Dependency levels of people in aged care institutions in Auckland

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Abstract

Between January and June 1988, a survey of 7516 people in aged care facilities in the Auckland region (99.4% response rate) was undertaken to ascertain the extent and provision of care for elderly people requiring ongoing care in order to make comparisons with other centres in New Zealand. Information was gathered about their ability to perform various activities of daily living by staff members who completed a structured precoded and pretested questionnaire for each resident or patient. Overall levels of dependency were also assessed as part of the questionnaire: 13% were assessed as requiring long stay hospital care, 48% had moderate or appreciable dependency, and the remainder had some dependency (23%) or none at all (16%). Almost one quarter (23%) of the 5213 residents in old people's homes were rated as apparently independent. Of people in religious and welfare residential homes, 38% were rated as independent whereas in commercial rest homes 12% of people were classified in this way. This high level of apparent independence in religious and welfare homes is the main aspect in which the Auckland long term care scene is distinct from other regions in the country.

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Introduction

The assessment of dependency in the elderly for determining the appropriateness of residential or continuing care has been the subject of much research and debate. A number of

different assessment systems are currently in use. Most assessment systems were developed originally as clinical measures, but are now primarily used by planners and policy makers to demonstrate patterns of need or use, and to show trends over time for population groups. They tend, therefore, to emphasise measures of functional capacity or incapacity and in general do not include medical diagnoses or underlying causes of disability. Measurement systems differ in four key respects: the care settings in which they are designed to be used, the components or content included, the structure of the scales, and the method of administration.

In New Zealand, several studies have concerned themselves with the dependency levels of older people in institutional care for the elderly within particular geographical based or administrative regions. At least six studies have used dependency rating systems based on the Booth scale [6], including five recent area studies [1-5] and a major national study of rest homes which was commissioned in 1988 by the Department of Social Welfare with a view to determining new policies in the payment and provision of long term care of the elderly [7].

It has long been recognised that Auckland differs with respect to the provision of care for the elderly. This study was intended to ascertain the extent and provision of care for elderly people requiring ongoing care in Auckland in order to make comparisons with other centres in the country.

Methods

Between January and June 1988, a survey was made of all people in long term care for the elderly in the then Auckland Hospital Board region. The methods and conduct of the study are described in more detail elsewhere [8]. Briefly, each patient occupying a designated long stay geriatric bed in all hospitals (public or private), and each resident in 223 of the 227 licensed old people's homes, was surveyed. Hospital patients in acute beds, in day wards, or assessment and rehabilitation beds were not included. Residents in retirement villages or similar complexes were excluded unless they occupied a bed which was licensed under the old people's homes regulations.

A precoded questionnaire of 36 items including demographic and admission details, information on functional dependency and activities of daily living using defined levels of functioning ranging between independence and complete dependence, was prepared for each resident or patient. Senior nursing staff who provided care were requested to assign functional scores according to each subject's status over the past two weeks. If the condition was variable, the staff were instructed to select the more dependent rating. The questionnaires did not require a total or overall dependency rating from the staff or survey personnel, nor any physical testing of the subjects.

Dependency was assessed using a modification of a rating scale developed by the unit for social service research at Sheffield University [6]. This instrument, hereafter referred to as the Booth scale, has been adequately assessed (inter-rater reliability=0.83, test retest reliability=0.95) and is a reliable tool in assessing the dependency of elderly people in residential care [9]. Although developed for use in residential homes, because it is based on measures of functional ability and not on medical diagnoses or causes of disability, its extension to cover patients in long stay nursing facilities seems reasonable.

Various versions of this scale have been used in dependency surveys in Otago, Canterbury and Taranaki [1-5]. In May 1987 the Department of Social Welfare in New Zealand introduced a system for the assessment of eligibility for subsidies, based on the Booth measures and the work of King [4,5].

The Department of Social Welfare's dependency scale, known as the composite dependency score (CDS), begins with 14 different measures which combine into three scales: self care and mobility (mobility, dressing, feeding, self care, toileting and bathing), continence (urine and faeces) and memory loss and confusion (orientation of time, orientation of place, memory, awareness and behaviour). Each scale has a range of one to five points, which are then summed and grouped into five categories of increasing levels of dependency as follows: independent (score 3); some dependency (score 4-6); moderate dependency (score 7-9); appreciable dependency (score 10-12); and requiring hospital care (score 13-15).

In accordance with the Department of Social Welfare's guidelines, residents were automatically moved into the appreciable dependency category if they received a single score of five in any component, or if they required nursing and night care. Using these rules, a computer model assigned the dependency category for each of the residents and patients in the survey.

The three categories of care which relate to eligibility for a rest home subsidy are category 1 (score 4-6), category 2 (score 7-9), and category 3 (score 10-12). Residents scoring 13 or above were deemed to be sufficiently disabled as to require the more intensive nursing facilities of a long stay hospital.

In order to check the reliability of the questionnaire, a 10% random sample of the old people's homes was taken and a proportion of the residents were then selected randomly from these homes. Staff were asked to repeat the survey for these selected residents. This exercise indicated that factual information such as marital status and ethnic origin did not alter at all and only 2% moved more than one category in the final dependency score suggesting that the scoring reliability appeared to be acceptable.

To enable comparisons with earlier studies in other regions of New Zealand, additional computer programs were developed to give dependency ratings according to the systems used in those studies. In the Booth scale as used for Dunedin [1,3] and Christchurch [4] there are differences in the measures employed with the final score producing only three dependency groups: low, medium and high. In the south Otago [4] and Taranaki [5] surveys, a score very similar to the composite dependency score was produced, that is, with five levels of dependency, but there are significant differences in its construction. It is recognised that the differences in construction of the dependency categories and other factors such as the selection of the population being studied, would limit the comparison between regions to all but broad categories.

Results

Precoded questionnaires were completed for 7516 people, representing 99.4% of all people in institutional care at the time of the survey. Of these, 5213 (69%) were residents of old people's homes, 1865 (25%) were patients in private hospitals, and 438 (6%) were patients in public hospitals. The distributions of dependency of the residents of old people's homes and hospital patients differed markedly. Table 1 demonstrates the large proportion of the residents in old people's homes who are categorised as being independent (23%) or else as having some dependency (32%). Only 3% of patients in private hospitals, and 11% of patients in public hospitals came into these two low dependency categories. The majority of hospital patients (82% and 75% of people in private and public hospitals respectively) had high levels of dependency (defined as "appreciable dependency" or requiring hospital care) compared with only 13% of people in residential care who were categorised in this manner; a small proportion (3%) in residential care were categorised as requiring hospital care.

Table 1.—Distribution (percent) of the levels of dependency, by type of institution

Level of dependency	Old people's home (n=5213)	Private hospital (n=1865)	Public hospital (n=438)	Total (n=7516)
Independent	23	1	1	16
Some dependency	32	2	10	23
Moderate dependency	29	15	14	25
Appreciable dependency	13	46	35	23
Hospital care	3	36	40	13

Figure 1 shows the dependency distributions for the old people's homes according to the type of institution providing care. In religious and welfare residential homes, 38% were apparently independent compared with only 12% of people in commercial rest homes. The latter also had a correspondingly higher proportion of residents who needed greater levels of care.

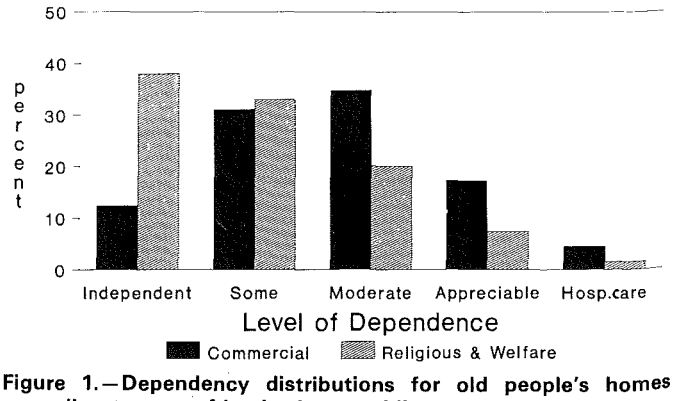

Figure 1.—Dependency distributions for old people's homes according to type of institution providing care.

In contrast, when the data for private hospitals were analysed, only slight differences in distribution of dependency were evident between those in the religious and welfare sector and those in the commercial sector (Figure 2). In religious and welfare geriatric hospitals, a lower proportion of patients required high levels of care than in the private (commercial) geriatric hospitals.

When the results of this study are contrasted with those for equivalent institution types from other regions, Auckland does not stand out as particularly different, except for the residents of religious and welfare residential homes who are much less dependent than their counterparts elsewhere. Using a chi square test to test the null hypothesis that the distribution of dependency in religious and welfare residential homes is no different for Auckland than for each of the other regions, for each comparison the null hypothesis was rejected ($p<0.0005$, except for Campbell's Dunedin study where $p<0.014$).

Discussion

The comparison of the dependency levels of residents and patients in different aged-care institutions in Auckland confirmed the expectation that people in hospitals (both public and private) were substantially more dependent than people in rest homes. It also demonstrated that people in religious and welfare residential homes were substantially more independent than people in the private sector (commercial) rest homes, according to the measures used in this study for assessing dependency.

The historical background of the two categories of homes in part may explain the different clientele being served. Until July 1989, religious and welfare homes received a substantial government grant to assist with building homes, but no assistance for the accommodation costs for any residents subsequently. Consequently, religious and welfare homes could only charge accommodation fees which were slightly less than the national superannuation allowance. The limitation on fees meant that staff levels were not sufficient to take more dependent residents, hence it is likely that selection was based more on social needs rather than physical or medical. This could explain the lower rating on the dependency scale in religious and welfare homes.

There is also a belief that the increase in numbers of large new religious and welfare homes in the past encouraged frail but otherwise independent elderly to opt for residency when the homes initially opened. Later vacancies may have been filled with those who were judged as most needy, so that subsequent admissions were more dependent.

Whilst the measures used in this study could not necessarily be regarded as sufficient for comparisons of individuals, they are regarded as sufficient for comparison on a population basis. Compared with studies elsewhere in New Zealand which measured dependency in a similar manner, Auckland is distinctive in that people in religious and welfare homes in this city are significantly more independent than residents of religious and welfare homes in some other parts of the country, although in all other respects the patterns of dependency are similar.

The reasons are difficult to identify. It has been suggested that the subsidy differences between Auckland and other parts of the country may be a factor. Auckland expsychiatric patients have until recently and unlike their counterparts elsewhere, been eligible for a special rest home subsidy in commercial rest homes. But their levels of dependency have not proven to be particularly different from others in that type of home. On balance, it would appear that an element of choice may be the key factor, some residents choosing the lifestyle the religious and welfare homes are able to offer – perhaps initially as privately paying residents – but later requiring a rest home subsidy.

There are however, difficulties in making comparisons with earlier studies because of the variations in the scales used to measure dependency. Even slight variations between different scoring systems employed can produce misleading results. Agreement on a set of standard core measures of dependency would assist those who would research or monitor this field. There are several difficulties in creating a single standardised scoring system, particularly in the human elements in making assessments. When people, rather than computers, are used to give a final score (as in initial assessments for eligibility for a subsidy), there is room for the rater's own biases to have an effect or for nonscheduled factors to be considered. Even where the final score is rated objectively, there may be a conditioning affect on the rater's perceptions of normal or independent for any individual score. Some indications that this effect may exist are shown in a case study by Alexander [10].

The scoring system for subsidy purposes currently in use, does not provide any weighting for loss of vision or hearing, yet almost 40% of people in rest homes were reported as having some impairment of vision; 20% had some impairment of hearing [8]. Further, the fact that this study shows some patients in public hospitals, particularly in psychogeriatric hospitals, as apparently independent, casts doubt about the ability of this particular scale to measure dependency which is primarily of a psychological or nonphysical nature, such as confusion, drug or alcohol dependency, emotional/mental difficulties, or social needs. In addition, it may reflect the lack of provision of suitable rest home or hostel type accommodation for this group with special needs. It cannot, therefore, be assumed that because an overall dependency rating shows no dependency, that on the one hand a person is capable of living alone independently, or, on the other, that he or she could be more appropriately accommodated elsewhere. One-half of all residents in commercial rest homes who were regarded as independent received a rest home subsidy (presumably at category 1 level) suggesting that the score may underestimate the level of disability [8].

Other than the absence of relevant measures from the composite dependency score, there have been several explanations offered as to why an apparently independent elder would seek long term accommodation in an institution. These include social reasons such as the absence of an able carer, fear and insecurity of living alone, the need for supervision of medication, the costs and difficulty of maintaining a home, and a preference for community living. Anecdotal reports indicate that each of these factors can play a role in the decision to move into an institution providing long term care. Additionally, we have evidence from a further study underway that geriatricians tend to rate people as more heavily dependent than the composite score would suggest. Social reasons become compelling when a rest home subsidy is required by individuals who, having paid their fees for several years, eventually exhaust their financial resources.

It must also be remembered that historically old people's homes were widely regarded as a retirement option and hence, probably, the term "rest home" to describe them. Many of the religious and welfare homes had – and still have – lengthy waiting lists for this reason. But this outlook is changing. Many homes now report on average a greater level of dependency in new admissions than there were a few years ago. The second study in Dunedin [3] reported this trend, but without further studies similar trends cannot be verified in Auckland.

The cost of funding long stay hospital and community care is considerable, representing 13% of the total funding for health care in 1985 [11]. The complicated system of benefits and subsidies and the lack of a standardised objective method of assessment prior to entry to residential care, make it difficult to monitor changes over time, or to compare practices between regions. Part of the problem arises because a Department of Social Welfare rating is not enforced on entry to a rest home if the person initially pays their own fees.

Clearly the provision and utilisation of long term care in Auckland is distinct from other parts of the country. The challenge will be to address this anomaly to ensure that all elderly people are treated equitably and appropriately by the health services. As was concluded by Salmond following the first major survey of accommodation needs of the elderly 15 years ago, "If resources are to be allocated fairly and wisely,

there must be planning, evaluation and accountability at all levels" [12]. This survey suggests the current guidelines and protocols provided by the Department of Social Welfare as well as the scale used for assessing the levels of dependency of individual residents and patients is inadequate to determine eligibility for public funding.

The planned transfer of funding of services for the elderly from the Department of Social Welfare to the Department of Health in July 1990 may provide the opportunity to establish a standardised protocol for all people who enter licensed residential or hospital beds. This would allow a more equitable distribution of government subsidies as well as providing a method to document the status of frail and dependent elderly who require continuing care.

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