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ELDER CARE

A Resource for Interprofessional Providers

Urinary Incontinence - Diagnosis

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Urinary incontinence, the involuntary leakage of urine, and a very common problem in older adults, often goes undetected, as many providers are uncertain about the evaluation, and up to half of patients fail to report the symptoms. Untreated urinary incontinence can greatly reduce quality of life, and often leads to depression, anxiety, social isolation, and increased caregiver burden. In reality, the evaluation is relatively straightforward, and for the most part, the workup is well within the capabilities of primary care practice. Most diagnoses can be made with a history and physical exam, urinalysis, and measurement of a post-void residual urine volume. Urodynamic testing and more invasive tests are rarely required for the routine evaluation of incontinence. This fact sheet will review the key steps in the primary care diagnosis of urinary incontinence. Another edition of Elder Care will discuss treatment.

Goals

The initial goals of an incontinence evaluation are twofold: to determine if a patient has a reversible cause of incontinence, or has findings that warrant referral for subspecialty or surgical care. If these concerns are not substantiated, the next step is to differentiate between the diagnosis of urge incontinence (uncontrolled bladder detrusor contractions) or stress incontinence (an ineffective urinary outlet sphincter). Treatments are then prescribed depending on the type of incontinence identified.

Step 1, Potentially Reversible Causes

Potentially reversible causes of incontinence are spelled out in the commonly-used mnemonic, DIAPPERS (Table 1). If history, physical, or urinalysis suggests any of these potentially reversible conditions, the diagnosis should be confirmed and the condition treated. In some cases the patient's incontinence will resolve with treatment.

Clinicians should carefully review all medications, as drug side effects causing incontinence are among the more common and easily reversible causes of incontinence. Alcohol and caffeine intake, as well as bowel habits, should be specifically asked about.

If no reversible causes can be identified, the clinician can move ahead to the next step of an incontinence evaluation.

Step 2, Conditions Requiring Further Evaluation or Subspecialty Care

History, physical, and urinalysis are also used to identify conditions that require further evaluation or referral to subspecialty care.

Conditions typically requiring subspecialty referral include severe vaginal/uterine prolapse (bladder/cervix protruding through the introitus), vesicovaginal fistula or urethral diverticulum, prior incontinence surgery, or prior pelvic radiation. Patients with recent (1-2 months) onset of urge incontinence and risk factors for bladder malignancy (e.g., smoking) require referral for cystoscopy to exclude bladder neoplasm.

Conditions that require further evaluation - but for which initial assessment often can be performed in primary care practice - include abdominal/pelvic pain or hematuria in the absence of infection, and urinary retention. Urinary retention is diagnosed by measuring the post void residual urine volume (PVR), which is the amount of urine remaining in the bladder immediately after a patient urinates. PVR is measured either with a hand-held ultrasound bladder scanning device (preferred) or with urethral catheterization. A PVR >200 cc is considered abnormal in older adults.

An elevated PVR in men often signifies an enlarged prostate, but it can also indicate a neurological disorder that impairs bladder contraction. It should also prompt a careful review of all medications, looking for agents that interfere with bladder contractions (e.g., anticholinergics)

TIPS FOR DIAGNOSING INCONTINENCE IN THE ELDERLY

- A good H&P, urinalysis and a post-void residual will identify most causes of urinary incontinence in older adults.
- Remember the mnemonic DIAPPERS to evaluate for reversible causes of incontinence.
- Common causes of reversible incontinence are prescription and OTC medications.
- Sudden onset of incontinence, hematuria in the absence of infection, previous radiation or pelvic surgery, or significant anatomical abnormalities (e.g., severe vaginal/uterine prolapse) should prompt subspecialty referral.
- Ask the three incontinence questions to help diagnosis stress, urge or mixed incontinence.
- Simple office cystometry can further help to distinguish between stress and urge incontinence.

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Continued from front page

or sphincter relaxants (e.g., alpha-adrenergic agonists, beta-adrenergic antagonists).

If no reversible causes are identified, and if the patient has no conditions requiring further evaluation, including a normal PVR, the clinician can proceed with confidence to the next step - which is to use the patient's symptoms to distinguish urge from stress incontinence.

Step 3, Urge vs. Stress Incontinence

The key symptoms distinguishing urge from stress incontinence are shown in Table 2. The "Three Incontinence Questions" (3IQ) listed below, or "International Consultation on Incontinence Questionnaire" (ICIQ, Figure 1), can be used to distinguish stress from urge incontinence and the effect on quality of life.

Some patients have mixed incontinence, with symptoms of both types. In the occasional case in which history and 3IQs cannot distinguish whether stress or urge is present, simple office cystometry can often help. Treatment should then be focused on the predominant symptom, as reviewed in the Elder Care on incontinence treatment.

Table 1. Reversible Causes of Urinary Incontinence (DIAPPERS)

Delirium (cerebral dysfunction causing loss of voluntary and involuntary inhibition of urination)
Infection (acute urinary infection)
Atrophic vaginitis (associated with atrophy/inflammation of bladder trigone, resulting in uncontrolled bladder contractions)
Pharmaceutical agents (drug side effects)
Psychological disorders (causing inability to follow directions or perform self-care)
Excessive urination (osmotic diuresis from hyperglycemia; on rare occasions hypercalcemia is the cause)
Restricted mobility (inability to get to the toilet on time when urge to void occurs)
Stool impaction (fecal impaction causing bladder outflow obstruction)

Table 2. Symptoms Distinguishing Urge from Stress

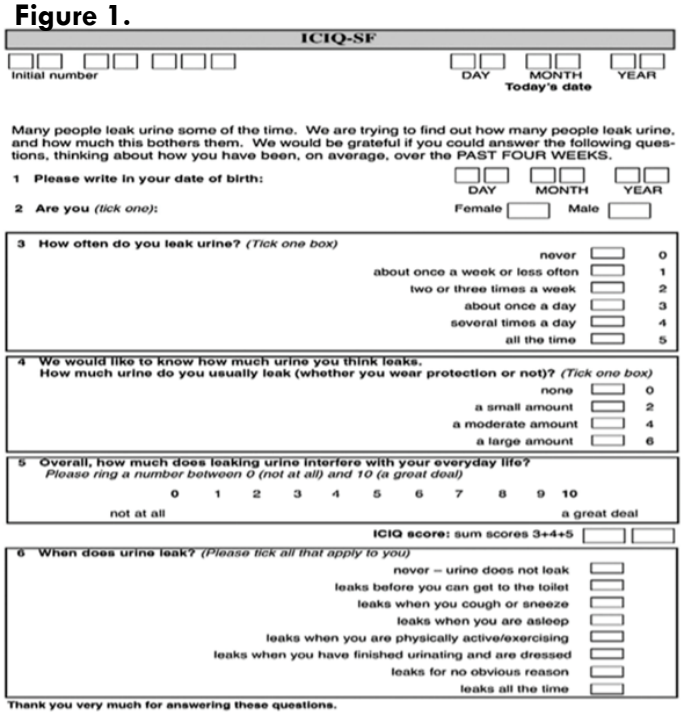
Symptom	*Urge*	*Stress*
Loss of urine with coughing, sneezing	-	++++
Urgency (sudden uncontrollable urge to void)	++++	-
Frequency (often 8 or more times/day)	++++	-
Nocturia	+++	-
Amount of urine loss per void	Large	Small

Three Incontinence Questions (3IQ)

During the last 3 months, did you leak urine:

1. When performing physical activity, such as coughing, sneezing, lifting, or exercise? [indicates stress incontinence]
2. When you had the urge or feeling that you needed to empty your bladder, but could not get to the toilet fast enough? [indicates urge incontinence]
3. Without physical activity or a sense of urgency? [indicates a cause other than stress or urge]

Figure 1.



ICIQ-SF

Initial number ☐☐☐☐☐☐ Today's date DAY ☐☐ MONTH ☐☐ YEAR ☐☐☐☐

Many people leak urine some of the time. We are trying to find out how many people leak urine, and how much this bothers them. We would be grateful if you could answer the following questions, thinking about how you have been, on average, over the PAST FOUR WEEKS.

1 Please write in your date of birth: DAY ☐☐ MONTH ☐☐ YEAR ☐☐☐☐

2 Are you *(tick one)*: Female ☐ Male ☐

3 How often do you leak urine? *(Tick one box)*

never	☐	0
about once a week or less often	☐	1
two or three times a week	☐	2
about once a day	☐	3
several times a day	☐	4
all the time	☐	5

4 We would like to know how much urine you think leaks. How much urine do you usually leak (whether you wear protection or not)? *(Tick one box)*

none	☐	0
a small amount	☐	2
a moderate amount	☐	4
a large amount	☐	6

5 Overall, how much does leaking urine interfere with your everyday life? *Please ring a number between 0 (not at all) and 10 (a great deal)*

0 1 2 3 4 5 6 7 8 9 10

not at all — a great deal

ICIQ score: sum scores 3+4+5 ☐☐

6 When does urine leak? *(Please tick all that apply to you)*

never – urine does not leak	☐
leaks before you can get to the toilet	☐
leaks when you cough or sneeze	☐
leaks when you are asleep	☐
leaks when you are physically active/exercising	☐
leaks when you have finished urinating and are dressed	☐
leaks for no obvious reason	☐
leaks all the time	☐

Thank you very much for answering these questions.

References and Resources

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