

of services at a lower price, and choosing cheaper providers. This means that hospitals lost money, despite the demand for specialist services having increased. It is on the whole reassuring that referral rates seem relatively immune from financial pressures as it suggests that fundholders' patients are not being deprived of the level of specialist attention afforded to those whose general practitioners are not fundholders. It may be disappointing, however, to those who hoped that the fundholders' scope for reinvesting savings in new practice based facilities would encourage a shift away from dependence on specialist hospital services. Our results show no such shift, at least in terms of initial outpatient referrals.

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## Urinary incontinence: long term effectiveness of nursing intervention in primary care

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In the United Kingdom regular urinary incontinence affects over 2 000 000 women and costs the NHS about £70 million a year on aids and appliances. The assessment and treatment services lack a coherent plan for its recognition and treatment, and where and from whom care is best received is debated.<sup>1</sup> Few of the current management strategies (pelvic exercises, appliances, drugs, and surgery) have been the subject of well designed randomised controlled trials in primary care, and few studies have reported long term results.<sup>2-4</sup> Thus lack of evidence combined with poorly trained primary care physicians and nurses has meant that fewer than one in three patients are recognised and fewer still are appropriately managed.<sup>1</sup>

In 1991 we reported the results of a randomised controlled trial of the management of incontinence in primary care using a nurse trained in simple assessment and management techniques.<sup>5</sup> The results after 12 weeks were promising: 68% cure or improvement in the intervention group compared with 5% in the controls. If these outcomes are maintained in the longer term then this model of service provision may have much to offer. This report details the four year follow up results of that study.

### Subjects, methods, and results

In the 1990 study, 292 women suffering from validated regular incontinence, with two or more leaks a month, were randomly assigned to immediate assessment and treatment by a nurse or were left for 12 weeks (historical controls), after which they followed the same intervention plan. Intervention consisted of four sessions of pelvic floor exercises or bladder retraining, depending on the dominant symptoms. Women were encouraged to continue the management plan at home and were not offered further intervention. At the 12 week follow up in 1990, 276 women reported their continence status (cure, improvement, the same, or worse). Those remaining the same or deteriorating were referred back to their general practitioner.

Four years later we contacted all these women, using a similar questionnaire asking about continence status, use of pads, exercises, or any further treatment. In the intervening four years, 18 women had died with conditions unrelated to their incontinence, 23 could not be traced, and six failed to respond. The continence status in 1990 of non-responders after treatment did not differ from that of those who responded to the

Four year follow up of women treated for incontinence by pelvic floor exercises or bladder retraining. Values are numbers (percentages)

| Status after treatment | At follow up                           |            |              |           |
|------------------------|--|------------|--------------|-----------|
|                        | Maintained benefit or improved further | No benefit | Deteriorated | Total     |
| Cured                  | 19                                     | 0          | 8            | 27 (12)   |
| Improved               | 124                                    | 0          | 18           | 142 (62)  |
| Same                   | 15                                     | 33         | 10           | 58 (25)   |
| Deteriorated           | 0                                      | 0          | 2            | 2 (1)     |
| Total                  | 158 (69)                               | 33 (15)    | 38 (16)      | 229 (100) |

questionnaire. Results are available from 229 women (89% of surviving women).

In 1994, 69% (158) of women had either maintained their original improvement or cure or had improved further. Sixteen per cent (38) had deteriorated and 15% (33) neither benefited from the original programme nor changed since then (table). Of the 60 women referred back to their general practitioner in 1990 and wanting further treatment, six had surgery, three were considering it, 11 were taking antimuscarinic agents, and four were receiving outpatient treatment. Only 27% (61) of women continued exercising for more than a year; 61% (141) exercised for less than a year and 12% (27) stopped immediately. Pelvic floor exercises for one year or more was strongly associated with improvement or maintenance of benefit (56/61) compared with exercises for less than one year (102/168;  $P < 0.001$ ).

### Comment

Our 1990 study showed that a short, three week training course for a nurse in the assessment and management of incontinence in primary care can offer the NHS a practical, accessible, and acceptable service for all women with urinary incontinence. This follow up study shows that this strategy is effective in the longer term. This model of service provision will also benefit secondary care by ensuring that patients are appropriately managed in primary care before possible referral.

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