How can we fund future aged care costs?

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Over the course of human history, the odds of living from birth to age 100 have risen from 1 in 20 million to 1 in 50 for females in low mortality countries.
And life expectancy continues to rise
Life expectancy at birth, various countries, females – Human Mortality Database (HMD)
At the same time, there is no sign of a significant compression of mortality – rather, the spread around the modal age at death remains large.
Modal age at death and standard deviation around that age
Nor is there yet conclusive evidence of a significant and sustained compression of morbidity – rather, many of the elderly and very elderly will experience many years of disability.
OECD Study

• The OECD study (Lafortune et al, 2007), reviewing trends in ADL disability at age 65 and over in 12 OECD countries during the 1990s, demonstrates that there is clear evidence of a decline in disability among elderly people in only five of the twelve countries studied: Denmark, Finland, Italy, the Netherlands, and the United States. Three countries (Belgium, Japan and Sweden) report an increasing rate and two countries (Australia, Canada) a stable rate. In France and the United Kingdom, different surveys show different trends in ADL disability (OECD, 2007).

• These results suggest that a decline in ADL disability may be less universal than expected. More importantly, the OECD study shows that ADL disability at age 65 and over ranges from a low 7.1% in the Netherlands (HIS) to a high of 18% in the United Kingdom (GHS survey).
For Australia, all of this translates into substantial population aging, as the very large baby boomer generation approaches old age, with the prospect of especially rapid growth in the numbers of Australians aged 85+ and 100+.
Population ageing

Aged Population Projections

Thousands of persons

Aged 80 years and older

Aged 86 years and older

Year

2005 2010 2015 2020 2025 2030

Henry Ergas – Funding Aged Care, April 2011
Proportions of different age groups in the Australian population over time, and annual growth rates of different age groups over time

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Children (0–9)</td>
<td>18.1</td>
<td>20.9</td>
<td>20.5</td>
<td>19.1</td>
<td>16.1</td>
<td>14.7</td>
<td>13.6</td>
<td>12.8</td>
<td>0.3</td>
<td>0.1</td>
<td>0.4</td>
<td>1.1</td>
</tr>
<tr>
<td>Teenagers (10–19)</td>
<td>14.8</td>
<td>14.3</td>
<td>17.3</td>
<td>18.2</td>
<td>17.5</td>
<td>15.1</td>
<td>13.9</td>
<td>13.6</td>
<td>0.2</td>
<td>0.4</td>
<td>0.9</td>
<td>1.5</td>
</tr>
<tr>
<td>Young adults (20–29)</td>
<td>16.0</td>
<td>14.5</td>
<td>12.8</td>
<td>16.1</td>
<td>16.9</td>
<td>16.2</td>
<td>14.0</td>
<td>13.9</td>
<td>0.1</td>
<td>0.7</td>
<td>1.5</td>
<td>1.3</td>
</tr>
<tr>
<td>Middle age (30–59)</td>
<td>38.8</td>
<td>37.8</td>
<td>36.7</td>
<td>34.2</td>
<td>35.5</td>
<td>38.5</td>
<td>41.8</td>
<td>41.9</td>
<td>1.9</td>
<td>1.8</td>
<td>1.8</td>
<td>1.8</td>
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<tr>
<td>Older middle age (60–79)</td>
<td>11.2</td>
<td>11.4</td>
<td>11.0</td>
<td>10.9</td>
<td>12.1</td>
<td>13.3</td>
<td>13.7</td>
<td>14.5</td>
<td>1.9</td>
<td>2.1</td>
<td>2.1</td>
<td>2.1</td>
</tr>
<tr>
<td>Elderly (80–99)</td>
<td>1.16</td>
<td>1.17</td>
<td>1.24</td>
<td>0.51</td>
<td>0.69</td>
<td>0.89</td>
<td>1.40</td>
<td>1.60</td>
<td>4.9</td>
<td>4.7</td>
<td>2.1</td>
<td>2.3</td>
</tr>
<tr>
<td>Centenarians (≥100)</td>
<td>0.0005</td>
<td>0.0008</td>
<td>0.0012</td>
<td>0.0016</td>
<td>0.0029</td>
<td>0.0073</td>
<td>0.012</td>
<td>0.016</td>
<td>8.5</td>
<td>8.4</td>
<td>7.5</td>
<td>8.0</td>
</tr>
</tbody>
</table>

*The following formula, provided by the Australian Bureau of Statistics, was used to calculate annual growth rate: \(100 \times \left(\frac{p_1}{p_0}\right)^{1/n} - 1\)%., where \(p_0\) = first number in series, \(p_1\) = last number in series and \(n\) = (number of years – 1). For example, the number of centenarians in 2006 (p1) was 3154; the number in 1947 (p0) was 36; and the number of years over this period was 59, thus \(n = 58\). Thus the annual growth rate for centenarians over the past 59 years was \(100 \left(\frac{3154}{36}\right)^{1/58} - 1\)% = 8.0% (rounded to one decimal place).

Given the high correlation between age and need for care, the demographics translates into major pressures on the aged care system.
Proportion of population in care

Source: Dr David Cullen, DoHA
Providing care efficiently will require substantial reform of the aged care system. Addressing long term funding issues is pivotal to those reforms, as many of the distortions in the current aged care system arise from attempts by the Commonwealth to manage its fiscal risk.
• Most forecasters predict a doubling of expenditure on aged care as a proportion of GNI by 2050.

• The bulk of aged care funding by the Commonwealth is through consolidated revenue. This requires current taxpayers, who are mainly in the labour force, to pay for the costs of caring for older Australians. We have, in other words, a PAYG system.

• Professor Hogan estimated increased outlays on aged care, if funded by taxpayers, would require an increase in all taxation rates of about 1.5%. A best estimate today would likely be closer to 2%.

• That increase in tax rates implies some deadweight (i.e. efficiency) loss, as higher taxes distort incentives to work and to save.

• This raises complex issues of fiscal sustainability and of overall efficiency. The question is whether the required funding can be raised and disbursed in a way that:
  – Contains the deadweight costs of taxation;
  – Protects consumers from the risk of exposure to potentially very high aged care costs, while ensuring equity of access;
  – Creates incentives for efficient pricing of services to consumers and for efficient supply.
Rising costs of care

• While the Commonwealth has borne a substantial share of recent cost pressures, one way it has dealt with those pressures is by increasing the contribution beneficiaries of care make to their aged care costs.

• For example:
  – New entrants to high-level residential care paid approximately 21% of their residential care costs in 1995-96 (the remainder being covered by payments from the Commonwealth). By 2005-06 that proportion had risen to 29%.
  – New entrants to low-level residential care paid approximately 40% of their residential care costs in 1995-96. By 2005-06 that proportion had risen to 57%.

• As the AFTS Report points out, the means-testing by which this contribution is secured imposes very high tax rates on assets for some care recipients.

• Those high tax rates do not fall evenly across the population, because some individuals experience very high care costs while others do not.
In practice, the PC recommends an increase in the consumer co-contribution to the cost of care.

*It is not easy to know the extent of that increase as the Draft Report does not set it out in any simple way.*

It will depend on:

- *The fee levels for care and for supported accommodation recommended by the regulator and ultimately determined by the government*
- *The means test and the share of care recipients who receive a government contribution*

*The effects will differ greatly within the elderly population*
• There is a nearly 50% chance that a woman (32% for men) aged 65 will enter permanent residential care at some time in her remaining life.

• Of those women that do enter such care, the average stay is around 3.5 years (2.3 years for men). However, actual durations of care vary considerably.
  – 30% of female residents (46% of male residents) stay for less than 1 year and 14% of female residents (23% of male residents) stay less than 3 months.
  – At the other end of the spectrum, 26% of female residents (14% of male residents) stay for at least 5 years and 6% of female residents (3% of male residents) stay for at least 10 years.

• In many countries, the trend to skewness in the distribution of durations has become more pronounced in recent years and reflects underlying demographic factors, notably the rising incidence of dementia and of other chronic conditions which affect morbidity more than mortality.

• **This skew results in very significant unevenness in the distribution of expected care costs within the elderly population.**
The PC deals with this unevenness by facilitating the financing of outlays, through the APB and the mortgage release scheme, both clearly oriented to ‘unlocking’ home equity

• While the industry seems concerned that the APB will eliminate bonds as a source of finance, that depends to a considerable degree on whether the industry can make upfront payments more attractive
  – This will be more difficult than collecting bonds has been, but is certainly feasible for the larger suppliers

• However, an APB will only really be of relevance for older people who are selling their home which creates issues for couples

• As for mortgage release, I am sceptical as to whether government will want to take on the liabilities associated with effectively under-writing a reverse annuity scheme

But given means-testing, unevenness acts as a random tax on bequests. This raises obvious issues of horizontal equity. Even more important, for risk-averse individuals (who prefer the certainty of a small loss to the uncertainty of a possible large loss), the inability to insure against that tax reduces welfare, i.e. creates an efficiency loss.
• In principle, insurance markets could be expected to offer insurance against that loss.

  – **The event that would be insured is definable.** It is possible to determine whether or not the event “a need for long term care” has occurred through assessment instruments that measure disability.

  – **The losses associated with long term care costs have a probabilistic character.** While the likelihood of ever requiring long term care is relatively high, the duration of that care, and hence its costs, varies greatly within the population in ways that are amenable to statistical characterisation.

  – Given life time long term care costs of $200,000 or more, **the severity of the event should be high enough to induce risk averse individuals to finance the loadings** (related to underwriting and administration costs) needed to make an insurance product viable.
• In practice, however, both overseas and past Australian experience highlights substantial difficulties with the development and take-up of LTC insurance.

• The difficulties seem to stem from three sources:
  1. The complexity involved in devising and properly pricing long term care insurance products.
  2. Demand side constraints on the development and take-up of effective long term care insurance.
  3. Complex transition issues.
How big is the resulting welfare loss?
Welfare as a function of income
Expected value = 3M

Certainty equivalent wealth = 2.538
Expected utility: an example
\[ u(w) = \ln(w) \]

- Expected utility = .924
- Certainty equivalent: solve
  \[ \ln(CE) = .924 \]
- Certainty equivalent = 2.519M
\[ E(U) = >80 \text{ with insurance} \]

Expected utility = 80 without insurance

Risk premium Max = 0.462

Welfare

\[ E(L) \]

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## Summary Results

<table>
<thead>
<tr>
<th>Income bands</th>
<th>Wealth</th>
<th>Co-contribution rates</th>
<th>Population percentile</th>
<th>Risk Premium</th>
<th>Total cost of health insurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>0- $99,999</td>
<td>$100,000 (a)</td>
<td>15.00%</td>
<td>30&lt;sup&gt;th&lt;/sup&gt;</td>
<td>$1,216</td>
<td>$16,084</td>
</tr>
<tr>
<td>$100,000 - $499,999</td>
<td>$250,000</td>
<td>50.00%</td>
<td>50&lt;sup&gt;th&lt;/sup&gt;</td>
<td>$6,348</td>
<td>$55,907</td>
</tr>
<tr>
<td>$500,000 - $1,499,999</td>
<td>$500,000</td>
<td>66.67%</td>
<td>90&lt;sup&gt;th&lt;/sup&gt;</td>
<td>$4,593</td>
<td>$70,672</td>
</tr>
<tr>
<td>&gt;$1,500,000</td>
<td>$1,500,000</td>
<td>100%</td>
<td>95&lt;sup&gt;th&lt;/sup&gt;</td>
<td>$2,953</td>
<td>$102,071</td>
</tr>
</tbody>
</table>

Average population weighted risk premium: $4,551

a) wealth floor of $50,000 is assumed

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Risk premium by income band

- 0-99,999
- $100,000-$499,999
- $500,000-$1,499,999
- >$1,500,000

Risk Premium
Population weighted average risk premium
• Given that private, voluntary, insurance markets are unlikely to develop, government could either offer insurance itself or create a third party market for that insurance.

• The PC tries to fill the gap through a ‘stop loss’ mechanism which would cap individual payments

• But that mechanism only covers care costs and is vulnerable to erosion through inflation and fiscal claw-backs. It also raises the question of how the resulting shortfalls would be recovered.

• Alternatively, government could require consumers to purchase LTC insurance from competing insurers, using income transfers to make that insurance affordable to low-income consumers.

• Such a model, in which insurance was mandatory, would be similar to the Medicare Select model flagged in the NHHRC Report for health services. Adding LTC to the required offerings of the competing health funds would allow smoother integration of aged care and health care services, reducing some of the current distortions from the current demarcations between these.
What would the model look like?
Coverage requirements, solvency and reinsurance regulation, consumer protection

Customer → Health funds

Risk equalisation scheme
Income subsidies

Aged care providers
Health care providers
..other health services providers

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• For predictable expenses, such as home care (that are likely to be required by a high share of the population), the premiums would amount to pre-payment, i.e. to a health care savings account. For the long tail risks, in contrast, there would be risk sharing within the population, reducing the current welfare loss.

• Insurers would cover consumer costs for insured services. As all consumers would be covered, means-testing of assistance would be unnecessary, and would be replaced by income subsidies for coverage. (Low-income consumers would be subsidised to buy insurance, rather than being subsidised to buy services).

• Within the scope given by regulation, insurers would have incentives to structure co-payments and deductibles so as to control demand-side moral hazard and to structure provider payments so as to control supply-side moral hazard. They would, in other words, have incentives for efficient pricing and to secure efficient supply of care, though regulation of the quality of care would remain essential.
• However, it is crucial that an insurance scheme have low costs. That could only be achieved if the insurance was supplementary to other products.

• Possibilities include superannuation and hospital cover, but both of these would complex regulatory and commercial issues.

• **An advantage of viewing this as part of wider health insurance is that it would help break down the silos separating health and aged care.**

• This is broadly what was recommended as a long term direction by the NHHRC but has had very little traction since its final report.
Finally, how does the insurance approach compare to alternative approaches for funding aged care?
• The current PAYG system has functioned well overall. However, the Commonwealth’s efforts to manage its fiscal exposure have created serious distortions to the aged care market and have imposed substantial risk on consumers. As expenditure pressures increase, all the current problems could be aggravated.

• An alternative that has been proposed to the PAYG system involves voluntary, tax-assisted, savings accounts, dedicated to aged care and health expenditure. Consumers would have a capped level of outlays, and outlays above the cap would be covered by the Commonwealth. This means the government would be left with funding all those out of the scheme and the outlays above the cap.

• Such a scheme is very vulnerable to adverse selection. The extent of the adverse selection and more generally take-up would depend on the extent of the tax preference, but it is not clear that how that preference could be set efficiently. In practice, such a scheme is merely likely to further distort the taxation of savings.

• As for its impacts on market efficiency, such a scheme can provide incentives for consumers to avoid moral hazard (as they are spending their savings). However, the same outcome can be obtained through deductibles and co-payments in a mandatory insurance scheme.

• Finally, if the required level of savings to qualify for the tax preference is low, the scheme will have little impact; if it is high, individuals may be left with excess bequests.
<table>
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<tr>
<th><strong>PAYG with co-contributions</strong></th>
<th><strong>Voluntary hypothecated savings accounts</strong></th>
<th><strong>Competitive social insurance</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Risk sharing</strong></td>
<td>Poor, as consumers exposed to catastrophic risk, subject only to stop loss</td>
<td>Exposes consumers to risk of excess bequests or high risk of complete loss</td>
</tr>
<tr>
<td><strong>Tax distortion</strong></td>
<td>Substantial</td>
<td>Substantial, if accounts are tax-preferenced</td>
</tr>
<tr>
<td><strong>Efficient pricing and efficient supply</strong></td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><strong>Equity</strong></td>
<td>Vertically equitable but horizontal inequity</td>
<td>No, as accounts likely to be taken up by wealthy</td>
</tr>
<tr>
<td><strong>Fiscal sustainability</strong></td>
<td>No</td>
<td>No: Government still funds those who are out of the scheme, and also has to fund the tax breaks</td>
</tr>
</tbody>
</table>
In conclusion...
The way forward

• Australia has an extensive, high quality and universally accessible aged care provision. However, population ageing will place the system under great stress.

• Reforms are needed to ensure greater efficiency in the provision of care.

• Financing also needs to be put on a sustainable basis. For so long as the Commonwealth is exposed to significant fiscal risk, it is very likely it will want to manage that risk by rationing.

• That would perpetuate the current distortions, including the welfare loss associated with the unavailability of insurance against the risk of incurring very high aged care costs. As the prevalence of dementia rises and the distribution of care costs becomes ever more skewed, that welfare loss becomes more acute.

• A move to a mandatory insurance model has the potential to offer significant gains in this respect, but obviously raises substantial design and implementation issues.

• Whether a transition to a model that provides greater assurance of funding for aged care therefore remains an open question