

Provision of services for incontinent elderly people at home

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SUMMARY Results of a survey of elderly people living at home suggest that 8% suffer from important degrees of urinary dysfunction and are accessible to community based services. Supply of NHS incontinence aids was inadequate, and improvements in provision are recommended. Attendance at a continence clinic established for the survey period suggests a need for additional specialist services to be made available close to home. Correspondence between actual and predicted cystometric diagnosis provides encouragement to develop simple, valid assessment procedures as an aid to patient management. For the average District Health Authority serving a population of 250 000, two continence nurse advisers and 50 continence clinic sessions per annum are recommended for people aged 75 and over.

Between 4% and 10% of elderly people in the community have clinically and socially important degrees of urinary incontinence.^{1,2} This prevalence increases with age, affecting an estimated 15–16% of men and women aged 85 and over.³ Already there is evidence that lack of services for incontinence is contributing to a breakdown in domiciliary care, generating demand for long term residential care.⁴ During the next 20 years the number of people aged 85 and over is expected to double, and the number aged 75 and over will increase by one third.^{5,6}

Services for incontinence in the elderly are largely composed of incontinence aid provision through community services and specialist assessment and prescription from departments of geriatric medicine, urology, and gynaecology. Reports available point to considerable shortfall and variation in provision. For example, elderly patients in contact with pad and laundry services formed only a quarter of all elderly people affected by regular incontinence.³ A survey of departments of geriatric medicine throughout the UK showed that only one third received substantial help from urologists and one fifth provided urodynamic assessment.⁷

Such variation results from the fact that most incontinence services have grown through a mixture of local endeavour and enthusiasm rather than as a systematic response to an accurate assessment of need. The present survey was designed to assess the extent of need for additional community incontinence services

and the likely demand for specialist services not previously provided in a locality.

Methods

The survey took place in Melton Mowbray, a market town in rural north-east Leicestershire. The whole community, including people in long stay geriatric provision, is served by a single 12-man general practice. The Department of Community Health at Leicester University helps the practice to maintain a computerised age-sex register of approximately 32 000 people. The study was conducted in three phases running concurrently over a one year period.

PHASE 1

All 1329 registered people aged 75 and over were selected for inclusion in a survey of the health and social status of the elderly.⁸ During the course of a structured personal interview each person was asked "Do you have difficulty in controlling your water?" In all, 148 people with some difficulty were identified. Catheterisation was noted within this group. "Frequent" difficulty was defined as more than twice per week, and "occasional" difficulty as twice per week or less.

PHASE 2

People living in the community who admitted to some difficulty in controlling micturition (N = 122) were

referred for a further home interview, this time conducted by a physician. Residents in long stay provision in hospitals and 'part three' accommodation (N=26) were excluded at this stage.

Incontinence was defined as the absence of dryness. Five aspects of incontinence were assessed: the amount of absorbent padding used regularly; the number of nocturnal appliances used; extra laundry incurred; the amount of bedwetting; the regularity of incontinence.³ The type, quantity, and regularity of use of all forms of incontinence aids, including Kanga pads and pants, sanitary towels, loose towelling, lint, wadding, and waterproofs, and their main source, were recorded.

In each case, the extent of wetting of clothes was assessed to show the effectiveness of services supplying incontinence aids. The extent of dysfunction, incorporating incontinence and dysuria,* provides an appropriate estimate of the need for urological services as a whole.

Recall of the duration of the disorder was recorded. An estimate of the underlying urodynamic nature of the disorder was made at the time of the interview on the basis of symptoms and clinical judgement, in relation to information reviewed in the literature.^{10 11}

PHASE 3

A continence clinic was established temporarily in the local hospital outpatient department. Each of the 122 persons interviewed in phase 2 was invited to attend for specialist assessment and/or cystometry. The clinic was staffed by a consultant geriatrician, a continence nurse adviser, and a medical physics technician.

The procedure of cystometry was described to each patient during the interview, mentioning the need to insert plastic catheters into both the bladder and the rectum, and is described in detail elsewhere.¹² Arrangements were made for ambulance transport as required. Patients identified with unstable bladder were started on incremental 25mg doses of imipramine and followed up at home. An assessment and prescription of incontinence aids was made by the clinic nurse. All patient interventions were conducted with the prior agreement of the general practitioner concerned and the local ethical committee.

Results

The study population comprised 90% of the total eligible practice population. Non-responders were made up of 5% refusals, 4% mortality, and 1% no trace. The prevalence of urinary dysfunction,

including catheterisation, identified in phase 1 of the study in the total population was 12%. Five percent of men and women experienced frequent difficulty in control (table 1). Prevalence increased with age, almost doubling between ages 75-84 and 85 and over. Catheterisation was found in 2% of men and in 1% of women.

The second phase of the survey focused entirely on the 10% (N=111) of people living in the community suffering from non-catheterised urinary dysfunction. On follow up, urinary dysfunction was confirmed in 8% (N=86), the remaining 2% having become terminally ill or entered hospital (N=6); moved house (N=3); denied a significant problem (N=8); or refused follow up in the intervening period (N=8). Incontinence (defined as absence of dryness) occurred in 7% and was described as sufficient to cause wetting in 5% of the community population. One percent experienced dysuric symptoms but managed to remain fully continent.

Half of the incontinent people identified in the community used personal incontinence aids during the day or night time, and of these almost 60% obtained aids from the NHS (table 2). Overt incontinence in terms of wetting of external clothing was present in 2% of the community, although half of these were using personal incontinence aids of some kind.

The wide range of duration of urinary dysfunction is shown in the figure. In 11 cases the disorder had developed within the 12 months immediately preceding interview, providing a crude estimate of the incidence of the disorder of 1% per annum among the elderly in the community.

Thirty two people, 37% of those with dysfunction, accepted an invitation to attend a specialist clinic for consultation. People who attended were more likely than non-attenders to be complaining of severe

Table 1 Prevalence (%) of urinary dysfunction among people aged 75 and over (number)

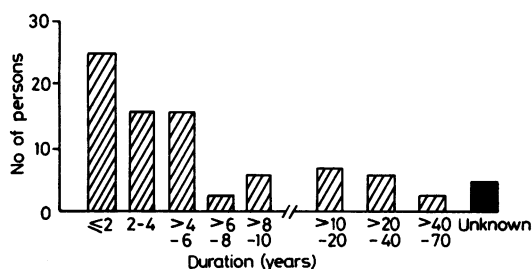
Age group (yr)	Place of residence					
	Community		Institutions		All persons	
	%	N	%	N	%	N
Males						
75-79	10	(24)	—	(3)	11	(27)
80-84	10	(9)	—	(2)	12	(11)
85+	21	(9)	—	(—)	20	(9)
Total (427)	11	(42)	50	(5)	12	(47)
Females						
75-79	8	(31)	—	(4)	9	(35)
80-84	14	(34)	—	(1)	13	(35)
85+	12	(15)	36	(16)	18	(31)
Total (902)	11	(80)	32	(21)	12	(101)
All	11	(122)	34	(26)	12	(148)

* Dysuria is defined as "referring to anything abnormal having to do with urination such as urinary frequency, nocturia, hesitancy in starting, straining, burning, urgency, decreased size of urinary stream, dribbling at the end, and combinations of these symptoms".

Table 2 *Manifestation of incontinence among elderly people using incontinence aids of various types*

Incontinence aid		Manifest incontinence*			
Source	Main type	None	Covert	Overt	All
NHS	Kanga pads	2	6	8	16
NHS	Other aids	2	3	3	8
Bought	Sanitary towels	2	5	1	8
Bought/recycled	Other aids	1	5	3	9
All sources and types of aid		7	19	15	41

*Overt incontinence = wetting of external clothing
 Covert incontinence = wetting of underclothing only
 No manifest incontinence = wetting contained by incontinence aids



Duration of urinary dysfunction among elderly people.

degrees of incontinence and other urinary symptoms and to describe disruption of normal social activities, such as shopping, on account of the dysfunction. Nine percent of cases experienced trivial dysfunction and might have been expected to refuse an appointment. The ethical requirement to describe in detail the nature of a cystometric investigation during a lengthy interview with an unknown doctor probably contributed significantly to non attendance in the remaining 54%.

Unstable bladder was identified as a component disorder in 70% of subjects who underwent

cystometry. Pure stress incontinence was present in 29% of female subjects.

Diagnosis predicted on clinical history before cystometry compared with cystometry based diagnosis is shown in table 3. A component of unstable bladder predicted on the basis of symptoms was found in 4% of the elderly population. In the clinic subseries, cystometry confirmed three quarters of predicted diagnoses of unstable bladder and showed unstable contractions in a quarter of persons judged not to be suffering from instability, suggesting a true frequency of unstable bladder in not less than 4% of the elderly in the community.

The clinic subseries represents only 27% of the full group with urinary dysfunction and is undoubtedly unrepresentative of the whole in terms of severity of dysfunction and motivation to obtain help. However, comparison of the ratios of numbers investigated and not investigated by cystometry in each symptomatic group suggests better representativeness in terms of quality than quantity of dysfunction.

Discussion

The overall prevalence of urinary dysfunction in the community was 11% based on a screening question designed to distinguish people possibly in need of help from those probably unaffected or highly tolerant of their condition. Vetter, in a similar population, reported a prevalence of 14%; all other recent population surveys have reported higher prevalences.

Overall prevalence increased with age in both sexes. In the community, an apparent plateau in prevalence in women at age 80 may be accounted for by an excess of incontinent women aged 85 and over resident in institutions within the total population. In contrast with other surveys, age specific prevalences of dysfunction were similar in males and females. As expected, the prevalence of urinary dysfunction in

Table 3 *Predicted and actual cystometric diagnosis of underlying dysfunction.*

Cystometric diagnosis	Symptomatic diagnosis					
	Unstable	Unstable and urethral incompetence	Unstable and obstruction	Urethral incompetence	Obstruction*	Other
Unstable	9	2		1		
Unstable and urethral incompetence	1					
Unstable and obstruction					1	
Urethral incompetence	1	2		2		
Obstruction					1	
Hypersensitive			1			
None				2		
No cystometry	23	7	2	14	11	6

* Obstruction and voiding difficulties (Diagnoses comply with International Continence Society terminology)

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institutions was three times the level encountered in the community.

The majority (97%) of cases living in the community were followed up in some way in the second phase of the survey, and only a small proportion (7%) positively denied a significant problem. Detailed enquiry revealed large differences in the nature of the dysfunction. A small number (1%) of people were encountered in whom incontinence was non-existent who nevertheless had disturbance of the normal pattern of micturition, and, to an extent, the reverse was also true.

Use of the term "difficulty in control" seemed to work satisfactorily as an initial screening question. One percent of the population claimed initially to have difficulty in control which proved to be trivial in the opinion of both the interviewing physician and the subject. Seven people (<1% prevalence) initially denied difficulty in control but were later referred by their GP for assessment and subsequently confirmed important and longstanding degrees of disorder, pointing to incomplete sensitivity of the question.

Estimates of the prevalence of urinary dysfunction in the community are very dependent on the nature of the enquiry. Milne *et al* showed that 34% of his study population reported "ever losing control" yet only 5% reported "wetness." The problem that continues to undermine rational planning is where to draw the line between trivial and important disorders. In Melton, within the 8% who described "difficulty in control" on two separate occasions, "wetness" was described by 5%, and its importance was supported by detailed descriptions of types and quantities of padding and laundry resulting from the wetting. It is clear that reports of "wetness" represent important clinical and social disorder. In a further 2% who denied wetting but reported "failure to remain dry" other aspects of dysfunction, often multiple symptoms including urgency, were present to a degree which impressed the interviewing physician of the need for medical assessment. In the remaining 1%, dysuria alone constituted a relatively mild form of disorder.

Detailed assessment and characterisation supports the finding that 7% of elderly people in the community experienced important degrees of urinary dysfunction, and a further 1% were catheterised, confirming estimates of significant incontinence from other recent surveys.

Half of all people with incontinence were not using personal aids, and about a third of these suffered from a volume of incontinence likely to betray the presence of the condition to a casual visitor to the home. The remainder managed their condition with personal aids, and about a third of these experienced similarly overt incontinence. Altogether management with aids provided by the NHS at the time of the survey was

completely successful in 5%, possibly acceptable in a further 12% of cases, unacceptable in 14%, and non-existent in the remaining 69% of cases of incontinence.

The main factors seeming to account for the poor performance of aids were restriction of supply and inefficient design or utilisation. Availability of NHS aids appeared to be limited by inadequate supply to the distribution point and compounded by the inaccessibility of the centre and lack of a home delivery service. Poor performance of non-NHS aids was apparently due to cost limitations and inappropriateness of design.

The attendance of 37% of cases at the special survey continence clinic may be indicative of a hidden need for additional specialist services. The clinic was provided in close proximity to the study community to minimise the journey time and to allow patients with frequency and urgency to attend without fear of mishap. Under normal conditions perhaps more than 27% of cases might be persuaded to undergo cystometric investigation, but the response suggests a need to adopt alternative, simple yet valid, forms of assessment to guide non-specialist management of the condition.¹³

The condition of unstable bladder appears to dominate the picture of underlying functional abnormalities identified by cystometry and predicted on the basis of symptoms, as suggested by large clinic-based series.¹⁴

A dysfunction incidence rate of 1% per annum and a prevalence of 11% in the community make it likely that most general practitioners would encounter 1 new case per annum and have a total case load of approximately 15 patients aged 75 and over living in the community. In the present circumstances general practitioners would be best advised to maximise their skills in eliciting the presence of the condition in the early stages, to seek the advice of a specialist for refractory or difficult cases, and to prepare a monitoring procedure. The latter, possibly in cooperation with the practice nurse, would ensure, at the very least, an adequate and appropriate supply of disposable and other incontinence aids.

The supply of incontinence aids may well vary markedly between district health authorities, but the present findings suggest a need for more and better aids and more counselling as to how they should be used.

In the elderly community population, 8% have been shown to be suffering from important degrees of urinary dysfunction. The average district health authority, with a population of 250 000, can expect 1008 elderly people in need of specialist help and advice at any one time, of whom 135 will have developed the condition within the preceding year. A

total of 50 local urodynamic clinic sessions per annum per average district would provide approximately 200 consultations, two thirds of which might be devoted to new cases and the remainder to review. Two continence nurse advisers per district would each manage a case load of 68 incident cases per year and 437 prevalent cases directly through continence clinics and indirectly in support of the district nursing services.

We thank the doctors of Latham House General Practice for their cooperation and acknowledge the contributions made by Hazel Kay in preparing the data.

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