Primary Health Care Research and Development 2001; **2**: 173–186

Clinical guidelines for the promotion of continence in primary care: community nurses' knowledge, practice and perceptions of their role

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Urinary incontinence is a common and debilitating problem. Its prevalence increases with advancing age, and heavy reliance on containment products results in high costs for community services, yet evidence exists that effective treatments can be provided in primary care. This quasi-experimental study compared the knowledge, practice and perceptions of their role by community nurses before (Phase 1) and after (Phase 3) the introduction of evidence-based clinical guidelines for continence care. Local guidelines were developed from nationally published guidelines and introduced into two localities of a community NHS trust (the intervention group) with a supporting educational programme during Phase 2. An audit of patient notes showed statistically significant improvements in assessment details recorded by the intervention group, and in the numbers of patients for whom a treatment plan was identified at Phase 3. Data collected from questionnaires, interviews and focus groups showed that the majority of community nurses in both the intervention and control groups believed that their role should involve the assessment and first-line treatment/management of urinary incontinence. However, limitations in their knowledge of continence care and difficulties in enhancing that knowledge base were identified. Three themes relating to role perceptions emerged from interviews, namely assessment skills, patient capacity and role restrictions. The study raises questions about what may constitute realistic expectations of role development for community nurses. Greater development of multidisciplinary teamworking, including enhancement of the link nurse role to provide co-ordination in continence care, could be a way forward.

Key words: clinical guidelines; community nurses; continence; education; primary care

Introduction

Urinary incontinence is a common and debilitating problem that affects up to 6 million people in the UK. Prevalence rates increase with advancing age, and the ranges for men and women aged 65 years and over, living at home, are 7–10% and 10–20%, respectively, but problems are often under-reported (Royal College of Physicians, 1995; Department of Health, 2000). Even for those known to the health services, incontinence is not always managed appropriately, and heavy reliance on the use of containment products has resulted in rapidly rising costs that are estimated to reach £236 million by 2001 (Euromonitor plc, 1997). Yet effective treatments exist, and even where complete cure may not be possible, improvement can be expected in a high proportion of cases (Royal College of Physicians, 1995; Department of Health, 2000).

Although urodynamic investigation is generally considered to be the definitive source of infor-

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1463-4236(2001)PC064OA

mation leading to diagnosis, a correlation exists between characteristic symptom patterns and urodynamic findings (Stanton and Hilton, 1981; Kurth, 1999). On this basis, symptom characteristics can provide a satisfactory foundation for decision making on first-line treatment approaches that can be initiated within primary care (Ramsay *et al*., 1994, 1996). Successful outcomes have been reported for a range of approaches which are within the scope of the primary health care team, provided that appropriate knowledge, skill and commitment exist (Button *et al*., 1998).

The Audit Commission report (Audit Commission, 1999) indicated that continence care represents a high proportion (20%) of the workload of district nurses, but patient assessments are inadequate, and management by containment methods predominates. The development and implementation of evidence-based clinical guidelines can be an effective approach to reducing inappropriate variations in practice, through utilizing research evidence to underpin practice, and by focusing on measurable outcomes in the light of limited resources (NHS Executive, 1996; Cheater and Closs, 1997; Thomas *et al*., 1998). National Guidelines for Continence have been developed in the USA (Agency for Health Care Policy and Research, 1992, 1996) and in the UK for primary health care (Button *et al*., 1998). More recently the Department of Health has published its guidance on *Good Practice in Continence Services* (Department of Health, 2000). Nevertheless, implementing guidelines to promote proactive care is a complex issue that can be influenced by a range of factors, including the quality of the evidence, change management strategies employed and the extent of support offered within the organization (Hurwitz, 1998; Kitson *et al*., 1998; Thomas *et al*., 1998).

The study reported here arose in response to questions about where the responsibility for first assessment of older adults (over 65 years of age) with urinary incontinence should lie. This age group utilizes the largest proportion of continence resources within the NHS trust studied, and it was believed that community nurses were in a unique position to take greater responsibility for assessment and initiation of strategies to promote continence than was currently the case. The study aimed to introduce evidence-based guidelines with an associated educational programme, since the Audit Commission (1999) reported that 20% of district nurses had no formal education in the assessment of continence.

Study design

A quasi-experimental design was used to compare the knowledge, practice and perceptions of their role by community nurses before and after the introduction of guidelines. Detailed examination of patient perspectives and the process of change management are reported elsewhere (Bignell *et al*., 2000). The project leader, herself an experienced community nurse, was based in the trust but held a joint academic/clinical contract. Guidance was provided by a project steering group which included trust executives.

Methods

The three-phase study (see Figure 1) was undertaken in a community NHS trust serving a population of approximately 60 000 people aged 65

Phase 1 (10 months) Trust-wide situational analysis and baseline audit, which examined current roles and knowledge of continence care. Data collection was by retrospective audit of patient notes, questionnaire and interviews. The information obtained was used to formulate a change in management strategy and to inform guideline development and educational initiatives in Phase 2.
Phase 2 (11 months) Development and introduction of locally adapted guidelines in the intervention group, supported by an educational programme.
Phase 3 (6 months) Evaluation of professional, organizational and patient outcomes through repeat audit across both groups.

Figure 1 Phases of the study.

years or older. The four localities within the trust were paired to provide control and intervention groups, which were matched as far as possible for population demography and range of health service provision.

There was a brief time overlap between Phases 1 and 2 due to a trust merger and change of project leader, which necessitated further situational analysis. However, strict measures were taken to avoid compromising the validity of the data. Strategies to disseminate the conclusions and sustain effective changes were built into the final stages of the project, and they included provision of guidelines and educational support to the control group.

Sample

The health professional sample consisted of the whole population of community nurses in the trust (n = 246). This included all district nurses (DNs), health visitors (HVs), nurse visitors for the elderly (NVEs) and Registered General Nurses without a district nursing qualification (RGNs). Similar proportions of these health professionals existed in both groups. Semi-structured interviews with the locality director (responsible for continence services) and the clinical service managers (responsible for localities) provided additional organizational perspectives. Attempts to interview a random sample of GPs were unsuccessful, and an opportunistic sample of three GPs was therefore recruited.

Phase 1

Audit of patients' notes

The records of all new patients receiving a continence assessment during a 3-month period were audited in order to identify assessment details, utilization of resources, and referrals.

Community nurse questionnaire and interviews

Data on community nurses' knowledge, role and attitudes was obtained by means of a postal questionnaire (adapted from Cheater, 1990 and Penney, 1999) which included three patient vignettes designed to test the application of nurses' knowledge. The questionnaire was deemed by academic and clinical continence specialists to have a high degree of content validity. It was piloted with a sample of 10 nurses from another trust prior to distribution. No changes were made. Further in-depth information was obtained by means of semi-structured interviews with a smaller, randomized sample of 30 community nurses. The sample was stratified according to locality and professional grouping, from those agreeing to be interviewed on their questionnaire response. It is acknowledged that this was not a truly random sample since it included a degree of self-selection. All of the interviews were recorded with the consent of the participants, and were later transcribed and subjected to thematic analysis with the aid of Nudist software.

Phase 2

Baseline data were used to inform the development and implementation strategy for local clinical guidelines through discussion at a series of community nurse focus groups (Krueger, 1994). The opportunity to join a focus group was open to all community nurses in the intervention group, and the six meetings that were held (three in each locality) provided a means of involving nurses in the ownership of potential changes in practice. However, attendance was relatively low, ranging from 3 to 8 nurses, despite prior agreement by others to participate. The groups identified the following key issues for consideration in guideline development: the importance of patient involvement in assessment and goal setting; sufficient detail to be recorded at assessment to enable the identification of different types of incontinence; and the need for clear guidance on assessment, treatment and referral processes. A Guideline Working Group (consisting of the project leader, continence specialists and link nurses) undertook the preparation of the local guidelines, which were adapted from existing national and international guidelines for continence promotion (Agency for Health Care Policy and Research, 1992, 1996; Button *et al*., 1998) and other local guidelines (Tower Hamlets Healthcare Trust, 1997). The criterion of involving patients fully in their assessment resulted in the first part of the assessment document being designed for self-completion by the patient (or a carer). Draft copies of the guidelines were presented at a series of community nurse discussion groups for feedback and revision prior to piloting with patients.

Guideline introduction

The strategy for guideline introduction included an education programme designed to prepare and support nurses in changes in practice, and to meet

learning needs that were identified either directly or indirectly from the level of knowledge that was apparent from the questionnaire responses. The programme (see Figure 2) was planned to facilitate access, since nurses often found it difficult to be spared from their workloads. A variety of methods were used to advertise sessions, and participants provided evaluative feedback. All of the staff in the intervention group were requested to attend a half-day introductory session on the new guidelines by senior management. The project leader provided further support, on request, during the 4 months following the introduction of the guidelines.

Phase 3

This phase consisted of a repeat of the baseline data collection protocol, with minor modifications to the questionnaire to reduce the completion time. Questionnaires were distributed to all community nurses in both groups, by personal contact wherever possible in order to improve the response rate.

Results

Audit of patients' notes

The introduction of guidelines was accompanied by changes in the assessment documentation used by nurses. As a result, it is difficult to make direct comparisons between assessment details recorded during Phases 1 and 3. However, Table 1 illustrates comparable categories and also compares both groups at the end of Phase 3, when the control group was also using the new documentation, following a half-day introduction. It should be noted that the reduction in identification of the cause/type of incontinence in Phase 3 is most probably due to changes in the assessment form. The form used in Phase 1 presented a choice of four tick boxes for the type of incontinence, but did not require any supporting evidence. By contrast, the documentation used in Phase 3 required much greater assessment detail to allow nurses to form their own diagnostic judgement. As a result, some nurses may have been uncertain or unwilling to commit themselves.

Statistically significant improvements by the intervention group in Phase 3 were noted for the monitoring of incontinence episodes ($P = 0.045$), urine testing ($P = 0.0002$) and treatment planning ($P = 0.0002$) compared with Phase 1. Urine testing had also improved in the control group in Phase 3 ($P = 0.0007$), but in both groups improvement was at least partially due to the increased availability of equipment, negotiated during Phase 2. An important difference between the groups in Phase 3 was the greater identification of a treatment plan for patients in the intervention group ($P = 0.028$).

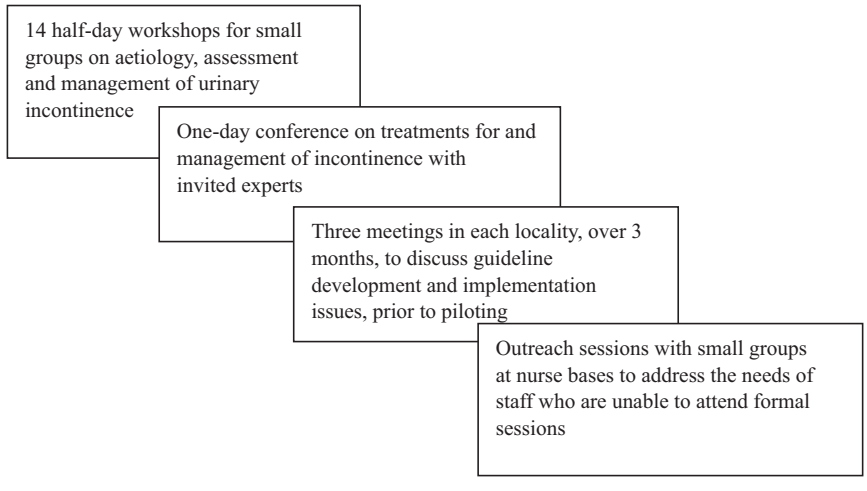

Figure 2 Educational programme provided for the intervention group.

Table 1 Comparison of audits of patient assessments

Category	Phase 1 New patients only (3-month period)	Phase 3 All patients assessed (2-month period)	
	Both groups (n = 43)	Intervention group (n = 47)	Control group (n = 51)
Identification of cause/type of incontinence	74%	53%	41%
Frequency of incontinence episodes	30%	70% (P = 0.045)[a]	55%
Physical observation	Not on assessment form	53%	27%
Physical examination undertaken/patient referred for examination	Not on assessment form	9%	2%
Urine test performed	12%	77% (P = 0.0002)[a]	66% (P = 0.0007)[a]
Urinary tract infection identified	Not known	17%	4%
Treatment plan	9%	70% (P = 0.0002)[a]	29% (P = 0.028)[b]

[a]Significant difference in comparison to Phase 1 (Chi-square test).
[b]Significant difference in comparison to intervention group (Chi-square test).

Community nurse questionnaire

The Phase 1 response rate was 41% (100/246), increasing to 70% (172/246) in Phase 3. There was no statistically significant difference in the distribution of community nurses (DNs, HVs, NVEs and RGNs) responding across groups or phases, or in the responses across the four localities. DNs and RGNs represented more than 55% of responses in both phases. Sources of previous continence education were varied (see Table 2), and included both formal and informal opportunities. In-service training by continence advisers was the most common source, and included an emphasis on product training.

Continence education was not widely reported as part of either general or community nurse training. This was true for nurses who were recently qualified, as well as for those who completed their training more than 10 years ago. Post-registration education, with a substantial focus on continence

Table 2 Sources of education for community nurses

Source	Phase 1		Phase 3	
	Intervention group	Control group	Intervention group	Control group
In-service training including products	46 (96%)	52 (100%)	62 (83%)	79 (81%)
Promotion of continence training	36 (75%)	45 (87%)	62 (83%)	79 (81%)
General training	12 (25%)	13 (25%)	13 (17%)	28 (29%)
ENB 978	5 (10%)	6 (12%)	4 (5%)	8 (8%)
Community training	4 (8%)	3 (6%)	18 (24%)	30 (31%)
Link nurse sessions	4 (8%)	4 (8%)	—	—
Sessions run by physiotherapists	4 (8%)	—	—	—
Own reading/updating	1 (2%)	4 (8%)	—	2 (2%)
Conference attendance	1 (2%)	1 (2%)	—	—
Other relevant ENB courses (941, 105)	—	—	5 (7%)	10 (10%)

care, was represented by English National Board (ENB) courses 978 (Promotion of Continence), 941 (Care of the Elderly) and 105 (Care of the Disabled Person). Table 2 shows that the frequencies of specialist training in continence were low, with only three nurses completing ENB 978 in the last 4 years. Self-development was mentioned by only 2% of respondents, perhaps reflecting limited enthusiasm for continence care among nurses.

Preparation for their role and adequacy of nurses' knowledge

The majority of the respondents in both groups believed that they had adequate preparation for their role in continence care in both Phases 1 and 3 (see Table 3). However, responses to a subsequent question that asked if they had adequate knowledge about urinary incontinence to enable them to care for patients effectively produced a conflicting result, with the majority of respondents in both groups believing that they did not, even in Phase 3. The differences between Phase 1 and 3 responses were not statistically significant. The interview data indicated that it was rare for the nurses to be fully aware of the range of continence resources available within the trust. However, the continence advisers were known by the majority of interviewees, and were referred to for advice about management and equipment, and sometimes for help in diagnosis.

Table 3 Nurses' opinions on the adequacy of their preparation for their role in continence care and their knowledge of how to care for patients effectively

		Intervention group	Control group	Total
Adequate preparation for role?				
Phase 1	Yes	31 (65%)	31 (60%)	62 (62%)
	No	13 (27%)	19 (37%)	32 (32%)
Phase 3	Yes	40 (53%)	51 (53%)	91 (53%)
	No	34 (45%)	41 (42%)	75 (44%)
Adequate knowledge to care for patients effectively?				
Phase 1	Yes	19 (40%)	24 (46%)	43 (43%)
	No	27 (56%)	26 (50%)	53 (53%)
Phase 3	Yes	37 (49%)	40 (41%)	77 (45%)
	No	32 (43%)	46 (47%)	78 (46%)

Knowledge of continence care

Community nurses' knowledge of different types of incontinence, common aetiological factors and possible treatment strategies are summarized in Tables 4, 5 and 6, respectively. Stress incontinence was the type identified most frequently, followed by urge incontinence. This is not surprising since these are the most commonly occurring types of incontinence. Identification of overflow and functional incontinence was more variable, with neurogenic and mixed incontinence being less frequently reported. The most commonly recognized aetiological factors (pelvic floor muscle insufficiency, urinary infection and neurological factors) (see Table 5) and treatments (with the exception of pads), including pelvic floor exercises, anticholinergic drugs and bladder retraining (see Table 6), were closely linked with the most well-known types of incontinence. The intervention group demonstrated a statistically significant improvement in awareness of anticholinergic drugs as a possible treatment for urinary incontinence in Phase 3 ($P = 0.001$), of physiotherapy referral ($P = 0.033$) and of modifying caffeine intake ($P = 0.037$). Mention of absorbent pads was significantly reduced ($P = 0.049$), and it is interesting to speculate whether this represents a change in emphasis towards proactive treatments as opposed to containment approaches.

Vignettes

Nurses were asked to identify possible causes of the problem described in three vignettes and the action that they would take (see Table 7).

The rate of correct responses to Vignette 1 (pelvic floor insufficiency) was high in both groups in both phases. Responses to Vignette 2 (retention

Table 4 Types of incontinence identified by nurses

Type of incontinence	Intervention group		Control group	
	Phase 1 ($n = 48$)	Phase 3 ($n = 75$)	Phase 1 ($n = 52$)	Phase 3 ($n = 97$)
Stress	43 (90%)	39 (52%)	45 (87%)	57 (59%)
Urge	29 (60%)	37 (49%)	35 (67%)	37 (38%)
Overflow	19 (40%)	9 (12%)	28 (54%)	14 (14%)
Neurogenic	8 (17%)	7 (9%)	10 (19%)	12 (12%)
Functional	27 (56%)	22 (29%)	23 (36%)	27 (28%)
Mixed	1 (2%)	—	3 (6%)	1 (1%)

Table 5 Most commonly identified causes of urinary incontinence

Cause of incontinence	Intervention group		Control group	
	Phase 1 (n = 48)	Phase 3 (n = 75)	Phase 1 (n = 52)	Phase 3 (n = 97)
Pelvic floor insufficiency	38 (80%)	19 (25%)	30 (58%)	16 (17%)
Neurological causes	24 (50%)	32 (43%)	26 (50%)	35 (36%)
Urine infection	22 (46%)	38 (51%)	25 (48%)	45 (46%)
Prostatic enlargement	9 (40%)	22 (29%)	17 (33%)	26 (27%)
Dementia/confusion	13 (27%)	15 (20%)	10 (19%)	20 (21%)
Constipation	13 (27%)	17 (23%)	11 (21%)	11 (11%)
Reduced mobility	11 (23%)	22 (29%)	16 (31%)	20 (21%)
Paralysis	8 (17%)	9 (12%)	12 (23%)	3 (3%)
Cardiovascular accident	5 (10%)	13 (17%)	7 (13%)	6 (6%)
Surgery	3 (6%)	11 (15%)	1 (2%)	13 (13%)

Table 6 Continence treatments most commonly identified by community nurses

Treatments most commonly identified	Intervention group		Control group	
	Phase 1 (n = 48)	Phase 3 (n = 75)	Phase 1 (n = 52)	Phase 3 (n = 97)
Pelvic floor exercises	35 (73%)	50 (67%)	37 (71%)	68 (70%)
Absorbent pads	24 (50%)	25 (33%)[a] (P = 0.049)	21 (40%)	35 (36%)
Bladder retraining	16 (33%)	31 (41%)	16 (31%)	27 (28%)
Anticholinergic drugs	15 (31%)	48 (64%) (P = 0.001)[b]	19 (37%)	45 (46%)
Surgery	14 (29%)	36 (48%)	18 (35%)	51 (53%)
Increase fluids	13 (27%)	22 (29%)	12 (23%)	32 (33%)
Timed voiding	13 (27%)	22 (29%)	19 (37%)	26 (27%)
Catheter	9 (19%)	14 (19%)	13 (25%)	17 (18%)
Treat urine infection	8 (17%)	22 (29%)	6 (12%)	19 (20%)
Vaginal cones	7 (15%)	11 (15%)	8 (15%)	15 (15%)
Bowel care	7 (15%)	15 (20%)	7 (14%)	12 (12%)
Refer to physiotherapist	5 (10%)	19 (25%)[a] (P = 0.033)	13 (25%)	16 (17%)
Refer to continence adviser	5 (10%)	4 (5%)	5 (10%)	10 (10%)
Modify diet	5 (10%)	11 (15%)	5 (10%)	13 (13%)
Exercise	4 (8%)	14 (19%)	7 (14%)	21 (22%)
Fluid/volume chart	3 (6%)	10 (13%)	5 (10%)	13 (13%)
Teaching patient	3 (6%)	13 (17%)	6 (12%)	15 (16%)
Modify caffeine intake	2 (4%)	12 (16%)[a] (P = 0.037)	—	6 (6%)
Refer to GP	1 (2%)	6 (8%)	4 (8%)	1 (1%)

[a]Statistically significant difference between Phases 1 and 3 (intervention group) (Fisher's exact test).
[b]Statistically significant difference between Phases 1 and 3 (intervention group) (Chi-square test).

with overflow) in Phase 3 showed that more respondents from the intervention group recognized possible obstruction by prostatic enlargement, requiring physical examination by a GP and exclusion of constipation (25%), but the overall response rate was poor. Vignette 3 responses (urge incontinence) were relatively poor, but showed a statistically significant improvement in Phase 3 by

https://doi.org/10.1191/146342301678227879 Published online by Cambridge University Press

Table 7 Nurses' ability to identify causes and treatments in vignettes

Vignettes	Intervention group		Control group		Between-group significance at Phase 3
	Phase 1 (n = 48)	Phase 3 (n = 75)	Phase 1 (n = 52)	Phase 3 (n = 97)	
Vignette 1	34 (71%)	53 (71%)	38 (73%)	56 (58%)	
Vignette 2	7 (15%)	19 (25%)	11 (21%)	14 (14%)	
Vignette 3 + 1 treatment	4 (8%)	17 (23%)	11 (21%)	10 (10%)	$P = 0.032$[a]
Vignette 3 + 2 treatments	—	7 (15%)	3 (6%)	6 (6%)	$P = 0.028$[a]
Urine testing + physical examination	6 (13%)	21 (28%)	8 (15%)	7 (7%)	$P = 0.033$[a]

[a]Chi-square test.

the intervention group ($P = 0.032$). Knowledge of more than one treatment approach (e.g., bladder retraining and anticholinergic drug therapy) was also significantly better ($P = 0.028$). In addition, more nurses in the intervention group included urine testing and physical examination as important aspects of assessment in vignettes in Phase 3 ($P = 0.033$).

Attitudes towards promotion of continence and perceptions of the nurses' role

Questionnaire data

Nurses' attitudes towards elderly patients with incontinence and their perceptions of their own role in continence care were explored by analysis of responses to a series of 13 statements on a 5-point Likert scale, where 5 represented strongest agreement with the statement. Some statements were negatively worded in order to avoid systematic responses. In Tables 8 and 9 the scores have been summarized to indicate overall percentage agreement. There were no statistically significant changes, although there was a notable reduction in the percentage of respondents in the intervention group in Phase 3 who believed that 2-hourly toileting and incontinence aids are the only realistic ways to promote continence for older people (a decrease from 30% to 12%). Overall, nurses in both groups demonstrated positive attitudes towards the investigation of continence problems, identification of continence as a realistic goal and the importance of health education for older people. However, this was tempered by evidence that at least 25% of respondents in Phase 3 believed that the nurses' primary role in caring for patients with incontinence should be concerned with supplying appropriate aids (see Table 9).

Interview data

Data from all of those interviewed confirmed that DNs were regarded as the most appropriate professionals to deal with incontinence in elderly people living in the community. GPs reported that they usually perform a physical examination and might treat or refer the patient for further investigation, but for a comprehensive assessment, first-line therapeutic care, management and the provision of aids and equipment they were most likely to refer the patient to the DN. '*The district nurses care for the incontinent patients*' (Interview 8).

Nurses themselves acknowledged their role, and confirmation of positive attitudes towards elderly patients with continence problems was evident in most of the 30 community nurse interviews, especially when discussing care for patients who were very motivated and able to participate in their own care. Some interviewees were able to describe successful treatment outcomes for their elderly patients. However, three major themes relating to provision of proactive continence care emerged from the nurse interviews, namely assessment skills, patient capacity and role restrictions.

Assessment skills: the majority of the interviewees recognized assessment of continence as an important part of their role, but this was commonly discussed in terms of identifying contributing health, social and environmental factors and/or management of the problem by provision of aids, equipment and absorbent products. '*We undertake a continence assessment and then decide on treat-*

Table 8 Nurses' views on incontinence in elderly people

Statement	Agreement (%)			
	Intervention group		Control group	
	Phase 1	Phase 3	Phase 1	Phase 3
Continence problems should always be investigated	46 (96%)	68 (91%)	48 (92%)	88 (91%)
Patients are incontinent due to laziness	7 (15%)	5 (4%)	5 (10%)	5 (5%)
Continence is a realistic goal for many incontinent people	37 (77%)	56 (75%)	38 (73%)	65 (67%)
I find it demoralizing looking after incontinent people, as there is little I can do to help	7 (16%)	12 (16%)	12 (24%)	18 (19%)
Two-hourly toileting and incontinence aids are the only realistic ways to promote continence in older people	14 (30%)	9 (12%)	15 (30%)	22 (23%)
Health education is as important for older people as for younger people	47 (98%)	70 (93%)	51 (98%)	93 (96%)
Incontinence is usually more distressing for a younger person than for someone who is elderly	11 (23%)	16 (21%)	10 (15%)	30 (31%)
Elderly people with longstanding incontinence problems do not usually require investigation	7 (15%)	9 (12%)	4 (8%)	13 (13%)
Incontinence is an inevitable part of the ageing process	5 (11%)	7 (9%)	9 (17%)	20 (21%)

Table 9 Nurses' views on their role in continence care

Statement	Agreement (%)			
	Intervention group		Control group	
	Phase 1	Phase 3	Phase 1	Phase 3
It is important to address the cause of incontinence when planning nursing care	47 (98%)	73 (97%)	50 (96%)	96 (99%)
Continence issues are an important part of nursing care	45 (94%)	69 (92%)	49 (92%)	91 (94%)
Nurses should have a good understanding of the causes of incontinence	46 (96%)	71 (95%)	50 (96%)	96 (99%)
The nurse's primary role in caring for patients with incontinence should be concerned with supplying appropriate aids	15 (29%)	20 (27%)	8 (15%)	30 (31%)

https://doi.org/10.1191/146342301678227879 Published online by Cambridge University Press

ment or aids and order pads and any continence aids they require' (Interview 30).

Nurses often lacked confidence in assessing patients in order to find causes, identify types of incontinence and offer treatments. They recognized that they tended to offer containment rather than treatment of the continence problem, and more than 50% stated that they felt inadequately prepared for a more proactive role, and required more training in assessment, particularly physical examination.

Patient capacity: a commonly raised issue was that elderly patients themselves often had low expectations of and compliance with active treatments, and therefore had only a limited capacity for improvement. Nurses were commonly visiting patients who were very elderly and frail, often with other disabling conditions. They believed that it was very difficult to promote continence in these patients, and that containment methods were appropriate. '*Motivation in patients can be so low. Pads and pants are OK rather than having a high goal promoting continence and initiating quite rigorous pelvic floor exercises*' (Interview 24).

Role restrictions: interviewees agreed that in reality their role was restricted and incontinence took a lower priority when patients had multiple and complex health problems. Lack of time to be thorough in assessment and an absence of clear documentation and guidelines were described. '*Patients need a lot of input in the early days if it is going to be successful. We often don't have time*' (Interview 15).

Although nurses accepted responsibility for continence care, there was a lack of role clarity with regard to what should and could be done for elderly patients. Nurses thought that the majority of patients who were referred to them by GPs were considered to have intractable incontinence and the expected management approach was continence pads. '*You have to convince the GP that the referral is going to be worthwhile even if she is over 65*' (Interview 15).

These issues were viewed with frustration and dissatisfaction by at least 50% of the nurses, who wanted to offer more, with two of the DNs with ENB 978 qualifications commenting that their knowledge was not being fully used.

Discussion

The audit of patients' notes showed statistically significant differences in a number of assessment criteria following the introduction of the guidelines together with the associated educational programme. In particular, the intervention group demonstrated significant improvements in monitoring the frequency of incontinence episodes through the use of frequency–volume charts. The symptomatic pattern of voiding can be a key characteristic of different types of incontinence, and is therefore an important aid to diagnostic judgement, leading to treatment decisions. It must be acknowledged that the new assessment forms introduced with the guidelines provided a more informative *aide-mémoire* for nurses. However, the results suggest that the educational programme provided valuable additional knowledge, since a statistically significant difference between Phases 1 and 3 was not apparent for the control group. A further highly significant difference between Phases 1 and 3 (intervention group) was in the percentage of patients for whom a treatment plan was identified. In Phase 1, assessment forms were used mainly to support requests for containment products, but following the introduction of guidelines and educational support, 77% of the patients who were assessed had treatment plans in place. This was significantly more than in the control group.

The percentage of patients who received a urine test was also significantly improved in Phase 3 for both groups. This is at least partially due to the greater availability of urine-testing equipment, which was an integral part of guideline introduction. Clearly there are costs associated with urine testing which trusts may consider difficult to justify, but urinary tract infection is a common, reversible cause of incontinence in elderly people that should not be overlooked. The audit results also showed that physical observation had increased in the intervention group, although not statistically significantly. The rate of physical examination remained very low in both groups in Phase 3, and this was an issue about which nurses expressed particular concern with regard to lack of training. There were corresponding statistically significant changes in the frequency with which urine testing and physical examination were recognized as important assessment factors in the vignettes on the nurse questionnaires.

There were a number of statistically significant changes in knowledge in the intervention group in Phase 3, the most notable being in relation to urge incontinence, particularly in the responses to Vignette 3. The results demonstrate improved recognition of urge incontinence and knowledge of potential treatments, and are important given the prevalence of urge incontinence in the client group (Burgio and Goode, 1997). It is interesting to speculate whether the decreased identification of absorbent pads as a treatment for incontinence reflects some change in emphasis towards proactive treatments compared to containment approaches.

All of the community nurses shared the view that appropriate education was essential to enable them to provide skilled care in the promotion of continence. However, few nurses could recall continence education as part of their general training (mean 24%), and even fewer as part of their community training (mean 17.5%). The continence advisers provided most of the education which nurses had received through in-service training, with a considerable proportion focused on containment product training. Indeed, 25% of respondents described this as focusing on product training alone. It is possible that continence care is regarded as requiring specialist education. However, specialist courses can hardly be justified as the main source of continence care knowledge when incontinence is one of the top five reasons why community nurses see patients (Audit Commission, 1999) and is therefore a fundamental part of their role. Relevant ENB specialized education courses had been completed by less than 10% of respondents, with only three having undertaken a course within the last 4 years. This must raise concerns about the depth and currency of community nurses' knowledge and their potential to be proactive, but it is also notable that some nurses who had completed ENB 978 (Promotion of Continence) expressed frustration that use of their specialist knowledge and skills was limited within their current role. Self-development was mentioned by only 2% of respondents, and although this may be indicative of limited enthusiasm for continence care among nurses, particularly given the need for detailed knowledge of many other aspects of community care, it may also reflect lack of awareness of what could be achieved.

In general, however, the community nurses in this study had received more continence education than has been previously reported for nurses in other settings (Cheater, 1990; Penney, 1999). The majority of questionnaire respondents felt adequately prepared for their role in continence care but, by contrast, less than 50% of respondents believed that they had adequate knowledge to care for patients effectively. This situation had not changed significantly in Phase 3, despite the educational programme supporting the introduction of guidelines. This incongruity may reflect a belief that the nurses were adequately prepared for their current role, but that more might be achieved with greater knowledge. It also raises questions as to whether the additional knowledge which nurses feel that they need is related to 'hands-on' experience, particularly since a lack of confidence in assessing patients was apparent during nurse interviews. Overall, attendance rates at the education programme were relatively low, despite the fact that nurses identified a need for further education in Phase 1. Although this was sometimes due to constraints imposed by practice responsibilities, it highlights the difficulties in implementing a strategy to enhance the nurses' knowledge base, and reinforces the need for greater continence education to be introduced during general and community nurse training.

Stated attitudes towards elderly patients with urinary incontinence were generally positive in both phases across both groups of respondents, but the interview data demonstrated that widespread assumptions about the frequent intractability of incontinence in the elderly and the futility of further investigation and treatment exist. This situation has been recognized elsewhere (Palmer, 1995; Killoran, *et al*., 1997). Patients' ability to comply with treatment approaches is an important aspect of realistic goal setting, but one that also needs careful assessment to ensure that patients are not categorized as untreatable on the basis of generalized assumptions.

The majority of community nurses endorsed the view that their role should involve the assessment, identification of causes, first-line treatment and management of urinary incontinence. However, their ability to fulfil this role was influenced by factors that constituted three themes – first, their own skill and confidence in assessment and treatment, secondly, the expectations of and capacity for improvement in elderly and frail patients (both

considered above), and thirdly, role restrictions, including a lack of time to undertake detailed assessments, but also lack of clarity about the role. There was inconsistency in the way in which GPs' and nurses' responsibilities with regard to the assessment of incontinence were interpreted, with some GPs undertaking assessments and referring patients with intractable incontinence to nurses, while in other practices nurses were expected to take responsibility for assessment and proactive care. The role of nurses with specialist continence education (ENB 978) was also poorly defined, causing frustration to some of them. These variations in practice may reflect different degrees of interest in promoting continence, or different ways of teamworking. In either case, these issues require further attention, as the need for effective teamwork in the primary care team has been highlighted by both the Audit Commission report (Audit Commission, 1999) and Department of Health guidance (Department of Health, 2000).

Limitations of the study

The degree of variability in some questionnaire responses, across both phases and groups, may be partially related to the length of the questionnaire. Although used similarly elsewhere (Cheater, 1990; Penney, 1999), the questionnaire requires cooperation from respondents in terms of both time and thoroughness, and the anticipated completion time of 30 minutes was inadequate for some. A common criticism of questionnaire surveys relates to the depth of knowledge that may be elicited, but alternative approaches were considered impractical within the constraints of the study. However, the vignettes provided an opportunity to test knowledge in the context in which it might be used in practice, and it is noteworthy that statistically significant differences between groups were found in Phase 3. The questionnaire length may also have influenced the response rate, which was poor in Phase 1 (42%), although it improved in Phase 3. Williams *et al*. (1995) have also highlighted difficulties in recruiting nurses to a study of educational interventions, using a similar but longer questionnaire.

Difficulties in achieving change in clinical settings are a common experience (Williams *et al*., 1995; Button, 1998), particularly when set against a background of competing priorities and changes. The responsibility for ensuring that clinical practice is evidence based lies both with the practitioner and with trust executives (NHS Executive, 1998), but the process of change management is recognized as largely an organizational issue (Kitson *et al*., 1998). This project was supported at the highest levels of the trust, but took place during a very demanding period of change following a recent merger of trusts. A number of concurrent initiatives were in progress and at times impacted on the progress of the project and staff motivation. One of these initiatives was a change in the continence product contract, in response to an urgent requirement to reduce local expenditure on the management of incontinence. This resulted in increased awareness of this aspect of continence care for nurses in both groups.

Conclusions

This study raises a number of issues with regard to the promotion of continence within primary care. Overall, there appeared to be a general acceptance that promotion of continence could and should be undertaken in primary care, and that community nurses, particularly district nurses, have a key role in providing effective care. The nurses appreciated that their role in continence promotion could be much broader than their present role, which is limited in terms of resources (expertise and time), clarity and co-ordination within the primary health care team. The study has contributed further insights into the variability and limitations in community nurses' knowledge of continence care and the difficulties in enhancing that knowledge base. Stronger educational input at early stages of students' careers is necessary to provide a robust foundation that can be built on during career progression, and this is endorsed within recent Department of Health guidelines on *Good Practice in Continence Services* (Department of Health, 2000). However, organization cultures also play a key role, and inequalities in practice are likely to continue until nurses and other health professionals perceive that they can make a difference and organizational processes recognize and promote expert practice.

This study has focused on community nurses' knowledge and perceptions of their role, and it inevitably raises questions as to what may constitute realistic expectations of their role develop-

ment. Although it is reasonable to expect all community nurses to be able to undertake a first assessment of incontinence and to identify patients who could benefit from proactive care, it may be less reasonable to expect nurses also to undertake treatment programmes in the face of competing demands on their time. Future developments must include effective use of existing expertise, ongoing education to increase the core of expertise, and efforts to enhance multidisciplinary teamworking. This should include further exploration of the 'link nurse' role in bridging the gap between continence services and community nurses at their bases, and the evaluation of integrated service models such as multidisciplinary continence clinics.

The Department of Health guidance (Department of Health, 2000) outlines a vision for integrated continence services for the future, led by a Director of Continence Services, possibly across a number of primary care groups. It recognizes the need not just for better staff training but also for raising their awareness of the subject if primary practices and community teams are to take on the responsibilities now placed on them. This study reinforces the need for increased awareness and training, and also contributes to the debate on the optimal way in which to provide a primary care continence service.

Acknowledgements

This project was funded by South Thames NHS Executive as part of the South Thames Evidence-Based Practice (STEP) initiative, and was a collaborative study between Surrey Hampshire Borders NHS trust and the European Institute of Health and Medical Sciences, University of Surrey.

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