



Healthy, wealthy and wise?

The relationship between health, employment and earnings in Australia



AMP.NATSEM INCOME AND WEALTH REPORT
ISSUE 23 - JULY 2009

NATSEM
UNIVERSITY OF CANBERRA

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1. Foreword

Healthy, wealthy and wise?

Australians are among the most prosperous, educated and healthy people in the world and are expected to live longer than the citizens of many other developed countries. But not all Australians experience good health.

Poor health can limit people's ability to work and earn to the detriment of their financial well-being and also that of their family.

The 23rd AMP.NATSEM Income and Wealth Report, *Healthy, wealthy and wise?*, examines the extent to which poor health diminishes the rate of employment and income of working-age (25 to 64 years) men and women in Australia.

Predictably, the report found that working-age Australians in good and poor health have very different rates of labour force participation. More than half of working-age Australians who are suffering poor health are not participating in the labour force, while just under a third are in full-time employment.

So how much does poor health affect our ability to work and earn?

Australia's health profile

The report notes that Australia has the fourth highest level of human development globally when health, education, standards of living and income are taken into consideration.

People in Australia are also expected to live longer than those in other industrialised English speaking countries such as Canada, New Zealand, Ireland, the United Kingdom and the United States - with the life expectancy for men at 79 years and 83.7 years for women.

In 2005, Australia spent slightly greater than the OECD average proportion of gross domestic product (GDP) on health, just over 9 per cent, and of that, public expenditure on health accounted for 6 per cent of GDP compared to 3 per cent for private expenditure.

The health of working-age people

Among working-age Australians arthritis is the most common health condition (16.7 per cent), followed by mental and behavioural problems (10.7 per cent) and asthma (9.4 per cent). Other diseases such as diabetes, cardiovascular diseases and cancer are less common (4 per cent).

Around 84 per cent of men and women aged 25 to 64 years assessed themselves to be in good health in 2007. But the report confirms that health status deteriorates with age, with the proportion of people with good health dropping from around 90 per cent for those aged 25 to 34 years to around 75 per cent for those aged 55 to 64 years.

Health and work

For many people health issues limit the amount of work they can take on. Only 29 per cent of people in poor health are employed full-time and 17 per cent are part-time. In comparison, 61 per cent of people in good health work full-time and a further 20 per cent work part-time.

Health issues are the third most common reason that working-age Australians are not participating in the labour force. The report shows that just over one in five (21 per cent) people of working-age who are not in the labour force state illness, injury or disability as the reason.

And while Australians took more than three million days off work in 2004-2005 due to illness, 18 per cent of Australian employees did not have access to paid sick leave in 2007.

Health and income gaps

Just as health can impact a person's ability to participate in the labour force it can also impact a person's ability to earn an income.

People in poor health are more likely to source their earnings from government benefits, with only 40 per cent sourcing their incomes primarily from wages and salaries. And as people get older they are more likely to source their income from government benefits, almost 65 per cent of people aged 55 to 64 years who are in poor health have benefits as their main source of income.

The report found that the average earnings of people in poor health are \$260 a week, less than half of the average for people in good health (\$589). This income gap continues to widen with age.

Labour force participation

More than two-thirds of working-age Australians rated their health consistently highly between 2002 and 2007. But around one in 10 were often in poor health and about one in 20 were always in poor health.

Those in “persistent good health” maintained the highest rate of employment at around 82 per cent in the years from 2002 to 2007, while the employment rate of those “often” in poor health dropped from 61 per cent in 2002 to 56 per cent in 2007. But the employment rate of people in “persistent poor health” was very low and fell from a high of 33 per cent in 2002 to just 26 per cent in 2007.

More than 70 per cent of people with “persistent poor health” were out of the labour force by 2007, which is in stark contrast to the 15 per cent of people with “persistent good health” who stayed out of the labour force.

Staying healthy, earning well

The report shows that the average individual total income (all sources) of people with “persistent good health” increased by almost 31 per cent to \$54,000 by 2006-2007. Whereas people with “persistent poor health” witnessed a 7 per cent drop in earnings in 2007 to \$22,000, that’s nearly half the income of those with “persistent good health”.

When looking at average personal income from just wages and salaries the figures are bleak.

Individuals with “persistent good health” saw a consistent rise in wage income from \$34,000 to nearly \$43,000, which translates to about 26 per cent growth during the period from 2001-2002 to 2006-2007. But the group of people with “persistent poor health” had the lowest wage income of less than \$12,000 in 2001-2002 and by 2006-2007 this had declined noticeably to just \$9,000.

Conclusion

Health is clearly an important matter for people of all ages and undeniably there is a strong correlation between health and wealth.

People in poor health are less likely to be working full-time and are more likely to be out of the labour force and this is compounded by age or “persistent poor health”. And people with poor health are increasingly likely to rely on government benefits for their income.

While generally speaking Australia is a healthy nation, more than half of working-age Australians who suffer poor health are not participating in the labour force, while just under a third are in full-time employment.

There is a compelling message in the finding that health issues are the third most common reason working-age Australians are not participating in the labour force.

Human nature dictates that we prefer to not think about possible ill-health but many people are not prepared for the financial consequences that can follow it. Being prepared, at least for the financial impact, can make the road to recovery easier for individuals and their families.

Anyone can find themselves battling health issues. So does greater emphasis need to be placed on the need for more Australians to financially better protect themselves and their families against such unforeseen health issues?



Craig Meller

AMP Financial Services
Managing Director

2. Introduction

Health is wealth, goes the adage. The message is clear: those who are healthy are likely to earn more. Is this old adage still applicable in Australia today? Are people with better health earning more than their peers with poorer health? How big is the gap? These questions have never been more important than in today's difficult economic environment when people are expected to put more effort into staying in the workforce and maintaining their earnings.

Health is precious. Being healthy is a foundation for all aspects of well-being, and maintaining good health is a key priority for most people. Each year, governments and individuals spend substantial amounts of money on maintaining and restoring good health and preventing poor health. As people age they are more likely to experience poor health, and as Australia faces the ageing of its population over coming decades health expenditure is expected to rise substantially. Yet, although illness and disabilities tend to be more frequent and severe for particular groups of people including the aged, illness, accident and disability do not discriminate and anyone can find themselves battling health issues to the detriment of their personal and working lives. Health is therefore an important matter for people of all ages, and our habits, lifestyle and circumstances earlier in life influence our health in later years.

As knowledge has increased about how to stay healthy, Australians have made changes to the way they live their lives. Increasingly, many people have realised the importance of eating healthy foods and staying fit. We have also developed a more holistic view of health, and the importance of mental health and well-being as well as our physical health is being more widely understood and acknowledged. In recent times, we have become more aware of the impact of stress on health and "work-life balance" has increasingly become a concern of employees and employers. Workplace health and safety has increasingly been prioritised and standardised. The potentially harmful health effects of some activities, such as smoking, have become known and most Australians have changed their habits accordingly (AIHW 2008). Also, in spite of Australians' general awareness of and inclination to adopt healthy lifestyles, some health risk factors, such as being overweight or obese, remain high (AIHW 2008). While survival rates for cancers and heart attacks have been improving, diabetes has become more common (AIHW 2008).

Overall, Australians are among the most prosperous, educated and healthy people in the world. In terms of standards of living, measured by average income per person, Australia stands among the 20 wealthiest countries globally (United Nations Development Programme 2007). When states of health and education are also taken into account, to construct the Human Development Index, Australia has the fourth highest level of human development globally (United Nations Development Programme 2007).

However, neither health nor prosperity is equally shared by all Australians. Recent studies have shown that women, less educated people, those with caring responsibilities and those living in regional areas of Australia tend to have lower levels of employment and income than men, more educated people, those without caring responsibilities and those living in capital cities (Nepal et al. 2008; Vu et al. 2008; Cassells et al. 2009). People with low incomes and socio-economic status have higher risks of disease and shorter life expectancies than people who are better off financially (AIHW 2008). At the same time, poor health can limit people's ability to work and earn, to the detriment not only of the individual's financial well-being, but also that of their family. In 2003, Issue 4 of the AMP.NATSEM Income and Wealth Report showed that long-term disability and the inability to earn an income (other than that from government benefits) could cost a middle income family almost a million dollars in lost income over 20 years (Walker et al. 2003). Taking a different approach in this Issue, we have examined the impact of overall health on people's employment and income in the present and the cumulative impact of health status over recent years.

This issue of the AMP.NATSEM Income and Wealth Report series examines how health status underpins the earnings of working-age Australians. Specifically, it examines the extent to which poor health diminishes the rate of employment and income of working-age men and women in Australia. This is done by comparing the economic activities and outcomes of individuals with good health versus poor health. We have focused on the 25 to 64 years age group as "working-age" in order to exclude younger age groups in which a substantial proportion of people may be studying or pursuing other activities, as these factors could make it more difficult to capture the impact of health on labour force participation. It is important to note that unlike the 2003 AMP.NATSEM report on health and wealth that calculated prospective income based on various scenarios of disabilities (Walker et al. 2003), this issue looks at people's self-assessed general health status and its relationship to their ability to work and earn.

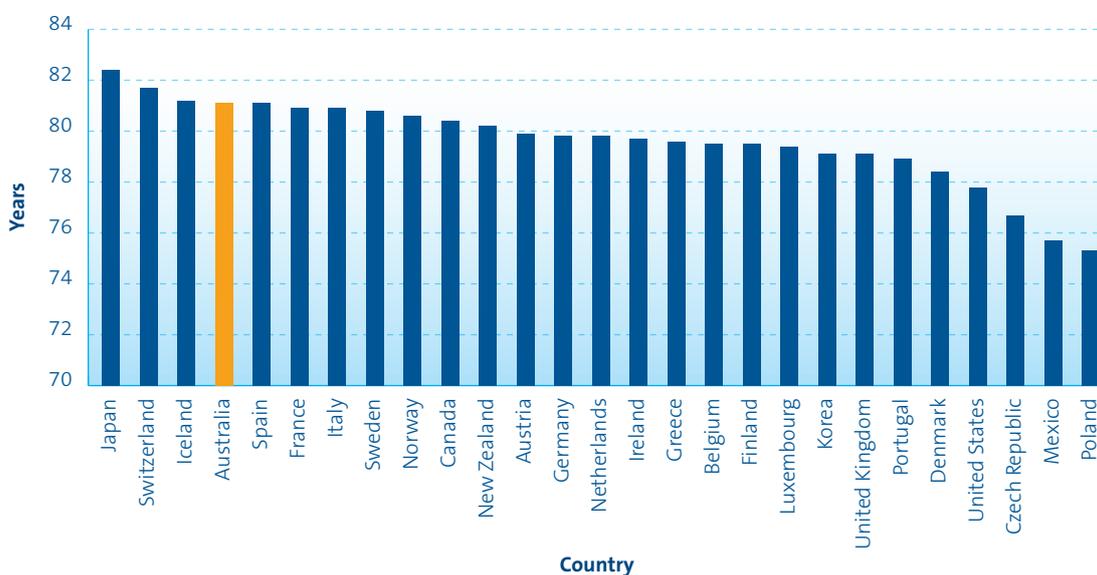
3. Australia's health profile

3.1 How Australia compares among the OECD¹

Australians live longer than the citizens of many other developed countries. With an overall life expectancy of 81 years, Australia ranked fourth among OECD countries in 2006, lagging only marginally behind Japan, Switzerland and Iceland. Australia is on par or a little ahead of many European countries such as Spain, France, Italy, Sweden and Norway in the life expectancy of its population. People in Australia live longer than those in other industrialised English speaking countries such as Canada, New Zealand, Ireland, the United

Kingdom and the United States of America. The Australian Bureau of Statistics (ABS 2008a) estimated that a boy born in 2005-2007 could expect to live 79 years while a girl could expect to live 83.7 years; an increase of 6 years for males and 4.1 years for females on the longevity of 20 years ago. Sadly, these are average figures and not all Australians share in this long life expectancy. Indigenous Australians born in the period 1996-2001 are estimated to have a life expectancy at birth of 59.4 years for males, and 64.8 years for females, significantly less than the overall average for all Australians (ABS 2004). Closing this gap has been identified by the government as a key priority in health policy (AIHW 2009).

Figure 1 - Life expectancy at birth, Australia and selected OECD countries



Notes: Reference year is 2005 for Canada, United Kingdom and United States, and 2004 for Italy. For all other countries, reference year is 2006. Excluded are the countries with life expectancy below 75 years (Slovak Republic, Hungary and Turkey).

Source: *OECD Health Data, December 2008 version (OECD 2008)*.

1. Organisation for Economic Co-operation and Development.

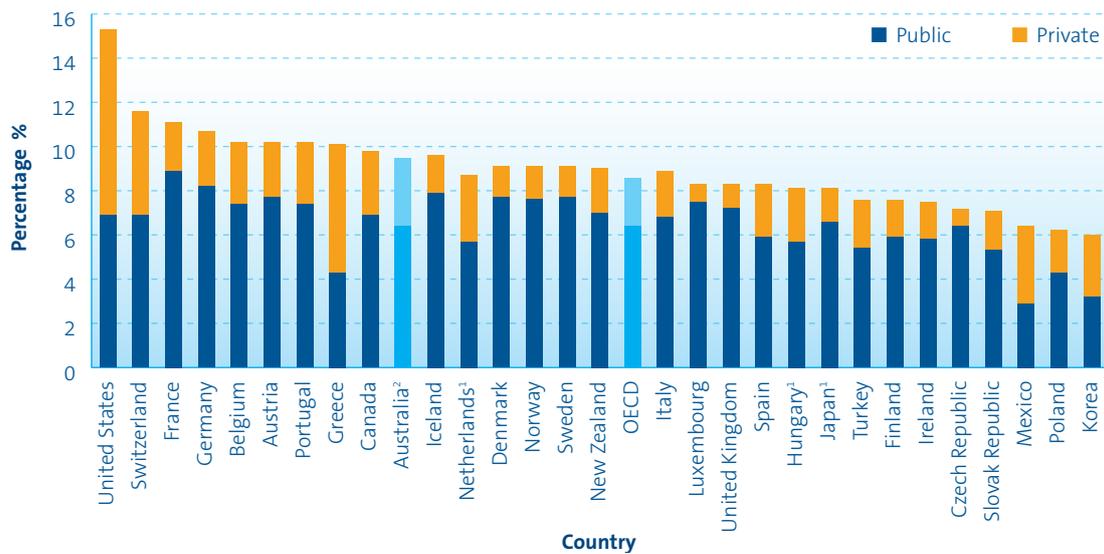


Around 84 per cent of working-age men and women assessed themselves to be in good health in 2007.

A sound investment in the health sector, among others, is desirable to achieve and maintain longer life expectancy and good health of the population. Figure 2 compares public, private and total expenditure on health as a proportion of gross domestic product (GDP) in OECD countries. In 2005, Australia spent just over 9 per cent of GDP on health, slightly greater than the OECD average. This level of spending is comparable with many other OECD countries, but considerably less than that of the United States, which spends the highest

proportion of GDP on health among the OECD countries. However, over half of the health expenditure in the United States is covered by private funding sources. This is in contrast to most other OECD countries including Australia where the public purse covers the majority of health expenditure. In Australia, public expenditure accounted for over 6 per cent and private expenditure around 3 per cent of GDP in 2005 (Figure 2). That is, public expenditure covered more than two-thirds of total health expenditure in Australia.

Figure 2 - Expenditure on health as a percentage of gross domestic product, Australia and selected OECD countries, 2005



Notes: 1. 2004. 2. 2004-2005.

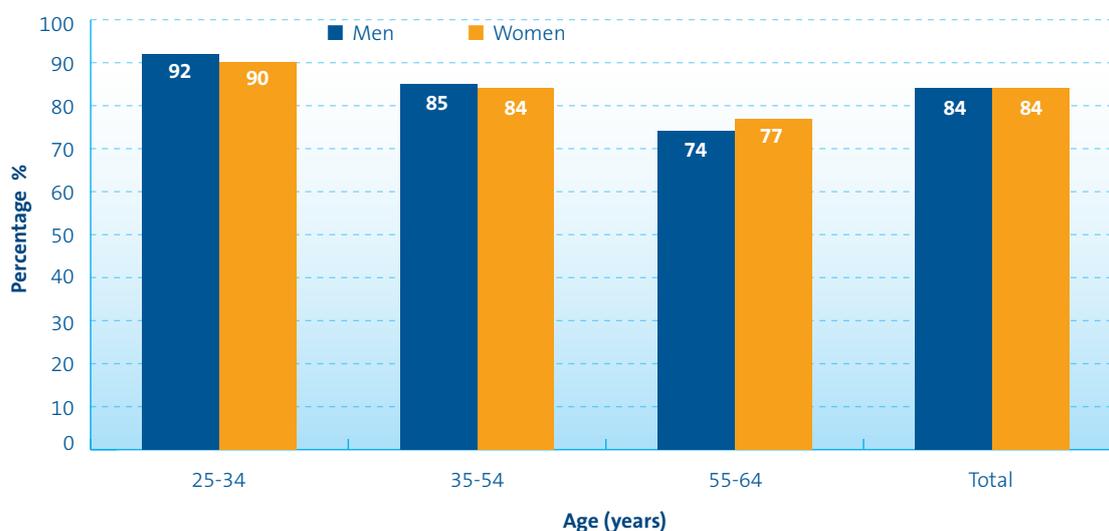
Source: *Health at a glance 2007: OECD Indicators (OECD 2007)*.

3.2 The health of working-age people

Much of Australia's health expenditure goes to the care and treatment of older persons. Generally, younger people tend to be healthier and hence only a relatively small proportion of health expenditure is spent on this age group. As expected, most working-age adults perceive themselves to be in a good state of health. In this analysis we have focused on self-assessed health status as a measure of health. Self-assessed health status is a widely used indicator in health research, as has been shown to generally correlate closely with respondents' experience of long-term conditions and disabilities in survey data (see page 8 and

Technical Notes for further discussion). We have defined those who stated their health was "good", "very good" or "excellent" as being in good health, while those who stated their health was "fair" or "poor" have been defined as having poor health. As shown in Figure 3, around 84 per cent of both men and women aged 25 to 64 years assessed themselves to be in good health in 2007. Within this group, however, health status deteriorates with age. The proportion of people with good health dropped from over 90 per cent in the age group 25 to 34 years to below 75 per cent in the age group 55 to 64 years (Figure 3). Men and women appear to be roughly equally healthy across the age groups.

Figure 3 - Percentage of men and women with good health, by age, 2007

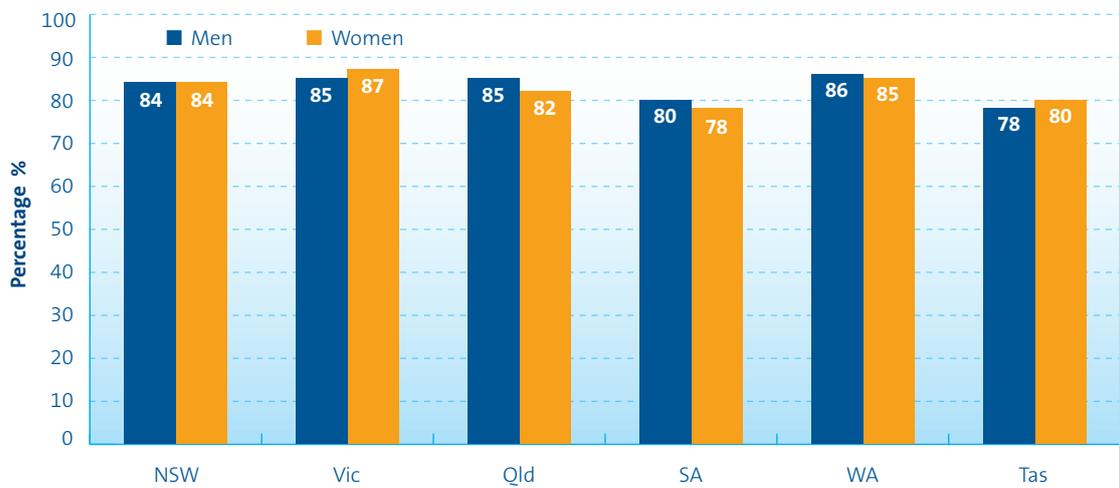


Notes: "Good health" includes excellent, very good and good health. About 12 per cent of cases with missing values or non-response are omitted before calculating these figures.

Source: Derived from HILDA Wave 7.

There is little variation between the states in the proportion of people perceiving themselves to be in good health. Across the five states shown in Figure 4, the proportion of people who reported having good health ranged between 78 and 87 per cent in 2007 (Figure 4).

Figure 4 - Percentage of men and women aged 25-64 years with good health, by state, Australia, 2007



Notes: About 12 per cent of cases with missing values or non-response are omitted. Northern Territory and Australian Capital Territory are excluded in this chart owing to small sample sizes.

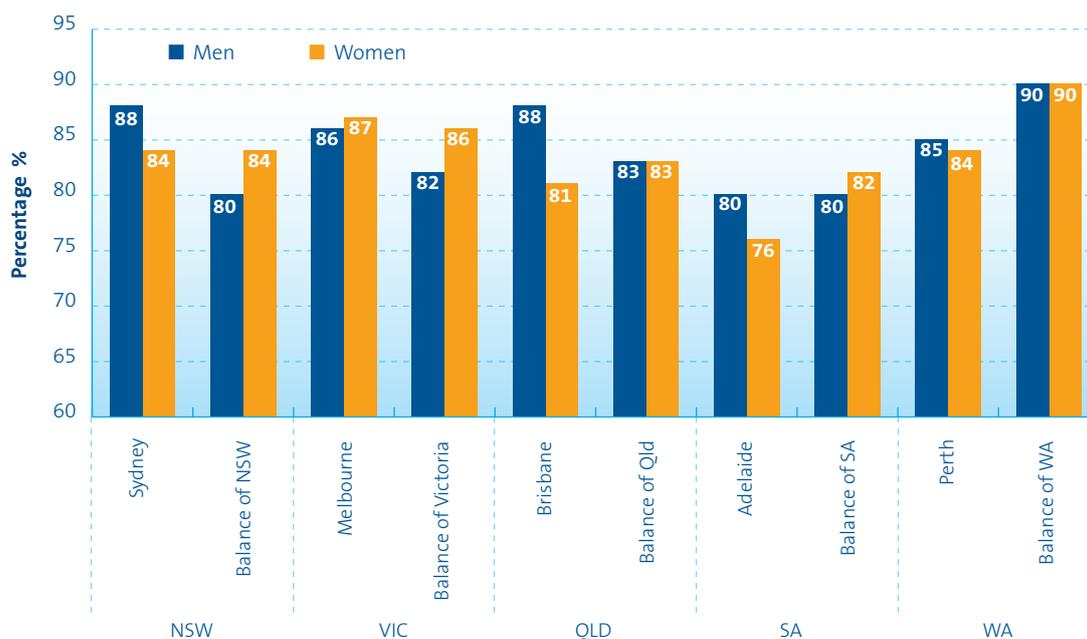
Source: Derived from HILDA Wave 7.



Men living in Sydney, Melbourne and Brisbane report higher self-assessed health status than their counterparts living outside the capital cities of New South Wales, Victoria and Queensland. This pattern is reversed for Western Australia while equal proportions of men in Adelaide and regional South Australia report good health (Figure 5). Women in regional and

rural Australia tend to perceive their health to be better on average than female capital city dwellers. But the differences are not notable, except in South Australia where 82 per cent of women in regional areas compared to 76 per cent in Adelaide perceived their health to be good in 2007.

Figure 5 - Percentage of working-age men and women with good health in capital cities and regional areas, five states of Australia, 2007



Notes: Tasmania and the territories have not been included due to small sample sizes.

Source: Derived from HILDA Wave 7.

The data we examined provide no direct clue as to why people assessed their health as being good or poor. It is assumed that people with poor health may have one or more mental and/or physical health problems which impact on their well-being. Table 1 shows the relationship of self-assessed health with two other health indicators, namely, level of psychological distress and presence of a long-term health condition. As expected, most people with good health report a lower level of psychological distress and are less likely to have a long-term health condition. More than two-fifths of individuals with poor health reported a high or very high level of psychological distress, compared to less than one-tenth of individuals with good health. Likewise, only 14 per cent of people with good health reported having a long-term health condition, whereas 61 per cent of people with poor health reported a long-term health condition. Here, long-term health conditions include physical impairment, mental health problems and chronic diseases.

Table 1 - Percentage distribution of people aged 25-64 years by level of psychological distress and presence of a long-term health condition, Australia, 2007

SELF-ASSESSSED HEALTH	LEVEL OF PSYCHOLOGICAL DISTRESS			LONG-TERM HEALTH CONDITION	
	LOW	MODERATE	HIGH/VERY HIGH	YES	NO
Good	70	20	10	14	86
Poor	30	25	43	61	39
All	63	21	15	21	79

Notes: Level of psychological distress is derived from the Kessler Psychological Distress Score based on HILDA data (Wooden 2009). About 1 per cent refused/not stated responses are not shown.

Source: *Derived from HILDA Wave 7.*

While chronic or long-term diseases are more prevalent in older persons, adults of working-age are not completely free of these. Table 2 presents the percentage of working-age people with selected long-term health conditions. The conditions presented here belong to the set of health problems identified as the National Health Priority Areas (AIHW 2004).

These include: asthma, diabetes, cardiovascular conditions, cancer, musculoskeletal conditions, injuries, and mental health. We can see in Table 2 that arthritis is the most common health condition among persons aged 25 to 64 years (16.7 per cent), followed by mental and behavioural problems (10.7 per cent) and asthma (9.4 per cent). Other diseases such as diabetes, cardiovascular diseases and malignant neoplasm (cancer) are less common (below 4 per cent).

Table 2 - Percentage of people age 25-64 years with selected long-term health conditions, Australia, 2004-2005

LONG-TERM HEALTH CONDITIONS	MEN	WOMEN	PERSONS
Arthritis	14.9	18.5	16.7
Mental and behavioural problems	8.6	12.7	10.7
Asthma	7.2	11.6	9.4
Diabetes mellitus	3.8	2.8	3.3
Heart, stroke and vascular diseases	2.7	2.9	2.8
Cancer	1.7	1.7	1.7

Source: *Derived from the National Health Survey 2004-2005 frequencies published in ABS (2006).*

4. Health and work

Illness can impact on all aspects of a person's life. This section looks at how ill-health can affect people's work. There is a substantial amount of research to support the link between health and labour force participation, including recent Australian studies such as Laplagne et al. (2007) and Cai and Kalb (2006). While it is clear, and unsurprising, that those suffering poor health are less likely to be participating in the labour force, the relationship between employment and health can work both ways. Obviously ill-health, including injuries, disabilities and mental health issues, can prevent people from being able to work, or limit the hours and types of work that people can undertake, but living on a low income and being out of work also impact greatly on health (AIHW 2008).

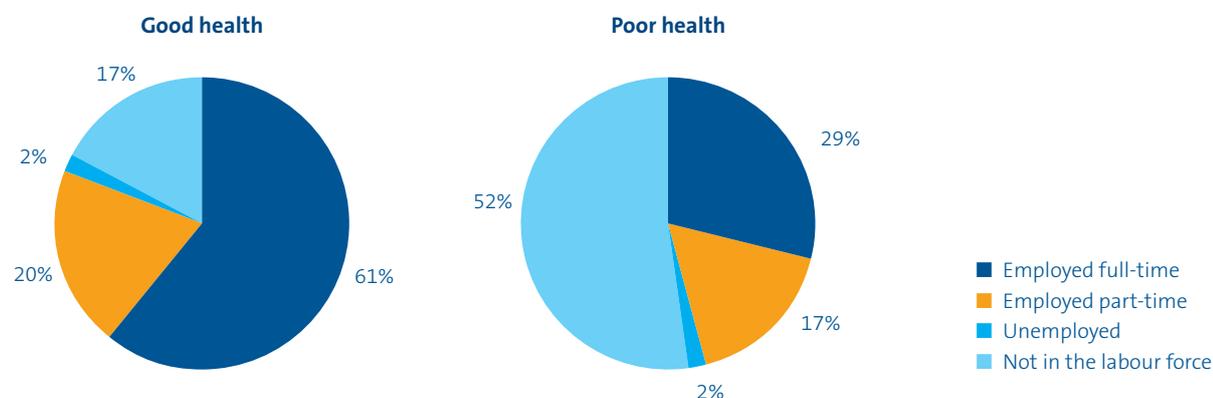
In economic theory, health can be seen as a form of "human capital" - people's potential to be productive - which can be traded for wages through employment. Poor health may limit one's productivity potential, especially in certain industries, limiting their potential to increase their earnings, thus perhaps further increasing disincentives to participate (Cai and Kalb 2006; Laplagne et al. 2007). Also, employment, unemployment, and being outside the labour force can all impact on health. Certain types of work can be detrimental to health (especially over time) or alternatively employment can have positive impacts on health, by increasing people's general level of activity and sense of well-being. The negative health impacts of unemployment, retrenchment and being out of the labour force are well documented. For example, a recent

study from the University of Michigan found that people who lose their jobs because of their health suffer especially significant depression and detrimental health outcomes as a result (Burgard et al. 2007). Cai and Kalb (2006) found that being outside the labour force had positive health impacts for women aged 50 to 64 years, but detrimental health impacts for men aged 15 to 49 years. Health is intrinsic to all aspects of well-being.

In this section, we compare the labour force status of Australians in self-assessed good and poor health. In order to capture the core "working-age" population, this analysis has been limited to those aged between 25 and 64 years. In this section, we have focused on those employed full or part-time and those outside the labour force (not working or seeking work). Apart from the overall breakdown shown in Figure 6, the unemployed have not been further analysed due to small sample sizes in the data.

As shown in Figure 6, working-age Australians in good and poor health have very different rates of labour force participation. One in every two working-age people in poor health is not in the labour force. In comparison, less than one in every five working-age people in good health are not in the labour force. Sixty-one per cent of people in good health work full-time, and a further 20 per cent work part-time, while 29 per cent of people in poor health are employed full-time and 17 per cent part-time.

Figure 6 - Labour force status of people in good and poor health, aged 25-64 years, 2007



Source: Derived from HILDA Wave 7.

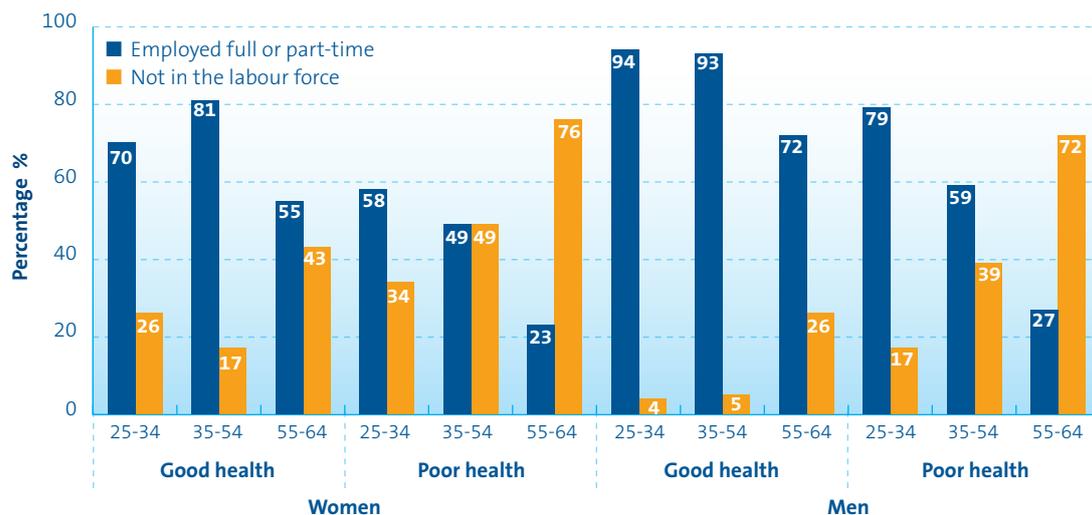


Sixty-one per cent of people in good health work full-time compared to just 29 per cent of people in poor health.

In Figure 7, we break down the employment status of people in good and poor health further by gender and age. Several points can be drawn from this chart. First, for all age groups and regardless of health, men are more likely to be employed, either full or part-time, than women. Second, the proportion of both females and males who are in employment decreases with age. Third, for both genders and each age group, those

in good health are more likely to be employed than those in poor health. Fourth, the chart suggests that for both men and women, poor health appears to have a greater impact on labour force participation as people get older. This supports the findings of Cai and Kalb (2006), that the impact of poor health on labour force participation increases with age.

Figure 7 - Labour force participation by age, sex and health, 2007



Notes: Unemployed are excluded due to small sample sizes.

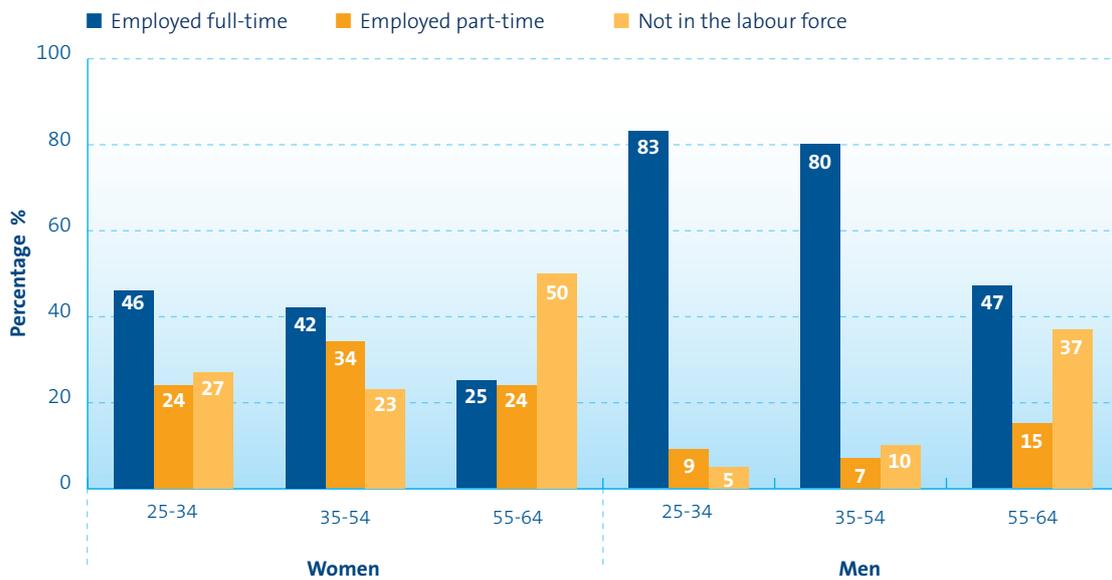
Source: *Derived from HILDA Wave 7.*

To put this in perspective, we present in Figure 8 the labour force status of working-age Australians by age and sex. For both men and women, the proportion of people not in the labour force is greatest in the 55 to 64 year age group, largely due to people retiring early. Whether they are in good or poor health, people in this age group are the most likely to opt out of the labour force, but as shown in Figure 7, people in poor health in this age group are even more likely not to be working. Figure 7 shows that around three-quarters of both men and women who are aged 55 to 64 years and suffering poor health are not in the labour force. This compares to 43 per cent of women and 26 per cent of men aged 55 to 64 years who are in good health who are not in the labour force. This suggests that while people aged 55 to 64 years are the most likely to take early retirement, health is a factor in this decision. This could suggest that people in this age group are more likely to have a serious health issue that prevents them from working than younger people. In addition to this, at this stage of their careers

there may be less incentive for people to continue working when they have a health issue, given that they may be retiring soon anyway. Also, some women in this age group are eligible for the age pension, which could help support the decision to retire. Of those in poor health in this age group, however, 23 per cent of women and 27 per cent of men are employed in spite of their health issues (Figure 7).

For both men and women in the younger age groups, the proportion of people not in the labour force is also higher for those in poor health. This difference is especially pronounced among men, where for those in good health only a very small proportion of men are not in the labour force. While women in poor health are also much more likely not to be in the labour force than their counterparts in good health, a greater proportion of women in good health are also not in the labour force, most likely attributable to raising children.

Figure 8 - Overall labour force status by age and sex, 2007



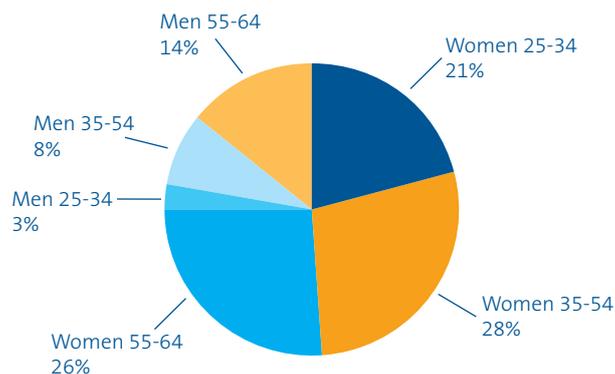
Notes: Unemployed are excluded due to small sample sizes.

Source: Derived from HILDA Wave 7.

As shown in Figure 9, three-quarters of people who are in good health and not in the labour force are women. As shown in AMP.NATSEM Report 22, women are more likely than men to opt out of the labour force for parenting and caring responsibilities (Cassells et al. 2009). Over the working lifetime, this may mean that women are less attached to the workforce and have less incentive to stay on in later years, contributing

to the lesser proportion of women in the labour force even in older age groups. There are also a range of other reasons why women are likely to retire earlier than men, including the fact that they may qualify for the age pension earlier, or may retire at the same time as their partners, who are often older.

Figure 9 - Percentage distribution of people not in the labour force by age and sex, 2007



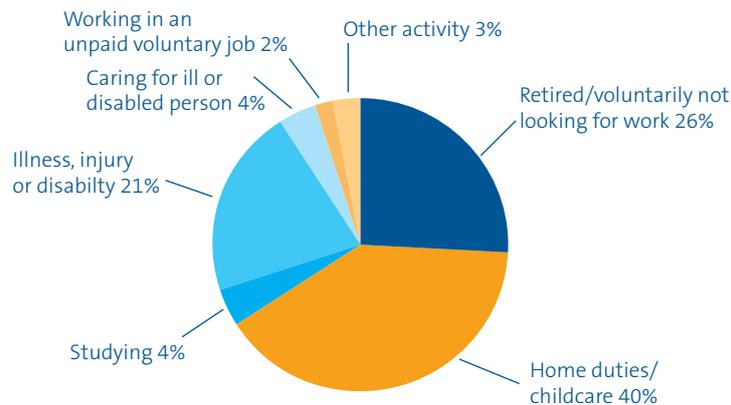
Source: Derived from HILDA Wave 7.

Overall, health issues are one of the major reasons why people are not participating in the labour force. As shown in Figure 10, just over one in five (21 per cent) of all people of working-age who are not in the labour force state illness, injury or disability as the reason. Childcare and home duties are the most frequent reasons that working-age Australians (predominantly women) are outside the labour force, followed by retirement and voluntarily being out of the labour force. Health issues are therefore the third most common reason that working-age Australians are not participating in the labour force. Notably a further 4 per cent of people not in the labour force are caring

for someone with an illness or disability. As explained earlier in this section, the causality between not being in the labour force and having poor health may be working both ways. Just as people may be outside the labour force due to poor health, people who are not in the labour force may also have increased chances of suffering poor health.

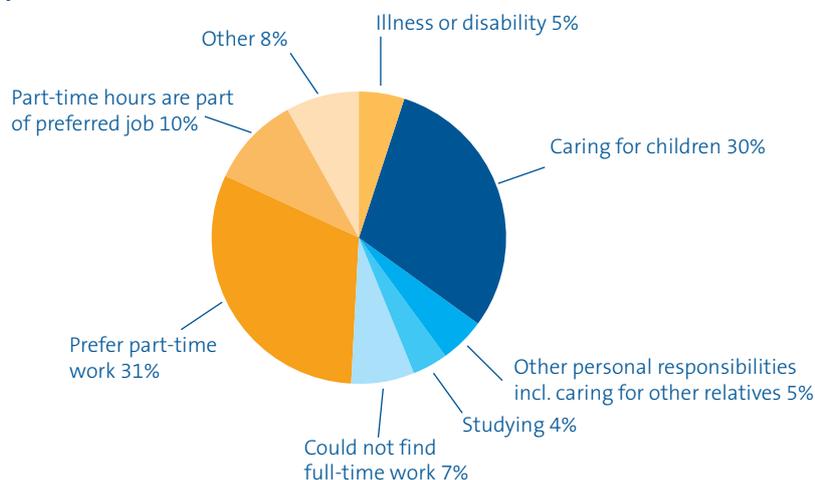
In addition to those outside the labour force, for many people health issues limit the amount of work they can take on. Five per cent of people (around 113,500 individuals) who are employed part-time state illness or disability as the main reason they are unable to work full-time (Figure 11).

Figure 10 - Main activity since last looked for work, people aged 25-64 years not in the labour force, 2007



Source: Derived from HILDA Wave 7.

Figure 11 - Main reason for working part-time rather than full-time, people aged 25-64 years employed for less than 35 hours weekly, 2007

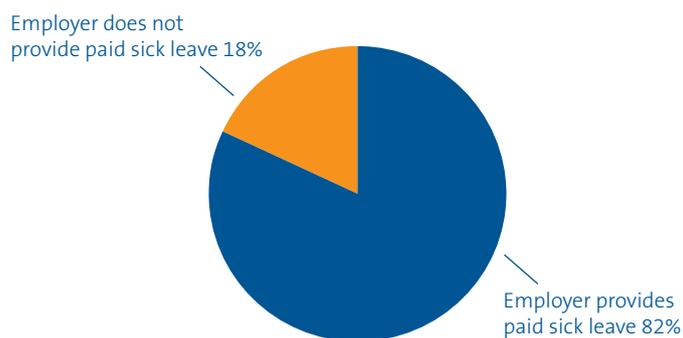


Source: Derived from HILDA Wave 7.

Although the relationship between labour force participation and health is complex, it is reasonable to say that poor health can have detrimental impacts on one's labour force participation, potentially with major costs to the individual. The 2004-2005 ABS National Health Survey shows that in a fortnight 8 per cent of employees took days off from work because of an illness, adding up to almost three million days away from work because of personal illness in that period (AIHW 2008). As presented in Figure 12, the HILDA data for 2007 show that 18 per cent of Australian employees do not

have access to paid sick leave, which may put substantial financial pressure on people suffering poor health, and limit their ability to hold down jobs. Australian federal workplace law provides that all permanent employees are entitled to a minimum of 10 days personal leave (including sick and carer's leave) (Australian Government Workplace Ombudsman 2009). Many employees, including casuals and contractors, are not covered by this standard. In addition to this, those who do have access to paid sick leave could easily exceed this 10 days of leave if they suffer a serious illness or injury.

Figure 12 - Access to paid sick leave, people aged 25-64, 2007



Source: *Derived from HILDA Wave 7.*

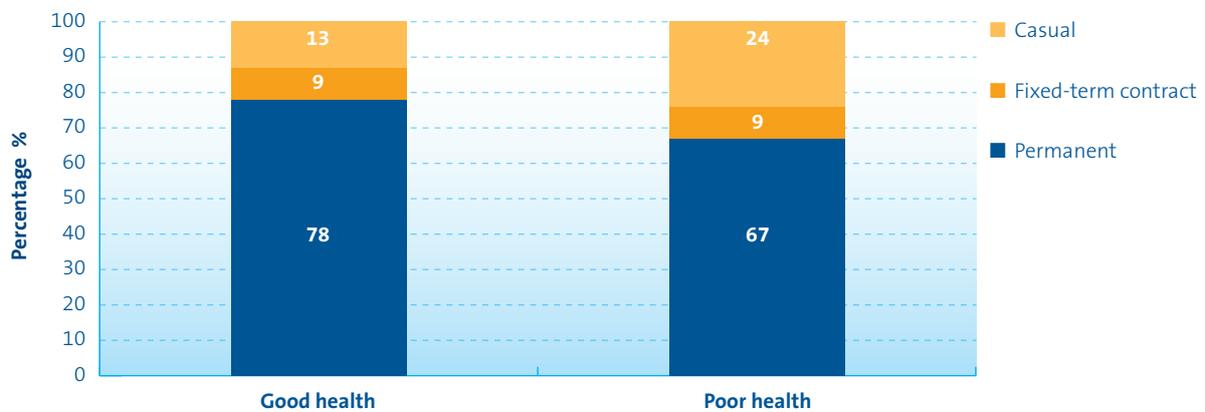
Some results from the HILDA data might suggest that people in poor health are less likely to be in "secure" employment, but again this relationship is complex. Illness may mean that people find it hard to maintain permanent employment, and over time, time out of the labour force could exacerbate this. At the same time, there is a possible link between being in less secure employment and suffering ill health. In either situation, a permanent and secure position is likely to be more supportive in a time of illness, in terms of paid leave provisions and future employment opportunities. Figure 13 shows that

around one in every four working-age Australians who are employed and suffering poor health are in a casual position. While the flexible and/or lesser hours associated with casual employment may be favourable to someone with health issues, it is unlikely that such a position would offer paid leave of any form or employment of an ongoing nature. Similarly, people in poor health are less likely to hold a permanent position than their healthy counterparts (67 per cent versus 78 per cent).



Almost 20 per cent of employees have no access to paid sick leave.

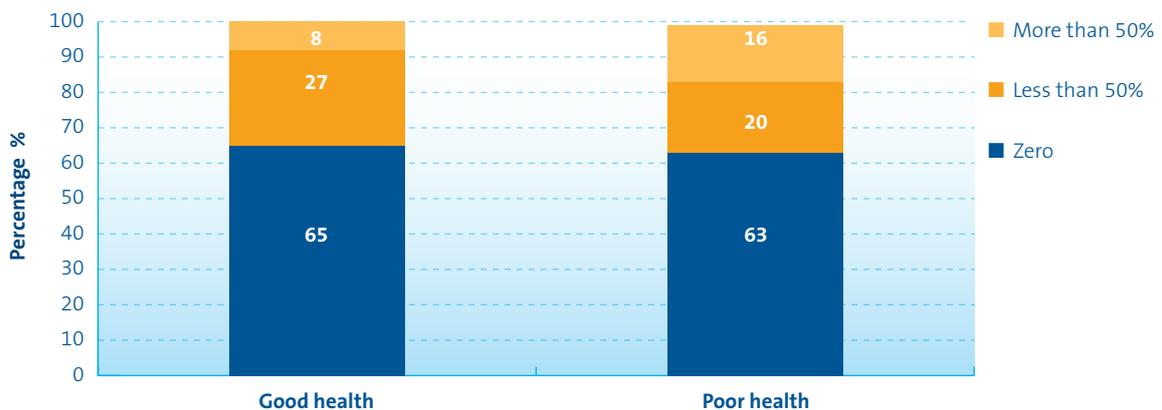
Figure 13 - Type of employment arrangement by health status, people aged 25-64 years, 2007



Source: Derived from HILDA Wave 7.

People in good health tend to be more confident about their employment prospects than those in poor health. Figure 14 shows that more people suffering from poor health perceive that they are likely to “lose” their job in the next 12 months. HILDA asks respondents to state what they feel is the percentage chance that they will involuntarily lose their jobs in the following year. While only 8 per cent of people in good health stated the chance to be more than 50 per cent, 16 per cent of people in poor health felt there was more than a 50 per cent chance they would lose their job.

Figure 14 - The self-perceived chance that people will lose their job in the next 12 months, by health status, 2007



Notes: “Zero” means that the employee felt there was no chance of them losing their job in the next 12 months.

Source: Derived from HILDA Wave 7.

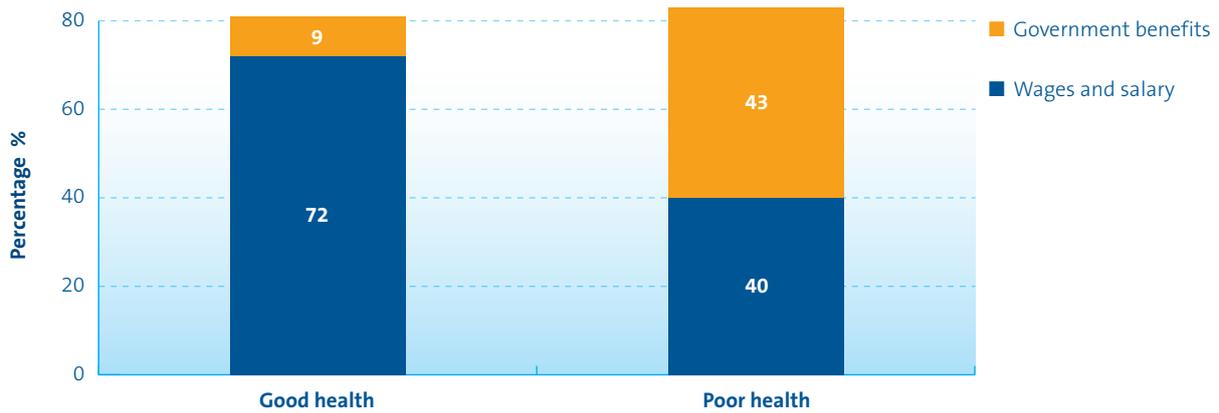
5. Health and income gaps

As employment and health are intrinsically linked, so are health and income. The earlier section showed that poor health can limit one's ability to participate in the workforce. This section examines how strongly good health and poor health underlie people's earning capacity.

A comparison of the primary sources of current income for people of working-age in good and poor health is shown in Figure 15. People in poor health are clearly less likely to source

their income primarily from earnings from wages and salaries and more likely to source it from government benefits. While nearly three-quarters of people of working-age who are in good health source their income primarily from employee earnings, only 40 per cent of people suffering poor health source their income primarily from earnings. In contrast, over two-fifths (43 per cent) of working-age people in poor health source their income primarily from government benefits, compared to only 9 per cent of those in good health.

Figure 15 - Primary source of current income by health, people aged 25-64, 2007



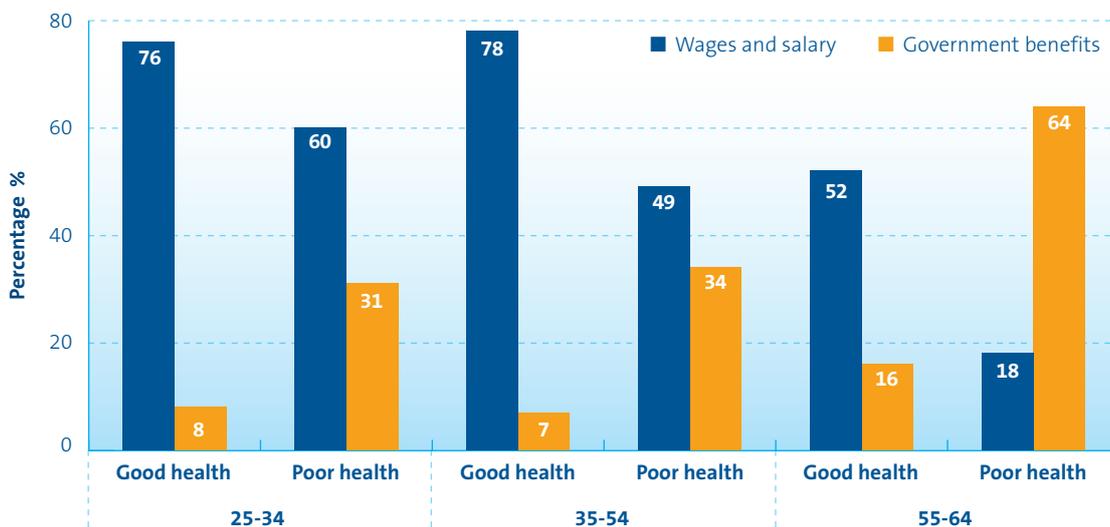
Notes: The proportions do not sum to 100 per cent as current income from business and other sources are not available in HILDA (as it can often be unreliable). The remaining proportion of people not shown here are those who source their incomes primarily from these sources.

Source: *Derived from HILDA Wave 7.*

Just as Figure 7 shows that as people get older those in poor health are increasingly likely not to be in the labour force, Figure 16 shows that they are also more likely to source their income from government benefits. Of those in poor health, three out of five people aged 25 to 34 and just less than one in two aged 35 to 54 source their incomes primarily from

employee earnings, compared to less than one in five of those aged 55 to 64. In contrast, around two out of three people in poor health aged 55 to 64 years have benefits as their main source of income. For both of the younger age groups, the proportion of people in poor health whose income is based on government benefits is just over 30 per cent.

Figure 16 - Primary source of current income by age and health, people aged 25-64, 2007



Notes: Other sources of current income are not available in HILDA and so are not shown in the chart.

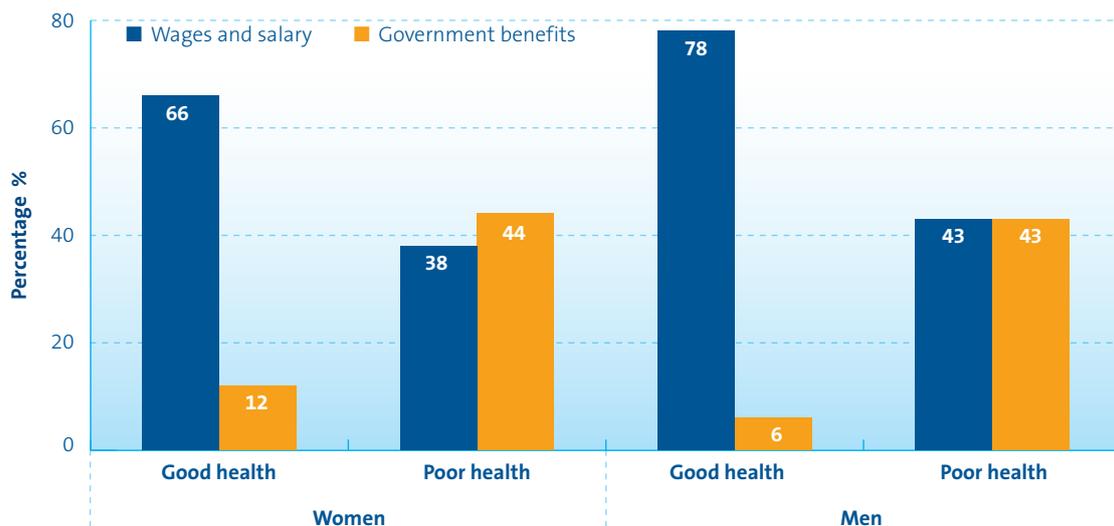
Source: Derived from HILDA Wave 7.



It appears that gender makes little difference alone to the relationship between poor health and primary source of income, in spite of the fact that, as discussed above, women are less likely to be in the labour force overall. While the rate of working-age women in good health who source their incomes primarily from employee earnings is around 15 per cent less than that of men (66 per cent versus 78 per cent), among those

in poor health there is little difference between the sexes in the proportions with incomes based on each source (Figure 17). Forty-four per cent of women and 43 per cent of men in poor health source their income primarily from government benefits, while 38 per cent of the women and 43 per cent of the men source their incomes from employee earnings (Figure 17).

Figure 17 - Primary source of current income by sex and health, people aged 25-64, 2007



Notes: Other sources of current income are not available in HILDA and so are not shown in the chart.

Source: Derived from HILDA Wave 7.



The average earnings of people in poor health are \$260 a week, less than half that of people in good health.

So what difference does health and income source make to income in dollar terms? Table 3 shows the average current weekly earnings of people in good and poor health who had earnings from wages or salaries. The average earnings of people in poor health are \$260 a week, less than half of the average for people in good health (\$589). This would be primarily related to people in poor health being more likely to be working less hours, or having had more career interruptions. When compared by age and gender, the gap between the average incomes of those in good and poor health grows,

indicative of the increased impact of poor health on labour force participation as people age. Within age groups, it appears there is little difference between the sexes in the income gap.

People who are deemed unable to work for at least 15 hours per week due to illness or disability may be eligible for the Disability Support Pension. Currently, the fortnightly payment is around \$570 for a single person over the age of 20 years. Clearly illness and disabilities can have detrimental effects on income.

Table 3 - Mean current weekly employee earnings for people aged 25-64 who have employee earnings, 2007

		GOOD HEALTH	POOR HEALTH	DIFFERENCE	PERCENTAGE DIFFERENCE
		\$	\$	\$	%
Overall mean		589	260	-329	-56
By age and sex					
25-34	Men	990	750	-240	-24
	Women	556	408	-147	-27
35-54	Men	1,060	602	-458	-43
	Women	618	337	-281	-45
55-64	Men	681	198	-483	-71
	Women	382	118	-264	-69

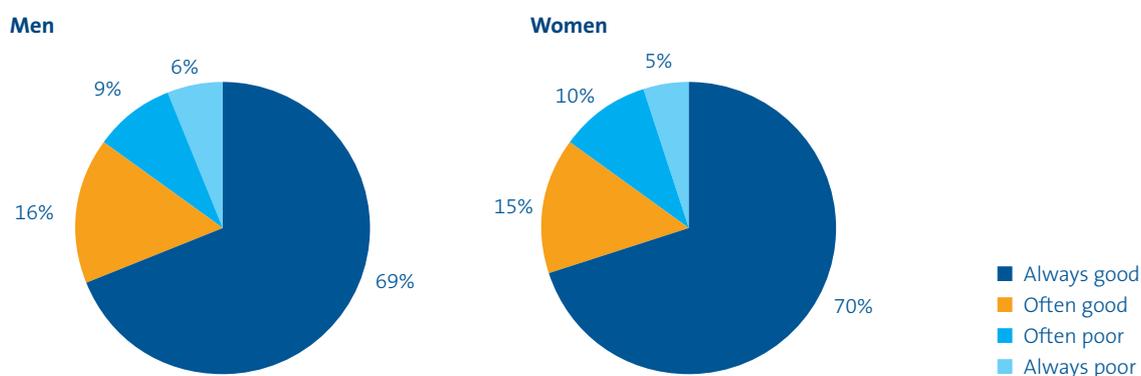
Source: Derived from HILDA Wave 7.

6. Staying healthy, earning well

In the preceding two sections we looked at the relationship between health, workforce participation and income using data from 2007. In this section, we extend this analysis by looking at the extent to which staying healthy makes a difference to people's participation in the workforce and their earnings over several years. For this purpose, we focus on the subset of respondents in the HILDA survey who participated in each year from 2002 to 2007, and provided a response to the question on their health status. Combining the information from these six waves of HILDA, we have derived a summary measure to reflect the transition or trend in health status with four categories: always good health (persistent good health), often good health, often poor health, and always poor health (persistent poor health). This classification is described in further detail in the Technical Notes.

In Figure 18, we present the distribution of people according to their health transition as reflected in their own assessment of their general health from 2002 through to 2007. Here, we considered working-age adults who were 30 to 64 years in 2007, or 25 to 59 years in 2002. As shown in Figure 18, more than two-thirds (69-70 per cent) of these working-age adults rated their health consistently highly throughout this period between 2002 and 2007. The general health status of nearly one in seven men (16 per cent) and women (15 per cent) was often good over this period. However, around one in 10 (9-10 per cent) individuals were often in a poor state of health and about one in 20 (5-6 per cent) always reported a state of poor health between 2002 and 2007.

Figure 18 - Distribution of men and women aged 30-64 years in 2007 according to the trend in their health status from 2002-2007



Notes: This is based on balanced panel data comprising those individuals who participated in all the surveys from 2002 to 2007. Non-response cases are excluded from the analysis.

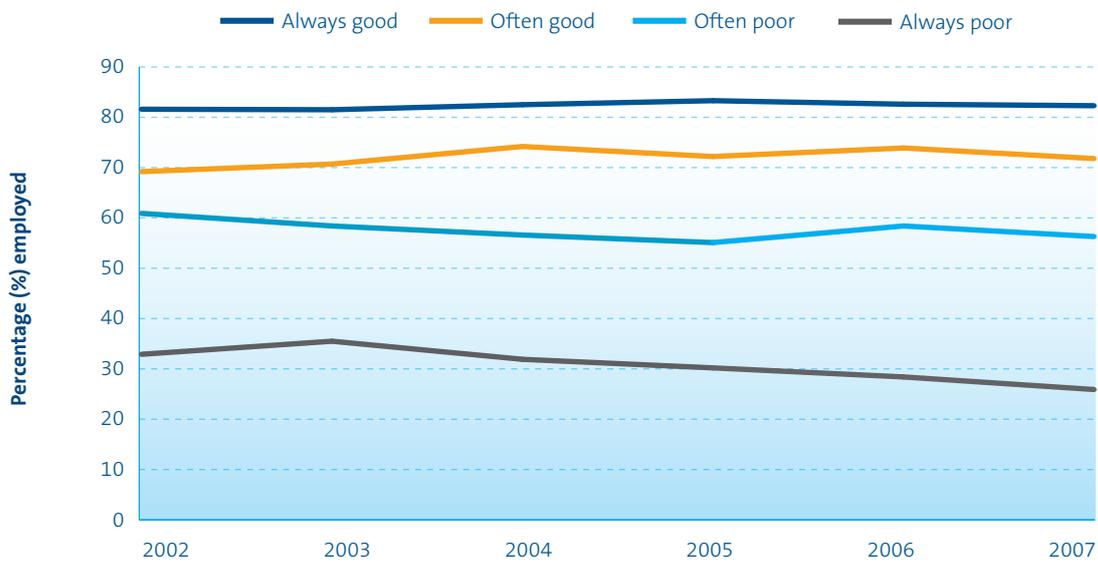
Source: Derived from HILDA Waves 2 to 7.

The group of people with “persistent good health” maintained the highest rate of employment at around 82 per cent in all the years from 2002 to 2007 (Figure 19). Those with “often good health” during this period also maintained their employment rate at 70 per cent or above. Although this rate is nearly 10 percentage points below the rate of people with “persistent good health”, it can still be considered a good outcome compared to those with poor health. In the segment of

adults who often reported having poor health, the proportion employed slipped from 61 per cent to 56 per cent over the period from 2002 to 2007. The employment rate in 2002 of those in “persistent poor health” was very low in comparison to the other groups and they also experienced a decline in employment over the period, falling from 33 per cent in 2002 to below 26 per cent in 2007.



Figure 19 - Percentage of people employed by health transition status, 2002-2007, persons aged 30-64 years in 2007



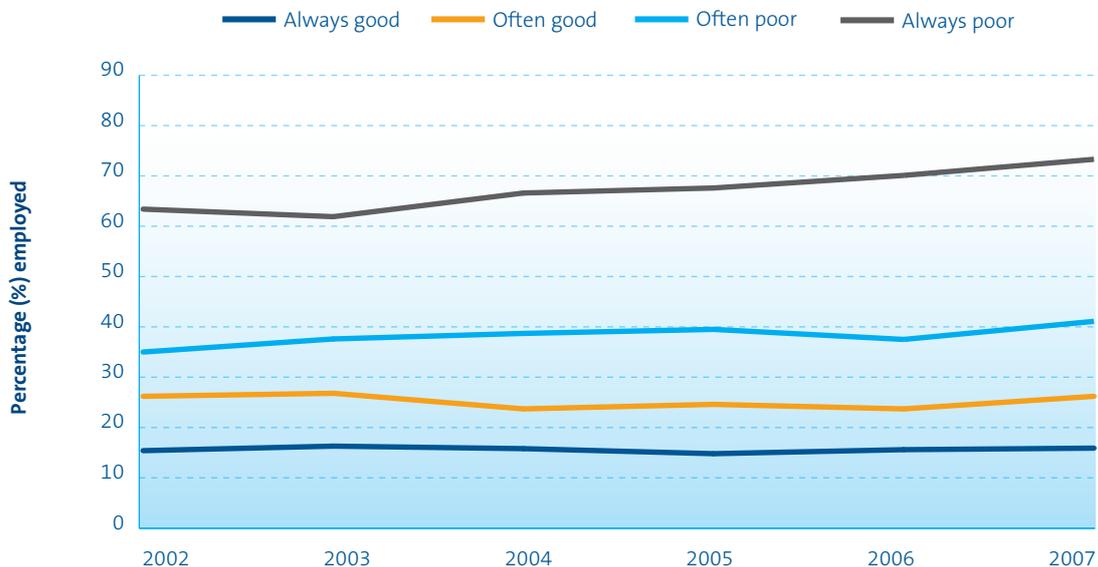
Notes: The figures are based on all individuals.

Source: Derived from HILDA Waves 2 to 7.

Not surprisingly, when we look at the tendency to stay out of the labour force the relationship is inverse to that shown above. As we show in Figure 20, more than 60 per cent of people with “persistent poor health” were out of the labour

force in 2002 and this proportion increased steadily to over 70 per cent by 2007. In a sharp contrast, only around 15 per cent of people with “persistent good health” stayed out of the labour force throughout this period.

Figure 20 - Percentage of persons not in the labour force by health transition status, 2002-2007, aged 30-64 years in 2007



Notes: The figures are based on all individuals.

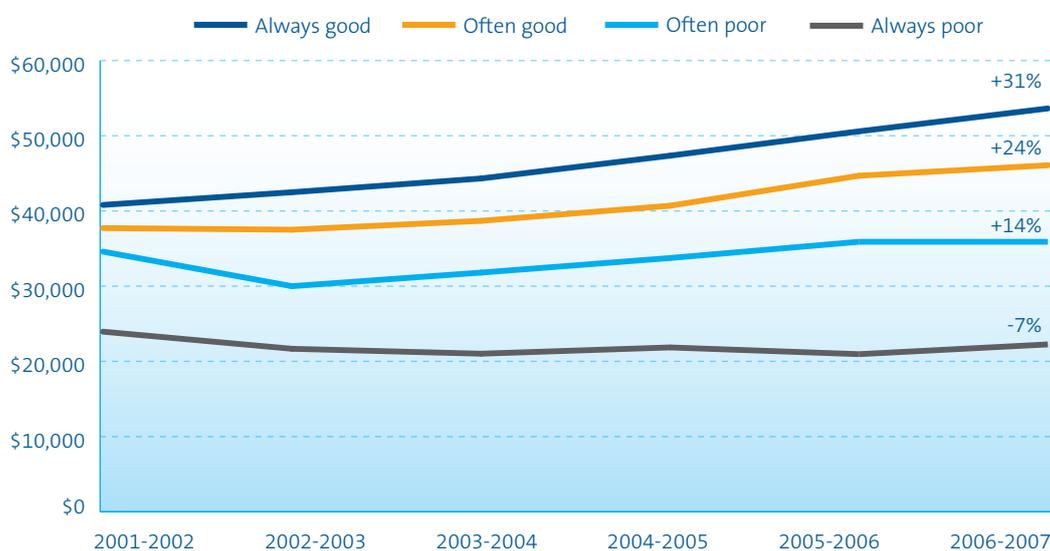
Source: Derived from HILDA Waves 2 to 7.

We now look at the relationships between health and earnings of working-age people. The income data presented here are “nominal” incomes. We have not adjusted the income data for inflation.

Like labour force participation, income shows a very strong correlation with health status. In Figure 21, we present trends in average individual total income (that is pre-tax income from all sources) by general health status over the period between 2001-2002 and 2006-2007. On average, the incomes of people with “persistent good health” were just over \$41,000 in 2001-2002. Their income increased consistently and climbed by almost 31 per cent to \$54,000 by 2006-2007. In contrast, the average pre-tax income of people with “persistent poor health”

was \$24,000 in 2002, nearly half the income of those with “persistent good health”, and dropped to \$22,000 by 2007 - a 7 per cent decline. The income of people whose health was “often good” and “often poor” stayed between the incomes of those with “always good health” and “always poor health”. The group of people whose health was “often good” experienced a 24 per cent rise in their total income over this period, slightly lower than that of people with “always good” health. The total income of those with “often poor” health also increased by 14 per cent during this period but their income growth was smaller than that of people with “persistent good health” and “often good” health.

Figure 21 - Average financial year individual total income, 2001-2002 to 2006-2007, by health transition status, persons aged 30-64 years in 2007



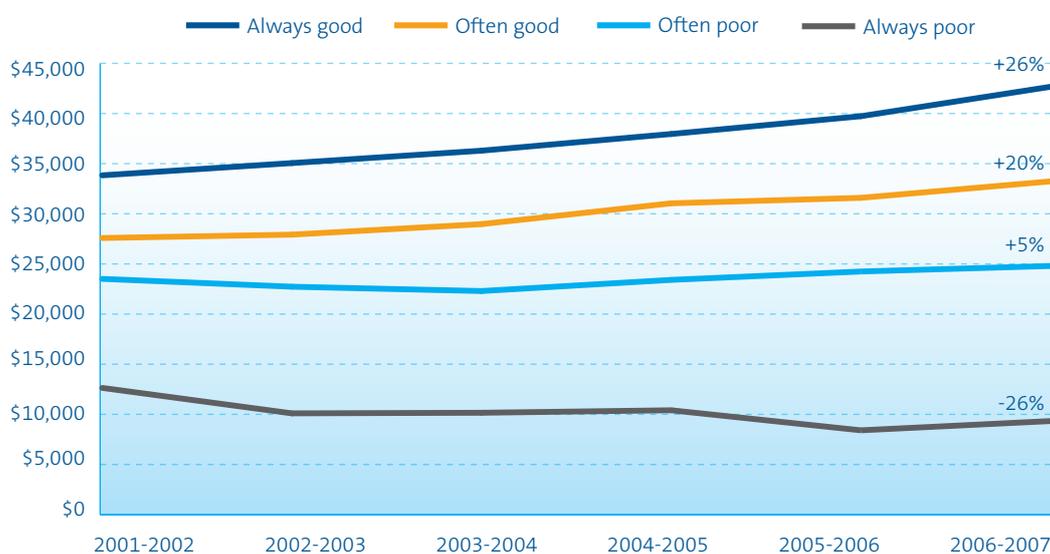
Notes: The figures are based on all individuals. Income is gross income from all sources. The figures on the right end of the charts are percentage change between 2001-2002 to 2006-2007.

Source: Derived from HILDA Waves 2 to 7.

A similar pattern and trend can be seen regarding the average individual income from wages and salaries of the people in the four health categories examined. As shown in Figure 22, the individuals with “persistent good health” saw a consistent rise in average wage income from about \$34,000 to nearly \$43,000 between 2001-2002 and 2006-2007. This translates to about 26 per cent growth in wage and salary income over this period. People who had “often good” health between 2002 and 2007 also experienced growth in their wage income although slightly smaller, from just below \$28,000 to \$33,000, or a 20 per cent

growth. The group of people with “often poor” health saw small fluctuations in their income from wages and salaries from 2001-2002 to 2006-2007 as they struggled to maintain their average income from wages and salaries at around \$24,000. The growth in their wage income was a mere 5 per cent on average during this period. The group of people with “persistent poor health” already had the lowest average wage income, less than \$12,000, in 2001-2002 and they, unlike all other groups, experienced a staggering decline in their wage income, sliding below \$9,000 by 2006-2007.

Figure 22 - Average financial year personal income from wages and salaries, 2001-2002 to 2006-2007, by health transition status, persons aged 30-64 years in 2007



Notes: The figures are based on all individuals. The figures on the right end of the charts are percentage change between 2001-2002 to 2006-2007.

Source: Derived from HILDA Waves 2 to 7.

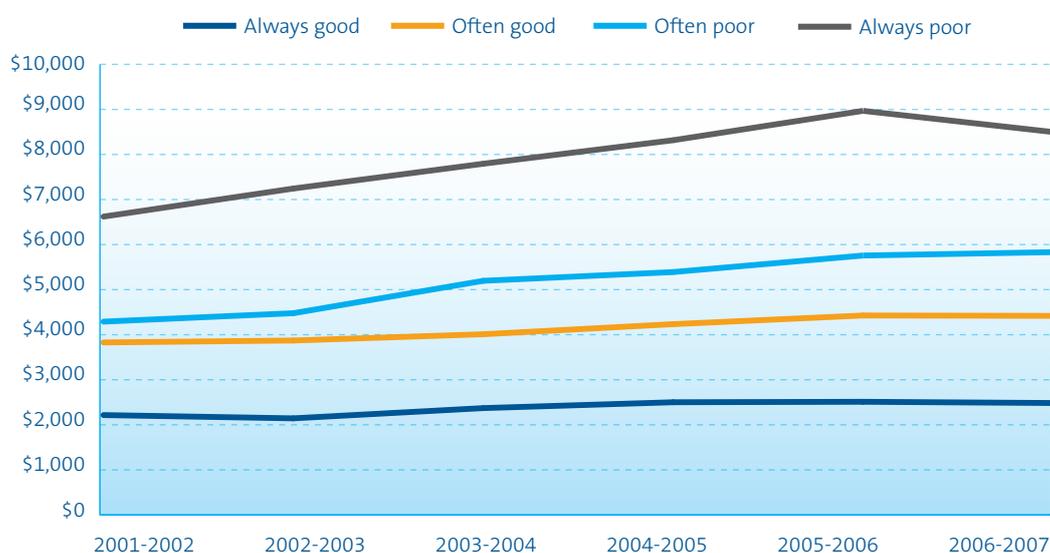
When focusing on income from government cash benefits, this source was, as expected, relatively high and generally increased among people with “persistent poor health” (Figure 23). The increase suggests that as people’s health continued to be poor over the six-year period and, as seen in previous figures, they became less likely to be employed, they became more likely to need to source their income from government benefits.

As shown in Figure 23, the average benefit income of people in “persistent poor health” dropped slightly between 2005-2006 and 2006-2007. This is likely related to the introduction of changes introduced under the Welfare-to-Work legislation in July 2006, by which many people who once would have been eligible for the Disability Support Pension would now be eligible only to receive the unemployment benefit Newstart Allowance, a lesser payment. The legislation ruled that people with a disability or illness deemed able to work 15 hours a week would be eligible for Newstart Allowance (rather than the Disability Support Pension they may once have qualified for) and need to seek

at least 15 hours of work (see Department of Education, Employment and Workplace Relations 2006). The changes were “grandfathered” so that people who were already receiving the Disability Support Pension in July 2006 would continue to do so, however, the eligibility changes would apply to anyone applying for support on the basis of illness or disability for the first time, or people who had intermittently received income support for periods in which they were unable to work.



Figure 23 - Average financial year income from government cash benefits, 2001-2002 to 2006-2007, by health transition status, persons aged 30-64 years in 2007



Notes: The figures are based on all individuals.

Source: *Derived from HILDA Waves 2 to 7.*

The preceding charts show that as poor health persists, its detrimental effects on earning capacity are compounded. The negative financial impacts of poor health or an injury are not only instantaneous but are likely to increase when a period of poor health or time out of the labour force persists. The longer that someone’s workforce participation is limited by poor health the more difficult it is for them to then increase, or even regain, their level of earnings. As shown in AMP.NATSEM Report 4, over the lifetime these losses can be devastating. It is of note also that in each of these charts, the poorer the health of the group, the more disadvantaged their starting point in 2002. This suggests that many may have already been experiencing poor health and it had already begun to influence their financial situation. Also, as discussed in earlier sections, the relationship between health, work and income goes both ways. Being out of work or living with a low income can also impact on health and this effect could also compound over time.

We now turn to differences across gender, place of residence and educational attainment.

Comparing men and women in the same health status, men had higher average individual wage and salary income than women, but between health status groups men and women experienced similar earning patterns. Among those with “persistent good health” or health that was “often good”, both men and women experienced a notable rise in their income from wages and salary between 2001-2002 and 2006-2007. But men and women with health that was “often poor” experienced only marginal growth. The average wage income of men with “persistent poor health” declined, and that of women stagnated between 2001-2002 and 2006-2007.



As poor health persists the gap between the average incomes of those in good and poor health widens further.

Figure 24 - Average income from wages and salaries in 2001-2002 and 2006-2007 by health transition status and gender



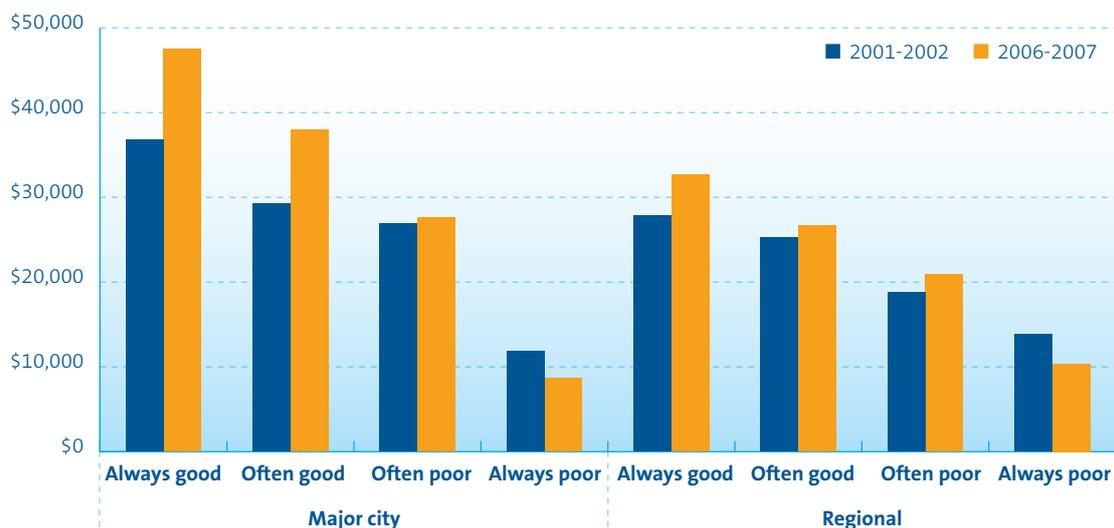
Notes: The figures are based on all individuals.

Source: Derived from HILDA Waves 2 to 7.

Whether people live in cities or regional areas, those who stayed healthy found their wage income increased between 2001-2002 and 2006-2007 (Figure 25). Among working-age adults aged 30 to 64 years (as at 2007) living in major cities and who stayed healthy from 2002 through to 2007, average income from wages and salaries grew by about 30 per cent, from nearly \$37,000 in 2001-2002 to about \$47,000 in 2006-2007. In contrast, those in a state of poor health living in cities during that period saw a slide in their income from just under \$12,000

to under \$9,000. The change in average individual wage income has a broadly similar pattern between major cities and regional areas across health transition groups. However, it is notable that for people in the same state of health, city dwellers tend to earn more than their regional peers and for those in good health their rate of growth in income was much higher. This is consistent with the previous studies that have shown that residents of capital or major cities tend to earn more than the residents of regional Australia (eg Vu et al. 2008).

Figure 25 - Average income from wages and salaries in 2001-2002 and 2006-2007 by health transition status and place of residence



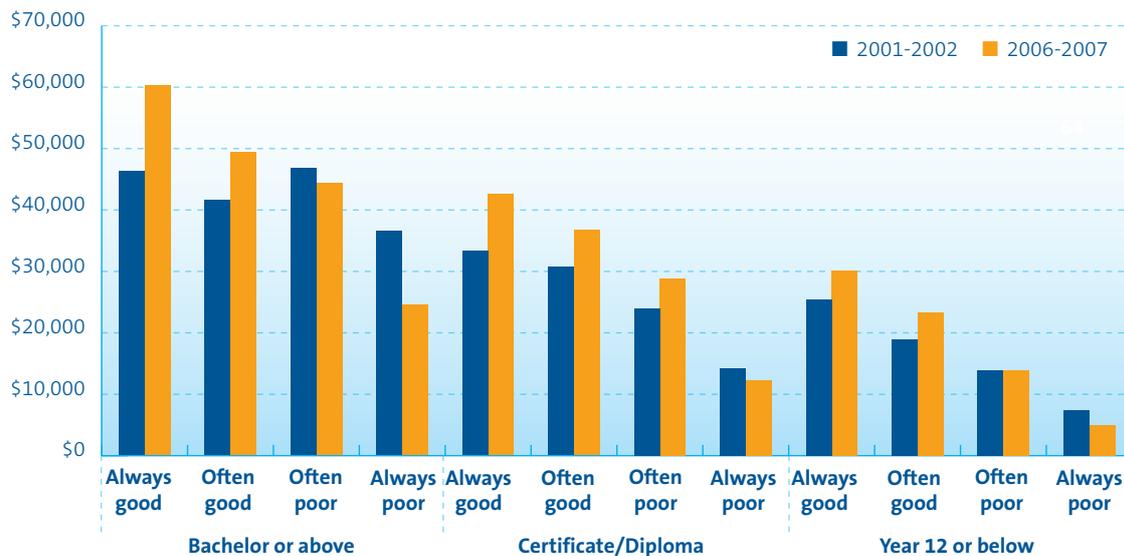
Notes: The figures are based on all individuals.

Source: Derived from HILDA Waves 2 to 7.

As expected, average income from wages and salaries has a clear positive association with education. But within each educational group, people who maintained good health experienced growth in their income from wages and salaries (Figure 26). Those in good health most of the years between 2002 and 2007 (“often good”) also saw an increase in their wage and salary income, irrespective of their education level. The group of people in poor health most of the six years (“often poor”) saw a mixed result depending on their level of education: those with a bachelor degree or higher education saw a slide

in their wage income, income of those with Year 12 or less education stagnated, and only the people with a certificate or diploma enjoyed a small rise in their wage income. But in the case of people with “always poor health” from 2002 to 2007, their average wage income declined irrespective of their level of education. It is worth noting that the people with Year 12 or less education earned less than \$7,500 in 2001-2002, which was the lowest average income from wages and salaries among the groups shown and even this amount dropped to about \$5,000 by 2006-2007 (Figure 26).

Figure 26 - Average income from wages and salaries in 2001-2002 and 2006-2007 by health transition status and level of education



Notes: The figures are based on all individuals.

Source: *Derived from HILDA Waves 2 to 7.*

7. Conclusion

The economic data analysed in this study come from a period of economic boom in Australia. The data examined were collected between 2001-2002 and 2006-2007, a time in which Australia experienced a consistently low and declining unemployment rate and impressive income growth. Unemployment dropped from 6.7 per cent in 2002 to 4.5 per cent in 2007 (ABS 2008b). During the same period, real net national disposable income per person increased from \$34,000 to \$39,000 (ABS 2008b).

Even in this time of economic boom, individuals with “persistent poor health” experienced a decline in employment and earnings. The average earnings of people with “persistent poor health” were already much lower than those of people with “persistent good health” and continued to diminish over the years irrespective of gender, education and the area people lived in. It is reasonable to assume that such individuals may be among the segment of the population hardest hit by the current global economic downturn that started to have an impact in Australia in 2008 and continues in 2009.

The findings show that people who are in poor health are less likely to be working full-time and more likely to be out of the labour force, and this effect compounds with age or persistent poor health. As shown in Section 3, more than half of working-age Australians who are suffering poor health are not participating in the labour force, while just under a third are in full-time employment. As people age, those in poor health are increasingly unlikely to be in the labour force. Section 5 shows that, over a longer term, while people staying in good health enjoy a high employment rate (above 80 per cent), those with “persistent poor health” fail to maintain their already low employment rate. As a result, individuals with poor health are increasingly likely to rely on government benefits for their income.

The average income from wages and salaries of working-age employees in poor health in 2007 was around \$260 a week, less than half the average for their counterparts in good health (\$589). Over 40 per cent of people of working-age who stated their health as poor, source their income primarily from government benefits.

The 2004-2005 ABS National Health Survey found that 8 per cent of employed persons took days off from work because of an illness in a fortnight before the survey, accumulating nationally to almost three million days away from work because of personal illness in that period (AIHW 2008). In 2007, almost one-fifth of Australian employees of working-age did not have access to paid sick leave, meaning that illness is especially likely to place them under financial

pressure. We can infer from the 2007 HILDA data that people in poor health are also more likely to be in casual employment. Suffering poor health and subsequent career interruptions is likely to make it harder for people to maintain permanent employment and at the same time less secure jobs are less likely to provide leave and support for employees in times of illness.

The relationship between health and income is complex as both can influence each other. While our focus in this report is on the importance of health to maintaining employment and earnings, many previous studies have shown that there is a two way relationship between health and employment and income (eg Cai and Kalb 2006; Lixin 2009). While poor health can disadvantage people in terms of their work and earnings, being out of work and having a low income can also disadvantage people's health.

In itself, maintaining good health is an important goal of individuals and governments. This study highlights that maintaining good health provides a strong foundation for sustaining sound employment and earnings. The old adage that “health is wealth” clearly remains relevant in Australia today.



Technical notes and definitions

Source data

This report uses unit record data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey. The HILDA Project was initiated and is funded by the Australian Government Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA) and is managed by the Melbourne Institute of Applied Economic and Social Research (MIAESR). The findings and views reported in this paper, however, are those of the author and should not be attributed to either FaHCSIA or the MIAESR.

The HILDA Survey (see Watson 2009) is an annual household-based longitudinal survey, with the first wave interviews conducted in the second half of 2001 and the latest seventh wave in the second half of 2007 (a very small proportion of interviews were conducted between January and March of the subsequent year).

Income

In HILDA, financial year income data usually relates to the completed financial year immediately preceding the date of interview, for example, 2001-2002 in Wave 2 (2002) and 2006-2007 in Wave 7 (2007). In Section 5 we have examined financial year income. This is “nominal” income which has not been adjusted for inflation, but refers to the dollars of the given year. Income is for the individual (ie not the household).

In Section 4, we focus on current weekly income variables. As current income from business and other sources such as investment is not available in HILDA (these are only available for the previous financial year) results for “primary source of income” are based on the greatest of either employee earnings or government benefits.

In analysis of both current and financial year income in this report, “benefit” income refers to income from any Australian Government transfer payment received by the respondent, including Government cash benefits and Family Tax Benefit A and B.

Health status

The health variable examined in this report is the standard self-assessed health status collected through the self-completed questionnaire. The questions asked were: “In general, would you say that your health is excellent, very good, good, fair or poor?” Respondents reported their health to be in any of the five levels.

For the ease of analysis and interpretation, we have reclassified these five levels into two: “good health” referring to the top three levels, excellent, very good and good health; and “poor health” referring to the bottom two levels, fair and poor health. Most of the primary analysis presented in this report is based on the Wave 7 of HILDA Survey (2007), except Section 5.

Section 2 presents another two indicators of health: level of psychological distress and long-term health condition. The level of psychological distress was derived from the Kessler Psychological Distress Score which in turn is derived from 10 questions that focus on anxiety and depression (Wooden 2009). This score has been found to be suitable for assessing morbidity in a population (Andrews and Slade 2001). Long-term conditions refer to any long-term health condition, impairment or disability that restricted the person’s every day activity and had lasted, or was likely to last, six months or more at the time of interview.

Summary measure of trend in health status

In Section 5, we presented a longitudinal analysis of health, work and income drawing data from Waves 2 to 7. A single measure of transition or trend in health status was computed by summarising the pattern of self-assessed health from Wave 2 through to Wave 7. If the respondents assessed their health to be good in all the six years from 2002 to 2007, then they are classified as having “always good health” or “persistent good health”. Having good health in four or five years out of six is categorised as being in “often good health”. If good health was reported in one to three years out of six then, it is classified as having “often poor health”. Those reporting “poor health” in all the six years were categorised as having “always poor health” or “persistent poor health”.

The self-assessed health indicator has been found to be useful and reliable in empirical research of health status. It has been widely used in previous research in Australia (for example, see Cai and Kalb 2006 and Lixin 2009).

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Suggested citation: Nepal, B., Payne, A. and Brown, L. (2009), Healthy, wealthy and wise? - The relationship between health, employment and earnings in Australia, AMPNATSEM Income and Wealth Report, Issue 23, July 2009, Sydney, AMP.