



Integrated care for older people (ICOPE) Guidelines on community-level interventions to manage declines in intrinsic capacity

Evidence profile: urinary incontinence

Scoping question:

Do non-pharmacological interventions (prompted voiding, timed voiding, toilet training, habit retraining, pelvic floor muscle training) produce any benefit and/or harm for older people with urinary incontinence?

The full ICOPE guidelines and complete set of evidence profiles are available at: who.int/publications/i/item/9789241550109

Painting: "Wet in Wet" by Gusta van der Meer. At 75 years of age, Gusta has an artistic style that is fresh, distinctive and vibrant. A long-time lover of art, she finds that dementia is no barrier to her artistic expression. Appreciated not just for her art but also for the support and encouragement she gives to other artists with dementia, Gusta participates in a weekly art class. Copyright by Gusta van der Meer. All rights reserved

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Background

Urinary incontinence, the involuntary loss of urine, is a highly prevalent condition in older people aged 60 years and over (1). The common types of urinary incontinence in older people are stress incontinence and urge incontinence. Stress incontinence is the involuntary leaking of urine during efforts or exertion, or while sneezing or coughing. Urge incontinence, or overactive bladder syndrome, involves a constellation of symptoms including frequency, urgency and leakage immediately preceded by urgency. The prevalence of urinary incontinence reported in population-based studies ranges from 9.9% to 36.1% (2–4), and is twice as high in older women as in older men. Urinary incontinence has a profound impact on the quality of life of older people, their subjective health status (5, 6), levels of depression (7) and need for care (8).

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Several chronic conditions and environmental factors increase the risk of urinary incontinence in older people. Chronic diseases that are associated with urinary incontinence include diabetes mellitus, Parkinson's disease, dementia, stroke, prostatic cancer, chronic obstructive pulmonary disease (COPD) and arthritis. Environmental factors such as inaccessible or unsafe toilet facilities, and the absence of caregivers for toileting assistance are also associated with urinary incontinence. Nonpharmacological interventions are mostly preferred and remain the mainstay of urinary incontinence management for patients with mild urinary incontinence. The primary goal of urinary incontinence interventions is to improve continence by reducing the frequency of urinary incontinence episodes. The nonpharmacological interventions addressed in this guideline include pelvic floor muscle training (PFMT), bladder training and habit retraining, and timed or prompted voiding.

Part 1: Evidence review

Scoping question in PICO format (population, intervention, comparison, outcome)

Population

Older people with urgency or stress or mixed urinary incontinence

Interventions

- Prompted voiding
- Timed voiding
- Bladder training
- Habit retraining
- Pelvic floor muscle training (PFMT)

Comparison

• No intervention/usual care

Outcomes

- Critical: Proportion of mean change in frequency of urinary incontinence, change in mean proportion of hourly checks that are wet, number of patients with reductions in incidence of daytime incontinence, number of patients with reductions in incidence of night-time incontinence, incontinent episodes in 24 hours, mean urinary incontinence incidence per 24 hours, urinary incontinence symptoms
- *Important:* Perceived cure, self-initiated toileting, median percentage of checks wet, number of incontinent episodes, urinary incontinence urgency, urinary incontinence frequency, nocturia, quality of life

Search strategy

A systematic literature search for reviews was conducted in Ovid MEDLINE, Embase, PsycINFO and Cochrane databases. The details of the search terms used for retrieving studies are provided in Annex 1. The search retrieved 188 reviews and 798 randomized controlled trials (RCTs). After initial screening for eligibility, 111 reviews and 161 RCTs were considered for full-text review. Ultimately, five systematic reviews that included 25 RCTs and two additional studies investigating the benefits of non-pharmacological interventions were included in this review (see Annex 2).

List of systematic reviews identified by the search process

Included in GRADE¹ tables

 Wallace SA, Roe B, Williams K, Palmer M. Bladder training for urinary incontinence in adults. Cochrane Database Syst Rev. 2004;(1):CD001308. Updated in 2009. [Systematic review was updated by WHO in 2015] (9) - Ostaszkiewicz J, Johnston L, Roe B. Habit retraining for the management of urinary incontinence in adults. Cochrane Database Syst Rev. 2004;(2):CD002801. Updated in 2009. [Systematic review was updated by WHO in 2015] *(10)*

- Eustice S, Roe B, Paterson J. Prompted voiding for the management of urinary incontinence in adults. Cochrane Database Syst Rev. 2000;(2):CD002113. Updated in 2006. [Systematic review was updated by WHO in 2015] *(11)*

- Ostaszkiewicz J, Johnston L, Roe B. Timed voiding for the management of urinary incontinence in adults. Cochrane Database Syst Rev. 2004;(1):CD002802. Updated in 2009. [Systematic review was updated by WHO in 2015] *(12)*

 Dumoulin C, Hay-Smith EJC, Mac Habée-Séguin G. Pelvic floor muscle training versus no treatment, or inactive control treatments, for urinary incontinence in women. Cochrane Database Syst Rev. 2014;(5):CD005654 (13)

¹ GRADE: Grading of Recommendations Assessment, Development and Evaluation. More information: http://gradeworkinggroup.org

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PICO table

	Intervention/ comparison	Outcomes	Studies used for GRADE
1	Timed voiding plus others vs usual care	 Number of patients with reductions in incidence of daytime urinary incontinence Number of patients with reductions in incidence of night-time incontinence Number of patients whose pad test indicates reduction in the volume of incontinence 	Ostaszkiewicz J, Johnston L, Roe B. Timed voiding for the management of urinary incontinence in adults. Cochrane Database Syst Rev. 2004;(1):CD002802. Updated in 2009. <i>(12)</i>
2	Prompted voiding vs no prompted voiding	 Number of patients with no improvement in urinary incontinence episodes Change in mean proportion of hourly checks that are wet urinary incontinence episodes in 24 hours Self-initiated toileting 	Eustice S, Roe B, Paterson J. Prompted voiding for the management of urinary incontinence in adults. Cochrane Database Syst Rev. 2000;(2):CD002113. Updated in 2006. <i>(11)</i>
3	Habit retraining plus others vs usual care	 Number of incontinent episodes Incontinent volume 	Ostaszkiewicz J, Johnston L, Roe B. Habit retraining for the management of urinary incontinence in adults. Cochrane Database Syst Rev. 2004;(2):CD002801. Updated in 2009. (10)
4	Bladder training vs no treatment or active treatment controls	 Cure rate Number of micturition episodes 	Wallace SA, Roe B, Williams K, Palmer M. Bladder training for urinary incontinence in adults. Cochrane Database Syst Rev. 2004;(1):CD001308. Updated in 2009. <i>(9)</i>
			(continued next page)

5	Pelvic floor muscle training plus bladder retraining vs control	 Mean urinary incontinence incidence per 24 hours Urinary incontinence urgency Urinary incontinence frequency Nocturia 	Dumoulin C, Hay-Smith EJC, Mac Habée- Séguin G. Pelvic floor muscle training versus no treatment, or inactive control treatments, for urinary incontinence in women. Cochrane Database Syst Rev. 2014;(5):CD005654. <i>(13)</i>
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Narrative description of the systematic reviews included in the analysis

The Cochrane systematic review by Wallace et al. (updated in 2009) aimed to synthesise evidence for effectiveness of bladder training for urinary incontinence in adults *(9)*. Relevant trials were identified from the Cochrane Incontinence Review Group's specialized register of controlled trials, which contains trials identified from MEDLINE, the Cumulative Index to Nursing and Allied Health Literature (CINAHL) and the Cochrane Central Register of Controlled Trials (CENTRAL). The specialized register was searched using the Review Group's own keywords and medical search terms. The review included 12 RCTs (total of 1473 participants). The participants were predominantly female (75%). Eight included trials had useable data but only four of them included older people aged over 60 years. Three of the trials were conducted in the United States of America and another study is a multicentre trial that included participants from Denmark, Norway and Sweden.

The Cochrane systematic review by Ostaszkiewicz et al aimed to investigate the benefit of habit retraining in the management of urinary incontinence in adults (10). Trials were identified from the search conducted in the Cochrane Incontinence Review Group's specialized register of controlled trials, MEDLINE, Embase,

CINAHL, PsycINFO, Biological Abstracts, Current Contents and the reference lists of relevant articles. Experts in the field were also contacted for potential papers. The search included relevant websites and hand searches of journals and conference proceedings. Four trials with a total of 378 participants met the inclusion criteria. Participants in these trials (mean age 80 years) were mainly women and they were physically and/or cognitively impaired, dependent on caregivers and residing either in nursing homes or in their own homes. Three trials tested habit retraining combined with other treatment, compared with usual care (14–16) and another trial compared the combination treatment with habit retraining alone (17).

The Cochrane systematic review by Eustice et al. (updated in 2006) aimed mainly to examine the effectiveness of prompted voiding in the management of urinary incontinence in adults *(11)*. The search for trials was conducted in the Cochrane Incontinence Review Group's specialized register of controlled trials (31 January 2006) as well as the reference lists of relevant articles. Investigators in the field were also contacted for additional studies. As a result, nine trials with a total 674 participants (mean age 84 years) were included in the review. The majority of participants included in the trials were older women. Prompted voiding was compared with no

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prompted voiding in nine trials. One trial was excluded as the ages of the trial participants were not reported *(18)*.

Ostaszkiewicz et al. (updated in 2009) is a Cochrane systematic review on timed voiding for the management of urinary incontinence in adults (12). The search for trials was conducted in Cochrane Incontinence Review Group's specialized register of controlled trials (searched 2 April 2009), MEDLINE (January 1966 to November 2003), Embase (January 1980 to Week 18 2002), CINAHL (January 1982 to February 2001), PsycINFO (January 1972 to August 2002), Biological Abstracts (January 1980 to December 2000), Current Contents (January 1993 to December 2001) and the reference lists of relevant articles. Experts in the field were contacted for potential studies. The search included relevant websites and conference proceedings. Hand searches were also conducted in relevant journals. Two trials with a total of 298 participants met the inclusion criteria (19, 20). Both compared timed voiding plus additional intervention with usual care. Most of the participants from the two selected trials were cognitively impaired elderly women (mean age 86.7 years) and all resided in facilities that provided nursing care. The majority of participants (82%) in one study were older women (19) while the other study did not report the sex of participants (20).

identify potential studies. Twenty-one trials involving 1281 women (665 PFMT, 616 controls) met the inclusion criteria. Seven of them recruited older people aged over 60 years or had mean participant age of more than 60 years (21–27).

Two additional RCTs, not listed in the above-mentioned Cochrane systematic reviews, were identified in an independent literature search and were also included *(28, 29)*.

Brief descriptions of the included nonpharmacological interventions

Prompted voiding is administered for older people with or without cognitive impairment to initiate their own toileting through requests for help, and includes the use of positive reinforcement from carers when they do this. This is distinct from some other therapies because of the participation of the individual in the process. In contrast, habit retraining attempts to determine the micturition pattern for an individual, which can be used to achieve continence but does not necessarily rely on the individual's participation. Timed voiding is fixed by time or event, and is carer led and is not an individualized intervention. Bladder training actively includes the individual in attempting to increase the interval between the desire to void and the actual void, and hence would not be suitable for



https://www.yunbaogao.cn/report/index/report?reportId=5_26661



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