INCONTINENCE IN FRAIL OLDER PERSONS

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Recommendations for practice

1. Environmental cues such as toilet visibility, signage, colour differentiation and images should be used to compensate for visuo-perceptual deficits in frail older adults with cognitive impairment.
2. As remaining physical strength and dexterity varies in individuals with cognitive impairment, each component of the toileting process which creates difficulty for such patients should be identified and treated individually.
3. Awareness raising activities should be conducted to enhance day-to-day continence care processes in healthcare settings.
4. Ensure that the time, resources, knowledge and skill required to conduct an assessment, and offer active, effective management and manage UI episodes are considered in service planning.
5. Continue to address gaps in healthcare practitioners' knowledge about preventing and managing incontinence in frail older persons.
6. As inappropriate use of continence products may contribute to onset or continuation of UI, clinicians who advocate or authorise their use, should be familiar with evidence-based guidelines that advocate an active approach to prevention, diagnosis and treatment.

9. SUMMARY OF THE EVIDENCE

Age-related changes in pharmacokinetics affect antimuscarinic drugs for UI and should be incorporated into treatment planning. (Level 1-2)

Drugs may be effective at lower doses in frailer compared with healthier older persons (Level 3)

Polypharmacy increases the chance of adverse reactions to drug therapy. (Level 1)

Adverse drug events are more common in the frail elderly. (Level 2)

Drug-drug and drug-disease interactions are common in frail older persons (Level 1-3).

Antimuscarinics for treatment of overactive bladder remain as potentially inappropriate medications for frail older people according to the Beer's criteria (Level 3-4)

Specific guidance for drugs for LUTS in older people exists, this may, with caveats, guide practice (Level 3).

Summary of evidence

- Active case finding and screening for UI in older persons because many do not spontaneously report their symptoms. (Level 1).
- Screening for frailty is possible with short screening instruments (Level 1).
- Current quality of primary care assessment of UI in frail elders is poor (Level 2).
- Cough stress test has moderate accuracy in frail institutionalised women (Level 2).
- No recommendation is possible on the utility of PVR testing in the assessment of UI in frail elderly (Level 4).
- Urodynamic testing is feasible in frail older people (Level 1) but it is unlikely to change management or outcomes except, perhaps, in those considered for surgical treatment of UI (Level 4).

Recommendations for evaluation

The essential first step is to actively case find in the frail elderly, as both UI and FI are generally underreported.

The second is to identify treatable, potentially reversible conditions and other factors (medications, environment) that can cause or contribute to incontinence. Although UI associated with such factors has been commonly called "transient UI," this is erroneous, as for most frail older persons incontinence is a chronic and often progressive condition. It is important to evaluate for such contributing factors because their amelioration may improve UI directly, make UI more amenable to other interventions, and overall improve the patient's (and caregiver's) quality of life [385]

The common, treatable, potentially reversible conditions that can contribute to UI in frail older people can be defined by the mnemonic DIPPERS ((Delirium, Infection [urinary tract), Pharmaceuticals, Psycho- logical, Excess fluid (in/out), Restricted mobility, and Stool impaction [and constipation]). This is a useful aid to teach and remember these conditions [386]. Cognisance must be made of the potential to overtreat asymptomatic bacteriuria as apparent infection because of the risk of adverse outcome [387].

Recommendations for practice

1. Prompted voiding is effective in the short-term treatment of daytime UI in nursing home residents and home-care clients when caregivers comply with the protocol **(Level of Evidence 1).**
2. Prompted voiding is ineffective and should not be used for people who need the assistance of more than one person to transfer, cannot follow a one-step command, have less than a 20% reduction in wet checks or less than a 66% appropriate toileting rate after a three-day trial; these people should be managed with "check and change" **(Level of Evidence 1).**
3. Interventions combining toileting and functional training decrease urine loss and improve endurance in nursing home residents **(Level of Evidence 1)**.
4. It is uncertain whether habit retraining reduces UI in frail older persons **(Level of Evidence 4)**.
5. It is uncertain whether timed voiding reduces UI in frail older persons **(Level of Evidence 4).**
6. It is uncertain whether bladder training reduces UI in frail older persons **(Level of Evidence 4).**
7. Biofeedback-assisted PFMT in combination with bladder training reduces UI in homebound older adults **(Level of Evidence 2)**.
8. Functional training in combination with PFMT reduces UI and improves walking time in frail older women **(Level of Evidence 2).**
9. There are no proven interventions to reduce the incidence of UI in hospitalised frail older persons **(Level of Evidence 4).**

Summary of the evidence

1. Short-term treatment with oxybutynin-IR has small to moderate efficacy in reducing urinary frequency and urgency UI when added to behavioural therapy in long term care residents. **(Level 2)**
2. Low dose oxybutynin-ER does not cause delirium in cognitively impaired nursing home residents **(Level 1)**
3. Oxybutynin-IR has been associated with cognitive adverse effects in persons with dementia and/or Parkinson's disease **(Level 3)**, although the incidence and prevalence are unknown **(Level 4)**
4. Oxybutynin has been associated with tachycardia **(Level 3)**, but not associated with QTc prolongation **(Level 3)** or ventricular arrhythmia **(Level 2)**
5. Oxybutynin is less effective in persons with impaired orientation, cerebral cortical under-perfusion, and reduced bladder sensation **(Level 2)**
6. Oxybutynin is less well tolerated, versus solifenacin, in older people **(level 2)**
7. Fesoterodine is effective in ameliorating the symptoms of OAB in robust community dwelling and medically complex older people, identified by VES-13 **(level 1).**

There is insufficient evidence to determine the efficacy, tolerability, and safety of the following agents in the frail elderly **(Level 4)**:

a) Intravesical oxybutynin

b) Transdermal oxybutynin

c) Trospium

d) Tolterodine

e) Darifenacin

f) Solifenacin

g) Mirabegron

h) Duloxetine

i) Oral and topical oestrogen

8. Tolterodine has been associated with cognitive impairment and tachycardia (Level 3), although the incidence and prevalence are unknown. (Level 4)
9. Solifenacin (5mg/day) is associated with no impairment of cognition in older persons with mild cognitive impairment versus placebo (level 2)
10. Excessive anticholinergic load is associated with cognitive impairment in frail older adults (level 3)
11. Anticholinerigc agents should be prescribed with due regard to underlying anticholinergic load in older persons (level 3)
12. The effect of cholinergic load on persons with mild dementia is uncertain (level 3)

Summary of the evidence

1. No studies were identified regarding gynaecological surgery in institutionalised elderly women. (**Level 4**)
2. Exogenous administration of oestrogen is ineffective in promoting wound healing after gynaecological surgery in older women. (**Level 3**)
3. Injection of bulking agents for SUI appears to give minor benefit in women, however the technique is minimally invasive and age does not appear to correlate with outcomes. (**Level 3**)
4. Injection of onabotulinumtoxinA might be an option als in patients with idiopathic or neurogenic overactive bladder although risk of residual urine and a lower long-term success rate have been described. (**Level 3**)
5. No studies were identified that evaluate functional or quality of life outcomes after UI surgery in frail older persons (**Level 4**)
6. Risks of morbidity and mortality for frail patients undergoing anti-UI procedures are similar to those of other major non-cardiac surgical procedures. (**Level 2**)
7. Surgical mortality risks are still low in elderly persons, and when deaths do occur, they are often due to cardiac or cancer complications. (**Level 2-3**)
8. Operative mortality is inconsistently associated with increased age, and most studies do not uniformly control for comorbid conditions (**Level 2-3**)
9. Patient-controlled analgesia provides adequate pain control and sedation and increased patient satisfaction compared with standard fixed and time-administered medications in cognitively intact geriatric patients. (**Level 2**)
10. Choice of agent for patient-controlled analgesia may affect postoperative cognition. (**Level 3**)
11. Some case series and waitlist-controlled trials suggest that minimally invasive surgical approaches may be useful in older adults, yet these trials may have little to do with whether surgical treatments are appropriate in the frail elderly (**Level 3**)

Recommendations for management

1. Age alone is not a contraindication to surgical treatment of UI (**Grade C**).
2. Urodynamic evaluation should be done before considering surgical treatment of UI in frail older persons (**Grade B**).
3. Preoperative risk should be stratified using established indices (**Grade A**).
4. Validated frailty scales may aid prognostication and planning from post surgical care in frail older adults (**Grade C**)
5. Ensure adequate post-operative nutrition, especially in patients who cannot take oral feeding or who become delirious (**Grade C**).
6. Programmes to prevent post-operative delirium should be utilised (**Grade A**) along with proactive use of established measures to diagnose delirium (**Grade A**).
7. Pain assessment in cognitively impaired persons should use measures specially-designed for this population (**Grade B**).
8. Proactive preventative approaches to hospitalisation-related functional impairment should be used (**Grade A**).
9. Specialised care units may improve selective outcomes for frail older patients (**Grade A**).
10. Discharge planning should begin before surgery takes place (**Grade C**).
11. Patient controlled analgesia can be used in cognitively-intact frail older persons (**Grade B**).
12. Analgesic agents associated with delirium (e.g., meperidine) should be avoided (**Grade B**).
13. Long-term outcomes before the operation should be discussed with the patient (**Grade C**).

Recommendations for research

Further research is required to:

1. identify risk factors for surgical outcome in frail elderly.
2. identify which treatments for UI are most appropriate in real-world settings for different older men and women.
3. define pre- and postsurgical care to improve surgical outcome in frail elderly.

Summary of the evidence

Late afternoon administration of a diuretic may reduce nocturia in persons with lower extremity venous insufficiency or congestive heart failure unresponsive to other interventions. **(Level 2)**

If OAB, DO, and/or urgency UI is felt to be a major contributor to nocturia, antimuscarinic agents should be considered. **(Level 3)**

If nocturia is due to insomnia alone, then a very-short acting sedative hypnotic may be considered. **(Level 3)**

DDAVP should not be used in frail elderly because of the risk of hyponatraemia. **(Level 1)**

Recommendations for management

Nocturia investigations should be carried out utilising both frequency-volume charts and validated questionnaires capturing QoL and bother related specific to nocturia (e.g. NQoL). **(GoR C)**

Summary of evidence for prevalence and risk factors for FI in frail older people

Summarised below are key points that are specific to the frail elderly population. The level of evidence is given in brackets.

- FI affects 1 in 5 older people (aged 65+) living in the community and in residential care facilities, and half of those residing in long-term care homes **[LoE1]**
- The prevalence of FI increases with age alone, particularly in the 8th decade and beyond **[LoE1]**
- The prevalence of FI is higher in the acute hospital, and nursing home setting than in the community **[LoE 1]**, thus the group most affected is frail older people.
- The prevalence of FI in frail older men is equal to or greater than in women in the community and in long-term care residents **[LoE 2]**.
- The prevalence of FI varies dramatically between institutions in nursing home studies due to measurement differences **[LoE 2]**.
- FI usually coexists with urinary incontinence in frail older people **[LoE 1]**
- Aside from age, the following are primary risk factors for FI in older people **[LoE 2]**:
  - Stool consistency – Loose stool
  - Bowel-related disorders, such as prior rectal surgery
  - Impaired mobility
  - Functional impairment
  - Dementia
  - Neurological disease
  - Diabetes mellitus
  - Chronic medical conditions
  - Depression
- Loose stool or diarrhoea may be a cause of transient FI in older people, if the diarrhoea is evaluated and treated **[LoE 2]**
- Faecal loading and constipation are clinically linked to FI, but there is little epidemiological work assessing this association **[LoE 3]**
- Physicians and nurses in primary care, acute hospital, and long-term health care settings do not have a high awareness of FI in older people **[LoE 2]**
- Within nursing homes, there is a low rate of referral by nursing staff of residents to primary care physicians or continence nurse specialists for further assessment of FI **[LoE 2]**, and there is a tendency toward passive management (e.g. use of pads only without further evaluation) **[LoE 2]**. Faecal loading is often present in older care home residents with FI **[LoE 2]**
- Older people may be reluctant to volunteer the symptoms of FI to their health care provider for social or cultural reasons, or due to a popular misperception that the condition is part of the aging process and therefore 'nothing can be done about it' **[LoE 2]**
- FI is associated with reduced quality of life, and poor health perception **[LoE 2]**

Recommendations – identifying faecal incontinence in frail older people

Bowel continence status should be established by *direct questioning and/or direct observation* in:

- all nursing/long-term care and residential home residents
- older adults with impaired mobility
- older adults with impaired cognition
- older adults with neurological disease
- older adults with chronic disease, especially diabetes
- older adults with constipation
- Primary care staff, hospital ward staff, home health staff, and long-term care staff should routinely enquire about FI in frail older patients
- Enquiry about FI should be systematic and include stool consistency, severity of FI and impact on activities of daily living and quality of life
- Health care providers should be sensitive to cultural and social barriers discouraging patients from talking about the condition
- Frail older patients with restricted ability to access primary care such as nursing home residents, and those with mobility, chronic illness, or cognitive impairment, should be screened for FI through systematic case-finding methods
- Systematic outreach programmes which make it easier for frail older people and those who care for them to volunteer the problem to their primary care provider should be implemented
- There are significant geographic variations in provision of specialist expertise in bowel care (both medical and nursing) nationally and globally, which may affect case-finding in older people
- Further examination of underlying reasons for the variations in prevalence of FI between nursing homes (standards of care, patient case-mix, reporting) is needed
- Urinary and FI often coexist; continence care workers (e.g. nurse specialists) should be trained in identification and management of fecal as well as urinary incontinence in older people
- Key requirements to improving detection in the practice setting should be implemented:
  - education of health care workers to embed both a sense of value in identifying FI, plus confidence that the condition can be treated
  - protocols should be in place clarifying all details of screening enquiry (who will ask, how to ask, when to ask, and who to ask)
  - patients and caregivers should have access to educational materials at the point of enquiry

Summary of evidence treatment of FI in frail older people

- Current evidence shows that stimulant laxatives, osmolar laxatives (PEG and lactulose), suppositories and enemas can be effective in treating faecal impaction in older people at risk of overflow **[LoE2]** . ***Included in 5th ICI chapter***
- Complete rectal clearance is required to reduce overflow FI **[LoE2]** but may be hard to achieve in frail older patients **[LoE 2]**.
- Structured multi-component approaches to bowel care did not reduce the frequency of FI in the nursing home setting, but did improve bowel frequency and number of bowel movements in the toilet **[LoE 2]**
- Older people with FI may benefit from biofeedback and sphincter strengthening exercises if they are able to comply **[LoE 3]**
- Loperamide can reduce frequency of FI, particularly when associated with loose stool (once infection and other causes have been excluded) but should be used with caution **[LoE 2]**
- Additional fibre supplementation to loperamide may not improve FI outcomes **[LoE 2]**
- Multi-component structured nurse-led assessment and intervention can improve bowel symptoms and alter bowel-related habits in older stroke patients **[LoE 2]**.
- More data are needed on the use of sacral neuromodulation in specific higher risk older age populations.

Recommendations: treatment of FI in frail older people

All following recommendations are Grade C

- Patients identified as having constipation with overflow should have effective bowel clearance (using a combination of laxatives and enemas), and then maintenance therapy with stimulant or osmotic laxatives ***Included from 5th ICI chapter***
- Suppositories are useful in treating rectal outlet delay and preventing recurrent rectal impaction with regular use
- Loperamide is a useful treatment in FI, in the absence of constipation, but should be used with caution in older adults
- Causes of loose stool must be identified and treated.
- All frail older people with FI should have structured multidisciplinary assessment and treatment of their bowel problem.
- Patient and caregiver education (using verbal and written materials) should be undertaken to promote self-efficacy and other coping mechanisms, and where appropriate self-management (e.g. reducing risk of constipation and impaction through dietary and lifestyle measures, advice on how to take loperamide). Advice on skin care, odour control, and continence aids is also important.
- Privacy and dignity of care during defecation should be afforded to all older people in institutionalised settings. Particular attention should be paid to this in patients with FI, as privacy may be relatively overlooked in their care.
- Greater emphasis needs to be placed on systematic and effective management of FI in older people backed up by sound communications between all health care providers, especially in the nursing home and acute hospital setting.
- Education of health care providers with regards to heightening awareness of the problem plus methods of identification, assessment and management of FI in older people should be broad-ranging and include geriatricians, general practitioners, hospital physicians, hospital, community, general practice and long-term care nurses, and related disciplines (physiotherapists, occupational therapists, dieticians, pharmacists).
- Cyclical national audit with provider accountability, of current practice in managing FI in older people is needed to lay the ground-work for standardised care, and provide a culture of continuous quality improvement. Such audit tools should be developed using standardised consensus methods. Incentives to providers could be benchmarking their practice against national averages, opportunities to share successful practice change strategies, and professional validation linked to good practice.

Recommendations for research

- Trials of laxative and nonpharmacological treatment and prevention of faecal impaction and overflow are needed to optimise standards of prescribing and care.
- Multicomponent interventions to treat FI in frail older people should be evaluated to assess effective ways of FI management in acute care settings
- Multidisciplinary study assessing the feasibility and efficacy of a step-wise approach to the management of dementia-related FI in nursing home residents (prompted toileting in those with mild to moderate dementia, scheduled toileting plus