

Aged care in Australia: Part I – Policy, demand and funding



CEPAR research brief 2014/01

Summary of brief

- *This is the first of two research briefs on aged care in Australia. It analyses the sector top-down, describing the policy landscape, as well as the demand for and funding of formal and informal aged care.*
- **Policy trends:** *Australian aged care is undergoing major changes following a landmark review and announced reforms. As in other countries, the policy area is seeing trends toward more consumer-centred, community-based, independence-focused models of care. These also hold out a promise of greater cost-efficiency – a concern for policy makers given an increasingly ageing population.*
- **Current demand:** *One fifth of people aged 65+ say they need care and lifetime risk estimates suggest that half of men and two thirds of women aged 65 will need formal aged care in their remaining lifetime. Age care provision ranges from services at home (with lower complexity and unit costs), to coordinated home care packages and residential care (with generally higher complexity and costs). Smaller programs are designed to add flexibility and cater to diversity (e.g., for remote communities or those transitioning between modes of care).*
- **Future demand:** *Population ageing is expected to result in increased demand for care. But there are uncertainties around demographic projections (Australians aged 85+ are projected to increase from two per cent of the population to anywhere between three and nine per cent by 2050); whether longer lives will be more or less healthy (international findings are mixed and Australian data deficient); the severity of disabling conditions (having more than one chronic disease is not uncommon); and how these will translate to care needs (some activities, such as bathing and eating, are good predictors of residential care admission and can be targeted).*
- **Supply:** *The supply of care in Australia has historically been highly controlled, which can result in misallocation of resources, waiting lists, and poor quality. In response, reforms are moving toward greater cost transparency and gradual increases in supply.*
- **Funding:** *Public aged care expenditure (currently around \$15b, including informal care support) will be driven by demography, expansions in planned supply, and unit cost changes. By 2050 it is projected to rise from 0.8% of GDP to 1.8-2.2%, but to remain below the OECD average. Care recipients also contribute funding (7% of total). In practice they receive care subject to needs- and means-tests, while funding is channelled to home service providers through grants, and to home package and residential care providers based on each individual's assessed care complexity.*
- **Co-contributions:** *Fees are being revised but reforms may not have gone far enough in ensuring fair co-contribution. One option is to access the vast wealth locked up in housing via equity release products (which are not always well designed or understood) or private aged care insurance, as has happened with private medical insurance and which is attracting research attention.*
- **Informal care:** *Funding and provision of formal care presumes the existence of a large informal care sector. But informal care is costly to individuals, which justifies interventions such as employment protection (which could be better), providing various support services, and cash benefits to cover costs or work absences. Approaches seen in other countries can also be considered.*

Summary of featured CEPAR research

- **Demand and disability:** Demand for aged care is influenced by disability. CEPAR researchers investigated transitions between non-disability, disability, and death, based on US data. They found a 10 per cent chance of becoming aged care disabled only at ages past 90, but the risk (and variance) then increases exponentially. Between age 50 and 80, there was a 10-20 per cent chance of recovery. CEPAR is seeking funding to obtain equivalent Australian data (box 1).
- Demand also depends on how disability translates to admission to residential care. Again using US data, research shows that bathing and eating difficulties are most influential in predicting residential care admittance. It suggests, for example, that home modifications should target bathrooms (box 1).
- **Demand and social factors:** Melbourne-based longitudinal data is used to understand the social and lifestyle factors for residential admission. In addition to age and disability, research finds that low social activity can increase the risk of admission to care, particularly for men (box 1).
- **Future demand:** To understand future demand, CEPAR researchers have looked at changes in healthy life expectancy. Research shows that (1) in many countries, longer lives mean more years of disability; (2) some risk factors (stroke or cognitive impairment) have a greater effect on years with and without disability than others (arthritis); (3) despite their longer lives, women become frail earlier than men; but (4) men are more likely to have several diseases at once; and (5) as with multiple diseases there are multiple causes of death, so if we cured cancer, for example, other causes of death would limit increases in life by 3-4 years (box 2).
- **Projecting costs:** There are different approaches to projecting fiscal costs of ageing. In contrast to Treasury modelling, recent CEPAR modelling assumes people respond to working and saving incentives. They show that between 2010 and 2050, aged care, healthcare and pension programs could increase by 84, 38, and 68 per cent respectively (compared to Treasury's 2010 estimates of 125, 78, and 44 per cent) (box 3).
- **Financial product design:** Increasing the funding base for aged care could include well designed financial products. CEPAR research shows that reverse mortgages in Australia are poorly priced – regulation and education may need to play a greater role to ensure better risk sharing. Researchers have also looked at how different products features and economic scenarios affect pricing and profits. They find lump-sum reverse mortgages are more profitable and less risky to providers than those with an income stream. House price changes by property type also matter. CEPAR researchers designed a series of house price indices and showed how these can be applied. For example, a reverse mortgage based on a CBD house has a higher risk and should be charged a higher risk premium than a contract based on a city coastline house (box 4).
- **Financial product barriers:** CEPAR research reveals that providers and consumers see various benefits, risks, and obstacles in the reverse mortgage market. For example, there are concerns about unfamiliarity of the products and a lack of relevant information (including from financial advisers) (box 5). Researchers have also looked at perceived supply barriers for Long Term Care Insurance, which include product design issues and lack of clarity about who will cover which care costs in future. CEPAR is now looking at Long Term Care Insurance product design innovations, including care insurance alongside pension annuities (box 6).
- **Informal care:** Research shows that caring responsibilities can limit carers' social activities. Also, many older people live close to their children, but needing to move closer to them or to services in later life can sever social ties (box 7). Researchers are also looking at the impact of informal caring on work (box 8).

1. Introduction

For a proportion of people, a long life comes with chronic illnesses, disability, or physical or cognitive decline. Some of them will require different levels of intervention to get on with their daily life. Aged care (known outside Australia as long term care, elder care, or social care) is the set of institutions that offers *care* interventions for the elderly in absence of *cure*.

Population ageing will put pressure on the aged care system

Population ageing means more people will require care and support. Much of it will be provided informally by family, but increasingly it will take the shape of formal aged care. Policy stakeholders in many countries have taken notice. Those in Australia are no exception – a landmark review in 2011 by the Productivity Commission has led to what will be a decade-long set of reforms. And many stakeholders are participating in a public and private discourse about the evolution of the system (see part 1 in brief 2 for summary of groups).

In this setting, it is crucial to encourage an informed debate about the building blocks of an effective care system. This is one of two briefs offering an accessible overview of aged care policy in Australia, combining a broad range of data and latest insights, and capturing the ongoing conversation between policy and academia, particularly relating to CEPAR research.

This brief look at the high-level challenges and responses

This first *top-down* research brief introduces the policy setting and looks at demand and funding of formal and informal care. The second brief takes a *bottom-up* approach by considering practical issues relating to the industry, workforce, access and quality of care.

2. Bird's-eye view

As care needs differ across the population so do modes of care, often segregated into different programs. To orientate the reader, table 1 summarises Australian aged care programs, from support given at home to that offered in institutions (i.e., residential care).

Table 1 Main aged care programs in Australia, by function

Supporting informal care	<i>Carer Allowance</i>	Cash benefits to cover carers' costs
	<i>Carer Payment</i>	Cash benefits to cover carer's absence from work
Preventing residential care (will be combined into <i>Home Support Program</i>)	<i>HACC (Home & Community Care)</i>	Support services at home that complement independent living
	<i>National Respite for Carers Program</i>	Services that allow short term formal care arrangements
Substituting for residential care (will be combined into <i>Home Care Packages</i>)	<i>CACP (Community Aged Care Packages)</i>	Coordinated home packages substitute for low-level care
	<i>EACH (Extended Aged Care at Home)</i>	Coordinated home packages substitute for high-level care
	<i>EACH-D (Extended Aged Care at Home - Dementia)</i>	Coordinated home packages substitute for high-level dementia care
Residential care (will have new set of care levels)	<i>Residential Care</i> with high and low care places	Care in institutional setting, increasingly high-care
Catering to diversity	Specialised programs (e.g., <i>Veteran, Transition, Respite, and Multi-purpose care</i>)	Cater to special groups or circumstances in mixed settings (e.g., veterans, post-hospital transition, short residential, remote)

As a further starting point, it is helpful to take in a high level view of the size of the Australian aged care system by use (figure 1A) and cost (1B). Both figures relate to people aged 65 or over and consist of various data from the course of 2011-12 as well as at a given point in time within

the period. The clockwise arrangement of modes of care represents a hypothetical continuum of care, though in reality, transitions between these are much more complex (e.g., see box 1).

Use of current programs

Many older people don't need care and some that do only rely on informal care

There are just over 3 million Australians aged 65 or above. About one fifth of them (570,000) report needing assistance with one or more core activities (based on Census data, which corresponds to the number with profound or severe disability in ABS Cat 4430.0 surveys), and the majority of them are living at home, often with a family member as their primary carer. In some cases, the informal care is supported by government benefits, which consist of *Carer Allowance* (a supplement to cover some costs of caring) and *Carer Payment* (for those unable to work as a result of caring). For example, 230,000 people aged 65 or over benefited from care provided by those receiving Carer Allowance.

(1) Some use services at home that prevent admission to residential care...

Several programs are available for those needing formal care at home. For many, this is their first direct experience of care. The *Home & Community Care* (HACC) program offers low intensity support for people whose independence is at risk. Services include home maintenance and modifications, meals, personal care such as bathing and dressing, and allied health care such as physiotherapy, nursing, and respite to allow informal carers to take a break. It aims to prevent premature admission to residential care. By 2015, the HACC program will be merged with *National Respite for Carers Program*, *Assistance with Care and Housing for the Aged* and the *Day Therapy Centre Program* to form the *Home Support Program*.

...(2) others use care packages that substitute for residential care

HACC contrasts with care packages, which are substitutes for low care residential places in the case of *Community Aged Care Packages* (CACP), and to high care residential places in the case of *Extended Aged Care at Home* (EACH) and *Extended Aged Care at Home-Dementia* (EACH-D). Packages, which under new reforms will be combined and known as *Home Care Packages*, require an assessment and are designed for those eligible for residential care, but who wish to remain at home. These are not large programs: there are 76,000 places in total, serving approximately 79,000 people over the year. HACC, on the other hand, is a large program – 750,000 older people used its services in 2011-12.

(3) Those in residential care can be there temporarily or permanently, with different care complexities

During the 2011 Census, 170,000 people were in residential accommodation (including 20,000 reporting not needing assistance). In the year, this translated to 220,000 in permanent and 47,000 in respite residential care. Accessing subsidised places requires an assessment by an *Aged Care Assessment Team* (ACAT) through the *Aged Care Assessment Program* (ACAP). Need is assessed according to three metrics: Activities of Daily Living (ADL), behaviour and cognition, and complexity of health issues. The intensity of care required in turn determines the level of subsidy paid by government to the aged care facility. Residential places can be low or high care (formerly known as hostels and nursing homes respectively, though reforms will see a further change, to categorisation into four distinct levels), with around three quarters of permanent residents occupying high care places. The supply of such places is also strictly controlled by annual allocations and provider accreditation.

(4) Smaller programs cater to diversity...

Smaller programs build flexibility into the system and cater to minority groups (see brief 2 on access). For example, the *Transition Care Program* provides low level care and rehabilitation for those leaving hospital but who need temporary care or time to decide about their options; *Multi-Purpose Services* provide a combination of health and care services in remote communities where either function would be independently unsustainable.

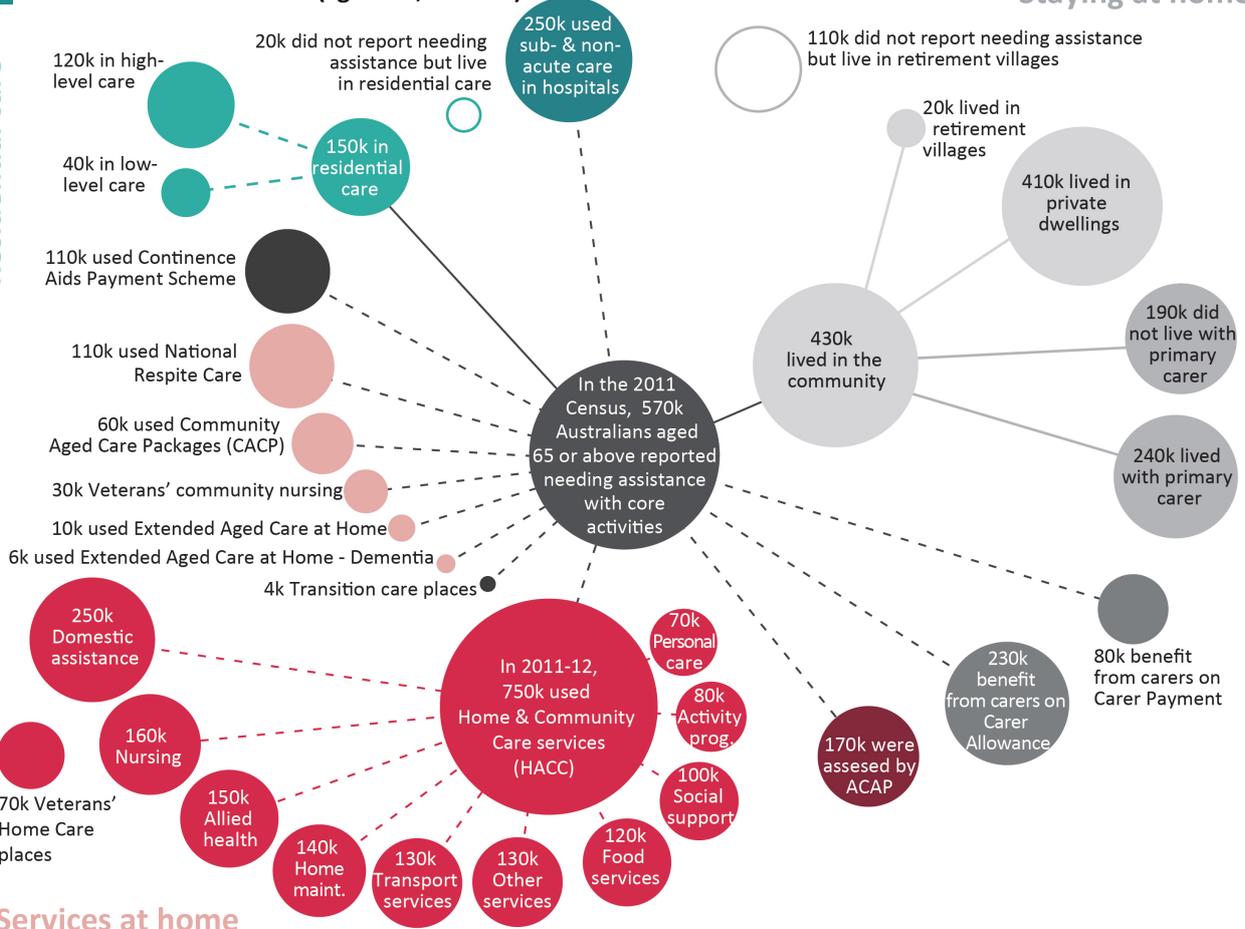
... and (5) Hospitals play a role at the intersection with healthcare

Finally, care in hospitals (e.g., rehabilitation and palliative care) lies at the intersection of health and aged care. During the year, 250,000 older people took advantage of these services. AIHW

1A Need and utilisation of care (ages 65+, 2011-12)

Staying at home

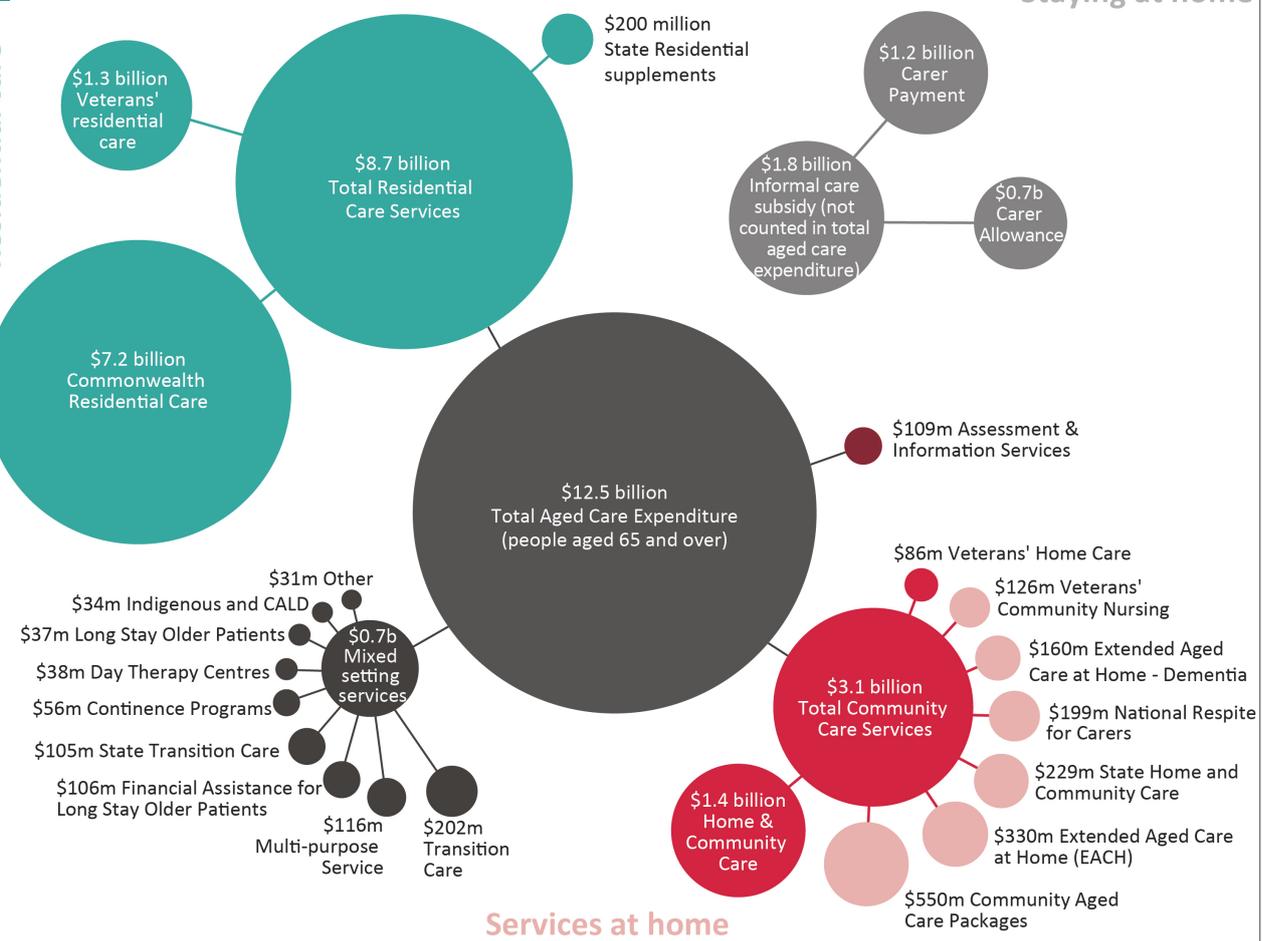
Residential care



1B Public cost of care (ages 65+, 2011-12)

Staying at home

Residential care



(2013b) reports that in 2008-09, residential care was the source of nine per cent of hospitalisations of over-65-year-olds and, from figures that include transfers between residential care facilities, a third of admissions into residential care were via hospital (two-thirds of which were permanent).

Cost of current programs

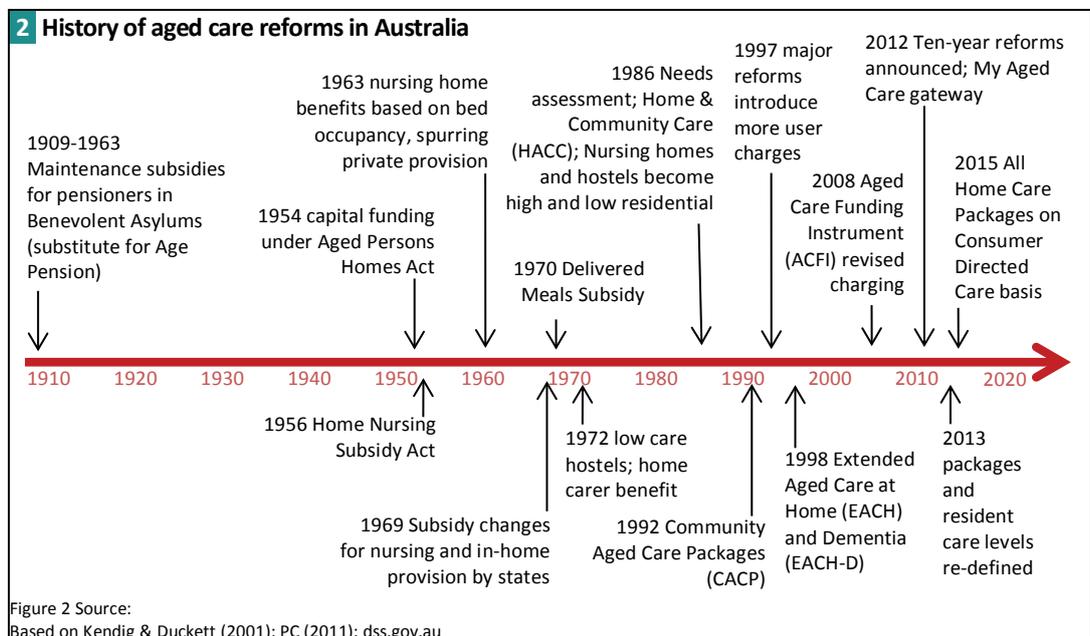
Some care modes (e.g., residential) are more expensive than others (e.g., at home)

It is instructive to compare utilisation to cost. Public expenditure on aged care was \$12.5 billion in 2011-12 (which increased to \$13.3 billion in 2012-13; DSS, 2013). Additionally, subsidised informal care for older people cost an estimated \$1.8 billion (see note to figure 1). Residential care is the largest cost component despite fewer people using it than home care. This reflects higher intensity and complexity of care per resident and higher accommodation costs. Some programs, such as those for Indigenous and *Culturally & Linguistically Diverse* (CALD) groups, delivered in mixed settings, are small in utilisation and cost but represent an emerging priority.

3. Policy trends

We got here by way of ad hoc reforms but a recent review has made way for fundamental changes

Australia's aged care system is a product of a series of ad hoc reforms (see Figure 2 and Kendig and Duckett, 2001). Church-based homes were the first institutions offering care outside the family. Besides income support, the earliest public interventions were related to capital funding for old persons' hostels (which were seen as a form of welfare) and increasingly for nursing homes (seen as a form of healthcare). Revenue subsidies in the 1960s saw increases in private provision but also public expenditure. As a result, cheaper community care was an increasingly attractive option, which led, in the 1980s and 1990s, to the introduction of home based programs, consolidating previously uncoordinated services and introducing new, specialised ones.



The following relate to figure 1 on page 3. Notes: Numbers represent *stock* of people at point in time (June 2011 or June 2012; including people needing assistance, living status, benefiting from subsidised informal care, and care places) or *flow* of people over year (2011-2012; including people using home packages, services, or hospitals). ACAT assessments is for 2010-11. Number of people rounded to closest 10k except for small numbers. Costs rounded to closest \$100m except for small programs. May not sum to total due to rounding or because some use more than one service. Cost of carer benefits based on program expenditure multiplied by care receivers 65+ as % of receivers of all ages – it is an estimate, since carers may care for multiple care recipients and benefit level may be correlated with age of recipient. Figure 1 relates to persons 65+ but some programs may include indigenous persons aged 50+. Sources: ABS (2011), DoHA (2012), FaHCSIA (unpublished), PC (2013), AIHW (2013), AIHW (2013b), AIHW (2013c).

The most recent round of changes were driven by a major Productivity Commission report in 2011 (PC, 2011). It led to the *Living Longer, Live Better* reforms, which saw the introduction of a simplified ‘gateway’ for information and assessment, an increased but still rationed number of available places, revised co-contributions, enhancement of consumer choice, and proposed increases in funding for the workforce, as well as improvements in complaints procedures to tackle variability in quality. The new government’s *Healthy Life, Better Ageing Agreement* will define the ongoing reform agenda.

Reforms are part of a trend to consumer-centred, community-based, independence-focused care, which often coincides with value for money

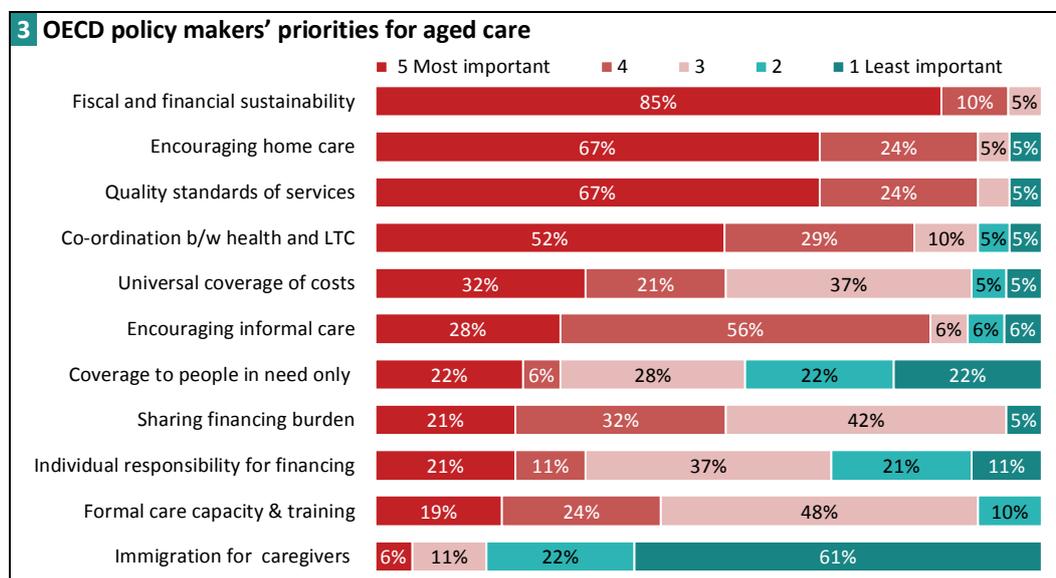
Underpinning such reforms in Australia and elsewhere are certain intertwined long-term trends: a shift from a provider-led to a funder-led system, and, according to the more recent rhetoric, to what will be a consumer-driven or at least person-driven system, with a greater emphasis on choice and wellbeing but one with greater requirement for information provision (see brief 2 on access and quality). When given the choice most people prefer staying in their community and ‘ageing in place’, which underlies another major trend: a shift in emphasis from residential to independent living in the community. Policymakers across the OECD, concerned about rising costs (see figure 3) also appear to favour cheaper home-based care.

In a drive to contain costs policymakers have employed strategies beyond encouraging home support services for older people and their carers. Alongside macro-level constraints of prices, supply, or budgets and micro-level changes to reimbursement contracts, regulation, and market mechanisms, focus is increasingly on controlling demand via preventative and re-enabling programs (through targeted or broader, wellness and productive ageing programs; see box 6 in brief 2). Another demand-side strategy is to increase contributions from those who can pay more, up to a cap, allowing for fairer risk sharing.

As reforms continue the policy area is a work-in-progress

What do these shifts mean for the future of aged care? Arguably, Australian governments have not gone far enough in resolving concerns about growing public costs, unmet expectations, and inequitable payment arrangements. Yet, each may be addressed by moving beyond controlled, centralised programs towards more consumer directed care and greater contributions from those who can afford it (e.g., those with large housing assets). There are also structural issues. Current reforms follow from a 2008 transfer of policy and funding responsibility for aged care from states to the Commonwealth, to ensure national standardisation; but there is still poor cross-government integration (Western Australia and Victoria are excluded) and between aged care and the health and disability systems (NHRC, 2009) – an opportunity as Australia introduces a new national disability insurance program.

For example, there are issues with supply structures and cross-government and cross-sector integration is lacking



Note: Based on survey responses from 28 OECD countries. Source: Colombo et al. (2011)

4. Future demand

Demand and need for care will likely increase in absolute and relative terms

Knowing that population ageing is likely to result in higher demand for care is one thing; assessing the level and structure of demand is another. One difficulty is that demand can potentially be driven by supply, so the starting point must relate to expressed need. Older people tend to have greater levels of activity-limiting disability (see figure 4B), so greater numbers and proportions of older people may translate to a greater need and demand for care in absolute (sheer numbers of people) and relative terms (compared to other parts of the economy). Yet there is significant disagreement about the magnitude of demographic change, the evolution of disability by age, how disability feeds into the demand for different modes of care, and how these inter-relationships change over time.

But there are uncertainties around (1) magnitudes of population ageing...

Take population trends: demographers acknowledge that small changes in migration, fertility and life expectancy assumptions can lead to big differences in the projected levels of population ageing (McDonald, 2012). This explains why competing official projections differ according to the agency releasing them, the series offered by each agency, and the year of release. Figure 4A presents projections from the United Nations, the Australian Treasury's Intergenerational Reports (IGR), and the Australian Bureau of Statistics (ABS) for over-85-years-olds. It also features the Productivity Commission's projections, which include confidence intervals. The age group makes up just under two per cent of the Australian population currently, but their share is projected to increase to between three and nine per cent.

... (2) whether longer lives will be more or less healthy,...

It is also unclear if increases in life expectancy will be accompanied by more years in good or poor health – the question of whether *morbidity* will expand, compress, or remain stable as first raised by Fries (1980), remains unanswered. In Europe the evidence is mixed and most recent evidence from the US suggests morbidity compression (see box 2). As noted in figure 4Ci, between 1998 and 2009 disability-free life expectancy in Australia increased, but so did the expected years with a disability and with severe functional limitations. That does imply longer, healthier and productive lives – some older people may retain the ability to look after more impeded partners into their later years – but it also indicates that a longer overall life may yield longer spells of disability. Another way of looking at this is to interact changes in age-specific disability rates and population age structure to see the effect on population-wide prevalence of disability. Latest figures on disability rates show the total proportion of Australians with disability has remained steady in the recent past at 18.5% (ABS, 2013).

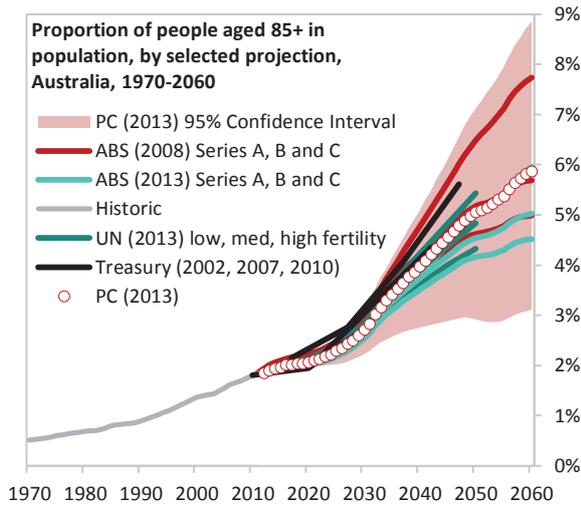
... (3) the severity of disability or health conditions that remain...

Meanwhile, halting some diseases could presage other, more complex and expensive states of frailty and multi-morbidity (Jagger et al., 2011). Numbers of people with dementia are projected to triple between 2011 and 2050 (AIHW 2012b). A major global effort to understand the health challenges across countries reveals that in Australia and elsewhere, musculoskeletal problems, particularly lower back pain, are the top causes of “years lost to disability” among older people (DoH Qld, 2013), and therefore where interventions could be targeted.

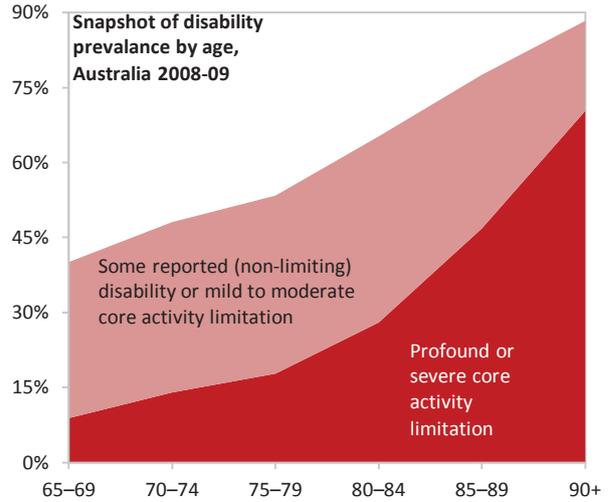
...and (4), how these will translate to care needs

There is a complex link between chronic diseases, physiological impairment, performance limitation, and disability. A state of disability, however defined, is not synonymous with poor health and needing care (see disability triggers for care in box 1). The availability and take-up of formal aged care depends on how authorities assess need and ration provision, the individual's preference for independence, early or re-enabling interventions or technologies, and access to informal assistance (see figure 4E(i) and (ii)).

4A There will be more older people in the population

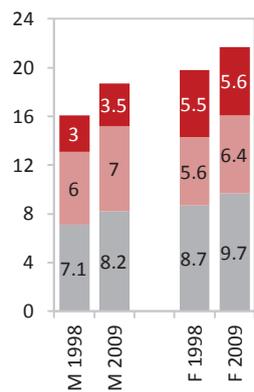


4B Older people are more likely to have a disability...

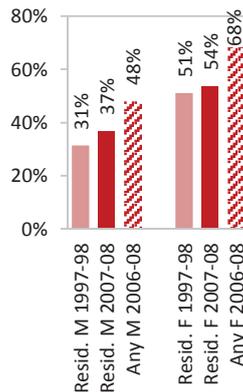


4C ...and longer lives can mean even more disability and an increasing lifetime risk of needing care

(i) Aust life exp. at 65 with (years):
 ■ severe/profound limitation
 ■ non severe/profound disab.

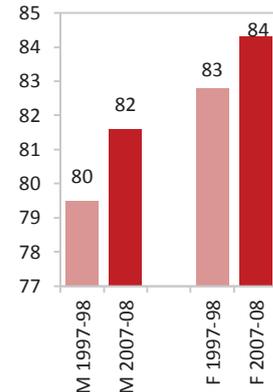


(ii) Lifetime risk (at age 65) of needing permanent residential and any care, Aust, 1997-2008

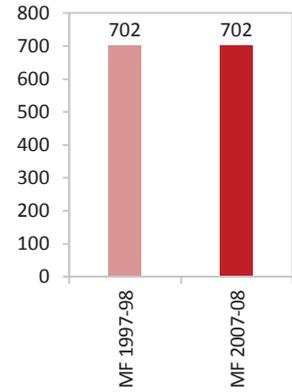


4D Residential care demand may increase slower than population ageing given delay in entry & constant duration

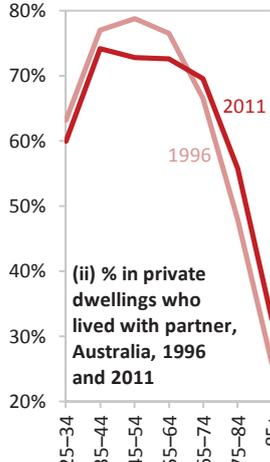
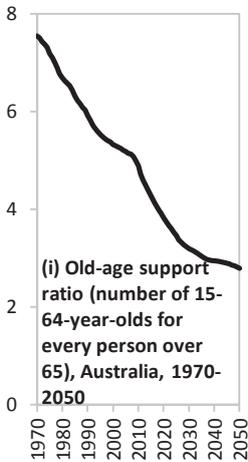
(i) Average age at entry into residential aged care, Aust, 1997-2008



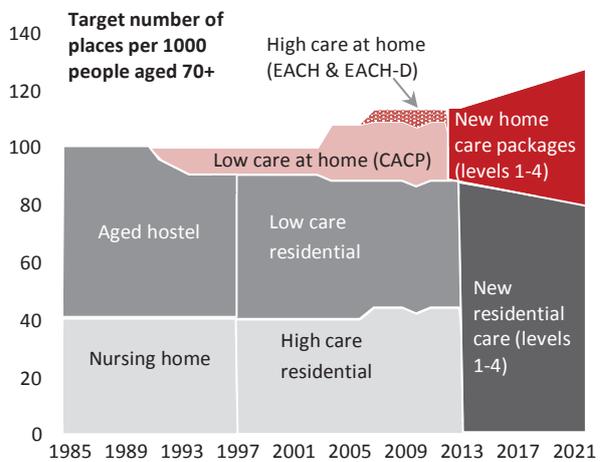
(ii) Median length of stay in permanent residential care, Aust, 1997-2008



4E But staying at home may depend on informal care



4F Government targets try to second guess these trends



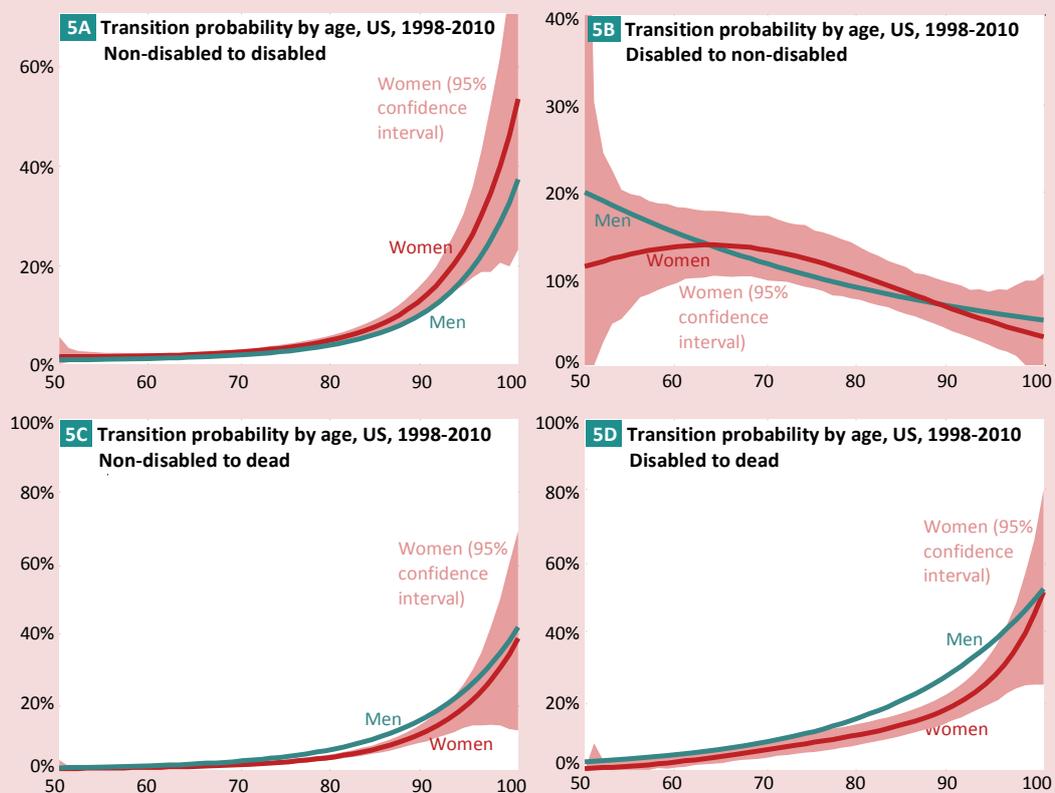
Note: IGR denotes the Intergenerational report produced by the Australian Treasury. Source: Australian Treasury (2002, 2007, 2010), UN (2013), ABS (1996, 2008, 2010, 2011, 2013b, 2013c), DoHA (2011), PC (2011), AIHW (2012), health.gov.au, Authors' calculations.

Box 1 CEPAR research spotlight Transition between health, disability, and care

What is the probability of moving from a state of good health to one with disability? And how likely is a recovery or death? CEPAR Research Fellow, [Joelle Fong](#), CEPAR Chief Investigator, [Michael Sherris](#), and PhD Candidate, [Adam Shao](#), attempt to answer such questions, which are important for public care provision as well as private care insurance.

CEPAR research reveals the age and sex differences in transition between non disability, disability, and death in the US. It is seeking funding to obtain Australian data

In Fong et al. (2013), they looked at elderly people in the US and updated less sophisticated methodology used in the insurance industry since the 1990s. Results (figure 5A) suggest that the elderly have a 10% chance of becoming aged care disabled (2+ADLs) only at ages past 90, but the risk (and variance) then increases exponentially. Women have a higher risk of becoming disabled and differ in recovery patterns. The estimates are sensitive to disability definitions, which has implications for benefit triggers for care programs. CEPAR is seeking funding for a survey that would allow such calculations, with ACFI triggers, for Australia. Currently local data is insufficient to allow such estimates (though some have tried: Hariyanto et al., 2012).



Bathing and eating difficulties are key predictors of nursing home admission, so modifications could target bathrooms

In a separate project, Fong and CEPAR Partner Investigator, [Olivia S. Mitchell](#), answer a related question: How does disability translate to nursing home admission? They find, based on US data, that three-fifths of men aged 65 (three-quarters of women) will experience disability during their remaining life severe enough to trigger aged care use; and that bathing and eating difficulties are most influential in predicting nursing home admittance (Fong et al. 2012). To delay institutionalisation, policy should appropriately differentiate ADL disability types. Retrofitting of homes for the elderly in the community should target the bathrooms. The researchers aim to look at how ADL disability differs by culture by using US and Chinese data.

Social activity is important too, particularly for men

CEPAR Chief and Associate Investigators, [Hal Kendig](#) and [Collette Browning](#), looked at Melbourne-based longitudinal data to understand the social and lifestyle factors for residential admission. In addition to age and disability, they found that low social activity has an influence (see also box 6 in brief 2 on isolation). For men, disease burden was the main driver but for women, social vulnerability and functional capacities were more important (Kendig et al. 2010).

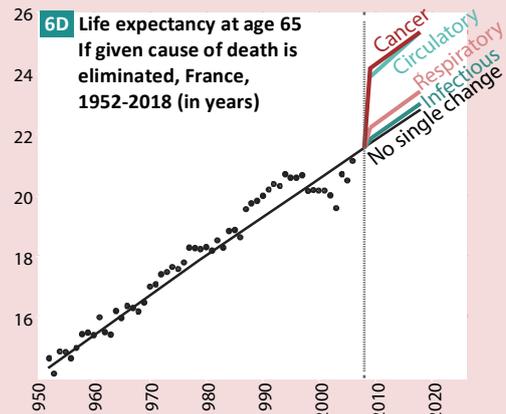
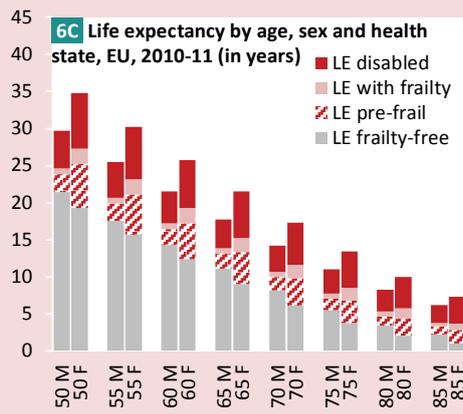
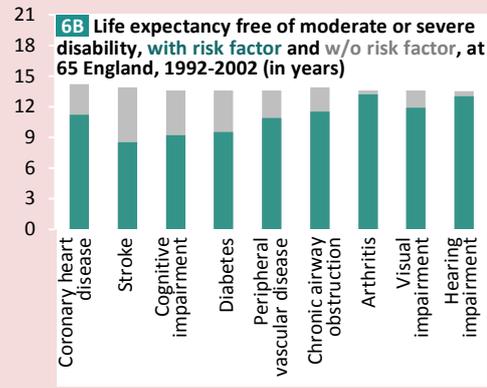
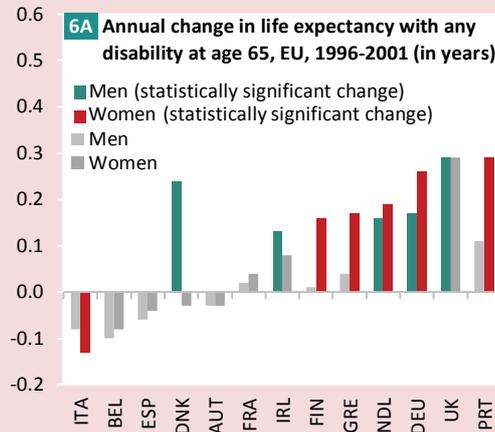
Box 2 CEPAR research spotlight Implications and complications of delayed death

A key concern for society and individuals is whether delaying death is prolonging disease and disability. Will morbidity compress, expand, or remain at equilibrium? According to research by CEPAR Partner Investigator, **Carol Jagger**, and other colleagues, the evidence is mixed in Europe (Jagger et al. 2009; see figure 4C(i) for Australia). On average, each year's cohort of 65-year-olds could expect to live 1.5 to 2 months longer than the previous; but more than half of that comprised an increase in life with a disability, with only 65-year-old Italian women seeing a significant drop in life expectancy *with* disability over the period (Fig. 6A).

Studies by CEPAR researchers on life expectancy and healthy life expectancy show that...

(1) in many countries, longer lives mean more years of disability...

... (2) some risk factors (stroke or cognitive impairment) have a greater effect on years with and without disability than others (arthritis)...



Note: 6A any disability includes non-severe disability. Source: Jagger et al. (2009); Jagger et al. (2007); Romero-Ortuno et al. (2013); Alai et al. (2013)

The next step will be to project healthy life expectancy. CEPAR Research Fellow, **Ralph Stevens**, is doing this by finessing actuarial methods to extrapolate to future trends of disability-free life expectancy and demonstrating their application with Dutch data (Majer et al., 2013).

... (3) despite their longer lives, women become frail earlier than men...

What about healthy life expectancy by disease risk factor and sex? Jagger studied these in Jagger et al. (2007) using UK data (figure 6B), and in Romero-Ortuno et al. (2013) across EU countries (figure 6C), which, by including levels of frailty (e.g., based on measures of exhaustion, slowness, weakness etc.) draws attention to the aphorism that ‘men die, women suffer’.

...but (4) men are more likely to have several diseases at once...

What about the dynamics of multimorbidity (having two or more diseases)? Soon to be published findings by CEPAR Research Fellow, **Vanessa Loh**, and Associate Investigator, **Kate O’Loughlin**, indicate that males and older age groups have higher rates of multimorbidity. Being married or in a *de facto* relationship and having higher educational qualifications, particularly for baby boomers, were associated with lower rates of multimorbidity. Related to this is the study of competing causes of death. CEPAR Chief and Associate Investigators, **Michael Sherris** and **Daniel Alai**, with another colleague, quantified the impact of eliminating certain causes of death on life expectancy (figure 6D). Using French data, they find, for example, that a cure for cancer would extend life expectancy by 2.2 years for those aged 65 (and 3.4 years for newborns; Alai et al. 2013).

...and (5) if we cured cancer, other causes of death would limit increases in life

A substantial proportion of people will never need any care in their lifetime. Measuring this lifetime risk at age 65, only two out of three women and one in two men will need any care at some point in their life (based on 2006-08 age-specific rates). The risk of needing residential care is lower – about one in two 65-year-old women and one in three 65-year-old men will ever access permanent residential care (figure 4C(ii)).

The risk of needing residential care has increased in the past decade, consistent with the story that expected years in disability have gone up. Age of admission into permanent residential care has also increased over the same period – 83 to 84 for women and 80 to 82 for men – which is consistent with the finding that healthy life expectancy has increased. But despite more expected years with disability, the average duration in aged residential care, another important factor in estimating demand, has remained constant (see figure 4D(i) and (ii)).

But more than total level of demand, its composition and distribution also matter

Other facets in understanding the current and future demand for care include the geographical distribution of need, the case mix (e.g., between low and high care and between community- and residential-based services), and the diversity of those seeking care (e.g., their socio-economic status or cultural and linguistic backgrounds). For example, there is a view that, as baby boomers seek to delay entry into residential care, growth in demand for high care places will outpace the growth for low care (Ergas and Paolucci, 2011).

Projections that do exist, show demand outstripping supply

Attempts at projecting total demand and its structure have been made using alternative assumptions and methodologies (e.g., PC, 2011; Access Economics, 2011, NATSEM, 2011). While results vary, one constant finding is that future demand will outstrip the supply of care, and this on top of current under-supply. In 2012, 44 per cent of Australians with severe or profound disability, who lived at home, reported that their need for assistance was only partly met or not at all (ABS 2013), an increase of one percentage point since 1998. Frictions between supply and demand owe much to the centralised planning of Australia's care industry.

Policy response to demand

Supply of care in Australia has historically been highly controlled

Government controls the level and composition of supply of care places (through an accreditation and place allocation process), the gatekeeping that fills such places (through ACAT), and the price structure (through subsidies and maximum fees; see appendix tables A1 and A2). Its desire to keep a tight grip on the aged care system is unsurprising given the potential fiscal exposure that comes from being the predominant funder (see section 5).

This can result in misallocation of resources, waiting lists, and poor quality

Yet, as noted by landmark reports by Hogan (2004) and PC (2011), these types of controls can result in various inefficiencies. For example, when rationing of resources takes the form of waiting lists some people who are in most need may miss out. Also, a lack of competition may result in some providers skimping on quality despite being allocated considerable resources. From another point of view, excessively restricting the supply of and access to aged care may conflict with the human rights approach to care (AHRC, 2012).

In response, reforms are moving toward greater cost transparency...

Mitigation may involve more targeted assessments and supervision of quality (over and above that required to protect those who are vulnerable; see companion brief), but is at a cost of even more control and bureaucracy, and potentially poor consumer outcomes. This is despite potential options of broadening the aged care funding base (see next section).

Still, some price structures have been revised to introduce transparency, and a new authority set up to advise on these. Also, reforms are set to increase over the next decade the planning ratios used to ration care places – from 113 per 1,000 people aged 70 and over to a ratio of 125

...and gradual increases in supply

per 1,000, but the increase will be for home care and will come at the cost of residential care (see figure 4F). Multiplying the ratios by the projected population (B series, ABS, 2013) suggests that the number of planned residential places is expected to increase from around 190,000 in 2012 to 250,000 in 2022 and 470,000 in 2050. Planned home care places are expected to increase from around 55,000 to 140,000 in 2022 and 270,000 in 2050. Pegging targets to the number of people aged 70+ will become problematic by 2050: those aged 85+ are the main users of care and their number is growing faster than is the case for younger age groups (2050 will be the year when the last of the baby boomers will turn 85).

5. Cost and funding

Total costs will be driven by the expanding supply as well as unit cost changes

Notwithstanding attempts to constrain the supply and price of care, an older population age structure is expected to increase the costs of the system substantially. Costs are also affected by non-demographic and/or residual factors: income and wealth elasticity (i.e. the extent to which households will spend any higher incomes and wealth on care services), relative prices of care, technology used, and balance between informal to formal care. In its estimates of the future cost of care, the OECD also includes the projected expenditure on health: higher health spending means longer survival despite ongoing health conditions (de la Maisonneuve and Oliveira Martins, 2013).

Projections of the rise in Australian Government aged care expenditure is shown in figure 8B. The estimates are based on taking age-specific costs per person (assuming that disability rates are kept constant), inflating these based on historic unit cost growth by program (taking account of upward pressure from labour costs and downward pressure from productivity improvement), and multiplying these out by the projected population at each age. The estimates are also adjusted based on the assumption that in future more care will be provided at home and that higher wealth and income of future cohorts will reduce costs due to means testing. The projections see federal aged care expenditure relative to GDP more than doubling, from 0.8 per cent of GDP in 2010 to 1.8 in 2050 (Australian Treasury, 2010).

Government aged care spending is expected to reach 2.2% of GDP by 2050, but still below OECD average

Australian Treasury estimates are broadly in line with others, including those of the Productivity Commission (2011), who also project an increase of one per cent of GDP by 2050, and more recently by the OECD (de la Maisonneuve and Oliveira Martins, 2013) who calculate an increase between 2010 and 2060 of 0.8 to 1.4 per cent of GDP, and Kudrna et al. (2013) who project an increase of 0.8 per cent (see box 3). PC (2013) estimates show a greater increase to 2.2 per cent of GDP in 2050 and 2.6 per cent in 2060, reflecting planned increases in care places. Australian Government expenditure on aged care will be at or below the OECD average, which is expected to reach 2.6 per cent of GDP in 2050 (figure 8C).

Funding models

There are different approaches to funding aged care. In some countries care is funded universally, with no means test

The OECD classifies aged care funding models into three types: single universal, mixed, and safety-net systems, with different risk and responsibility sharing arrangements (Figure 7).

Single universal systems include the tax-financed aged care schemes common to Scandinavia and social insurance-reliant Germany and Japan. The category also includes Belgium's, where support with daily activities is provided through the health system. In most countries aged care and healthcare are separated in recognition of their differing functions and to reduce use of more expensive medical facilities.

Mixed systems have three sub-types: parallel universal, means-tested, or a fragmented mix of these. For example, Scotland has a series of parallel universal programs offered in home and residential settings – accommodation costs are paid by users but free nursing care is provided through the health system and free personal care by local authorities, regardless of means.

Some countries require better-off people to contribute more, offering in-kind (e.g. Australia) or cash benefits (e.g. France) that reduce as assets and incomes increase

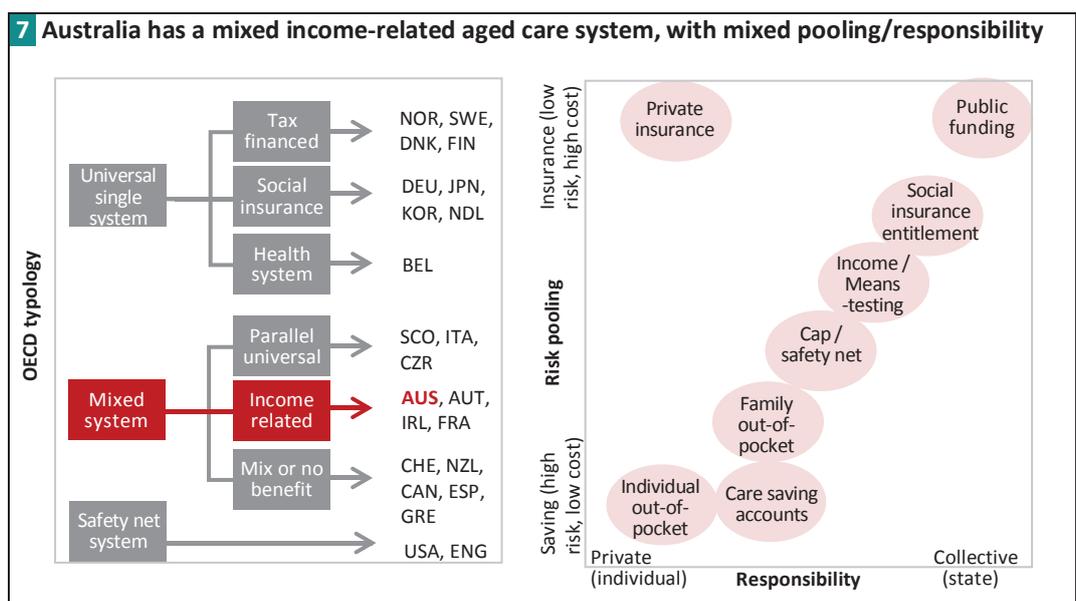
In mean-tested schemes benefits are withdrawn based on an individual's level of income or wealth. This is the model adopted in Australia, Ireland, Austria, and France. In Australia the benefits traditionally relate to in-kind services, where a provider delivers care to a needs- and means-assessed individual and is paid by the government. This is differentiated from the French system, where individuals receive needs- and means-tested cash benefits directly.

In another group of countries with mixed systems the financing is more varied: some services are universal, some are means-tested and some are absent altogether. For example, in Switzerland, universal nursing care is funded through mandatory social insurance but personal care benefits are modest and means-tested. In Greece there is no formal home care and only institutional care is offered, regardless of means but subject to available places.

At the other extreme, England and the US pay for care of only the poorest, so assets may need to be used up before benefits kick-in

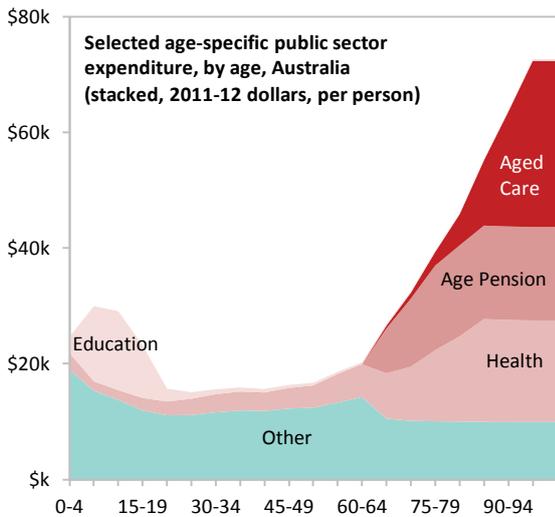
Finally, some countries fund aged care only as a safety net – if an individual's income or assets are below a set threshold. In the US care is provided for the very poor via Medicaid, a social health insurance. England offers non-means-tested cash benefits on account of disability, but aged care subsidies are only available if an individual's assets are low; the state then meets some of the aged care cost depending on the individual's assessable income. As will be the case in Australia, England is introducing a lifetime cap on the amount of care costs that an individual will need to pay. This introduces an insurance element into the system.

System design determines how formal aged care costs are shared between social insurance, tax and private contributions (figure 8D). In Australia, tax-payer funding makes up 93 per cent of aged care expenditure – less than in countries with single tax-funded universal models (e.g., Sweden), and more than in social insurance funded countries (e.g., Germany) or those that have higher levels of private contributions (e.g., Switzerland). These structures also affect the proportion of the population covered by formal care arrangements and their split between home and institutional care (Figure 8E).

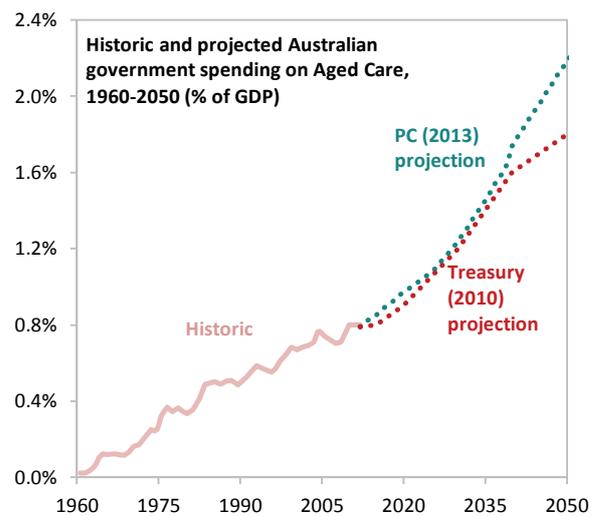


Source: Adapted from Colombo et al. 2011 and Wanless 2006.

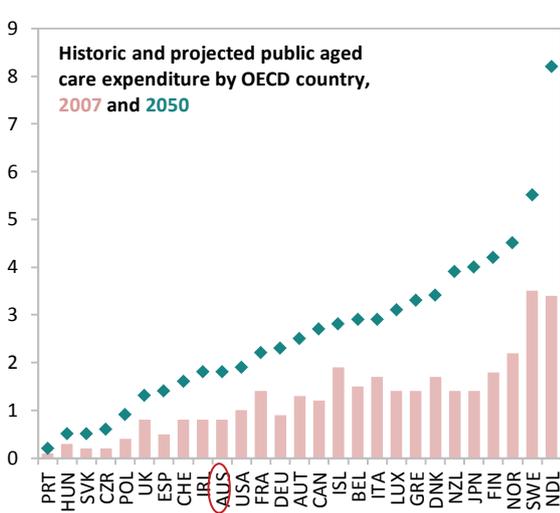
8A Like some other government programs, aged care expenditure is strongly linked to age



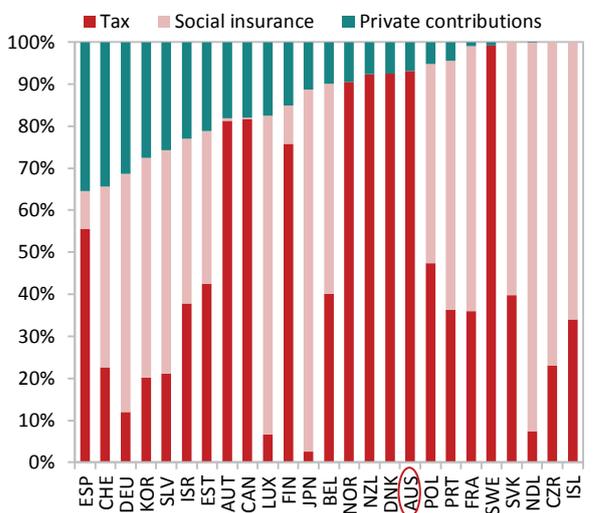
8B As the population ages, Commonwealth aged care spend is projected to keep increasing faster than GDP



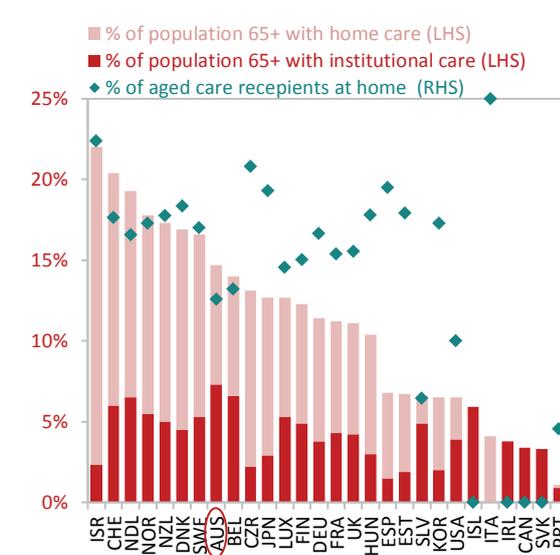
8C Projected fiscal impact in Australia is not as high as in some countries, but is still significant



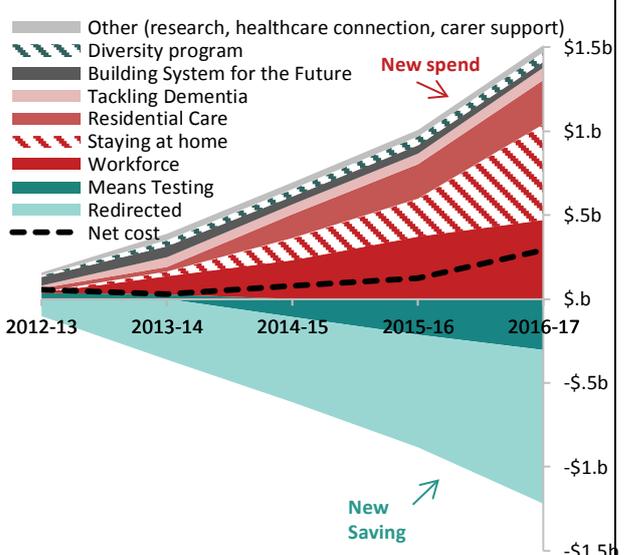
8D Less than a tenth of aged care funding in Australia (2011) is through private co-contributions



8E Policies and funding affect how much and what type of care is used by the older population



8F Funding in medium term is based on a 5-year \$3.7b package of redirected budgets + means testing savings



Note: Figure 8C slightly underestimates Australia's public expenditure relative to other countries, since it only includes federal government spending. In figure 8D data for Australia and Japan is for 2010 and for Israel is 2009. Source: PC (2013), Australian Treasury (2010), DoHA (2010), Colombo et al. (2013), OECD (2013), DoHA (2012b)

Box 3 CEPAR research spotlight Fiscal impacts of population ageing: Alternative models

A popular fiscal projection approach is to relate demographic trends to spending by age

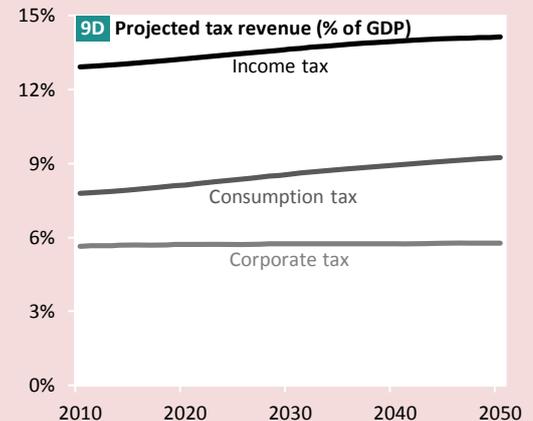
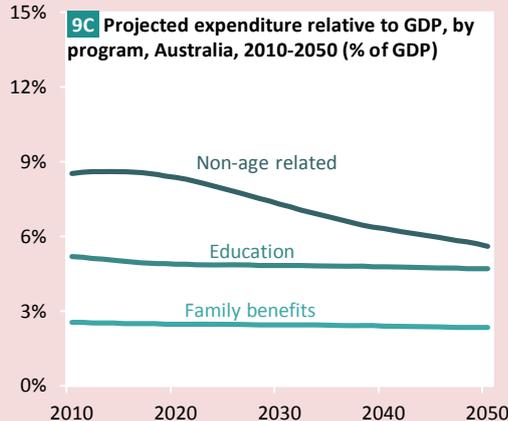
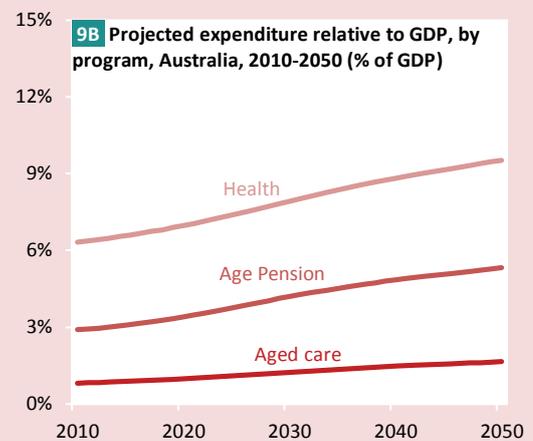
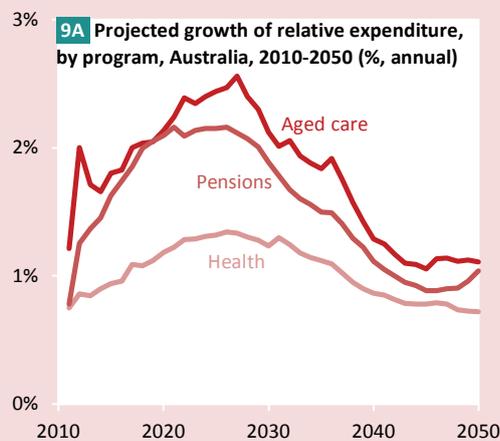
Another method, recently applied at CEPAR, is to also assume that people respond to working and saving incentives

Assumptions in such models are always debatable, but the analysis helps us to understand potential spending and revenue pressures

Estimating long term costs of spending programs often involves a form of *micro-simulation* (e.g., as used by Australian Treasury), where the numbers of different types of households are projected into the future and interacted with the expected evolution of costs for that type of household. These are then compared with the supply side of the economy that combines population, participation, and productivity to estimate GDP, the denominator. Commonly, this type of analysis assumes limited or no behavioural responses of households and omits feedback effects – e.g., if population ageing increases spending and taxes, it might also discourage younger households from working and further impact on the budget.

CEPAR Chief Investigator, Alan Woodland, and Research Fellow, George Kudrna, and Associate Investigator, Chung Tran, have instead built a *general equilibrium* model of the Australian economy in which households make lifetime decisions based on economic incentives. These are in turn dynamically affected by policy and demographic changes. Admittedly, not all households act so rationally, but the model only requires that *on average* the different groups do so. It is also anchored in such a way that it is able to explain current outcomes before turning to the future.

In Kudrna et al. (2013), they show how demographic shifts can affect output, expenditure and taxes. They project that between 2010 and 2050, aged care, healthcare and pension programs costs could increase by 84, 38, and 68 per cent respectively (compared to Treasury’s 2010 estimates of 125, 78, and 44 per cent), with aged care expected to see the greatest level of expenditure growth. The extra costs could by 2050 require an estimated 40 per cent cut to non-age-related spending or a 34 per cent increase in consumption taxes (figure 9). Mechanical though such analyses are (see Kendig, 2010, for a critique), they provide a helpful measure of what might happen if certain assumptions were to hold.



Source: Kudrna et al., 2013

Public funding in practice

In Australia, public funding is delivered through subsidies paid directly to providers. These are set according to care need: the more complex the need the more subsidies and supplements.

Funding generally increases with need, but assessments differ and could be streamlined

For HACC programs, funding contracts require a certain number of services delivered in a given area. For home care packages, ACAT assessment determines levels of subsidy. And for residential care, once need is established by an ACAT assessment and the individual enters care, the care home conducts its own appraisal used to apply for public funding. This is based on a schedule known as the *Aged Care Funding Instrument (ACFI)*.

In residential care, one assessment has a gatekeeping function, while another determines funding

Multiple assessments can be problematic and could benefit from streamlining (Sansoni et al, 2012). In theory assessments are portable between locations but not easily between programs that should be equivalent (a separate issue can occur when moving older people closer to their children: guardianship and trusteeship for parents with dementia do not apply interstate).

ACFI attributes a different level of subsidy or funding supplement to each combination of nil, low, medium, and high need across ADL, behaviour, and health categories (appendix table A1). To reduce bureaucratic burden the measure relates to usual rather than actual need, and assessment requires various diagnostic tools (e.g., Cornell Scale for Depression) and records (e.g., continence record). Neither ACAT nor ACFI assessments take direct account of trajectories of morbidity (box 1), but care recipients may be re-classified as their needs change.

The subsidies are additive – a care recipient scoring highly across all three types of subsidy would attract funding of \$184 per day or \$67,000 per annum in 2013-14. Additional funding is available for certain conditions (e.g., enteral feeding, oxygen support, or for respite costs), for participating in surveys, and to help with the extra costs of remoteness. Confusingly, there is a dementia supplement in addition to what is available through ACFI for those with particularly challenging behaviours. Government monitors claims via random checks and reassessments that can result in either funding upgrades, or, more likely, downgrades. Subsidy claims are only approved for places that had previously been allocated (see discussion about supply, above; funding may be lower if facilities have too few residents whose accommodation is subsidised).

There may also be issues in the method of linking need to payment

It is unclear how well subsidies match actual costs, whether the varied and complicated weighting procedure is necessary for these to match, and whether more funding or a re-classification for given conditions leads to a difference in actual attention and care that an individual receives – all questions the new Aged Care Funding Authority may potentially investigate.

Private funding in practice

Care recipients who can afford to, contribute to the cost of their care and accommodation. Fees are summarised in table 2, and in more detail in appendix table A2 (pre-reform) and A3 (post-reform). These can take the form of flat, means-tested, per-item charges, as well as interest-free loans to the care provider.

Contributions by individuals generally takes the form of different fees, some of which increase with means

Reforms are altering the pricing structure (e.g., care and accommodation fees are separated and individuals can choose between lump-sum or periodic accommodation payments), the price levels (e.g., higher accommodation price levels), subsidies (e.g., higher maximum accommodation payment), the means test for residential and home care, and introduce yearly and lifetime caps on care fees. For residential care, the means test results in fully supported residents (who pay the basic fee out of their Age Pension or who are otherwise publicly

But the system is being reformed

covered by ‘hardship’ arrangements), partly supported residents (who pay the basic fee, some accommodation fees, but no care fee), and non-supported residents (who pay the basic fee, full accommodation fees, and some or all of the care fee up to the cap).

Unbundling of care and accommodation fees makes sense. Uncertainty about needing high care means the risk should be socialised (achieved by the means-test and cap). Housing costs are more predictable and paying for them should be mostly the responsibility of the individual.

Private contributions make up about 7 per cent of formal aged care spending (see also figures 4E and 4F in the companion brief on contribution of fees to provider revenue). Since the greater the care recipient’s ability to pay, the more subsidies are clawed back from providers, more aggressive means-testing will translate to public savings. The reforms, which also included considerable redirecting of funds and a deferral of large spending increases, were part funded by savings resulting from the means-testing arrangements (see figure 8F).

The overall effect is that individuals contribute to 7% of aged care spending

Nonetheless, the co-contribution structure still protects wealthy homeowners from the means test, creating inequity and distorting asset prices. Neglecting the vast housing equity locked up in real estate is a missed opportunity to enhance inter- and intra-generational fairness of funding, address gaps in aged care quality and quantity, and improve the viability of providers. Unlike trends within the pension and health systems in Australia, where a greater responsibility has been transferred to private individuals, aged care remains firmly a publicly funded domain.

But reforms may not have gone far enough in ensuring a fair co-contribution regime

Table 2 Post-reform fee structure summary

Fee	Residential care (no high-low distinction as before)	Residential respite	Home care packages
Basic daily fee	Up to a maximum, set just below full Age Pension	Up to a maximum, set just below full Age Pension	Up to a maximum, set well below full Age Pension
Care fee	Based on new means test (asset & income) with a disregarded amount then tapers up to caps	n/a	New income test with a disregarded amount then taper up to caps
Accommodation fee	Based on means test and choice of facility, payable by new Daily Accommodation Payment (DAP), or Refundable Accommodation Deposit (RAD)	n/a	n/a
Extra service charge	Paid if entering place with above standard quality (regulated maximum)	Paid if entering place with above standard quality (regulated maximum)	n/a
Additional amenity fee	Pre-agreed between provider and resident. Per amenity (e.g., newspaper / hairdressing)	Pre-agreed between provider and resident. Per amenity (e.g., newspaper / hairdressing)	n/a

Broadening the funding base – equity release

Two ways to broaden the aged care funding base involve equity release products and private insurance. Both were previously raised by the Productivity Commission (2011, 2013)

Equity release products, such as reverse mortgages, allow individuals to make use of home equity without having to move, not just to pay for aged care but more generally as a form of greater late-life financial security. A reverse mortgage, for example, involves cash advances that are repaid only after the property is sold, usually after death. These are an alternative to the traditional approach of selling-up or downsizing and can be particularly useful for older Australians, who are often income poor but asset rich (figure 10A). Ownership patterns among older people are projected not to change dramatically: in 2030 older Australians are expected to own 47 per cent of household wealth while making up 19 per cent of the population (PC, 2011).

One option is to access the vast wealth locked up in housing by way of equity release products

The market for equity release products has grown dramatically...

The current level of demand for equity release products is growing. In 2012, there were over 40,000 reverse mortgage loans taken out in Australia worth \$3.6 billion, a four-fold increase in value since 2005 (figure 10B). There are also some restricted versions of reverse mortgages operated by Australian governments (e.g., *Pension Loan Scheme* via Centrelink, and Australian Capital Territory and South Australian rate deferral schemes; PC, 2013).

There are other innovative products. For example, home reversion schemes transfer ownership to the provider but involve a lifetime lease (see box 4). These can set a limit on the share of equity that can be sold to a home reversion company, leaving the rest to customers who might one day wish to fund aged care after the property is fully sold.

...unsurprising given they are consistent with people's aspirations and needs

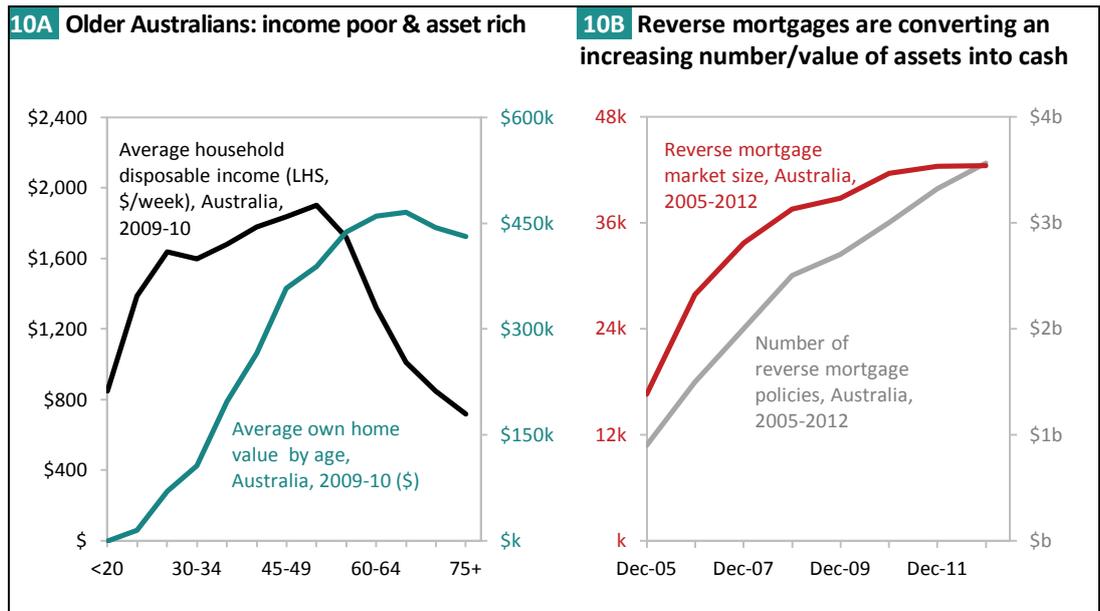
A third of Australian baby boomers expected to use all their assets before they die (Olsberg and Winters, 2005). Some may sell and downsize – for example, older homeowners report wanting to *age in place* (65%). Still, a majority (83%) are attached to the area rather than the family home (Olsberg and Winters, 2005). Older users of equity release products often do so to maintain, rather than increase, spending; many access home equity to maintain independence when faced with health issues and low economic resources (Ong et al. 2013).

But design and understanding of equity release products is lacking...

But there are various obstacles in the way (see box 5) and examining the risks quantitatively reveals that current products are not always well designed and priced (see box 4). More competitive and smarter pricing by providers, regulation that better protects consumers (e.g., caps on loans), less restrictive government provision (e.g., through Centrelink), financial education of consumers and advisers, and reviewed pension and aged care means tests could transform how households contribute to aged care and fund their retirement.

...and unleashing their potential to fund aged care would require means test changes

To really access home equity as a complimentary funding base, homes could be included in the pension and aged care asset tests alongside reverse mortgage instruments that would claw back pension and/or aged care benefits when the home is sold (also raised by the Grattan Institute in Daley et al. 2013). It would allow asset rich pensioners to receive a pension and care, stay at home, and pay their way.



Source: PC (2013), Deloitte Actuaries & Consultants (2013)

Box 4 CEPAR research spotlight Designing reverse-mortgage (RM) products

Good RM product design starts with understanding risks

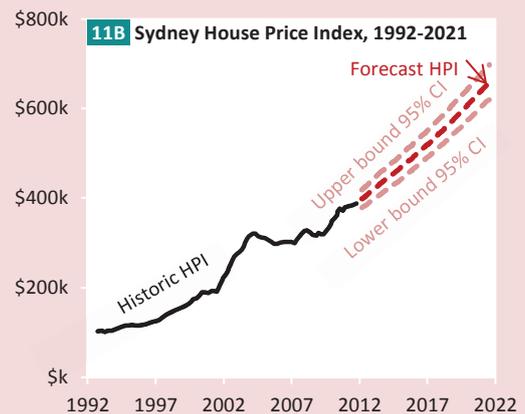
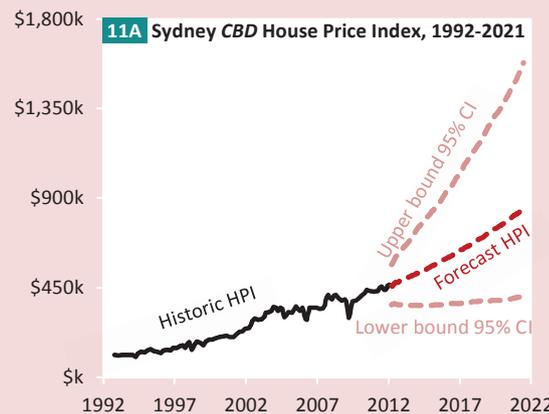
For example, there is the possibility that selling the house will not be enough to cover provider's costs

This is why CEPAR research, which shows house price changes by property type is so useful

Designing RM products requires an understanding of what will happen to the values of the loan and the home equity that eventually repays that loan. These are subject to different risks.

For providers, if the house value grows too slowly or declines then the sale can earn less than the loan has cost. Providers normally can't ask for more money – RMs act as a guarantee that a customer will not fall into debt as a result of the contract. But how can providers distinguish between houses when drawing up contracts? CEPAR PhD Candidate, Adam Shao, Chief Investigator, Michael Sherris, and Associate Investigator, Katja Hanewald, try to answer this question. In Shao et al. (2013) they construct house price indices based on a large data set of Sydney property transactions between 1971 and 2011, which include characteristics such as house location, age, and size. This allows them to estimate the likely evolution of prices by type of house (figure 11A and B).

In Shao et al. (2012), they evaluate providers' house price risks in practice. For example, all else being equal, a reverse mortgage based on a CBD house has a higher risk and should be charged a higher risk premium than a contract based on a city coastline house. In Shao et al. (2014) they take this even further by combining house price risk with longevity risk (i.e., consumers living longer than expected) and analyse the impact of non-mortality related causes of reverse mortgage termination, including entry into long-term care, prepayment and refinancing.



Note: CI denotes Confidence Interval. Source: Shao et al. (2012)

CEPAR research is also shedding a light on longevity and interest rate risks

...and that Australian consumers are paying a premium while retaining much of the risk of current equity release products

That covers the value of the home. The other side of the equation is the loan value, which varies with interest rates over time, and of course the time itself – how long the customer lives. With CEPAR Graduate Student, Daniel Cho (Cho et al., 2013), the CEPAR team estimate how different economic scenarios affect pricing and profits. They find lump-sum RMs are more profitable and less risky to providers than those made up of an income stream. It explains why the former dominates most markets.

Michael Sherris and CEPAR Associate Investigator, Daniel Alai, in Alai et al (2013b) also look at provider risks, but include home reversion contracts (where ownership passes to the provider at a discount in exchange for a lifelong lease). The authors find both products to be poorly priced in Australia, in favour of providers, and urge for regulation and education to ensure better risk sharing.

Finally, Hanewald and Sherris, in Hanewald et al. (2013) consider fairly priced reverse mortgages and home reversions from the householder's perspective, taking account of longevity, house price, interest rate, and aged care risks. It turns out that a retiree gains utility from either product, but more from reverse mortgages. There is also an advantage to unlocking home equity early in retirement – the longer they live the more they gain from the contract.

Box 5 CEPAR research spotlight Reverse-mortgage (RM) market issues

Markets for equity release products are still underdeveloped so research on their design (see box 4) as well as studies on public and provider perceptions are still new and evolving.

Chief Investigator, **Hal Kendig**, was part of an Australian Housing and Urban Research Institute (AHURI) project that involved interviewing providers and consumers to distil the benefits, risks, and obstacles in the RM market (see table 3; Bridge et al., 2010; see also Ong et al., 2013, for more detailed analysis). For example, the research highlighted concerns about the unfamiliarity of the products and a lack of relevant information.

Table 3 Sydney CBD House Price Index, 1992-2021

	Consumers	Providers
RM benefits	<ul style="list-style-type: none"> • Release equity but remain at home • Top-up income stream or one off spending • Fund home maintenance / age-adaptation • Gifting now instead of as inheritance • Guarantee of no negative equity 	<ul style="list-style-type: none"> • Fills gap in market • Greater products range for clients • Growth area as population ages
Risks	<ul style="list-style-type: none"> • Compound interest means low value if taken at early age • Fixed RM interest > market interest could mean low value • Lack of legal and financial expertise of advisers • Break fees for premature finalisation (pre-pay penalty) • Potential tax or pension means test impacts 	<ul style="list-style-type: none"> • Falling house prices, since these comprised the repayment • Negative tax changes (e.g., when profits are realised)
Obstacles	<ul style="list-style-type: none"> • Lack of legal and financial expertise of advisers • Exclusion of some (e.g. by age or property type) • Some products require fees in addition to interest • Lack of use of RM calculators by brokers / lenders • Lack of range of information on products 	<ul style="list-style-type: none"> • Product complexity and related cost of face-to-face interactions • High level of documentation • Current commission levels • Exclusion clauses • Low community awareness

Adapted from Bridge et al. (2010)

Broadening the funding base – Long term care insurance

Another option to broaden funding is to look at private aged care insurance, as has happened with private medical insurance

Long term care insurance (LTCI) is sometimes disregarded as a viable funding option because of demand and supply side reasons. These often relate to lack of information, incentives, insurability, or ‘rational’ behaviour (Brown and Finklestein, 2007, 2008 and 2009; Zhou-Richter and Grundl, 2010).

Even in different institutional settings observed in other countries, the market for long term care insurance is underdeveloped. Indeed, no country’s LTCI market operates as well as the markets for other types of insurance. So what hopes are there for such a market?

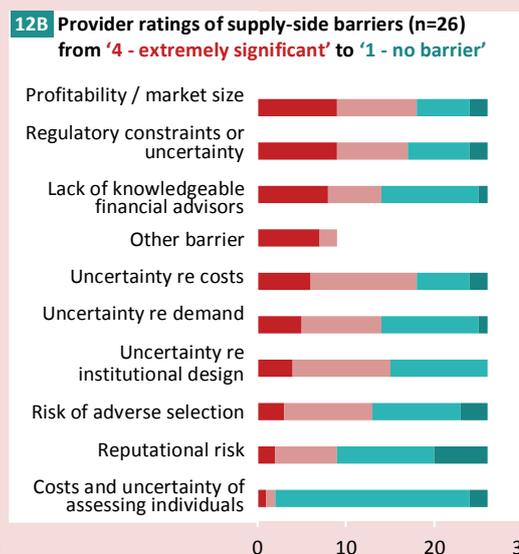
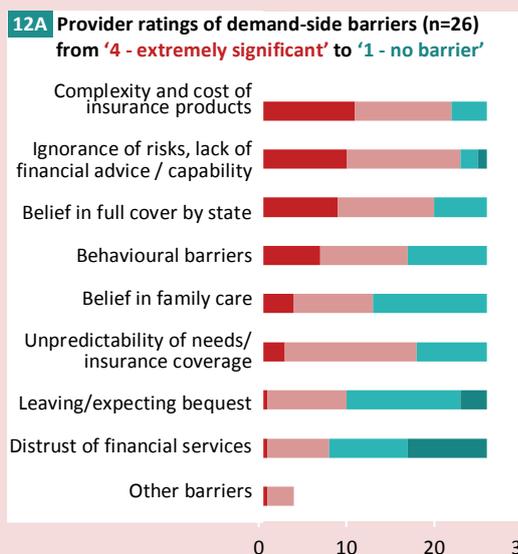
The US has the largest LTCI market in absolute and relative terms, with private insurance covering seven per cent of aged care expenditure (Centres for Medicare & Medicaid Services, 2008). In the US insurance companies reimburse customers for a set of approved care expenses. In France, where the insurance model provides small amounts of top-up cash benefits, the total contribution of LTCI is lower, but there is much broader coverage with a take-up of 15 per cent of the population. In various countries LTCI and reforms that would encourage it remain a live topic (Lloyd, 2011).

There is a question of whether, between Australia’s aged care safety net and the cap for care fees, there is enough incentive to self-insure, and what form this insurance could take (box 6). Should appropriate frameworks and incentives be put in place, the policy direction of enhanced choice could lead us some way toward private aged care insurance, much as has happened with private medical insurance in recent decades.

Box 6 CEPAR research spotlight Long term care insurance

CEPAR research shows that supply barriers include product design and lack of clarity about who will cover which care costs

One reason for an underdeveloped Long Term Care Insurance (LTCI) market in Australia may be reluctance on behalf of financial services providers. To understand this issue in more detail, CEPAR PhD Student, [Bridget Browne](#) (2012), surveyed leaders in the financial services and insurance industry. She found that on balance they believed the residual risk associated with aged care costs in Australia was insurable. However they pointed to significant hurdles (see figures 12A and B) that would need to be overcome, including product design, effective marketing, and clarity from government about what care costs it will cover in future.



Note: Wording of response options shown in figure have been edited down from the original. Source: Browne 2012

And future work will look at how best to design products alongside pension annuities

It is worth understanding LTCI alongside pension annuities. Both have benefits as insurance contracts. The former can insure against high costs of aged care; the latter insures the purchaser against inflation, poor returns, and outliving their savings. Besides the often-quoted barriers to take-up, the interactions between the two instruments may be relevant: Why annuitise if you want savings to cover potential out-of-pocket health and caring costs?

CEPAR PhD student, [Shang Wu](#), along with CEPAR Senior Research Fellow, [Ralph Stevens](#), and CEPAR Associate Investigator, [Hazel Bateman](#), are looking at developing a so-called LTC annuity which provides additional benefits for aged care costs.

The project will provide empirical evidence, theoretical justification, and pricing aids for the new product while taking into account the announced reforms and existing institutional features of the LTC system in Australia, the UK and US.

The team intend to calculate optimal decisions and also to run annuity experiments to study how the lifetime cap on an individual's aged care expense (being introduced in Australia and UK) will affect an individual's insurance decisions. From the insurance provider's point of view, the researchers will look at implications for diversification and adverse selection.

Such research will be particularly meaningful to annuity providers looking at a new generation of innovative annuity products, which some scholars (Americas et al., 2011) see as a new growth market over the next decade.

6. Informal Care

Funding and provision of formal care presumes the existence of a large informal care sector

Informal care determines the level, composition, and cost of formal care. It is provided by family, friends and neighbours and is assumed to make up the majority of all care for older people. In 2012, 2.7 million people (1.9 million according to the 2011 Census) identified as informal carers to older or disabled people, with 400,000 as primary carers to those aged 65 and over (ABS, 2013).

The future supply of informal carers will depend not only on the relative size of age groups who have traditionally been carers but also on cohabitation and family formation patterns (see box 7), labour force participation, particularly of women, and general willingness to take on the role (Nepal et al., 2011). An attempt in 2003 to project primary carer numbers in 2013 was some 200,000 people (or 34%) lower than the outcome (though it's unclear whether the difference was demand or supply driven; Jenkins et al., 2003; also NATSEM, 2004).

Informal carers are often older women, who provide care for a few hours a week out

Informal carers are often older and mostly women; the majority care fewer than ten hours per week; and the recipients of their care tend to be partners or parents (ABS 2013; see box 7 and appendix figure A1, panels A to D for an OECD comparison). Of the reasons that Australian primary carers reported for taking on the role, the most common was out of family responsibility (63%) or because they thought they would provide better care than others (50%; ABS 2013).

Those who care for many hours per week, such as cohabiting carers, can experience negative health and employment impacts

The value of unpaid care was estimated to be worth \$40 billion in Australia in 2010 (Access Economics, 2010). Yet it comes at a cost. Carers work less and are more likely to be in poverty (due to lower income, not necessarily lower wages) and are more likely to suffer mental health problems (appendix figure A1, panels E and F). But negative effects are driven by high-intensity care (more than 20 hours) and cohabitation suggesting that interventions should target these carers. Colombo et al. (2011) suggest that the large number of carers with few hours of care in OECD countries means that there is scope to increase the total volume of informal care with limited negative impacts (see box 8 for similar insights for Australia).

Research by Australia's National Seniors Productive Ageing Centre (Adair et al. 2013) finds that carer support and flexible working patterns are crucial to improve employment options for informal carers. For example, based on a large representative survey, they find that among non-employed carers whose caring prevented them from working, 46 per cent said they would work if suitable external care were accessible, while 61 per cent said they would work an average 18-hour-week if flexible work arrangements were available. Similarly, half of such carers who already worked part time said they would work more if such flexible arrangements were offered.

Supporting informal carers

Responses have included (1) recognising carers ...

The need to support informal care is not lost on policy makers. The response in Australia has seen a new policy framework – *National Carer Strategy*, which sets priorities for action on areas that include information provision, economic security, education, and health. A new legal framework was also introduced – the *Carer Recognition Act 2010*, which places obligations, unenforceable though they are, on public bodies to abide by a set of principles and respect the rights of carers.

...(2) ensuring employment protections...

But, additional legal protections can be built-in to help with employment arrangements. Australia's *Fair Work Act 2009* has recently been amended to allow carers to request flexible arrangements, refusible on reasonable business grounds. The Act also entitles carers to ten days of paid leave, but only when the care is for immediate family or household, rather than the full range of care

relationships (see box 7), and casual workers remain unprotected (AHRC, 2013). Here, employers could play their part and reap the benefits of a more flexible work culture.

...(3) providing a number of in-kind support services...

There is also a range of direct services to support carers. These can be complimentary to the informal care (e.g., *HACC program*, *Veteran's Home Care* services), a temporary substitute (e.g., respite at home, in a day centre, or in a residential facility for up to 63 days a year), take the form of social and emotional help (e.g., the *National Carer Counselling Program* funded by government but delivered by carer associations), provide education (e.g., *Dementia Education and Training for Carers*), or offer information and coordination in recognition that services still require a certain level of management on behalf of carers (e.g., *Commonwealth Respite and Carelink Centres*). The *National Respite for Carers Program* separately funds many of these but some will be merged under one program known as the *Home Support Program*, from 2015, addressing the sometimes fractured nature of support.

...and (4) cash benefits to cover costs or absence from work

Finally, the Australian Government offers financial support to carers. This consists of a *Carer Allowance* (a supplement to cover some costs of caring, worth around 15 per cent of the Age Pension) and *Carer Payment* (for cohabiting carers unable to work as a result of caring, consistent with the value of the Age Pension; see section 2 on aggregate costs and take-up).

But there are issues with existing arrangements and potential to explore those seen in other countries

The Carer Payment is means- and work-tested which may result in disincentives to work. For example, claims are reviewed if the carer works, studies, or volunteers more than 25 hours a week, but some report that the 25-hour-rule triggers immediate cessation of eligibility (Carers Australia, 2013). One unintended consequence of cash payments is that these may monetise family relations.

Carer support in Australia shares similarities with what is seen elsewhere, but there is a variety of approaches (Table 4) and limited research on what works. Notable examples of support that exist elsewhere but not in Australia include tax incentives for care and contributions to pensions. The latter is implicitly included in Australia's non-contributory, means-tested Age Pension, which compensates those who did not accumulate adequate Superannuation, a type of contributory 'pension'. However this compensation is not exclusively targeted at carers.

Table 4 Informal care support in Australia and OECD, 2009-10

	AUS	AUT	BEL	CAN	CZR	DNK	FIN	FRA	DEU	HUN	IRL	ITA	JPN	KOR	LUX	MEX	NLD	NZL	NOR	POL	SVK	SVN	ESP	SWE	CHE	UK	USA
Carer allowance	Y	N	**	**	N	Y	Y	N	N	Y	Y	N	N	N	N	N	Y	Y	Y	N	Y	N	N	Y	N	Y	N
Care recipient allowance	N	Y	Y	N	Y	N	N	Y	Y	N	N	Y	N	N	Y	N	Y	Y	Y	Y	Y	N	Y	Y	N	Y	**
Tax credit	N	N	N	Y	N	N	N	Y	Y	N	Y	N	N	N	Y	N	N	Y	N	N	N	N	N	N	Y	N	Y
Pension accrual	N	Y	N	Y	Y	N	N	Y	Y	Y	Y		N	N	Y	N	Y	N	Y	N	Y	N	Y	Y	N	Y	N
Paid leave	Y	N	Y	Y	N	Y	Y	Y	Y	N	N		Y	N	N	N	Y	N	Y	Y	Y	Y	Y	Y	N	N	N
Unpaid leave	*	Y	Y	Y	N	N	N	Y	Y	Y	Y		N	N	Y	N	Y	N	N	N	Y	N	Y	N	N	*	Y
Flexible work	N	Y	Y	**	Y	**	Y	Y	Y	Y	N		Y	**	**	N	Y	Y	Y	N		**	N	N	**	Y	Y
Education	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y		Y	Y	Y	Y	Y	Y	N	N		Y	Y	Y	Y	Y	**
Respite care	Y	Y	Y	Y	Y	Y		Y	Y	N	Y		N	N	N	N	Y	Y	N	N		Y	Y	Y	Y	Y	**
Counselling	Y	Y	Y	Y	Y			Y		Y			N	N	Y	N	Y	Y	N	N		Y	Y	Y	Y	Y	**

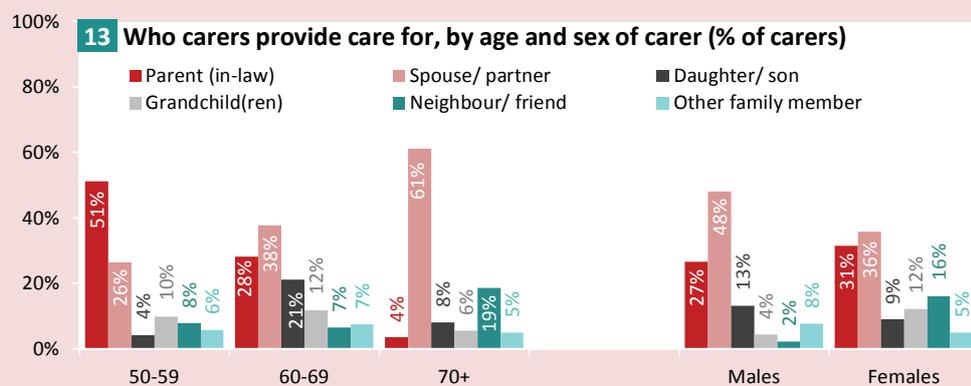
Note: * only 2 days for emergency; ** Not nationwide but industrial or sub-national arrangement; Based on country survey for arrangements in 2009-10. Source: Adapted from Colombo (2011)

Box 7 CEPAR research spotlight Older informal carers, proximity, and cohabitation

In many cases the main informal carer is an older family member, such as a spouse or mature-age child. So it is important to conduct research on informal care from the perspective of the older carer. CEPAR Associate Investigator, Heather Booth, with colleagues at ANU and National Seniors Australia, has done precisely that.

The team sampled 2,000 Australians aged 50+ in 2010/11, and showed that 13% of females and 9% of males identified as a carer, with many providing care for several years. Perhaps unsurprisingly, carers in their fifties were most likely to care for their parents while those aged 70+ were mostly providing care for their partner. Women and older carers are quite likely to care for a neighbour or friend, which is much rarer for male carers (figure 13). The time spent providing care seems to vary but it has its impact – a third said that providing care limits their social activities often or always (Booth and Rioseco, 2013).

Research shows that caring can limit carers' social activities



Note: Percentages may not sum to 100% because of multiple responses. Source: Social Networks and Ageing Project (SNAP, 2013)

Many older people live close to their children, but moving closer to them or to services in later life can sever social ties

Such informal care depends on residential proximity. Respondents tended to live near their children – three quarters live within an hour's travel time – but sometimes seeking care means needing to move home. A third of those aged 70+, who moved recently, did so to be nearer to their family or to services. Such moves often involved distances of more than one hour's travel time, severing social activity with neighbours and local friends (Booth and Rioseco, 2012).

Other CEPAR research shows that the costs of caring can have an impact on whether children move away

CEPAR Research Fellow, Shiko Maruyama, has also looked at the question of proximity but through the prism of economic incentives. Children 'gain' if their siblings look after elderly parents, but providing care themselves can be 'costly'. This creates a 'free-rider' problem where children move away to shirk the responsibility. Using US data in a game theoretic framework, he finds such attempts at free-riding are non-negligible and that 18% of parents in families with multiple children miss out on having at least one child nearby (Maruyama and Johar, 2013).

What about cohabitation with elderly parents? In Johar and Maruyama (2011), he investigated the drivers of cohabitation in Indonesia, finding that the decision is largely influenced by the incentives of adult children: cohabitation is more likely among healthy parents with greater wealth. In other papers (Maruyama, 2012; Johar and Maruyama, forthcoming) he finds a negative impact of cohabitation on parental health and survival, taking account of causality. Interestingly, this is not the case for parents who are socially active. Cohabitation could worsen parental health because parents may invest less in their own wellbeing.

Box 8 CEPAR research spotlight Informal care and employment

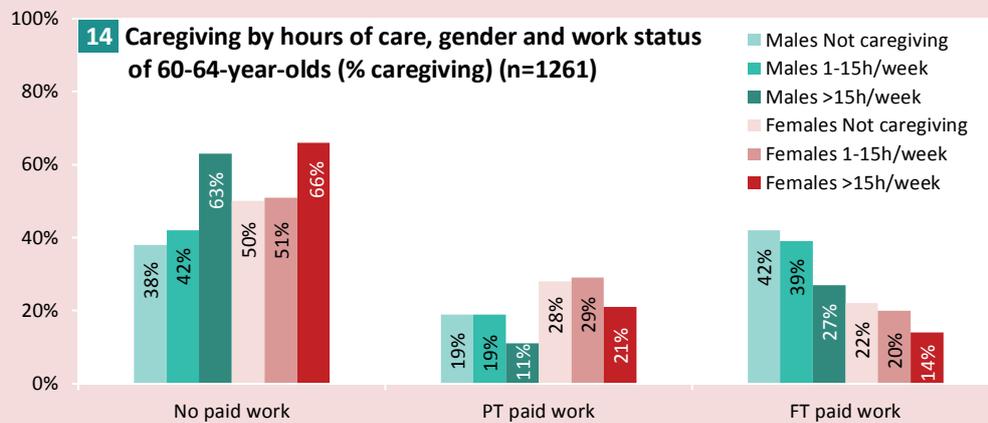
An evolving area of CEPAR research is around informal care and work

Initial results suggest economic outcomes for carers are explained by gender and health outcomes by the caring role

Future research will look at how social policies affect caring

Two priority areas in Australia’s National Carer Strategy are the economic security and health of carers. But there is much that we still don’t understand about the trade-offs between work and care, and how these affect wellbeing. For example, while caring can affect carers negatively, limited hours of care have been shown to have a positive effect on life satisfaction. This is what a team led by CEPAR Chief Investigator, Hal Kendig, has found, using Australian data.

His team, including CEPAR Associate Investigator, Kate O’Loughlin, and Research Fellow, Vanessa Loh, are working on a project to better understand how societal and policy context influences working and care-giving, work-care transitions, and impacts on individuals and economic activity. In a forthcoming paper, they find the now familiar pattern: greater hours of care are associated with less paid work, particularly in the case of more than 15 hours of care and poorer health. But while economic outcomes are largely explained by gender (figure 14 for 60-64-year-olds) – women are more likely to be carers and work less – health outcomes appear to be associated with the caring role. The team will look at cross-national differences and the effect of policy (e.g., whether retirement schemes impact on caregivers’ work choices).



Source: O’loughlin et al. (Forthcoming)

7. Conclusion

This first of two research briefs on aged care in Australia looked at the system *top-down*. It captures the aged care system as it transitions, not only in response to the current reform agenda but also in adapting to wider market, social, and demographic changes. The types of research insights highlighted in these briefs can guide decision makers in aged care as the system evolves.

Funding aged care will remain a key preoccupation of policy makers. Demographic trends are expected to put upward pressure on aged care budgets. But some of the other trends in aged care are a win-win for both care recipients and those concerned with care costs: (1) a shift to consumer-centred care both enables choice and can give way to market discipline, improving efficiency (see brief 2 on *Consumer Directed Care*); (2) more community-based care allows people to *age-in-place* and can put downward pressure on the demand for more expensive residential care; and (3) more independence-focused models of care allow people to get on with their lives by emphasising prevention and enablement, which also takes pressure off the care system. There is another win-win worth exploring: greater contributions from those with substantial housing assets could be a way of dealing with the public’s unmet expectations for care, addressing perceptions of inequitable contributions, and tackling growing public costs.

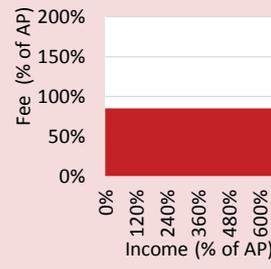
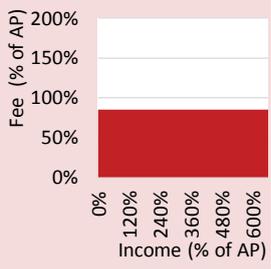
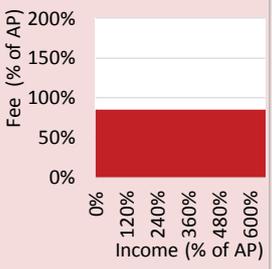
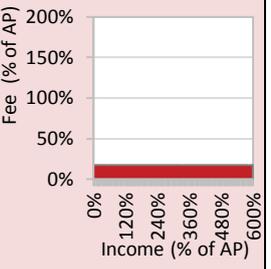
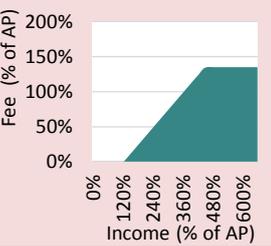
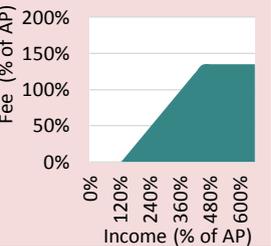
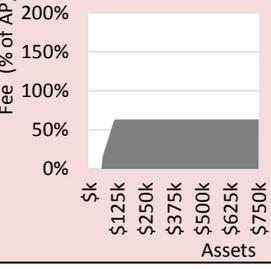
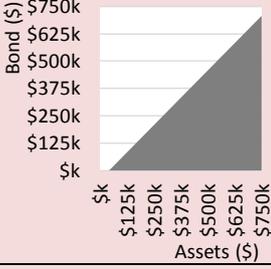
Appendix

Table A1 Translating care need into public subsidies – the Aged Care Funding Instrument

Domain	Care level measure	Scoring the care level				From score to funding level	Funding per day per level, 2013-14	
ADL Subsidy								
1. Nutrition (readiness to eat)	Independent, supervised, or assisted	A (nil)	B	C	D(high)	High ≥88	\$94.79	
		0	6.69	13.39	20.09			
2. Mobility (transfers/locomotion)	Independent, supervised, or assisted	0	6.88	13.76	20.65	Med ≥62	\$68.42	
3. Hygiene (dressing, washing, grooming)	Independent, supervised, or assisted	0	6.88	13.76	20.65			
4. Toileting (toilet use/completion)	Independent, supervised, or assisted	0	6.11	12.21	18.31			
5. Continence	Frequency	0	5.79	11.53	17.31	Low ≥18	\$31.43	
Behaviour supplement								
6. Cognitive skills	Severity	A (nil)	B	C	D(high)	High ≥50	\$31.03	
		0	6.98	13.91	20.88			
7. Wandering	Frequency	0	5.91	11.82	17.72	Med ≥30	\$14.88	
8. Verbal	Frequency	0	7.04	14.1	21.14			
9. Physical	Frequency	0	7.7	15.4	23.11			
10. Depression	Severity	0	5.71	11.43	17.15	Low ≥13	\$7.18	
Complex health supplement								
11. Medication (assistance required)	Complexity, frequency, assistance time	12 11	A	B	C	D	High =3	\$58.15
		A	0	0	2	2	Med =2	\$40.27
12. Complexity (procedures)	Complexity, frequency	B	0	1	2	3		
		C	0	1	2	3		
		D	0	2	3	3		

Note: Domains are assigned a severity from A (nil) to D (high). Some are weighed and summed. Some are applied to a matrix to produce a score for each of three subsidies/supplements. Some have higher weight than others (e.g., among ADL domains, mobility and hygiene affect ADL score more than continence). Score thresholds in turn determine care level for funding. Source: Authors' interpretation of health.gov.au

Table A2 Fees that residential care providers could charge care recipients pre-2013-14 changes

Fee	Residential Low Care or Extra Service place	Residential High Care	Residential Respite	Community care packages
Basic daily fee for daily expenses	Max 85% of AP (\$44.50 per day); flat fee 	Max 85% of AP (\$44.50 per day); flat fee 	Max 85% of AP (\$44.50 per day); flat fee 	Max 17.5% of AP (\$12.38 per day); flat fee 
Former income tested fee for care and accommodation expenses	Max 135% of AP (\$70.70 per day); based on 42% taper on income beyond 125% of AP 	Max 135% of AP (\$70.70 per day); based on 42% taper on income beyond 125% of AP 	n/a	n/a
Former accommodation charge	n/a	Max 64% of AP (\$32.58 per day); based on taper of 0.048% on assets beyond \$40.5k 	n/a	n/a
Former accommodation Bond	Lump sum or periodic payment; based on any proportion of assets beyond 250% of annual AP (\$43k). 11% and 21% of AP can be deducted from bonds of \$20.52k-\$39.72k and \$39.72k+ for five years. Home included up to \$144.5k unless occupied by relative/carer 	n/a	n/a	n/a
Extra Service Charge (for higher standard)	Max pre-agreed by Government. Pays if in extra service place. Fee reduces Government care subsidy by 25% of fee.	n/a	Max pre-agreed by Government. Pays if in extra service place. Fee reduces Government care subsidy by 25% of fee.	n/a
Additional amenity fee	Pre-agreed between provider and resident. Per amenity (e.g., newspaper / hairdressing)	n/a	Pre-agreed between provider and resident. Per amenity (e.g., newspaper / hairdressing)	n/a

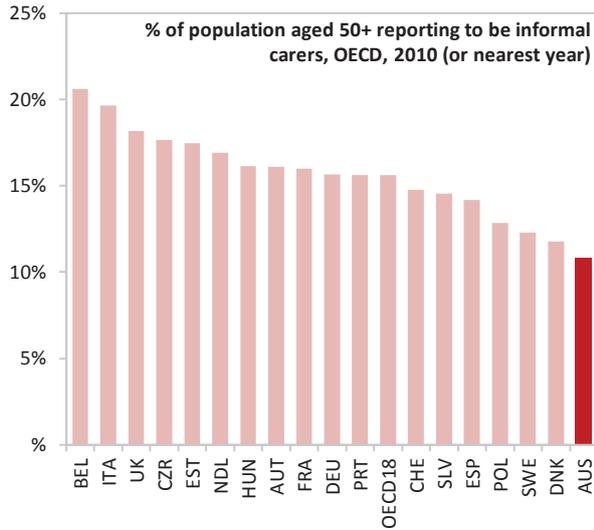
Note: AP denotes Age Pension; Figures are for single standard aged care recipient, as at Mar-Sep 2013, in 2013 prices, as proportion of Age Pension of \$52.4 per day or dollar amount per day; Indexation rules mean some fees may not move with AP for percentage rates shown to stay constant (the figures should therefore be treated as indicative); Applies to government subsidised aged care; Caps on income and means tested fees under reform are annual but shown here as daily

Table A3 Fees that residential care providers could charge care recipients post-2013-14 changes

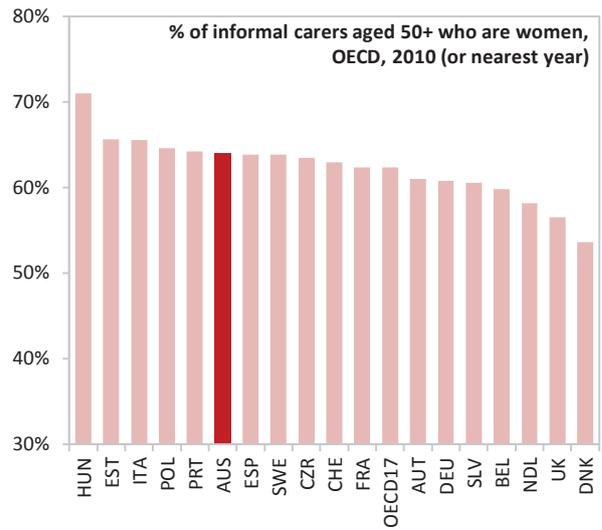
Fee	Residential care (no high-low distinction)	Residential Respite	Home care packages
Basic daily fee for daily expenses	<p>Max 85% of AP (\$44.50 per day); flat fee</p>	<p>Max 85% of AP (\$44.50 per day); flat fee</p>	<p>Max 17.5% of AP (\$12.38 per day); flat fee</p>
New income tested care fee (for home care) and new means tested care fee (for resident), which reduces care subsidy	<p>Annual max 130% of AP (\$68.50 per day; lifetime max of 314% of AP); based on combined income and asset tested amount; That is, 50% taper on income beyond 119% of AP, plus 17%, 1%, and 2% taper on assets \$40.5k-\$144.5k, \$144.5k-\$353.5k, \$353.5k+ (converted to per day basis), minus approx 100% AP (i.e. max accommodation supplement, which is clawed back first). Up to \$144.5k of former home is included in test unless occupied by relative or carer.</p>	n/a	<p>Max 52% of AP (\$27.47); based on 50%, 0%, and 50% tapers on income 119%-171%, 171%-226%, and 226%-278% of AP (has effect of treating full, part, and non Age Pensioners differently)</p>
New Daily Accommodation Payment (DAP), ...or... Refundable Accommodation Deposit (RAD) (which reduce supplement)	<p>Fee based on means test (see above) and choice of providers with accommodation price levels: (1) up to approximately 100% of AP as standard, (2) up to 166% of AP if provider self-assesses as higher quality, (3) higher if provider agrees the price with Pricing Commissioner. Means test claws back up to government max accommodation supplement, approximately 100% of AP and equivalent to level 1 price.</p> <p>RAD based on DAP amounts converted to lump-sum via Maximum Interest Rate. Cannot leave recipient with assets of less than \$40.5k. Refundable with no deduction amounts permitted</p>	n/a	n/a
Extra Service Charge	<p>Max pre-agreed by Government. Pays if in extra service place. Fee reduces Government care subsidy by 25% of fee.</p>	<p>Max pre-agreed by Government. Pays if in extra service place. Fee reduces Government care subsidy by 25% of fee.</p>	n/a
Additional amenity fee	<p>Pre-agreed between provider and resident. Per amenity (e.g., newspaper / hairdressing)</p>	<p>Pre-agreed between provider and resident. Per amenity (e.g., newspaper / hairdressing)</p>	n/a

(cont...) fees rate; Lifetime cap of \$60k applies to income and means tested care fees only; Post-reform asset test includes \$144.5k of own home unless occupied by relative or carer. Source: health.gov.au (now dss.gov.au)

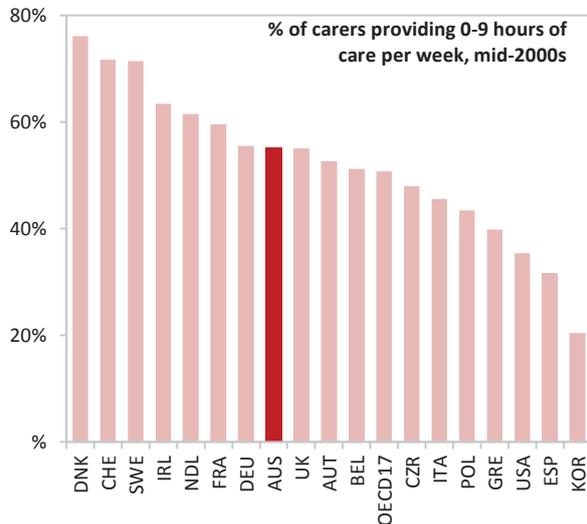
A1A Older people in Australia provide less informal care than is the case in other countries



A1B Informal carers are predominantly women, in Australia and elsewhere

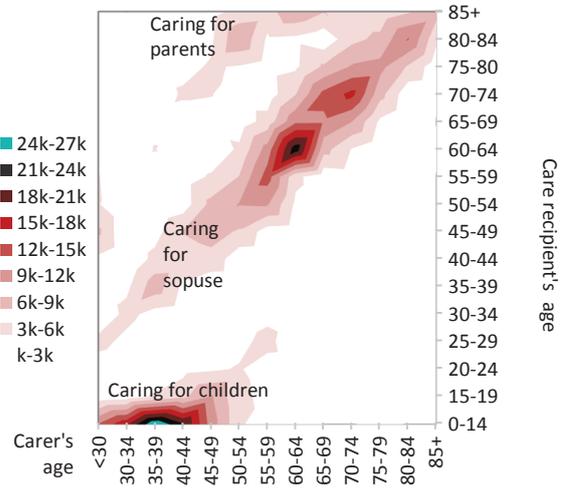


A1C The majority of carers provide few hours of care

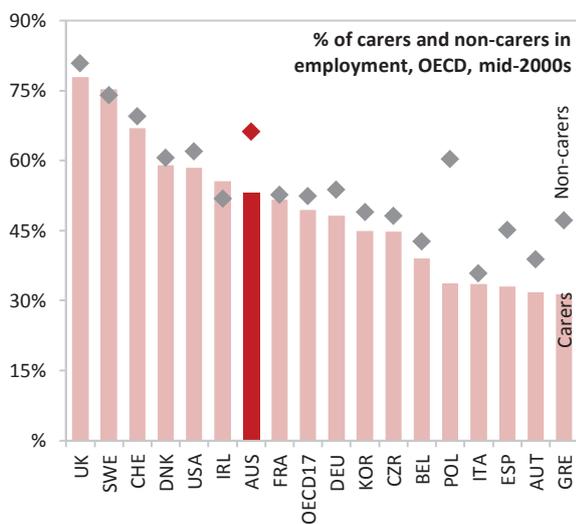


A1D Some age groups care for children, spouse, & parents

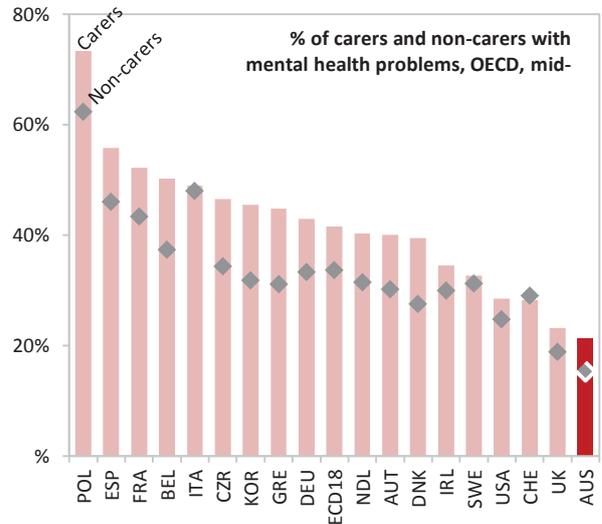
cohabiting primary carers by carer/care recipient age, Aust., 2009



A1E But informal care results in lower employment rates (higher poverty and lower incomes, not shown)...



A1F ...and higher rates of mental health problems (though levels appear lower in Australia)



Note: Australian HILDA data in all figures except for panel D, which is based on SDAC data. Source: OECD (2011, 2013b), Adapted from SDAC data in PC (2011)

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About CEPAR

The ARC Centre of Excellence in Population Ageing Research (CEPAR) brings together researchers, government and industry to address one of the major social challenges of this century. It aims to establish Australia as a world leader in the field of population ageing research through a unique combination of high level, cross-disciplinary expertise drawn from Economics, Psychology, Sociology, Epidemiology, Actuarial Science, and Demography.

CEPAR is one of 13 centres that commenced in 2011 under the Australian Research Council's Centres of Excellence program. It is a global research centre with international university partners, and is supported by the Australian Government, the NSW Government and industry leaders. Our mission is to produce research that will transform thinking about population ageing, inform private practice and public policy, and improve people's wellbeing throughout their lives.

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