Factoring the cost of aged care into retirement planning

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Abstract: This paper addresses one of the information lacunae that employees face as they plan for their retirement, namely the likely aged care costs that they can expect to face in retirement. It derives lower bounds on the private aged care costs that several representative individuals can expect to face in retirement by estimating their lifetime risk of entry to permanent residential aged care, the most expensive form of aged care, and their expected length of stay in permanent residential aged care (given that they enter). Almost half (49.9 per cent) of women and a third (31.9 per cent) of men aged sixty-five will enter permanent residential aged care at sometime in their remaining life. Of those who do enter permanent residential aged care, women on average stay for 3.5 years while men on average stay for 2.3 years. The total private cost of residential care depends on a care recipient's income and assets. For a part-pensioner with total income of $30,000 per annum and assessable assets of $160,000 who enters residential aged care, the total private cost would, on average, be $62,000 for a woman and $31,000 for a man. A quarter of part-pensioners with this level of income and assets who enter residential aged care would face a total private cost of more than $133,000 (for women) and $81,000 (for men).

In the context of the theme of this Colloquium: *Choice in Retirement Funding*, this paper addresses one of the information lacunae that employees face as they exercise this choice, namely the likely aged care costs that they can expect to face in retirement.

Advancing age often increases an individual's level of demand for care and support services, with the rate of increase in demand itself often accelerating with age. The implications of this for Australia's economy and health and welfare systems, given the overall ageing of the population and the ageing of the older population itself, have been the subject of considerable analysis (Australian Treasury 2002; Productivity Commission 2004). The Australian Department of Health and Ageing's Aged Care Dynamic Cohort Model, developed in

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conjunction with Access Economics, suggests that, under current policies, total public and private expenditure on aged care will more than double to 2.3 per cent of Gross National Income over the next forty years (Access Economics 2004; Hogan 2004). The financial implications for individuals of the changes in health status that are often associated with advancing age have been less well studied than those for the economy as a whole. One recent study, based on the experiences of older people in the United States, suggests that ageing-related changes in health status can significantly affect both an individual's total wealth and the distribution of their assets across asset classes (Coile and Milligan 2005).

Coile and Milligan examined the first six waves of the US Health and Retirement Study, covering 1992 to 2002, for the impact of ill health on the financial position of over 20,000 retirees.[†] They modelled the impact of ill health on the financial position of households before and after one or more of four types of health shocks and found that:

- an 'acute shock' – that is, either spouse experiencing an acute event such as heart problems, stroke or cancer – reduced the total value of a household's assets by an average of US$65,000 in the first two years and by about US$30,000 a year thereafter. Four years after an acute shock, the total value of a household's assets was reduced on average by around 29 per cent;

- a 'chronic shock' – that is, either spouse receiving a new diagnosis of a chronic illness such as high blood pressure, diabetes, lung disease, psychological problems or arthritis – reduced the total value of a household's assets by US$34,000 in the first year and by US$150,000 over the first four years. Four years after a chronic shock, the total value of a household's assets was reduced on average by around 35 per cent;

- a 'health status shock' – that is, either spouse reporting a worse health status than at the previous wave – had no statistically significant impact on the total value of a household's assets. However, this may have been because of a vagueness in the formulation of the variable with some health shocks representing a change in health status from excellent to good; and

- an 'ADL shock' – that is, either spouse reporting more difficulty with activities of daily living (ADLs) – reduced the total value of a household's assets by about US$70,000 in the first two years. Four years after an ADL shock, the total value of a household's assets was reduced on average by around 20 per cent.

Coile and Milligan also found that acute and ADL shocks affected the distribution of assets across asset classes. In particular, they found these shocks led to a decrease in business assets and other (rental) real estate assets. They hypothesise that this could be because these types of assets become too difficult to manage.

[†] The US Health and Retirement Study covers individuals born before 1924 (five waves of two-yearly interviews), individuals born between 1924 and 1930 (three waves), individuals born between 1931 and 1941 and their spouses (six waves) and individuals born between 1942 and 1947 (three waves).

Because of the significant differences between the health and aged care financing arrangements of Australia and the United States, it is not possible to draw direct conclusions for Australia from Coile and Milligan's findings. However, it is likely that the impact of acute, chronic and health status shocks would be more muted in Australia than in the United States because of the safety net offered by the various components of Medicare, including public hospitals, the MBS (including bulkbilling by GPs) and the PBS. The impact of ADL shocks is also likely to be more muted in Australia than in the United States. While an increasing requirement for assistance with activities of daily living will often translate into a demand for aged care services and while such services, although they are substantially subsidised by the Australian Government, can involve considerable private cost in Australia, these costs tend to be lower than in the United States. In addition, the stringent eligibility test for Medicaid assistance in the United States may encourage more rapid asset 'spend down' there than is strictly necessary (Government Accountability Office 2005).

Whatever its direct relevance, Coile and Milligan's analysis raises interesting questions for Australians planning for their retirement, especially as the level of the private costs of aged care (especially in terms of lifetime cost) and the likelihood that an individual will need to incur these costs are not well understood in Australia. This paper seeks to address this information lacuna to better inform retirement planning.

Methodology

Because of a lack of a comparable study, it is not yet possible to apply the Coile and Milligan approach in Australia. In the longer term, the Household, Income and Labour Dynamics in Australia (HILDA) Survey, which is funded by the Australian Department of Families, Community Services and Indigenous Affairs, may offer an appropriate data set. However, the Survey only began in 2001 and although ten annual waves of interviews are planned only four waves have been completed, with the fifth wave of data due to be released in January 2007 (Melbourne Institute of Applied Economic and Social Research 2006).

This paper takes a different approach to estimating the impact of an ADL shock on an older person's financial position by directly calculating the private aged care costs that individuals can expect to face in their retirement. It estimates a lower bound on the likely lifetime private cost of aged care for a number of representative individuals by estimating their:

- lifetime risk of entry to permanent residential aged care (the most expensive aged care);

- expected total length of stay in permanent residential aged care; and

- annual private cost of permanent residential aged care.

Finer estimates of the impact of an ADL shock on an older person's financial position could be developed by taking into account lifetime use of respite (as well as permanent) residential aged care and lifetime use of Community Aged Care Packages and Extended Aged Care at Home Packages. That analysis is currently being prepared for publication.

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Data

The Department of Health and Ageing holds detailed data on the use of residential aged care at the individual level. This data is collected as an administrative by-product of the Australian Government's role as the principal funder of residential aged care, since under the *Aged Care Act 1997* aged care subsidies are paid in respect of individuals. This paper's analysis is based on deidentified unit record data for 2004-05, including data on:

- 47,766 admissions – 63 per cent of whom were women and 83 per cent of whom were aged at least seventy-five (38 per cent were aged at least eighty-five); and

- 40,927 discharges (deaths) – 64 per cent of whom were women and 77 per cent of whom were aged at least eighty (28 per cent were aged at least ninety).

The paper also analyses the total length of stay for all 44,320 final discharges (including the 40,927 deaths noted above) in 2004-05, where total length of stay is calculated by combining the lengths of stay of all of an individual's episodes of care in both nursing homes and hostels.

Caveats

For simplicity, the paper's analysis is restricted to permanent residential aged care, which is the most expensive form of aged care assistance. As noted above, the total aged care costs faced by older people will, in general, be higher than those estimated in this paper as they will often have been receiving (and often contributing to the cost of) less intensive forms of assistance for some time before entering permanent residential aged care.

Several other caveats should be also noted about the following analysis. First, the supply of residential aged care is currently constrained through regulation, with the Government subsidising 88 residential aged care places for every 1,000 people aged at least seventy. Admission to aged care, and hence the derived estimates of the lifetime risk of entry, are necessarily affected by this constraint on supply.

Second, future patterns of disease and dependency can be expected to change the nature of the aged care services that older people will demand and the length of time they will live after they begin to lose their independence. For example, older people are likely to have more than one health condition (co-morbidity) as their life expectancy increases. The annual costs of aged care are therefore likely to rise as care becomes more complex. This is already apparent with the average unit cost of aged care in Australia increasing in real terms by around four per cent per annum over the last decade (Australian Department of Health and Ageing 2006a). In addition, disorders of memory, understanding, behaviour, motor and sensory function, mobility and balance are also likely to become more widespread. These neurological conditions are already a key contributor to the substantial increase in dependency experienced by many very old people. The incidence of dementia increases dramatically after the age of seventy. As people live longer, therefore, more people can expect to be impacted upon by dementia. This is likely to increase the length of stay of individuals in residential aged care as the length of stay of people with dementia is already substantially longer than that of other people (Lindsay, Griffiths *et al.* 2003).

Finally, the future cost of aged care is likely to be affected by changing expectations and by economic factors. There is considerable evidence that people now reaching the eligibility age for the age pension are significantly wealthier in real terms than their mothers and fathers were at the same time of life. Currently, just over half of individuals aged 65 and over receive a full rate pension, another quarter receive a part rate pension and a fifth are not eligible for the age pension. By the middle of this century, after the Superannuation Guarantee system has reached maturity, it is expected that the proportion of people aged 65 and over receiving a full rate pension will fall to around one third and the proportion of people receiving a part rate pension will increase to around two fifths. The proportion of people not receiving the pension will rise to around a quarter. As the members of succeeding generations enter retirement and then reach the age at which aged care often becomes necessary they will, on average, have more assets and greater income in real terms (Percival and Kelly 2003). They are therefore likely to have an increased desire, and financial capacity, to play a more pro-active role in choosing where and how they receive the services they require and to demand greater choice in the level of amenity they wish to pay for (Olsberg and Winters 2005).

Although these caveats are substantial, they will all arguably exert upwards pressure on the cost of aged care for individuals, so that the lower bounds developed in this paper will continue to be valid.

Estimating the lifetime risk of entry to residential aged care

The lifetime risk of entry to permanent residential aged care is not well understood, perhaps because, as Figure 1 illustrates, at age eighty only 3.7 per cent of men and 6.0 per cent of women are receiving permanent residential aged care at any one time. Even at the peak of usage (age ninety-six) only 22.0 per cent of men and 41.1 per cent of women are receiving permanent residential aged care at any one time.

Figure 1: Probability of being in receipt of permanent residential aged care, by age, by sex

Source: Department of Health and Ageing, unpublished data

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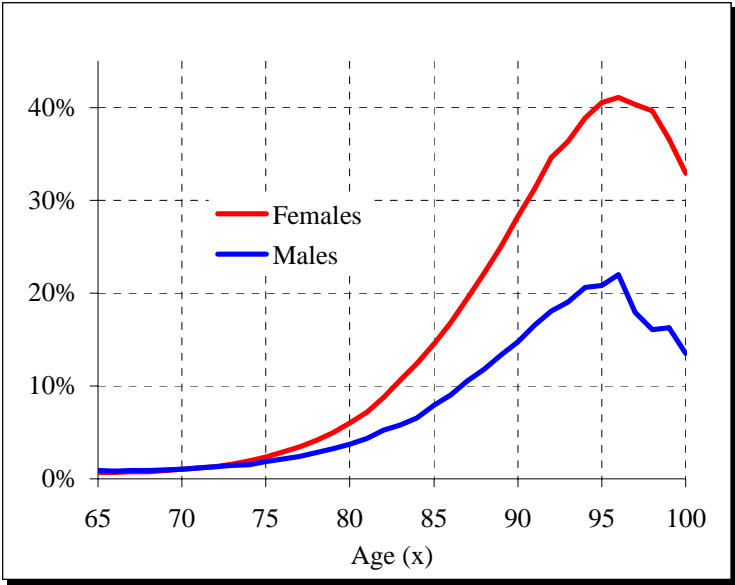
However, such cross-sectional data tends to understate the likelihood that an individual will require permanent residential aged care at some time in their life. The Australian Institute of Health and Welfare have suggested that better estimates can be provided by life table analysis (Liu 1996; Mason, Liu *et al.* 2001). Figure 2 illustrates the (remaining) lifetime risk of entry to permanent residential aged care at different ages for men and women who have never received permanent residential aged care, based on 2004-05 aged care data and the standard 2002-04 life tables (Australian Bureau of Statistics 2006).

Figure 2: Remaining lifetime risk of entry to residential care (having never received care), by age, by sex
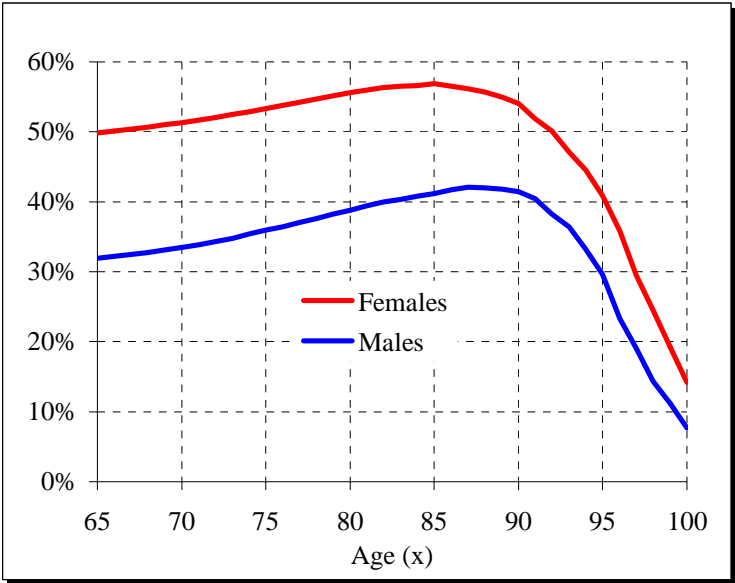
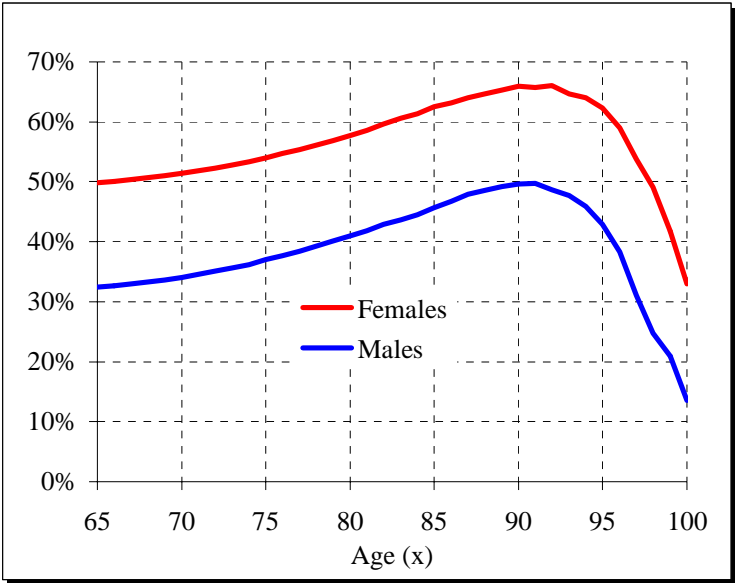Source: Department of Health and Ageing, unpublished data

At age sixty-five, an individual man has a lifetime risk of entry to permanent residential aged care of 31.9 per cent (only slightly higher than their lifetime risk at birth of 28.1 per cent). By age eighty-seven, a man's lifetime risk of entry has reached its maximum at 42.1 per cent. In general, women have a greater lifetime risk of entry to permanent residential aged care than men at all ages. Both because they live longer and hence are more likely to live until the ages when entry to residential aged care is more common and because they tend to outlive their partners and so have less access to informal care. At age sixty-five, an individual woman has a lifetime risk of entry to permanent residential aged care of 49.9 per cent (again only sightly higher than their lifetime risk at birth of 46.0 per cent). By age eighty-five, a woman's lifetime risk of entry has reached its maximum at 56.9 per cent.

Note, however, that Figure 2 also understates the likelihood of an individual entering permanent residential aged care at any age, as it does not include individuals who have previously entered residential aged care at a given age.

Figure 3 illustrates the results correcting for this understatement and shows the (remaining) lifetime risk of receiving permanent residential aged care at different ages for men and women whether or not they have received permanent residential aged care before that age. Perforce, the two remaining lifetime risks illustrated in Figure 2 and Figure 3 are identical at

birth and almost equal at age sixty-five (since there are few admissions before that age). After age sixty-five, however, the risks diverge. For men, the remaining lifetime risk of receiving permanent residential aged care reaches its maximum at age ninety-one, when it is 49.7 per cent or 9.3 percentage points greater than the remaining lifetime risk of first admission at that age. For women, the remaining lifetime risk of receiving permanent residential aged care reaches its maximum at age ninety-two, when it is 66.0 per cent or 15.9 percentage points greater than the remaining lifetime risk of first admission at that age.

Figure 3: Remaining lifetime risk of requiring permanent residential aged care, by age, by sex

Source: Department of Health and Ageing, unpublished data

Table 1 details the results illustrated in Figure 3 for the remaining lifetime risk at several key ages of receiving permanent residential aged care at different ages for men and women whether or not they have received permanent residential aged care before that age.

**Table 1: Remaining lifetime risk of receiving permanent residential aged care, by age, by sex**

	At Birth	*At age 65*	*At age 75*	*At age 85*	*At age 90*	*At age 100 or over*
Females	46.0%	49.9%	54.0%	62.5%	66.0%	33.0%
Males	28.1%	32.4%	37.0%	45.6%	49.6%	13.5%

Estimating the expected length of stay in residential aged care

Using life table analysis, Liu (1999) estimated that the average length of stay in a nursing home over a lifetime was 2.62 years for women who received nursing home care and 1.62 years for men who received nursing home care. He also estimated that the average length of stay in a hostel over a lifetime was 3.27 years for women who received hostel care and 2.50 years for men who received hostel care. However, the life table analysis did not allow him to calculate the average length of stay in residential aged care (nursing homes and hostels) for people who used either or both nursing home or hostel care.

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The expected (total) length of stay in permanent residential aged care can be estimated directly from administrative data held by the Department of Health and Ageing. Because this administrative data identifies individuals it is possible to calculate the total length of stay in permanent residential aged care for residents by combining the lengths of stay of all of their episodes of care in both nursing homes and hostels. The average total length of stay of residents discharged in 2004-05 was 3.0 years (2.3 years for men and 3.5 years for women). However, as always, averages conceal a wide distribution (see Figure 4).

Figure 4: Cumulative probability of a total length of stay below a given length, by sex
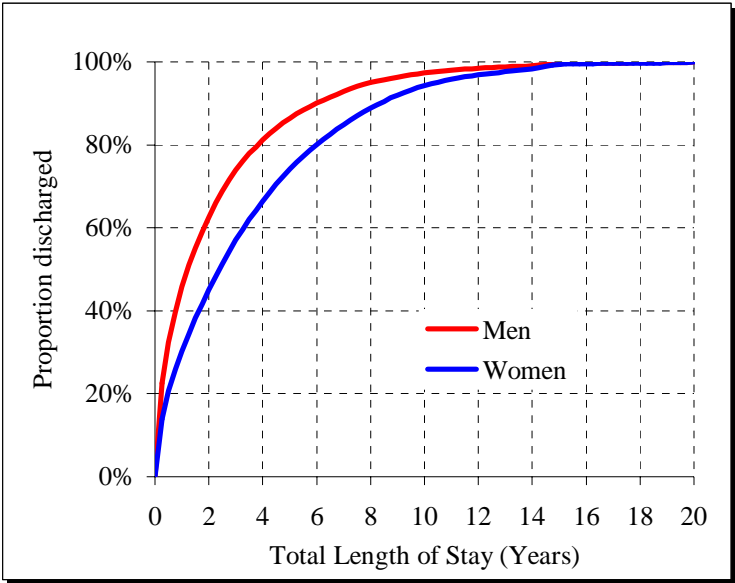
Source: Department of Health and Ageing, unpublished data

Some 36.0 per cent of residents stay for less than one year (45.8 per cent of men and 30.3 per cent of women). Indeed, 17.1 per cent of residents stay for less than three months (22.6 per cent of men and 13.8 per cent of women). On the other hand, 21.3 per cent of residents stay for at least five years (13.6 per cent of men and 25.8 per cent of women) and 4.6 per cent of residents stay for at least five years (2.6 per cent of men and 5.7 per cent of women).

As Figure 4 illustrates, the distribution of lengths of stays is heavily left skewed. The median length of stay is 1.2 years for men and 2.4 years for women. That is, almost half of all men stay for less than half the average length of stay for men; the length of stay of more than half of all women is over a year less than the average length of stay for all women. Table 2 provides the lengths of stay for the 5th, 25th, 75th and 95th percentiles of all discharges.

Table 2: Distribution of total length of stay (years), by sex,

(years)	5th percentile	25th percentile	median	75th percentile	95th percentile
Females	0.06	0.70	2.40	5.13	10.39
Males	0.04	0.30	1.20	3.13	7.98

Estimating the cost of residential care

Residents of aged care homes pay a complex of fees and charges for the care they receive.[‡] The levels of these fees depend on the resident's income and assets and also on whether they are a pensioner or a self funded retiree and on whether they are receiving high level (nursing home) care or low level (hostel) care. In brief, a resident can be asked to pay:

- a basic daily care fee;

- an asset-tested accommodation payment;

- an income-tested care fee;

- an optional uncapped 'extra service' fee.

Basic daily care fees

The level of a resident's basic daily care fee depends, in general, on whether the resident is a pensioner or a self funded retiree. Pensioners pay a fee equal to 85 per cent of the basic single age pension (or $10,700 per annum). Self-funded retirees pay a slightly higher basic daily care fee of $13,300 per annum.

Accommodation payments

The level of a resident's accommodation payment depends, in general, on their assets and on whether they entered permanent residential aged care to receive high or low level care.

Residents who enter an aged care home to receive high level care can be asked to pay an accommodation charge of up to $6,100 per annum on top of their basic daily care fee. Although the accommodation charge is asset-tested, residents only require assets of $62,000 to be eligible to pay the maximum charge and almost 90 per cent of eligible residents pay the maximum charge.

Residents who enter an aged care home to receive low level care can be asked to pay a partially-refundable lump sum accommodation bond, which is capped only by the level of their assets. These arrangements remain in place even if they later 'age in place' and receive (high level) care. The aged care home is allowed to deduct an annual retention amount from the bond and to keep any interest earned on the bond. The cost to the resident of paying the bond is the retention amount plus the income they could have earned on those assets.

The average accommodation bond paid in 2004-05 was $125,000 and 10.0 per cent of residents paid a bond greater than $250,000. Assuming that a resident could derive income


[‡] The information provided in this Section is heavily summarised. More complete information on fees and charges in residential aged care can be found in the Department of Health and Ageing's *Residential Care Manual* (Australian Department of Health and Ageing 2006b).

Note the Australian Government sets the maximum fees and charges that residents can be asked to pay in almost all instances. These maximums are indexed regularly and the figures in this section are as at 30 June 2006. For simplicity, this paper assumes that aged care homes generally charge residents the maximum fees allowable.

on their assets at five per cent (the pension deeming rate), the cost to the resident of paying a bond of $125,000 and $250,000 (including the retention amount and interest income forgone) would be $9,400 per annum and $15,700 per annum respectively.

Figure 5 illustrates how an individual's combined basic daily care fee and asset-tested accommodation payment varies with the level of their assets and the type of care they receive.

Figure 5: Annual basic daily care fee and accommodation payment, by asset level
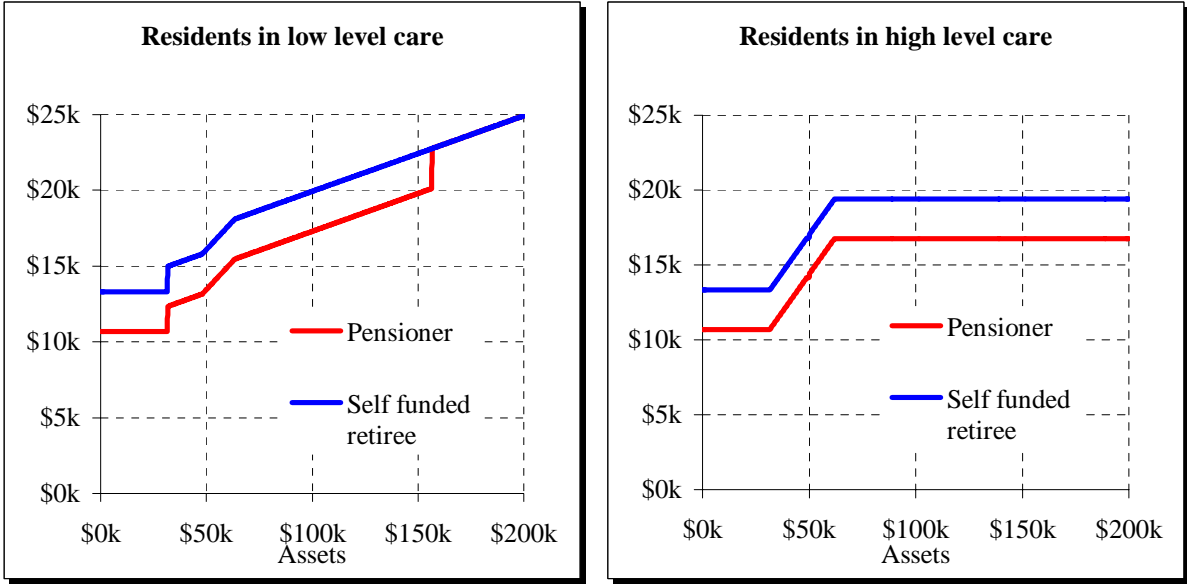
Source: Derived from the *Aged Care Act 1997*

Income tested fees

The level of a resident's income tested fee, in general, depends only on their private (non-pension) income. Residents pay an income tested fee equal to 25 per cent of their private income above the annual age pension income test free threshold ($3,224). About 45 per cent of residents pay an income tested fee. For these residents, the average income tested fee in 2004-05 was $3,300. The maximum income tested fee that a self funded retiree resident can be asked to pay is $18,700 per annum (if they have private income of $77,873 or more per annum). The maximum income tested fee that a pensioner resident can be asked to pay is $8,200 per annum (if they have private income of $36,071 per annum), noting that because of the pension income test pensioners cannot have a greater private income than this amount.

Figure 6 illustrates how an individual's income tested fee varies with their income.

Extra service fees

Around three per cent of residents choose to purchase 'extra services', such as a higher quality of accommodation or hotel services, from their aged care homes. In 2004-05, the average extra service fee was $20,000. Extra service can be expected to become more common as the baby boomers age as they can be expected to seek a wider range of services and greater control over their care.

Figure 6: Annual income tested fee, by income level
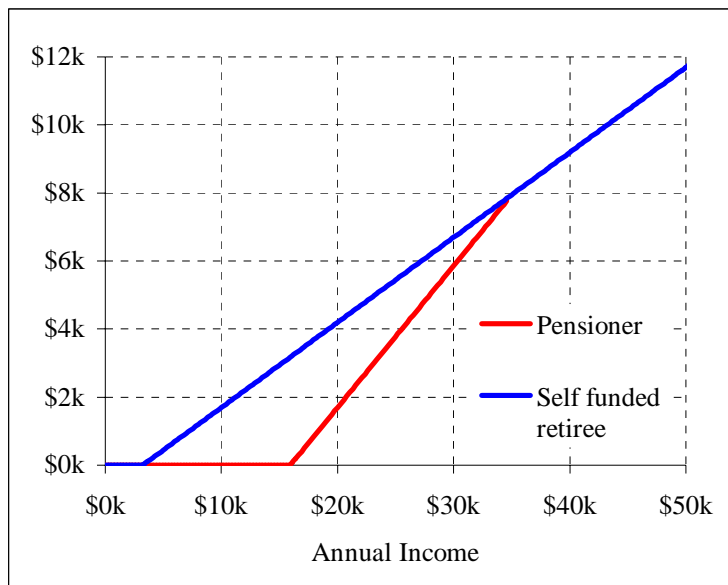
Source: Derived from the *Aged Care Act 1997*

Total fees for representative individuals

Table 3 applies the rules governing fees and charges to determine the total annual fee payable by a number of representative individuals:

- a full-pensioner receiving low care with total income of $15,000 and assessable assets of $65,000. This resident would not pay any income tested-fee and could only be asked to pay a small accommodation bond of around $35,000;

- a part-pensioner receiving low care with total income of $30,000 and assessable assets of $160,000. This resident would pay an income tested-fee and could be asked to pay an accommodation bond of around $125,000;

- a self funded retiree receiving low care with total income of $60,000 and assessable assets of at least $280,000. This resident would pay the higher basic daily care fee, an income tested fee and could be asked to pay a larger bond (say $250,000)

- a full-pensioner receiving high care with total income of $15,000 and assessable assets of $65,000. This resident would not pay any income tested-fee and but could be asked to pay the maximum accommodation charge of $6,100;

- a part-pensioner receiving high care with total income of $30,000 and assessable assets of $160,000. This resident would pay an income tested-fee and could be asked to pay the maximum accommodation charge; and

- a self funded retiree receiving high care with total income of $60,000 and assessable assets of at least $280,000. This resident would pay the higher basic daily care fee, an income tested fee and could be asked to pay the maximum accommodation charge.

Table 3: Total annual fee, by type of care, by income, by assets

Total income	Assessable assets	Basic daily care fee	Accom. payment	Income tested fee	Extra service fee	Total annual fee
Low care						
$15,000	$65,000	$10,700	$4,900	$0	-	$15,600
$30,000	$160,000	$10,700	$9,400	$5,800	-	$25,900
$60,000	$280,000	$13,300	$15,700	$14,200	-	$43,200
High care						
$15,000	$65,000	$10,700	$6,100	$0	-	$16,800
$30,000	$160,000	$10,700	$6,100	$5,800	-	$22,600
$60,000	$280,000	$13,300	$6,100	$14,200	-	$33,600
Extra service						
$60,000	$280,000	$13,300	$15,700	$6,700	$20,000	$55,700

Source: Derived from the *Aged Care Act 1997*

Estimating the quantum of the 'economic shock' of entering aged care

For a given individual I, the average economic impact of a 'residential aged care shock' (that is, the expected cost in constant 2004-05 dollars of residential aged care services given that the individual has entered residential aged care) can be calculated as:

(1) $$\mathrm{E}(Cost_{Lifetime}(I)) = \mathrm{E}(LOS_{Total}) * Cost_{Annual}$$

Table 4 provides estimates of these costs together with estimates of the likely spread of costs among the different representative individuals given the distribution of total lengths of stay noted earlier in Table 2.

Table 4: Average economic impact (total cost) of a 'residential aged care shock'

Total income	Assessable assets	5th percentile	25th percentile	median	75th percentile	95th percentile
Woman who initially enters permanent residential aged care for low level care						
$15,000	$65,000	$936	$10,920	$37,440	$80,028	$162,084
$30,000	$160,000	$1,554	$18,130	$62,160	$132,867	$269,101
$60,000	$280,000	$2,592	$30,240	$103,680	$221,616	$448,848
Woman who initially enters permanent residential aged care for high level care						
$15,000	$65,000	$1,008	$11,760	$40,320	$86,184	$174,552
$30,000	$160,000	$1,356	$15,820	$54,240	$115,938	$234,814
$60,000	$280,000	$2,016	$23,520	$80,640	$172,368	$349,104
Woman who receives high or low level care and chooses to receive extra services						
$60,000	$280,000	$3,342	$38,990	$133,680	$285,741	$578,723

Total income	Assessable assets	5th percentile	25th percentile	median	75th percentile	95th percentile
Man who initially enters permanent residential aged care for low level care						
$15,000	$65,000	$624	$4,680	$18,720	$48,828	$124,488
$30,000	$160,000	$1,036	$7,770	$31,080	$81,067	$206,682
$60,000	$280,000	$1,728	$12,960	$51,840	$135,216	$344,736
Man who initially enters permanent residential aged care for high level care						
$15,000	$65,000	$672	$5,040	$20,160	$52,584	$134,064
$30,000	$160,000	$904	$6,780	$27,120	$70,738	$180,348
$60,000	$280,000	$1,344	$10,080	$40,320	$105,168	$268,128
Man who receives high or low care and chooses to receive extra services						
$60,000	$280,000	$2,228	$16,710	$66,840	$174,341	$444,486

Source: Calculated using equation (1)

As residential aged care tends to be a comprehensive service, some of these costs are costs that individuals would meet in the normal course of living. Even discounting these costs (by discounting by the basic daily care fee component of fees), however, the additional cost of residential care (and especially extra service care) can be considerable.

For example, 25 per cent of female and male part-pensioners with total income of $30,000 per annum and assessable assts of $160,000 who enter permanent residential aged care will face an additional lifetime cost of more than $78,000 and $48,000 respectively. Similarly, 25 per cent of female and male self-funded retirees with total income of $60,000 per annum and assessable assts of $280,000 who enter permanent residential aged care will face an additional lifetime cost of more than $153,000 and $94,000 respectively. If they choose to receive permanent residential aged care on an extra service basis then 25 per cent of women and men who enter permanent residential aged care will face an additional lifetime cost of more than $218,000 and $133,000 respectively.

Estimating the expected lifetime cost of residential aged care

All retirement planning, of necessity, balances risk and reward. One approach to measuring an appropriate level of provision of the risk of entering residential aged care is to consider the expected lifetime cost of permanent residential aged care, which for a given individual I at age x is given by the following:

(2) $\mathrm{E}(Cost_{Lifetime}(I)|\mathrm{Age}(I)=x) = \mathrm{Pr}(Use_{Lifetime}(I)|\mathrm{Age}(I)=x)*\mathrm{E}(LOS_{Total})*Cost_{Annual}$

Table 5 provides estimates of this expected cost for a number of representative individuals at age sixty-five (noting that expected costs at any earlier age are roughly equivalent). For simplicity, the calculations assume that all entry to residential aged care is initially to low level care. The Table also provides estimates of the likely spread of these costs among different individuals of the same age given the distribution of lengths of stay noted earlier.

Table 5: Expected lifetime cost of residential aged care at age sixty-five

Total income	Assessable assets	5th percentile	25th percentile	median	75th percentile	95th percentile
Woman aged sixty-five						
$15,000	$65,000	$467	$5,449	$18,683	$39,934	$80,880
$30,000	$160,000	$775	$9,047	$31,018	$66,301	$134,281
$60,000	$280,000	$1,293	$15,090	$51,736	$110,586	$223,975
Man aged sixty-five						
$15,000	$65,000	$199	$1,493	$5,972	$15,576	$39,712
$30,000	$160,000	$330	$2,479	$9,915	$25,860	$65,932
$60,000	$280,000	$551	$4,134	$16,537	$43,134	$109,971

Source: Calculated using equation (2)

Conclusions

A recent survey of 7000 Australians aged at least fifty for the Australian Housing and Urban Research Institute has confirmed that older people and people approaching retirement do not tend to plan ahead, especially with respect to their future health and aged care needs (Olsberg and Winters 2005). Respondents to the survey argued that too much planning was a waste of time as health expectations are unknowable and that frequent changes in Government policy also make it impossible to plan sensibly for the future. Almost a fifth of all respondents, and almost a quarter of respondents aged fifty to fifty-nine, indicated that they had given no consideration to how they would pay for their future aged care needs. Despite this tendency against planning, almost half of all respondents to the survey, and more than two thirds of self-funded retirees, expected to have to pay for their own future health and aged care needs out of savings, superannuation and insurance. Although the home was by far the major asset for most respondents only 6.3 per cent indicated that they would consider using a reverse mortgage to fund future health and aged care needs.

The analyses in this paper are intended to address one of the information lacunae at the centre of these apparently contradictory positions – a failure to financially plan specifically for the costs of future health and aged care services while recognising that these costs are more likely to be borne by individuals in the future – by illustrating the likely aged care costs that all Australians can expect to face in their retirement. Given the caveats discussed above, the paper's estimates can only offer lower bounds on the likely costs that older Australians will face on current policy settings. Even so, they clearly indicate that retiring Australians (and especially women) face a considerable risk that they will require aged care services during their remaining life time risk and that the private cost of those services will substantially impact on their finances if they have not planned for those costs. The analysis also indicates that the likely aged care costs faced by retiring Australians are such as to require a considerable planning period if those future costs are to be managed without substantial impact on other activities.

References

Access Economics (2004). *Aged Care Dynamic Cohort Model*. Research Report for the Review of Pricing Arrangements in Residential Aged Care. Canberra, Department of Health and Ageing.

Australian Bureau of Statistics (2006). *Australian Historical Population Statistics, 2006* (Cat. No. 3105.0.65.001). Canberra.

Australian Department of Health and Ageing (2006a). *Report on the Operation of the* Aged Care Act 1997*: 1 July 2004 to 30 June 2005*. Canberra.

Australian Department of Health and Ageing (2006b). *Residential Care Manual*. DCanberra.

Australian Treasury (2002). *Intergenerational Report 2002-03*. Canberra.

Coile, C and K Milligan (2005). *How portfolios evolve after retirement: the effect of heath shocks*. Centre for Retirement Research Working Papers, Boston College.

Government Accountability Office (2005). *Medicaid: Transfers of Assets by Elderly Individuals to Obtain Long-Term Care Coverage*. Reports to Congressional Requestors. United States. Government Accountability Office.

Hogan, W (2004). *Review of Pricing Arrangements in Residential Aged Care*. Canberra, Department of Health and Ageing.

Lindsay, R, G Griffiths and V Boero Rodriguez (2003). *Aged Care Data: statistical analysis by the Australian Bureau of Agricultural and Resource Economics*. Research Report for the Review of Pricing Arrangements in Residential Aged Care. Canberra, Department of Health and Ageing.

Liu, Z (1996). *The probability of nursing home use over a lifetime*. Welfare Division Working Papers. Canberra, Australian Institute of Health and Welfare.

Mason, F, Z Liu and P Braun (2001). *The probability of using an aged care home over a lifetime (1999-00)*. Welfare Division Working Papers. Canberra, Australian Institute of Health and Welfare.

Melbourne Institute of Applied Economic and Social Research (2006). *The Household , Income and Labour Dynamics (HILDA) Survey*.

Olsberg, D and M Winters (2005). *Ageing in Place: intergenerational and intrafamilial housing transfers and shifts in later life*. Australian Housing and Research Institute.

Percival, R and S Kelly (2003). *Older Australians: Incomes, assets, regional variations and residential aged care*. Research Report for the Review of Pricing Arrangements in Residential Aged Care. Canberra, Department of Health and Ageing.

Productivity Commission (2004). *Economic Implications of an Ageing Australia*. Canberra.