder relaxes
- Delay voiding



Pelvic Muscle Exercise (Kegel)

- Focus on modifying the bladder outlet/strengthening the urinary sphincter
- Primarily for stress incontinence but can be effective with urge UI, urgency & frequency
- Isolation and identification of the correct muscle

Management of Urine Leakage

Absorbent Products Disposable

- Upper layer through which moisture passes and one or more absorbent layers.
- Some pads have a superabsorbent polymer (SAP) that "locks" urine into a gel.
- Superabsorbent polymer holds more urine for its weight than does fluff pulp
- Retains urine better under pressure.

Absorbent Products

Identifying the most appropriate product based on

- Ease of use in those patients who are independent and self-toileting
- Selection of a more absorbent product in those patients who are not capable of maintaining continence independently or through regular toileting or other measures

Absorbent Products Reusable

- Made of cloth material with a rayon or polyester fiber core
- Number, size and arrangement of these fibers are a factor in the absorption
- Urine-holding capacity of all absorbent products varies and is not standardized

Light to Moderate Urine Loss

Pantiliners
Very thin, discreet. Designed for light urine loss.

Perineal Pads
Designed for urine loss with super absorbent materials. Available in several absorbency levels.

Guards for Men
Contoured design to fit a man's anatomy. Can be comfortably worn inside close-fitting underwear.

Moderate to Heavy Urine Loss

Undergarment
Open-sided design and stretchy straps for comfort. Gentle leg gathers help prevent leakage.

Protective Underwear
Slim-fitting, comfortable and discreet. Designed to slip on like regular underwear.

Refastenable Underwear
Slip on like regular underwear or open the perforations on the sides and attach the fasteners. Adjusts for superior fit.

Fitted Briefs
Elastic at the waist and legs for a close fit. Adhesive tapes for fastening.

Newman D. *Managing and Treating Urinary Incontinence.* Health Professions Press; 2002.

SCA TENA PRODUCTS

Continuing Education-
PROGRESS: Bladder & Bowel Rehabilitation Program

Toilet Substitutes

Portable devices that substitute for a regular toilet.

Two general categories:

- Commode seats or bedside commodes
- Hand held devices such as a bedpan or urinal.

Toilet Substitutes Considerations for Use

Indications:

- inaccessible toilet areas
- doorways and bathrooms are too narrow for access (e.g. when using a walker or a wheelchair)
- nocturnal frequency and urgency is a significant problem
- decreased mobility

Containers & Toilets

Indwelling Catheterization

Definition:

Insertion of a closed, sterile catheter system into the bladder for continual drainage

Complications:

- **Infections**
- **Hematuria**
- **Urethral Erosion**
- **Fistula Formation**
- **Kidney Stones**
- **Bladder Cancer**

Indications for Indwelling Catheter

- ✓ **Short-term decompression of acute urinary retention**
- ✓ **Continued use of an indwelling catheter beyond 14 days should be restricted to:**
  - **Urinary retention**
    - PVR volumes in a range > 200 mLs
    - Failed voiding trials
    - Cannot be otherwise treated and for which alternative therapy is not feasible
    - Facility has made two to three unsuccessful attempts to perform intermittent catheterization to drain the bladder
    - Causing persistent overflow UI, symptomatic infections, and/or renal dysfunction
    - Cannot be corrected surgically

CMS UI Guidance

Indications for Indwelling Catheter

- ✓ **Presence of multiple pressure ulcers in areas for which healing is impeded by contamination of urine**
- ✓ **Terminal illness or severe impairment, which makes positioning or clothing changes uncomfortable, or which is associated with intractable pain.**

CMS UI Guidance

Catheterization: Intermittent

- **Indications**
  - ✓Management of overflow incontinence.
  - ✓New onset incontinence from a transient, hypotonic/atonic bladder (following indwelling catheterization removal)
  - ✓Acute urinary retention
- **Complications**
  - ✓Urinary Tract Infections
  - ✓Urethritis/Epididymitis
  - ✓Urethral Stricture
  - ✓False Urethral Passage

Straight catheters – PVC, silicone or rubber catheters

Clear – polyvinyl (PVC) – more rigid

Red rubber more flexible

Latex – concern is allergy

Catheters Types

Sized according to French (FR) scale)

- **Each unit equals 0.33 mm**

Length is either 5 inches (for women) or 12 inches (for men)

Blue guide stripe

Tip shape – Straight, Coude or Tiemann

- **Allow passage past prostate gland**

External Collection Devices

Definition:

External devices which are secured to the skin with adhesive or straps and are connected to a tube and collecting bag

Indications:

- Urinary incontinence
- Preferable to indwelling catheterization

Complications:

- UTI
- Mechanical Irritation to the penis
  - Erosion
  - Maceration
  - Dematitis
  - Ischemia

Urinary Tract Infections in Long Term Care facilities:

A Diagnostic and Therapeutic Dilemna

One Point Restraints: Patient Perspective

- 42% of patients report indwelling bladder catheters are uncomfortable.
- 48% report they are painful.
- 61% report a restriction in their activities of daily living.
- Decreased activity increases risk of pressure sore and venous thromboembolism.

Saint S. J Am Geriatr Soc 1999;47:1453-7

Antibiotics and Nursing Homes

- 54% of nursing home patients receive a course of antibiotics each year.
- Most common indication is for urinary tract infections; 36% of all antibiotics.
- 9% of all prescriptions are for asymptomatic bacteriuria, which is inappropriate.

Warren J. J Am Geriatr Soc 1991;39:963-72.

F315

Definitions:

"Bacteriuria" is defined as the presence of bacteria in the urine. By the 30th day of catheterization, bacteriuria is nearly universal.

Bacteriuria alone in a catheterized individual should not be treated with antibiotics.

Bladder Catheters and Infection

- Daily rate of acquisition of bacteriuria: 3-10%
- Of those with bacteriuria, 10-35% will develop symptomatic UTI.
- 3% of those with bacteriuria will develop bacteremia.

Saint S. Am J Infect Control 2000;28:68-75

Residents with Chronic Catheterization

- Bacterial colonization of residents with chronic indwelling foley catheters approaches 100%, usually with 2-5 different organisms.
- Indwelling catheters develop a biofilm on the interior of the catheters where the organisms reside.
- Urine cultures in chronically catheterized residents reflect the bacteriology of the catheter biofilm; not the bladder urine.

Is It a UTI ? No easy Answers.

- For residents of LTCFs without a foley, 25-50% of women and 15-40% of men have significant bacteriuria.
- UTI is also the most common cause of bacteremia in LTCF residents.
- Common cause of transfer to acute care facilities.

Does Pyuria Help ?

- 90% of residents with asymptomatic bacteriuria will have white blood cells in their urine (pyuria).
- In fact, 30% of all residents without bacteriuria will have pyuria.
- High rates are related to genital, bladder, prostatic or renal inflammation, usually non-infectious.
- Absence of pyuria essentially excludes UTI, but the presence of white cells is not helpful.

Does Appearance or Smell Help ?

- Foul smelling and cloudy urine have been used in the past to help determine who to treat.
- Neither foul smell or cloudy urine have been clearly associated with symptomatic UTI.

Fever and Asymptomatic Bacteriuria

- A common diagnostic dilemna is the presence of fever with no localizing findings in a resident with bacteriuria and pyuria.
- Only 10% of these episodes are attributable to a urinary source in residents who do not have an indwelling foley catheter.

Orr P. Am J Med 1996;100:71-77.

Clinical Deterioration and UTI

- UTI has been used as an explanation for nonspecific symptoms, such as
- "clinical deterioration."
- UTI was a cause of clincal deterioration in only 11% of episodes.
- If UTI was the cause, all were febrile.

Berman P. Age Ageing 1987;16:201-7.

Acute Change in Function and UTI's

"An acute deterioration in stable chronic symptoms may indicate an acute infection. Multiple co-existing findings such as fever with hematuria are more likely to be from a urinary source.

In someone with nonspecific symptoms such as a change in function or mental status, bacteriuria alone does not necessarily warrant antibiotic treatment.

Although sepsis, including urosepsis, can cause dizziness or falling, there is not clear evidence linking bacteriuria or a localized UTI to an increased fall risk." F315

Treatment of Asymptomatic UTI

"Prospective, randomized clinical trials of treatment of asymptomatic urinary tract infections in both male and female long term care residents, repeatedly have shown no benefits of antimicrobial treatment."

Lack of Benefit of Treatment of Asymptomatic UTI

Specifically, antimicrobial therapy does not:

- Decrease the frequency of symptomatic UTI.
- Alter chronic symptoms, such as chronic incontinence.
- Alter long term outcomes, including death.

Nicolle L. and the Society for Hospital Epidemiology of America Long-Term-Care Committee. Infect Control Hosp Epidemiol 2001;22:167-175.

Detrimental Effects of Treating Asymptomatic UTI

- *By 6-8 weeks after treating asymptomatic patients with bacteriuria, 60-80% will have recurrence with the same or a new infecting organism.*
- *Subjects who receive antimicrobial therapy for asymptomatic bacteriuria have:*
  - *Increased* frequency of *adverse events* from the antibiotics.
  - *Increased reinfection with resistant organisms.*
  - *Increased cost.*

Treatment of Asymptomatic Bacteriuria in Chronically Catheterized Residents

- Asymptomatic bacteriuria is universal in subjects with long term indwelling catheters.
- Antimicrobial therapy will not prevent bacteriuria or symptomatic infection.
- Antimicrobial therapy will lead to side effects, increasing resistance and cost.
- Asymptomatic bacteriuria should not be treated.

Treat Asymptomatic UTI? No Way.

"Thus, antibiotics are not indicated for the treatment of asymptomatic UTI in residents of long term care facilities."

Nicolle L. and the Society for Hospital Epidemiology of America Long-Term-Care Committee. Infect Control Hosp Epidemiol 2001;22:167-175.

Not Enough and May or May Not

"Urinary Tract Infection" (UTI) is a clinically detectable condition associated with invasion by disease causing microorganisms of some part of the urinary tract.

A positive urine culture will show bacteriuria, but that alone is not enough to diagnose a symptomatic UTI.

A negative leukocyte esterase or the absence of pyuria strongly suggests that a UTI is not present. A positive leukocyte esterase test alone does not prove that the individual has a UTI."
F315

The Never Ending Dilemna

- Clinically, the health care provider is faced with a difficult dilemna:
- Indwelling bladder catheters are the #1 risk for bacteremia in LTCFs, but…
- Essentially all urine cultures will be positive in residents with chronic catheterization.

Who Do You Treat ?

- Urinalysis and urine culture are only really helpful if negative (excludes a UTI).
- Fever is the most frequent clinical presentation of UTI in the chronically catheterized resident.
- Catheter obstruction is often a precipitating event for fever and systemic infection.
- Fever with hematuria or catheter obstruction has a high probability of being from a urinary source.

F315

"Because many residents have chronic bacteriuria, the research-based literature suggests treating only symptomatic UTIs.

Symptomatic UTIs are based on the following criteria:

F315: Indications to Treat a UTI

Residents without a catheter should have at least three of the following signs and symptoms:

- Fever (increase of >2 degrees F/ rectal T >99.5 F/single T >100 F).
- New or increased burning, pain on urination, frequency or urgency.
- New flank or suprapubic pain/tenderness.
- Change in character of urine (new bloody urine, foul smell 0r amount of sediment) or lab report (new pyuria or microscopic hematuria).
- Worsening of mental or functional status (confusion, lethargy, unexplained falls, recent onset incontinence, decreased activity or appetite).

F315: Indications to Treat a UTI

Residents with a catheter should have at least two of the following signs and symptom:

- Fever or chills.
- New flank pain or suprapubic pain/tenderness.
- Change in character of urine.
- Worsening of mental status or function.

Local findings such as obstruction, leakage or mucosal trauma (hematuria) may also be present.

Treatment of Symptomatic UTI

When a patient has fever and the source is felt to be the urinary tract in a patient with a chronic Foley catheter, there is a more rapid response and a lower rate of recurrent symptoms if the Foley catheter is changed prior to initiation of antibiotics.

Suggests removal of the biofilm laden catheter is beneficial.

Raz R. J Urol 2000;164:1254-58.

Duration of Treatment

Most experts recommend that antimicrobial treatment should be for as short a period as possible; 5-7 days.

Rationale is to decrease emergence of resistance, but will also decrease cost.

F315: Follow-Up of UTIs

"The goal of treating a UTI is to alleviate systemic or local symptoms, not to eradicate all bacteria. Therefore, a post-treatment culture is not routinely necessary but may be useful in certain situations.

Continued bacteriuria without residual symptoms does not warrant repeat or continued antibiotic therapy."

Recurrent UTIs

Recurrent UTIs (2 or more in 6 months) in a noncatheterized resident may warrant additional evaluation (such as determination of abnormal postvoid residual urine volume or referral to a Urologist) to rule out structural abnormalities such as enlarged prostate, periurethral abscess, strictures, bladder calculi, polyps and tumors.

Recurrent UTIs

Recurrent symptomatic UTIs in a catheterized or noncatheterized individual should lead the facility to check whether perineal hygiene is performed consistently to remove fecal soiling in accordance with accepted practices and catheter care and to reconsider the risks and benefits of continuing the use of an indwelling catheter.

Recommendations from SHEA

- *Surveillance for endemic asymptomatic bacteriuria in LTCF should not be undertaken.*
- *Asymptomatic bacteriuria should not be treated.*
- *For individuals with indwelling catheterts, duration of therapy should be less than 10 days.*
- *Post treatment cultures to document cure should not be obtained.*

Nicolle L. and the Society for Hospital Epidemiology of America Long-Term-Care Committee. Infect Control Hosp Epidemiol 2001;22:167-175.

Prevention of Foley Catheter-Associated UTI's

Handwashing is the key---

Before and after handling of the catheter, drainage tubing or collecting bag.

Handwashing

- The single most important factor in preventing nosocomial infections.
- Poor compliance, almost all studies show less than 40% utilization.
- Low rates of compliance are associated with: heavy work loads, lack of time, lack of facilities (sinks), skin reactions, being a physician.

Alcohol Hand Rubs vs. Handwashing

- Handwashing for 15 sec decreases bacteria by 0.5-1.0 log, 30 sec decreases by 1.8-2.8 logs.
- Alcohol hand rubs decrease bacteria by 3.2-5.8 log with 30 sec rubs.
- Does not require sinks, can be placed at bedside, no towels needed, much more time efficient.

Widmer A. Clin Infect Dis 2000;31:136-43

12 Steps to Prevent Foley catheter Associated UTI's

Assesss need on a daily basis.

Indications include:

- Relief of urinary tract obstruction.
- Urinary drainage with bladder dysfunction/retention (post void residual >200 cc) and intermittent catheterization has failed.
- Protection of Stage III & IV wounds/decubitus.
- Terminal illness/severe impairment which makes positioning /clothing changes uncomfortable or intractable pain.

Prevention of UTI's

- Use smallest size (14FR) catheter possible to minimize urethral trauma.
- Insert catheters using sterile technique.
- Use closed-drainage system.
- Stabilize catheter to reduce tissue trauma:
  - *Inner/upper thigh for women*
  - *upper thigh or lower abdomen for men.*

Prevention of UTI's

Position catheter to ensure urinary flow.

- Keep the bag BELOW the level of the bladder.

  Urine flows down, not up.
- NEVER hang on bedrail, back of chair, top of a walker.
- No kinks, No obstructions.
- Use sterile technique when obtaining a specimen.
  - *Use the port designed to take specimens.*
  - *NEVER take the specimen from the bag.*

Prevention of UTI's

- Cleanse the perineal area daily and after each bowel movement.
  - *Use plain soap and water*
  - *Include the catheter-meatal junction.*
- Use care when emptying the collection bag.
  - *Assign each patient a collection container.*
  - *NEVER share these containers.*
  - *Always use gloves when emptying the catheter bag.*

12 Steps to Prevent UTI's

- Whenever possible, use alternatives to Foley catheters.
  - *Incontinence pads*
  - *External (condom catheters)*
  - *Intermittent catheterization*
- Many times patients are unable to void following use of a Foley catheter.
- Keep patient well-hydrated.
- Keeps the system "flushed" (oral fluids) preventing stasis and sediment.

Last and Not the Least of the 12 Steps

Remove the indwelling Foley catheter as soon as medically feasible to reduce and prevent infection.

UTI Prevention and the Facility

The facility should demonstrate that they:

- Employ standard infection control practices in managing catheters and associated drainage system.
- Strive to keep the resident and catheter clean of feces to minimize bacterial migration into the urethra and bladder (e.g., cleaning fecal material away from, rather than towards, the urinary meatus).
- Take measures to maintain free urine flow through any indwelling catheter.
- Assess for fluid needs and implement a fluid management program (using alternative approaches as needed) based upon those assessed needs.

Summary

- The prevalence and impact of UI in LTC is high and is increasing.
- CMS & Practice guidelines exist to assist staff with continence care.
- All residents with UI should have an appropriate assessment.
- Toileting and bladder retraining programs can be successful in appropriately identified residents.
- Drug therapy should be considered in combination with toileting and retraining programs.
- Options are available for management of urine leakage.
- Indwelling catheters is indicated in a select number of residents.