

# Urinary Incontinence and Overactive Bladder: To Pee Or Not To Pee

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# Clare Hawkins, MD, MSC, FAAFP

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Dr. Hawkins practices family medicine at a federally qualified health center in Houston, Texas and works in outpatient Palliative Care. He has been teaching for 29 years. He serves on the AAFP Commission on the Health of the Public and Science and the subcommittee on Clinical Practice Guidelines. His topics of specialty include patient-physician relationships and patient-centered communication; physician work-life balance; pulmonary conditions; palliative care; health care reform; and sexually transmitted infections. Dr. Hawkins believes the greatest challenge facing family physicians is communicating the value of family medicine to the public, legislators, and colleagues in other specialties.



# Learning Objectives

1. Incorporate current guidelines for diagnosis in patients presenting with urinary problems.
2. Coordinate referral to a urologist or urogynecologist if initial diagnosis is unclear; or red flags such as hematuria, obstructive symptoms or recurrent urinary tract infections are present.
3. Counsel patients regarding first-line treatment options, including behavioral therapy and lifestyle modifications, emphasizing adherence and follow-up.
4. Prescribe second or third line treatment options if first-line therapies are unsuccessful, coordinating referral and follow-up care for surgical treatment as necessary.



# Audience Engagement System

The image shows three sequential screenshots of a mobile application interface. Step 1 shows a home screen with a grid of icons for various features. Step 2 shows a list of CME events with details like date and time. Step 3 shows the details for a specific event, including a title, location, date, and a description. Red arrows indicate the flow from Step 1 to Step 2, and from Step 2 to Step 3.



## Prevalence

- 13 million women in the United States and has been associated with profound adverse effects on quality of life

Weight loss to treat urinary incontinence in overweight and obese women. N Engl J Med 2009;360(5):481-90

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## Prevalence

- Women
  - 14-21 = 25%
  - 40-60 postmenopausal = 44-57%
  - >75 =75%
  - One study; 70% of nursing home residents

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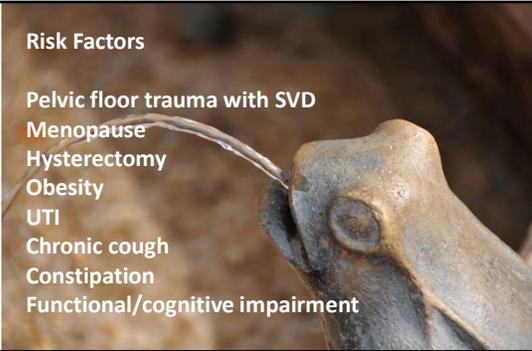
## Impact

- High medical spend
  - ~20 billion, in US 2004
  - Increased risk of falls, fractures
  - 6% of nursing home admissions for elderly women (3 billion)

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### Risk Factors

Pelvic floor trauma with SVD  
 Menopause  
 Hysterectomy  
 Obesity  
 UTI  
 Chronic cough  
 Constipation  
 Functional/cognitive impairment



## Urinary Incontinence ICD 10

Name	Code
Unspecified Urinary Incontinence	N39.4-
Stress Incontinence (M & F)	N39.3
OAB	N32.81
Urge Incontinence	N39.41
Mixed Incontinence	N39.46
Other unspecified	N39.498

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## Miscellaneous ICD 10- CPT

Name	Code
Persons encountering health services for other counseling and medical advice, not elsewhere classified	Z71.-
Other symptoms and signs involving the genitourinary system	R39.8-
CPT	
Nutritional Therapy	97802-97804
Time Based face-to-face / > 50% counseling/ coordinating	992xx

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## Urinary Incontinence ICD 10 contd

Name	Code
Recurrent & Persistent Hematuria	N02.-
UTI	N39.0
Incontinence without sensory awareness	N39.42
Post-void dribbling	N39.43
Nocturnal Enuresis	N39.44

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## Clinical Case

- Mrs. Hobson a 62 yo F comes to see you for a check up. Mammography, colorectal screening, vaccination and Pap testing (once every 5 years), and smoking cessation are performed.
- Although she doesn't volunteer a problem with continence, you note that she has responded "yes" to incontinence on your admission questionnaire.

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## Audience Response Question 1

You should do the following;

- A. Refer to Urogynecologist
- B. Order Urodynamic Studies
- C. Pelvic Ultrasound
- D. Get more history

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## More History

- She had three children born SVD, began with progressive urine leakage with activity starting at age 50, managed with exercise restriction and pads
- She has not sought help for this in the past
- A friend had successful surgery and she requests a referral to this doctor for the same procedure
- She has gained several pounds per year and current BMI 33

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## Audience Response II

Her incontinence diagnosis is;

- A. Stress Urinary Incontinence (Stress UI)
- B. Urgency Incontinence, (Urgency UI)
- C. Mixed Incontinence
- D. Overactive Bladder

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## Audience Response III

The next appropriate step is

- A. Refer to her friend's specialist
- B. Weight Loss and Pelvic Floor Training Exercises
- C. Pharmacotherapy with an antimuscarinic
- D. Vaginal estrogen replacement

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## Definitions

- Stress Urinary Incontinence, (Stress UI):
  - Urethral sphincter failure associated with intra-abdominal pressure and results in inability to retain urine when laughing, coughing, or sneezing
- Urge Urinary Incontinence, (Urge UI):
  - Involuntary loss of urine associated with a sudden & compelling urge to void
- Mixed Incontinence, (Mixed UI):
- Overactive Bladder, (OAB):
  - Constellation of sx that includes urinary urgency, (with or without UI), usually accompanied by frequency, & nocturia.

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## Other

- Overflow Incontinence
  - Incontinence due to the bladder being full (retention)
- Functional Incontinence
  - Cognitive or physical barriers

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## Goal 1: Guideline Implementation: ACP

1. PFMT for stress UI first line (strong recommendation /high quality evidence)
2. Bladder Training for urgency UI (weak/low)
3. PFMT & Bladder Training for Mixed (strong/high)

Qaseem, Amir et al. ACP Guideline on nonsurgical management of urinary incontinence in women. Annals of Internal Medicine vol 161, #6. 16 Sept 2014. <http://annals.org/article.aspx?articleid=1905131> accessed August 6, 2016

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## ACP Guideline continued

4. **Recommend against** pharmacotherapy for stress UI (strong/low)
5. Recommend pharmacotherapy for Urgency UI if bladder training unsuccessful (strong/high)
  - tolerability, SE, ease of use, and cost
6. Weight loss & exercise for obese women with UI (strong/moderate)

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## Nonpharmacologic Treatments for UI

- **PFMT** (Pelvic Floor Muscle Training): Kegel, voluntary contraction of pelvic floor muscles
- **PFMT** with biofeedback using vaginal EMG: visual feedback when properly contracting muscles
- **Bladder Training**: Behavioral Therapy that includes extending time between voiding
- **Continence Service**: Treatment program with nurses and clinicians trained in identifying, dx and treating patients with UI.

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## Evidence Review for Stress UI

Treatment/Outcome	Studies	Patients	Outcome/Eflect	Absolute RR	NNT	Evidence Quality
PFMT to achieve continence	10	959	improve	0.30	3	High
PFMT to Improve UI	6	510	Improve	0.41	2	High
PFMT with probe biofeedback Continence	2	185	Improve/NS	0.49 (-.1-1.08)	NA	Low
PFMT & Probe to Improve UI	4	383	improve	0.39	3	High

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### Evidence Review for Stress UI Comparative

Treatment/Outcome	Studies	Patients	Outcome/Effect	Absolute RR	NNT	Evidence Quality
Supervised vs self PFMT Continence Improved	4	300	NS	0.20	NA	High
PFMT & Probe vs PFMT Continence	6	542	NS	0.08	NA	High
PFMT & Cones: continence	3	320	NS	-0.11	NA	Mod
PFMT & Cones: improved	4	440	NS	0.01	NA	Mod

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### Evidence Review for Urge UI

Treatment/Outcome	Studies	Patients	Outcome/Effect	Absolute RR	NNT	Evidence Quality
Bladder training, improved	2	283	Improved	.43	2	Low
PFMT & bladder training vs bladder training	2	271	NS	.0001	NA	Moderate

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### Evidence Review for Mixed UI

Treatment/Outcome	Studies	Patients	Outcome/Effect	Absolute RR	NNT	Evidence Quality
PFMT & Bladder Training Continence	5	1369	Improved	0.17	6	High
PFMT & training Improved	4	1171	improved	0.39	3	High
Continence Service	3	3939	Improved/NS	0.30 (-0.01-0.6)	NA	Moderate
Weight Loss	2	386	Improved	0.27	4	Moderate

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### Weight Loss

- Weight loss of more than 5% had a reduction of at least 50% in the frequency of incontinence
- all incontinence episodes, urge-incontinence episodes, and stress-incontinence episodes

Weight loss to treat urinary incontinence in overweight and obese women. N Engl J Med 2009;360(5):481-90

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### Physical Activity

- In addition to specific bladder floor exercises, activity provides overall benefit
- Must overcome the fear of “going out” and not being near a bathroom
- Benefit is in addition to weight loss.

Physical activity and incident urinary incontinence in middle-aged women. J Urol 2008;179(3):1012-6; discussion 1016-7

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### A Hidden Symptom

- Most do not tell their doctor

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## Questions

- Focused history and ask specific questions, such as the time of onset, symptoms, and frequency
- *“Do you have a problem with urinary incontinence (of your bladder) that is bothersome enough that you would like to know more about how it could be treated?”*
  - Increases appropriate care by 15%

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## HEDIS Measures H.O.S. Survey

- Medicare Health Outcomes Survey
  - Survey question to Medicare Members
  - Management of Urinary Incontinence in Older Adults
- Will your patients remember to answer that you’ve discussed this?

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## Physical Exam

- “Above the waist”
  - CV exam: signs of volume overload
  - Abd exam: masses, tenderness
  - Neuro exam
- Genital Exam
  - Atrophy, cystocele, rectocele, pelvic masses
- Rectal Exam
  - Prostate enlargement, rectal mass, stool impaction

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## Laboratory Testing

- Urinalysis (with culture if infection suspected)
- Renal function
- Fasting Glucose

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## Office Testing - Post Void Residual

- Controversial in primary care setting at first presentation
- Catheter or Ultrasound
- <50mls complete voiding
- >200mls suggests obstruction/detrusor underactivity

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## Urodynamic Testing

- Routine testing is ***not*** recommended
- “Gold Standard”
- Expensive, Invasive, specialized equipment

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## Bladder Training

- Remain stationary when urgency occurs
- Concentrate on decreasing the sense of urgency through rapid successive pelvic muscle contractions, mental distraction (e.g., mathematical problem solving), and relaxation techniques (e.g., deep breathing)
- After controlling the sense of urgency, walk slowly to the bathroom and void
- After mastering this, attempt to extend the time that urination can be postponed; aim to extend the interval by 30 to 60 minutes
- Continue this process until voiding occurs every three to four hours without incontinence

Hersh L & Saltman B, Clinical Management of Urinary Incontinence in Women AFP 2013;87(9):634-640

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## Habit Training

- Check for wetness at intervals to determine when the patient urinates
- Bring the patient to the toilet, or provide commode or bedpan at intervals slightly shorter than the patient's normal voiding interval

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## Pelvic Floor Training

- Assist the patient in isolating pelvic floor muscles by instructing her to hold urine during urination and to feel pelvic muscle floor contraction (while avoiding buttock, abdomen, or thigh muscle contraction)
- Ask the patient to perform three sets of eight to 10 contractions (held for six to eight seconds) three to four times weekly; extend contraction time to 10 seconds, if possible
- Continue regimen for at least 15 to 20 weeks

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## Getting Ahead of Incontinence

- Prompted Voiding
  - Remind the patient to use the toilet at regular intervals, ideally timed to the patient's normal voiding intervals
- Scheduled Voiding
  - Bring the patient to the toilet at regular intervals
  - (e.g., every two to three hours)

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## Pharmacologic Treatments

- Duloxetine:
  - worsens or did not achieve continence in 2 studies, but improved UI in 4 but with a high cost of adverse effects (9 studies NNH 8)
- Intravaginal Estriol: (Not FDA approved)
  - One study improved ARR=.7 NNT 1 (quality low)

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## Pharmacological Antimuscarinic NNT 7-13, D/C rate

- Darifenacin (ENABLEX) \$73-140 /month
- Fesoterodine (TOVIAZ) \$280/month
- Oxybutynin (DITROPAN) \$10-15, (ER = \$30-60)
- Tolterodine (DETROL or DETROL LA) \$50-100
- Trospium (SANCTURA) (\$40-100)
- Solifenacin (not available in US)
- Propiverine (not available in US)

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## Comparing Antimuscarinic

- SE common: dry mouth, constipation, blurred vision. NNT harm 6-12
- Dizziness more frequent for trospium
- Dry mouth and insomnia for oxybutynin
- Tolterodine has some risk for hallucinations
- More d/c with fesoterodine than tolterodine NNTH = 58

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## B-Adrenergic Receptor Agonist

- Mirabegron (MYRBETRIQ) acts on beta3-adrenergic receptors to relax the detrusor
- one to two fewer incontinence episodes per day
- S/E = nausea, diarrhea, constipation, dizziness, and headache
- Increased blood pressure occasionally
- Urinary retention risk increases when used with an anticholinergic

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## Pharmacological Other

- Mirabegron (MYRBETRIQ) B receptor Agonist (goodrx = > \$300/mo)
  - NNT 12 to achieve continence
  - NNT 9 to improve
  - Few d/c due to SE, but some nasopharyngitis and gastrointestinal disorders

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## Comparisons

- Solifenacin had lowest risk for d/c where oxybutynin was highest
- Tolterodine and oxybutynin had same benefits, but tolterodine caused fewer harms
- Only darifenacin and tolterodine had d/c risk = placebo

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## ARS Case #1

A 67 y.o. WF c/o 3 episodes of urinary incontinence. Each time she didn't make it to the bathroom. One happened while shopping, one driving and one at church. She is now hesitant to go out. The most likely cause of her problem is:

1. Stress
2. Urge
3. Overflow
4. Functional

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## ARS #2

- A 75 y.o. female nursing home resident consistently urinates in her bed. This frustrates the nursing staff who ask for an indwelling foley. Because of recent surgery she is unable to walk to the bathroom and has side-rails up. What is the most likely diagnosis;

1. Urge
2. Stress
3. Functional
4. Overflow

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### ARS #3

A 58 yo man presents to your clinic c/o "Leaking Urine". The most appropriate next step in the evaluation of this patient is to:

1. Obtain a post void residual
2. Conduct urodynamic testing
3. History and Physical Exam
4. Obtain a urinalysis

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### ARS # 4

- A 62 year old male has recently begun therapy with antihistamine therapy for allergies and already takes amitriptyline 50 mg at H.S. for sleep and chronic pain. He now finds himself leaking urine. This is most likely

1. Urge
2. Stress
3. Functional
4. Overflow

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### ARS #5

- A 42 yo AA Woman states she has had several episodes of leaking urine. Mostly with coughing or sneezing and has had to begin wearing absorbent undergarments. She has 2 children, both SVD with long second stage. The best first-line treatment option for this patient is:

1. Tolterodine ER 4mg daily
2. Pessary Placement
3. Oxybutynin 5mg tid
4. Kegel Exercises

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### Summary

- Non-pharmacologic rx effective at managing UI with large benefit and low risk
- PFMT alone and /or in combination with bladder training, biofeedback and weight loss with exercise for obese women were effective
- No good head-to-head evidence comparison to recommend one antimuscarinic over another

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### High-Risk/ Alarm Symptoms

- Previous Urinary Incontinence Surgery
- Persistent UTI
- Constitutional Sx
- Poor renal function
- Saddle Anesthesia
- Recent back trauma
- Pelvic surgery (especially recent)

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### Other Treatments

- Pessary
- Incontinent Tampons
- Vaginal Inserts
- Urethral Plug
- Injection of filler around urethra
- Radiofrequency denaturation
- Augment urethral closure
- Support and stabilize the bladder neck and urethra
  - midurethral slings
  - pubovaginal slings
  - Needle urethropexy
  - Retropubic urethropexy
    - Burch
    - Marshall- Marchetti-Krantz

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## Questions

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## Contact Information

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## Reference List

- Qaseem, Amir et al. ACP Guideline on nonsurgical management of urinary incontinence in women. Annals of Internal Medicine vol 161, #6. 16 Sept 2014
- Weight loss to treat urinary incontinence in overweight and obese women. N Engl J Med 2009;360(5):481-90
- Hersh L & Salzman B, Clinical Management of Urinary Incontinence in Women AFP 2013;87(9):634-640

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## Billing & Coding

When services performed in conjunction with: \_\_\_\_\_

Office Visit 992xx \*

Nutritional Therapy 97802-97804

\*Time-based selection documentation criteria:

- Face-to-face time
- greater than 50% spent counseling/coordinates care

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