The role of the nurse in community continence care: a systematic review

CRD summary
This review assessed the clinical effectiveness and cost-effectiveness of nurse interventions in community continence care. The authors found limited short-term evidence to suggest that nurse treatment reduces incontinence. Given the variation between the studies and the difficulties in determining the specific effects of the nursing component, the authors are right to be cautious in their conclusion.

Authors' objectives
To assess the clinical effectiveness and cost-effectiveness of nurse interventions in community continence care.

Searching
MEDLINE, CINAHL and EMBASE were searched up until April 2004; the search terms were reported. The reference lists of retrieved articles were also screened for additional studies. No language restrictions were applied.

Study selection
Study designs of evaluations included in the review
Only randomised controlled trials (RCTs) were eligible for inclusion. The duration of follow-up in the included studies ranged from 8 weeks to 2 years.

Specific interventions included in the review
Eligible studies had to compare any community continence care intervention in which a nurse played an important role, with usual care or no treatment. The included studies incorporated a number of different combinations of different interventional components. The most commonly reported elements involved nurses giving advice or information about pelvic floor muscle exercises, bladder training and giving other instructions to patients. Electrostimulation therapy, anticholinergic treatment, biofeedback and information about the anatomy of the urinary tract were also used in some studies. In 8 studies the nurses were reported as being specifically skilled or trained in the assessment and treatment of incontinence.

Participants included in the review
Studies of community-dwelling adults suffering from urinary incontinence were eligible for inclusion. The participants included in the review were all aged 26 years or older, with incontinence of varying type (stress, urge or mixed) and severity (at least twice a week, to at least once in the preceding month).

Outcomes assessed in the review
Eligible studies had to assess one or more of the following outcomes: episodes of incontinence (leaks), pad usage, pad test, quality of life, patient satisfaction and costs. The included studies used bladder diaries, frequency/volume charts, pad test, frequency or severity (using visual analogue scale or questionnaire), patient satisfaction (standardised instrument or questionnaire) and quality of life (e.g. Incontinence Impact Questionnaire or Urogenital Distress Inventory).

How were decisions on the relevance of primary studies made?
The authors did not state how the papers were selected for the review, or how many reviewers performed the selection.

Assessment of study quality
Study validity was assessed using a published list of 17 criteria (9 internal validity criteria, 6 descriptive criteria and 2 statistical criteria); details of the criteria were reported. A quality score between 0 and 18 points was awarded to each study. Studies meeting less than 50% of the criteria (i.e. 9 points) were excluded from the review (one study scored 8).
At least two reviewers assessed the validity of each study and any disagreements were resolved through discussion.

**Data extraction**
The authors did not state how the data were extracted for the review, or how many reviewers performed the data extraction. The data appears to have been extracted as reported in the original study articles.

**Methods of synthesis**
**How were the studies combined?**
The studies were combined according to outcome in a narrative summary.

**How were differences between studies investigated?**
Some differences between the studies were evident from the data tables while others were discussed in the review text.

**Results of the review**
Eleven RCTs (n=2,560) were included. One additional RCT was identified but it failed to meet the reviewers’ quality criteria.

The quality scores ranged from 9 to 13 (maximum score 17); the mean score was 11.5. Criteria that were often either not met or not reported included the following: treatment allocation concealed; cointerventions avoided or comparable; compliance acceptable in all groups; outcome assessed blinded; adverse effects described; and long-term follow-up performed.

Clinical and patient satisfaction.

Incontinence episodes were reported in all 11 studies: all but 3 studies reported statistically significant reductions in favour of the intervention compared with no treatment or usual care. Two studies measured the number of leaks, one of which reported a significant difference in favour of the intervention group. Three studies used a pad test, two of which found a statistically significant difference in favour of the intervention group. Four studies measured the number of incontinence pads used, of which three reported greater patient satisfaction with the intervention than the control group.

Five studies assessed patient satisfaction, of which two (representing two of 4 studies using the Incontinence Impact Questionnaire) reported significantly higher satisfaction with the intervention compared with the control; the other 3 studies failed to find any statistically significant difference between the intervention and control groups.

Two out of 6 studies reported an improvement in the quality of life of participants receiving the intervention versus the control: one study reported a significant increase in perceived knowledge and bladder control, and the other a significant reduction in the severity of urine loss.

Two studies found that women with more severe incontinence benefited more from the intervention than those with less severe incontinence. However, another 2 studies found no relationship between severity and improvements in outcomes.

**Cost information**
One RCT reported a significant reduction in costs for treatment interventions, but no formal cost-utility analysis was conducted. Another RCT assessed the costs but did not report any useful data.

**Authors' conclusions**
There is limited short-term evidence to suggest that incontinence treatment involving nurses results in a decrease in incontinence.

**CRD commentary**
This review was based on a clear research question. However, since the literature search did not specifically search for unpublished studies it could be subject to publication bias, as the authors themselves acknowledged. It was also unclear whether the authors took appropriate steps to reduce the risk of error and bias when selecting the studies for inclusion and extracting the study data. Some attempts were, however, made to reduce error and bias when assessing the quality of the studies, with two reviewers independently assessing each study.

Given the wide variation in study settings, patient characteristics, interventions and outcome measures, the use of a narrative summary appeared appropriate. In terms of interpreting the data, however, it would have been helpful to have had more information on the characteristics of the patients (e.g. incontinence severity, age, type of incontinence) and the effect sizes of the outcomes. The complexity of the interventions also made it difficult to determine the exact effects of the nursing component of the interventions, as the authors themselves acknowledged. Overall, given the heterogeneity between the studies, the lack of long-term data and the difficulties in determining the specific effects of the nursing component of interventions, the authors are right to be cautious in their conclusions.

Implications of the review for practice and research
Practice: The authors stated that the involvement of nurses in incontinence care seems justified.

Research: The authors stated that future studies should assess long-term outcomes (i.e. longer than 3 years), the impact of incontinence severity, costs, and which types of patients would benefit the most from nurse care.

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This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.