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**Dependency in the aged:
measurement and client profiles
for aged care**

Debra Rickwood

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Abstract

The measurement of dependency is essential to the provision of aged care services. Levels of dependency are used to allocate scarce aged care resources and target appropriate types of care for the frail and disabled aged. This paper examines how dependency is measured in national data collections for aged care services.

Dependency is a state in which an individual is reliant upon others for assistance in meeting recognised needs. Level of dependency is indicated in these data sets through disabilities, usually measured by physical function, but also by some mental and social function items. Selection of these items lacks a conceptual perspective and reflects the purpose, background and specific focus of the associated aged care service. There is, consequently, little overlap in the items assessed between data sets. Some trends in dependency levels can, however, be identified from available data. Larger proportions of clients of Aged Care Assessment Teams and residential care services are dependent than those served by Community Options Projects. These, in turn, are more likely to be dependent than clients of home and community care services. It is argued that greater consistency and a firmer conceptual basis for the selection of items would enhance our understanding of dependency in the aged and enable better targeting of services.

1 Introduction

Dependency is a state in which an individual is reliant upon others for assistance in meeting recognised needs. Consequently, dependency is a relationship rather than an individual attribute (George 1991). When a person cannot independently care for him/herself, other people are needed to perform the necessary functions of daily living. This reliance is most often upon informal care provided by family, friends, and neighbours, but also upon formal services provided by government, private for-profit, and private not-for-profit care services (AIHW 1993:200).

Most frail and disabled aged persons prefer to remain in the community in their own homes for as long as possible and community care is often the most appropriate form of care (Davison et al. 1993; HHCS 1991ab). It is, however, important to ensure that a person can be cared for appropriately in the community, and that the burden of care is not so heavy as to make inhuman demands on informal carers (Gibson, Harvey & Thumpkin 1992). Community care services can maintain a frail or disabled aged person in the community when the informal resources of family and friends cannot manage alone; residential care is generally considered only when informal family resources and community care services are no longer adequate to provide for the dependency needs of the person.

Formal community and residential care are generally provided by government funded aged care services. The goal of the Australian Government aged care program is:

To enhance the independence and quality of life of the frail aged and their carers by providing a coherent framework of community and residential care, which makes available high quality and cost-effective services appropriate to assessed need. (HHLGCS 1993a:231)

A coherent framework of community and residential care can only be provided if clients of all types of aged care services can be compared. Suitable services can then be targeted to those aged persons assessed with particular needs. Assessing need in terms of dependency is fundamental to providing an appropriate balance of care.

The current climate for health and welfare services remains one of fiscal restraint. While community care has experienced an expansion in the last decade, this was accompanied by a reduction in the availability of nursing home beds (AIHW 1993:211,222). The issue of targeting available services to those most in need remains a central policy concern. Geriatric assessment has increasingly been advocated as a solution to many serious problems associated with the operation and delivery of aged care services in Australia, and in particular how best to allocate scarce resources to those most in need.

The measurement of dependency can be at two levels: assessment of an individual and population indicators. For individuals, level of dependency is used to select appropriate types of care, to monitor rehabilitation progress, and to determine the burden of care. Reduction in dependency is the desired outcome in many health interventions; however, for the frail aged, maintaining dependency levels, reducing the extent to which dependency increases, and responding appropriately to increasing dependency are also entirely legitimate goals. Timely access to geriatric assessment with appropriate follow-up services has, in randomised control trials, proven to be beneficial in improving both functional capacity and more effective use of health resources among older persons (Chernoff & Lipschitz 1988). The one-to-one assessment of an individual's needs by a clinician or service provider is the basis of an appropriate and effective care plan.

For populations, measures of levels of dependency are used to compare sub-groups, monitor health trends, plan services, and assess the health outcomes of various interventions or types of care. They can also be used to establish the extent of inappropriate service use, blocked beds in acute hospitals and excessive demand for nursing home beds, thereby informing debate about such issues. Needs-based planning has replaced submission-based planning for government services, and level of dependency is an essential measure of need for aged care services. While population indicators do not require the detail of individual assessments, they need to capture their salient features.

Dependency measurement of individuals and populations is fundamental in planning for adequate and appropriate aged care services:

If we are to have debate about resource allocation, patterns of service use, client outcomes and cost effectiveness, it is far preferable for this debate to be informed rather than based on anecdote and impression. (Howe 1992:47)

For such debate, good measures of dependency are imperative, both to assess the needs of individuals and to plan services for populations. It will be increasingly necessary to describe dependency levels via consistent, reliable and valid measures in order to appropriately ration and target aged care resources in the face of rising demand.

Prevalence of dependency in the aged population

Most elderly people suffer from multiple physical illnesses or problems. Age-specific morbidity profiles show that there are few people over the age of 65 without the symptoms of at least one chronic disease (Rabin & Stockton 1987). Despite this, the lives of the majority of the aged are relatively unaffected by illness or disability, and they experience no major limitations in their daily activities. With increasing age, however, a growing proportion does develop disabilities, and for most people, the final stage of life involves the experience of some disability (Sax 1993; Rabin & Stockton 1987).

The most recent data available on the prevalence of dependency in the Australian aged population comes from the Australian Bureau of Statistics (ABS) Disability, Ageing and Carers Survey conducted in 1993. Table 1 presents proportions of those aged over 60 who are disabled, handicapped and dependent. Dependence is defined here by the ABS categories of severe or profound handicap, indicating whether personal help or supervision is required sometimes or always for self-care, mobility or communication activities. The most frequently reported handicap in both the 1988 and 1993 surveys was in the area of mobility, followed by problems with self-care and communication (Sax 1993; ABS 1993). Many elderly people have multiple handicaps.

Table 1: Percentage of persons with disability, handicap, and profound/severe handicap by sex, age and year, Australia

	Males			Females		
	1981	1988	1993	1981	1988	1993
Disability						
60-64	36.10	43.53	41.64	23.74	27.89	26.22
65-69	34.78	47.29	44.02	31.57	35.93	35.22
70-74	40.84	50.81	58.25	36.75	45.93	48.59
75-79	45.98	53.00	59.59	47.95	54.07	53.74
80-84	52.41	67.81	73.19	56.04	66.89	61.45
85+	38.45	76.35	81.05	54.91	85.41	79.51
Handicap						
60-64	26.34	37.63	32.83	17.53	24.40	20.73
65-69	21.95	35.38	31.12	21.53	28.60	27.20
70-74	27.65	40.37	43.34	26.73	38.24	40.19
75-79	32.73	45.06	45.41	40.85	48.94	47.50
80-84	41.42	59.02	65.64	51.46	62.50	57.32
85+	53.29	71.53	76.65	61.99	84.01	77.74
Severe/profound handicap—dependent						
60-64	6.63	6.04	4.40	6.61	6.36	4.32
65-69	7.65	8.60	6.07	9.46	8.99	8.21
70-74	9.77	10.66	8.99	12.72	14.34	14.15
75-79	16.01	11.85	12.05	22.29	22.90	18.43
80-84	22.54	26.44	24.50	38.73	36.80	34.37
85+	38.45	40.10	49.70	54.91	70.19	58.28

Source: ABS Survey of Disability, Ageing and Carers, 1993

Levels of disability and handicap are very high in older age groups and increase considerably between each 5-year age group. It is clear, however, that disabilities and handicaps do not necessarily translate into dependency; the proportions of those who are dependent are much lower than the rates for disability and handicap. For the aged under 70, fewer than 10 per cent are dependent for self-care, mobility or communication. Dependency increases with age, however, and there is a sharp increase for those aged 80 and over. By 85 years of age, 58 per cent of women and 50 per cent of men are dependent for basic activities of daily living.

Table 2 presents more detailed data on levels of dependency, showing the percentage of aged persons requiring help with at least one activity from those of home help, home maintenance, meal preparation, personal affairs, and transport. For this combination of activities more women are dependent than men at all ages,¹ and again, dependency increases with age. Similar trends have been found in both the United Kingdom (Jagger, Spiers & Clarke 1993) and United States (Manton 1988).

¹ More detailed analyses of each of these activities may reveal different patterns of sex differences. For example, women may be more likely than men to require help with home maintenance but less likely to require help with meal preparation.

Table 2: Aged persons needing help with at least one activity,^(a) age and sex

	60-64	65-69	70-74	75-79	80+
No. ('000)					
Males	54.6	56.0	69.5	51.2	79.7
Females	119.1	167.5	171.0	160.2	178.0
Persons	173.7	223.5	240.5	211.4	257.7
Per cent					
Male	15.41	17.27	28.80	32.88	66.14
Female	33.37	47.82	58.70	74.06	85.49
Persons	24.43	33.13	45.16	56.83	78.40

(a) Activities comprise home help, home maintenance, meal preparation, personal affairs, and transport.

Source: ABS Catalogue no. 4430.0, Table 17

A substantial proportion of aged persons are, therefore, dependent on their families and others for help with functional activities. Furthermore, there is some evidence to suggest that a greater proportion of our elderly population is becoming disabled and that future cohorts of aged persons will be more dependent due to handicap (Rowland 1991). Morbidity data point to an increase in chronic degenerative disease and a commensurate growth in the number of people who are functionally disabled (Rabin & Stockton 1987). International trends show increasing life expectancy and stationary or falling health expectancy (Robine, Mathers & Brouard 1993). Deaths by previously fatal diseases commonly suffered by the aged such as diabetes, heart disease, hypertension and arteriosclerosis have decreased but there has been a parallel rise in non-fatal chronic conditions such as arthritis (Sax 1993). This trend is not unequivocal, however, and some studies show a decline in chronic disability in the aged (e.g. Manton, Corder & Stallard 1993).

With demographic trends revealing large increases in the aged population, particularly the over 80 age group, there is consensus that the absolute number of dependent aged is increasing and that the demand for services is consequently rising. Scarce resources must be targeted to those most in need. The vast majority of the dependent aged, many of whom are highly dependent, are cared for within the community (HHCS 1991ab). These people and their carers require more or less support depending on the level and type of dependency. Particular types of disability and very high levels of dependency are associated with institutionalisation (Wolinsky et al. 1993). Detailed dependency indicators are required for both community and residential care. These indicators are necessary at both the individual and the population level: detailed individual assessments determine individual care plans while more general population profiles inform policy and program planning.

What is dependency?

The concept of dependency has not been systematically explored. In this paper it is defined as reliance on others to meet recognised needs. There is an underlying dimension of a continuum of care according to the relative dependency, or need, of a person. At one end is the independent person who may have some problems but does not require assistance; at the other end is the totally dependent person who requires intensive and full-time assistance (Gelfand & Olsen 1980).

Dependency is a function of impairment, disability and handicap. These concepts, unlike the concept of dependency, have received considerable attention. Definitions used here follow the International Classification of Impairments, Disabilities and

Handicaps (ICIDH) (WHO 1980) which is the basis for ABS definitions. According to this conceptualisation—and in the context of health experience—an impairment is any loss or abnormality of psychological, physiological, or anatomical structure or function; a disability is any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being; and a handicap is a disadvantage for a given individual, resulting from an impairment or a disability, that limits or prevents the fulfilment of a role that is normal (depending on age, sex, and social and cultural factors) for that individual.

Figure 1 presents a simplified picture of the dependency process. The arrows are not, however, intended to represent inevitable causal paths; for each of these processes there is possible reciprocity of causation. This diagram presents a basic model of the primary paths in the dependency process. Minaire (1993) presents more detailed models of the disablement process, showing factors likely to modify the process.

Although the model shows dependency as the result of impairment, disability and handicap, each of these stages in the process may or may not lead to the subsequent stage. Impairment and disability may or may not lead to handicap; they also may or may not lead to dependency. Dependency and handicap are both social consequences; they are a function of a person's physical and psychological abilities within the context of their total social and economic living situation.

Medical diagnosis of disease or disorder has been shown to be a poor indicator of a person's level of dependency (Kay 1989; Humphries 1992). Some diseases are, however, more important than others in affecting physical functioning. In particular, musculoskeletal disease is particularly responsible for physical disability in the aged (Hughes et al. 1993). The effects of type of disease, as indicated by medical diagnosis, are through functional limitations.

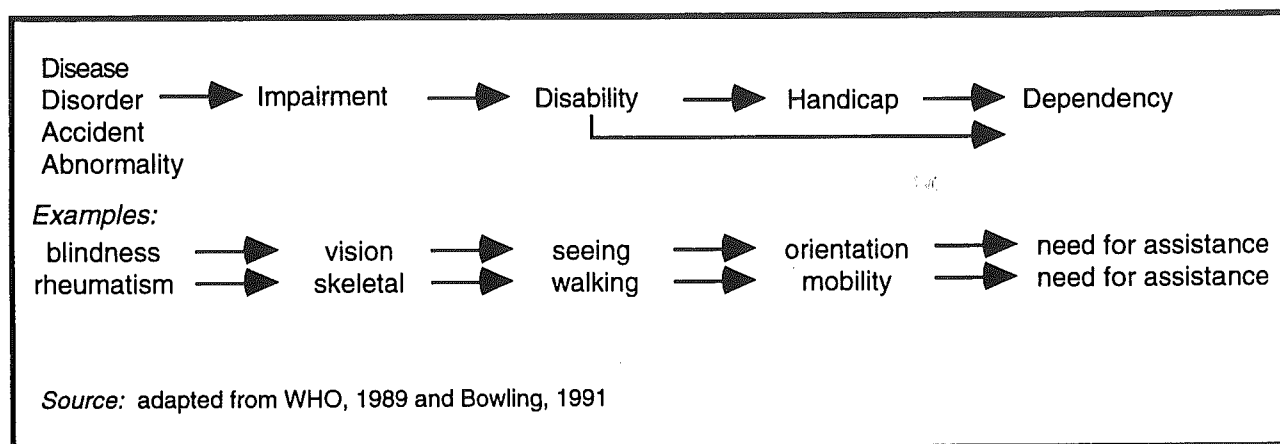


Figure 1: *Dependency process*

Diagnostic tests, standard medical summaries and physician's rating scales assessing physical impairment used with elderly and chronically ill patients were found to be insufficient when rehabilitation practice expanded to include the return of patients to the maximum level of independence (McDowell & Newell 1987). Impairments resulting from illness can usually be accurately measured, but these are not the only factors that predict dependency and need for care. Personality and environmental, demographic, financial, and social factors all affect how, and whether, an impairment is translated into a disability or handicap.

Disability is the linchpin in the dependency process as it is most often and most easily measured. Impairments are generally less relevant for understanding dependency, because although they are the immediate consequences of disease— unless they are

translated into disability—they do not result in dependency. The practical consequences of disease that affect daily life and personal care are more evident in disabilities and handicaps. The measurement of handicap is, however, particularly problematic. Handicap is the classification in the ICIDH that receives the greatest criticism (Wood 1987;1989). This is because it is difficult to objectively standardise and measure the performance of roles and the presence of social disadvantage. The measurement of handicap is particularly affected by social-cultural norms in terms of what constitute appropriate and necessary roles. Such roles vary by sex, ethnic background, age and many other factors. However it is the very notion of handicap that, if validly measured, would best show the social patterning of dependency and enable the targeting of health and welfare resources to areas of greatest need (Bury 1987).

Describing disabilities is the key to assessing the needs of the frail and disabled aged because accepted measures of handicap are lacking and impairments often do not translate into dependency problems. Kane and Kane (1981) in their seminal work on assessing the elderly maintain that there are four areas of functioning in which disabilities need to be assessed: physical, mental, social and economic. These distinctions are used to organise the discussion that follows.

Physical function

There has been a proliferation of scales to measure physical disability:

The measures apply to a variety of purposes: some apply to particular diseases, some are broadly applicable; there are research instruments, screening instruments and clinical rating scales; some for severely ill inpatients, some for outpatients, some assess impairments, disability, handicap or social environment. (McDowell & Newell 1987:36)

Functional ability—or physical capacity in terms of what activities a person can or cannot perform—is a widely used measure of dependency. It is usually operationalised in terms of activities of daily living and measured by scales that assess ability to perform these activities.

Activities of Daily Living (ADL) scales assess basic abilities related to self-care. Some primary ADL scales include the Barthel Index of ADL (Mahoney & Barthel 1965), the Katz Index of ADL (Katz et al. 1963), the Kenny ADL Scale (Iverson et al. 1973), the Physical Self-Maintenance Scale (Lawton & Brody 1969), the PULSES Profile (Moskowitz & McCann 1957), and the Rankin Scale (Rankin 1957).

The Katz Index was one of the earliest of these scales and was developed in 1957 to study the effects of treatment on elderly and chronically ill patients. Katz chose items to represent primary biological functions: following this, the scale measures a person's level of independence in bathing, dressing, using the toilet, moving around the house, and eating.

The Barthel Index is recommended by the Research Unit of the Royal College of Physicians and the British Geriatrics Society (1992) among others and has been proposed as a standard measure of physical disability (Rogers, Curless and James 1993; Wade & Collin 1988), provided that the user is aware of its benefits and limitations. These limitations include the fact that Barthel scores are intended to reflect the amount of time and assistance a person requires to perform an activity. The measure also suffers from ceiling effects in that changes in functional status can occur beyond the endpoints of the scale (Bowling 1991). The Barthel Index measures need for assistance in feeding, transfers, grooming, toileting, bathing, walking, dressing, bowel and bladder continence, and using stairs. Barthel scores have been used

frequently in Australian aged care settings and have been shown to discriminate between the aged in nursing homes compared with those remaining in the community (Humphries 1992).

Katz's scale is one of the few instruments to provide a conceptual justification for the activities it includes. Most other ADL scales are not built on any conceptual approach to disability, and there has been little systematic effort to specify the activities that should be covered in the scales. Items are commonly selected on the basis of clinical judgement without broader reference to a body of theory. As a result, scales proliferate and the field is uncoordinated. Comparative validity and reliability have also suffered from such proliferation; the scoring of scales is often elementary and the psychometric properties are inadequately assessed (McDowell & Newell 1987).

A further limitation of ADL scales in general is that such concise measures focusing on physical performance are insensitive to small changes. They are concerned with severe disabilities and are more relevant to persons who are very frail or institutionalised. They underestimate dysfunction in community populations because they are insensitive to less severe levels of disability (Bowling 1991).

Consequently, during the 1970s, the concept of functional ability was extended to consider problems more typically experienced by those living in the community such as shopping, cooking and managing money (McDowell & Newell 1987). These activities have come to be known as Instrumental Activities of Daily Living (IADL). The emphasis on community care for the aged stimulated the development of these scales, which are more appropriate for community populations than the less sensitive ADL scales (Pope & Tarlov 1991). This focus also prompted a need to measure the environment in which a client lived and the way that person adapted to that environment, including the use of aids and social support as compensating factors.

Instruments to measure IADLs include the Instrumental Role Maintenance Scale (Lawton 1972), the PGC IADL Scale, PACE II: IADLs (US DHEW 1978), the OARS Instrumental ADL (Duke University 1978), and Performance Activities of Daily Living (Kuriansky & Gurland 1976). These scales suffer from the lack of a conceptual basis and inadequate testing (in terms of validity and reliability) to a greater extent than those measuring ADLs; their psychometric properties are even less rigorous (McDowell & Newell 1987). They have also been criticised for overemphasising activities customarily performed by women (Lawton 1972).

There is a wide variety of scales to choose from to measure functional ability in terms of ADLs and IADLs, although most suffer from a number of inadequacies. However, both the Katz Index and Barthel Index are relatively sound choices to quickly and reliably measure ADLs. The choice is less clear when measuring IADLs and more work is required to establish the reliability and validity of IADL scales for Australian aged populations. A particular need in the context of aged care is for a measure that allows comparability between ADL function, which is usually impaired in the aged in residential care, and IADL function, which is a more common problem for the aged receiving home and community care. A hierarchy or intersection point between ADL and IADL activities is needed to describe the physical function of the aged within a balance of care context.

Mental function

Mental status in the aged is determined by both cognitive and affective (emotional) states. These states are often overlooked in formal assessment because they are difficult to estimate reliably and validly. In determining both cognitive and affective functioning it is change that is often the most important facet, and this requires sensitive, repeated long-term assessment (Kane & Kane 1981). Despite measurement

difficulties, cognitive and affective functioning are highly relevant in assessing the aged. Physical and mental problems are often confounded and both states need to be carefully assessed to determine appropriate care. For example, hearing problems often manifest with confusion and paranoia (Kane & Kane 1981).

Cognitive functioning is more often recognised as an important dimension of dependency than affective state. In particular, dementia has profound implications for the need for care. The presence of dementia was associated with the lowest likelihood of remaining in the community in an Australian sample from Geriatric Assessment Teams (Humphries 1992) and was shown to be most indicative of residential care in the United Kingdom (Harrison, Savla & Kafetz 1990).

It has been estimated that between half and one-third of the physically dependent elderly also have senile dementia: the cognitive impairments caused by dementia also affect physical functioning (Ledesert, Ritchie & Touchon 1994). Alzheimer's disease is the predominant type of dementia and the behaviours associated with this disease substantially increase the need for supervision in both community and institutional settings.

There is a large literature on the effectiveness of different cognitive impairment scales in indicating Alzheimer's disease and related disorders (Ritchie & Fuhrer 1992), yet there is no consensus on how best to measure these. Many screening instruments have been developed including the Abbreviated Mental Test (Hodkinson 1972), the Mini Mental State Examination (Folstein, Folstein & McHugh 1975), CAPE (Pattie & Gilleard 1976) and the Short Portable Mental Status Questionnaire (Pfeiffer 1975). The Abbreviated Mental Test is endorsed by the Research Unit of the Royal College of Physicians and the British Geriatrics Society (1992), while the Mini-Mental State Examination is used widely and endorsed by others (Jorm & Henderson 1992).

None of these instruments provides a diagnosis of a specific type of dementia; they indicate the presence of some form of cognitive impairment. Only an interview with a psychogeriatric specialist will indicate type of dementia, and such diagnoses should then be according to either the World Health Organisation's ICD-10 or the DSM-IV (Jorm & Henderson 1992).

It is, however, important to determine the type of dementia in order to treat any causes that are subject to intervention. With the exception of Alzheimer's disease, many dementias are potentially reversible. Those caused by depression, delirium, alcoholism and as a side-effect of medication are amenable to treatment (Manton, Corder & Clark 1993).

Affective functioning is as important as cognitive functioning in the assessment of dependency and the two are often interrelated. Depression among the elderly frequently goes undiagnosed, but may be twice as common as dementia (Snowden 1987; Teri & Wagner 1992). Its symptoms are often confused with those of dementia because symptoms of impaired memory and concentration are common to both. Separating depression from dementia is important for two reasons. First, depression is one of the most curable of mental problems; second, it is strongly associated with suicide. The suicide rate for people aged 65 years and over is higher than in any other age group and men aged over 70 years have the highest suicide rate (Snowden 1987; Ruzicka & Choi 1993). 'Measuring depression is universally acknowledged to be important, both as an outcome in itself and as an independent variable affecting outcomes' (Kane & Kane 1981:105).

Depression can be measured by a number of scales including the Geriatric Depression Scale (Yesavage 1988), the Hamilton Rating Scale for Depression (Hamilton 1967), and the Zung Self-Rating Depression Scale (Zung 1965). The Geriatric Depression Scale has been shown to assess the presence of depression even amongst those

institutionalised with mild and moderate dementia (O'Riordan et al. 1990; Snowden & Donnelly 1986). As noted before, separating depression from dementia is particularly difficult but important for determining appropriate treatment and type of care.

The measurement of mental function is essential to determining the dependence of the aged: mental status interacts with physical function to impact considerably on the need for care. Mental function comprises both cognitive and affective functions, and indications of the presence of dementia and depression are especially relevant for the elderly.

Social function

Kane (1987) argues that it is now well recognised that aspects of social functioning are also important in determining the needs of the elderly. These aspects include 'social relationships (their frequency, context, and quality); social activities (again their frequency, nature, and quality); social resources (including income, housing and environmental conditions); and social support (what kind of help does the patient receive from others in the environment and what kind of help can be expected)', and burden on family caregivers (Kane 1987:89).

Social functioning correlates with physical and mental functioning and is important as a predictor of need for care and as an outcome in itself. The acceptance of the importance of social functioning is a recent addition to assessment, and consequently its measurement is less well developed than that of other types of functioning. The concepts are often vague and there is a lack of norms (Kane & Kane 1981; Kane 1987).

A set of items that cover the relevant dimensions of social function has not been proscribed (Royal College of Physicians 1992), and reviews indicate that there are many different dimensions of social function that can be measured in a multitude of ways (Kane & Kane, 1981; McDowell & Newell 1987; Butler, Fricke & Humphries 1993). Some important dimensions that have emerged from research predicting type of care for the aged include measures of living arrangements, such as whether the elderly person lives alone or not, and whether a carer is available. Having a co-resident carer has been shown to be particularly important for assisting those who are dependent to remain in the community (Tennstedt, Crawford & McKinlay 1993). Being widowed is also predictive of high dependency (Wolinsky & Johnson 1992).

Information on the burden of care is also important. It is recognised increasingly that the needs of carers must be met to maintain dependent aged persons in the community (Braithwaite 1990; Herrman et al. 1993). The health of carers is, therefore, a social resource that affects the dependency of the aged.

A systematic set of questions covering the relevant dimensions of social function in the aged is required. At a minimum the social status of the aged needs to be determined through living arrangement and carer status, as these have a profound effect on dependency.

Economic function

The social resources of income, housing and environmental conditions can be distinguished from the other social functions as economic resources:

Independence for older people rests on three main conditions: having adequate incomes, housing that provides not only shelter but a secure and supportive environment for daily living, and access to the same range of activities as others in the community.
(Giles 1992:5)

Economic circumstances impact directly and indirectly on physical and mental health (Arber & Ginn, 1993).

The age pension is central to the economic well-being of the aged, although replacement of the pension with superannuation is a long term objective of the Federal Government. Pension rates are indexed biannually in accordance with the Consumer Price Index, and all aged persons below a means tested income level are eligible for the pension. Consequently, the aged in Australia are provided with a minimum level of income. This makes assessing source of income less relevant to the dependency of the elderly in Australia than in other countries where extreme poverty is a real risk. However, financial circumstances are still likely to affect access to and use of services that may, in turn, affect independence (Bolzan & Graham 1994).

Of particular relevance may be the benefits provided by private health insurance or a health benefits card. Although Australia has a universal health care insurance system, there remains variability in the capacity of the aged to buy additional health care services that enhance independence. Furthermore, welfare services are not covered by health insurance or health benefits cards. Currently, an ad hoc system of fees applies to many home and community care services. Economic status may affect the ability of some aged persons to purchase those services needed to remain at home.

Type of housing also plays a major role in relation to level of dependence. A high proportion of older Australians are home owners, and home ownership provides advantages of secure housing and low housing costs. However, the maintenance of a typical suburban house may, with increasing frailty or widowhood, increase dependence on others. Public housing, while having a financial advantage over private rental, is not always appropriate due to lack of security and inappropriate physical features (such as stairs). Private rental accommodation has the dual disadvantages of high cost and variable tenure. Housing for older people is increasingly a focus of attention and type of housing has a real impact on the needs of older people (Davison et al. 1993; Zhao et al. 1993).

Other environmental conditions related to housing and the area in which a person resides impact on level of dependency. These conditions include ease of access to transport and other services, and issues related to safety and personal security. Lack of feeling safe is often cited as a reason for moving to a more institutional setting (Davison et al. 1993).

Economic function is perhaps the least well understood of all the factors affecting dependency of the aged. Housing, income, health insurance, area of residence and other economic factors interact with each other—and also with physical, mental and social status—to significantly affect dependency levels in the aged.

In summary, dependency levels in the aged can be revealed through measures of physical, mental, social and economic function. Only physical function, as indicated by activities of daily living, has accepted reliable and valid measures, which are, however, most relevant to those who are quite frail and disabled. There is a paucity of accepted measures of activities more relevant to the aged remaining in the community. While widely used measures of cognitive impairment are available, affective status is an important component of mental function that is often disregarded. Social and economic function suffer most from the lack of established and psychometrically robust measures. For these functions the relevant dimensions to measure are not even clear. Nevertheless, indicators of functioning in each of these four areas are critical to determining dependency profiles for clients of aged care services.

2 Indicators of dependency for national aged care data collections

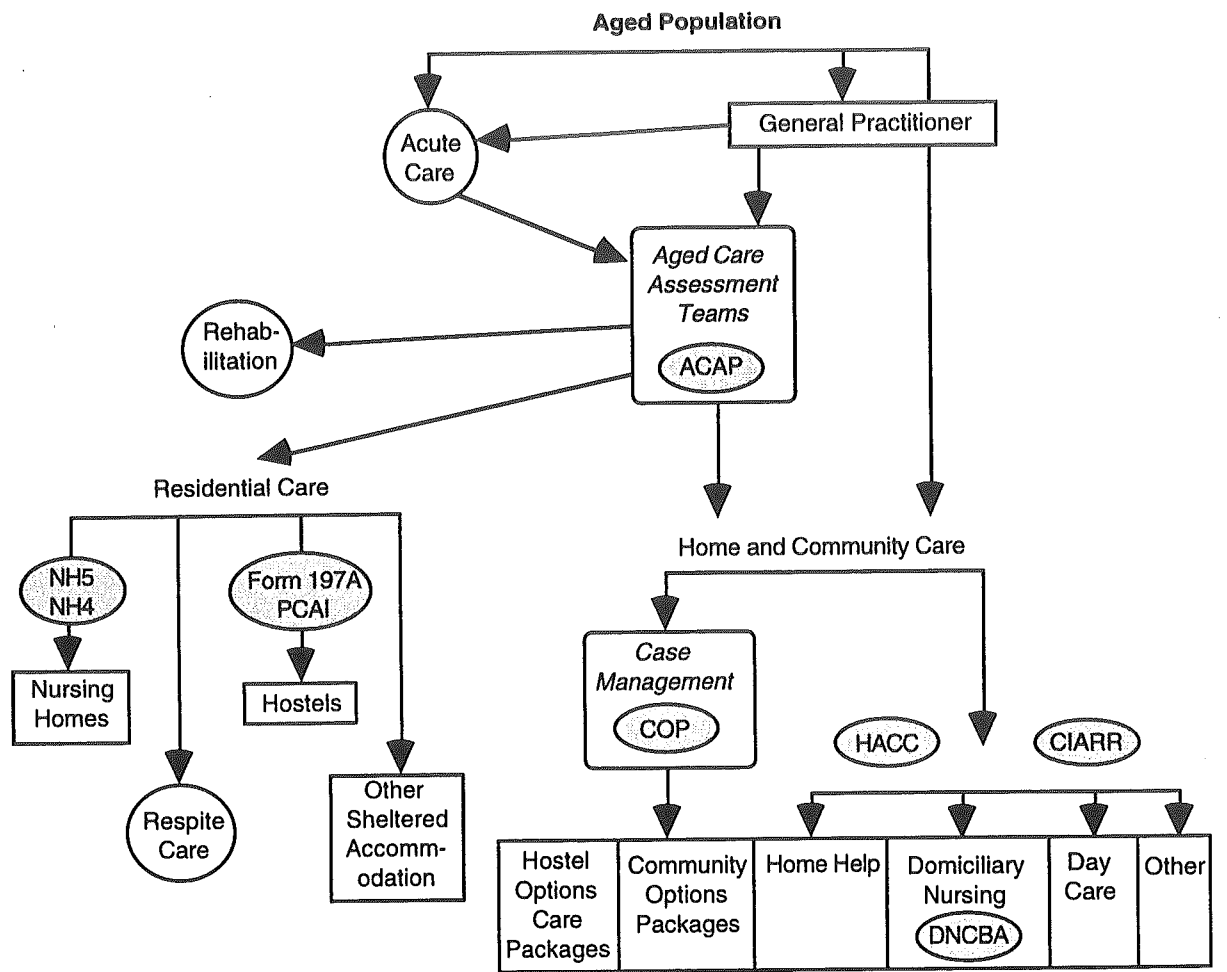
Assessment of level of dependency occurs at various points in the Australian aged care service system to determine individual need for services. Older people generally first consult their general practitioner, who is then involved to a greater or lesser extent in their ongoing management. Aged Care Assessment Teams (ACATs) usually determine whether there is a need for residential care or whether the aged person can be cared for within the community with the support of Home and Community Care (HACC) programs, informal care and privately paid services. The Australian Commonwealth Government aged care program is outlined in Figure 2; the darkened ovals indicate where data collections measuring dependency occur.

ACATs assess all residents entering federally funded nursing homes and from 1994 also assess all residents entering hostels. They also determine whether and how a person can remain in the the community and can refer clients to home and community care services. ACATs are multidisciplinary teams trained to assess the physical, medical, psychological and social needs of the frail and disabled aged and to assist them to access suitable services.

ACATs in each State and Territory employ a variety of assessment instruments; there is no standard procedure to assess individuals. However, at the national level, population indicators are attained through a standard minimum set of 23 items that are extracted each six months from ACAT records in each State and Territory, and from 1994 will be compiled into a national minimum data set.

Assessments for home and community care are carried out by individual HACC service providers and ACATs. Providers use a variety of assessment instruments including the Barthel Index, the Katz Index and the Resident Classification Index to determine individual dependency levels and need for care (HHCS 1992a:25). Assessments are designed to determine level of care and the types of services needed to maintain a frail or disabled aged person in the community.

A totally different instrument is the Client Information, Assessment and Referral Record (CIARR) which is designed to standardise and reduce duplication of core information collected by service providers within the HACC program. It is an ongoing record retained by the aged person in their home that records core demographic, dependency and service use information. It is not intended to provide a centralised collection of data to inform programs or policy. The CIARR was successfully piloted in 1993 and is currently being implemented by the States and Territories in selected ACAT regions.



 Data Collection Points
 Short-stay Care
 Long-term Care
 italics Key Decision Points

Notes:

The diagram does not present all possible paths. In particular, it omits the sideways and backward paths.

For nursing homes, 18 per cent are State Government sector (AIHW 1993), and may not use the NH4 and NH5.

Data Collections:

- ACAP Aged Care Assessment Program National Minimum Data Set
- CIARR Client Information, Assessment and Referral Record
- HACC Home and Community Care Service Users Characteristics
- COP Community Options Projects Client Characteristics
- DNCBA Domiciliary Nursing Care Benefit Application
- Form 197A Hostel Care Assessment Application
- PCAI Personal Care Assessment Instrument
- NH5 Application for Nursing Home Admission
- NH4 Application for Resident Classification

Figure 2: Diagrammatic representation of Australian aged care service network showing points of national data collection

The Domiciliary Nursing Care Benefit Application (DNCBA) is another distinct type of record. It is used to determine the eligibility of the carer of a person who requires nursing home level care to obtain a government benefit. Information is collected about the carer (as the carer is the client) but also about the level of dependency of the person being cared for.

Population indicators are obtained from two data collections within the home and community care program: the Community Options Projects Client Characteristics census (COP) and the Home and Community Care Service Users Characteristics Survey (HACC). The community options data collection is a census of clients usually carried out annually in each State and Territory. The HACC data collection is a sample survey of user characteristics that is carried out annually for those persons who have received home and community care services within a specified four week period.

For residential care services, entry to nursing homes and hostels is determined by ACATs using the NH5 form for nursing homes and the PCAI form for hostels. These records are used to determine eligibility and are available for each individual assessed for care. Once in residential care, the NH4, which is used to determine the Resident Classification Index (RCI), and the Personal Care Assessment Instrument (PCAI) are used to annually assess the level of care required by each resident to determine funding to the home or hostel.

The purposes of these national data collections are diverse. The CIARR provides core information to home and community care providers; it is neither an assessment instrument nor designed to provide population indicators. ACATs undertake detailed individual assessment of clients and the national minimum data sets uses this information to provide a standard set of population indicators. The community options and HACC surveys are designed specifically to generate population data to provide a profile of clients accessing services to ensure that programs are meeting the government's access and equity requirements. The residential care assessments are used to determine both access to residential care at the individual level and Federal Government funding paid to the nursing home or hostel per resident. Population indicators are also generated from the residential care data.

Equally diverse is the training of the persons undertaking the assessments. ACAT and nursing home assessments are undertaken by medically trained nurses or geriatricians. Hostel, HACC, Community Options Projects and Client Information, Assessment and Referral Record assessments are carried out by a variety of service providers, some of whom are volunteers and many of whom have limited training in geriatric assessment. The training and disciplinary background of information providers and assessors can greatly affect the validity of the information obtained. In general, however, more objective constructs such as mobility have been found to be measured with greater validity than more subjective constructs such as behaviour and affect (Farrow & Samet 1990; Elam et al. 1991).

Indicators of dependency vary considerably across collections reflecting the purpose, background and specific focus of the type of service and also the discipline and training of the information provider. These differences are summarised in Table 3 and must be kept in mind when considering the utility of the data sets for providing dependency profiles of clients.

Table 3: Data collections for aged care services

	Instrument	Information Provider	Purpose	Timing
Aged Care Assessment Program	ACAP minimum data set (census)	Multidisciplinary assessment team comprising: social worker, geriatrician, nurse, etc.	Monitor the Aged Care Assessment Program	Biannual Jan-June July-Dec
Home and Community Care	HACC User Characteristics Survey (survey)	Service provider	Describe the users and beneficiaries of services to allow monitoring of access to services provided to the target population and special needs groups	Annual for four week period
	Community Options Projects (census)	Case manager	Provide information about clients of community options projects to be used for overall planning and ongoing evaluation	No agreed collection interval but usually annual
	Client Information, Assessment and Referral Record	Service provider or ACAT	Provide a common way of recording core client information and referral in order to minimise duplicate assessments and to provide an ongoing record	Pilot conducted in Sept-Oct 1993 Implementation by States begun 1994 No data available
Hostel Care	Domiciliary Nursing Care Benefit Application	Carer and Assessment Service, registered nurse or qualified medical practitioner	Determine eligibility for DNCB	Data provided to Commonwealth
	Hostel Care Assessment Application—Form 197 (census)	ACAT or Hostel Care Assessment Authority	Determine level of care required by client and authorise subsidy payment	Data provided via payment system
	PCAI Personal Care Assessment Instrument (census)	Personal Care Assessment Authority (formal qualifications not required)	Assign hostel residents to a level of personal care subsidy by assessing their relative need for care	Each resident assessed 6 monthly Data updated each month
Nursing Home Care	NH5 (census of non-government and adjusted fee homes)	ACAT	Determine eligibility for care	Some data provided to Commonwealth via Nursing Home Payment System
	NH4 (census of non-government and adjusted fee homes)	Director of Nursing, registered nurse in charge, assessment service, CMO	Assess resident's nursing and personal care needs to determine level of dependency and hence funding	Each resident assessed annually Data provided to Commonwealth each month

Dependency measures

The first point to be made about the data collections on their measurement of dependency is that they all concentrate on the assessment of disability and none focus on impairment or handicap as defined by the ICIDH. They do not assess impairments as consequences of disease and, in fact, collect only the most rudimentary measures of disease itself. Their interest does not lie in the causes or even the immediate consequences of disease, but rather the practical consequences that affect daily life and personal care. Possibly because of the difficulties mentioned earlier regarding the measurement of handicap, they also do not measure handicap. They concentrate on disability which is determined primarily by the two indicators of physical activity restrictions and cognitive impairment.

The items used to measure disability and other factors affecting dependency in the data collections are shown in Tables 4 to 9. The tables are divided according to physical, mental, social and economic functioning to follow the conceptual classification presented previously.

The last column of each table also presents the data collected in the ABS 1993 Disability, Ageing and Carers Survey. Not surprisingly, since its sole function was to measure disability, this data collection provides the most comprehensive measures of disability. It is presented here to determine possible points of comparison between the population estimates provided by the survey and the aged care data collections. It must be kept in mind, however, that although an item may be measuring the same function, comparison may not be possible due to different levels of measurement between the instruments and somewhat different wording of the items (see Rickwood 1994:Table 3).

Indicators of physical function

The basis for measuring physical disability in all the data collections seems to be items from the Activities of Daily Living (ADL) and Instrumental Activities of Daily Living (IADL) scales. Tables 4 to 6 are, therefore, presented as activities of daily living, instrumental activities of daily living and miscellaneous medical items (this covers those items that relate to dependency that do not fit into the I/ADL categories). Standard examples of the ADL scales, such as the Katz Index (Katz et al. 1963) and Barthel Index (Mahoney & Barthel 1965), which have widely established validity and reliability, (McDowell & Newell 1987; Research Unit of the Royal College of Physicians & British Geriatrics Society 1992) have not generally been replicated in their entirety. Rather, individual items have been excerpted and combined, and consequently the new measures no longer possess the reliability and validity of the original scales.

Activities of daily living are essentially personal care activities and instrumental activities of daily living are activities that enable one to manage within the community. Items in the data sets concentrate primarily on activities of daily living reflecting the serious nature of the disability they are designed to detect. Residential care assessments concentrate most heavily on activities of daily living while home and community care assessments include more instrumental activities reflecting their concern with maintaining independence in the community. Mobility is the only item that is common to all data collections. However, in some cases the definition of mobility includes transfers and in other cases it does not.

Each data set indicates physical function in a unique way. The population indicators provided by the ACAP minimum data set are limited mainly to sociodemographic measures (Humphries 1992). To measure physical disability only two ADLs, mobility

and continence, are collected. These were identified by Preston (1984), along with orientation, as providing an adequate description of dependency in elderly populations. While ACAT assessments in practice place a primary focus on assessing dependency and the need for care, this is not reflected in the items selected for national collection in the minimum data set.

The Client Information, Assessment and Referral Record provides a more comprehensive assessment of disability, reflecting its purpose to inform HACC service providers of areas of dependency so that multiple services do not have to duplicate many core assessment items. It focuses primarily on those ADLs and IADLs that HACC services are designed to provide help with (meals on wheels, home maintenance, housework, transport). It includes items comparable with the Katz Index, lacking only a measure of continence.

The HACC User Characteristics Survey data is, like the ACAP minimum data set, minimal in terms of measuring disability; it is limited to three ADLs and one IADL.

The Community Options Project Client Characteristics data collection measures disability more comprehensively. It covers a range of ADLs, although the items do not match either the Katz Index or Barthel Index. It also covers a wide range of IADLs reflecting the types of services provided by community options projects.

The Domiciliary Nursing Care Benefit Application assesses ADLs matching those from the Katz Index, but measures no IADLs. It covers the same items as the NH5, reflecting that this benefit is paid to carers of persons who require nursing home level care.

The two hostel instruments are diverse in their focus. At the point of assessment for a hostel place, Form 197A covers both ADLs and a large range of IADLs. After becoming a resident, PCAI assessment concentrates on ADLs (covering items from the Katz Index) as these items reflect greater level of care intensity.

The two nursing home instruments are more similar, covering only ADLs. The NH5 includes items from the Katz Index, but the NH4 departs from this index by omitting a measure of transfers and confounding dressing and bathing. The omission of IADL measurement reflects the fact that people entering or resident in nursing homes should, by definition, be unable to manage such activities.

It is interesting to note that the DNCBA, PCAI and NH5 appear to be based on the Katz ADL Index. Their levels of measurement are comparable to some extent with the Katz instrument, although the PCAI has four levels of measurement compared with three in the NH5 and DNCBA. The physical function measures from these three instruments are the only dependency indicators that are based on a proven, reliable and valid measure. Unless an established scale is retained in its entirety, its integrity is compromised and it no longer has proven psychometric properties.²

² Many of the aged care instruments do not sum the ADL or IADL items into a scale, however, and use the information that is provided by individual items.

Table 4: Items indicating physical function: activities of daily living

Assessment	Form										Population
	ACAP	CIARR	HACC	COP	DNCBA	197A	PCAI	NH4	NH5	ABS	
Continence(a)(b)(c)	17		9	12	25		7	1		C5	*
Use of toilet(a)(c)		*			24	15	6	11		C4	*
Mobility(a)	16	*	9	14	22	15	5	10	+transfer	C2	*
Transfers(a)(c)		*	+transfer	14	24	+transfer	4			C4	*
Stairs(a)											*
Grooming(a)		*									
Bathe/shower(a)(c)		*		14	24	15	1	12		C4	*
Dress/undress(a)(c)		*		14	24	15	2	+dress		C4	*
Eating(a)(c)		*		14	24	24	3	13		C4	*
Falls					23					C3	
Catheter/colostomy					24					C4	*
Footcare		*									
Personal appearance				14							
Personal care (bathing, feeding)			9								

* Indicates that an item measuring this activity is contained in the instrument. Numbers indicate the number of the item in the corresponding instrument.

(a) Items comprising the Barthel ADL Index.

(b) Coded separately for bowel and bladder in the NH5, ABS survey and Barthel Index.

(c) Items comprising the Katz Index of ADL.

Table 5: Items indicating physical function: instrumental activities of daily living

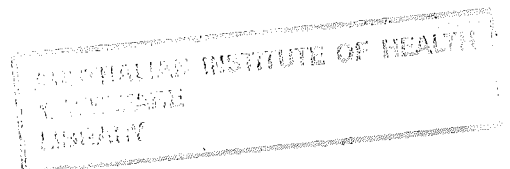
Assessment	Home and community care					Hostels			Nursing homes			Population
	ACAP	CIARR	HACC	COP	DNCBA	Form 197A	PCAI	NH4	NH5	ABS		
Take medicine				14		15				*		
Shopping				14						*		
Bank and shop	*					15						
Money and finance				14						*		
Clean house	*	9		14	+laundry	15				* +laundry		
Prepare meals	*			14		15				*		
Do laundry						15						
Minor home maintenance	*			14						*		
Telephone	*			14		15				*		
Transport	*			14		15				*		
Read						public 15				*		
Write						15				*		

* indicates that an item measuring this activity is contained in the instrument. Numbers indicate the number of the item in the corresponding instrument.

Table 6: Items indicating physical function: miscellaneous medical items

Assessment	Form										Population
	ACAP	CIARR	HACC	COP	DNCBA	197A	PCAI	NH4	NH5	ABS	
Vision								7			*
Hearing								8			*
Primary diagnosis	15										
Major medical diagnoses					30					D1	
Perceived health problems											
Special diet						15	8				
						follow	requires				
Rehabilitation support									9		
Independence therapy								14			
Skin integrity								2			
Specialised treatments								10	3		
Wound dressing										24	

* indicates that an item measuring this activity is contained in the instrument. Numbers indicate the number of the item in the corresponding instrument.



Indicators of mental function

Measures of mental function further indicate whether a person can care for themselves or whether dementia and other cognitive and affective problems result in dependence. The aged care data collections include some measures of cognitive impairment, but lack specific measures of dementia and include no measures of affective functioning (Table 7). There is no standard reporting of client characteristics in terms of dementia. This results in an inability to monitor dementia care in aged care services (excepting Community Options Projects which do indicate dementia).

The ACAP minimum data set includes only one indication of cognitive disturbance—orientation. A diagnosis of dementia is recorded only if it is the primary diagnosis (Table 6). As many elderly have multiple illnesses and conditions that may coexist with dementia, this record will underreport the prevalence of dementia (Leddesert, Ritchie & Touchon 1994).

The Client Information, Assessment and Referral Record includes no indicators of cognitive or affective disturbance.

The HACC User Characteristics Survey includes two items measuring cognitive disturbance, orientation and communication, but no diagnosis of dementia or affective disorder.

The Community Options Projects data provide three indications of cognitive disturbance and is the only data collection that specifically indicates the presence of dementia.

The Domiciliary Nursing Care Benefit, hostel (Form 197A) and nursing home admission (NH5) applications measure the same four cognitive impairment items: sleep disturbance, disorientation, disruptive behaviour and wandering. These application forms provide no direct indication of the presence of dementia.

The residential care classification instruments (PCAI, NH4) measure neither dementia nor affective functioning. They cover a range of cognitive impairment items, but the only item common to all four residential collections is disruptive behaviour.

Table 7: Items indicating mental function

	Assessment										Population
	Home and community care					Hostels		Nursing homes			
	ACAP	CIARR	HACC	COP	DNCBA	Form 197A	PCAI	NH4	NH5	ABS	
Orientation	18		9		26	15			C6	*	
Speech/comprehension								9		*	
Communication			9	13			11			*	
Physical aggression							15 or verbal	4			
Verbal disruption								5			
Disruptive behaviour				11	27	15	12	6	C7		
Wandering				11 + confusion	27	15	16		C7		
Sleep disturbance					27	15			C7		
Motivation							14				
Understand daily living tasks							13				
Dementia				10						*	
General comments mental						20					

* indicates that an item measuring this activity is contained in the instrument. Numbers indicate the number of the item in the corresponding instrument.

Indicators of social function

Social functioning of aged care clients is minimally recorded in the data sets. Items on marital status, living arrangements and the availability of a carer are used to tap social function, but none of these items is common to all collections (Table 8).

Marital status is measured only on the ACAP minimum data set and for hostel care assessment (Form 197A). As mentioned previously, widowhood is particularly relevant to dependency (Wolinsky & Johnson 1992).

The availability of informal care—as measured by living arrangements and availability of a carer—is covered in some way by most collections. Only the PCAI and NH4 have no indications of informal care. None of the residential care data sets indicate availability of a carer, as such support is assumed to be redundant. The nursing home data (NH5) do include an item on whether the resident had a carer who was in receipt of the DNCB. Most of the home and community care collections (CIARR, HACC, COP) indicate whether a carer is available. This is an important determinant of whether a person can maintain a degree of independence within the community. The CIARR does not determine whether the carer is a co-resident, however, and co-residency has important implications for whether a person with high dependency levels can cope at home. The DNCB application contains the only information available about the carer.

Indicators of economic function

Items that measure economic function include source of income, health insurance status and housing type. These are presented in Table 9.

Source of income is measured in most data collections by pension status and, sometimes, type of pension.

Possession of a health benefit card is recorded by the home and community care collections (CIARR, HACC and COP), but not by the residential care or ACAP data sets. Private health insurance is recorded only on the CIARR.

Very little information is recorded related to housing. Housing tenure is available only for the ACAP and CIARR collections, and type of usual accommodation (house or flat, hostel etc.) for the ACAP and residential care collections.

Table 8: Items indicating social function

Assessment	Home and community care					Hostels		Nursing homes		Population
	ACAP	CIARR	HACC	COP	DNCBA	Form 197A	PCAI	NH4	NH5	
Marital status	5					7			A8	*
Usual living arrangements	11	* 7 alone	4 alone			12			A15	*
Has carer		*	8	5						*
Resident or visiting carer			8	5	10				A12 carer in receipt of DNCB	*
Regular support available		*				18				*
Info about carer					1-9					*

* indicates that an item measuring this activity is contained in the instrument. Numbers indicate the number of the item in the corresponding instrument.

Table 9: Items indicating economic function

	Assessment		Home and community care				Hostels		Nursing homes			Population
	ACAP	CIARR	HACC	COP	DNCBA	Form 197A	PCAI	NH4	NH5	ABS		
Income:												
Government pension/benefit	8	*	6	6	19	10			A13	*		
Age pension				6	19	10			A13	*		
Invalid/disability pension				6	19	10			A13	*		
Repatriation pension				6	19	10			A13	*		
DVA benefit			12					*		*		
Health insurance:												
Health benefit card		*	6	6								
Private health insurance		*						*	A11			
Compensation claim												
Housing:												
Type of usual accommodation	9					11			A14	*		
Housing tenure	10	*								*		

* indicates that an item measuring this activity is contained in the instrument. Numbers indicate the number of the item in the corresponding instrument.

3 Balance of care: dependency profiles for aged care services

A balance of care view of client dependency profiles is a requisite for informed policy and planning decisions. Movements towards new benchmarks set for levels of nursing home and hostel provision, as part of the restructuring under the Aged Care Reform Strategy, have already led to changes in client dependency levels in both nursing homes and hostels. Concurrently, the range and supply of home and community care services have been increased to maintain clients with higher dependency levels in the community. A comparison of client dependency profiles across aged care services will determine whether a coherent framework of services that meets the varying dependency needs of the aged is being provided through these changes.

The following analysis is a preliminary attempt, using the limited data presently available, to describe and compare dependency levels within and across aged care services. Considerable variability in the quantity and quality of data available across services severely restricts the analysis. This variability arises from inconsistency in the items recorded across the data collections and limitations in the type of data currently available.

Data sources

Data is not yet available from the ACAP national minimum data set as its inception date was 1 January, 1994. The most recent biannual reports to the Commonwealth from the ACAT Evaluation Units are July to December 1993 for New South Wales (which includes the Australian Capital Territory); January to June 1993 for Queensland, Western Australia (which includes the Northern Territory) and Tasmania; and July to December 1992 for Victoria and South Australia. These reports are not based on the minimum data set, so there is considerable difficulty comparing dependency measures between the States and Territories. This should be kept in mind when examining Tables 10 to 30. Percentages should not be used to infer differences in prevalence between the States and Territories because they are generated from measures that are not comparable with any degree of confidence.

No data are centrally recorded for the Client Information, Assessment and Referral Record.

The HACC data presented here come from information published in the 1990 HACC User Characteristics Survey. More detailed information related to dependency is contained in the data set but has not been published. Data from the 1993 User Characteristics Survey is currently being processed by the Department of Human Services and Health (DHS) and should be available later in 1994.

The community options data provide detailed dependency indicators available from the 1992 data set. The 1993 data are currently being processed by the department.

While more detailed dependency information is currently available for nursing homes, only aggregate dependency measures³ are available for both hostels and nursing homes. These aggregate measures are taken from the most recent statistical overviews produced by the Department of Human Services and Health—1992–93 for hostels and 1991–92 for nursing homes. Information on individual dependency items comes from the department's data on 1992–93 nursing home residents. The data report the most recent RCI assessment for all persons who were nursing home residents at any time between 1 July 1992 and 30 June 1993.

Client profiles

Subject to the limitations on data availability discussed above, the following sections provide client dependency profiles for each of the aged care services. Where possible, comparison is made across service types. It is not possible, however, to directly compare assessment team (ACAP) data between the States and Territories, or prevalences between different sectors of care because the categories used to code responses are not identical. Overall, the dependency profiles show the expected pattern, with HACC services catering to the smallest proportion of dependent aged persons, community options packages catering to a larger proportion, and nursing homes servicing the greatest number of highly dependent aged persons.

Physical function profiles

Tables 10 to 17 present the data currently available to describe physical function in the aged accessing aged care services. Some limited trends in dependency are evident from these tables.

Tables 10 and 11 present the aggregate dependency indexes used to allocate funding to hostels and nursing homes. These are summary indexes formed from items in the PCAI form for hostels and the NH4 form for nursing homes. These summary indexes are not comparable between hostels and nursing homes and do not relate to any standard measurement scale in terms of dependency. The indexes can only be used to compare dependency levels between States and Territories within the same type of residential care. Table 17 presents information on some of the individual physical function items that are summed to provide the RCI index in nursing homes. The information provided at this level is more meaningful for describing dependency. Information at this level of detail was not available for hostels.

Tables 12 to 17 present items measuring physical function in the data collections. Mobility and continence are the only items that are recorded across all the data collections. However, mobility is defined in different ways across instruments. In the

³ For hostels the aggregate dependency measure is the Personal Care Level, which is computed from items from the Personal Care Assessment Instrument. A weighting is attached to each response for items 1 through 12 of the PCAI. These scores are then summed and used to determine Personal Care Category. There are three categories of care need: high, intermediate and low.

For nursing homes the aggregate dependency measure is the Resident Classification Index, which is computed from items from the NH4. A weighting is attached to each response for items from section 1 of the NH4. These scores are then summed and used to determine RCI category. There are 5 categories of care need. Category 1 residents are those with the highest care needs or level of dependency (27 hours per week); category 5 residents are those who are least dependent (nine hours care per week). (For more information about the RCI see HHLGCS 1992.)

assessment team data, mobility is defined as walking (Table 12); in the HACC data as walking and transfers (Table 14); in the community options data as ability to move independently (Table 15); and in the nursing home data as mobility and transfers (Table 17). These definitions are all tapping mobility but in slightly different ways. In the assessment team data this problem is compounded by varying response categories between the States and Territories so that a national picture cannot be formed. The proportion of those who walk unaided appears to vary considerably between the States and Territories, but this is more likely to be due to differences in response categories used by the States than real differences in prevalence. Between 33.0 and 67.2 per cent of assessment team clients are able to walk unaided. In comparison, only 8.5 per cent of nursing home clients require no mobility assistance and about three-quarters of both HACC and community options clients do not require help with mobility.

The measurement of continence across the data collections has an additional problem for comparison purposes because the ACAP data set measures prevalence while the other collections measure need for assistance.⁴ Excluding Western Australia, which seems to be an outlier, between 44.4 and 64.1 per cent of assessment team clients are never incontinent (Table 13). This leaves between 35 and 55 per cent with some type of incontinence problem, but there is no indication of how many require assistance due to their condition. In nursing homes a very large proportion (79.4 per cent) require assistance with continence, and this proportion increases to 91.3 per cent who require assistance with toileting. These rates are considerably higher than those for people requiring help in the home and community care sector. About one-fifth of community options clients (21.7 per cent, Table 15) but very few HACC clients (5-6 per cent, Table 14) require assistance due to incontinence. Incontinence is a condition that impacts on need for more intensive care and appears to be a decisive factor in institutionalisation of the aged.

The published HACC data provide further indications of the functional ability of home and community care clients. Table 14 shows that the majority of HACC clients (71-76 per cent) require help with self-care, a much smaller proportion (24-26 per cent) require help with mobility, and very few require help with continence.

Tables 15 and 16 present more detailed information on the functional profile of community options clients. Home maintenance is the area of most frequent need for assistance for these people, followed by housework, grocery shopping and transport. Need is concentrated in the instrumental activities of daily living rather than the more care intensive activities of daily living. However, there is still a considerable proportion who need help with some ADLs: about half the clients need help with dressing and appearance and a little more than half with bathing.

The functional profiles of nursing home clients show that 99.3 per cent need help with washing and dressing, and of these, 83.8 per cent require total help (Table 17). About 25 per cent of community options clients require help with the most care intensive conditions of continence, mobility, transfers and eating. In contrast, between 80 and 90 per cent of nursing home clients require help with eating, mobility, toileting and continence. These indicators of functional status show that many more nursing home residents are highly physically dependent than community options clients.

⁴ This problem of non-comparability between the ACAP minimum data set and other data is pervasive. The nursing home and home and community care data measure need for assistance but give no indication of the prevalence of a problem, while the assessment team data indicate prevalence but do not measure the need for assistance.

Table 10: Hostels: Personal Care dependency levels^(a) (per cent)

	NSW	Vic	Qld	WA/NT ^(b)	SA	Tas	ACT	Aust
Low	27.6	31.6	31.7	35.3	37.0	41.4	23.8	31.6
Intermediate	16.1	18.6	13.7	14.2	14.2	14.9	12.3	15.9
High	8.9	8.9	10.7	6.1	8.9	8.6	6.5	9.1
N	15,705	11,699	10,153	4,429	5,368	1,087	521	49,065

(a) Current permanent residents 30 June 1993 who have a positive Hostel Care assessment.

(b) WA includes NT.

Source: DSHS 1994:38

Table 11: Nursing homes: Resident Classification Index (RCI) dependency levels^(a) (per cent)

	NSW	Vic	Qld	WA	SA	Tas	NT	ACT	Aust
1 high	4.7	5.4	3.3	3.9	3.4	4.0	10.8	14.1	4.5
2	26.6	36.8	30.6	33.3	32.4	30.2	42.6	44.0	30.6
3	36.5	43.8	40.1	36.9	41.2	40.3	25.7	27.9	39.0
4	21.2	12.0	18.6	19.0	17.2	19.3	11.5	12.0	18.3
5 low	11.0	2.0	7.3	6.9	5.9	6.3	9.5	2.0	7.7
N	25,682	11,362	9,625	4,630	6,234	1,568	148	391	59,640

(a) Current permanent residents 30 June 1992.

Source: HHLGCS 1993b:52

Table 12: ACAP: mobility (per cent)

	NSW ^(a)	Vic ^(c)	Qld	WA	SA	Tas	ACT	NT
Walks unaided	^(b) 67.2		39.6	^(d) 49.1	42.3	32.9	38.8	54.7
Stick/frame/tripod	-		33.5	-	-	37.5	35.2	^(e) 15.1
With assistance	-		14.7	-	45.9	12.9	11.4	11.5
Wheelchair	-		6.9	-	-	4.4	4.0	^(f) 12.2
Bedfast	-		4.9	-	11.8	2.7	2.1	
Missing	5.0		0.4	-	0	9.6	8.5	6.5
N	24,243		8,115	6,981	3,803	2,220	631	278

(a) Includes ACT July-December 1993.

(b) Independently mobile.

(c) Not provided for Victoria.

(d) Inferred from report that 51.9% have poor mobility.

(e) Includes wheels self.

(f) Includes bedfast.

Source: ACAT Evaluation Unit Reports (see p25)

Table 13: ACAP: continence (per cent)

	NSW ^(a)	Vic ^(b)	Qld	WA	SA	Tas ^(e)	ACT ^(e)	NT
Never incontinent	59.6		61.4	^(c) 87.9	44.4	64.1	55.5	60.4
Sometimes in day	—		21.6	—	^(d) 40.0	15.4	23.5	^(c) 21.2
Night only	—		3.9	—	—	3.2	1.6	—
Always	—		11.8	—	15.6	7.2	3.6	9.0
Missing	11.4		1.3	—	0	10.2	15.8	9.4
N	24,243		8,115	6,981	3,803	2,220	631	278

(a) Includes ACT July–December 1993.

(b) Not provided for Victoria.

(c) Inferred from report that 22.1% are incontinent.

(d) Includes day and night.

(e) Urinary incontinence only.

Source: ACAT Evaluation Unit Reports (see p25)

Table 14: HACC^(a): need for assistance (per cent)

	Mobility	Self-care	Continence
65–79	24	71	5
80+	26	76	6

(a) N=22,367.

Source: HHCS 1992b:36

Table 15: COP^(a): need for assistance with ADLs (per cent)

	Continence	Move independently	Transfers	Bathe	Dress/undress	Appearance	Eat meals
No need	76.6	75.1	76.0	43.2	54.3	54.5	75.1
Some need	—	18.9	17.2	40.3	34.9	35.7	21.3
Total need	21.7	6.1	6.8	16.5	10.8	9.8	3.1
Missing	1.7	0	0	0	0	0	0

(a) N=5,091, includes only COP clients aged 60 and over.

Source: DSHH COP data 1992

Table 16: COP^(a): need for assistance with IADLs (per cent)

	Home maintenance	Take medicine	Manage finances	Phone	Transport	Housework	Prepare meals	Grocery shop
No need	4.2	42.9	41.5	63.0	13.6	6.0	23.8	11.7
Some need	19.4	40.1	32.6	22.9	62.4	41.7	39.1	45.4
Total need	76.4	17.0	25.9	14.1	24.0	52.3	37.1	42.9

(a) N=5,091, includes only COP clients aged 60 and over.

Source: DSHH COP data 1992

Table 17: Nursing homes^(a): need for assistance with ADLs (per cent)

	Contenance	Toileting	Mobility	Washing/ dressing	Eating
No assistance	20.6	9.7	8.5	0.7	15.8
Some occasions	12.3	10.8	14.2	4.0	35.9
Most occasions	12.7	10.5	16.8	11.5	20.2
Total assistance	54.4	68.9	60.5	83.8	28.1

(a) N=80,455 residents 1992-93, missing data for a further 4,724 residents.

Source: DSH data 1992-93 residents

Mental function profiles

Mental function is indicated in all the data sets by items that measure specific aspects of cognitive impairment (Tables 18-22). No measures of affective status are recorded.

Dementia is indicated only in the assessment team (Table 18) and community options (Table 21) data sets. Prevalences from State and Territory assessment teams vary from 16.8 to 26.3 per cent. Of the community options clients 24.8 per cent needed assistance due to dementia. These proportions appear similar, but comparison of prevalences is not possible because the assessment team data measure prevalence of dementia as a primary diagnosis while the community options data indicate need for assistance due to dementia.

Another dimension of mental function is measured by orientation ('awareness of place and time') in the assessment team data (Table 19); 'confusion, orientation' in the HACC data (Table 20); and 'wandering, confusion' in the community options data (Table 21). The assessment team data again presents prevalence of the condition while the home and community care data measure need for assistance. Assessment team prevalences for those who are disoriented are highly variable, ranging between 27.9 and 67.4 per cent across the States and Territories. In comparison, 16.8 per cent of community options clients and 10-13 per cent of HACC clients need help due to disorientation. As expected, disorientation is evident in greater proportions of clients in more intensive care settings.

The home and community care data sets also include an item on need for assistance due to communication problems as a result of stroke or disability (Tables 20,21). Very few HACC clients (6-7 per cent), but three times as many community options clients, need such assistance (19.6 per cent). A somewhat comparable item for nursing home residents is the 'speech/comprehension' item in Table 22. A substantial 70.7 per cent of nursing home clients need assistance with communication.

The nursing home data also provide some indication of the level of aggressive and disruptive behaviour in residents. Such behaviour severely affects dependency because it necessitates a substantial need for supervision. In nursing homes 18.6 per cent of residents are physically aggressive in a way that requires intervention on the majority of days, with 5.1 per cent needing intervention four or more times daily. An even greater proportion of residents (34.3 per cent) are verbally disruptive in a way that requires attention at least once a day, with 11.0 per cent verbally disruptive to the point of requiring intervention more than six times daily. Three-quarters (74.9 per cent) of residents are disruptive in other ways that require intervention at least once a day, with 31.2 per cent behaviourally disruptive more than six times daily. These figures reveal a high prevalence of disruptive behaviour due to impaired mental function.

Table 18: ACAP: dementia as primary diagnosis (per cent)

	NSW(a)	Vic(b)	Qld	WA	SA	Tas	ACT	NT
Dementia	16.8		17.7	26.3	20.5	18.7	23.3	25.9
N	24,243		8,115	6,981	3,803	2,220	631	278

(a) Includes ACT July–December 1993.

(b) Not provided for Victoria.

Source: ACAT Evaluation Unit Reports (see p25)

Table 19: ACAP: cognition (per cent)

	NSW(a)	Vic(b)	Qld	WA	SA	Tas	ACT	NT
Always aware place and time	57.7		51.5	(c)72.1	32.6	49.0	48.3	54.7
Sometimes disoriented	–		33.7	–	47.9	32.6	30.4	29.5
Always disoriented	–		13.3	–	19.5	8.0	11.3	6.8
Missing	6.7		1.5	–	0	10.4	5.1	9.0
N	24,243		8,115	6,981	3,803	2,220	631	278

(a) Includes ACT July–December 1993.

(b) Not provided for Victoria.

(c) Inferred from report that 27.9% are confused.

Source: ACAT Evaluation Unit Reports (see p25)

Table 20: HACC^(a): need for assistance (per cent)

	Communication	Behaviour (orientation)
65–79	7	10
80+	6	13

(a) N=22,367.

Source: HHCS 1992b:36

Table 21: COP^(a): need for assistance (per cent)

	Dementia	Behaviour (orientation)	Communication
Yes	24.8	16.8	19.6
No	74.4	82.1	75.6
Missing	0.7	1.1	4.9

(a) N=5091, includes only COP clients aged 60 and over.

Source: DSHS COP data 1992

Table 22: Nursing homes^(a): need for assistance (per cent)

	Physical aggression	Verbal disruption	Behaviour disruption	Speech/ comprehension
No assistance	81.4	65.7	25.1	29.3
Some occasions	9.2	14.8	24.9	18.5
Most occasions	4.3	8.5	18.8	18.1
Total assistance	(b)5.1	(c)11.0	(c)31.2	34.1

(a) N=80,455 residents 1992-93, missing data for a further 4,724 residents.

(b) Requires assistance 4 or more times a day.

(c) Requires assistance 6 or more times a day.

Source: DSHS data 1992-93 residents

Social function profiles

Tables 23 to 27 present items that measure aspects of social function. One item included in all the data collections is whether the person lives alone or previously lived alone. Between 26.6 and 41.4 per cent of those accessing assessment teams usually live alone (Table 24). Of those in residential care, 55.9 per cent of hostel residents and 33.8 per cent of nursing home residents previously lived alone (Table 27).⁵ In the home and community care sector, about 60 per cent of HACC clients (Table 25) and 49.1 per cent of aged community options clients (Table 26) live alone. Living alone, by itself, does not indicate dependency, but it is an important factor in combination with other factors affecting dependency (such as level of physical and mental function).

Another factor relevant to dependency in combination with physical and mental function is the availability of a carer. Carer availability is reported only in the home and community care data. About half the HACC (Table 25) and 67 per cent of community options (Table 26) clients have a carer. Community options clients have greater dependency needs and would be less able to remain in the community without the help of a carer. While the assessment team data do not indicate availability of a carer, it is interesting to note that carer stress was identified by both the Tasmanian and Western Australian Evaluation Units as the most commonly cited social problems and appeared to be increasing.

Information on marital status is available only for ACAT clients (Table 23). The largest group are widowed persons and the next largest group are those who still have a living spouse. However, about 70 per cent of assessment team clients across all States and Territories do not have a partner to care for them.

⁵ Nursing home clients are more likely than hostel clients to have come from another institutional care setting such as an acute care hospital or a hostel.

Table 23: ACAP: marital status (per cent)

	NSW ^(a)	Vic	Qld	WA	SA	Tas	ACT	NT
Never married	8.1	10.0	10.6	6.8	8.5	8.9	4.3	19.5
Married/de facto	32.4	32.9	30.8	34.8	31.7	31.2	34.0	28.8
Divorced/separated	4.7	3.8	5.0	4.1	3.5	3.3	4.6	8.2
Widowed	47.7	49.2	52.2	48.1	55.0	55.0	57.1	37.7
Missing	7.2	4.0	1.4	6.2	1.2	1.6	0.2	5.8
N	24,243	21,806	^(b) 15,643	6,139	3,803	2,220	631	257

(a) Includes ACT July–December 1993.

(b) Reported for July 1992 to June 1993.

Source: ACAT Evaluation Unit Reports (see p25)

Table 24: ACAP: usual living arrangement (per cent)

	NSW ^(a)	Vic	Qld	WA	SA	Tas	ACT	NT
Alone	35.0	34.6	32.7	32.8	39.8	41.4	35.3	26.6
Spouse	24.0	25.3	26.4	26.5	28.5	23.2	25.5	16.2
Others	23.0	20.1	40.1	17.0	12.2	17.6	19.7	33.8
Hostel	9.2	7.4	–	–	–	6.1	12.0	^(b) 12.2
Nursing home	4.4	2.4	–	–	–	1.3	1.7	
Other	1.8	9.3	0.9	23.8	19.6	2.7	0.7	2.9
Tribal	–	–	–	–	–	–	–	8.3
Missing	2.5	0.9	–	0	0	7.8	5.1	–
N	24,243	21,806	7,864	6,981	3,803	2,220	631	278

(a) Includes ACT July–December 1993.

(b) Combines hostels and nursing homes.

Source: ACAT Evaluation Unit Reports (see p25)

Table 25: HACC^(a): living arrangement (per cent)

	Lives alone	Has carer
65–79	56.3	49.0
80+	64.0	52.9

(a) N=22,367.

Source: HHCS 1992b:30,33

Table 26: COP^(a): living arrangement (per cent)

	Lives alone	Has carer
Yes	49.1	67.0
No	49.9	32.1
Missing	1.0	0.9

(a) N=5,091.

Source: DSHS COP data 1992

Table 27: Residential care: prior living arrangement (per cent)

	Hostels ^(a)			Nursing homes ^(b)		
	Female	Male	Total	Female	Male	Total
Alone	59.7	45.4	55.9	37.1	25.5	33.8
Siblings	2.1	2.7	2.2	2.3	2.0	2.2
Child/ren	14.2	9.8	13.0	16.0	7.7	13.6
Spouse	8.8	21.6	12.2	14.2	39.6	21.4
Other	15.3	20.4	16.6	30.5	25.2	29.0
N	21,977	7,944	29,921	26,579	10,506	37,085

(a) As of 30 June 1993. Not recorded for 20,250 hostel clients.

(b) As of 30 June 1992. Not recorded for 23,182 nursing home clients.

Sources: DSHS 1994:33, HHLGCS 1993b:38

Economic function profiles

Information available on economic status is presented in Tables 28 to 30.⁶ Nearly all clients accessing ACATs (Table 28) and home and community care services (Table 29) are pensioners. When missing data are excluded over 90 per cent of clients of these services are shown to be pensioners. This compares with 78 per cent of the general population aged over 65 (HHCS 1992:26). This means that these aged care services are being successfully accessed by those on lower incomes.

Housing tenure information is available from the ACAP data only for South Australia and the Northern Territory and these two areas show very different patterns (Table 30). Home ownership is enjoyed by the majority of the aged in South Australia and is much more prevalent than in the Northern Territory where the largest group of aged persons are in public housing. This pattern reflects very different aged populations. New South Wales also measures housing tenure, but due to the large amount of missing data the rates are not representative.

Table 28: ACAP: major source of income (per cent)

	NSW ^(a)	Vic ^(b)	Qld	WA ^(b)	SA	Tas ^(b)	ACT ^(b)	NT
Govt pension	73.4		76.4		97.5			85.6
Other	2.1		3.3		1.4			11.2
Missing	24.5		20.3		1.2			3.2
N	24,243		7,864		3,803			278

(a) Includes ACT July–December 1993.

(b) Not reported for Vic, Qld, WA, Tas and ACT.

Source: ACAT Evaluation Unit Reports (see p25)

⁶ Hostels provide DSHS with information on the number of Financially Disadvantaged Persons (FDP) they accommodate, as they are required to meet a quota of such persons. A FDP is defined as someone who is on the maximum pension rate and did not own their own home in the two years prior to entry to the hostel. Around half of hostel residents are in this category.

Table 29: HACC/COP: pension status (per cent)

	HACC	COP
Receives pension	(a)95 (b)96	(c)87.8
Missing	0	5.4

(a) Aged 65-79.

(b) Aged 80+.

(c) Aged 60+.

Source: HHCS 1992b:27; DSHS COP data 1992

Table 30: ACAP: housing tenure (per cent)

	NSW(a)	Vic(b)	Qld(b)	WA(b)	SA	Tas(b)	ACT(b)	NT
Home owner/ purchaser	19.9				49.9			18.0
Public rental	1.9				9.0			29.5
Private rental	1.7				9.9			11.9
Boarding	0.4				-			-
Hostel/nursing home	5.3				17.2			12.9
Other	3.0				12.4			8.6
Aboriginal community	-				-			15.5
Missing	67.7				1.4			3.6
N	24,243				3,803			278

(a) Includes ACT July-December 1993.

(b) Not reported for Vic, Qld, WA, Tas and ACT.

Source: ACAT Evaluation Unit Reports (see p25)

4 Discussion

From these data a number of conclusions can be drawn regarding the dependency of the aged accessing aged care services. Many of these points relate to inadequacies in our knowledge and indicate areas of need, but there are still some interesting trends evident for client dependency profiles.

Overall, we know little about the dependency levels of clients of aged care services. Our best information relates to their physical function in terms of activities of daily living. We also know a little about their mental function in terms of cognitive impairment, but nothing about their affective functioning. We have very few indicators of their social and economic function. Information about mental function—particularly affect—and social and economic function is, therefore, a pressing need.

What constitutes dependency and what factors affect dependency are especially relevant questions. The present focus on physical function as the predominant measure of dependency excludes consideration of many other important factors. We have no understanding of such factors as the effect of housing tenure on care needs, the importance of carers and carer health to maintaining the frail elderly in the community, and the impact of fears about security as a major reason for moving to more institutionalised care. While many such issues are the province of special surveys, some are central enough to the provision of aged care services that items providing related information could be incorporated into these data sets.

We also cannot yet adequately examine dependency profiles within a balance of care framework. This is due to the lack of uniformity of items between data collections; the same items are not collected in all data sets, and when similar items are collected, they are measured in idiosyncratic ways. As a consequence, we cannot compare the dependency profiles of those in residential and community care, or between types of residential or community care. The inability to compare data from assessment teams with any other data is particularly restrictive in terms of describing clients of different types of care, as ACATs act as an umbrella service or gateway to the various types of care. Furthermore, the ACAT data record recommendations for appropriate types of care, and the inability to compare dependency profiles from clients recommended for particular services with client profiles from those services is especially prohibitive for a holistic understanding of aged care. Some standardisation of dependency measurement across data collections would facilitate a balance of care approach to service provision and program and policy analysis.

Issues related to the reliability and validity of these data are especially vexing. Because none of the data collections use conceptually based and psychometrically tested measures—with the exception of some of the physical function items that are based loosely on the Katz ADL Index—their acceptability as measurement tools is doubtful. A conceptual consideration of what aspects of dependency must minimally be measured is needed. This would include measures of the physical, mental, social and economic status of clients. Following this, measures must be selected that have acceptable psychometric rigour and established validity as dependency indicators. These are urgent needs if such data are to be used as descriptive or research tools.⁷

⁷As acknowledged previously, many of these data collections were not developed for the purposes of research. However, they are all used to some extent to describe client groups, and as such, all these points are relevant.

Despite these restrictions some general and very tentative dependency profiles are evident. These trends are, however, subject to all the provisos and restrictions that affect the quality and availability of the data.

Physical function

The home and community care data reveal that more community options clients are dependent in terms of mobility, continence and self-care needs than mainstream HACC clients. This confirms that some of the targets of the community options program—in terms of servicing a more disabled population—are being met. The vast majority of nursing home residents are revealed to be disabled in the basic activities of daily living. Again, this confirms that nursing homes are being used by a large proportion of severely disabled aged persons. Fewer community options clients need help with activities of daily living, although there is still a substantial proportion (around one-quarter) who need intensive help in this area. Community options clients need most help with home maintenance, housework, transport, and to a lesser extent, other instrumental activities of daily living.

Mental function

Our knowledge of mental function is limited to cognitive impairment as measured by disorientation and communication problems. However, both these conditions can be a consequence of so many factors that it is difficult to determine what it really means in terms of need for care. Only the community options data specifically identify dementia, with about 20 per cent of clients needing assistance as a consequence of this disorder. The trend for mental function is equivalent to that revealed for physical function, with nursing homes catering to the highest proportion, community options packages to considerably fewer, and HACC services to the least number of mentally impaired aged persons.

Social function

The items measuring social function are very inconsistent across the data sets and subsequently tell us little about the social dependency of the aged accessing these services. Usual living arrangement is the only somewhat consistently available item, and in the absence of other information, such as availability of a carer, it reveals little about the real risks of living alone.⁸

Economic function

There is an even greater paucity of information related to economic function. Almost all the aged accessing ACATs and HACC services are shown to be dependent on some sort of pension. This and other economic factors, such as housing tenure, require much greater investigation.

⁸ For example, in more detailed analysis of the COP 1992 data, which will be presented elsewhere, 67 per cent of those who reported living alone did not have a carer.

The assessment of dependency is becoming more essential as the aged population grows. The segment growing most rapidly is the oldest and frailest which means that many more frail aged will require access to aged care services. This need is evident at the individual level to determine and evaluate individual care plans, and at the population level to provide and plan services and inform policy. As the provision of aged care services is expensive and generally funded from the public purse, it is imperative to effectively target services to those most in need. Until we can describe the dependency profiles of the aged who are in need of and who are accessing all types of aged care services, we do not possess the information to plan and evaluate our aged care system.

5 Issues for consideration

This report is a preliminary attempt to provide client dependency profiles within a balance of care framework across aged care services. Some limited comparative descriptions of client dependency profiles across aged care services were achieved. These initial results show the potential these data collections have for revealing the interaction of factors that determine dependency in the aged. However, further effort in this area is unrealisable without the consideration of several issues related to the data gathered on dependency. The following issues require resolution before client profiles for aged care services can be produced that can fully inform policy and program decisions.

1. Do measures of physical, mental, social and economic status need to be covered in all aged care data collections to adequately provide a picture of dependency in the aged? If not, what are the essential components of dependency that need to be measured to support policy and program development?
2. Can the measurement of physical function be standardised across data collections by including a proven measure such as the Katz Index or Barthel Index? Furthermore, can a hierarchy or point of overlap between ADLs and IADLs be established to enable comparison of physical function between community and residential care services?
3. Can mental function be measured more fully? In particular, can valid and reliable measurement tools be found for dementia and affective state?
4. What are the relevant dimensions of social function? Is it sufficient to measure prior living arrangements, availability of carer and whether the carer is co-resident?
5. What are the relevant dimensions of economic status? Can valid and reliable measures of economic and environmental security be developed?
6. When relevant dimensions of all aspects of dependency have been identified, can psychometrically sound measures be found in the literature or developed through appropriate pilot testing?
7. Can the measurement of basic dependency indicators (as well as sociodemographic and other essential items) be standardised and applied consistently across program areas so that comparability and a balance of care perspective is possible?

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Abbreviations

ABS:	Australian Bureau of Statistics
ACAP:	Aged Care Assessment Program
ACATs:	Aged Care Assessment Teams (previously referred to as Geriatric Assessment Teams)
ADL:	Activities of Daily Living
AIHW:	Australian Institute of Health and Welfare
CIARR:	Client Information, Assessment and Referral Record
COP:	Community Options Projects
DHSH:	Department of Human Services and Health (also referred to by earlier names of HHLGCS (Dept of Health, Housing, Local Government and Community Services) and HHCS (Health, Housing and Community Services))
DNCBA:	Domiciliary Nursing Care Benefit Application
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition
Form 197A:	Hostel Care Assessment Application
HACC:	Home and Community Care
HC:	Hostel Care level for hostels
IADL:	Instrumental Activities of Daily Living
ICD-10	International Classification of Diseases Tenth Revision
ICIDH:	International Classification of Impairments, Disabilities and Handicaps
NH4:	Application for Resident Classification
NH5:	Application for Nursing Home Admission
PC:	Personal Care level for hostels
PCAI:	Personal Care Assessment Instrument
RCI:	Resident Classification Index for nursing homes
WHO:	World Health Organisation