



4.1 Social determinants of health

Our health is influenced by the choices that we make—whether we smoke, drink alcohol, are immunised, have a healthy diet or undertake regular physical activity. Health prevention and promotion, and timely and effective treatment and care, are also important contributors to good health. Less well recognised is the influence of broader social factors on health (see 'Chapter 1.1 What is health?').

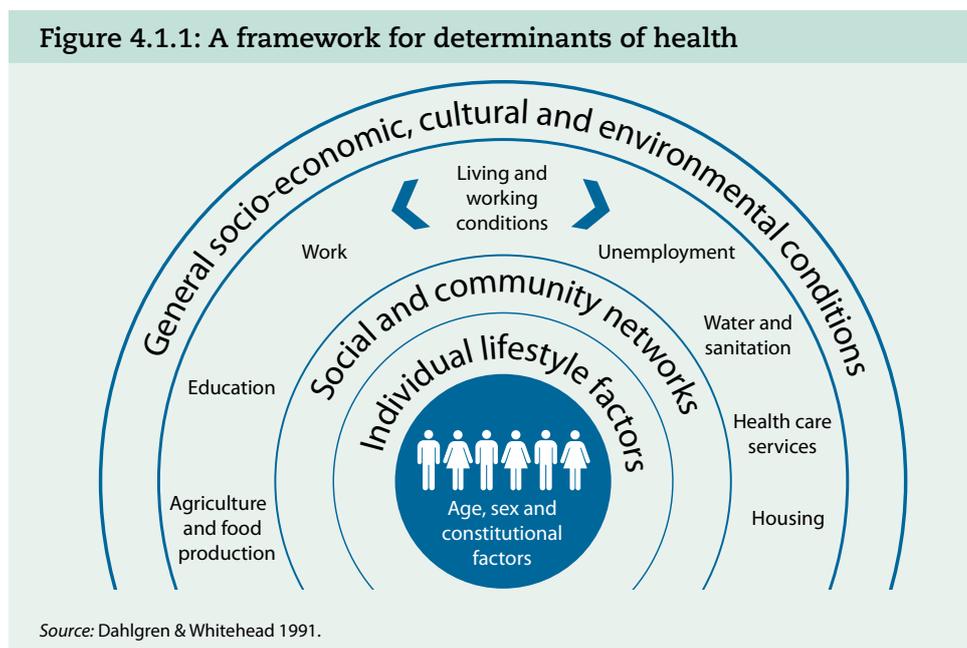
Evidence on the close relationship between living and working conditions and health outcomes has led to a renewed appreciation of how human health is sensitive to the social environment. Factors such as income, education, conditions of employment, power and social support act to strengthen or undermine the health of individuals and communities. Because of their potent and underlying effects, these health-determining factors are known as the 'social determinants of health' (Wilkinson & Marmot 2003).

The World Health Organization (WHO) has described social determinants as:

...the circumstances in which people grow, live, work, and age, and the systems put in place to deal with illness. The conditions in which people live and die are, in turn, shaped by political, social, and economic forces (CSDH 2008).

According to WHO, the social conditions in which people are born, live and work is the single most important determinant of good health or ill health. As factors that affect health, social determinants can be seen as 'causes of the causes'—that is, as the foundational determinants which influence other health determinants. In keeping with this model, Figure 4.1.1 illustrates how social determinants extend inward to affect other factors, including health behaviours and biomedical factors that are part of a person's individual lifestyle and genetic make-up.

Figure 4.1.1: A framework for determinants of health





The National Health Performance Framework also recognises the importance of social determinants to our health. The framework includes community and socioeconomic factors that relate to income, health literacy and educational attainment (see 'Chapter 7.1 Indicators of Australia's health').

The health advantages and disadvantages experienced by Australians are shaped by their broader social and economic conditions (see Box 4.1.1). Inequalities in health appear in the form of a 'social gradient of health', so that in general, the higher a person's socioeconomic position, the healthier they are.

Some health inequalities are attributable to external factors and to conditions that are outside the control of the individuals concerned. Inequalities that are avoidable and unjust—health inequities—are often linked to forms of disadvantage such as poverty, discrimination and access to goods and services (Whitehead 1992).

Box 4.1.1: Ten facts about social determinants and health inequalities

- The 20% of Australians living in the lowest socioeconomic areas in 2014–15 were 1.6 times as likely as the highest 20% to have at least two chronic health conditions, such as heart disease and diabetes (ABS 2015a).
- Australians living in the lowest socioeconomic areas lived about 3 years less than those living in the highest areas in 2009–2011 (NHPA 2013).
- If all Australians had the same death rates as people living in the highest socioeconomic areas in 2009–2011, overall mortality rates would have reduced by 13%—and there would have been 54,000 fewer deaths (AIHW 2014d).
- People reporting the worst mental and physical health (those in the bottom 20%) in 2006 were twice as likely to live in a poor-quality or overcrowded dwelling (Mallett et al. 2011).
- Mothers in the lowest socioeconomic areas were 30% more likely to have a low birthweight baby than mothers in the highest socioeconomic areas in 2013 (AIHW 2015a).
- A higher proportion of people with an employment restriction due to a disability lived in the lowest socioeconomic areas (26%) than in the highest socioeconomic areas (12%) in 2012 (AIHW analysis of ABS 2012 Survey of Disability, Ageing and Carers).
- Unemployed people were 1.6 times as likely to use cannabis, 2.4 times as likely to use meth/amphetamines and 1.8 times as likely to use ecstasy as employed people in 2013 (AIHW 2014e).
- Dependent children living in the lowest socioeconomic areas in 2013 were 3.6 times as likely to be exposed to tobacco smoke inside the home as those living in the highest socioeconomic areas (7.2% compared with 2.0%) (AIHW analysis of the 2013 National Drug Strategy Household Survey).
- People in low economic resource households spend proportionally less on medical and health care than other households (3.0% and 5.1% of weekly equivalised expenditure, respectively, in 2009–10) (ABS 2012).
- People living in the lowest socioeconomic areas in 2014–15 were more than twice as likely to delay seeing—or not see—a dental professional due to cost compared with those living in the highest socioeconomic areas (28% compared with 12%) (ABS 2015b).



Key social determinants of health

The evidence gathered from the ways in which social, economic, political and cultural conditions create health inequalities has led to the identification of key social determinants of health and wellbeing (CSDH 2008; Wilkinson & Marmot 2003), including socioeconomic position, early life circumstances, social exclusion, social capital, employment and work, housing and the residential environment.

Socioeconomic position



In general, people from poorer social or economic circumstances are at greater risk of poor health, have higher rates of illness, disability and death, and live shorter lives than those who are more advantaged (Mackenbach 2015). Generally, every step up the socioeconomic ladder is accompanied by an increase in health.

Historically, individual indicators such as education, occupation and income have been used to define socioeconomic position (Galobardes et al. 2006).

- **Educational attainment** is associated with better health throughout life. Education equips people to achieve stable employment, have a secure income, live in adequate housing, provide for families and cope with ill health by assisting them to make informed health care choices. An individual's education level affects not only their own health, but that of their family, particularly dependent children.
- **Occupation** has a strong link to position in society, and is often associated with higher education and income levels—a higher educational attainment increases the likelihood of higher-status occupations and these occupations often come with higher incomes.
- **Income** and wealth play important roles in socioeconomic position, and therefore in health. Besides improving socioeconomic position, a higher income allows for greater access to goods and services that provide health benefits, such as better food and housing, additional health care options, and greater choice in healthy pursuits. Loss of income through illness, disability or injury can adversely affect individual socioeconomic position and health (Galobardes et al. 2006).

Early life



The foundations of adult health are laid in-utero and during the perinatal and early childhood periods (Lynch & Smith 2005). The different domains of early childhood development—physical, social/emotional and language/cognitive—strongly influence learning, school success, economic participation, social citizenry and health (CSDH 2008). Healthy physical development and emotional support during the first years of life provide building blocks for future social, emotional, cognitive and physical wellbeing. Children from disadvantaged backgrounds are more likely to do poorly at school, affecting adult opportunities for employment, income, health literacy and care, and contributing to intergenerational transmission of disadvantage. Investment in early childhood development has great potential to reduce health inequalities, with the benefits especially pronounced among the most vulnerable children (Heckman & Mosso 2014).



Social exclusion



Social exclusion is a broad concept used to describe social disadvantage and lack of resources, opportunity, participation and skills (Hayes et al. 2008). Social exclusion may result from unemployment, discrimination, stigmatisation and other factors. Poverty; culture and language; and prejudices based on race, religion, gender, sexual orientation, disability, refugee status or other forms of discrimination limit opportunity and participation, cause psychological damage and harm health through long-term stress and anxiety. Social exclusion can damage relationships, and increase the risk of disability, illness and social isolation. Additionally, disease and ill health can be both products of, and contribute to, social exclusion.

Social capital



Social capital describes the benefits obtained from the links that bind and connect people within and between groups (OECD 2001). The extent of social connectedness and the degree to which individuals form close bonds with relations, friends and acquaintances has been in some cases associated with lower morbidity and increased life expectancy (Kawachi et al. 1997), although not consistently (Pearce & Smith 2003). It can provide sources of resilience against poor health through social support which is critical to physical and mental wellbeing, and through networks that help people find work, or cope with economic and material hardship.

Social infrastructure—in the form of networks, mediating groups and organisations—is also a prerequisite for 'healthy' communities (Baum & Ziersch 2003).

The degree of income inequality within societies (the disparity between high and low incomes) has also been linked to poorer social capital and to health outcomes for some, although there is little evidence of consistent associations (Lynch et al. 2004).

Employment and work



Unemployed people have a higher risk of death and have more illness and disability than those of similar age who are employed (Mathers & Schofield 1998). The psychosocial stress caused by unemployment has a strong impact on physical and mental health and wellbeing (Dooley et al. 1996). For some, unemployment is caused by illness, but for many it is unemployment itself that causes health problems through its psychological consequences and the financial problems it brings.

Rates of unemployment are generally higher among people with no or few qualifications or skills, those with disabilities or poor mental health, people who have caring responsibilities, those in ethnic minority groups or those who are socially excluded for other reasons (AIHW 2015b).

Once employed, work is a key arena where many of the influences on health are played out. Dimensions of work—working hours, job control, demands and conditions—have an impact on physical and mental health (Barnay 2015). Participation in quality work is health-protective, instilling self-esteem and a positive sense of identity, while also providing the opportunity for social interaction and personal development (CSDH 2008).



Housing



Safe, affordable and secure housing is associated with better health, which in turn impacts on people's participation in work, education and the community. It also affects parenting and social and familial relationships (Mallet et al. 2011). There is a gradient in the relationship between health and quality of housing: as the likelihood of living in 'precarious' (unaffordable, unsuitable or insecure) housing increases health worsens. The relationship is also two-way, in that poor health can lead to precarious housing. Single parents and single people generally, young women and their children and older private renters are particularly vulnerable to precarious housing (AIHW 2015b; Mallet et al. 2011).

Residential environment



The residential environment has an impact on health equity through its influence on local resources, behaviour and safety. Communities and neighbourhoods that ensure access to basic goods and services; are socially cohesive; which promote physical and psychological wellbeing; and protect the natural environment, are essential for health equity (CSDH 2008).

To that end, health-promoting modern urban environments are those with appropriate housing and transport infrastructure and a mix of land use encouraging recreation and social interaction.

Measuring socioeconomic inequalities in health

Since social determinants are often pinpointed as a key cause of health inequalities, measuring the size of the health gap between different social groups is important. This provides essential information for policies, programs and practices which seek to address social determinants in order to reduce health gaps (Harper & Lynch 2006).

A common approach to measurement is to: (i) rank the population by socioeconomic position; (ii) divide the population into groups based on this ranking; and (iii) compare each group on health indicators of interest. To rank the population by socioeconomic position, factors such as education, occupation or income level are commonly used, although many other factors, such as housing, family structure or access to resources, can also be used. These factors closely reflect social conditions, such as wealth, education, and place of residence (WHO 2013a). Similar associations between socioeconomic position and health are generally found regardless of which factor is used.

Although individual measures of socioeconomic position are included in some health data sets, area-based measures can be calculated from most collections. An example is the Australian Bureau of Statistics (ABS) composite Index of Relative Socio-economic Disadvantage (IRSD), which is frequently used to stratify the population—see Box 4.1.2 for further details.



Box 4.1.2: The Index of Relative Socio-economic Disadvantage

The IRSD is one of four indices compiled by the ABS using information collected in the Census of Population and Housing (ABS 2013). This index represents the socioeconomic conditions of Australian geographic areas by measuring aspects of disadvantage. The IRSD scores each area by summarising attributes of their populations, such as low income, low educational attainment, high unemployment, and jobs in relatively unskilled occupations. Areas can then be ranked by their IRSD score and are classified into groups based on their rank. Any number of groups may be used—five is common.

If five categories are used, then the IRSD commonly describes the population living in the 20% of areas with the greatest overall level of disadvantage as 'living in the lowest socioeconomic areas' or the 'lowest socioeconomic group'. The 20% at the other end of the scale—the top fifth—is described as the 'living in the highest socioeconomic areas' or the 'highest socioeconomic group'.

It is important to understand that the IRSD reflects the overall or average socioeconomic position of the population of an area; it does not show how individuals living in the same area might differ from each other in their socioeconomic position.

Often, the gap between the lowest and highest socioeconomic groups is of greatest interest. Simple differences in epidemiologic measures, such as rates and prevalences, can be used to examine this gap—and this gap can be *absolute* (for example, a difference in rates) or *relative* (for example, the ratio between two rates) (Harper et al. 2010).

Both absolute and relative measures help in understanding the differences in health status between the two groups. Absolute measures are important for decision makers, especially where goals in absolute terms have been set, since they allow a better appraisal of the size of a public health problem.

Simple measures generally use information from only two socioeconomic groups—the lowest and highest—and ignore the middle groups. More complex measures use information from all groups to measure the magnitude of socioeconomic inequalities in health (WHO 2013a).

Although complex measures include information on both the magnitude of inequality and the total population distribution of inequality, they are restricted by the types of data that can be used, and by their ease of interpretation.

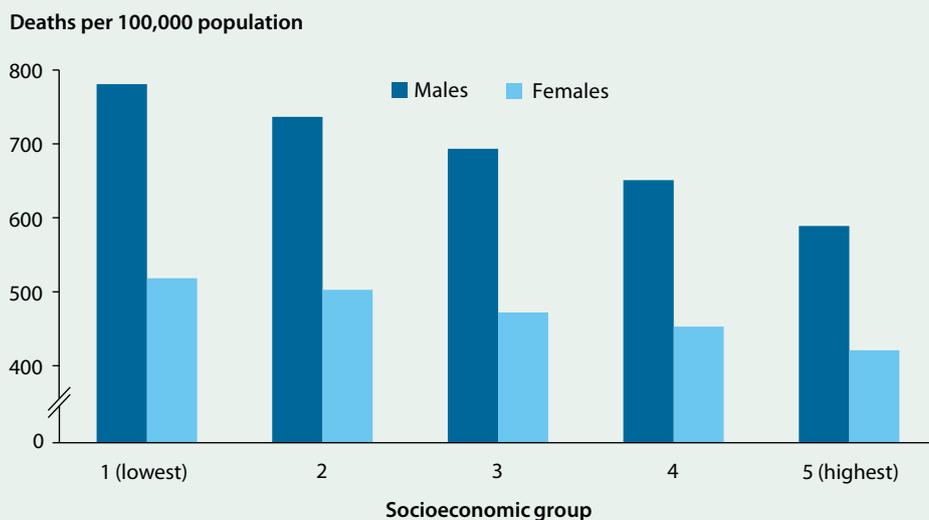
The social gradient in health

There is clear evidence that health and illness are not distributed equally within the Australian population. Variations in health status generally follow a gradient, with overall health tending to improve with improvements in socioeconomic position (Kawachi et al. 2002).



One example is mortality (Figure 4.1.2). In 2009–2011, the female mortality rate was 518 deaths per 100,000 population in the lowest socioeconomic areas, compared with 503 in the second group, 472 in the third, 453 in the fourth, and 421 in the highest socioeconomic areas—with a 23% difference in mortality rates between the highest and lowest areas. For males, the effect was similar, with an even greater inequality (33%) between the highest and lowest areas (AIHW 2014d).

Figure 4.1.2: The social gradient in Australian mortality, 2009–2011



Note: Socioeconomic groups are based on the area of residence using the ABS Index of Relative Socio-economic Disadvantage.

Source: AIHW 2014d.

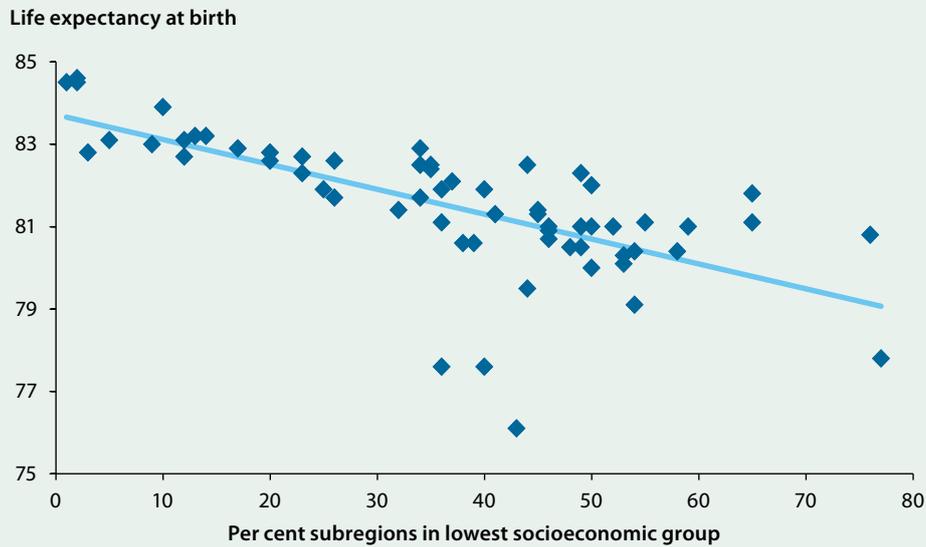
The gradient in mortality affects life expectancy. People living in the lowest socioeconomic areas generally have lower life expectancies (Figure 4.1.3). In 2009–2011, a baby born in a region where only 10% of the subregions were in the lowest socioeconomic group could, on average, expect to live to 83 years, whereas a baby born in a region where 70% of the subregions were in the lowest socioeconomic group could expect to live to 79 years.

The gradient is apparent even at young ages. Figure 4.1.4 illustrates the relationship between social exclusion and health outcomes among Australian children. Children at higher risk of social exclusion—measured using an index of socioeconomic circumstances, education, connectedness, housing and health service access—had higher rates of avoidable deaths (that is, deaths which were potentially preventable or treatable within the present health system) (AIHW 2014c).

The social gradient also extends to types of health care coverage (Figure 4.1.5). People living in the lowest socioeconomic areas report much lower rates of private health insurance than those living in the highest socioeconomic areas (33% compared with 80% in 2011–12). Related to this, people living in lower socioeconomic areas were more likely to be covered by other schemes such as government health concession cards, reflecting the greater proportion receiving pensions and other income support in these areas. This pattern is not surprising, given government policy and incentives to encourage people with higher incomes to contribute more to the costs of their care, including through the purchase of private health insurance (ABS 2010).



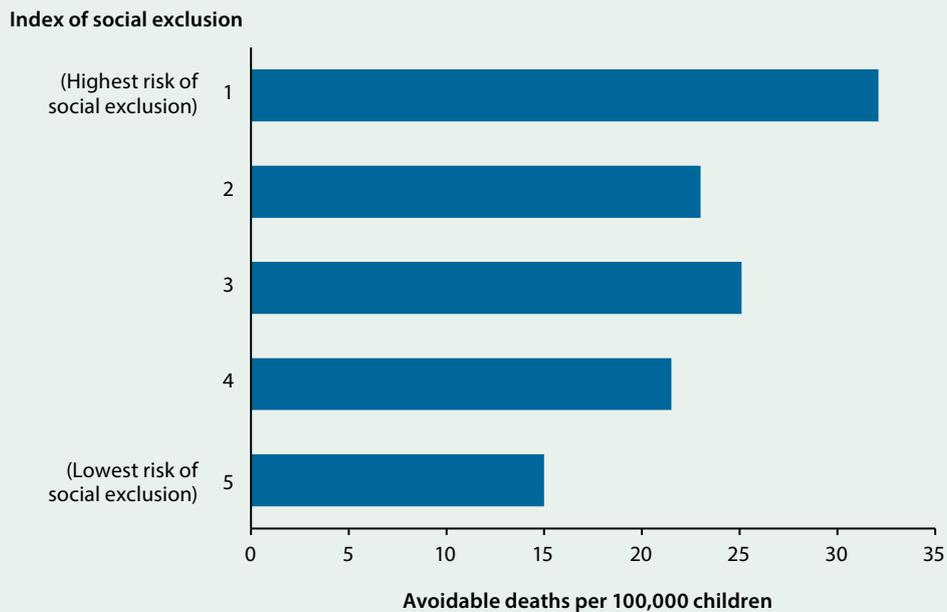
Figure 4.1.3: Proportion of health subregions in the lowest socioeconomic group and life expectancy at birth, 2009–2011



Note: Each point represents a Medicare Local administrative health region. These consist of smaller subregions based on ABS Statistical Areas Level 1 (SA1), which were classified using the ABS Index of Relative Socio-economic Disadvantage. The line through the scatterplot is based on regression analysis which has been used to determine the best fit through the observed data.

Source: NHPA 2013, based on ABS Causes of Death and Life Tables 2009–2011.

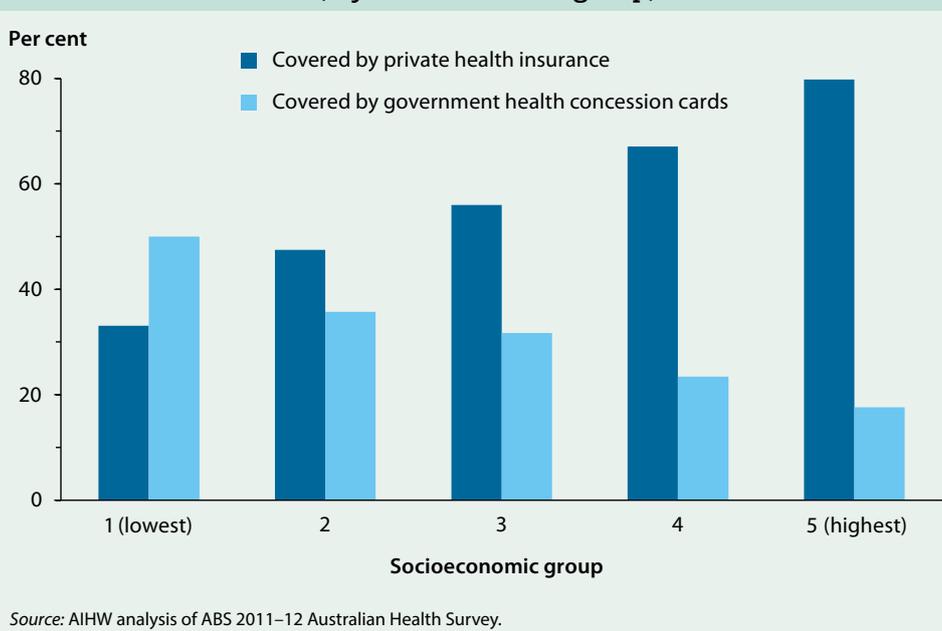
Figure 4.1.4: Estimated rate of avoidable deaths of children aged 0–15, by index of social exclusion, 2007



Source: AIHW 2014c.



Figure 4.1.5: Coverage with private health insurance and government health concession cards, by socioeconomic group, 2011–12



The social gradient in health can also be seen in differing rates for many health risk factors; in the prevalence of many chronic diseases and conditions; in the need for doctor visits; in hospitalisation; and in the use of other health care services (AIHW 2014a, 2014b, 2015c; De Vogli et al. 2007).

The gradient also exists within population groups, including among Aboriginal and Torres Strait Islander Australians (see 'Chapter 4.2 Social determinants of Indigenous health'), and minority groups such as people from non-English speaking backgrounds and refugees (Shepherd et al. 2012; Wilkinson & Marmot 2003). The social gradient effects can start from birth and persist throughout life, through adulthood and into old age, often extending to the next generation. This tends to entrench differences in health and wellbeing across the population. The gradient is a global phenomenon affecting all countries, regardless of whether they are low-, middle- or high-income countries (CSDH 2008).

Better health through action on social determinants

Action on the social determinants of health is often seen as the most appropriate way to address health inequalities, with the prospect of better health for all across the entire social gradient (CSDH 2008). One study has estimated that half a million Australians could be spared chronic illness, \$2.3 billion in annual hospital costs saved, and Pharmaceutical Benefits Scheme prescriptions cut by 5.3 million, if the health gaps between the most and least disadvantaged were closed (Brown et al. 2012).



In 2008, the WHO Commission on Social Determinants of Health made recommendations on what is required to close the health gap through action on social determinants (CSDH 2008). WHO suggested that countries adopt a 'whole-of-government' approach to address the social determinants of health, with policies and interventions from all sectors and levels of society—for example, transport and housing policies at the local level; environmental, educational, and social policies at the national level; and financial, trade, and agricultural policies at the global level (WHO 2011).

The United Kingdom and the WHO Regional Office for Europe have both conducted reviews of political action required to narrow health inequalities (Marmot 2010; WHO 2013b). In Australia, a major focus has been on closing the gap in Indigenous health (see 'Chapter 5 Health of population groups').

Barriers remain, however, in adopting a social determinants approach. Despite strong evidence and an imperative to tackle health inequities, the complex nature of social determinants continues to challenge conventional policy-making and action (Baum et al. 2013; Carey et al. 2014).

What is the AIHW doing?

Socioeconomically disadvantaged people are a priority population for health monitoring. The AIHW routinely uses available measures, such as the IRSD, to assess and report the health outcomes of socioeconomic groups, and it investigates, where possible, which factors contribute to observed inequalities.

The Closing the Gap Clearinghouse at the AIHW has produced a number of reports that discuss how social determinants influence Aboriginal and Torres Strait Islander health outcomes, and how these determinants are associated with the health gap (AIHW 2015d).

The AIHW is seeking to expand its use of health and welfare data to further understand how social factors influence health.

What is missing from the picture?

Social determinants of health act through complex and multidirectional pathways. Research is focusing on better understanding the causal links between social determinants and health outcomes, and on which policies might lead to better health outcomes. Across all key determinants, evaluation of programs and interventions to identify successes in reducing inequalities is important.

Data availability and analytical constraints limit the monitoring of social determinants and the evidence needed for policy development. The extension of reporting to include variables such as ethnicity, culture and language, social support and the residential environment would provide a more robust picture of socioeconomic position. There is also scope for linking health and welfare data to provide a broader and more comprehensive understanding of the effects of social determinants. Additional longitudinal data would also enable improved monitoring of gaps and gradients in health inequalities.



Where do I go for more information?

Many AIHW reports include analysis of health indicators based on socioeconomic position, for example, [Mortality inequalities in Australia 2009–2011](#).

For more information about disadvantage and social inequalities, see the AIHW report [Australia's welfare 2015](#).

The World Health Organization has a leading role in supporting countries to take action on the social determinants of health to address health inequities:

http://www.who.int/social_determinants/en/.

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