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Care of the elderly in North and West Belfast

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SUMMARY

A survey of all elderly people aged 65 years and over from North and West Belfast receiving long-term care in residential and nursing homes, and in psycho-geriatric and geriatric care was undertaken. A total of 967 subjects was studied and physical dependency and mental impairment documented. The high dependency of residents in geriatric and psycho-geriatric care was highlighted, with greater levels of dependency than among those receiving nursing home care. Professional assessment prior to admission should be common to all long-term care facilities and is essential if services for the projected demographic increase in numbers of very elderly people are to be provided, and inappropriate admission and expenditure avoided.

INTRODUCTION

The pattern of care for dependent elderly people continues to evolve, with increasing emphasis on community support to enable them to be maintained in their own homes. This has been accompanied by an expansion in the provision of non-statutory nursing home and residential home accommodation. The government document People First: Community Care in Northern Ireland in the 1990's[1] has major implications for the role of nursing home, residential home and hospital care of the elderly.

The present elderly population of North and West Belfast is approximately 22,000 over the age of 65, with 8,100 over the age of 75, out of a total population of 168,300. The projected increase in the population over the age of 65 between

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1991 – 1996 is 2·3% and the population over the age of 85 will increase by 23% during this 5 year period.[2] The future demands on services for the elderly will be considerable. Central to whatever pattern of care evolves is the accurate assessment of need, and the appropriate targeting of available resources. To identify services required within the present pattern of care a survey to assess mental and physical disability was undertaken of all elderly people in institutional care in North and West Belfast.

METHODS

The survey was carried out between January and July 1989. The proprietors of the private and voluntary residential and nursing home establishments registered in North and West Belfast were approached. The purpose of the survey was explained, and agreement to participation obtained. Agreement to approach residents in statutory residential care was obtained from senior social work officers, and from senior medical staff to approach patients in geriatric and psycho-geriatric care. Permission was also sought from the appropriate general practitioners. All patients resident in the psycho-geriatric facility for North and West Belfast situated in Purdysburn Hospital were included in the survey, regardless of previous home address or age. The residents and patients were then visited individually by a physician trained in the care of the elderly. A standard proforma was completed which included age, marital status, home address and address admitted from, date of admission, whether supplemented or self-financing if applicable, and drug therapy. A Barthel Index[3] of activities of daily living was completed with help from the attendant staff, the score varying from 0 (severely disabled) to 20 (fully independent). This is a simple index of independence to score the ability of a person to care for himself. A mental test questionnaire[4] was also completed, the score ranging from 0 (severely confused) to 10 (normal). A postal survey was carried out of nursing and residential homes in the remainder of Northern Ireland outside North and West Belfast to identify the number of residents originally domiciled in North and West Belfast who had chosen to move outside this area for care.

All data were analysed using SPSSX on the ICL 2988 mainframe computer at the Queen's University of Belfast.

RESULTS

A total of 967 subjects was surveyed. There were 248 residents in private and statutory residential care, 347 in voluntary, charitable or private nursing home care, 112 in psycho-geriatric care and 260 in geriatric hospital care. The overall ratio was 3·7 females to 1 male. The age distribution and home address in each of the four categories is shown in Table I. The nursing home sector has the highest proportion of residents aged less than 65 years, and also the highest proportion whose home address is outside North and West Belfast. The postal questionnaire of nursing homes outside North and West Belfast identified 20 females and 5 males originally from North and West Belfast, and 43 females and 14 males in private and residential homes outside North and West Belfast. The residential sector received 65% of admissions from home, 20% from hospital, geriatric and psycho-geriatric care and 8% from other hospital sources. The nursing home

sector received 53% of admissions from home, 4% from hospital, geriatric and psycho-geriatric care, and 32% from other hospital sources. The psycho-geriatric sector received 63% of admissions from home, 23% from hospital and 14% from residential homes. The geriatric sector received 65% of admissions from home, 24% from hospital and 11% from residential homes.

TABLE I

Age structure and home address of 967 subjects

	n	*Mean years*	*Age (range)*	*Age less than 65 yr*	*Home address* *North and West Belfast*	*Outside North/West Belfast*
Residential home	248	82·4	(54–100)	8 (3·2%)	220 89%	19 8%
Nursing home	347	82·4	(40–101)	23 (6·6%)	229 66%	105 30%
Psycho-geriatric care	112	81·0	(52–100)	2 (1·8%)	95 85%	17 15%
Geriatric care	260	82·7	(63–107)	3 (1·2%)	236 91%	22 8%

The lengths of stay are shown in Table II for each of the four categories. Some of the facilities in each category were opened less than five years prior to the survey and this would be reflected in the pattern of their lengths of stay. Similarly, other psychiatric institutions such as Purdysburn Hospital have a number of patients who were admitted at a young age and remained in institutional care before passing into the geriatric sector.

TABLE II

Length of stay of 967 subjects recorded at the time of survey

	n	*1 yr*	*1 yr*	*2 yr*	*3–5 yr*	*>5 yr*
Residential home	248	53	38	41	43	73
Nursing home	347	117	78	42	52	58
Psycho-geriatric care	112	35	21	20	10	26
Geriatric care	260	132	35	23	33	37

The Barthel index scores and the mental scores are shown in cross-tabulation form for residential home subjects, nursing home residents, psycho-geriatric patients and geriatric hospital patients in Table III. The subjects with the lowest mental scores (0–3) combined with the lowest Barthel scores (0–4) are the most heavily dependent and confused. In residential homes 4% fall into this category, with 12% in nursing homes, 13% in psycho-geriatric care, and 33% in hospital care. Conversely subjects with the highest mental scores (8–10) and Barthel scores (15–20) are largely independent and not confused. In residential homes 28% fall into this category, with 26% in nursing homes, 1% in psycho-geriatric care and 6% in hospital care.

TABLE III

Mental scores correlated with Barthel scores for the four groups of subjects

			Mental score			
			0–3	*4–5*	*6–7*	*8–10*
Residential home	Barthel score	0–4	9	3	4	—
(246)		5–9	17	4	—	6
		10–14	32	14	11	18
		15–20	18	14	26	70
Nursing home	Barthel score	0–4	40	13	9	4
(336)		5–9	19	13	7	20
		10–14	17	19	11	36
		15–20	11	16	14	87
Psycho-geriatric care	Barthel score	0–4	14	—	—	—
(111)		5–9	48	—	—	—
		10–14	31	2	1	—
		15–20	9	3	2	1
Geriatric care	Barthel score	0–4	83	11	13	13
(254)		5–9	26	12	8	17
		10–14	9	3	11	27
		15–20	3	2	2	14

In the nursing home sector 293 patients (84%) were receiving supplementary financial support. This approximates to an annual cost of £3·5m in North and West Belfast, assuming an average financial supplementation of £200 per week. The proportion of subjects at present in care in one or other of the residential home, nursing home, psychiatric and geriatric care groups is shown in Table IV. The projected changes in the population by 1996 are included, and adjustments to the current numbers of beds available in the present facilities have been projected, which indicates the need for an overall 11% growth by 1996 if the present pattern of care is to continue.

DISCUSSION

The major strength of this study is the uniform method by which information has been gathered from the four separate components providing care for those elderly no longer able to remain at home in North and West Belfast. The major weakness is the absence of similar information on those remaining at home and cared for by their families and community services. Although the assessment tools (Mental test score and Barthel index) are not designed to assess behavioural disorders or social circumstances contributing to admission to care, they are well established methods of measuring confusion and independence, two factors which often determine need for care outside the home.

TABLE IV

North and West Belfast: Residential home, nursing home, psycho-geriatric and geriatric hospital care.
Proportion of subjects in care by age, and projected placement needs by 1996

Age: yr	*65 – 74*	*75 – 84*	*85 +*	*Total*
No. of placements in 1989	112	362	388	862
% of total placements	13%	42%	45%	100%
No. of people age > 65 in N/W Belfast	14,000	6,500	1,600	22,100
Proportion of these in care in 1989	1%	6%	24%	3·9%
Projected population change 1991 – 1996	−0·4%	+1%	+23%	+2·3%
Projected additional placement needs by 1996	−0	+4	+89	+93 (11% growth)

In the residential sector a total of 70 subjects (28%) have a normal mental score (8 – 10) and a Barthel score of 15 – 20 which indicates a high degree of independence without confusion. While social and behavioural factors contributing to admission were not assessed it is likely that a substantial number of these residents could remain at home if improved home care support was available as an alternative to residential care.

In the nursing home sector 7% of the residents are aged less than 65, showing that these facilities are not used exclusively by the elderly. Also, 30% of the residents came from home addresses outside North and West Belfast indicating that such facilities, although sited in one health district, may care for patients from other surrounding districts. A surprising number of nursing home residents, 87, (26%) were mentally normal with a score of 8 – 10 and had a good Barthel score of 15 – 20 indicating a high degree of independence. A substantial number of these residents could be cared for at home if improved care was available, or in less costly residential homes.

There were 160 subjects whose length of stay was greater than 6 months in hospital and who may be deemed unlikely to recover independence to enable them to return home or to a residential home and who therefore require long-term nursing care. Current residents in geriatric hospital care are heavily dependent, 33% with a mental score of 0 – 3 and a Barthel score of 0 – 4 which supports the conclusion that these facilities are appropriately used. A similar appropriate pattern of limited physical ability in addition to mental impairment is present in the psycho-geriatric care facilities.

This survey establishes that at present elderly people in North and West Belfast occupy 277 places in residential care (34/1,000 over the age of 75), 254 places in nursing home care (31/1,000 over the age of 75), 95 places in psycho-geriatric care (12/1,000 over the age of 75) and 236 places in hospital geriatric

care (29/1,000 over the age of 75). This means that there are 106 places/1,000 people over the age of 75, or that 3·9% of the total of 22,100 people over the age of 65 are presently receiving care in either hospital, residential or nursing home facilities. This is lower than the reported figure of 5·6% of old age pensioners in institutional care in Scotland.[5] There is clear evidence of major inappropriate placement in the nursing home sector. Similar findings of lower levels of nursing dependency have been reported in registered nursing homes in Edinburgh[6] and West Glasgow[7] in comparison to geriatric long-term care wards. This is in contrast to Brighton[8] where a larger proportion of residents in private nursing homes required heavy nursing than in the long-stay hospital wards. The provision of 5 beds/1,000 population aged 65 and over in Brighton is much lower than the 11·5/1,000 hospital beds available in North and West Belfast indicating a significantly different pattern of care, although psycho-geriatric provision was not included in the overall analysis from Brighton. It is evident that at present in North and West Belfast nursing home care and long-term hospital care are providing for elderly people with significantly different levels of dependency, with lower dependency in nursing home care and high dependency in hospital care. If the number of elderly in hospital care falls, there will be an accompanying rise in dependent elderly who will require care in nursing home accommodation. At present these two facilities are not providing for similar populations, and should not be viewed as comparable.

We believe that the present lack of formal assessment before admission to nursing home care is invidious and costly, and may deprive some of the elderly of more appropriate community care. There is evidence from this study that strengthened community services would allow a proportion of the fitter residents of nursing home and residential home facilities to remain in their own homes. A substantial number of the elderly will nevertheless continue after appropriate assessment and treatment to require long-term nursing care, and it is essential that provision of such care on the basis of need continues to be available. The projected demographic changes in numbers of elderly people will result in the largest increase occurring in the very elderly section of the population which currently consumes the greatest proportion of resources. At present 24% of the over 85 year-olds are receiving long-term residential home, nursing home or hospital care and an 11% increase in resources will be required to maintain the present provision of care over the next 5 years alone. If the expectations of the projected demographic increase in numbers of very elderly are to be effectively met, skilled professional pre-admission assessment should become common to all long-term care facilities. This will allow the allocation and targeting of care to individual need, at home or in long-term care, and reduce the present level of inappropriate admission and expenditure.

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REFERENCES

1. Department of Health and Social Services. People First: Community Care in Northern Ireland for the 1990's. London: HMSO, 1990.

2. Public Health Matters. The first annual report of the director of public health. Eastern Health and Social Services Board, Northern Ireland, 1989.

3. Mahoney FI, Barthel DW. Functional Evaluation: Barthel Index. *Maryland State Med J* 1965; **14**: 61-5.

4. Qureshi KN, Hodkinson HM. Evaluation of a ten question mental test in the institutionalized elderly. *Age Ageing* 1974; **3**: 152-57.

5. Scottish Home and Health Department and the Scottish Education Department. Changing patterns of care. Report on services for the elderly in Scotland. Edinburgh: HMSO, 1980.

6. Capewell AE, Primrose WR, MacIntyre C. Nursing dependency in registered nursing homes and long-term care geriatric wards in Edinburgh. *Brit Med J* 1986; **292**: 1719-21.

7. Stott DJ, Dutton M, Williams BO, MacDonald J. Functional capacity and mental status of elderly people in long-term care in West Glasgow. *Health Bulletin* 1990; **48**: 17-22.

8. Bennett J. Private Nursing Homes: contribution to long stay care of the elderly in the Brighton Health District. *Brit Med J* 1986; **293**: 867-70.