

Addressing the Tipping Point for Care in Australia and the UK:

An analysis of the tipping point, current solutions and
a suggested way forward.

Submission for the Oxford Global Challenge
Umps Health

Part One: What is the ‘tipping Point for care’?

In 2010, Carers UK published a report outlining the impending ‘tipping point for care’. The report argued that unless action was taken immediately, by 2017 the UK would reach a ‘tipping point’, where the care required by older people would exceed societies’ propensity to care (1). Sufficient measures have not been taken, and both Australia and the UK are now witnessing the effects of the tipping point.

There are three main drivers of the tipping point. Firstly, the demand for informal, unpaid care has increased dramatically in the twenty-first century (2). Secondly, during the same period, societal and demographic shifts have reduced the pool of carers, creating a shortage. Finally, the shortage has resulted in carers facing poor health outcomes and increased financial insecurity, reducing individual’s capacity to provide effective care.

The increasing demand for care

Throughout the twentieth century, both Australia and the UK experienced a rapid increase in life expectancy (10). While this is one of societies’ greatest achievements, a far greater proportion of our society now lives with age-related disabilities.

Despite this, the overwhelming majority of older people prefer to live at home, rather than in assisted living institutions, a preference that is also far cheaper for governments (11). Accordingly government policies typically seek to shift of care from the hospital to the home, and often from formal, paid care to informal care provided by family members (12) (13).

The shrinking pool of carers

The overwhelming majority of carers are women and older people. In Australia, since 1978, the female labour force participation rate has risen from 43.4% to 59.3% (14). Similarly, there has been a rapid increase in workforce participation of older people, driven by a desire to work later in life and restrictions on eligibility for the aged pension (15). As more women and older people enter the labour market, there has been a reduction in the number of people providing unpaid care (3).

During this same period, divorce rates and the number of single-person families have increased, and more older people are now living alone without a partner to care for them (16) (6). Rising rates of childlessness have also challenged the traditional pyramid structure of families, and it is now not uncommon for an older person to have few or no children to support them in older age (17).

The challenges of being a carer

There are now fewer carers delivering care to more people, and the increasing demands on carers have increased the likelihood of poor mental health, physical health and financial insecurity among carers.

Already, 2.3 million people in the UK have given up work to provide care, and a further 3 million people having reduced their hours (4). A similar situation is observed in Australia, where nearly half of all primary carers do not participate in the workforce (5) (6). These challenges are not dispersed evenly in society, with women aged 45-54 more than twice as likely to have given up work than men, and more than four times as likely to have reduced their working hours (4) (6). The restrictions on undertaking paid work mean that carers are more likely to be living in poverty than the general population, and many carers facing difficulties in affording essentials such as food and heating (7).

In addition to the risk of financial insecurity, the demands of informal caring can have a significant negative effect on a person’s social support network. This places carers at far greater risks of stress and depression than the general population (8). Additionally, 39% of carers have put off medical treatment so they can fulfil their caring responsibilities, indicating their physical health suffers as they prioritise the health of the care recipient (7) (5).

Summarising the Levers of Change

In the first part of this report, the authors have identified three drivers of the informal care gap, and pointed to several potential Levels of Change. These Levers of Change include:

1. **Addressing an increase in the prevalence of age-related disability**
There has been an increase in life expectancy over the past century, and more people are now living in states of age-related disability. The peak age for caring is currently 50-64 years old. As this cohort ages, their role will shift from carer to care recipient, simultaneously increasing the demand for care while reducing the pool of carers.
2. **Supporting people in paid employment to continue to provide care**
A rise in participation rates of women and older people in paid care have reduced these groups propensity to provide unpaid care.
3. **Accommodating for new and more diverse family structures**
Smaller family sizes, higher divorce rates, rising childlessness and an increase in single person families have reduced the size of the support network available to older people.
4. **Improving the physical and mental health of carers**
Poor physical and mental health can reduce an individual's capacity to provide care, and has fiscal implications on the health system.
5. **Creating financial security for carers**
Many carers need to reduce or withdraw from paid employment, creating a situation of financial insecurity. This increases pressure on the welfare system, and exacerbates poor health states

Part Two: How do we address the tipping point?

The second part of this report reviews the existing solutions available to address the 'tipping point', identifies impact gaps and makes recommendations for key stakeholders. It is the product of a review of both academic and grey literature, which:

- Identifies key interventions that exist to develop resilience and contribute to the long-term sustainability of care (19),
- Reviews the effectiveness of identified interventions against the stated levers of change,
- Assesses the level of adoption of the identified interventions against their levels of effectiveness, and;
- Highlights key areas where levels of adoption are not congruent with the benefits the intervention provides to individuals and society (i.e. levels of under-adoption or over-adoption).

Existing Solutions focus on building resilience at an individual level

The most common services available to older people and carers are counselling, education and training, respite care, carer support groups and welfare payments. These services focus on improving the capacity of existing carers to deliver informal care (*Levers of Change 4 and 5*). In contrast, very few policies aim to address the underlying demographic and social trends that are driving the 'tipping point', or support working carers to provide care (*Levers of Change 1, 2 and 3*).

Technologies to support older people age in place and the provision of informal care are significantly underutilised

Technology-based solutions are particularly effective at supporting working carers, reducing stress and improving wellbeing and self-efficacy (27) (28). Despite this, recent research by the McKinsey Global Institute identifies the healthcare industry as having among the poorest levels of digitalisation (29). This gap is particularly evident when considering how the Internet of Things and artificial intelligence have completely digitalised other industries (30).

It is already estimated that the average household in Australia has more than 11 connected devices. Through the application of machine learning and artificial intelligence, data from these devices is being used to automate manual labour, improve entertainment services, reduce energy usage, provide new modes of transport and create more effective public safety applications (31). The same technology could be leveraged in use cases designed to support older people to live at home, and the provision of informal care.

Recommendations for the future

In Australia, replacing informal care with paid care would cost the economy \$60.3 billion, or 3.8% of GDP (3). The magnitude of Australia and the UK's dependency on informal care makes this unsustainable. In order to address the 'tipping point', new and better tools to address the Levers of Change must be developed, with a particular focus on Levers 3, 4 and 5.

It is evident that there exists a gap between the capability of the IoT and artificial intelligence, and the levels of adoption for supporting the care of older people in Australia and the UK. This gap can be attributed to (39) (40):

- A failure of governments to create a competitive environment among the provision of healthcare services,
- An unwillingness for businesses to take commercial risks in a highly regulated environment, and;
- A failure of technology companies to engage and understand the specific needs and requirements of older people, leading to poor levels of market adoption.

Governments should implement reforms to increase competition in the provision of aged services.

Historically, the provision of aged services in Australia and the UK has been subject to significant regulation. Governments should introduce policy with the intention of creating competition in the provision of aged care service, such as reducing the requirements to become a provider of aged care services or providing consumers with greater choice in the way government funding can be spent. Australia has already taken the first step, with the introduction of recent Consumer Directed Care reforms.

Greater competition will incentivise service providers to provide more value to consumers of care, and pursue efficiencies in the delivery of care. This will not only lower the cost of formal care (making it a more sustainable alternative to unpaid care), but also drive the commercialisation of digital services that can support informal carers.

Aged care service providers must embrace IoT and machine learning applications for aged care

The IoT and artificial intelligence have potential to transform the way that informal care is delivered, supporting individual carers and ensuring the long-term sustainability of informal care. Leveraging technology solutions developed in other industries, the IoT and artificial intelligence could be used to:

- Support older people to live at home, reducing the demand for informal care,
- Automate elements of the caring role, supporting working carers to deliver care more efficiently, and
- Provide carers with peace of mind, lowering levels of stress and anxiety.

A future IoT and AI driven service

Imagine your father boils water at 2:43AM and again at 3:17AM. This is not entirely unusual for your dad, who often has a cup of tea after working late on his computer. However, a machine learning program assesses this in conjunction with the large number of lights that have been left on in the house, the fact that the computer hasn't been used all evening and knowledge that your dad made toast half an hour earlier. Further analysis against population data suggests that this combination of anomalies could be associated with a loss of sense of time, an early symptom of dementia. It isn't difficult to imagine a future where a program would then review your calendar against available appointments with your father's GP, and make a tentative booking on your behalf.

Technology companies must become 'age-literate'.

Technology companies have traditionally focussed on younger consumers, regarding them as 'early adopters'. This is symptomatic of broader and pervasive ageism, which disregards older people as contributors and consumers. Additionally, there is a significant underrepresentation of older people in the technology industry workforce, which is likely to reduce the industry's

understanding of older people's wants and needs, and capability to design solutions that accommodate these (41).

The growing business opportunity to serve older people in the UK and Australia means that technology companies should invest in becoming age-literate. This can be achieved by developing a more age-diverse workforce and engaging older people early in the design process.