

Table 1a -- Internal Risk Factors for Urinary Incontinence

Atrophic Vaginitis
Bladder/Prostate Cancer
Congestive Heart Failure
Dementia
Diabetes
Neurological Disorders
Parkinson's
Prolapsed Uterus
Stroke

Possibly Reversible

Anxiety
Constipation
Delirium
Depression
Excessive/Inadequate Urine Output
Fecal Impaction
Hypercalcemia
Hyperglycemia
Impaired mobility
Pain
Symptomatic UTI
Urethral obstruction
Urinary retention

Table 1b -- Environmental Risk Factors for Incontinence

Call light not within reach
Inappropriate access/distance to toilet
Lack of alternate methods to toilet
(commode, bedpan, urinal, adult briefs)
Lack of aids to/assistance with mobility
(elevated toilet seats, grab bars, walker,
wheelchair, staff assist)
Lack of appropriate resident clothing
(elastic waistband, velcro closures, adequate
footwear)
Poor lighting
Use of physical restraints
Inadequate staffing
Reminders to toilet

Table 1c -- Oral Bladder Irritants

Alcohol
Caffeine

Table 1d -- Medications that Can Increase Risk of Incontinence

Alpha Adrenergic blockers/agonists
Anticholinergics
Anticholinergic or alpha-adrenergic antihistamines
Anticholinergic anti-parkinsonian medications
Antispasmodics
Beta Adrenergic agonists
Calcium channel blockers
Diuretics
Anticholinergic psychoactive medications
Narcotics

Table 2 -- Types of Urinary Incontinence

(Reference: AMDA, 2004)

Urge

- Most common cause of urinary incontinence in older patients.
- Characterized by abrupt urge to urinate, frequent need to urinate, large-volume urine loss, and nocturia.
- Associated with detrusor muscle overactivity, which may be age-related or may result from bladder infection or urethral irritation.

Stress

- Second most common type of urinary incontinence in older patients.
- Occurs with increases in intra-abdominal pressure (e.g., coughing, sneezing, laughing, walking stairs, bending, lifting).
- Results from impaired closure caused by insufficient pelvic support [or impaired function of the sphincter].

Overflow

- Usually results from detrusor muscle underactivity, bladder outlet obstruction, or both.
- May result from impaired or absent bladder contractility (neurogenic bladder) caused by diabetic or other neuropathy, low spinal cord injury, or pelvic nerve damage due to surgery or radiation therapy.
- Symptoms of overflow incontinence are similar to those due to stress or urge incontinence, and may include dribbling, weak urinary stream, hesitancy, frequency, and nocturia.

Functional

- Results primarily from physical or cognitive problems that prevent reaching toilet facilities in time, in someone whose urinary tract function would otherwise be adequate for them to be continent.
- Causes may include dementia, confusion, poor eyesight, inflammatory joint disease, lack of strength, poor mobility, poor dexterity, or reluctance to toilet due to depression.
- Underlying environmental factors may include poor lighting, physical restraints, low chairs that are difficult to rise from, and excessive distance from toilet facilities.

Transient

- Temporary episodes of urinary incontinence that are reversible once the cause is identified and treated.
- Causes may include delirium, infection, atrophic urethritis or vaginitis, medications (e.g., sedatives, hypnotics, diuretics, anticholinergic agents), markedly increased urine production, or limited mobility.

Mixed

- Mixed incontinence refers to a combination of stress and urge incontinence.

Table 3 -- Diagnostic Tests Relative to Urinary Incontinence

Table	Purpose
Urinalysis	Screening for hematuria Screening for bacteriuria and pyuria (in patients with symptoms of urinary tract infection)
Urine cultures and sensitivities	Verifying bacteriuria and guide antibiotic selection in individuals with symptoms suggesting an UTI
Urine cytology	Detect evidence of cancer in sterile hematuria
Post-void residual	Determine if urinary retention is present
Glucose, Calcium	Hyperglycemia/hypercalcemia may cause Polyuria

Table 4 -- Criteria for Treatment of a Urinary Tract Infection

Residents with a **catheter** need at least **two**, resident **without a catheter** need at least **three** of the following symptoms:

- Fever: Increase of temperature (2°F, 1.1°C) from baseline **or**
Rectal temperature >99.5°F (37.5°C) rectally twice **or**
Single measurement of temp >100°F (37.8°C)
(Bentley et al 2001)
- New or increased chills, frequency, urgency, or burning on urination
- New onset of pain or tenderness (flank/suprapubic)
- Changes in character of urine (new bloody urine, foul smell, cloudiness) or by lab report (pyuria, microscopic hematuria)
- Worsening of mental or functional status (confusion, lethargy, decreased activity, decreased appetite, unexplained falls, recent onset of incontinence)
- Catheterized residents only: obstruction, leakage, mucosal trauma

PLEASE NOTE: This prompted voiding protocol reflects an example of this form of resident assessment. It is not regulatory in nature and similar protocols may be substituted. Resident dignity and quality of life are considered inherent in all protocols.

Table 5 -- Example of a Prompted Voiding Protocol for a Nursing Home

(Reference: ACOVE)

Assessment Period - (3-5) Days

1. Contact residents every hour from 7:00 a.m. to 7:00 p.m. for 2-3 days, then every 2 hours for 2-3 days.
2. Focus their attention on voiding by asking them whether they are wet or dry.
3. Check them for wetness, record on bladder record, and give feedback on whether response was correct or incorrect.
4. Whether wet or dry, ask residents if they would like to use the toilet or urinal. If they say yes:
 - Offer assistance.
 - Record results on bladder record.
 - Give positive reinforcement by spending extra time talking with them.If they say no:
 - Repeat the question once or twice.
 - Inform them that you will be back in one hour and request that they try to delay voiding until then.
 - If there has been no attempt to void in the last 2-3 hours, repeat the request to use the toilet once or twice more before leaving.
5. Measure voiding volumes as often as possible by:
 - Placing measuring hat in the commode.
 - Preweighing and then reweighing incontinence pads and garments [if appropriate scale is available].

Table 6 -- Chronic Indwelling Catheters in the Nursing Home

(Adapted from AMDA, APIC)

Appropriate Indications:

- Urinary retention characterized by the following:
 - Persistent overflow incontinence, symptomatic infections, or renal dysfunction.
 - Documented post void residual (PVR) volume >200 milliliters.
 - Cannot be treated surgically or medically.
 - Cannot be managed practically with intermittent catheterization.
- Presence of skin wounds, pressure sores, or skin irritations that are being contaminated by urinary incontinence despite appropriate personal care.
- Care of terminally ill or severely impaired residents for whom bed and clothing changes are uncomfortable or disruptive.

Ongoing Care:

- Maintain sterile, closed gravity drainage system and avoid breaking the closed system. If the system must be opened *wash hands, apply gloves and* disinfect (e.g., with an alcohol wipe) the catheter-tubing junction before disconnection. *Prevent kinks or loops in the tubing that impede urine flow.* Do not allow the catheter tubing, bag or spigot to touch the floor. Wash hands between residents in institutional settings.
- Use the smallest catheter (consistent with good drainage) and the smallest balloon possible to minimize urethral and bladder trauma. Use a system with a sampling port.
- Secure the catheter to the upper thigh *in women* or lower abdomen in men to avoid perineal contamination and urethral irritation due to movement of the catheter. Vary the exact site at regular intervals. Keep the collection bag below the level of the bladder.
- Avoid frequent and vigorous cleaning of the catheter entry site. Wash with mild soapy water, rinse and dry. Once per day is generally sufficient; more frequent and vigorous manipulation is likely to be detrimental. *Strive to avoid fecal contamination of urinary catheter. Promptly clean feces from catheter entry site.*
- Do not routinely irrigate. Do not irrigate without a doctor's order. If irrigation is absolutely necessary, use a large-volume sterile syringe and sterile irrigant. Use aseptic technique and disinfect the catheter tubing junction before disconnecting. Dispose of irrigating equipment (e.g., after 8 hours). Use sterile irrigant in smallest containers possible (e.g., 100 to 250 mL).
- Do not routinely change the catheter at a fixed time interval (although this is often done every 30 to 60 days, there is insufficient evidence to support changing urinary catheters routinely).
- Do not routinely use prophylactic or suppressive urinary antiseptics or antimicrobials.
- When disconnecting, reconnecting and storing leg bags, disinfect connections with alcohol before disconnecting or connecting. Change bags at regular intervals; rinse with soap and water, vinegar, or a 1:10 bleach and water solution after each use. Dry bags and store empty; cover all connections. Label bag with resident's name and date.
- Do not do routine surveillance cultures to guide management of individual residents. All residents with long-term catheters have bacteriuria, (often polymicrobial) and the organisms change frequently.
- Provide regular inservice training for all personnel who provide care to residents with catheters.
- Do not treat bacteriuria unless symptoms develop. Consider other possible sources of infection before attributing symptoms to urinary tract infection.
- If a symptomatic infection develops, change the catheter before collecting a specimen for culture (specimens obtained from the old catheter may be misleading because of colonization of the catheter lumen).
- If symptomatic urinary tract infections develop frequently, consider a genitourinary evaluation to rule out pathologic conditions (e.g., stones, periurethral or prostatic abscesses, chronic pyelonephritis).