

Changes in the ability to get outdoors among a community sample of people aged 85+ in 1987: results from a follow up study in 1990

Ann Bowling*, Morag Farquhar*, Emily Grundy**

Introduction

Increases in the proportions of very elderly people aged 75 and over have been greater than expected, and are projected to increase quite substantially in Britain, as well as in other Western countries^{1,2}. The percentage of the world population aged 65 and over is changing, and a shift of the age structure of the population away from a pyramid shape to a wider, more rectangular shape is taking place. The substantial future increases that are projected have inevitable implications for health and social service providers³, particularly in relation to the needs of older women who, although having a higher life expectancy than men, are likely to spend a longer time disabled^{4,5}.

Most old people aged 65 and over are able to perform all tasks of daily living unaided, albeit sometimes with a degree of difficulty. However, the prevalence of long standing illness is high in older age groups. In Great Britain 63% of men and 67% of women aged 65 or over living in private households, who were included in the 1987 General Household Survey, reported a longstanding illness, disability or infirmity⁶. The Office of Population Censuses and Surveys (OPCS) disability survey in the UK reported that the prevalence of severe disability was 133 per 1,000 for people aged 80 years and over, compared with 16 per 1,000 for people in their sixties, and 3 per 1,000 for adults aged under 50⁷. In the United States it has been estimated that

Summary

The results reported here are drawn from a study initially designed with the aim of assessing the needs of very elderly people (aged 85 and over) living in an East London health district (City and Hackney). Sample members were followed up two and a half to three years later, with the aim of documenting changes in health and social circumstances over a two and a half to three year period. This paper explores changes in the ability of very elderly frail people to go outdoors. It focuses, in particular, on those with severe difficulties in going outdoors and those who could not go out at all – the 'chronic housebound group'. This group had poorer mental health, life satisfaction, reported more pain, health and functional ability problems, and a heavier dependency on services (ie loss of independence). Fewer than 10% received services specific to rehabilitation and social support (eg. physiotherapy, occupational therapy or social work), and substantial numbers (around a third to half) did not receive any chiropody services. However, the provision of instrumental aid with tasks of daily living from home help services, and, in particular, from relatives was relatively high. This paper focuses on descriptive data in relation to people who report that they are housebound, and changes in this status,

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over three quarters of elderly people report at least one chronic condition and nearly half a chronic

* Health Needs Assessment Unit, University of London, Department of General Practice and Primary Care, London, Great Britain
** Age Concern Institute of Gerontology, King's College, Cornwall House Annex, Waterloo Road, London SE1 8TX, Great Britain

Address for correspondence and reprint requests: Dr. Ann Bowling, PhD Reader, Health Needs Assessment Unit, University of London, Department of General Practice and Primary Care, St. Bartholomew's Hospital Medical College, Charterhouse Square, London EC1A 7BE, Great Britain

condition which limits their activity^{8,9}. The higher reported prevalence in the USA probably reflects differences in the question wording on which these estimates are based.

Longitudinal surveys have confirmed the evidence from cross-sectional studies that functional decline is associated with sex (females are more likely to decline), and older age^{10,11}. Fewer investigators have addressed the direction of changes in functional status over time. Chirikos and Nestel (1985) followed up a sample of 5,000 black and white men at fifteen years after baseline data collection (aged 45-59 years at baseline), and with a good response rate (sample attrition was due to deaths rather than refusals)¹². These were respondents to the National Longitudinal Surveys of Labour Market Experience in the USA. While functioning declined with age, they also reported some evidence of functional capacities being restored and the consequent more favourable health outcomes, and the acquisition of disabilities leading to unfavourable outcomes. The duration of most disabilities was about 30 months, but were often replaced by new disabilities.

Jagger and Clarke (1988) carried out a longitudinal health survey of a sample of 1329 people aged 75 and over in Leicestershire. Of those who were independent at baseline, 34% were still independent seven years on¹³. Women at each age had higher dependency levels, and men had higher mortality rates, as would be expected from other data. Those reporting poor perceived health status at baseline were more likely to lose independence at five and seven years, even after adjustment for age, sex and Activity of Daily Living scores (ADL). Sample attrition (53 people) was due mainly to migration out of the area.

Few studies are available which include representative samples of people in very old age groups, either in the UK or the USA, as few studies include sufficient numbers of people aged 85 and over to merit analyzing them separately. The few studies which include this group point to the tremendous increase in functional problems with increasing age¹⁴. In the UK, the OPCS longitudinal study, which is a record linkage study based on a one per cent sample of the population covered in the 1971 Census, permits analyses up to age 75 and over, but not 85 and over. The socio-demographic analyses by age have been presented by Grundy

(1992)¹⁵. Most data about this age group comes from cross-sectional data. However, selective survival results in older people being a sub-set of persons from a larger cohort existing at a previous time. Thus one should be cautious about drawing conclusions from cross-sectional data sets, because people with certain characteristics may have been systematically removed.

In the UK, the (OPCS) national disability survey emphasised the high prevalence in old age of disabilities affecting hearing, sight and mobility. Problems with feet were a major cause of walking difficulties among older people⁷. The most common causes of longstanding illness, reported from General Household Survey data in Britain, among people aged 75+ are arthritis and rheumatism, cataracts, other bone and joint problems, hypertension, heart attack and other heart problems¹⁶. The relative loss of independence that can accompany such conditions is likely to detract from sufferers' quality of life. A survey of a representative sample of 1,000 adults aged 16+ in England on attitudes to their own ageing, reported that loss of independence in old age was the central concern expressed (33%). Women were more likely than men to report concern about loss of independence, perhaps reflecting their realisation of longer life expectancy. Four in five respondents were able to identify circumstances when they would not want to live any longer. The two main circumstances were deteriorating health and loss of independence¹⁷.

Chronic illnesses do not necessarily result in disability, and the prevalence of disability is lower than the prevalence of chronic illness. The World Health Organisation (1980) distinguished between impairments resulting from disease, disabilities resulting from these impairments and the possible handicaps these disabilities may be associated with¹⁸. An impairment of the musculo-skeletal system such as arthritis, for example, may result in a walking disability and a mobility handicap. The relationship between impairment and disability depends not just on the severity of underlying pathological processes but also on host-environment interactions, and, in some cases, on therapeutic, prosthetic and other interventions. Some have argued that dependency is exacerbated by the organisation and expectations of society^{19,20}. More speci-

fically, the disability consequences of severe osteoarthritis may be exacerbated or mitigated by the organisation of the home and immediate environment or, in some cases, largely remedied through prosthetic intervention. Psycho-social, as well as physical, factors influence the outcomes of impairment.

One of the most important aspects of mobility in relation to implications for independent living, is ability to get outdoors. The prevalence of 'house-boundness' among the population aged 65 and over is low, and there is some evidence from a comparison of surveys conducted in the past thirty years that it may have declined over time²¹, probably partly reflecting changing medical attitudes to the relative merits of bed-rest and rehabilitation. Townsend and Wedderburn (1965) suggested that 13% of those in private households and nearly half of those in institutions were housebound or unable to go outside without assistance²². Harris (1968) reported from the results of a national survey conducted in 1965 that between 8% and 11% of the elderly population were bedfast or housebound²³. Hunt (1978), however, reported that only 4.5% of the elderly people included in her 1976 survey were permanently bedfast or housebound²⁴.

Lindesay and Thompson (1993), in a random sample of people born before 1921 in Lewisham and North Southwark, London, reported that the prevalence rate of people who were completely and permanently housebound was 3.5%, but in respondents aged 85 and over it was 20%²⁵. A logistic regression analysis showed that physical health status, age, access to car, floor of entry to household and household tenure emerged as significant predictors of house-boundness. The housebound reported higher rates of use of formal and informal care. Other studies have reported higher rates of service use among people who are housebound²⁴. In relation to the causes of such immobility, however, Bury and Holme (1991) have pointed out that 'going out' depends not only on the physical potential for mobility, but also on confidence and sense of safety in the environment²⁶. It has been reported that a substantial minority of people who are reportedly housebound do not have any physical disabilities which could account for this²⁷. Exton Smith et al (1972) reported that some of these respondents reported that they were nervous of traffic, had lost confidence or interest in the out-

side world²⁷. An enabling environment is necessary in order to promote mobility (eg access to transport, help to overcome obstacles such as steps)²⁸.

Differences in definition (particularly the classification of people who can only go out with assistance) may account for differences in prevalence rates, but it would seem probable that changes in the management of health problems in elderly people and in housing quality may have led to a real reduction in 'house-boundness'. However, severe immobility and disability are strongly related^{7,29} and among very old people inability to leave the home is relatively common. Bury and Holme (1991) reported that, in a national survey of 200 people aged 90 or more, 53% of women and 43% of men were housebound²⁶. Little is known about this group in relation to their social, psychological and physical characteristics. In this paper we present data from a longitudinal study of very old people (aged 85 or more at baseline) on variations and changes in ability to leave the home.

The study

Aims

The results reported here are drawn from a study initially designed with the aim of assessing the health and well-being, social and domestic circumstances and need for health and social services among very elderly people (aged 85 and over) living in an East London health district (City and Hackney). Sample members were followed up with the aim of documenting changes in health and social circumstances over a two and a half to three year period. The analyses presented describe life circumstances in relation to frailty, specifically among those who were housebound. The strength of the study is its longitudinal nature, although it is limited, by the study definition, to people living in the community and, inevitably, to the probably healthier elderly people who survive into very old age.

Area of the study, subjects and methods

The study was conducted in City and Hackney, in the East End of London. This is one of the most deprived areas within North East Thames Regional Health Authority, according to census statistics on, for example, the proportion of people who are un-

employed, overcrowded households, and the proportion of people receiving supplementary benefit (state aid).

The number of people who were successfully interviewed in 1987 was 640, and 267 of these were re-interviewed in 1990. In 1987 all people aged 85 and over who could be traced from general practitioners' lists, held centrally by the Family Practitioner Committee (now Family Health Services Authority) records in City and Hackney, and who were listed in the electoral rolls, were eligible for inclusion in the study. This is the most effective method of tracing elderly people in the UK, apart from an expensive postal screen^{30,31,32}. The response rate to the base line survey in 1987 was 67% (640), and 70% (267) of the eligible sample members were successfully followed-up and re-interviewed in 1990 (excluding those who had died); a further 1% (eight people) completed a brief 'last ditch' postal questionnaire about their circumstances (these eight are not included in the analyses presented here). Full details of response rates of the study are given elsewhere^{33,34}.

Scales were selected after a careful review of the literature, and were chosen after consideration of their levels of reliability and validity. The scales measured life satisfaction^{35,36}, psychiatric morbidity³⁷, functional ability³⁸, and social support^{39,40}, as well as individual items on health and service use. Results were analyzed using the Statistical Package for the Social Sciences (Xth version)⁴¹. Univariate and bivariate statistics were carried out, including Chi-square and Wilcoxon tests of significance. The results of Chi-square tests are reported here, unless otherwise indicated. The question about being housebound was asked in a list of activities of daily living. Respondents were asked about any difficulties they had getting outdoors and could respond: no difficulty, slight, moderate or severe difficulty, could not do alone or could not do at all even if helped. The questions were phrased to measure ability rather than performance. Those who admitted any difficulty were then asked whether they received any help with this, and if so, who from and how often. Cross-sectional analyses of the data in 1987 and 1990 are available in a working paper available from the authors²⁹. The longitudinal analyses only are reported here.

Results

Ability to get about out-doors

Forty five per cent of the (1990) respondents in 1987 had had severe difficulty getting outdoors alone, could only do this with help, or could not do this at all. The proportion had increased to 61% by 1990. Table 1 shows the movement between ability groupings. Significantly more respondents deteriorated than improved or remained the same in relation to their ability to get outdoors between 1987 and 1990 (Wilcoxon matched-pairs signed ranks test: $Z=-5.852$; $p<0.0001$, 2-tailed).

Over half of those with no difficulties getting outdoors in 1987 had deteriorated in varying degrees by 1990; 70% of those with slight difficulties had deteriorated; 67% of those with moderate difficulties had deteriorated, as had 62% of those with severe difficulties, and 47% of those who could only get out with help.

Forty three percent of those who reported that they could not go out at all in 1987, reported some improvement in 1990, largely to being able to get out with help (23%). The greater improvements shown among a further 20% of this group were probably explained by to short term illness in 1987, which temporarily affected mobility.

For the purposes of longitudinal analyses respondents were recoded into the groups shown below (chosen after analyzing each combination of possibilities in relation to providing reasonable sub-group numbers for analysis). Sub group totals of less than 17 were not considered to be viable for statistical analysis, and in these cases numbers only (not percentages) are presented in bivariate analyses.

The groups who had not changed significantly in ability:

- the able group: those who had no or only slight difficulty getting outdoors in both 1987 and 1990 ($n=62$; 26% of surviving sample members);
- the intermediate chronic group: those who had moderate or severe difficulty getting outdoors in both 1987 and 1990 ($n=13$; 5%);
- the severe chronic housebound group: those who could not get out either on their own or at all in both 1987 and 1990 ($n=78$; 32%);

Table 1 Degree of difficulty getting outdoors: 1990 & 1987

1990	1987												Total	
	None		Slight difficulty		Moderate difficulty		Severe difficulty		Can only do with help		Cannot do at all			
	%	(No)	%	(No)	%	(No)	%	(No)	%	(No)	%	(No)	%	(No)
None	43	(40)	10	(2)	5	(1)	—	—	3	(1)	2	(1)	18	(45)
Slight difficulty	17	(16)	20	(4)	14	(3)	—	—	—	—	3	(2)	10	(25)
Moderate difficulty	10	(9)	25	(5)	14	(3)	13	(2)	9	(3)	7	(4)	11	(26)
Severe difficulty	5	(5)	5	(1)	19	(4)	25	(4)	3	(1)	8	(5)	8	(20)
Can only do with help	18	(17)	25	(5)	14	(3)	31	(5)	38	(13)	23	(14)	23	(57)
Cannot do at all	7	(7)	15	(3)	34	(7)	31	(5)	47	(16)	57	(35)	30	(73)
Total respondents	38	(94)	8	(20)	9	(21)	6	(16)	14	(34)	25	(61)	100	(246)

(χ^2 : 122.55; 25df; $P < 0.00001$)

The group who had improved in ability:

- the group who had improved: those who had improved from not being able to get out on their own or at all in 1987 to able to do (with or without difficulties) in 1990 ($n=17$; 7%);

The group who had worsened in ability:

- the group who had worsened
 - a: those who had worsened from no or slight difficulty getting out in 1987 to moderate or severe difficulties or could not get out at all or on own in 1990 ($n=52$; 22%);
- the group who had worsened
 - b: those who had worsened from moderate to severe difficulties with getting out in 1987 to those who could not get out alone or at all in 1990 ($n=20$; 8%).

Age, sex, health and functional status

At baseline, 75% of the sample were aged 85<90, 21% were aged between 90<95, and 4% were aged 95 and over (two of these were aged over 100). At follow-up, the proportions falling into the 90<95 age group had increased: 32% were aged 87<90, 57% were aged 90<95, 9% were aged 95 and over and 2% were aged 100 or more. Eighty three per cent were females and 17% were males.

Thirty one per cent of the severe chronic housebound group were aged 90 and over in 1987 (baseline), in comparison with 16% of all other groups ($p < 0.0001$). They were also, along with the intermediate chronic group, more likely to be women: 91% and 92% respectively were female in comparison with between 74–82% of other groups ($p < 0.01$).

The severe chronic housebound group reported the most physical health problems in 1987 and 1990: in 1990 60% of this group reported five or more health problems in comparison with between 25–51% of other groups ($p < 0.01$). The physical health problems significantly associated with changes in ability to get outdoors were problems with feet, urinary incontinence and aches/pains/stiffness in muscles/joints. In 1990, for example, 51% of this group reported problems with feet in comparison with 36% of those with no/slight difficulties (the able group), and 41–47% of other groups with moderate-severe difficulties ($p < 0.05$); 38% of the severe chronic housebound group reported urinary incontinence in 1990, as did 39% of the group who had worsened (group a), in comparison with 16–29% of other groups ($p < 0.05$); between 81–85% of the severe chronic housebound group and the two groups who had worsened (groups a and b) reported aches/pains/stiffness in muscles/joints in 1990, in comparison with between 66–77% of other groups ($p < 0.05$).

One of the most striking differences to emerge from the comparisons is that the group who had improved between 1987 and 1990 were far more likely to report trouble with their feet in 1987 (69%), but by 1990 the percentage reporting this had decreased to a level below that also of all other groups except those with no or slight difficulties getting outdoors (41%).

The group who worsened (a) were less likely than all other groups, except those with no or slight difficulties with going out in both years, to report aches/pains/stiffness in muscles/joints in 1987

(64%), but were among those most likely to report this in 1990 (85%).

The severe chronic housebound were more likely to have very high activity of daily living scores (ADL) in both years, indicating very poor ability to perform tasks of daily living. For example, in 1987, 74% of this group had a poor activities of daily living score, in comparison with up to 66% of other groups ($p < 0.0001$); in 1990, 92% of this group had a poor score, as did 80% of group b who had worsened, in comparison with up to 57% of other groups ($p < 0.0001$). The figures are reported in more detail in the working paper available from the authors²⁹.

Emotional well-being

Table 2 shows that the severe chronic housebound group were far more likely to have poorer emotional well-being. The severe chronic housebound group were more likely to score as a case with the General Health Questionnaire (GHQ), indicating psychiatric morbidity (anxiety or depression) in 1990, although this did not achieve statistical significance in 1987 despite apparent differences. They were among those least likely to have good overall and current life satisfaction (Neugarten Life Satisfaction Scale and Delighted-Terrible (D-T) Faces Scale respectively), although these trends did not achieve statistical significance by 1990, although again the percentage differences were still apparent. The lack of statistical significance probably reflects the small sub-group numbers, and therefore attention should be drawn to the actual differences between groups rather than to significance levels. There were no significant associations with reported loneliness.

Briefly, in relation to emotional well-being, qualitative methodology was used to supplement the quantitative data collected for this survey. Twenty three respondents who were interviewed by one of the researchers (MF) were invited to form one of four focus groups (of 4 to 7 people each) to explore what factors are important for 'a happy old age'. The participants were brought to the research unit by taxi, and returned to their homes by taxi after about three hours. Tea and biscuits were provided and the seating was arranged around one table. The group was diverse and included fit older people as well as less fit active and less active elderly people

(for example, one man in his eighties had one leg and looked after his 60 year old handicapped son; one woman in her nineties was blind and another in her nineties did not go outside except if taken). The members of the group were lively and based their decision making on their own experiences and those of people they knew. The discussions were taped and a content analysis was performed of the transcripts. This showed that eight domains emerged, and that the most often raised was being able to get out (raised by 15 people), along with having friends and support (also raised by 15 people), having activities, clubs, interests (again by 15), followed by having enough money (mentioned by 10). Other items raised were having access to transport (by 8), having help or services (by 8), being healthy (by 7), being independent (by 1), having a decent home (1), and living in a decent area (by 1).

Network type

There were no significant differences with changes in ability to get outdoors and network size or composition (density, number of children, other relatives, friends, confidantes in 1987 or 1990), or satisfaction with frequency of social contacts. In both years between 81% and 100% of respondents in each category reported having a main (informal) helper. There were no significant associations with reporting having a helper and ability to get outdoors. However, the implication is that in 1990, for example, 18% of the severe chronic housebound group had no main informal helper, and relied totally on formal services.

Social visiting was inevitably affected by increasing difficulties getting outdoors. In relation to visiting relatives, neighbours and friends: the figures for 1987 were :68% of those with no or slight difficulty getting outside in both years reported that they regularly or occasionally went out visiting, in comparison with 46% of those who had worsened from having no or slight difficulty in 1987 but had moderate or worse difficulty by 1990, 45% of those who had worsened from moderate or severe difficulty in 1987 to cannot get out except with help in 1990, 46% of those with moderate or severe difficulty in both years, 44% of those who had improved from cannot get out in 1987 to slight or moderate or severe difficulty in 1990, and 27% of those who could only get out with help in 1987

Table 2 Emotional well-being and changes in ability to get outdoors 1987-1990+

	None/slight difficulty 1987 & 1990		Moderate/severe difficulty 1987 & 1990+++		Cannot do except with help/cannot do at all on own 1987 & 1990		Improved from cannot do/at all in 1987 to slight/moderate/ severe difficulty in 1990+++		Worsened ^b None/slight difficulty in 1987 & moderate/severe /cannot do at all 1990		Worsened ^b moderate/severe difficulty in 1987 & cannot do/do at all in 1990	
	%	(no)	%	(no)	%	(no)	%	(no)	%	(no)	%	(no)
Neugarten overall life satisfaction scale score:												
1987:												
Low (poor) (0-6)	7	(4)		(1)	18	(13)		(3)	10	(5)	10	(2)***
Medium (7-14)	38	(23)		(3)	62	(45)		(6)	44	(21)	55	(11)
High (good) (15-20)	55	(33)		(8)	20	(15)		(6)	46	(22)	35	(7)
1990:												
Low (poor) (0-6)	11	(6)		—	18	(11)		(2)	13	(5)	11	(2)
Medium (7-14)	39	(22)		(6)	54	(33)		(4)	46	(18)	63	(12)
High (good) (15-20)	50	(29)		(2)	28	(17)		(6)	41	(16)	26	(5)
D-T Faces current life satisfaction score:												
1987:												
Low (good) (1-10)	68	(39)		(5)	29	(18)		(7)	48	(24)	15	(3)***
Medium (11-19)	30	(17)		(5)	57	(36)		(2)	50	(25)	85	(17)
High (poor) (20-35)	2	(1)		(1)	14	(9)		(2)	2	(1)	—	—
1990:												
Low (good) (1-10)	48	(24)		(5)	37	(16)		(6)	55	(18)		(4)
Medium (11-19)	46	(23)		(2)	51	(22)		(3)	30	(10)		(8)
High (poor) (20-35)	6	(3)		—	12	(5)		(3)	15	(5)		—
GHQ Score												
1987:												
<5	83	(43)		(9)	61	(39)		(11)	76	(38)	75	(15)
6+ (case)	17	(9)		(3)	39	(25)		(2)	24	(12)	25	(5)
1990:												
<5	83	(47)		(6)	61	(39)		(7)	69	(24)	67	(12)**
6+ (case)	17	(10)		(2)	39	(23)		(4)	31	(11)	33	(16)
Number of respondents++	50-60		7-12		43-73		11-15		33-50		12-28	

+ The table excludes 4 people with moderate-severe difficulty in 1987 & none-slight difficulty in 1990 as it was not felt justified to include them in with the other group who had improved from being unable to go out.

++ The sub-group numbers vary due to item non-response.

+++ Percentages not calculated due to small sub-group totals

X² test: * p<0.05, ** p<0.01, *** p<0.001, **** p<0.0001

and in 1990, (and, of course none of those who could not get out at all in both years) (p<0.001, 1987; p<0.0001, 1990). The percentages were similar for each group between years, the exception being with the group who had worsened from moderate-severe difficulty in 1987 to cannot get out except with help in 1990, whose reporting of going out visiting had dropped from 45% to 20%.

Service use

Between 100 and 83% of respondents in each category reported having help from an informal carer and/or a professional with activities of daily living in 1987 and 1990. In each case those who had no help with ADL were those who had no or only slight difficulties getting outdoors. This group also reported having help with fewer tasks than the

other groups. The severe chronic housebound groups were far more likely to report having help with a greater number of tasks than other respondents in both years. For example, in 1990, 77% had help with 9 or more tasks in comparison with 11% of those with no or slight difficulty, five out of thirteen of those with moderate or severe difficulty, 12% of those who had improved, 46% of group a who had worsened and 55% of group b who had worsened ($p < 0.0001$).

While 22% of the able group had help from 4 or more health (excluding general practitioner) and social services in 1990, far more of the other groups had help – between 37-66% ($p < 0.01$), with increased use reflecting increased inability to get outdoors. These were usually district nursing, meals on wheels and home help services. There were no consistent or significant associations with consultations with general practitioner (GP), contact with hospital doctor, optician or dentist in 1987 or 1990. Nearly a quarter (23%) of the severe chronic housebound group had not seen their GP in the 12 months preceding re-interview in 1990. While 26% of the able group received chiropody services in 1987, in comparison with far more of all the other groups – between 45-66% ($p < 0.0001$), there were no differences between groups by 1990. Sixty four per cent of the severe chronic housebound group in 1987 and 69% in 1990 received chiropody services. This was the only reported service (unmet) need that distinguished these groups in both 1987 and 1990. For example, in 1990, 23-58% of all groups except the able group and the intermediate chronic group (where the proportions were 9% and 15% respectively) reported a need for (more) chiropody. Less than 10% in each group received or said they wanted rehabilitation services in either year (occupational therapy or physiotherapy).

Conclusion

This paper presented findings from a survey of people aged 85+ in 1987, and a follow-up study of the survivors in 1990. Although a very small proportion of all people aged 65+ are housebound, this proportion increases in advanced old age. The analyses presented here showed that while 26% of the survivors were able to get outdoors with no or only slight difficulty in both 1987 and 1990, 5% had

moderate to severe difficulties getting outdoors in both 1987 and 1990, 32% could not get outdoors alone or with help in both 1987 and 1990, 7% had improved in their ability to get outdoors and 30% had worsened. The proportion able to get outdoors inevitably declines with age, but this is a sharp decline at 85+. The proportions with difficulties getting out in both 1987 and 1990 are the majority, just one reason why their problems with locomotion should be treated seriously given their impaired emotional and social well-being. About a fifth of people aged 85 and over are resident in long stay institutions, thus the results from this study will under-emphasise the extent of inability to get outdoors in this age group as a whole.

Those who could not get outdoors in 1987 or 1990 – the 'severe chronic housebound group' had poorer mental health, life satisfaction, reported more problems with health and functional ability, and heavier dependency on services (ie loss of independence). Few received services specific to rehabilitation and social support (eg. physiotherapy, occupational therapy and social work), although the provision of instrumental aid with tasks of daily living was relatively high (eg from home help services, and, in particular, from relatives). Musculo-skeletal problems, such as arthritis and related problems, and problems with feet, as well as urinary incontinence, appeared to be major causes of being housebound. The implication of the findings is that the onset, or worsening, of arthritis related disorders is likely to be responsible for deterioration in mobility, while relief of foot problems may lead to improvements in mobility. It is, of course, possible that a small proportion of those who worsened had done so only temporarily (as with the group found to have improved at follow-up). It is unclear from this study why relief of foot problems should lead to the improvement in mobility, while on the other hand, it was apparently the onset of joint related problems that led to deterioration.

Although this is a longitudinal data set which, in theory, should enable investigators to understand the direction of the associations reported above, the numbers within the sub-groups are often too small for meaningful analysis at a detailed level. Although the initial sample was large (640), many of these people had died before follow-up. Although

the follow-up sample numbered 267, the numbers within sub-groups of ability become small (as was evident in Table 2). However, the authors carried out two similar follow-up studies of almost 800 randomly sampled people aged between 65 and 85, who either lived in the same urban district (City and Hackney) or in more rural Essex (a comparison district). Identical methods were used and the files for the three samples (including the 85+ sample discussed here) are currently being merged and weighted. The resulting larger sample size should enable the investigators to explain the directions of any associations. The results presented here can only be tentative in relation to suggestions about causality.

The results of this survey, if the suggestions about the direction of the relationships are accepted, have implications for appropriate service provision in order to more effectively meet this group's health and social needs. Although relatives provided most help, there was a probable need for ongoing input from professional therapy staff for relief from/rehabilitation of the arthritis related problems and problems with footcare in particular. Input from occupational therapy has been demonstrated to be effective in increasing ability to perform tasks of daily living among people with arthritis and rheumatism⁴².

A study by Ellis (1993a; 1993b) in Birmingham of assessments of disabled people reported that professionals tended to rely on their own judgements, devaluing the views of users and carers. Both users and professionals regarded self reliance as a virtue; and the priority of most people with disabilities was to regain their independence^{43,44}. However, because services tended to reinforce an 'unwelcome sense of dependency', people sought assistance with reluctance, seeing services as an intrusion on their privacy and a threat to normal living. As she implied, living in the community is wider than the provision of a home help or other services. This fostering of dependency was confirmed by the study presented here – few rehabilitation services had been provided, and the most commonly provided services were home helps and meals on wheels.

It is of interest that there was no consistent association with consultation with GP (including home

visits) and degree of restriction. As many as 23% of the severe chronic housebound group had not seen their GPs for 12 months or more in 1990. This is likely to change with the new contracts for GPs which require them to offer annual home check ups to their patients aged 75+, before they qualify for full financial reimbursement for the care of these patients⁴⁵. Whether or not this leads to improvements in management of conditions affecting mobility remains to be seen. It is hoped that it will facilitate the targeting of appropriate services for these patients. The chronic housebound group was most likely to use other health and social services.

This study relied on respondents' own reporting of degree of difficulty in the performance of tasks of daily living, including getting outside. Blaxter (1976) pointed out that there can be significant differences between individuals' perceptions of disability and professionals' ratings. Value is now placed on people's own subjective perceptions of their health and functional status⁴⁶. Bowling and Cartwright (1982) also pointed to the lack of awareness among general practitioners of their elderly patients' health and functional ability problems⁴⁷.

From another perspective, this research also shows that the health and functional status of people aged 85 and over and 87 and over is very variable. Although the largest proportion, 32% , were categorised as the chronic housebound, 26% remained able to get outdoors in both years with either no difficulty or only slight to moderate difficulty, and a very small proportion, 7%, who improved between interviews. Certainly, these findings confirm Bury and Holme's contention that the process of decline is very diverse among the oldest old, whilst not discounting the very real health problems of most of these people²⁶. This study was, however, one of elderly people living in the community.

Finally, it should be re-emphasised that handicap is created socially. Going out depends not only on sensory and functional abilities, but also on the structure of the environment – road safety, safety from criminals, the availability of transport and aids to mobility. While it is clear that there is a need to improve use of rehabilitative services, and for full geriatric assessments of older people given the evidence on their effectiveness⁴⁸, there is also a

need for a safer and more secure environment. Also, while this research cannot provide information about the numbers of people who would benefit from medical interventions, as opposed to rehabilitation, this aspect of health care should not be neglected for elderly people. There is a clear need for further research on the latter, as well as on elderly people's attitudes towards various invasive procedures.

It was often assumed in the past that transitions between independence and dependency were in one direction only, but with improved methodologies and techniques of longitudinal study analysis this assumption is seen as unrealistic⁴⁹. However, there is little longitudinal data in changes over time in level of functioning. While longitudinal research is desirable, it is not without problems which limit the generalisability of research, such as voluntary sample attrition⁵⁰. Sample loss with older respondents is usually due to the death (involuntary attrition) of older sample members; and those who perceive their health as poor are also more likely to drop out of longitudinal research, culminating in an age and health status bias among remaining sample members⁵⁰. The findings reported here should be interpreted with these cautions in mind, but there is still a need for longitudinal surveys of changes in levels of functioning and data which can be used to calculate healthy life expectancy as well as for service planning.

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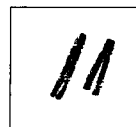
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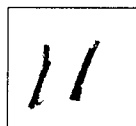
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