Objectives:

• Identify and treat urinary incontinence (UI) in the older adult
• Enhance the utilization of appropriate treatment measures available to Highmark Medicare Advantage members
• Prevent the complications of incontinence

Background:

Urinary incontinence is involuntary loss of urine of sufficient severity to be a social or health problem. There are several types of UI, but all are characterized by an inability to restrain or control urinary voiding.
Urinary Incontinence Prevention Outline
Incontinence Management in the Older Adult

A. Statistics

• One third of all elderly, and 20 percent of younger women suffer from incontinence
• At least three fourths could be cured and most of the remainder helped
• 80 percent of patients suffering from incontinence are unknown to the primary care physician

B. Key Factors

• The causes of incontinence are multiple and rarely single, with most falling within the preview of the primary care physician
• Even when the primary care physician can’t fix it, detection of incontinence allows the patient to be referred and benefit from evaluation and treatment
• In the majority of cases, the evaluation and treatment of incontinence does not require complex studies or surgery
• Clinical diagnosis for most patients can be accomplished with a focused incontinence history, physical examination, post-void residual determination, urinalysis, and a few baseline laboratory tests

Urinary incontinence is common and underdetected, is never normal, and its causes are often multi-factorial.

C. Assessment and Treatment

• Don’t be misled by the fact that patients don’t complain because, oftentimes, they think it is part of normal aging or having children. Patients may not report incontinence because of misconceptions that the only treatment available may be surgery. Therefore, it is important to ask elderly patients if they ever wet themselves or cannot get to the bathroom on time.
Urinary Incontinence Prevention Outline
Incontinence Management in the Older Adult

FIVE-STEP APPROACH TO THE TREATMENT OF URGENCY, FREQUENCY, OR URINARY INCONTINENCE (UI) IN ADULTS

Developed by Neil Resnick, MD
Please note this Five-Step Approach was revised with the permission of Neil Resnick, MD, to make it more specific for the geriatric patient.

1. DETECT

Patients often complain of urinary frequency and urgency, but not urinary incontinence. Ask: “Do you ever lose control of your urine and wet yourself?” (Not: “Are you incontinent?”)

2. TREAT TRANSIENT CAUSES (especially in older patients)

D Delirium (acute confusion) – usually due to new medications or illness

I Infection of urine, with dysuria (+ frequency/urgency)

A Atrophic urethritis/vaginitis (Dx: vaginal petechiae, telangiectasia, erosions, erythema)

P Pharmaceuticals – consider stopping/substituting if appropriate, as follows:

a. Drugs causing urinary retention + urinary frequency (postvoid residual > 200 mL):
   • alpha-adrenergic agonists (phenylpropanolamine, Sudafed), especially in men
   • Anticholinergic meds (tricyclic antidepressants, antipsychotics, older antihistamines, Cogentin/Artane, disopyramide, antidiarrheals like Lomotil, or antispasmodics like Bentyl)
   • Opiates
   • Calcium channel blockers (e.g., verapamil)

b. Drugs causing female stress incontinence:
   • alpha-blockers (e.g., prazosin, terazosin, doxazosin)
   • ACE inhibitors (only if they induce a cough)

c. “Loop” diuretics (and alcohol), if they overwhelm the ability to get to the bathroom in time

d. Drugs causing sedation/confusion (diazepam [Valium], flurazepam [Dalmane])

Psychological – severe depression (rare)

E Excess excretion – excess intake, diuretic use, diabetes (if osmotic diuresis), heart failure, peripheral edema

R Restricted mobility – if you can’t treat it, use commode/urinal; timed voiding, bladder training

S Stool impaction
3. EXCLUDE SERIOUS UNDERLYING CAUSES OR CONSEQUENCES

Hydronephrosis

Obtain a renal ultrasound if residual urine volume > 150 mL, especially in men.

Treatable neurologic lesions (e.g., disc, brain/cord tumor, conus medullaris lesion)

Complete a screening neurologic exam. Also assess leg reflexes and sacral innervation (perineal sensation and resting tone and volitional control of the anal sphincter).

Lower urinary tract lesion (e.g., cancer of bladder/prostate, bladder stone)

Check prostate consistency/nodule; prostate size does not correlate with obstruction. Check UA for sterile hematuria (if present, do the usual evaluation for hematuria). Check urine cytology, if there is pain or new onset of urgency or urge UI.

4. DETERMINE LOWER URINARY TRACT (LUT) CAUSE

(Requires a stress test plus assessment of postvoid residual urine [PVR])

Lower Urinary Tract causes:

• Overactive bladder (OAB), stress incontinence (SI), obstruction, or other causes.

Stress test (ST) if UI

• When the bladder feels full, have the patient stand, relax pelvic muscles, and cough. Then have the patient void into a receptacle and measure the volume voided.
• Cough must be single and forceful

Caveats

• Patient should not have abrupt urgency just before performing test (resulting leakage suggests overactive bladder, not stress incontinence)

• Positive test for SI: leakage occurs only during the cough

• Leakage must replicate the symptom; a few drops are unimportant if this is not the patient’s main problem

• True negative test requires adequate bladder volume (PVR plus voided volume) ≥ 200mL. Volume of > 200 will ensure that this is an accurate test.
Urinary Incontinence Prevention Outline
Incontinence Management in the Older Adult

PVR determination
• After voiding, measure with an ultrasound or catheter

Caveats to avoid spuriously high or low values
• Instruct the patient not to:
  1. Strain to urinate, or
  2. Revoid before the voided volume is measured
• Measure within 10 minutes of the void, especially if the patient drank caffeine in the past few hours
• If a catheter is used, ensure complete collection
  1. If correctly inserted, at least some urine should be obtained
  2. Withdraw slowly after drainage ceases to detect additional volume, then have the patient strain to obtain any more before removing the catheter

5. STEPWISE APPROACH TO TREATMENT

Stress incontinence (SI) in women (refer men)

1. Simple measures
   Have the patient cross her legs and tighten the pelvic floor muscles when coughing/sneezing/bending
   Have the patient insert a tampon (largest size/“super”) to compress the urethra before exercising
2. Kegel exercises (technique is crucial); alternative is vaginal cones
3. Estrogen for atrophic vaginitis: Estrogen - 0.3 mg oral or 1 to 2 g vaginally; taper as tolerated
4. Treat for overactive bladder if the patient also has abrupt leakage in the absence of stress maneuvers
5. Refer for pelvic floor muscle training or biofeedback (if available)
6. If SI persists, refer to an Incontinence Specialist

Overactive bladder (OAB)
(causes abrupt urgency or a gush of urine without a stress maneuver)

1. Use simple methods:
   Adjust output to 1.0 to 1.5 liters/day (patient measures using a voiding record)
   Ensure that the voiding frequency is 6 to 8 times/daytime
   Teach urge suppression with bladder training

2. Men only (in instances where benign prostatic hypertrophy may be contributing):
   alpha-blocker (flomax 0.4 mg po qd; prazosin 1 to 2 mg bid or tid; terazosin 2 to 10 mg qd; doxazosin 1 to 8 mg qd)
Overactive bladder (OAB) continued

3. Depending on preference/availability, the next two steps may be done in either order:
   - Treat with bladder relaxant (only if PVR < 100 mL); stop the alpha-blocker
   - Refer for behavioral training (e.g., bladder retraining/biofeedback)

4. Refer to an Incontinence Specialist if there is an unsatisfactory result and it is clinically appropriate

**FIVE-STEP APPROACH TO URGENCY, FREQUENCY, OR URINARY INCONTINENCE IN ADULTS**

Choice of treatment depends on the individual patient. For overactive bladder, the cornerstone of treatment is behavioral. When using drugs in the elderly, begin with the lowest dose and increase slowly until encountering maximum benefit or intolerable side effects.

<table>
<thead>
<tr>
<th>Drug</th>
<th>Suggested Dosing</th>
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<tbody>
<tr>
<td>Therapeutic Class: anticholinergic/antispasmodic (refer to full prescribing information)</td>
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<tr>
<td>*Dicyclomine hydrochloride (Bentyl® Tablets)</td>
<td>Start at 10 mg po qd and titrate as appropriate to 10 to 30 mg po tid</td>
</tr>
<tr>
<td>*Oxybutynin chloride (Ditropan® Tablets) (immediate release)</td>
<td>Start with 2.5 mg po qd and titrate as appropriate to 2.5 mg. po tid or qid (2.5 mg. po tid or qid is preferred to larger doses)</td>
</tr>
<tr>
<td>Oxybutynin chloride (Ditropan XL® Tablets)</td>
<td>Start with 5 mg po qd and can titrate up to 20 mg qd</td>
</tr>
<tr>
<td>Tolterodine tartrate (Detrol™ Tablets)</td>
<td>Start 1 mg po bid and titrate as appropriate to 2 to 4 mg daily in two divided doses (titrate at 4-8 week intervals)</td>
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FLOW SHEET

First visit Detection (on ROS): Do you ever lose control of your urine and wet yourself?
If yes, at this visit:
- Emphasize that treatment is possible and give them a brochure/workbook
- Focused exam if time permits; otherwise, do one at the follow-up visit
- Check UA (with a culture if there is dysuria); treat the infection, pursue sterile hematuria
- Schedule one or two follow-up visits within 2 to 4 weeks to complete items below

Follow-up visit—data collection (by nurse or physician)
- From data the patient provided in a voiding diary, review:
  - Circumstances of incontinence
    Abrupt urge, only with stress maneuvers, continuous dribbling
  - Relevant medical history and review of systems
  - Voiding diary
  - Medication list with the patient. Highlight:
    - Alpha-adrenergic agonists
    - Alpha-adrenergic antagonists
    - Anticholinergics
    - ACE inhibitors (if they induce a cough)
    - Opiates
    - Alcohol
    - Strong diuretic (e.g., Lasix®)
    - Sedative/hypnotics
  - If there is UI, perform a stress test in the bathroom. Measure PVR and record
  - Pelvic/rectal exam if not done earlier
    - Perineal sensation
    - Atrophic vaginitis (see Step 2 for description)
    - Severe prolapse (protrudes to introitus or beyond)
    - Anal sphincter tone and control
    - Fecal impaction
    - Teach pelvic muscle contraction if the evaluation suggests stress incontinence
  - Screening neurologic exam plus careful neurologic exam of sacral area and legs (see Step 3)

Data synthesis and treatment initiation (usually the physician)
- Treat any causes identified outside the lower urinary tract
- See attached algorithm to determine the management plan
D. Summary

- Incontinence is not a normal part of aging.
- Clinical diagnosis for most patients can be accomplished with a thorough patient history, a physical examination, post void residual determination, urinalysis and a few baseline laboratory tests.
- Treatment can be effective for most of the patients and if urinary incontinence recurs after successful treatment, look for a transient cause.

EVALUATION OF INCONTINENT MEN

<table>
<thead>
<tr>
<th>POSITIVE</th>
<th>Refer</th>
<th>Stress Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEGATIVE</td>
<td>PVR</td>
<td></td>
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</tbody>
</table>

- > 100 mL: Refer
- < 100 mL: Treat as Overactive Bladder
STEPWISE EVALUATION OF INCONTINENT WOMEN

Address Transient Causes ("DIAPERS" — See Page 3), Exclude Serious Associated Conditions, Then:

Algorithm designed to assist primary physician in determining the lower urinary tract contribution to incontinence in older women. Diagnosis in patients who do not fit into one of the terminal boxes (e.g., positive stress test, but postvoid residual [PVR] > 200 mL) is less clear. Treat empirically or refer for further testing as clinically appropriate.

SI indicates stress incontinence; DO, detrusor overactivity; and DHIC, detrusor hyperactivity with impaired contractility; PVR must be obtained following unstrained void.

* Other than anterior colporrhaphy.
† Use bladder relaxants with caution if PVR is 50 to 150 mL; avoid them if PVR is more than 150 mL

References/Resources:

Agency for Health Care Policy and Research. Urinary Incontinence in Adults (Update). Rockville, MD: AHCPR 1996. The AHCPR clinical practice guideline used by the interdisciplinary workgroup in preparing this AMDA guideline may be obtained from AHCPR by contacting: AHCPR Publications Clearinghouse, P.O. Box 8547, Silver Spring, MD 20907; 1-800-358-9295.

“Urinary Incontinence” Clinical Practice Guideline, American Medical Directors Association, 1996. To order copies of these clinical practice guidelines, call 1-800-876-2632 or 410-740-9743.

Further reading


            www.NAFC.org (National Association for Continence) 800-BLADDER.
            www.niddk.nih.gov (National Institute of Diabetes and Digestive and Kidney Diseases)

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