



Louisiana Health Care Review

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***Your moderator will be
with you shortly***



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URINARY
INCONTINENCE

Clinical Practice Guideline

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Dr. Charles Cefalu

Urinary Incontinence (UI)

- One of the most common conditions among residents of Long Term Care Facilities
- Affects about 55% of all residents residing in LTC Facilities
- The prevalence of **UI** increases with age
- Women are affected more than men.
- The annual cost of managing **UI** in long-term care facilities is estimated at \$5.5 billion.

Urinary Incontinence Clinical Practice Guideline (CPG)

Outcomes that might be expected from implementation of this CPG:

- Better identification of individuals who have a reversible urinary incontinence problem.
- More individualized approaches to management.
- More effective targeting of staff resources to **the management of UI.**
- Minimization of inappropriate use of diapers and catheters.
- Reduction in significant complications of urinary incontinence and urinary catheters.

Recognition

Step 1 - Does the patient have a history of **UI**?

- Interview patient and family for history of **UI**
- Review transfer summaries and referral data
- Use the criteria in the Minimum Data Set (MDS)

MDS 2.0 Criteria for Levels of Continence*

- 0. Continent:** Complete bladder control (including control achieved by care that involves prompted voiding, habit training, reminders, etc.)
- 1. Usually continent:** ≤ 1 bladder incontinence episodes per week
- 2. Occasionally incontinent:** ≥ 2 (but not daily) bladder incontinence episodes per week
- 3. Frequently incontinent:** Daily episodes of bladder incontinence episodes, but some control is present (e.g., on day shift).
- 4. Incontinent:** Multiple daily episodes of bladder incontinence

* Criteria may change in future revisions of the MDS

Recognition: Types of Urinary Incontinence

Type	General Description	Typical Symptoms	Examples of Specific Causes
Urge	Associated with detrusor muscle overactivity, which may be age-related, may be secondary to neurogenic disinhibition of the central nervous system, or may result from bladder infection or urethral irritation	Abrupt urge to urinate, frequent need to urinate, urine loss, nocturia	<ul style="list-style-type: none"> ●Neurogenic: Neurological disease (e.g., Parkinson’s disease, cerebrovascular accident) ●Inflammatory: Acute or chronic cystitis (bacterial, post-radiation, etc.); estrogen deficiency in women
Stress	Associated with increase in intra-abdominal pressure; results from impaired urethral closure due to insufficient pelvic support	Incontinence occurs with coughing, sneezing, laughing, climbing stairs, bending, lifting	<ul style="list-style-type: none"> ●Multiple childbirths ●Aging ●Estrogen deficiency ●Damage to sphincter resulting from radiation or surgery
Overflow	Associated with leakage of urine when the bladder is at maximum capacity and remains distended	Straining, dribbling, weak urinary stream, hesitancy, frequency, nocturia	<ul style="list-style-type: none"> ●Related to conditions that cause detrusor muscle underactivity or denervation of bladder wall musculature; anticholinergic medications ●Neurogenic: Diabetes, multiple sclerosis, low spinal-cord injury or disease, pelvic nerve damage resulting from surgery or radiation, vitamin B12 deficiency (rare) ●Obstructive: BPH, stricture, tumor, fecal impaction, uterine displacement

Recognition: Types of Urinary Incontinence

Type	General Description	Typical Symptoms	Examples of Specific Causes
Functional A	Results from physical or cognitive problems that prevent reaching toilet facilities in time in a patient whose urinary tract function would otherwise be adequate for him or her to be continent	Usually large-volume urine loss; often denied by more severely cognitively impaired patients	<ul style="list-style-type: none"> • Impaired mobility (e.g., due to arthritis of lower limbs or back, muscle weakness, poor vision or lighting, physical restraints, excessive distance from toilet facilities, high beds or low chairs that prevent independent rising) • Dementia, delirium, confusion
Transient	Temporary episodes of urinary incontinence that are reversible once the cause is identified and treated	Any of above symptoms	<ul style="list-style-type: none"> • Adverse drug reactions (e.g., to sedatives, hypnotics, anticholinergic agents, diuretics) • Acute infection or inflammation (e.g., atrophic vaginitis) • Physical restraints or otherwise restricted mobility • Delirium, anxiety, depression
Mixed	Combination of urge and stress incontinence	Symptoms of urge and stress incontinence	Conditions that cause urge and stress incontinence

Recognition

- Step 2 – Does the patient show signs and symptoms of UI?
 - observing an incontinence episode
 - finding the patient wet

Assessment

Step 3 – Identifying factors affecting the patient's **UI**

Assess for potentially modifiable causes of incontinence and risk factors that may affect the patient's continence so that interventions may be targeted to those potentially modifiable factors

Examples of Risk Factors For Urinary Incontinence

Conditions	Constipation, benign prostatic hyperplasia (BPH), urethral stricture, delirium, fecal impaction, symptomatic urinary tract infection (UTI), urinary retention, hypercalcemia, hyperglycemia
Diagnoses	Anxiety, depression, congestive heart failure, diabetes, Parkinson's disease and other degenerative neurological conditions, stroke, dementia, and arthritis of the knees, hips, or spine
Environment	Inadequate access to toilet, restrictive clothing, use of physical restraints
Medications	Antihistamines and other anticholinergics, narcotic analgesics, diuretics
Other	Atrophic vaginitis, bladder irritants (e.g., excessive intake of caffeinated beverages), bladder or prostate cancer, uterine prolapse, visual disturbances, recent surgery or acute medical illness, recent placement of urinary catheter

Assessment

Step 4 – Perform a physical examination and an additional work-up as indicated

A targeted physical exam may include:

- Neurological assessment (neuropathy)
- Suprapubic palpation (urinary retention)
- Perineal skin inspection
- Rectal exam (fecal impaction)
- In men, consider a genital and prostate exam (BPH)
- In women, consider a pelvic exam (signs of atrophic vaginitis, uterine prolapse, pelvic masses)

Assessment

Examples of additional diagnostic tests:

- Postvoid Residual testing
- Urinalysis
- **BMP**
- **Bladder stress testing**

Postvoid Residual Testing

- Normal PVR < 50ml
- Abnormal PVR > 200ml
- PVR between 50ml & 200ml should be interpreted in the light of other clinical findings



Common Risk Factors for Urinary Retention

- Anticholinergic medications, narcotic analgesics, and other drugs that interfere with bladder emptying
- Diabetes
- Male sex (due to high prevalence of BPH, possibly resulting in bladder outlet obstruction, in men aged >50)
- Neurologic diseases
- Paraplegia/quadriplegia
- Recent anesthesia
- Recent bed rest for acute illness
- Trauma/pain (e.g., pelvic fractures)
- Recent placement of indwelling catheter
- Uterine prolapse

Assessment

Step 5 – Summarize relevant information about the patient's incontinence

- Previous interventions for UI
- Physical conditions that may affect the patient's continence
- Existing or previous complications related to the use of an indwelling urinary catheter
- Functional impairments that may impede the patient's ability to maintain continence.
- Impairments or alterations in fluid intake
- Presence of significant constipation or fecal impaction.
- Medications that may affect continence, including those with anticholinergic properties.
- Environmental factors and assistive devices

Treatment

Step 6 – Identify treatment goals and develop an individualized care plan.

The most basic goals of managing **UI** are:

- **Trying to reduce frequency and severity**
- **Minimizing related complications**

Treatment Options

- Environmental interventions (e.g., leaving bed side-rails down to allow easy access to bathroom, enhancing bathroom lighting, making toilet easily accessible, elevating toilet seats if necessary)
- Toileting program
- Bladder retraining or pelvic muscle exercises
- Absorbent pads and external collection devices
- Pharmacologic therapy
- Surgery
- Pelvic support devices (pessaries)
- Intermittent catheterization
- Chronic indwelling catheter

Treatment

Step 7 – Address transient causes of, and modifiable risk factors for incontinence

- Manage acute conditions such as:
 - **Pain**
 - **Delirium**
- Manage conditions that affect:
 - **Mobility and function**
- Review and adjust medications that may affect continence by stopping or reducing a dose
 - **Cognitive impairment**
 - **Uncontrolled diabetes mellitus**

Transient Causes of **UI**

Mnemonic **DIAPERS**:

- **Delirium**
- **Infections**
- **Atrophic**
- **Pharmaceuticals/Psychological**
- **Excess urine production/Endocrine**
- **Restricted mobility**
- **Stool impaction**

Criteria for a Symptomatic Urinary Tract Infection

At least three of the following criteria must be met for a symptomatic UTI to be suspected in patients **who do not have an indwelling catheter**:

- Fever ($>38^{\circ}\text{C}$) or chills
- New or increased burning pain on urination
- New flank or suprapubic pain or tenderness
- Changes in character of urine
- **Alteration in level of consciousness**

Criteria for a Symptomatic Urinary Tract Infection

At least two of the following criteria must be met for a symptomatic UTI to be suspected in patients **who have an indwelling catheter**:

- Fever ($>38^{\circ}\text{C}$) or chills
- New flank or suprapubic pain or tenderness
- Changes in character of urine
- **Alteration in level of consciousness**

Treatment

Step 8 – Provide a toileting program as appropriate

A toileting program should start with a 3-5 day trial whereby a staff member at scheduled times each day either take a patient to the toilet, give the patient a urinal, or remind the patient to go to the toilet.

* Address patient's mobility issues before attempting a toileting assistance trial.

Treatment

Step 9 – Consider additional or alternate interventions as appropriate

- Bladder rehabilitation or bladder retraining
- Pelvic floor muscle rehabilitation

Treatment

Step 10 – Evaluate the effectiveness of interventions thus far and implement additional approaches as indicated

- Pharmacologic Therapy
- Incontinence Devices and Products
- Pelvic Support Devices
- Electrical Stimulation
- Surgery

Pharmacotherapy Considerations

Pharmacokinetics and Drug Interactions

- Pharmacologic agents may reduce the number of urination and incontinence episodes in a 24 hour period while increasing the volume per episode.
- Identify other medications that may counteract the beneficial effects or exacerbate the side effects of the agent prescribed for **UI**.
- At-Risk patients taking antimuscarinic drug therapy should be monitored for possible urinary retention (diabetics, men with symptoms of **BPH** and patients who have an elevated PVR, **initially**).

Potential Medication Interventions By Type of Incontinence

Drug/Type of Incontinence	Drug Class	Dose Range	Side Effects
<i>Urge incontinence</i>			
Darifenacin (Enablex®)	Antimuscarinic	7.5-15 mg qd (7.5 mg/d with moderate liver impairment or potent 3A4 inhibitors)	Dry mouth, constipation, dyspepsia are most commonly reported
Imipramine (Tofranil®)*	Tricyclic antidepressant	10–75 mg at night	May worsen cardiac conduction abnormalities Postural hypotension Anticholinergic effects as per tolterodine, but more marked
Oxybutynin extended release (Ditropan XL®)	Antimuscarinic	5–20 mg qd	Same as for tolterodine, but anticholinergic effects may be more prevalent. Side effects may be less likely with use of extended-release formulation.

* Potentially inappropriate in older adults

Drug/Type of Incontinence	Drug Class	Dose Range	Side Effects
<i>Urge incontinence</i>			
Oxybutynin immediate release (Ditropan®)*	Antimuscarinic	2.5–10mg, 2–4 times daily	Strongest anticholinergic side effects Generally considered inappropriate for use in older adults
Oxybutynin transdermal system (Oxytrol®)	Antimuscarinic	3.9 mg/d system, applied twice weekly to dry, intact skin on abdomen, hip or buttock	Most common adverse events are localized application-site reactions
Solifenacin (Vesicare®)	Antimuscarinic	5-10 mg qd (5 mg/d with moderate liver impairment, CrCl <30 ml/min, or potent 3A4 inhibitors)	Dry mouth, constipation, blurred vision are most commonly reported;

* Potentially inappropriate in older adults

Drug/Type of Incontinence	Drug Class	Dose Range	Side Effects
<i>Urge incontinence</i>			
Tolterodine immediate release (Detrol®)* Tolterodine extended release (Detrol LA®)	Antimuscarinic	Immediate release: 1–2 mg bid Extended release: 2–4 mg/d	Dry mouth, constipation, urinary retention, sedation, blurred vision, insomnia, tachycardia, orthostatic hypotension, confusion, delirium. Side effects may be less likely with use of extended-release formulation.
Trospium (Sanctura®)	Antimuscarinic	20 mg bid 20 mg/d if aged >75 y or CrCl<30 ml/min	Dry mouth and constipation are most commonly reported
<i>Stress incontinence</i>			
Pseudoephedrine (Sudafed®)*	Alpha-adrenergic agonist	15-30 mg tid	Hypertension, cardiac arrhythmia, anxiety, tremor, agitation

* Potentially inappropriate in older adults

Drug/Type of Incontinence	Drug Class	Dose Range	Side Effects
<i>Overflow incontinence or overactive bladder (in association with BPH)</i>			
Alfuzosin (Uroxatral®)	Alpha-adrenergic antagonist	10mg /d for BPH (immediately after the same meal each day).	Incidence of side effects is comparatively low. Weakness, dizziness, upper respiratory infection, headache, impaired ejaculation may occur. Avoid in patients who have moderate or severe hepatic insufficiency or with potent CYP3A4 inhibitors
Doxazosin (Cardura®)*	Alpha-adrenergic antagonists	1–8 mg/d (increase by 1 mg every 7–14 days)	Same as prazosin
Dutasteride (Avodart®)	5-alpha reductase inhibitor	0.5mg/d for BPH	Impotence, decreased libido, ejaculation disorder, gynecomastia

* Potentially inappropriate in older adults

Drug/Type of Incontinence	Drug Class	Dose Range	Side Effects
<i>Overflow incontinence or overactive bladder (in association with BPH)</i>			
Finasteride (Proscar®)	5-alpha reductase inhibitor	5 mg daily	Impotence, decreased libido or ejaculate volume, mastodynia
Prazosin (Minipress®)*	Alpha-adrenergic antagonists	1–2 mg, 2–4 times daily	Orthostatic hypotension (watch particularly for a first-dose effect), dry mouth, constipation, diarrhea, syncope, tinnitus, tachycardia, rash, sexual dysfunction, dyspnea

* Potentially inappropriate in older adults

Drug/Type of Incontinence	Drug Class	Dose Range	Side Effects
<i>Overflow incontinence or overactive bladder (in association with BPH)</i>			
Tamsulosin (Flomax®)	Alpha-adrenergic antagonist	0.4-0.8 mg daily for BPH (approximately 30 min following the same meal each day)	Incidence of side effects is comparatively low. Weakness, dizziness, insomnia, somnolence, impaired ejaculation may occur.
Terazosin (Hytrin®)*	Alpha-adrenergic antagonists	1–10 mg/d (increase by 1 mg every 4 days as needed)	Same as prazosin

* Potentially inappropriate in older adults

Incontinence Devices and Products

Choose products that:

- Are comfortable to wear
- Are available in various styles and sizes
- Can quickly wick wetness away from the skin
- Promote and maintain a healthy skin environment
- Are more conducive to personal dignity (e.g., less obtrusive or evident to other people).

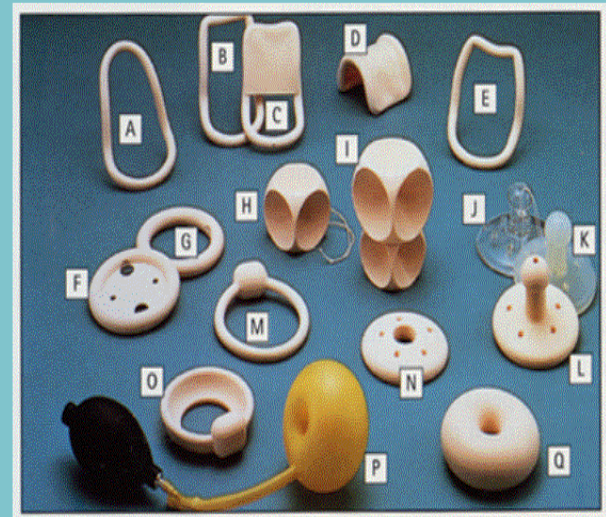
Considerations when selecting a supplier of incontinence products:

- Specific needs of the facility and its residents
- Product performance
- Supplier/manufacturer's ability to:
 - Offer a program or system for managing incontinence
 - Provide tools and training manuals
 - Provide hands-on training for staff
- Whether products are reusable or disposable
- Cost effectiveness
- Provide outcome data

Pelvic Support Devices

In the absence of viable alternatives, some women whose urine retention or urinary incontinence is associated with bladder or uterine prolapse may benefit from the placement of a **pessary**

■ Pessaries



Treatment

Step 11 – Consider catheterization

- **Intermittent catheterization:** most useful as part of a bladder retraining program after removal of an indwelling catheter from a patient who had urinary retention precipitated by a clinical event such as a hip fracture or stroke
- **Indwelling catheterization** may be appropriate for some patients in specific circumstances. Document a clinically valid reason for the use of an indwelling catheter. Incontinence alone is not a valid reason.

Appropriate Indications for Use of a Chronic Indwelling Catheter in the Long-Term Care Setting

Urinary retention that:

- Causes persistent overflow incontinence, symptomatic infections, or renal dysfunction
- Cannot be corrected surgically or medically
- Cannot be practically managed with intermittent catheterization
- Short-term for skin wounds or pressure ulcers when other measures are not viable and healing is enhanced by keeping the area dry
- Provision of palliative care or care of severely impaired patients for whom bed and clothing changes are uncomfortable or disruptive
- Preference of a patient who has not responded to more specific treatments

Management of an Indwelling Catheter in a Long Term Care Setting

- Use the smallest gauge catheter possible, consistent with good drainage.
- Maintain a sterile, closed, gravity-drainage system and avoid breaking the closed system.
- Use clean techniques in emptying and changing the drainage system.
Wash hands after cleaning a patient's catheter
- Secure catheters to the upper thigh or lower abdomen to avoid bladder and urethral trauma.
- Avoid frequent and vigorous cleaning of the catheter entry site.
Washing with soapy water once per day is sufficient.
- Avoid obstruction, kinking, or trauma to the urinary tract associated with the catheter. Catheter obstruction is correlated with infection.

Management of an Indwelling Catheter in a Long Term Care Setting (con't)

- Do not routinely irrigate the catheter.
- Do not routinely change the catheter at fixed time intervals.
- Do not routinely use prophylactic or suppressive urinary antiseptics or antimicrobials.
- Do not perform routine surveillance cultures to guide individual patient management. All patients with indwelling catheters have bacteriuria, which is often polymicrobial.
- Do not treat bacteriuria unless symptoms develop. Consider other possible sources of infection.
- If symptomatic UTIs develop frequently, consider a urologic evaluation to rule out pathologic conditions (e.g., stones, periurethral or prostatic abscesses, chronic pyelonephritis).

Monitoring

Step 12 – Monitor the course and consequences of **UI** and its treatment

Specifically, monitor patients for:

- Effectiveness of interventions, using an objective measure of the severity of **UI** such as systematic recordings or a bladder diary.
- Response to any medications initiated to try to control continence.
- The appropriateness of changing to a less obtrusive or lower-risk intervention.
- Patient satisfaction with treatment.
- Side effects or complications of treatment

Summary

- **UI** is increasingly prevalent with age
- **UI** is not part of normal aging
- **UI** should always be managed, often can be modified, and can sometimes be significantly improved, if not eliminated, even in frail older adults and people with dementia who reside in long-term care facilities