

Assessment of urinary incontinence in older adults, part 2: treatment

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Clinical question

How should I treat urinary incontinence (UI) in older patients with frailty?

Bottom line

Robust older adults with UI should be treated similarly to younger adults with UI. In older adults with frailty, it is important to consider the risks and benefits of treatment, set realistic goals for outcomes, and encourage discussion among professionals, patients, and care partners. Continence care in older adults with frailty focuses on addressing factors such as comorbidities, medications, and constipation, as well as recommending conservative measures such as bladder training and pelvic floor muscle therapy. For those in congregate living environments, measures such as prompted voiding, timed voiding, and containment may be appropriate. Neither old age nor frailty are absolute barriers to any treatments for incontinence, including medications and surgery. A detailed review of this topic was published in 2015 in the *Canadian Geriatrics Society Journal of CME*.¹

Evidence

- Musculoskeletal exercise, including both gait and balance exercises and pelvic floor muscle therapy as directed, has been shown to be of benefit.^{2,3}
- Reducing caffeine intake may be helpful but has limited evidence.⁴
- Fluid intake should be around 1.5 to 2.0 L per day.⁵
- Oxybutynin has been shown to cause adverse cognitive effects. Short-term studies have shown that newer agents such as trospium, solifenacin, fesoterodine, topical oxybutynin, tolterodine, darifenacin, and mirabegron are safer in older people who have no cognitive impairment.⁶
- Solifenacin at a dose of 5 mg daily may have a lower risk of causing cognitive impairment in older people with mild cognitive impairment.⁷
- Fesoterodine has evidence of safety in vulnerable older adults with frailty.⁸
- Mirabegron has evidence of safety and efficacy in older adults.⁹
- Urethral bulking agents can be beneficial for stress incontinence in older women with frailty.¹⁰

Approach

A structured continence assessment can help with clinical diagnosis and can guide management of common

conditions such as overactive bladder, stress UI, mixed incontinence, overflow incontinence, and functional incontinence (see Table 4 in the *Canadian Geriatrics Society Journal of CME*¹ or part 1 of this 2-part series on UI in older adults¹¹). Underlying contributing factors such as comorbidities and medications should be addressed where appropriate.¹¹

Conservative approaches. Fluid intake should be normalized, aiming for around 1.5 to 2.0 L per day.^{5,12} Caffeine reduction can be suggested.^{4,12} Medications that contribute to UI should be decreased or tapered off if possible.¹¹

Bladder retraining is a cognitive approach in which the individual uses urgency suppression techniques to improve urine hold time and reduce incontinence,¹³ but it requires patient buy-in and memory retention, and may be less effective in those with dementia. Self-directed pelvic floor muscle exercises and supervised pelvic floor muscle therapy should be offered as they are useful for urgency and stress incontinence; they may be effective in those with cognitive impairment.¹⁴

In those with more advanced frailty or cognitive decline, alternative approaches can be used that aim to reduce the frequency of incontinence episodes as opposed to normalizing bladder habits.

Functional incontinence describes UI that is largely caused by functional or cognitive impairments that prevent an individual from identifying, getting to, and using an appropriate toilet. For these people, an individualized approach is essential to identify and mitigate these challenges with, for example, gait and mobility physiotherapy, walking aids, environmental accommodations (eg, signposts and lights in bathrooms in congregate living facilities), hand-held urinals, and bedside commodes.

Prompted voiding involves prompting people to use the toilet with positive reinforcement. It has been shown to reduce UI episodes and increase self-initiated toileting in nursing home residents.¹⁵ Habit retraining identifies the individual's toileting pattern through the care provider maintaining a bladder diary and performing regular wet checks, resulting in a toileting schedule to pre-empt UI episodes. With timed voiding, people are taken to the toilet by their caregivers at regular intervals, usually every 2 to 4 hours while awake, with no attempt to improve bladder function. This requires considerable caregiver engagement and must consider the patient's cognitive and physical abilities.

Pharmacologic approaches.

Pharmacologic agents should be considered for urgency incontinence after optimizing other factors. Anticholinergic and adrenergic agents show modest benefits in decreasing wet episodes. Medication choices are mentioned above.⁶⁻⁹ The decision to use pharmacotherapy should be made with patients based on their symptom burdens and acceptability of the potential side effects once conservative measures have been tried.¹⁶


Overall, flexible-dose fesoterodine has the most evidence for efficacy, and mirabegron is the best tolerated in this population,¹⁶ but response and adverse effects are highly dependent on the individual and it may be necessary to try different medications before choosing the right one. All the agents require 6 to 8 weeks to achieve full effect and therapeutic trials should reflect this. These agents should be deprescribed if they are not helpful after adequate trials.

Implementation

Various of products are available to help people maintain social or contained continence when dryness cannot be achieved, including urinals, body-worn collection devices, and absorbent pads. The International Consultation on Incontinence has a product directory to provide advice to patients and caregivers that is searchable by location and type of product (<https://www.continenceproductadvisor.org>).

With intractable incontinence, a long-term catheter may be the only solution. Guidelines¹⁷ recommend suprapubic catheters, mostly to avoid urethral complications and for the relative ease of replacement.¹⁸ In patients without overactive bladder, use of a catheter valve should be considered, assuming that the older person has the dexterity to open and close the tap. Sheath or condom catheters for men may be practical solutions

but present challenges with application and remaining in place; they are preferred to indwelling catheters for incontinence without retention. Any indwelling catheter carries a high risk of catheter-associated urinary tract infection, and all indwelling catheters will be colonized by bacteria within a month of insertion.¹⁹

Urinary incontinence in older adults with frailty is a complex management issue. While the treatments offered to younger and more robust individuals, including medication and surgical interventions, may be appropriate for older individuals, an individualized approach incorporating assessment of the person's cognition, function, and support network is essential to set appropriate goals and reduce the occurrence of uncontained incontinence. 

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Competing interests

Dr William Gibson has received speaker honoraria from Astellas and Pfizer.

References

- Gibson W, Wagg A. Urinary incontinence in the frail elderly. *Can Geriatr Soc J CME* 2015;5(2).
- Schnelle JF, MacRae PG, Ouslander JG, Simmons SF, Nitta M. Functional Incidental Training, mobility performance, and incontinence care with nursing home residents. *J Am Geriatr Soc* 1995;43(12):1356-62.
- Vinsnes AG, Helbostad JL, Nyrønning S, Harkless GE, Granbo R, Seim A. Effect of physical training on urinary incontinence: a randomized parallel group trial in nursing homes. *Clin Interv Aging* 2012;7:45-50. Epub 2012 Feb 8.
- Bryant CM, Dowell CJ, Fairbrother G. Caffeine reduction education to improve urinary symptoms. *Br J Nurs* 2002;11(8):560-5.
- Townsend MK, Jura YH, Curhan GC, Resnick NM, Grodstein F. Fluid intake and risk of stress, urgency, and mixed urinary incontinence. *Am J Obstet Gynecol* 2011;205(1):73.e1-6. Epub 2011 Feb 23.
- Gibson W, Athanasopoulos A, Goldman H, Madersbacher H, Newman D, Spinks J, et al. Are we shortchanging frail older people when it comes to the pharmacological treatment of urgency urinary incontinence? *Int J Clin Pract* 2014;68(9):1165-73. Epub 2014 Sep 6.
- Wagg A, Dale M, Tretter R, Stow B, Compion G. Randomised, multicentre, placebo-controlled, double-blind crossover study investigating the effect of solifenacin and oxybutynin in elderly people with mild cognitive impairment: the SENIOR study. *Eur Urol* 2013;64(1):74-81. Epub 2013 Jan 11.
- Dubeau CE, Kraus SR, Griebing TL, Newman DK, Wyman JF, Johnson TM 2nd, et al. Effect of fesoterodine in vulnerable elderly subjects with urgency incontinence: a double-blind, placebo controlled trial. *J Urol* 2014;191(2):395-404. Epub 2013 Aug 21.
- Wagg A, Staskin D, Engel E, Herschorn S, Kristy RM, Schermer CR. Efficacy, safety, and tolerability of mirabegron in patients aged ≥65yr with overactive bladder wet: a phase IV, double-blind, randomised, placebo-controlled study (PILLAR). *Eur Urol* 2020;77(2):211-20. Epub 2019 Nov 13.
- Dmochowski RR, Appell RA. Injectable agents in the treatment of stress urinary incontinence in women: where are we now? *Urology* 2000;56(6 Suppl 1):32-40.
- Gibson W, Molnar F, Frank C. Assessment of urinary incontinence in older adults, part 1. *Can Fam Physician* 2024;70:249-53.
- Park J, Lee H, Kim Y, Norton C, Woodward S, Lee S. Effectiveness of fluid and caffeine modifications on symptoms in adults with overactive bladder: a systematic review. *Int Neurourol J* 2023;27(1):23-35. Epub 2023 Mar 31.
- Wyman JF, Burgio KL, Newman DK. Practical aspects of lifestyle modifications and behavioural interventions in the treatment of overactive bladder and urgency urinary incontinence. *Int J Clin Pract* 2009;63(8):1177-91. Epub 2009 Jul 2.
- Lee BA, Kim SJ, Choi DK, Kwon O, Na HR, Cho ST. Effects of pelvic floor muscle exercise on urinary incontinence in elderly women with cognitive impairment. *Int Neurourol J* 2017;21(4):295-301. Epub 2017 Dec 31.
- Ouslander JG, Schnelle JF. Incontinence in the nursing home. *Ann Intern Med* 1995;122(6):438-49.
- Chapple CR, Mironska E, Wagg A, Milsom I, Diaz DC, Koelbl H, et al. Multicriteria decision analysis applied to the clinical use of pharmacotherapy for overactive bladder symptom complex. *Eur Urol Focus* 2020;6(3):522-30. Epub 2019 Oct 15. Erratum in: *Eur Urol Focus* 2022;8(1):360-1.
- Campeau L, Shamout S, Baverstock RJ, Carlson KV, Elterman DS, Hickling DR, et al. Canadian Urological Association best practice report: catheter use. *Can Urol Assoc J* 2020;14(7):E281-9.
- Niël-Weise BS, van den Broek PJ, da Silva EM, Silva LA. Urinary catheter policies for long-term bladder drainage. *Cochrane Database Syst Rev* 2012;(8):CD004201.
- Hooton TM, Bradley SF, Cardenas DD, Colgan R, Geerlings SE, Rice JC, et al. Diagnosis, prevention, and treatment of catheter-associated urinary tract infection in adults: 2009 International Clinical Practice Guidelines from the Infectious Diseases Society of America. *Clin Infect Dis* 2010;50(5):625-63.

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Suggested reading

ICS fact sheets. A background to urinary and faecal incontinence. Bristol, UK: International Continence Society; 2013. Available from: <https://www.ics.org/Documents/DocumentsDownload.aspx?DocumentID=2172>. Accessed 2024 Jun 20.

Abrams P, Cardozo L, Khoury S, Wein A, editors. *Incontinence. 5th International Consultation on Continence, Paris February 2012. 5th edition 2013.* Arnhem, the Netherlands: European Association of Urology, International Consultation on Urological Diseases; 2013. Available from: https://www.ics.org/Publications/ICI_5/INCONTINENCE.pdf. Accessed 2024 Jun 14.

Tips for dealing with bladder control and leakage problems. Markham, ON: Canadian Continence Foundation; 2024. Available from: <https://www.canadiancontinence.ca/tips-for-bladder-control>. Accessed 2024 Jun 14.



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