

# going <sup>the</sup> distance...

*Working longer,  
living healthier.*



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# Foreword

The trends and forecasts are clear – Australians will continue to live longer. We now have one of the highest life expectancies in countries among the OECD, and it's expected to increase well into the nineties over the next 40 years.

On the surface, longer life expectancy is welcome news. It means we'll have more time to pursue the things we're passionate about, whether it's spending more time with family, travelling the world or contributing to a cause.

The catch is that longer retirements cost more, and at present, the reality is that the majority of Australians won't have enough savings to live comfortably in retirement.

So it's likely we will have to work longer to save more for a longer retirement. At the very least, some of us may need to stay in the workforce until we qualify for the Age Pension, which is proposed to rise to 70 years by 2035.

The thought of staying in the workforce longer won't be welcome news for many people. It raises some confronting questions, in particular, whether Australians will be healthy enough to keep working until they're 70.

This report answers this question and the key insight is that as a nation we must think carefully about our approach to the later years of working life.

Reaching a certain age shouldn't mean we need to leave the workforce entirely. Rather, retirement should be a transition phase with reduced levels of work that gives us more time to focus on our health and wellbeing.

Funding ourselves through these transitions is important, but so too is our health and the ability to continue to actively contribute through work or volunteering.

There is an important role employers can play to help re-design the workplace of the future so that older workers can stay at work for longer and transition to retirement in a way that suits them, while building wealth and income along the way.

Not only does this provide more options for older Australians to save more for retirement, but also helps the nation harness the skills and knowledge that would otherwise leave the workforce. Doing this is good for Australians, and good for Australia.

So while there is work to do in making the workforce more adaptable for a transition to retirement, it also raises the question for each of us – how healthy will we be in the later years of our working life?



**Paul Sainsbury**  
Chief Customer Officer  
AMP

# Introduction

Australians are living longer than ever, with life expectancy rates now over 80 for both men and women. While living longer gives us more time to pursue our hobbies and spend time with loved-ones, funding our retirement is becoming an increasing issue.

More years in retirement places strain on our superannuation balances – for many it means we will need to work longer to save more for our retirement or until we qualify for the Age Pension, proposed to rise to 70 years of age.

Older Australians have had access to the Age Pension since the early 1900s and its purpose has remained unchanged from that of 100 years ago. It provides income support and access to a range of concessions for eligible older Australians.

In recent years, the qualifying age for the Age Pension has come under intense scrutiny by the Australian Government with a number of changes being introduced. The pension age for men and women born from 1 July 1952 onwards will be gradually increased from 65 to 67 over the next eight years (Table 1).

In the 2014–15 Budget, Treasurer Joe Hockey announced a budget measure to further increase the pension age from 67 to 70 years. If legislated, this measure will gradually increase the pension eligibility age by six months every two years between 1 July 2025 and 1 July 2035 when the Age Pension qualifying age will reach 70.

**Table 1** Increases in the qualifying age for the Age Pension

| Date of birth                   | Qualifying pension age | Date pension age changes |
|---------------------------------|------------------------|--------------------------|
| Before 1 July 1952              | 65 years               | N/A                      |
| 1 July 1952 to 31 December 1953 | 65 years and 6 months  | 1 July 2017              |
| 1 January 1954 to 30 June 1955  | 66 years               | 1 July 2019              |
| 1 July 1955 to 31 December 1956 | 66 years and 6 months  | 1 July 2021              |
| 1 January 1957 onwards          | 67 years               | 1 July 2023              |

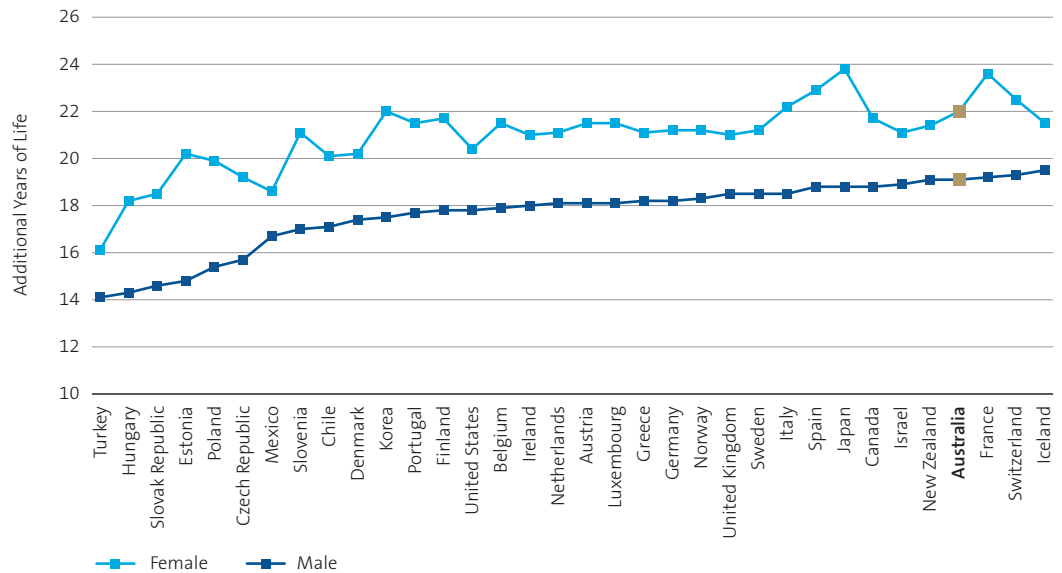
Source: [www.humanservices.gov.au/customer/services/centrelink/age-pension](http://www.humanservices.gov.au/customer/services/centrelink/age-pension); [www.dss.gov.au/our-responsibilities/seniors/benefits-payments/age-pension](http://www.dss.gov.au/our-responsibilities/seniors/benefits-payments/age-pension)

The idea of working longer to qualify for the Age Pension is not likely to be welcome news for many Australians, but as life expectancy continues to grow, Australians will inevitably need extra income to support themselves.

The good news is that Australians enjoy high life expectancy by international standards. Australian men currently aged 65 years can expect to live to 84.8 and women to 87.4 years (ABS, 2014). This ranks Australia fourth-equal for men and sixth for women among 34 Organisation for Economic Co-operation and Development (OECD) countries in 'residual life expectancy at age 65' (Figure 1).

More years in retirement places strain on our superannuation

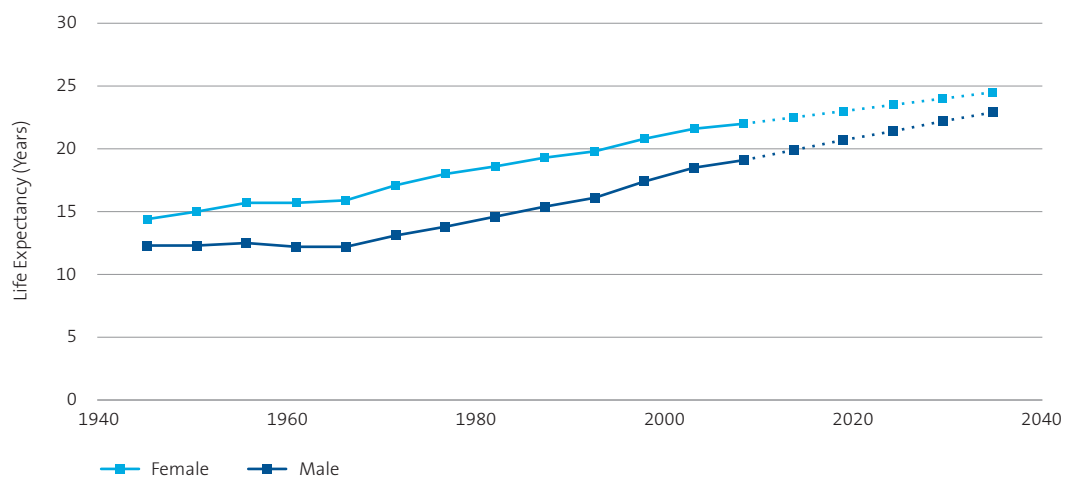
Figure 1 Life expectancy at age 65 years in OECD countries, 2012



Source: OECD Health Statistics Dataset

Trends over the past decade in life expectancy can be used to look forward to 2035 when the pension qualifying age of 70 is planned to be introduced. Men aged 65 years in 2035 might expect to live another 22.7 years (a life expectancy of 87.7 years) and women another 24.4 (life expectancy of 89.4 years).<sup>1</sup>

Figure 2 Increases in residual life expectancy for Australians at age 65 years



Source: ABS Australian Historical Population Statistics, 2014 and authors' calculations.

Of those people in the 65–69 year age group, about 57 per cent of men and 67 per cent of women receive the Age Pension, in part or full. By 2035, will older Australians have accumulated sufficient superannuation and private savings to financially support themselves until they are eligible for the Age Pension? If not, will they be able to work until they are 70?

<sup>1</sup> These life expectancies have been calculated using a natural logarithmic trend-line. These life expectancies are 1.6 years less for males and 2.1 years less for females compared to those presented in the 2015 Intergenerational Report – see Technical Notes.

Labour force participation of older Australians has increased from 32 per cent in 1979 to 54 per cent in 2014

# The older working age population and the labour market

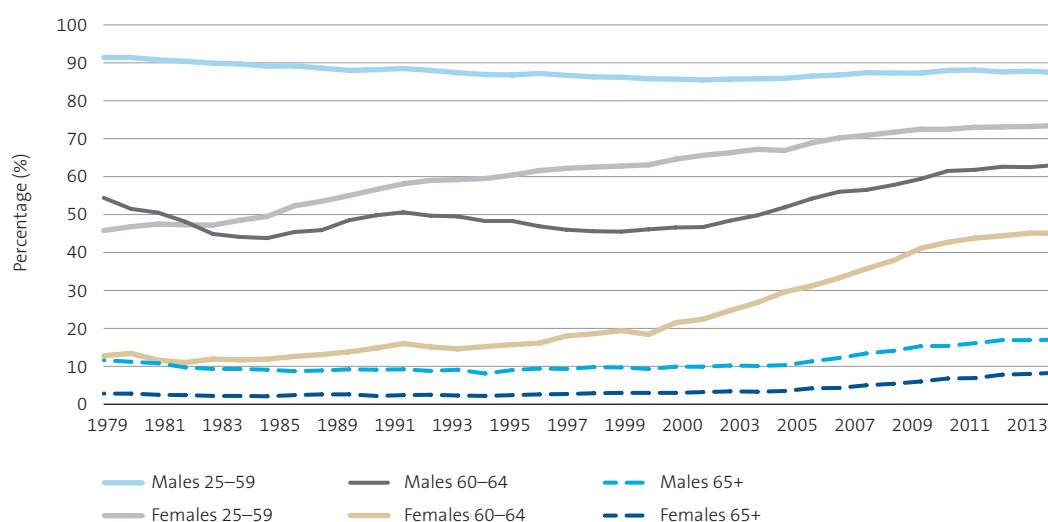
Australians are retiring earlier than expected

## Labour force patterns and trends

The labour force participation rate of Australians aged 60–64 years has increased from 32.7 per cent in 1979 to 54 per cent in 2014 and almost doubled from 6.3 per cent to 12.3 per cent for those aged 65 years or over in this three-decade period (Figure 3).

These rates have grown faster than the younger group of 25–59 years whose participation has increased by only 1.2 times. When looking at gender, it's interesting that female labour force participation in the 60–64 year age group has increased significantly – at more than three times between 1979–2014.

Figure 3 Trends in labour force participation rates by sex, 1979–2014



Source: ABS, *Labour Force Survey*, 2014  
 Note: Monthly data is smoothed to yearly average

The Northern Territory (NT), Western Australia (WA) and the Australian Capital Territory (ACT) have higher labour force participation rates, including for people in their sixties, than in the other states (Table 2).

This may reflect the specific nature of the labour markets in these jurisdictions such as the strength of the public sector in the ACT, and the strong mining economy in recent years in Western Australia and the Northern Territory.

A gender gap in participation rates widens with age, ranging from around 13 percentage points (in 25–59 age group on average) to around 15 percentage points in the 65–69 age group on average. This shows labour force participation rates for men and women vary and that Australian women may experience increasing barriers to work as they age.



Table 2 Labour force participation rate (%) and state of residence, 2014

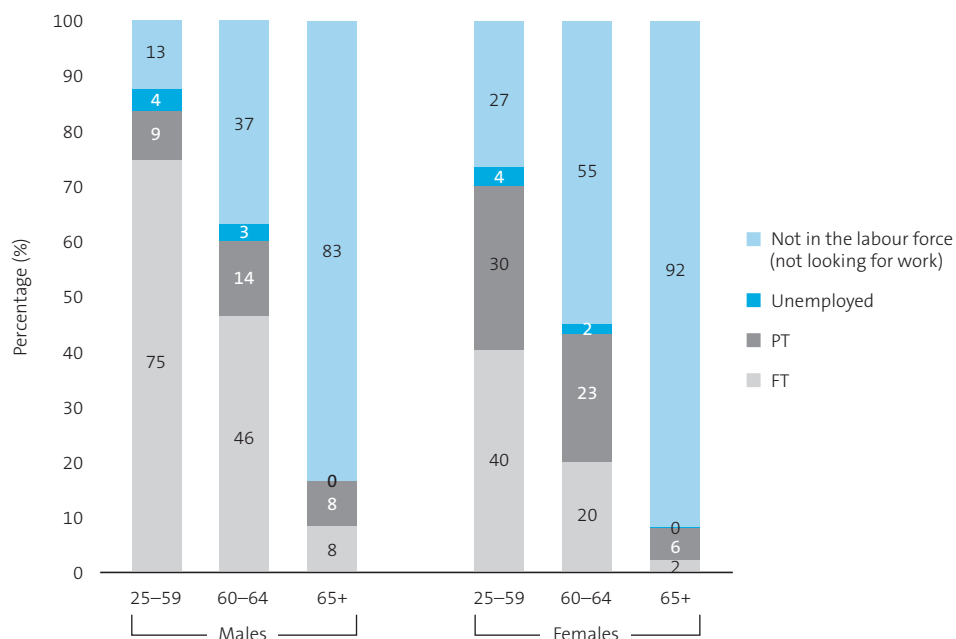
| Age group (years) | State/Territory | Gender |         |
|-------------------|-----------------|--------|---------|
|                   |                 | Males  | Females |
| 60–64             | NSW             | 60.2   | 43.2    |
|                   | VIC             | 65.2   | 45.4    |
|                   | QLD             | 63.0   | 43.2    |
|                   | SA              | 62.3   | 47.2    |
|                   | WA              | 68.6   | 50.1    |
|                   | TAS             | 53.8   | 44.0    |
|                   | NT              | 72.9   | 64.1    |
|                   | ACT             | 70.7   | 51.9    |
| 65–69             | NSW             | 29.2   | 18.9    |
|                   | VIC             | 36.0   | 19.9    |
|                   | QLD             | 30.5   | 18.5    |
|                   | SA              | 31.1   | 17.9    |
|                   | WA              | 39.7   | 22.8    |
|                   | TAS             | 31.2   | 19.2    |
|                   | NT              | 52.4   | 32.7    |
|                   | ACT             | 38.2   | 21.8    |

Source: ABS, Labour Force Survey, 2014

As expected, most men (83 per cent) and women (92 per cent) older than 65 no longer work (Figure 4). This is a significant decline from people aged 60–64, where 60 per cent of men and more than 40 per cent of women are still employed.

On average, older Australians are retiring earlier than expected, and few are still actively participating in paid employment in their sixties (Figure 4). For Australians who have retired in the last five years, the average age of retirement is 63.3 years for men and 59.6 years for women. This means Australians are retiring well before the current Age Pension qualifying age of 65 years.

Figure 4 Labour force status and sex, 2014



Source: ABS, *Labour Force Survey*, 2014

Among those people still employed there has been a shift from full-time to part-time employment as they age.

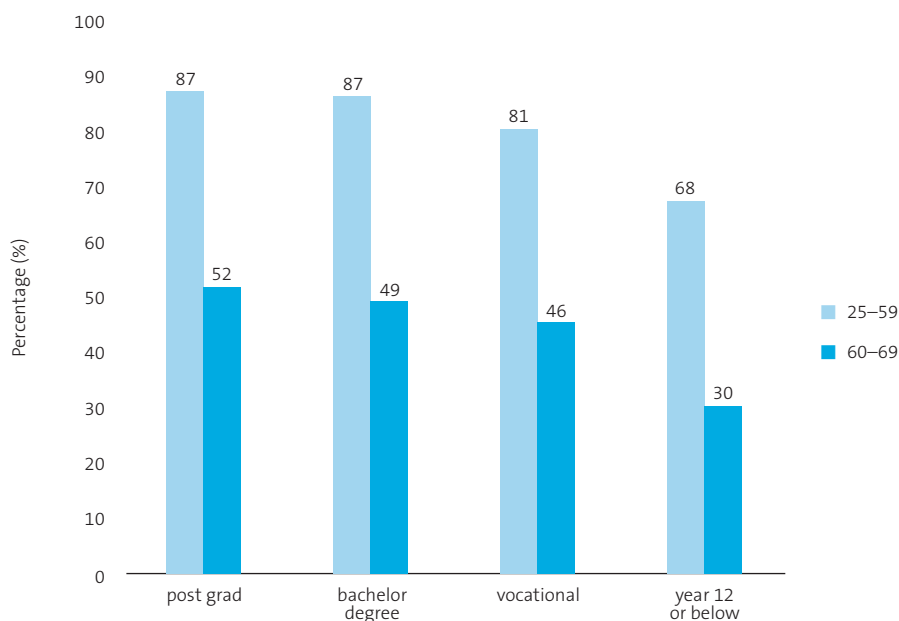
The proportion of employed men who work part-time increases from 9 per cent for those under 60 to 14 per cent for those aged 60–64 years. The majority of women (53.5 per cent) aged 60–64 work part-time, however it decreases to 31.7 per cent for those over age 65, largely due to people exiting the workforce.

### Socio-economic characteristics of employed older people

There are a number of socio-economic factors that influence whether older Australians stay in the workforce. People with tertiary qualifications are more likely to be employed at older ages with half of those aged 60–69 years with post-school qualifications still employed compared to only around 30 per cent whose highest educational level is year 12 or below (Figure 5).

Not only is educational attainment an influence on people staying in the workforce, but also the socio-economic status of the area in which people live. Older people who live in areas with the highest socio-economic ranking (the top one-fifth of the ABS Index of Relative Socio-economic Disadvantage areas) are more likely to be employed compared to those who live in the most disadvantaged areas.

Figure 5 Employment status and level of educational attainment, 2013



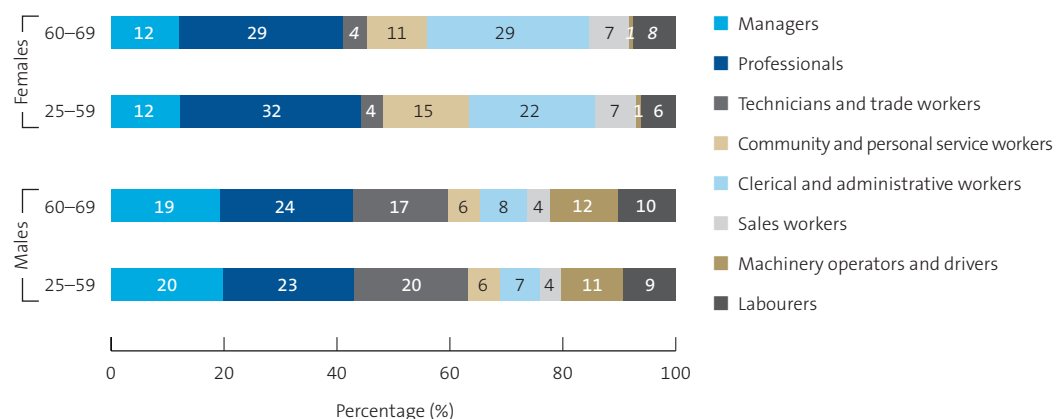
Source: NATSEM calculations from HILDA, wave 13 unit record data.  
 Note: Excluding those who have not education, due to small sample size. Employed covers those who work full-time and part-time. Not employed covers those who are unemployed and not in the labour force.

### Jobs and mature age workers

Around 24 per cent of men and 29 per cent of women aged 60–69 years who are employed work as professionals (Figure 6). This is the most common occupation for older male workers, while for female workers aged 60–69 years, this is shared with clerical and administrative jobs.

The second most common occupation for men is managers, with almost one in five (19 per cent) men aged 60–69 years working in this category. Compared to the younger generation aged 25–59 years who are more likely to be managers, older men are more likely to be employed in the higher skilled occupations, such as machinery operators and drivers.

Figure 6 Employment by occupation (%), 2013



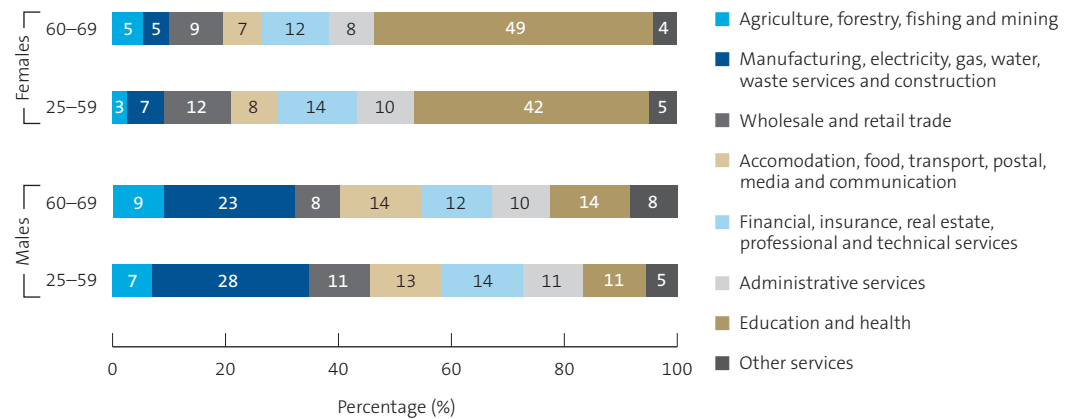
Source: NATSEM calculations from HILDA, wave 13 unit record data.  
 Note: Figures in italics are based on small sample size.

## Flexible working is most important to older workers

The industry sectors that employ the most men are manufacturing, electricity and construction with one in four men aged 60–69 working in these sectors. The education and health sectors dominate the employment of women with almost half of women in the older age group working in these two industries (Figure 7).

Comparing with the younger age group, the share of men employed in manufacturing, electricity and construction is lower for older men. For females the proportion of older people in the education and health sectors is higher. Education and health are also popular industry sectors for older men, with around 14 per cent employed in these sectors.

Figure 7 Employment by industry (%), 2013



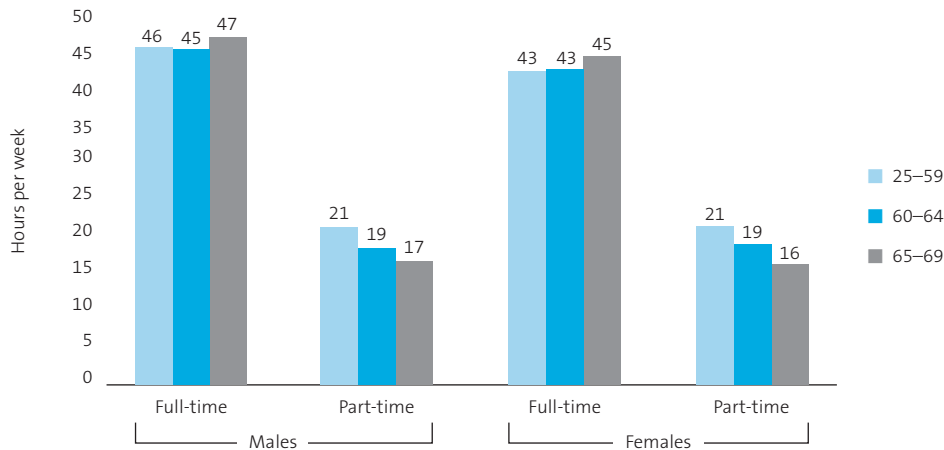
Source: NATSEM calculations from HILDA, wave 13 unit record data.  
Note: Some industries are aggregated due to small sample size.

The number of people who are employers or self-employed is higher for those aged over 60. The proportion of women with this status almost doubles from eight per cent among the 25–59 year age group to 15 per cent among those aged 60–69 years and more than doubles for men, from 11 per cent among the 25–59 year olds to 24 per cent for those aged 60–69 years.

Despite smaller proportions of men and women aged in their sixties being employed, if they are still in paid employment then they spend a higher number of hours working per week. This is particularly so among the 65–69 age who work full-time, compared with those under the age of 60 (Figure 8).

Older men aged 65–69 report they work around 47 hours per week full-time, slightly higher than the younger age group. A similar trend is also found among women aged 65–69 years who work full-time (Figure 8). This may link to the type of occupations older workers are employed in, with high proportions working as managers and professionals.

Figure 8 Employment by full-time or part-time status and hours of work per week, 2013



Source: NATSEM calculations from HILDA, wave 13 unit record data.

### Job suitability and satisfaction for older workers

As people age, the types of jobs they are able to perform may need to change to match their ability. While supply factors, such as human capital, may play a stronger role in determining the nature of the labour force participation of younger workers, in older ages, this may be less important.

Based on work by Johnson et al. 2007 and selected indicators on job attributes using HILDA survey data (see Technical Notes) the job attributes considered most important to older workers include:

- i) Flexible working arrangements (eg flexible working times, reduced working hours),
- ii) Job requirements (eg whether a job requires hard physical efforts, good eyesight, intense concentration or the intensive use of a computer, the employee to work fast or is complex),
- iii) The work environment (eg level of difficulty and the level of job autonomy) and
- iv) Work enjoyment (eg satisfaction with the job, or work relationship with co-workers).

What is evident is that job quality and a job that fits with employee’s needs and preferences are very important in contributing to the quality of life of older workers. This may influence their decision to stay in the workforce longer.

Job satisfaction also increases as the person gets older regardless of whether they work full-time or part-time. This may indicate that those who stay in paid work later in life are those who enjoy their work (Table 3).

Younger men (25–59 years) who work full-time have higher job satisfaction on average than those working part-time, while for men aged 60 or above, job satisfaction is higher for those who work part-time. For women, working part-time always relates to higher job satisfaction on average than those who work full-time.

In addition, older workers are more prone to barriers to participation in the labour market. One of the findings of the Australian Human Rights Commission Report (2015) on age discrimination in the workplace is that around a third of people aged between 55–59 years and a fifth of people aged 65 and above have experienced age discrimination.

Table 3 Employment status and job satisfaction (average score), 2013

| Age   | Males     |           | Females   |           |
|-------|-----------|-----------|-----------|-----------|
|       | Full-time | Part-time | Full-time | Part-time |
| 25–59 | 7.51      | 7.21      | 7.55      | 7.78      |
| 60–64 | 7.88      | 8.26      | 7.99      | 8.33      |
| 65–69 | 8.15      | 8.59      | 8.16      | 8.64      |

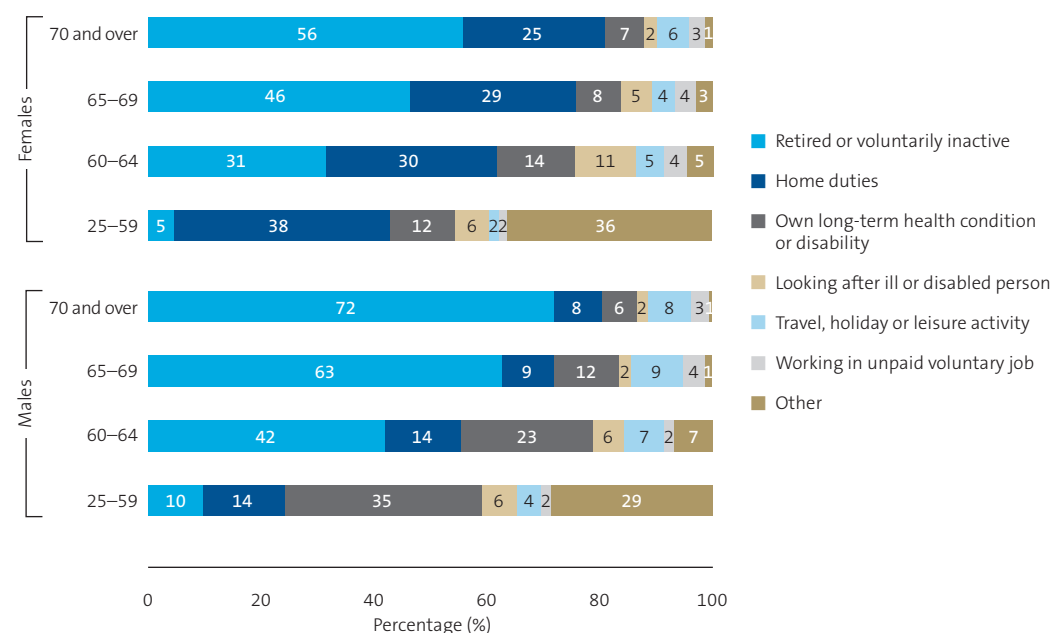
Source: NATSEM calculations from HILDA, wave 13 unit record data.  
 Note: The average score is calculated from the range of 1–10.

### What keeps older Australians busy outside the workforce?

Home duties contribute highly to the activities of those who are not in the labour force, particularly for women. Around 29 per cent of women aged 65–69 years still undertake this activity, which may include grand parenting (Figure 9).

Looking after their own health and caring for others contributes between 13–14 per cent of the main activities of both genders in the 65–69 year age group. Spending time in leisure activities, such as travelling or holidaying, is popular, particularly for men aged 60 years or above, with between 7–9 per cent of men in this age group identifying this as their main activity.

Figure 9 Main activity when not in the labour force by sex (%), 2013



Source: ABS, *Persons Not in the Labour Force*, September 2013

Australia's  
self-assessed health  
status is similar to  
that for Switzerland,  
Sweden and the  
United States

# International comparisons

Australia performs better than the OECD average for employment of older people

The majority of Australians retire earlier than the current qualifying age for the pension of 65 years (Figures 10a and 10b).<sup>2</sup>

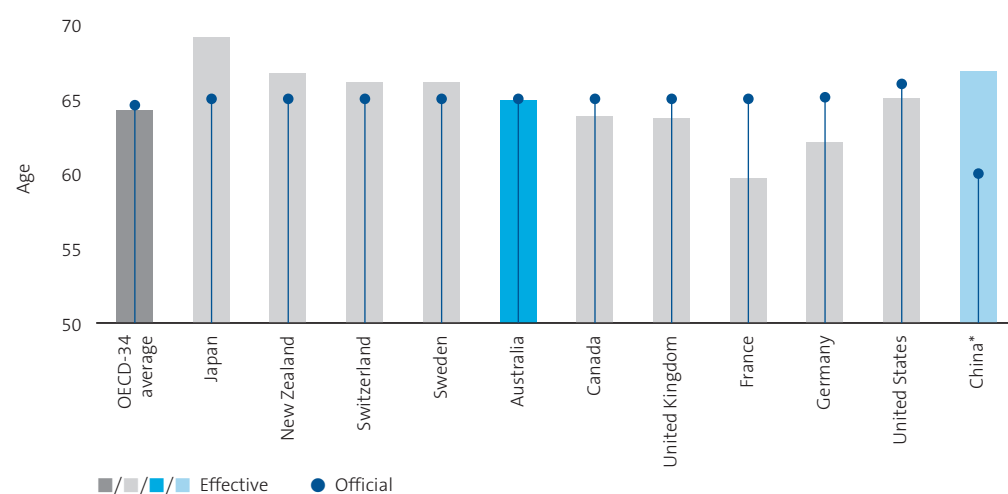
On average, men in OECD countries tend to leave the labour force at an age that is lower but close to the official retirement age. In Japan, New Zealand, Switzerland and Sweden men tend to retire later than the official retirement age.

For example, Japanese men tend to retire four years later than the official retirement age. Chinese men also tend to retire seven years after the official retirement age. This is often the case in countries where there is a high demand for labour, a skills shortage or increased share of work is knowledge-based rather than being manually demanding. As a result, older people remain in the workforce for longer due to the increase in job opportunities.

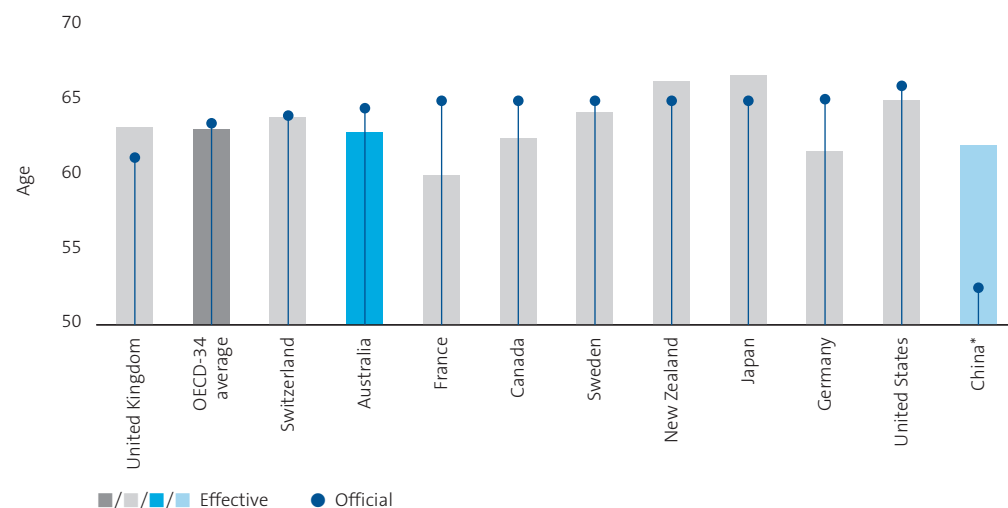
Similar patterns also hold for women, where older working women in some countries retire later than the official retirement age. This phenomenon happens again in countries such as Japan, New Zealand and the United Kingdom.

Figure 10 Average retirement age of Australia vs. other selected countries

**a. Males, 2007–2012**



**b. Females, 2007–2012**

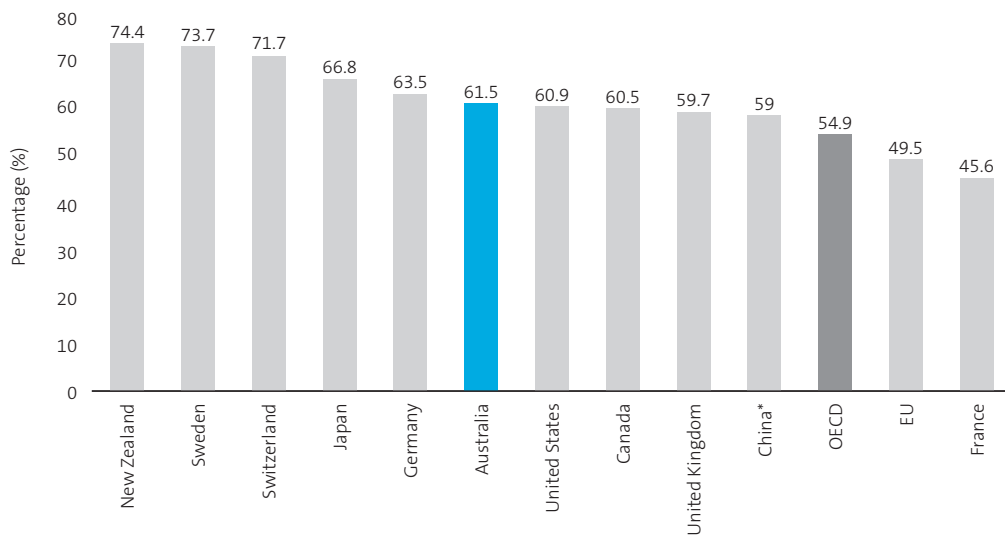


Source: OECD, *Pensions at a Glance (2013)* and *Ageing and Employment Policies – Statistics on average effective age of retirement (2013)*  
 Note: \* refers to 2010 figure



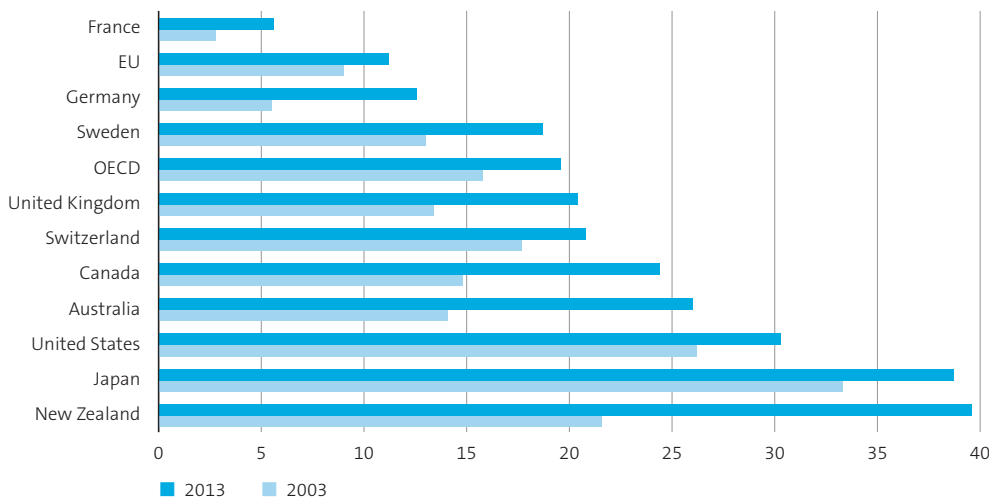
Compared to OECD countries (Figure 11), Australia performs better than the OECD average and EU for the employment rate of people aged 55–64 years. Japan and New Zealand still record high employment rates of mature-aged workers. Alongside increased demand for labour since the mid-1990s, a range of factors contribute to the high rates of mature age labour force participation seen in a number of countries, including improvements in education, health and working conditions (Australian Law Reform Commission, 2013; Retirement and Policy Research Centre, 2014).

**Figure 11 Employment rate (%) for Australia vs. other selected countries, people aged 55–64 years, 2013**



Source: OECD, *Older Workers Scoreboard, 2014; Factbook, 2014*  
 Note: \* refers to 2012 figure

**Figure 12 Employment rate (%) for Australia vs. other selected countries, people aged 65–69 years**



Source: OECD, *Older Workers Scoreboard, 2014*  
 Note: Data on China for this age group is not available

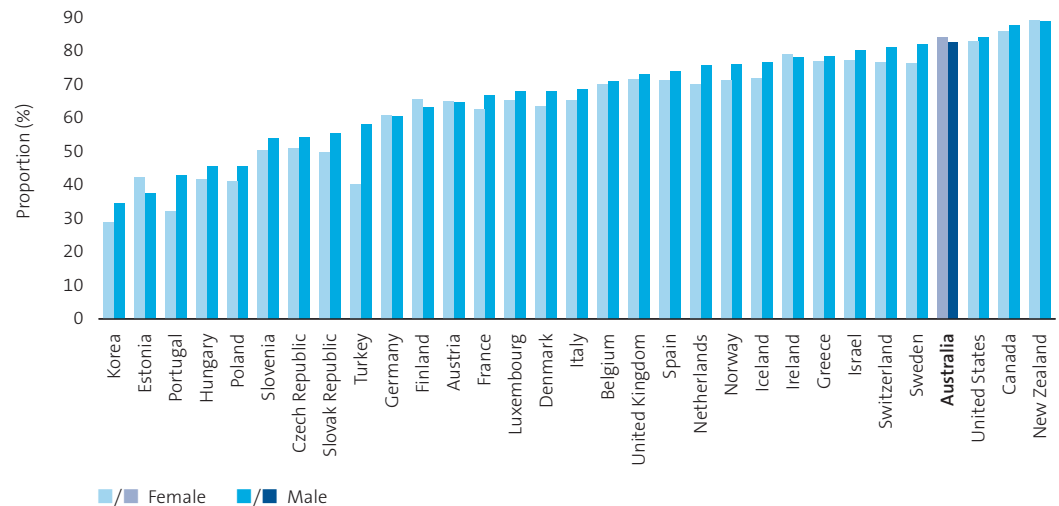
2 The average effective age of retirement is defined as the average age of exit from the labour force during a 5-year period for those whose age is 40 years and above while the official age corresponds to the age at which a pension can be received irrespective of whether a worker has a long insurance record of years of contributions (OECD 2013, indicator 3.8). Therefore there are differences in terms of the average age of the retirement for Australia presented in this section which adopts the average effective age, with the figure presented earlier in Section 1 which adopts different definition.

For men aged 45–64 years, Australia’s self-assessed health status is similar to that for Switzerland, Sweden and the United States – the former two having labour force participation rates higher than those in Australia. However, in this age group and even more so for the 65+ group, Australia is significantly out-ranked in health status by Canada, the US and New Zealand.

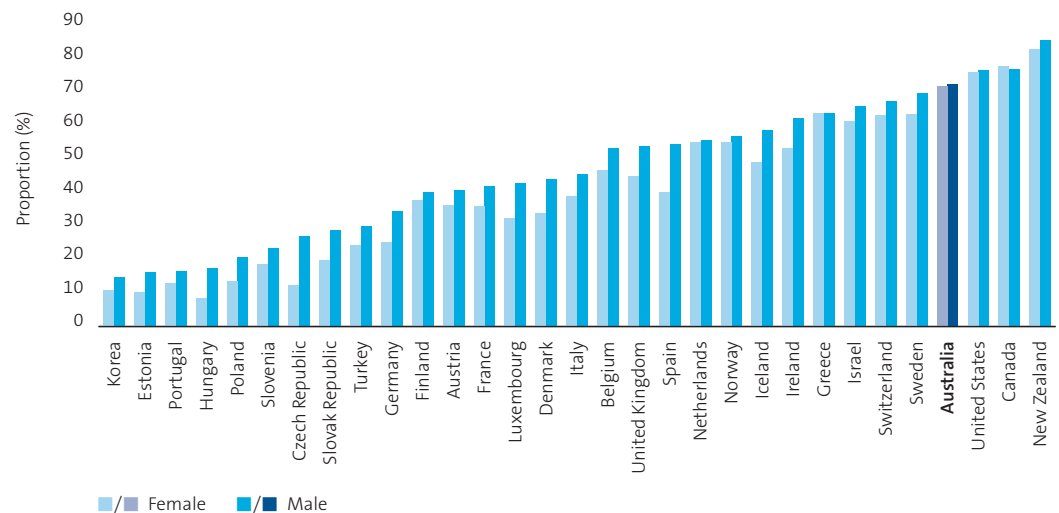
In New Zealand, 82.9 per cent of women and 85.5 per cent of men aged over 65 perceive their health status to be good or better. This is 11.2 and 13.0 percentage points higher than the rates reported by Australians. This is similar to Japan, where around 82 per cent of 50–75 year olds reported their health as good, very good or excellent.

Figure 13 Proportion of people (%) in OECD countries reporting good, very good or excellent self-assessed health status, 2011–2012

a. Persons aged 45–64 years



b. Persons aged 65 years or above



Source: OECD Health Statistics Dataset

80 per cent of  
Australians aged  
60–64 rank their  
health as being  
good, very good  
or excellent

# The health of Australians aged in their sixties

Women aged 60–64 in very good or excellent health are three times more likely to be working

The health status of Australians aged in their sixties impacts their likely participation in the workforce. Australia's 2011–12 National Health Survey (Table 4) shows 80 per cent of Australians aged 60–64 rank their health as being good, very good or excellent, and over 75 per cent of 65–69 year olds. This means that more than one in five aged 60–64 rank their health as only fair or poor.

People with very good or excellent health have a much higher chance of being in paid work than those ranking their health as fair or poor (Figure 14).

Men aged 60–64 years with very good or excellent health are more than twice as likely to be in the workforce compared to those with fair or poor health (72.2 per cent vs 34.8 per cent) and men aged 65–69 years are nearly twice as likely (41.5 per cent vs 22.5 per cent) (Figure 14).

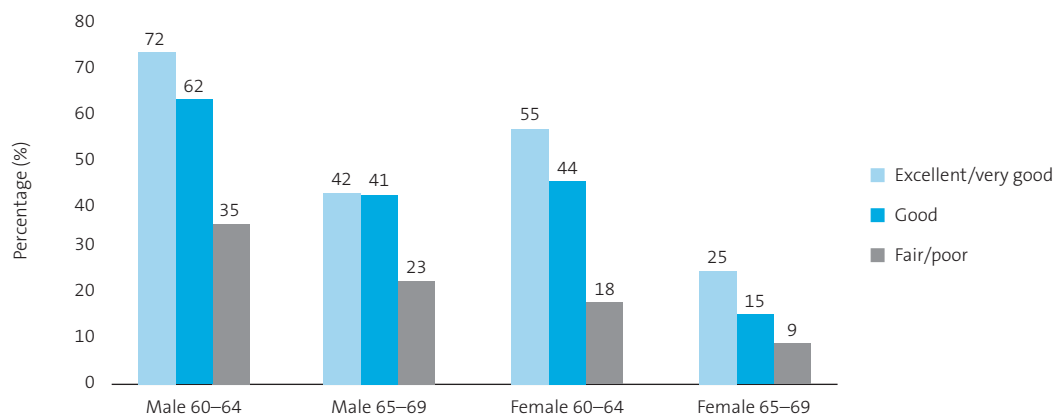
The health gap in employment for women is even higher than that for men. Women aged 60–64 years in very good or excellent health are three times more likely to be working than those in fair or poor health (55.4 per cent vs 17.8 per cent) and older women aged 65–69 years nearly three times as likely (24.7 per cent vs 8.9 per cent).

Table 4 Health status by employment status, age and gender (%) (2012)

|                             | Employed full-time |        | Employed part-time |        | Unemployed/not in the labour force |        | All  |        |
|-----------------------------|--------------------|--------|--------------------|--------|------------------------------------|--------|------|--------|
|                             | Male               | Female | Male               | Female | Male                               | Female | Male | Female |
| <b>60–64 year age group</b> |                    |        |                    |        |                                    |        |      |        |
| Excellent/very good         | 59.2               | 58.6   | 47.0               | 57.2   | 34.7                               | 36.8   | 46.9 | 46.1   |
| Good                        | 32.0               | 32.5   | 33.8               | 35.5   | 31.8                               | 34.3   | 33.3 | 34.3   |
| Fair/poor                   | 8.8                | 8.9    | 19.2               | 7.3    | 33.4                               | 28.9   | 19.7 | 19.6   |
| <b>65–69 year age group</b> |                    |        |                    |        |                                    |        |      |        |
| Excellent/very good         | 51.6               | 67.5   | 53.3               | 61.3   | 43.4                               | 42.6   | 46.7 | 46.4   |
| Good                        | 31.1               | 21.9   | 36.8               | 25.9   | 28.3                               | 30.2   | 30.3 | 29.2   |
| Fair/Poor                   | 17.3               | 10.6   | 9.9                | 12.8   | 28.4                               | 27.2   | 23.1 | 24.4   |

Source: ABS Tablebuilder 2011–12 National Health Survey

Figure 14 Proportion employed either full or part-time by health status (2011–12)



Source: ABS Tablebuilder 2011–12 National Health Survey.

Long-term health conditions impact the ability of Australians aged in their sixties to work (Table 5).

With the exception of cancer in women, the prevalence of long-term health conditions is higher in people working part-time or not working. Cardiovascular disease affects one in every two Australians aged 60–69 years, but it’s mental illness that seems to have the greatest impact on workforce participation.

Mental health problems are nearly three times higher in men aged 60–69 years working part-time and more than double in men not in the labour force compared to the prevalence rate in men working full-time. Mental illness also impacts heavily on women, although the ratios are lower. In addition, diabetes seems to be strongly related to the workforce status of older women.

**Table 5 Prevalence of the six most common long-term health conditions impacting on the employment of persons aged 60–69 years (2012)**

|                        | Prevalence rate (%)<br>employed full-time |        | Prevalence ratio*<br>employed part-time |        | Prevalence ratio<br>not in the labour force** |        |
|------------------------|---|--------|---|--------|---|--------|
|                        | Male                                      | Female | Male                                    | Female | Male  | Female |
| Cardiovascular disease | 56.9                                      | 50.4   | 1.2                                     | 1.1    | 1.1   | 1.3    |
| Arthritis              | 28.3                                      | 35.1   | 1.7                                     | 1.2    | 1.2   | 1.6    |
| Cancer                 | 27.5                                      | 30.0   | 1.6                                     | 0.9    | 1.2   | 0.9    |
| Diabetes               | 18.0                                      | 7.9    | 1.2                                     | 1.8    | 1.5   | 2.7    |
| Asthma                 | 11.4                                      | 17.2   | 2.5                                     | 1.3    | 1.5   | 1.2    |
| Mental health problems | 8.2                                       | 10.8   | 2.9                                     | 1.5    | 2.2   | 2.0    |

Source: ABS Tablebuilder 2011–12 *National Health Survey*.

Note: \* The prevalence ratio is the ratio of the prevalence rates for those employed part-time or not in the work force to the prevalence rates for those employed full-time.

\*\* Includes those who were unemployed.

Health is a  
key determinant  
of workforce  
participation in  
mature age workers

# Transitions in health

## Changes in health status of Australians as they age from 60 to 70 years

Health is a key determinant of workforce participation in mature aged workers, and therefore in their ability to accumulate superannuation and private savings to fund retirement.

### 1. Ageing from 60 to 65 years

On average, 51 per cent of men and women reported the same health status when they were 60 and 65 years of age – the exception being those in excellent health when they were 60 years of age (Table 6).

For those in excellent health when they were 60, only 40 per cent said they had very good health by the time they reached their 65th birthday.

Of those people reporting their health status as very good at age 60, a third reported their health status at age 65 had dropped to good. This shows a gradual deterioration in health status between 60 and 65 years of age.

While some people experience a decline in their health, many individuals also improved. Around a third of those in fair health in 2001–03 reported a better health status in 2006–08, and nearly half of those with poor self-assessed health (Table 6).

Table 6 Five year transitions in self-assessed health status from 60 to 65 years of age (%)

a. Males

| Health status at age 60 years (2001–3) | Health status at age 65 years (2006–8) |           |      |      |      |
|--|--|-----------|------|------|------|
|  | Excellent                              | Very good | Good | Fair | Poor |
| Excellent                              | 41.6                                   | 43.2      | 13.0 | 1.8  | 0.4  |
| Very good                              | 8.1                                    | 50.9      | 35.4 | 5.0  | 0.7  |
| Good                                   | 1.4                                    | 18.6      | 59.6 | 18.7 | 1.7  |
| Fair                                   | 0.4                                    | 3.9       | 27.1 | 55.7 | 13.0 |
| Poor                                   | 0.1                                    | 1.2       | 7.9  | 38.7 | 52.0 |

b. Females

| Health status at age 60 years (2001–3) | Health status at age 65 years (2006–8) |           |      |      |      |
|--|--|-----------|------|------|------|
|  | Excellent                              | Very good | Good | Fair | Poor |
| Excellent                              | 37.3                                   | 45.9      | 13.5 | 2.8  | 0.5  |
| Very good                              | 8.1                                    | 51.6      | 34.1 | 5.6  | 0.7  |
| Good                                   | 1.7                                    | 19.7      | 58.1 | 18.3 | 2.1  |
| Fair                                   | 0.6                                    | 5.4       | 29.2 | 52.1 | 12.7 |
| Poor                                   | 0.2                                    | 2.3       | 8.7  | 34.1 | 54.7 |

Table 7 Five year transitions in self-assessed health status from 65 to 70 years of age (%)

a. Males

| Health status at age 65 years (2006–8) | Health status at age 70 years (2011–13) |           |      |      |      |
|--|---|-----------|------|------|------|
|  | Excellent                               | Very good | Good | Fair | Poor |
| Excellent                              | 31.7                                    | 54.6      | 12.6 | 1.1  | 0.1  |
| Very good                              | 8.2                                     | 46.6      | 39.6 | 5.2  | 0.5  |
| Good                                   | 1.7                                     | 17.4      | 57.3 | 21.3 | 2.3  |
| Fair                                   | 0.2                                     | 2.7       | 26.3 | 55.1 | 15.8 |
| Poor                                   | 0.04                                    | 0.5       | 6.22 | 41.7 | 51.5 |

b. Females

| Health status at age 65 years (2006–8) | Health status at age 70 years (2011–13) |           |      |      |      |
|--|---|-----------|------|------|------|
|  | Excellent                               | Very good | Good | Fair | Poor |
| Excellent                              | 33.8                                    | 54.0      | 11.0 | 1.1  | 0.1  |
| Very good                              | 8.6                                     | 48.5      | 36.9 | 5.4  | 0.6  |
| Good                                   | 1.8                                     | 18.6      | 54.7 | 22.1 | 2.8  |
| Fair                                   | 0.3                                     | 3.5       | 28.1 | 52.4 | 15.7 |
| Poor                                   | 0.05                                    | 0.7       | 7.2  | 41.8 | 50.2 |

## 2. Ageing from 65 to 70 years

As people age from 65 to 70 years, greater proportions of individuals shifted into lower levels of health (Table 7). Although having the same health status at 70 years of age as at 65 years of age was the most common occurrence, fewer people maintained or improved their health status compared with the previous five years (Table 8).

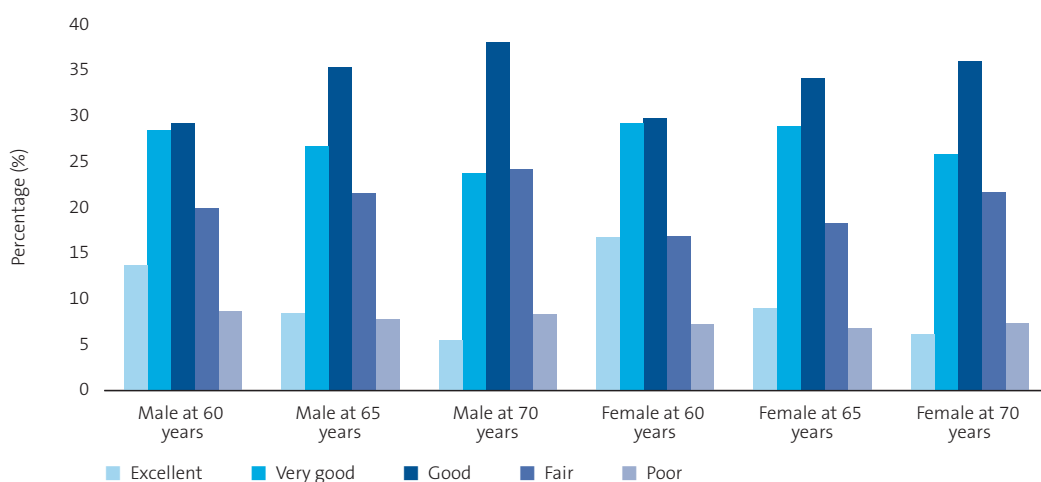
The most noticeable change occurs in the number of men reporting that they maintained excellent health as they aged. There were nearly 10 per cent fewer men staying in excellent health as they aged from 65 to 70 years compared with when they aged from 60 to 65 years.

The overall outcome of these transitions in health between 60 and 70 years of age is shown in Figure 15.

Table 8 Proportion of individuals maintaining or improving their health status as they age

| Health status at starting age | Male               |                    | Female             |                    |
|-------------------------------|--------------------|--------------------|--------------------|--------------------|
|                               | 60 to 65 years (%) | 65 to 70 years (%) | 60 to 65 years (%) | 65 to 70 years (%) |
| Excellent                     | 41.6               | 31.7               | 37.3               | 33.8               |
| Very Good                     | 59.0               | 54.8               | 59.7               | 57.1               |
| Good                          | 79.6               | 76.4               | 79.5               | 75.1               |
| Fair                          | 87.1               | 84.3               | 87.3               | 84.3               |

Figure 15 Net effect of transitions in health from 60 to 70 years of age (2001–03 to 2011–13)



Source: Modelling using waves 1–13 of the HILDA survey.



For both men and women, good health is increasingly becoming the dominant self-assessed health status with people reporting excellent or very good health becoming less prevalent.

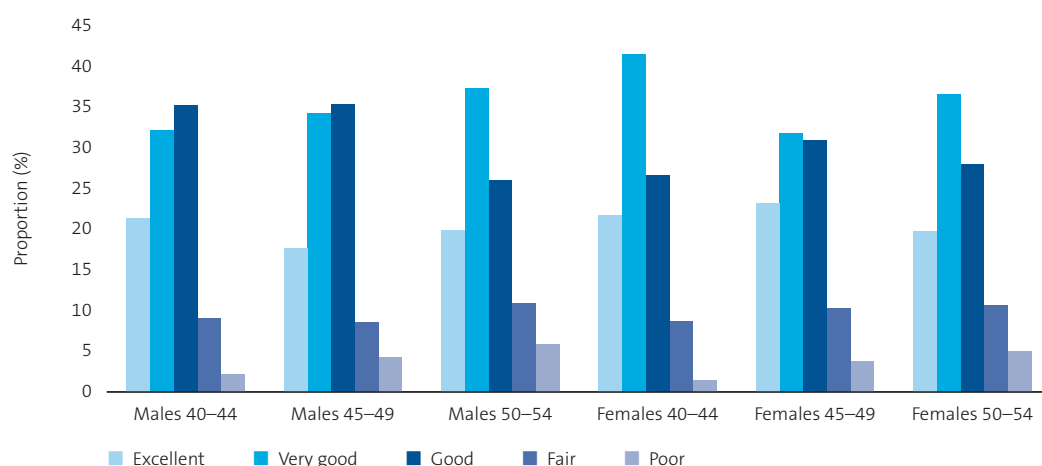
There is a rise in the proportion of people with fair health, which impacts their likelihood to be employed (Figure 14). As men aged from 60 to 70 years over the decade 2001–03 to 2011–13, the proportion identifying their health status as fair increased from 20.0 to 24.2 per cent and women 16.9 to 21.7 per cent.<sup>3</sup>

## Projected health status in 2035 of mature age Australians

There are currently around 2.38 million men and 2.42 million women aged 40–54 years living in Australia (ABS, 2013). These people overwhelmingly enjoy good to excellent health with fewer than one in six ranking their health as fair or poor (Figure 16).

But, what will the health status of these Australians be in 2035 when they are 20 years older, and may have to work until they are 70 before they can qualify for the age pension? The method used to model future health status is explained in the Technical Notes.

Figure 16 Health status of Australians aged 40–54 years in 2015



Source: ABS 2011–12 National Health Survey

As people age from their forties into their sixties, not unexpectedly, their health status changes (Tables 9 and 10).

### Transition in health status from 2015 to 2035 for males aged 40–55 years in 2015

- By 2035, on average only one in three Australian men currently in their forties or early fifties are likely to have the same health status when they are in their sixties.
- A male aged 40–44 years with excellent health in 2015 has a 33 per cent chance of having only good, fair or poor self-assessed health status by 2035; a 45–49 year old 34 per cent and a 50–54 year old 38 per cent.
- For men aged 40–54 years and who have very good health in 2015, health status will drop to fair or poor by 2035 for around 49 per cent of these men.

<sup>3</sup> Note these proportions do not directly align with the cross-sectional figures presented in Table 5 for the two age groups 60–64 years and 65–69 years as these are calculated for different cohorts of individuals.

Table 9 Probability of a particular health status in 2035 for males given their age and health status in 2015

| Health status in 2015 | Age in 2015 (years) | Projected health status in 2035 (age 60–74 years) |           |      |      |      |
|-----------------------|---------------------|---|-----------|------|------|------|
|                       |                     | Excellent   | Very good | Good | Fair | Poor |
| Excellent             | 40–44               | 30.8  | 36.2      | 22.2 | 8.2  | 2.6  |
|                       | 45–49               | 28.9  | 36.9      | 23.0 | 8.5  | 2.7  |
|                       | 50–54               | 24.2  | 38.0      | 25.3 | 9.5  | 3.0  |
| Very good             | 40–44               | 22.4  | 34.4      | 26.9 | 12.0 | 4.3  |
|                       | 45–49               | 20.5  | 34.5      | 27.8 | 12.6 | 4.6  |
|                       | 50–54               | 16.7  | 34.1      | 29.9 | 14.1 | 5.2  |
| Good                  | 40–44               | 13.0  | 27.4      | 31.4 | 19.3 | 8.9  |
|                       | 45–49               | 11.2  | 26.4      | 31.7 | 20.5 | 10.2 |
|                       | 50–54               | 9.0   | 25.0      | 32.6 | 22.1 | 11.3 |
| Fair                  | 40–44               | 7.5   | 19.8      | 29.9 | 25.8 | 17.1 |
|                       | 45–49               | 5.7   | 17.2      | 28.5 | 27.8 | 20.8 |
|                       | 50–54               | 4.2   | 15.0      | 27.7 | 29.3 | 23.7 |
| Poor                  | 40–44               | 3.4   | 11.2      | 22.7 | 29.8 | 32.9 |
|                       | 45–49               | 2.2   | 8.5       | 19.8 | 30.7 | 38.8 |
|                       | 50–54               | 1.7   | 7.5       | 19.0 | 30.8 | 41.0 |

#### Transition in health status from 2015 to 2035 for females aged 40–55 years in 2015

- By 2035, on average only 28 per cent of Australian women currently in their forties and early fifties are likely to have the same health status when they are in sixties.
- Women 40–54 years of age with excellent health in 2015 have the same chance as men of having only good, fair or poor self-assessed health status by 2035 (33 per cent for 40–44 year olds; 34 per cent for 45–49 year olds; and 38 per cent for 50–54 year olds).
- For women aged 40–54 years and who have very good health in 2015, their health status is expected to drop to good, fair or poor by 2035 for around 41 and 47 per cent of these women. This suggests that women in this group have a better chance of maintaining or improving their health over the next 20 years than men.

Table 10 Probability of a particular health status in 2035 for females given their age and health status in 2015

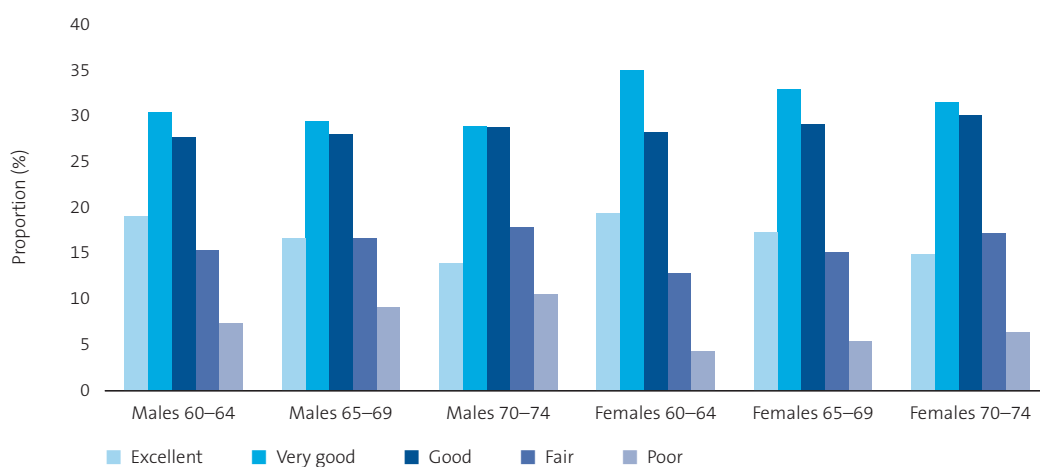
| Health status in 2015 | Age in 2015 (years) | Projected health status in 2035 (age 60–74 years) |           |      |      |      |
|-----------------------|---------------------|---|-----------|------|------|------|
|                       |                     | Excellent   | Very good | Good | Fair | Poor |
| Excellent             | 40–44               | 28.1  | 39.0      | 23.0 | 7.9  | 2.0  |
|                       | 45–49               | 26.9  | 38.6      | 23.7 | 8.6  | 2.2  |
|                       | 50–54               | 23.9  | 38.4      | 25.2 | 9.9  | 2.6  |
| Very good             | 40–44               | 21.2  | 37.6      | 27.5 | 10.8 | 3.0  |
|                       | 45–49               | 19.7  | 36.6      | 28.4 | 12.0 | 3.4  |
|                       | 50–54               | 17.1  | 35.3      | 29.7 | 13.8 | 4.0  |
| Good                  | 40–44               | 13.8  | 32.2      | 32.3 | 16.3 | 5.5  |
|                       | 45–49               | 12.5  | 30.5      | 32.7 | 18.0 | 6.2  |
|                       | 50–54               | 10.8  | 28.6      | 33.3 | 20.1 | 7.1  |
| Fair                  | 40–44               | 8.6   | 25.1      | 33.1 | 23.0 | 10.2 |
|                       | 45–49               | 7.7   | 23.1      | 32.8 | 25.1 | 11.3 |
|                       | 50–54               | 6.4   | 20.9      | 32.5 | 27.5 | 12.8 |
| Poor                  | 40–44               | 5.9   | 19.5      | 30.9 | 27.8 | 15.9 |
|                       | 45–49               | 4.7   | 16.6      | 29.4 | 30.8 | 18.5 |
|                       | 50–54               | 3.7   | 14.4      | 28.4 | 33.2 | 20.3 |

Source: Modelling using waves 1–13 of the HILDA survey.

## Projected health status of Australians aged 60–74 years in 2035

As would be expected, the research points to a decline in the number of Australians with good health as they age from their forties and early fifties to sixties and early seventies (Figure 16 and 17). The proportion expected to report fair or poor health when they are in their sixties compared to when they were in their forties increases by 90 per cent for men and 50 per cent for women.

Figure 17 Projected health status of Australians aged 60–74 years in 2035



Source: Modelling using waves 1–13 of the HILDA survey.

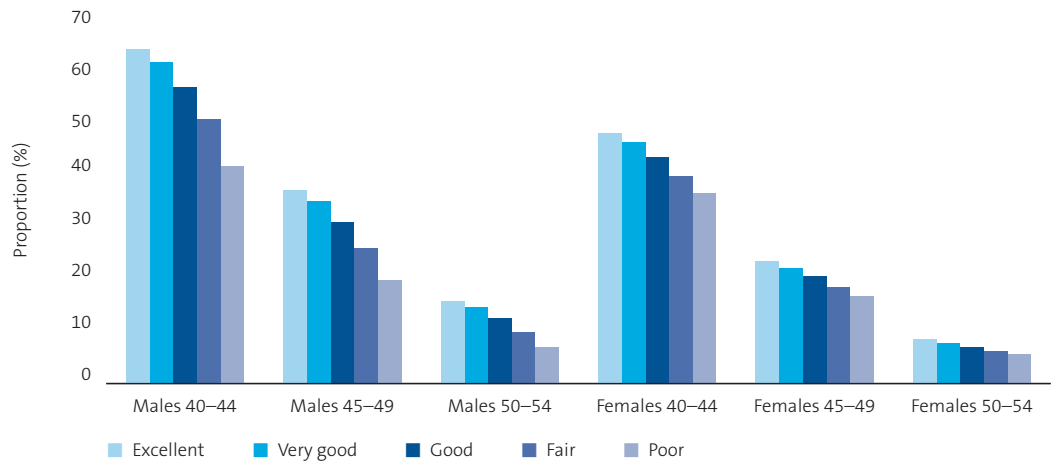
## The propensity of 60–74 year olds in 2035 to work

Modelling shows that the majority of Australians have less than a 50 per cent chance they will still be working in 2035, when they are aged between 60 and 74 years. The only exception to the rule is men currently aged 40–54 who don't have poor health. This group is more likely to still be in the workforce in 2035 (Figure 19).

The probability of being in the workforce in 20 years' time is significantly lower for females than males, and declines with both age and health. Nearly two-thirds (64.1 per cent) of men aged 40–44 years in 2015 and who have excellent health are expected to be working in 2035 when they are 60–64 years of age.

As few as 5.6 per cent of females currently aged 50–54 years and who are in poor health are expected to be in the workforce in 2035.

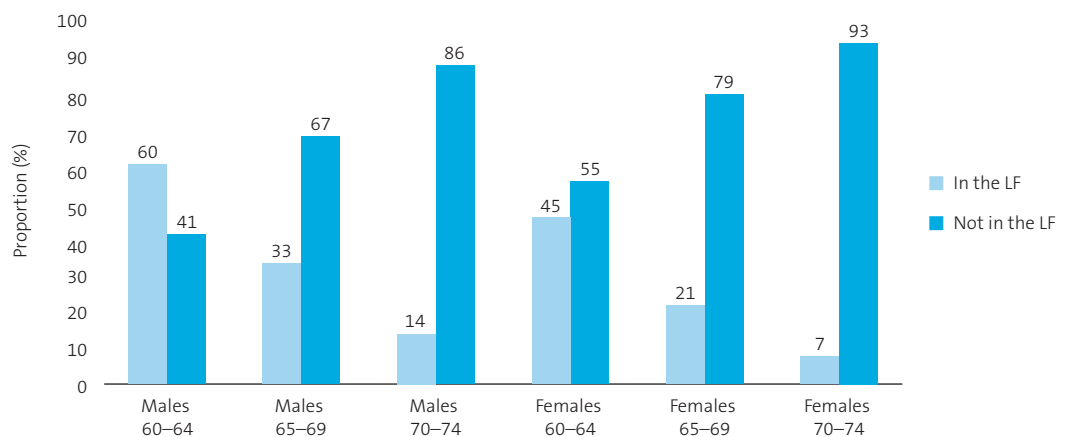
Figure 18 Proportion of population working in 2035 by age, gender and health status in 2015



Source: Modelling using waves 1–13 of the HILDA survey.

As people age over the next 20 years, it is predicted that participation in the workforce by older Australians will increase slightly compared to current levels. Participation rates for men are likely to increase by around 1 percentage point for those aged 60–69 years.<sup>4</sup> However, it's expected that there will be larger increases in workforce participation for females in this age group with rates in 2035 estimated to increase by 3 percentage points compared with those in 2015.

Figure 19 Participation in the labour force of persons aged 60–74 years in 2035



Source: Modelling using waves 1–13 of the HILDA survey; LF = labour force

4 These estimates differ from the participation rates projected by Treasury in the 2015 Intergenerational Report which also indicate increases are expected for both 60–64 and 65–69 year olds. However, a cohort method was used by Treasury to project the participation rates of older people. Changed modelling assumptions have resulted in higher projected participation rates for older people than in previous reports.

# Conclusions

In 2035, the majority of retired or unemployed Australians in their sixties will not have enough superannuation for retirement. If the pension age is raised to 70, many Australians will need to consider working longer to have an income and build more retirement savings.

The ability of Australians to work longer is directly linked to health with a much higher chance those aged over 60 will work full or part-time when they assess their health status as good, very good or excellent rather than fair or poor.

The key issue for Australia is that between 60 and 70 years of age, the proportion of people reporting fair or poor health increases. Modelling in this report predicts that in 2035, one in four men and one in five women in their sixties are expected to assess their health as fair or poor.

For those expected to be in fair or poor health, the majority (65.1 per cent) of men and more than two-thirds (72.1 per cent) of women are likely to be unemployed. It is these Australians who may struggle to participate in the workforce if the pension age is increased to 70 years.

The challenge is how the nation and employers can support future generations to remain in the workforce longer in environments that allow flexibility and the ability to transition to retirement.

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# Technical Notes

## Life expectancy at 65 years of age

The figures presented in this report are based on the ABS Australian Historical Population Statistics series, released by the ABS in September 2014. Life expectancy is given at single ages for men and women with the latest figures being for 2010–12. A simple natural logarithmic trendline was used to calculate residual life expectancy at age 65 into the future. The life expectancies presented in the 2015 Intergenerational Report were calculated using the cohort method rather the period method which is used by the ABS and in the previous Intergenerational Reports. The cohort method gives higher life expectancies in 2015 and projected forwards.

## Modelling Method

Using the shifts in health status experienced by respondents in waves 1 to 13 (2001–2013) of the Household, Income and Labour Dynamics in Australia (HILDA) survey, the likely transitions in the health status of 40–55 year olds in 2015 over the next 20 years was modelled based on their age, gender and health status in 2015. The health status progression is modelled as a non-stationary Markovian process. The estimation resembles an ordered logit model conditionally on gender and the health status five years ago. To allow for a complex pattern between age and health status, a cubic spline transformation is applied to age related variables in order to obtain smoothed nonlinear changes in transition probabilities. Technological advancement is modelled as a simple trend parameter in the underlying latent health status. All data comes from the HILDA Survey 2001–2013. The end model closely matches the observed patterns and the predicted transition probabilities are used to simulate the health progressions in Australia in the next three decades. The proportion of 60–74 year olds in 2035 who are likely to be working then was estimated based on their health status in 2015, survival to 2035, and taking into account recent trends in health status and current labour market conditions.

## HILDA data

This paper uses unit record data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey. The HILDA Survey was initiated and is funded by the Australian Government Department of Social Services (DSS), and is managed by the Melbourne Institute of Applied Economic and Social Research (Melbourne Institute). The findings and views based on these data should not be attributed to either DSS or the Melbourne Institute.

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