



Urinary Incontinence in Older Adults

A review of management approaches to a challenging and burdensome problem.

This article is part of a series, *Supporting Family Caregivers: No Longer Home Alone*, published in collaboration with the AARP Public Policy Institute. Results of focus groups, conducted as part of the AARP Public Policy Institute's No Longer Home Alone video project, supported evidence that family caregivers aren't given the information they need to manage the complex care regimens of family members. This series of articles and accompanying videos aim to help nurses provide caregivers with the tools they need to manage their family member's health care at home.

The articles in this new installment of the series provide simple and useful instructions that nurses should reinforce with family caregivers. This article is the first of two that provide an update on urinary incontinence and its management in older adults. The second article will contain an informational tear sheet—*Information for Family Caregivers*—that contains links to the instructional videos. To use this series, nurses should read the articles first, so they understand how best to help family caregivers, and then encourage caregivers to watch the videos and ask questions. In this article, the videos can be found in *Resources for Nurses*.

Urinary incontinence (UI)—the loss of bladder control—is common among older adults and can have significant consequences for those affected and their caregivers. The condition is associated with falls, pressure injuries, social isolation, depression, and caregiver stress; it also increases the risk of institutionalization.^{1,4} Prevalence rates are highest among women, people of advanced age, and those who have cognitive and physical disabilities.^{5,6} According to a Centers for Disease Control and Prevention report on the prevalence of incontinence, 43.8% of noninstitutionalized Americans ages 65 and older and 70.3% of long-term care residents were reported to have experienced urinary leakage.⁷

In community-dwelling populations, family caregivers are essential care partners, often performing the most basic tasks, including bathing and dressing.⁸ Caring for an older adult who has UI can be challenging and burdensome, particularly if the person has other complex health issues.⁹ Age-related changes to the genitourinary system can lead to a higher prevalence of UI among older adults. These changes may include decreased bladder capacity, increased involuntary bladder muscle contractions, prostate enlargement, decreased estrogen levels, increased nighttime urine production, and alterations in immune

function.⁸ Cognitive losses frequently present in this population can affect a person's ability to recognize bladder distention and determine the appropriateness of voiding at a specific time and place. Managing odors, containing leakages, and providing supervision and toileting assistance (especially at night) can strain relationships and lead to fatigue, depression, and emotional stress.¹⁰ Many family caregivers have reported that they lack the knowledge and skills to successfully manage the condition.¹¹

This article provides an update on UI and its management in older adults. Practical tips to help family caregivers manage the daily challenges of UI will be discussed in the next article in this series.

TYPES OF URINARY INCONTINENCE

UI can be classified in one of several ways, including urgency, stress, mixed, related to chronic retention of urine (or overflow incontinence), and functional.^{12,13} (See Table 1.¹³)

Urgency UI. Studies indicate that the prevalence of urgency UI, which is one of the most common types of UI in men, increases with age.¹⁴⁻¹⁶ Common precipitants include the sound of running water, arriving home, pulling down clothes to void, seeing a bathroom sign, exposure to cold, drinking large amounts of fluid, and the use of certain medications (diuretics



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and cholinesterase inhibitors, for example).¹⁷ Urgency UI can coexist with a condition called detrusor hyperactivity with impaired contractility, in which contractions don't fully empty the bladder, leaving a large postvoid residual amount of urine.^{8, 18}

Stress UI results from an inefficient urethral sphincter, which leads to urine loss as a result of exertional activity. This type of UI is common among women of all ages and may occur in men following prostate surgery.¹⁹⁻²¹

Mixed UI. In older adults, urgency and stress UI frequently coexist. Referred to as mixed UI, this condition has a higher incidence rate and is of greater severity among older women than younger women.²² Management of mixed UI should begin with the most bothersome symptom.⁸

Incontinence related to chronic retention of urine (or overflow incontinence) refers to urinary leakage resulting from an overfilled and distended bladder.¹³ This type of UI is frequently caused by bladder outlet obstruction, making it more prevalent among men who have hyperplasia of the prostate.²³

Functional UI is a result of cognitive, physical, or environmental factors that prevent a person from voiding appropriately.¹²

Potential outcomes for older adults with incontinence include the following⁸:

- *independent continence*, in which a person doesn't need ongoing treatment (after a successful surgical procedure, for example)
- *dependent continence*, in which a person is dry owing to ongoing assistance, behavioral management, and/or the use of medication
- *contained incontinence*, in which a person is unable to achieve independent or dependent continence and requires the use of absorbent pads, catheters, devices, or other products.

ASSESSMENT

Assessment and management of urinary incontinence should be based on a stepwise, multicomponent approach.²⁴ (See Figure 1.²⁴) Screening older adults is critical in the evaluation of UI. Many older adults and their caregivers erroneously believe UI is part of the normal aging process, dismissing potential management options. Because of embarrassment or social stigma, others may delay the reporting of UI until it's severe.¹⁰

The first step is to complete a comprehensive assessment aimed at identifying factors that may

Table 1. Types of Urinary Incontinence¹³

Type	Underlying Abnormality	Characteristics
Urgency	Bladder overactivity	<ul style="list-style-type: none">• Strong, uncontrolled urgency prior to urine leakage• Large-volume urine loss• Urinary frequency• Nocturia (two or more times)• Nocturnal enuresis
Stress	Urethral underactivity	<ul style="list-style-type: none">• Urine leakage with physical exertion (coughing, sneezing, laughing, lifting, changing positions, exercise)• Small amounts of urine loss
Mixed	Bladder overactivity and urethral underactivity	<ul style="list-style-type: none">• Urine leakage associated with both urgency and physical exertion
Related to chronic retention of urine (or overflow incontinence)	Bladder underactivity or bladder outflow obstruction	<ul style="list-style-type: none">• Difficulty starting urine stream• Weak or intermittent urine stream• Postvoid dribbling• Prolonged voiding• May have urinary frequency• Voiding a small amount• Feeling of incomplete bladder emptying
Functional	None	<ul style="list-style-type: none">• Urine leakage associated with mobility, manual dexterity, cognitive impairment, or environmental factors that make it difficult to reach a toilet or urinal or to disrobe in time

be contributing to UI. These are outlined in *Potential Contributors to Urinary Incontinence*.^{8, 17} Management of underlying comorbidities (heart failure or diabetes, for example) and medications may be necessary. Using medications that have more limited effects on lower urinary tract function may help to reduce UI severity, for instance. Although UI in older adults may be chronic and progressive in nature, addressing any potentially reversible contributing factors may improve overall health and/or the trajectory of this condition.⁸

The assessment should include a detailed UI history that includes the onset and severity of symptoms, previous treatments and outcomes, quality of life, desire for treatment, and information about the older adult and family caregiver's goals and treatment preferences. A targeted physical examination (including an assessment of cognition, mobility, toileting skills, and neurologic function, as well as a digital rectal examination) should be completed, along with a urinalysis; if positive, a urine culture may be necessary to check for a urinary tract infection. The use of a bladder diary can be helpful in identifying incontinence patterns and severity. Unless urinary retention is suspected, a postvoid residual urine determination by bladder scan ultrasound is not generally recommended as part of the initial assessment.⁸

MANAGEMENT

UI in older adults may become intractable, making independent continence an unrealistic goal. In this case, nonpharmacologic and pharmacologic management options may be explored. Multiple interventions may be needed for some older adults.

Nonpharmacologic management. After addressing the potentially reversible contributing factors to UI and determining the type of UI, the first line of treatment is nonpharmacologic interventions.

Lifestyle and behavioral interventions can reduce potential risk factors. Research has shown symptom improvement among younger adult populations and women older than age 50.^{25, 26} Considering the risks associated with drug therapy as people age, lifestyle and behavioral interventions remain the cornerstone of treatment among older adults with UI.⁸ Caution is recommended with fluid modification, as inadequate fluid intake and dehydration are detrimental and may result in constipation, thereby increasing UI risk or severity. However, if nocturia is a problem, limiting fluids three hours before bedtime may be helpful. Similarly, if peripheral edema is present, elevating the



A provider greets a mother and daughter who are seeking advice on how to manage the older adult's incontinence. Photo courtesy of the AARP Public Policy Institute.

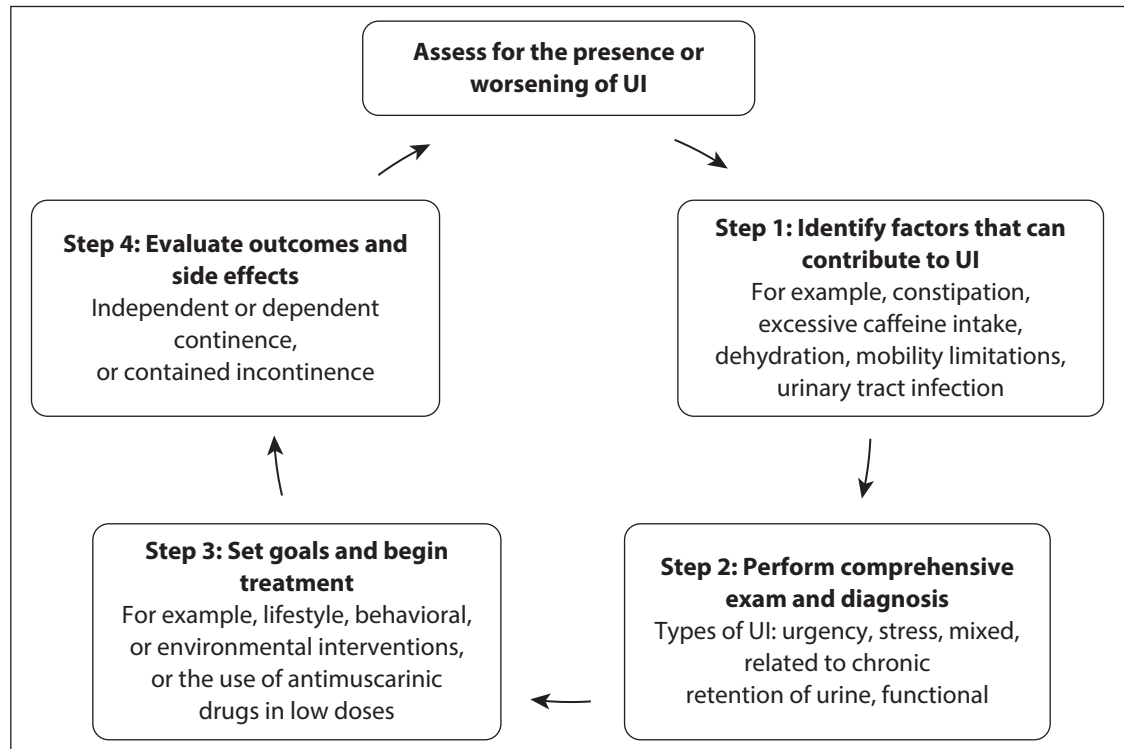
feet several hours before bedtime can help to reduce nocturia.²⁷ Some interventions may not be recommended in older adults (weight loss, for instance); however, age should not prevent the use of interventions that are deemed appropriate for this population.²⁴ Physical activity and/or physical therapy to improve mobility may help those with mobility issues to reach the bathroom more quickly when urgency occurs.

Although there is limited evidence supporting their effectiveness, interventions such as timed voiding and habit retraining may be useful. Engberg and colleagues demonstrated the effectiveness of prompted voiding when used in cognitively impaired homebound older adults.²⁸ For this intervention to be successful, the older adult must be able to respond appropriately to a prompt to void. The prompting schedule can be based on the person's toileting pattern or on a fixed schedule (every two or three hours, for example).²⁹ The use of this approach may be limited if the person has cognitive or functional impairments.

Pelvic floor muscle (Kegel) exercises and bladder retraining have proven effective in the management of urgency, stress, and mixed UI and should be considered for use in those who have sufficient cognition, regardless of age and level of frailty.⁸ Evidence of the efficacy of pelvic floor



Figure 1. Urinary Incontinence (UI) Management in Older Adults²⁴



muscle training has been reported by Singh and colleagues.³⁰ A common pelvic floor muscle regimen involves performing three sets of 15 contractions and holding each for up to 10 seconds, for a total of 45 contractions. Use of preventive pelvic

floor muscle contractions prior to an exertional event and to control urgency has been found to be beneficial in managing urgency and stress UI.^{31, 32} Biofeedback-assisted pelvic floor muscle exercise instruction using visual and sensory cues has been shown to be an effective adjunct to teaching correct muscle contraction in homebound and non-homebound community-dwelling older adults.^{33, 34} Biofeedback is typically offered by a continence nurse specialist or physical therapist in community settings. With bladder retraining, the person is taught to void “by the clock” (typically every two hours). She or he is also taught urgency suppression strategies to prevent voiding before the scheduled time.

Older adults may achieve greater benefits using a combination of behavioral interventions.^{8, 24, 35} A behavioral management program involving goal setting, self-monitoring (such as keeping a bladder diary, reducing caffeine intake, adjusting the amount and timing of fluid intake, and making dietary changes to promote bowel health), bladder training, and pelvic muscle exercises with biofeedback was found to be effective in reducing urine loss in older women.³⁵ Similarly, use of physical activity or physical therapy to improve balance,

Potential Contributors to Urinary Incontinence^{8, 17}

- Urinary tract infection
- Atrophic vaginitis
- Severe constipation
- Dietary factors (spicy foods, citrus drinks, artificial sweeteners)
- Hyperglycemia with polyuria
- Excessive caffeine or fluid intake
- Medications, including diuretics and those that can exacerbate a cough, such as angiotensin-converting enzyme inhibitors
- Dementia or other cognitive impairments
- Impaired mobility
- Environmental factors, such as a lack of toileting assistance or access to a toilet

Resources for Nurses

Managing Incontinence: How Family Caregivers Can Help^a

<http://links.lww.com/AJN/A154>

Managing Incontinence at Home^a

<http://links.lww.com/AJN/A155>

Helping Someone to the Toilet^a

<http://links.lww.com/AJN/A156>

Seeking Emotional Support: Managing a Family Member's Incontinence^a

<http://links.lww.com/AJN/A157>

How to Talk with Someone About Incontinence^a

<http://links.lww.com/AJN/A158>

Selecting Incontinence Products^a

<http://links.lww.com/AJN/A159>

Managing Incontinence for Those with Difficulty Getting Out of Bed^a

<http://links.lww.com/AJN/A160>

^a Family caregivers can access these videos, as well as additional information and resources, on AARP's Home Alone Alliance web page: www.aarp.org/nolongeralone.

strength, and walking speed may be helpful when used alone or in combination with other behavioral interventions.³⁶ In a recent pilot study of frail older women, UI was significantly reduced using customized behavioral treatments (bladder training and/or pelvic floor muscle exercises) in combination with a walking program and strength training.³⁷

An older adult who has dependent continence or contained incontinence may rely on disposable and reusable products. These include disposable pantliners or perineal pads for women, guards for men, adult underwear or briefs, and disposable or reusable bed pads or underpads. Condom catheters with a leg bag may be useful in men. In general, indwelling urinary catheters are not recommended because of the associated risk of developing a urinary tract infection.

Environmental interventions should be considered when caring for an older adult with UI. It may be helpful, for instance, to install grab bars and raised toilet seats or to provide bedside commodes for those who have functional limitations. Cognitive and visual cues—such as a bathroom door painted a contrasting color—can also be useful.³⁸

Pharmacologic management. The use of antiincontinence medications in older adults may be considered only after a thorough assessment has been conducted, any potentially reversible factors have been addressed, and an attempt has been made to

implement behavioral therapies. Selection of a medication therapy depends on the underlying etiology. A combination approach, in which both pharmacologic and nonpharmacologic options are utilized, may be best. In one study, for instance, the combination of pelvic floor muscle exercises and duloxetine (Cymbalta) was found to have significant efficacy in the management of stress UI in women.³⁹ There are no effective medications for managing incontinence related to the chronic retention of urine (overflow incontinence); however, selective α blockers, such as tamsulosin (Flomax), may be effective if the condition is related to benign prostatic hyperplasia.⁴⁰

Antimuscarinic drugs, such as oxybutynin (Ditropan), may help suppress urinary urgency and frequency by relaxing the smooth muscle of the bladder, diminishing excess contractility and increasing bladder capacity. The anticholinergic side effects of these medications, however, include constipation, dry mouth, urinary retention, dizziness, blurred vision, and cognitive impairment. For this reason, lower doses should be used when prescribing antimuscarinic drugs to older adults.

Low-dose, topical estrogen therapy that targets urogenital atrophy may be helpful in managing urgency and stress UI in older women.^{41,42} Although its systematic absorption is low, topical estrogen must be used with caution in women who have a history of breast cancer. Of note, although the vaginal estradiol ring may be a convenient method of treatment for older women, those with a small introitus (vaginal opening) may find it uncomfortable to have the ring replaced every three months.

REALISTIC MANAGEMENT PLANS

Despite the availability of various nonpharmacologic and pharmacologic options, UI can remain a significant quality-of-life issue for older adults and their family caregivers. Health care providers, older adults, and family caregivers should work together to develop realistic and ethical management plans. Whatever the anticipated outcome, such plans should be focused on the needs and preferences of the older adult and the caregiver, with an emphasis on preserving dignity, avoiding neglect, and preventing complications. ▼

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