



## The time cost of care

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### Abstract

Extensive small scale studies have documented that when people assume the role of assisting a person with impairments or an older person, care activities account for a significant portion of their daily routines. Nevertheless, little research has investigated the problem of measuring the time that carers spend in care-related activities. This paper contrasts two different measures of care time – an estimated average weekly hours question in the 1998 Australian Survey of Disability, Ageing and Carers, and diary estimates from the 1997 national Australian Time Use Survey. This study finds that diaries provide information for a more robust estimate, but only after one models the time use patterns in the days of carers to identify care-related activities, which diarists do not necessarily record as care. Such a measure of care time reveals that even people who offer only occasional assistance to a person with impairments tend to spend the equivalent of more than 10 minutes a day providing care. Most caregivers undertake the equivalent of a part-time job to help a friend or family member. Summing the average caregiving time provided by all household members reveals that over a quarter of Australian households caring for an adult or child provide the equivalent of a full-time employee's labour, and another quarter work between 20 and 39 total weekly hours to provide informal care.

**JEL-Codes:** C13, J14, J16, J17, J19, J20

**Keywords:** Care, unpaid work, time estimation, family and gender roles, informal economic activity

## **1 Introduction to the problem of measuring time spent in care<sup>1</sup>**

Informal care of people with disabilities and the frail elderly constitutes an important element of unpaid work in many industrialised countries (OECD 1999). In Australia, over 2.6 million people help a person with impairments perform tasks of daily living (ABS, 2003), providing services worth 18.3 billion per annum (Carers Australia, 2003). Some carers may offer only occasional help, such as collecting shopping or performing periodic repairs around the home of an older person. Other carers assist a person who needs more regular help for such activities as getting out of bed and dressed in the morning.

As the average age of Australians increases, the need for care also will expand. A number of motivations have prompted the transfer of care from state-sponsored institutions to the community. Policies emphasising community care acknowledge that those needing assistance prefer to live at home (Dalley, 1988). Conscious of the potential impact on state and national budgets which state-provided care might entail, successive Australian governments since the 1980s have striven to transfer an increasing share of the responsibility for care to families and communities (Ungerson and Kember, 1997; Schofield et al, 1998; Fine, 1999). This transfer has involved positive incentives (such as payments to carers looking after an elderly or disabled person in their homes) and well as the restriction of services, both through the reduction of time in which people needing longer term care may remain in hospitals and other public facilities and also through the cutting back of government-funded services or tightening of criteria to access some services. By the mid-1990s, informal carers provided 74 percent of all the care that enabled elderly and disabled Australians to remain at home (Department of Human Services and Health, 1995). Similar trends emphasising de-institutionalisation and care in the community have emerged in other industrialised countries (National Commission of Audit, 1996; OECD, 1998; OECD, 1999).

In some respects, care of a person with a long-term condition is similar to care of a person of any age with a temporary illness or injury or to the care of children. In many significant ways, however, people looking after someone with a disability or long-term illness face more difficult circumstances than people looking after children or adults with temporary difficulties. Valerie Braithwaite (1990) has observed that carers of the elderly and people with long-term disabilities differ fundamentally from carers of children and people with temporary illness and injuries. Societies celebrate the recovery of people with temporary medical conditions and the development of children into independent adulthood. Parents and temporary carers can look forward to milestones of achievement for the care recipients, which also mark milestones in the decreased needs of the person for whom they provide aid. Governments, religious institutions, and businesses contribute to the care of children and people with temporary injuries by providing such services as public education, special meals and activity packs for children, temporary leave and pay provisions to aid recovery from injury, and baby changing facilities in public toilets. Societies tend not to celebrate prolonged incapacity or the decline of basic functions (Braithwaite

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<sup>1</sup> Though the authors conducted the research reported here at the Social Policy Research Centre, the New South Wales Department for Women, the NSW Department of Ageing, Disability and Home Care, the NSW Department of Community Services, NSW Health and Carers NSW were partners in the larger project and provided advice and comment during this research. Nevertheless, this chapter represents the views of the authors and does not necessarily represent the views of the other partners.

1990). Carers do not have milestones marking decreased dependence to which they can look forward (indeed some will face the reverse experience of the declining capacities and increased dependency of the person whom they aid), and the number of facilities and services available to providers of care are few compared to support for raising children (Braithwaite 1990; Bittman and Fisher 2003). Societies tend to develop social expectations of the role of parents – while such expectations are not as developed or as strong in relation to care, leaving many carers with a lack of sense of direction for their role as carers (Braithwaite 1990). Consequently, the circumstances of carers deserve academic consideration.

Australian government agencies providing services to older residents and people with disabilities or long-term illnesses have developed concern for the welfare of informal carers. In part, the rising cost of providing services for carers has generated concerns among those managing public budgets (National Commission of Audit, 1996). After all, if informal carers lose the capacity to continue in this role, both the care recipient and the carer may have to turn to the state for publicly funded assistance. At the same time, service providers have noted that a significant number of carers who could benefit from support do not take up the public services to which they are entitled (Brodaty et al, 2005; McCabe et al, 1995; Yeatman, 1996; Schofield et al, 1998).

Most care relationships emerge from pre-existing close relationships, and carers do not always recognise that a change in their loved one's health has changed the nature of their relationship – that is some carers simply do not recognise that they have assumed the role of carer (Parker 2000: 3). Denying the necessity of providing care also can provide some people with a coping strategy for distressing circumstances. If accepting services means facing up to the reality of a loved one's poor health, some carer's prefer to avoid services (Brodaty et al 2005; McCabe et al 1995; Schofield et al, 1998). Some people whose applications for public assistance for carers have been declined may accept that they are not actually carers (Bittman, Fast, Fisher, and Thomson 2004). Carers may be isolated from support because potentially useful services are not accessible in their area due to hours of operation or cost. Some carers from cultural or linguistic minority backgrounds find services culturally inappropriate or insensitive (Thomson, Fine and Brodaty 1997). Other reasons carers may not use services are lack of information and their perceptions that they do not need services (Hill et al. 2005). Carers who do not receive sufficient support from public agencies, charities, or their informal social and family networks can experience social isolation, develop financial problems, drop out of the labour market, and experience poor health and stress (Brodaty and Hadzi-Pavlovic, 1990; Schofield et al, 1998; Watson and Mears, 1999). International research shows that community services designed to support carers can make a significant difference to their health and welfare (Schofield et al, 1998; Braithwaite 1998; Watson and Mears, 1999; Parker, 2000; Zarit et al, 1998). Charitable organisations aiding people with disabilities and academic researchers have additionally expressed concern that women assume a disproportionate share of the burden of informal care (Fine, 1999; Schofield, et al 1998; Watson and Mears, 1999). Again, concerns for carers in Australian have also emerged in other industrialised countries (OECD, 1998; OECD, 1999).

One element of understanding the experience of being a carer – an essential task to inform policy relating to carers – is to examine the range of time requirements the different groups of carers typically commit to this role. This paper aims to address a gap in the literature on caring and time use by investigating the conceptual and technical issues involved in understanding the time costs of care. Two different nationally representative data sets in Australia allow the estimation of the time constraints caring imposes on the daily activities of the people providing informal care. The 1998 Australian Bureau of Statistics (ABS) Survey of Disability, Ageing and Carers (SDAC) included a weekly time estimate question, asking co-resident primary carers if their typical

weekly care commitment required fewer than 20 hours, 20 to 39 hours, or 40 or more hours of work. The 1997 ABS Time Use Survey (TUS) collected self-reported accounts of daily activities of all members aged 15 or more of a sample of Australian households over each five minute interval for two consecutive 24 hour days.<sup>2</sup> The two studies generate very different estimates of the time required for care. Indeed, the time use study can also produce divergent estimations depending on how the researcher defines a carer and how time spent caring is measured. While the data sets analysed here are Australia-specific, similar data are available in other countries. This paper explores procedures that can aid the investigation of care in a range of national contexts.

We address the question of how researchers might best measure the time cost of care by contrasting the estimates generated by these two studies.<sup>3</sup> We argue that time diary data provides the more robust estimate, but only if the researcher engages in an extended process to identify the range of daily activities affected by care. Nevertheless, when the time recorded in the diaries is aggregated to the household level, and household care time estimates are compared against the SDAC results, both surveys suggest that a significant proportion of households included members whose care activities amount to the equivalent full-time employment hours. Consequently, care constitutes a significant and largely unmeasured dimension of informal economic activity.

## 2 The importance of examining time spent providing care

The major official source of information about carers in Australia, the Australian Bureau of Statistics' *Disability, Ageing and Carers Survey* contains limited information about the time devoted to care. Consequently, there is hardly any systematic knowledge about what determines the quantity of labour required for informal care, its nature or its intensity and the demands it places on families. Therefore it is not possible to estimate the demands placed on carers, how they vary according to changes in circumstances and to make informed judgements about the supply of caring labour.

Informal care has been described as the submerged portion of the 'iceberg of welfare' as it remains unseen because it is unpaid and does not register in conventional accounting for welfare expenditure. Although unpaid activities leave no cash trail, they do leave a trace in terms of the expenditure of time<sup>4</sup>.

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<sup>2</sup> We removed 236 poor-quality diaries which either had unrealistically low numbers of activities recorded or had in excess of one hour of time when no activity was recorded and the missing time slots could not be imputed as travel by unknown means or as falling within a similar limited range of possible activities.

<sup>3</sup> Though the authors conducted the research reported here, the New South Wales Department for Women, the NSW Department of Disability, Ageing and Home Care, the NSW Department of Community Services, NSW Health and Carers NSW were partners in the larger project and provided advice and comment during this research. Nevertheless, this paper represents the views of the authors and does not necessarily represent the views of the other partners.

<sup>4</sup> The only official estimate of the cash value of informal care is provided by the Australian Institute of Health and Welfare. Using information from the Time Use Survey and some conservative assumptions, the Australian Institute of Health and Welfare, has calculated that the dollar value of unpaid caring labour is approximately double the total (monetary) welfare service expenditure in Australia (Australian Institute of Health and Welfare, 2003:76)

### 3 Defining a 'carer'

The population of carers, like the population of people needing assistance, is diverse. The degree of time required to look after any particular person in need of aid depends in part upon: the degree of independence retained by the care recipient; the degree of impairment this person experiences, the range of tasks with which the person needs assistance: the range of support services available to the carer and the care recipient; and whether other informal carers share the role or one person assumes the responsibility alone. Nevertheless, some caring relationships have a greater degree of intensity than others. Four groups of carers are considered in the subsequent analysis.

Both the SDAC and the TUS distinguish between *primary carers*; people who supply the main source of help to another person who needs regular assistance; and *other carers*; people who either supply supporting assistance alongside a primary carer or who help a person whose need is less profound. The SDAC only asked primary carers for information about the time they spent on care. The TUS asked all diarists if they supplied main (or primary) care to an adult or children with disabilities, if they supplied a less intensive degree of care (other care), or did not care for an person needing assistance. The 1998 SDAC included 918 primary carers, while the 1997 TUS included diaries from 262 primary carers and 627 other carers. These 918 respondents to the SDAC and 889 respondents in the TUS all identified themselves as carers to the survey teams.

Nevertheless, some people who provide care do not self-identify as carers (Bittman, Fast, Fisher, and Thomson 2004) and hence are unlikely to classify themselves as carers in a survey. As previously noted in the introduction, there are many reasons why carers may not self-identify. The Time Use Survey, however, also offers the possibility to distinguish two groups of carers who do not identify themselves as carers on questionnaire items. We found that 240 diarists who did not report that they provided help to another person nonetheless recorded an activity coded as 'care' in one or both of their time diaries (such as reporting helping their elderly father get out of bed and get dressed, or reporting assisting a grandparent with getting into and out of the bath then taking medication). We categorised these people who performed care but who did not claim to be carers as 'non-identified carers' (we discuss this issue in more detail in Bittman, Fisher, Hill, Thompson, and Thomson. 2004).

We profiled the daily activities of these three groups of carers – primary carers, other carers, and non-identified carers, and identified variations in patterns of behaviour which distinguished carers from the rest of the survey population. We then identified 1263 diarists in the remaining population who exhibited similar behaviour patterns to carers, and whose behaviour we could not explain as arising from a reason other than care. We grouped these diarists into a category of 'possible carers' (full details of our methodology for locating non-identified carers who did not record care activity in their time diaries appears in Bittman, Fisher, Hill, Thompson, and Thomson 2004). Over half of these possible carers (56.2%) live in a household with another person who needs care (Bittman, Fisher, Hill, Thompson, and Thomson. 2004). We now compare the time primary carers report spending in care in the SDAC and the TUS, and also examine the time other carers, non-identified carers and possible carers spend in care in the time diary data.

## **4 Estimates of time spent caring**

The SDAC asked primary carers (though, unfortunately, not other non-primary carers) to estimate their weekly care commitments. In addition to limiting the possible responses to the number of hours spent in care to a three point range, the age categories in the SDAC are limited to four age groups. These are under 25; 25-39; 40-64; and 65 or more. Some general trends emerge in the SDAC data. For co-resident female primary carers, the proportion indicating that their care time consumes 40 or more hours per week increases with age. Among all female primary carers, the proportion spending 40 or more hours per week in care is lowest in the under 25 age group (19.7%), plateaus in the middle age groups (34.6% and 33.8% respectively), and rises among women aged 65 or more (60.6%). The youngest male primary carers did not report spending over 40 hours or the equivalent of full time employment hours in care. Two-thirds of both co-resident male primary carers and all male primary carers indicated that they spent fewer than 20 hours per week providing care. Around one-third of both male and female primary carers performing 20 to 39 hours of care work per week are in the youngest age group. It should be noted that young carers are the largest proportion among carers who provide 20 to 39 hours per week of care.

The 1997 Time Use Survey collected information on time spent caring at a number of levels. Diarists wrote down what they were doing, using their own words to describe the main focus of their attention, any other activities they did at the same time, for whom they performed each activity, who else was present, and where they were. The ABS used the same series of activity codes to classify both main activities and secondary activities.

Of diarists who recorded care on one or both of their diary days (this set of diarists includes all non-identified carers and a proportion of the self-identified primary carers and self-identified other carers), 81 percent recorded this care as a main activity that did not overlap other activities. A further 12 percent of these diarists recorded care as a secondary activity only, while the remaining 7 percent reported their care tasks as both primary and secondary activities. Even when overlaid with another activity, such as socialising with the care recipient or listening to the radio while undertaking care, care time imposes constraints on the range of potential activities in which the carer can engage and, like main activity care time, tends to cover a significant need for the care recipient. We argue that secondary care time counts equally with main activity care time in terms of summing the time commitment from care provided that one does not double-count periods where both the main activity and secondary activity are care.

The coding of “for whom the diarist performed the activity” column distinguishes activities which the diarist reported they did for a person with a disability on account of that person’s disability. Again, with the proviso that such time not be included if the main or secondary activity is already recorded as care, we argue that such time likewise properly fits into the domain of care time.

Summing these various definitions of care time (main activity recorded as care + secondary activity recorded as care when main activity is not care + time spent for people with a disability when neither the main nor the secondary activity is recorded as care), however, we find very low estimates of time spent caring, particularly compared to the SDAC estimates. The 80 percentile carer score (where the total minutes spent in care by the 20 percent of carers who reported the longest time in care is at this level or higher, and the total minutes spent in care by all other carers

is lower) is 23 minutes per day – and the median minutes in care for all four types of carers is no time spent caring.

The differences in the basic estimates suggested by the two studies are striking, and points to a conceptual issue related to defining care. Carers know that their responsibilities can make a big impact on their daily routines, but when they write down what they do during the day, carers list very few explicitly care-related activities. There are good reasons why this phenomenon should occur. Some aspects of care are closely related to domestic activities. Looking after a person who has continence problems, who regularly spills drinks and food on account of a hand tremor, or who sweats profusely, among other difficulties, likely entails more time washing clothing, sheets and towels than might be undertaken in a household with a similar number of members of the same sex and age. Nevertheless, it is highly unlikely that any carer in such a position could accurately estimate how much of the time they spend doing laundry is simply part of their routine domestic needs and how much of that laundry time is extra time generated by their caring role. The time diaries have particular value in enabling us to work out the average laundry time of similar households where no care takes place to work out what that difference is likely to be.

## **5 Revising the time diary estimates**

This paper developed from a larger project assessing the needs of hidden and vulnerable carers in Australia. As part of this project, we profiled the daily activity patterns of carers using the 1997 Time Use Survey. The quantitative profiling revealed that carers spend more time in voluntary work, spend more time on domestic work, spend less time on paid work and related activities, spend less time and personal care; perform more total activities on an average day; and have more restricted leisure time than other people (Bittman, Fisher, Hill, Thompson, and Thomson. 2004). These findings were also supported by focus groups we conducted with carers in a previous study (Bittman and Thomson 2000). Having identified the patterns of daily activities associated with self-identified and non-identified carers, we could use this information to build more precise estimates of the average daily minutes different groups of carers spend undertaking care-related activities.

Even so, we cannot simply add up extra time spent doing laundry or other activities where we have already identified that carers typically expend more time. People who are not carers also may spend particularly long periods performing activities that dominate the days of carers (on account of cleaning the house after the visit of many guests or preparation for a large celebration, for example). Similarly, carers themselves will sometimes spend longer periods on activities that can be extended by care commitments for reasons entirely unrelated to their role as carers. Account must be made to exclude as much time not related to care as possible. To make such an account, we experimented with the effect of including 30 percent, 40 percent, 50 percent, and 75 percent of the extra time expended by carers in care related activities after subtracting out the mean score all non-carers spent in extra time in these same activities. We found the 75 percent score performed sufficiently robustly for use in the estimate compared to the benchmark of self-identified carer.

Table 1 shows the resulting estimates of care time yielded by this procedure. The first feature to note is that some residual time (time which is resembles a care-style pattern) remains for some non-carers, but this residual time is considerably lower than the time invested by all types of carers. The next striking feature is the similarities between the care times of primary and other carers – though primary carers record marginally higher care times, this difference is not significant.

**Table 1**  
**Estimates of average daily time ranges spent in care (in hours and minutes per day)**  
**by the carer types**

Carer Type	20 percentile	median time	80 percentile
Self-identified primary carers	2 minutes	1 hour 19 min	3 hours 16 min
Self-identified other carers	0 minutes	1 hour 14 min	3 hours 8 min
Non-identified carers	37 minutes	1 hour 59 min	4 hours 29 min
Possible carers	12 minutes	1 hour 27 min	3 hours 33 min
<b>All carer types</b>	<b>10 minutes</b>	<b>1 hour 27 min</b>	<b>3 hours 31 min</b>
<b>Non-carers with no other care responsibilities</b>	<b>0 minutes</b>	<b>10 minutes</b>	<b>1 hour 39 min</b>

Source: 1997 Australian Bureau of Statistics Time Use Survey

Indeed, one reason why the average time spent by non-identified carers undertaking care is higher than the care time reported by identified carers may be that the time diary data are picking up only a selected portion of non-identified carers on the days when they undertake care, and that we are failing to identify an element of the non-identified carer population that performs less intensive care as these individuals did not complete a diary on a care day – though it is also possible that non-identified carers spend more time in care, or that a combination of these reasons accounts for the higher time estimates for the non-identified and possible carer populations.

## 6 Comparing the 1998 SDAC and the revised 1997 TUS estimates

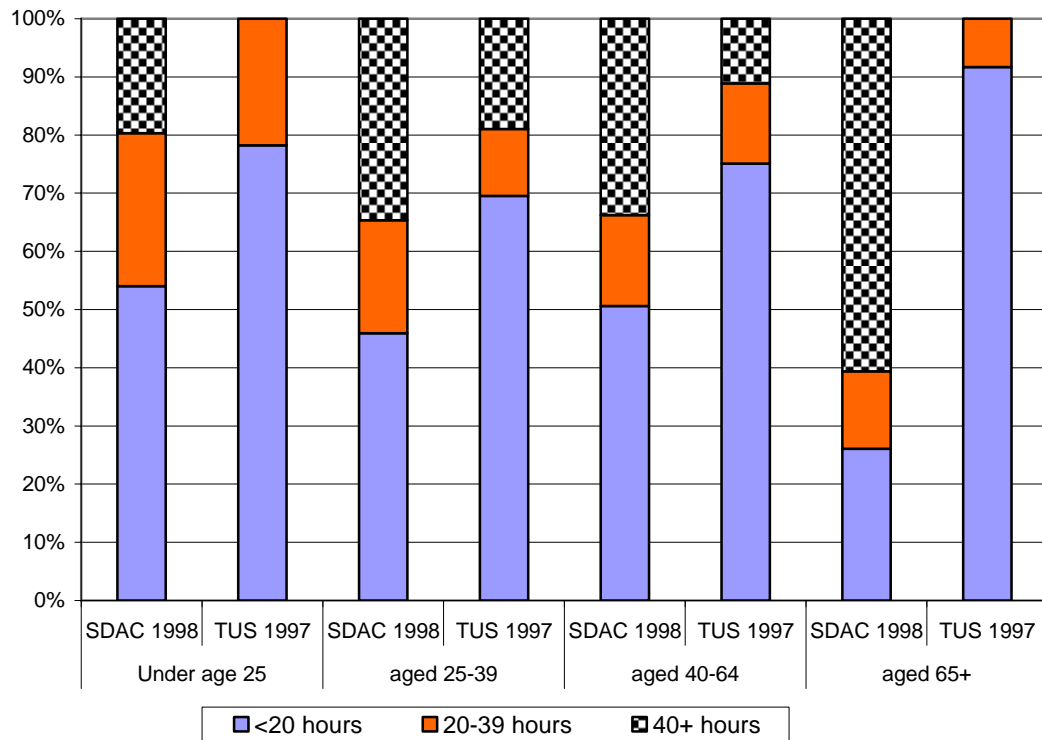
Figures 1 and 2 compare the revised Time Use with the SDAC estimates for women and men by the four age categories available in the 1998 SDAC data.

A similar picture emerges for primary co-resident carers. These comparisons suggest that women of all ages and men 25 or older may possibly over-estimate their hours of care time when using a retrospective recall method, though men aged 25 to 39 appear to make smaller over-estimates than female carers or older male carers, while women aged 65 or more appear to make the highest over-estimates. Nonetheless, Figures 1 and 2 also suggest that male carers aged less than 25 may be significantly underestimating their care time in the diary method, compared to the SDAC estimations.

Figures 1 and 2 indicate that we have two pieces of apparently contradictory evidence. First the SDAC estimates suggest that carers view their caring role as occupying a significant proportion of their daily life. Our second estimate of the time spent caring, based on activities recorded in the TUS diaries, suggest that caring involves a smaller time commitment. Broadly there are two ways of reconciling these apparently divergent pieces of information together. A decision can be made that one method is superior to the other. For example it could be decided that retrospective recall tends to exaggerate the demands of their care situation. Conversely one can rely on the known quality of the time diary data and conclude that an accurate assessment of time spent in caring activities is found by this method. However, it might be possible to accept the findings produced by each method and seek ways of reconciling apparent contradictions.



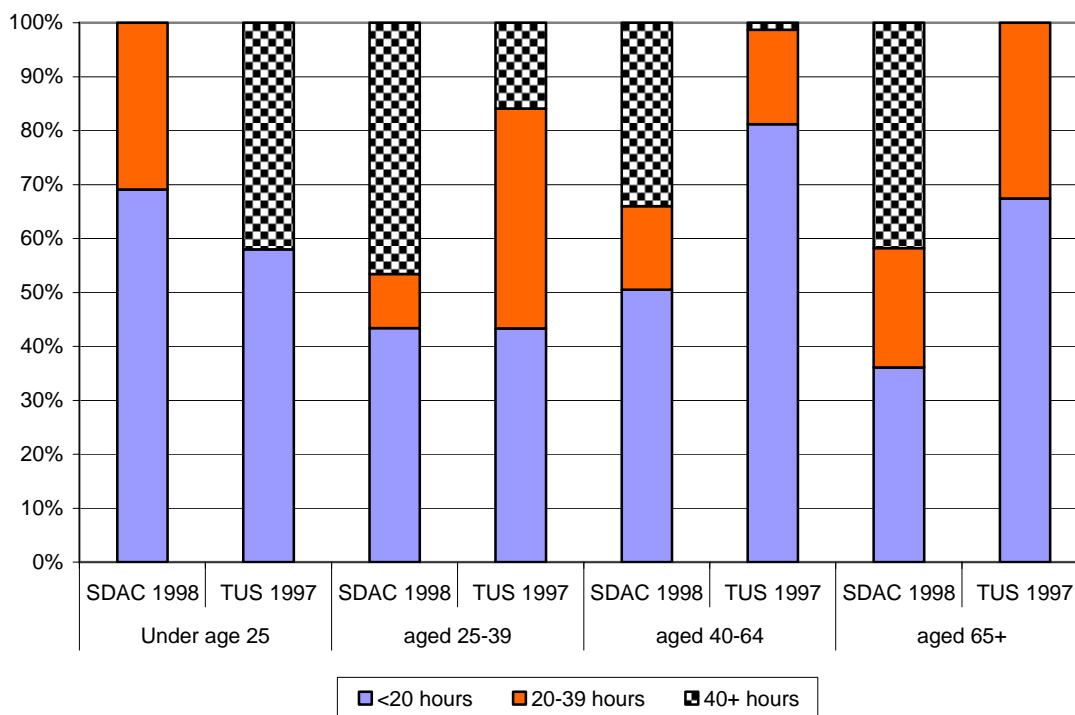
**Figure 1**  
**Time spent by women performing care from the 1998 SDAC and 1997 TUS, primary carers (women) by grouped hours of care**



Source: 1998 Survey of Disability, Ageing and Carers and 1997 Australian Bureau of Statistics Time Use Survey

The time use data may well miss out some supervisory time, and not always indicate the extent to which carers rearrange their schedules to be nearby to the care recipient in case they are needed. It is possible that the weekly estimates carers provide to the SDAC include such rearranged schedule time. It may also be that the carers in the SDAC survey look after people with more profound disabilities. Consequently, these respondents may have a higher average time commitment to care than the total primary carers population in the time use data. It may also be the case that primary carers are including some hours of care actually provided by other household members in their estimate of their personal hours spent in care. It may be that it is easier to calculate an estimate of care time without using a diary by summing the typical time the care recipient needs help with a given activity rather than to try to estimate both the recipient's care time need and the proportion of that need fulfilled by the person making the estimate. As we shall see in the next section, the people living in the over one-fifth of households where a person needs care collectively put in the equivalent of forty or more hours of care per week. Even if the SDAC data are reflecting over-estimates of the time individual carers spend in care, the average care median time of ten hours per week of care is a significant commitment of personal resources by a considerable number of Australian carers.

**Figure 2**  
**Time spent by men performing care from the 1998 SDAC and 1997 TUS,**  
**primary carers (men) by grouped hours of care**



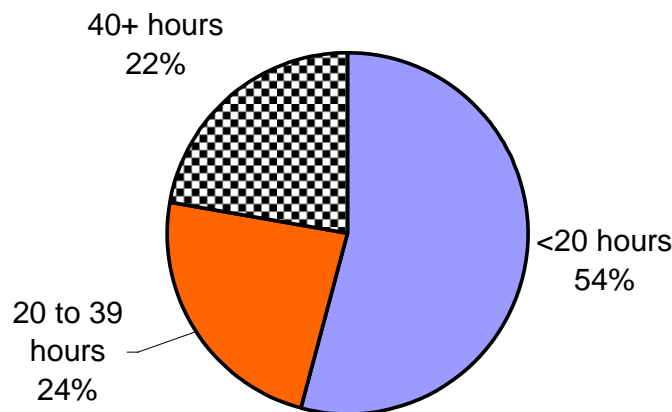
Source: 1998 Survey of Disability, Ageing and Carers and 1997 Australian Bureau of Statistics Time Use Survey

## 7 Hours of care provided at the household level

As the 1997 Time Use Survey collected diaries from all adult household members, we can consider the total weekly hours of care provided by all carers in households where at least one person provides care. The level of care provided at the household level does not differ greatly by the number of carers in the household. The 1053 households in the 1997 Time Use Survey where we identified one carer, the 520 households where we identified two carers, and the 74 households where we identified three carers each undertook a median weekly time of over 13 hours of care work. The 18 households with four carers performed a median of nine weekly hours of care, and the one household with five carers reported an estimated 2 hours and twenty minutes of care time, though the numbers of households in these latter groups is too small for more meaningful examination.

Figure 3 shows the breakdown of grouped weekly hours of care provided at the household level in Australia in 1997. Just under one quarter of carer households provide 40 or more hours of care per week, while another nearly quarter of carer households perform between 20 and 39 hours of care per week. This means that roughly half of all carer households in Australia perform the equivalent of at least a part-time job when they look after one or more people.

**Figure 3**  
**Percentage of carer households by grouped weekly hours of care provided by all carers living in the same household**



Source: 1997 Australian Bureau of Statistics Time Use Survey

## 8 Conclusions

The estimates of the weekly hours devoted to care differ considerably between the two surveys. These differences may in part arise from the different sample populations and the different means of data collection, or they may reflect limitations in either or both of the data sets. In particular, the level of hours in the three categories offered to respondents in the SDAC may have skewed results. Carers who perform around 13 hours of care per week may recognise that their caring responsibilities make a considerable impact on their week, and feel reluctant to choose the smallest category of time on offer. Time diary researchers often argue that diary-based estimates of most activities are more reliable than direct questions asking people to estimate the time they spend performing activities (Gershuny 2000; Niemi 1993); however, time diary data has been shown to significantly underestimate time spent performing child care (Ironmonger 2002). It may well be that time diaries also under-report care – especially by not capturing supervisory time or time where carers rearrange their schedules to be nearby to their care recipient in case their services are needed.

These limitations aside, both quantitative data sets confirm qualitative research findings that the caring role makes a significant impact on the daily lives of carers. The time diary data also raise a curious issue of definition – as carers tended to report many of their care activities as unpaid domestic work rather than as care. By facilitating the estimation of the proportion of extra unpaid domestic work carers assume as a consequence of looking after another person, time diary data thus have the potential to significantly contribute to future research into policies affecting carers and people with impairments.

Carers commit a median time of over an hour of care each day, thus making a significant contribution to the informal economic activity of Australian society taking place on any given day. Nearly half of all carer households perform the equivalent of part-time or full-time working

hours to look after their friends and family members. Thus the costs to public service providers to replace such informal present care arrangements at the same standard of care would be considerable.

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