Bladder training, toileting and practical management for frail older people with incontinence

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In this session

Brief overview and review of the evidence for bladder training and toileting programmes and what we know from Cochrane systematic reviews

Include findings from a metastudy of the four Cochrane reviews and present a summary of findings from more recent systematic reviews of studies managing incontinence in older people in care homes

Finally look at the practical management of incontinence with reference to policy guidance and key texts
Definitions and Context

Bladder training
Aims to increase the time interval between voids either by mandatory or self-adjustable schedule so that incontinence is avoided and continence regained (Wallace et al 2004).

Prompted voiding
Teaches people with or without cognitive impairment to initiate toileting through requests for help and from positive reinforcement from carers (Eustice et al 2002)
Habit retraining
Aimed at people with or without cognitive impairment. Identifies an individual’s toileting pattern and development of a schedule that pre-empts involuntary bladder emptying by decreasing or increasing the void intervals aiming to keep intervals as long as possible without incontinence (Hadley 1986, Fantl et al 1996, Ostaszkiewicz et al 2004b)

Timed voiding
Sometimes called scheduled, routine or regular toileting and characterised by a fixed time interval between toileting and aimed at people with or without cognitive impairment. A passive toileting assistance program initiated and maintained by carers suitable for people who cannot undertake independent toileting (Fantl et al 1996, Ostaszkiewicz et al 2004a)
Historical Context

**BT:** one of the earliest to evolve in the mid to late 1970’s aimed at people who are cognitively and physically able

**PV:** came later and was targeted at people with cognitive and physical impairments by care staff and common in institutional settings

**HR:** evolved at a similar time as BT aimed at people with impaired cognitive and physical abilities by motivated staff

**TV:** also came later and aimed at people with cognitive and physical impairments by care staff and common in institutional settings
Populations and Interventions

**Bladder training**  Included: 12 trials, n = 1473 mainly women (Wallace et al 2009)

**Prompted voiding** Included: 9 trials, n = 674 elderly, mainly women (Eustice et al 2009)

**Habit retraining** Included: 4 trials, n= 378 mainly women (Ostaszkiewicz et al 2010)

**Timed voiding** Included: 2 trials, n = 298 (Ostaszkiewicz et al 2010)
**Figure 1.** The relative risk (95% CI) for the number of participants with improvement in incontinence following timed voiding combined with another intervention compared to usual care (Tobin and Brocklehurst, 1986)

<table>
<thead>
<tr>
<th>Study</th>
<th>Control n/N</th>
<th>Treatment n/N</th>
<th>RR (95% CI Fixed)</th>
<th>Weight %</th>
<th>RR (95% CI Fixed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobin 1986</td>
<td>18 / 79</td>
<td>39 / 95</td>
<td></td>
<td>0.0</td>
<td>0.56[0.35,0.89]</td>
</tr>
</tbody>
</table>

n = the number of participants with this outcome/N = the total number of participants in the group with outcome

RR = relative risk

95% CI = 95% confidence interval
Outcomes

What did we find?

There is limited evidence suggests Bladder Training may be useful, and suggestive evidence that Prompted Voiding may be useful in the short term for managing urinary incontinence in adults.

There is insufficient evidence on the effectiveness of Habit Retraining and Timed Voiding to support for or against the management of urinary incontinence in adults.
Meta-study
Systematic review of bladder training and voiding programmes in adults: a synopsis of findings on theory, methods, data analysis and outcomes using meta-study techniques (Roe et al 2007 a,b)

To review the evidence base of bladder training, prompted voiding, habit retraining and timed voiding from systematic reviews and meta-study

To address definitions, historical and theoretical constructions, clinical effectiveness, resources, adherence, feasibility and sustainability

To identify gaps in evidence for these behavioural interventions

To identify and inform future research and current practice
Overview of the Evidence Base

Cochrane systematic reviews
BT (Wallace et al 2004); PV (Eustice et al 2002); HR and TV (Ostaszkiewicz et al 2004 a,b)

Meta-study using review methods for qualitative studies to provide a synopsis and descriptive comparison and constrast

Selection and appraisal of primary research
Meta-theory
Meta-method
Meta-data analysis

Paterson et al 2001
Theoretical Foundations

All conservative therapies

Therapeutic focus on a programme of voiding

Client cooperation for toileting is a prerequisite

Differ from one another in their overall aim, pattern of toileting involved and degree of participation by client or caregiver

In practice TV and HR used in situations where client is not always cooperative, although client cooperation is optimal for success
Terminology Conundrum

Need to reconceptualise the theory underpinning BT, PV, HR, and TV, their mutual exclusivity and consequently terminology

Operational overlap in relation to terminology in the trials and studies reviewed across the systematic reviews. Difficulty whether to include or exclude studies from reviews.

Clarification sought from lead investigators

Reasons for overlap or lack of clarity: Studies undertaken before standardisation of terms available, operational terms varied in the studies although they stated BT, PV, HR or TV used or stated used but insufficient detail reported in the written account to confirm this
Terminology Conundrum

Further examples;

**BT** suggested to increase bladder capacity by prolonging voiding intervals (Hadley 1986) but not borne out in cystometric capacity testing (Dougherty et al 1998, Elser et al 1999)

**PV** has shown an increase in self initiated toileting which may reflect dependency on caregiver rather than behavioural change (Eustice et al 2002)

Need to explore cognitive mechanisms underlying **BT** and voiding programs, the role of Cognitive Behavioural Therapy also the implications of combined complex interventions in future trials
Current Cochrane reviews being undertaken

Toileting assistance programs for the management of urinary incontinence in adults (Ostaszkiewicz et al)

To determine the effects of toileting assistance programs for the management of urinary incontinence in adults.

Combined conservative interventions for urge, stress or mixed incontinence in adults (French et al 2010, protocol)

To determine whether combinations of conservative interventions reduce the number of people with UI compared against no treatment/usual care

To determine their effects on subjective perceptions, severity or symptoms, QOL/symptom distress, satisfaction, cost, adverse events
Systematic reviews of the management of incontinence and promotion of continence in older people in care homes

Descriptive studies with UI as the primary outcome
(Roe et al 2011. JAN 67,2, 228-250)

Descriptive studies with factors associated with UI as primary focus
(Roe et al 2011. IJOPN 19 Dec 2011)

Intervention studies with UI as the primary outcome
(Flanagan et al 2012. Geriatr Gerontol Int. 12,4,600-11)

Intervention studies with factors associated with UI as primary focus
(Flanagan et al, under review)
Systematic reviews of the management of incontinence and promotion of continence in older people in care homes

To identify empirical research for the management of incontinence, promotion of continence or maintenance of continence in older people in care homes

Search conducted with no date limits up to 2009, then updated 2010

Empirical studies that used quantitative or qualitative designs and methods that met inclusion criteria were included

Standard techniques and methods for systematic reviews were used and narrative synthesis of designs, methods, findings and outcomes
Systematic reviews of the management of incontinence and promotion of continence in older people in care homes

Records identified from database search (n=181)
Records after duplicates removed (n=175)
Records and full text articles screened (n=174, 1 awaiting)

Full text articles assessed for eligibility (n=86 including 5 systematic reviews and 1 related paper to identify relevant studies)
Records and full text articles excluded with reasons (n=82)

Studies included in quality appraisal (86 to 68 primary studies)
Studies included in data extraction (n=42 intervention studies and 26 descriptive/observational studies)
Included studies

Descriptive studies
10 studies with UI as primary focus/outcome
16 studies with associated factors/comorbidities or management approaches as primary focus/outcome

Intervention studies
33 studies with UI as primary outcome: of which 11 were RCTs
9 studies with associated factors or management approaches as primary focus/outcome

Associated factors included economic data, skin care, exercise and mobility studies, staff quality and prompted voiding adherence, patient and family preferences, promotion of continence by the management of dehydration and incontinence
What did we conclude

Use of incontinence pads and toileting programmes were the most common management approaches.

No studies attempted to maintain continence of residents in care homes. Preventive studies are warranted.

Basic management procedures including the use of toileting programmes and incontinence pads have proven to be successful in terms of reducing the frequency of incontinence, increasing the percentage of appropriate toileting behaviour, maintaining social continence and regaining continence for some.
What did we conclude

Incontinence in care homes is largely a care management issue which needs time and cost efficient staff management procedures to improve outcomes and ensure quality care is delivered and achieved.

Objective improvements are needed with long term continence as the primary focus of future trials.

The effectiveness of combined behavioural interventions within these populations for the management of incontinence in future trials is warranted.

Managing incontinence is also associated with promotion of exercise and mobility, staff quality, promotion of continence, institutional and personal costs.
Practical management of UI in frail older people

History & symptom assessment & clinical assessment
assess and treat potentially treatable conditions & ADLs
assess QOL, desire for Rx, goals of Rx and preferences
target physical exam – cognition, mobility, neurological
urinalysis and MSU
bladder diary, fluid intake, cough test & PVR

Clinical diagnosis – urge UI, stress UI, mixed UI, significant PVR

Initial management – conservative - lifestyle, behavioural therapies,
treat constipation, review medications,
consider topical oestrogen, cautious addition/trial antimuscarinics or alpha blocker (men)
Ongoing management and reassessment ? Specialist referral
Practical management of FI in frail older people

Medical, functional and cognitive assessment
  functional toileting problems
  cognitive problems

Digital rectal examination
  weak pelvic floor and anal sphincters
  rectal stool impaction

Bowel symptoms and abdominal examination
  constipation by symptoms or by X ray
  loose stools

Education – patient, carers, health care providers
Practical management - Key policies, algorithms, guidance

NICE guidance being updated 2012 –

Cochrane reviews available

European Association of Urology guidelines –
European Urology 2011, 59, 387-400

Incontinence in the frail elderly: Report from the 4th International consultation on incontinence


In Conclusion

Incontinence in frail older people can be successfully managed – using conservative approaches and continence regained, or social continence attained with use of dependent assistance and containment aids

Assessment and diagnosis are essential to guide management

Regular evaluation and reassessment are required

Able to be undertaken in primary care - at home or care home

MDT input is essential, as are committed staff

Studies on maintenance of continence and prevention are warranted
Thank you

Any questions?

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