Print Summary

### Guideline Title

**Urinary incontinence in frail/older men and women. In: Guidelines on urinary incontinence.**

### Bibliographic Source(s)

Urinary incontinence in frail/older men and women. In: Schröder A, Abrams P, Andersson KE, Artibani W, Chapple CR, Drake MJ, Hampel C, Neisius A, Tubaro A, Thüroff JW. Guidelines on urinary incontinence. Arnhem, The Netherlands: European Association of Urology (EAU); 2009 Mar. p. 44-51. [79 references]

### Guideline Status

This is the current release of the guideline.

## Scope

### Disease/Condition(s)

Urinary incontinence, including urgency, stress, and mixed incontinence

### Guideline Category

Counseling
Diagnosis
Evaluation
Management
Treatment

### Clinical Specialty

Geriatrics
Obstetrics and Gynecology
Surgery
Urology

### Intended Users

Advanced Practice Nurses
Physician Assistants
Physicians

### Guideline Objective(s)

To provide diagnostic evaluation and therapeutic interventions for clinical practitioners for the condition of urinary incontinence

### Target Population

Frail/older men and women with urinary incontinence

### Interventions and Practices Considered

**Assessment/Diagnosis**

1. History and symptom assessment
   - Rectal examination for faecal loading or impaction
   - Functional assessment
   - Screening for depression
   - Cognitive assessment
   - Screening for hematuria
   - Nocturia assessment
   - Post-void residual (PVR) volume measurement
2. Clinical diagnosis

**Initial Management/Treatment**

1. Lifestyle changes
2. Bladder training in fit or alert patients
3. Prompted voiding for frail and cognitively impaired patients
4. Drug therapy
   - Antimuscarinic drugs
   - Alpha-blockers
   - Vasopressin (specifically not recommended)
5. Ongoing management and reassessment

**Specialized Management/Treatment**

1. Preoperative assessment for co-morbidities

2. Patient-surgeon (or carer-surgeon) discussion of potential outcomes
3. Urodynamic testing
4. Surgical treatment

### Major Outcomes Considered

- Quality of life/patient satisfaction
- Rate of improvement in urinary continence
- Incidence of complications/side-effects

## Methodology

### Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

### Description of Methods Used to Collect/Select the Evidence

**General Search Strategy**

Up until 2007, the main strategy was to rely on the guidelines group members' knowledge and expertise on the current literature assuming that all, or almost all, relevant information would be captured. In updates produced from 2008 onwards, a structured literature search has been performed for all guidelines but this search has been limited to randomized controlled trials and meta-analyses, covering at least the past three years, or up until the date of the latest text update if this exceeds the three-year period. Other excellent sources to include are other high-level evidence, Cochrane review and available high-quality guidelines produced by other expert groups or organizations. If there are no high-level data available, the only option is to include lower-level data. The choice of literature is guided by the expertise and knowledge of the Guidelines Working Group.

### Number of Source Documents

Not stated

### Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

### Rating Scheme for the Strength of the Evidence

**Levels of Evidence**

**1a** Evidence obtained from meta-analysis of randomized trials

**1b** Evidence obtained from at least one randomized trial

**2a** Evidence obtained from one well-designed controlled study without randomization

**2b** Evidence obtained from at least one other type of well-designed quasi-experimental study

**3** Evidence obtained from well-designed non-experimental studies, such as comparative studies, correlation studies and case reports

**4** Evidence obtained from expert committee reports or opinions or clinical experience of respected authorities

### Methods Used to Analyze the Evidence

Systematic Review

### Description of the Methods Used to Analyze the Evidence

The principles of 'evidence-based medicine' (EBM) apply for analysis and rating of the relevant papers published in the literature, for which a modified Oxford system has been developed. This approach applies 'levels of evidence' (LE) to the body of analysed literature.

### Methods Used to Formulate the Recommendations

Expert Consensus (Consensus Development Conference)

### Description of Methods Used to Formulate the Recommendations

**General Methods Used to Formulate the Recommendations**

- The first step in the European Association of Urology (EAU) guidelines procedure is to define the main topic.
- The second step is to establish a working group. The working groups comprise about 4 to 8 members, from several countries. Most of the working group members are academic urologists with a special interest in the topic. Specialists from other medical fields are included as full members of the working groups as needed. In general, general practitioners or patient representatives are not part of the working groups. Each member is appointed for a four-year period, renewable once. A chairman leads each group.
- The third step is to collect and evaluate the underlying evidence from the published literature.
- The fourth step is to structure and present the information. All main recommendations are summarized in boxes and the strength of the recommendation is clearly marked in three grades (A-C), depending on the evidence source upon which the recommendation is based. Every possible effort is made to make the linkage between the level of evidence and grade of recommendation as transparent as possible.

**Specific Methods Used for This Guideline**

- In the first International Consultation on Incontinence in 1998, a structure of 'Clinical Guidelines for Management of Incontinence' was developed. This included a summary and overview, which were presented in flow sheets ('algorithms'), with recommendations for 'Initial Management' and 'Specialised Management' of urinary incontinence (UI) in children, men, women, patients with neuropathic bladder and elderly patients. These algorithms have already been presented in the previous EAU Guidelines on

neuropathic bladder and elderly patients. These algorithms have already been presented in the previous EAU Guidelines on Incontinence and continue to be the skeleton of the guidelines. The algorithms are uniformly constructed to follow from top to bottom a chronological pathway from patient's history and symptoms assessment, clinical assessment using appropriate studies and tests so that the condition of the underlying pathophysiology can be defined as a basis for rational treatment decisions. To limit the number of diagnostic pathways in the algorithms, clinical presentations that require a similar complexity of diagnostic evaluation have been grouped together by history and symptoms.

- This guideline presents a synthesis of the findings of the 4th International Consultation on Incontinence held in July 2008. References have been included in the text, with a focus on new publications covering the time span 2005 to the present.

### Rating Scheme for the Strength of the Recommendations

**Grades of Recommendation**

A. Based on clinical studies of good quality and consistency addressing the specific recommendations and including at least one randomized trial
B. Based on well-conducted clinical studies, but without randomized clinical trials
C. Made despite the absence of directly applicable clinical studies of good quality

### Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

### Method of Guideline Validation

Internal Peer Review

### Description of Method of Guideline Validation

The Appraisal of Guidelines for Research and Evaluation (AGREE) instrument was used to analyze and assess a range of specific attributes contributing to the validity of a specific clinical guideline.

The AGREE instrument, to be used by two to four appraisers, was developed by the AGREE collaboration (http://www.agreecollaboration.org/) using referenced sources for the evaluation of specific guidelines. (See the "Availability of Companion Documents" field for further methodology information).

## Recommendations

### Major Recommendations

***Note from the European Association of Urology (EAU) and the National Guideline Clearinghouse (NGC)***: The following recommendations were current as of the publication date. However, because EAU updates their guidelines frequently, users may wish to consult the EAU Web site for the most current version available.

The levels of evidence (**1a-4**) and the grades of recommendations (**A-C**) are provided at the end of the "Major Recommendations" field.

**History and Symptom Assessment**

**General Principles**

Because frail/older men and women have a very high prevalence of urinary incontinence (UI), active case finding and screening for UI should be done in all frail/older persons **(grade of recommendation: A)**. The history should identify co-morbid conditions and medications likely to cause or worsen UI.

**Table: Recommendations for Evaluation**

| Recommendations | GR |
|---|---|
| Rectal examination for faecal loading or impaction | C |
| Functional assessment (mobility, transfers, manual dexterity, ability to successfully toilet) | A |
| Screening test for depression | B |
| Cognitive assessment to assist in planning management | C |

GR = grade of recommendation

The mnemonic DIAPPERS (Delirium, Infection, Atrophic vaginitis, Pharmaceuticals, Psychological condition, Excess urine output, Reduced mobility, Stool impaction) includes some co-morbid conditions and factors to be considered. Two alterations from the original mnemonic should be noted; they are:

- Atrophic vaginitis does not by itself cause UI and should not be treated solely for the purpose of decreasing UI alone **(grade of recommendation: B)**.
- Current consensus criteria for diagnosis of urinary tract infections (UTIs) are both poorly sensitive and non-specific in nursing home residents **(level of evidence: 2)**.

The patient and/or their carer should be asked directly about:

- The degree of bother of UI **(grade of recommendation: B)**
- Goals for UI care (dryness, specific decrease in symptom severity, quality of life, reduction of co-morbidity, decreased care burden) **(grade of recommendation: B)**
- The likely level of co-operation with management **(grade of recommendation: C)**

It is also important to consider the patient's overall prognosis and remaining life expectancy **(grade of recommendation: C)**.

All patients must be screened for haematuria **(grade of recommendation: C)**, as it is not known if treatment of otherwise asymptomatic bacteriuria and pyuria is beneficial (no recommendation possible). Such treatment may cause harm by increasing the risk of antibody resistance and causing severe adverse effects, such as *Clostridium difficile* colitis **(grade of recommendation: C)**. There is insufficient evidence to recommend a clinical stress test in frail/older persons.

**Nocturia**

For frail/older people with bothersome nocturia, assessment should focus on identifying the potential underlying cause(s), including **(grade of recommendation: C)**:

- Nocturnal polyuria
- Primary sleep problem (including sleep apnoea)
- Conditions resulting in a low voided volumes (e.g., elevated post-voiding residual) co-morbidity

A bladder diary (frequency-volume chart) or wet checks may be useful in the evaluation of patients with nocturia **(grade of recommendation: C)**. Wet checks can be used to assess UI frequency in long-term care residents **(grade of recommendation: C)**.

**Post-Void Residual (PVR) Volume**

A PVR is impractical to obtain in many care settings. However, there is compelling clinical experience for measuring PVR in selected frail/older persons with:

- Diabetes mellitus (especially if longstanding)
- Prior episodes of urinary retention or history of high PVR
- Recurrent UTIs
- Medications that impair bladder emptying (e.g., anticholinergics)
- Chronic constipation
- Persistent or worsening UI despite treatment with antimuscarinics
- Prior urodynamic study demonstrating detrusor underactivity and/or bladder outlet obstruction **(grade of recommendation: C)**

Treatment of co-existing conditions (e.g., constipation) and stopping anticholinergic drugs may reduce PVR. There is no consensus regarding what constitutes 'high' PVR in any population. A trial of catheter decompression may be considered in patients with PVR >200 to 500 ml, in whom high PVR may be a major contributor to UI or bothersome frequency **(grade of recommendation: C)**.

**Clinical Diagnosis**

The most common types of UI in frail/older persons are urgency UI, stress UI, and mixed UI (in frail/older women). Frail/older persons with urgency UI often have concomitant detrusor underactivity with an elevated PVR in the absence of outlet obstruction, a condition called detrusor hyperactivity with impaired contractility during voiding (DHIC). There is no published evidence that antimuscarinics are less effective or cause retention in persons with DHIC (no recommendation possible).

**Initial Management**

Initial treatment should be individualized and influenced by goals of care, treatment preferences, and estimated remaining life expectancy, as well as the most likely clinical diagnosis **(grade of recommendation: C)**.

In some patients, it is important to recognize that contained UI (e.g., managed with pads) may be the only possible outcome for UI that persists after treatment of contributing co-morbidity and other factors. This is especially true for frail persons with no or minimal mobility (i.e., require the help of at least two persons to transfer), advanced dementia (i.e., unable to state their own name), and/or nocturnal UI.

Conservative and behavioral therapies for UI include:

- Lifestyle changes **(grade of recommendation: C)**
- Bladder training in fit or alert patients **(grade of recommendation: B)**
- Prompted voiding for frail and cognitively impaired patients **(grade of recommendation: A)**

For selected, cognitively intact, frail persons, pelvic muscle exercises may be considered, but they have not been well studied in this population **(grade of recommendation: C)**.

**Drug Therapy**

Any drug treatment should be started with a low dose and titrated with regular review, until the desired improvement has been achieved or there are adverse effects.

**Table: Recommendations for Drug Therapy in Frail/Older Men and Women with UI**

| Recommendations | GR |
|---|---|
| A trial of antimuscarinic drugs may be considered as an adjunct to conservative therapy of urgency urinary incontinence (UUI). | A-C* |
| Similarly, alpha-blockers may be cautiously considered in frail men with suspected outlet obstruction from prostate disease. | C |
| Because DDAVP (vasopressin) carries a high risk of clinically significant hyponatraemia, it should not be used in frail / older persons to treat nocturia or nocturnal polyuria. | A |

GR = grade of recommendation

*Depending on agent

**Ongoing Management and Reassessment**

Urinary incontinence can usually be managed successfully using a combination of the above approaches. However, if initial management does not provide sufficient improvement in UI, then the next step should be to reassess the patient for contributing co-morbidity and/or functional impairment and to treat it.

**Specialised Management**

Specialist referral should be considered if the initial assessment finds that a frail/older person with UI has:

- Other significant factors (e.g., pain, haematuria)
- UI symptoms that cannot be classified as urgency, stress, or mixed incontinence, or other complicated co-morbidity, which the primary clinician is unable to address (e.g., dementia, functional impairment)
- An insufficient response to initial management

The type of specialist will depend on local resources and the reason for referral. Surgical specialists could include urologists or

gynaecologists. Patients with functional impairment could be referred to a geriatrician or physical therapist. Continence nurse specialists may be helpful for homebound patients. The decision to refer a patient should take into account the goals of care, patient/carer's desire for invasive therapy, and estimated life expectancy.

**Surgical Approaches to UI in Frail/Older Men and Women**

Age itself is not a contraindication to incontinence surgery **(grade of recommendation: C)**. Before surgery is considered, all patients should undergo the following.

**Table: Recommendations for Patient Care Prior to Surgery**

| Recommendations | GR |
|---|---|
| Evaluation and treatment for any co-morbidity, medications and cognitive and/or functional impairment that may be contributing to UI and/or could compromise the outcome of the planned surgery. For example, artificial sphincter should not be placed in men with dementia, who cannot manage the device on their own. | C |
| An adequate trial of conservative therapy followed by reassessment of the need for surgery. | C |
| A discussion with the patient and/or carer to make sure that the anticipated surgical outcome is consistent with the preferred goals of care in the context of the patient's remaining life expectancy. | C |
| Urodynamic testing because the clinical diagnosis may be inaccurate. | B |
| Pre-operative assessment and peri-operative care to establish risks for, and to minimize, common post-operative complications in the elderly, such as: | |
| • Delirium and infection | A |
| • Dehydration and falls | C |

**Definitions**:

**Levels of Evidence**

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### Clinical Algorithm(s)

The original guideline document contains an algorithm for Management of Urinary Incontinence in Frail/Older Men and Women.

## Evidence Supporting the Recommendations

### Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for selected recommendations (see the "Major Recommendations" field).

## Benefits/Harms of Implementing the Guideline Recommendations

### Potential Benefits

- Appropriate management and treatment of urinary incontinence in frail/older men and women
- Improvement of symptoms

### Potential Harms

Adverse effects of drug therapy

## Contraindications

### Contraindications

Because DDAVP (vasopressin) carries a high risk of clinically significant hyponatraemia, it should not be used in frail/older persons to treat nocturia or nocturnal polyuria.

## Qualifying Statements

### Qualifying Statements

- The purpose of this text is not to be proscriptive in the way a clinician should treat a patient but rather to provide access to the best contemporaneous consensus view on the most appropriate management currently available. European Association of Urology (EAU)

guidelines are not meant to be legal documents but are produced with the ultimate aim to help urologists with their day-to-day practice.
- The EAU believes that producing validated best practice in the field of urology is a very powerful and efficient tool in improving patient care. It is, however, the expertise of the clinician, which should determine the needs of their patients. Individual patients may require individualized approaches, which take into account all circumstances and treatment decisions often have to be made on a case-by-case basis.
- There are some very clear limitations on the use of the EAU Guidelines. These guidelines are specifically aimed at helping the practising urologist and will thus be of limited use to other health care providers or third party payers. These are limitations which we have accepted, given that the aim is to cover all of Europe and that such non-clinical questions are best covered locally. Another limitation is that the texts have no medico-legal status, nor are they intended to be used as such.

## Implementation of the Guideline

### Description of Implementation Strategy

The European Association of Urology (EAU) Guidelines long version (containing all 19 guidelines) is reprinted annually in one book. Each text is dated. This means that if the latest edition of the book is read, one will know that this is the most updated version available. The same text is also made available on a CD (with hyperlinks to PubMed for most references) and posted on the EAU websites Uroweb and Urosource (http://www.uroweb.org/guidelines/online-guidelines/ & http://www.urosource.com/diseases/).

Condensed pocket versions, containing mainly flow-charts and summaries, are also printed annually. All these publications are distributed free of charge to all (more than 10,000) members of the Association. Abridged versions of the guidelines are published in European Urology as original papers. Furthermore, many important websites list links to the relevant EAU guidelines sections on the association websites and all, or individual, guidelines have been translated to some 15 languages.

### Implementation Tools

Clinical Algorithm
Foreign Language Translations
Pocket Guide/Reference Cards
Resources

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

## Institute of Medicine (IOM) National Healthcare Quality Report Categories

### IOM Care Need

Getting Better
Living with Illness

### IOM Domain

Effectiveness
Patient-centeredness

## Identifying Information and Availability

### Bibliographic Source(s)

Urinary incontinence in frail/older men and women. In: Schröder A, Abrams P, Andersson KE, Artibani W, Chapple CR, Drake MJ, Hampel C, Neisius A, Tubaro A, Thüroff JW. Guidelines on urinary incontinence. Arnhem, The Netherlands: European Association of Urology (EAU); 2009 Mar. p. 44-51. [79 references]

### Adaptation

Not applicable: The guideline was not adapted from another source.

### Date Released

2009 Mar

### Guideline Developer(s)

European Association of Urology - Medical Specialty Society

### Source(s) of Funding

European Association of Urology

### Guideline Committee

Not stated

### Composition of Group That Authored the Guideline

*Primary Authors*: A. Schröder; P. Abrams (*Co-Chairman*); K-E. Andersson; W. Artibani; C.R. Chapple; M.J. Drake; C. Hampel; A. Neisius; A. Tubaro; J.W. Thüroff (*Chairman*)

### Financial Disclosures/Conflicts of Interest

All members of the Incontinence Guidelines writing panel have provided disclosure statements on all relationships that they have and that might be perceived to be a potential source of conflict of interest. This information is kept on file in the European Association of Urology (EAU) Central Office database. This guidelines document was developed with the financial support of the EAU. No external sources of funding and support have been involved. The EAU is a non-profit organisation and funding is limited to administrative assistance and travel and meeting expenses. No honoraria or other reimbursements have been provided.

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### Guideline Status

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### Guideline Availability

Electronic copies: Available in Portable Document Format (PDF) from the European Association of Urology Web site.

Print copies: Available from the European Association of Urology, PO Box 30016, NL-6803, AA ARNHEM, The Netherlands.

### Availability of Companion Documents

The following are available:

- EAU guidelines office template. Arnhem, The Netherlands: European Association of Urology (EAU); 2007. 4 p.
- The European Association of Urology (EAU) guidelines methodology: a critical evaluation. Arnhem, The Netherlands: European Association of Urology (EAU); 18 p.

The following is also available:

- Guidelines on urinary incontinence. 2009, Pocket guidelines. Arnhem, The Netherlands: European Association of Urology (EAU); 2009 Mar. 12 p. Electronic copies: Available in Portable Document Format (PDF) in English and Russian from the European Association of Urology Web site. Also available as an e-book from the EAU Web site.

Print copies: Available from the European Association of Urology, PO Box 30016, NL-6803, AA ARNHEM, The Netherlands.

### Patient Resources

None available

### NGC Status

This NGC summary was completed by ECRI Institute on May 7, 2010. The information was verified by the guideline developer on June 21, 2010.

### Copyright Statement



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