The Brimbank Atlas of Health and Education

Mapping the influences on health and education in the Brimbank community

Prepared by the Public Health Information Development Unit for the Mitchell Institute for Health & Education Policy

2014

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- Diana Hetzel developed and wrote Sections 1 and 2, and contributed to the 'context' statements, the summary and other text in Section 3;
- Kristin Brombal, Kimberley Sobczak and Sarah Ambrose shared the task of producing the tables, maps and graphs, and undertaking the correlation analysis; and
- John Glover developed and wrote Section 3, and managed the project.

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Section 1:

Context and purpose

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Background to the atlas and its place in the work of the Mitchell Institute

The Mitchell Institute of Health and Education Policy has been established by the Harold Mitchell Foundation and Victoria University to invest in research into health and education outcomes for individuals, communities and the nation, and to apply contemporary evidence to advice on health and education, and related public policy, for governments, business and community leaders and organisations and the public.

Education is recognised as a crucial path to physical and mental health, which is important for both individual wellbeing and participation in society, and for lifelong learning and education. However, in Australia, there has been little investment or policy attention to the relationship between health and education and the impact on individual wellbeing and economic participation.

In response to this policy gap, the Mitchell Institute Health and Education Indicators project has been established to create a unique set of measurements and information, and potentially an index, to broker and influence the understanding of health and education policy makers, the community and the media.

To undertake this project, a research and policy partnership has been established between:

- The Mitchell Institute;
- The Brimbank City Council;
- The Public Health Information Development Unit (PHIDU), The University of Adelaide; and
- The Victoria Institute for Strategic Economic Studies (VISES), Victoria University.

The development of this atlas by PHIDU provides the foundation data for the development of the suite of health and education indicators by VISES. In addition, the SportsSpatial team within the Institute for Sports, Exercise and Active Living has compiled a report, Physical Activity, Sport, and Health in the City of Brimbank, on the levels of engagement of Brimbank residents in organised sport and active recreation and leisure, providing a companion body of information to this atlas.

The Brimbank health and education atlas, and the Physical Activity, Sport, and Health in the City of Brimbank report provide Brimbank and the residents of the City with information about their community, which Mitchell Institute hopes will prove valuable to community leaders and organisations in planning and developing services and other supports, to enhance the health and education outcomes within the community. They will also provide Mitchell Institute and the City of Brimbank with information to guide targeted research strategies and projects and health and education interventions to improve or enhance health and education outcomes within the City's communities.

Furthermore, the data in these reports will be analysed, and a suite of health and education indicators selected that measure the links between health and education pathways and disadvantage at both the national and local levels. The Mitchell health and education indicators will incorporate significant life stage transition points – early childhood, adolescence, adulthood, prime age and senior years – and offer compelling evidence about the most significant opportunities for effective decision making and investment in health and education and related public policy. The Brimbank atlas and the Mitchell health and education indicators are intended to provide tools for communities in particular, as well as for policy makers, to enable them to design policies, services and investments to improve health and education outcomes for individuals and communities throughout Australia.

Introduction

Over more than three decades, numerous reports and studies have highlighted substantial variations in the health and education of the population, and significant gaps between those who are 'doing well' in Australia, and those who are not.[1-6]

In this atlas, these variations are referred to as 'inequalities[1]', reflecting the fact that such differences exist. The notion of 'inequality' implies a sense of two things being different, not the same. Numerous inequalities exist across the population and they tend to divide the community into different groupings.

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1 In the atlas, the term, 'inequality' refers to a difference, that is, 'not the same'.

There are many types of inequality – age, sex, ethnicity, social and economic position, ability, geographical area, remoteness and so on. Some dimensions of inequality are unavoidable and not amenable to change, such as age. Other inequalities occur as a result of differences in access to educational opportunities; material resources; safe working environments; effective services; living conditions in childhood; the experience of violence, racism and discrimination; and so on. Such inequalities can also alter expectations of what life offers in the future. Many inequalities are potentially avoidable and therefore, the fact that they occur implies a degree of unfairness or 'inequity'. Such inequities occur as a consequence of unjustifiable differences in opportunity, which result in unequal access to those resources and experiences that will optimise learning, development, health and wellbeing capacities, and lead to a fulfilling life.

There is mounting evidence of the significant impact of both economic and social inequalities on various groups in society, and government and community concern about the need to address those which are avoidable.[4-6] This atlas focuses on health and education, and the inequalities in these outcomes across the communities of the City of Brimbank. It highlights those communities and groups living in Brimbank who are doing well, and those where further effort is needed to improve health and educational outcomes.

A brief profile of Brimbank

Brimbank is a Local Government Area (LGA) in Victoria, which comprises 27 suburbs between 11 and 23 km west and northwest of Melbourne's city centre. Brimbank has an area of 123 km² and a population of 195,469 residents in 2013, making it the second most populous municipality in metropolitan Melbourne, and the largest in the Western Region.[7]

Brimbank lies within the area occupied by the Kurung-Jang-Balluk and Marin-Balluk clans of the Wurundjeri people (also known as the Woiwurung language group) who form part of the larger Kulin Nation.[7] Other groups who occupied land in the area include the Yalukit-Willam and Marpeang-Bulluk clans.[7] The peoples of the Kulin Nations are recognised as the traditional custodians of the land.[8]

A social history timeline of important events in Brimbank's history is presented in Figure 1.

The City of Brimbank was established on 15 December in 1994 after the merger of the former Cities of Keilor and Sunshine, during the amalgamations of local councils by the Kennett Liberal government. Brimbank is bounded by the City of Hume in the north, the Cities of Maribyrnong and Moonee Valley in the east, the Cities of Hobsons Bay and Wyndham in the south and the Shire of Melton in the west.[8] The suburbs in Brimbank are divided into five local Districts:

- Sydenham District - including the suburbs of Calder Park, Delahey, Keilor Downs, Keilor North, Sydenham and part of Hillside, Keilor Lodge and Taylors Lakes;
- Keilor District - including the suburbs of Keilor, Keilor Park and part of Keilor East, Tullamarine, Keilor Lodge and Taylors Lakes;
- St Albans District - including the suburbs of St Albans, Kings Park and Kealba;
- Deer Park District - including the suburbs of Albanvale, Cairnlea, Deer Park and Derrimut; and
- Sunshine District - including the suburbs of Albion, Ardeer, Sunshine, Sunshine North and Sunshine West, and part of Brooklyn.[8]

For the purposes of the atlas, Brimbank is divided into Population Health Areas (PHAs), which are described in detail in Section 3.

Brimbank is one of Victoria's most culturally diverse municipalities - the result of waves of migration over many years. More than 150 different languages are spoken across the municipality, with more than half the population speaking a language other than English; and the rate of new arrivals with low or no proficiency in English has increased in recent years.[8,269]

In some of Brimbank's neighbourhoods, there are significant access and equity issues due to high levels of social and economic disadvantage.[7] However, while Brimbank represents the second most disadvantaged Local Government Area (LGA) in Melbourne, the community has many strengths (including neighbourhood groups, clubs, service organisations and service provider agencies), combined with its social, economic, human and environmental capital.[8]

Figure 1: Social history timeline of important events in Brimbank's history

Date	Description
	The people of the Kulin Nations were the custodians of the land in the Port Phillip Bay region, including the current City of Brimbank, for over 40,000 years before European settlement.
1803	Charles Grimes, the first European to see the Sunshine Area.
1830s	Earliest settlers from England, Scotland and Ireland migrants arrived.
1840s	Keilor established.
1843	Livestock market collapsed. Boiling down works for the production of tallow established by Joseph Raleigh, a wealth merchant and grazer. He also set up the Meat Preserving Works.
1850s	Skilled migrants arrived during gold rush era, from Germany, England and Scotland - for example, blacksmiths, fruit and vegetable producers, and those with dairy skills.
1880	Land boom. Sunshine established as a settlement of Braybrook Junction.
1884	Rail Junction created. Victorian Railways began construction of a branch line from the Bendigo line, heading westwards towards Melton, Bacchus Marsh and Ballarat.
1885	Manufacturing industries established e.g. Albion Quarries, Braybrook Implement Co
1886	First land sales, and closure of the cannery (Meat Preserving Works).
1889	Wright & Edwards carriage works established.
1891	Manufacturers of railway rolling stock. Bendigo Line connected to Ballarat Line. Financial recession.
1893	Smelter & fireworks factory established.
1900s	Next wave of British migrants arrived to work at the new factories in Sunshine. Migrants from Italy and Spain found employment largely in the quarries and market gardens.
1902	Severe Australia-wide drought and closure of Braybrook Implement Works.
1904	Purchase of Braybrook Implement Works by the industrialist, Hugh Victor McKay.
1906	McKay relocated Harvester works to Sunshine. United effort by the Protectionist Party and the Australian Labour Party to introduce measures to guarantee workers to fair and reasonable wages and working conditions. *Excise Tariff (Agricultural Machinery) Act* established.
1907	The Harvester Judgement, setting the standard for industrial wage regulation (including for unskilled labourers) and minimum wages throughout Australia. Suburb of Braybrook Junction changed to Sunshine.
1908	Sunshine Railway disaster occurred.
1911	The Harvester strike (16 Feb – 9 May): 2000 employees of Sunshine Harvester Workers made up half of the strikers.
1920	Arrival of multinational and interstate manufacturing firms in Sunshine. Sunshine Harvester Works claimed to the largest manufacturing plant in the southern hemisphere. Maltese migrants began to arrive in Sunshine finding employment largely in the Albion Quarry.
1930	Economic Depression nation-wide.
1939-1945	End of World War 2. Post war migration from Britain and Europe, for example Ukrainian, Greek, Polish, Italian and Maltese migrants. Extraordinary suburban expansion, i.e. young couples, post war European immigrants and settlers from country Victoria moved into Sunshine.
1951	Municipality proclaimed the City of Sunshine on 16 May.
Mid – 1960's	Sunshine - the largest and fastest growing Industrial Centre outside Central Melbourne.
1970's	Progressive reduction of tariff protection dealt a considerable blow to Sunshine's manufacturing industries, leading to high unemployment especially among the younger population, and fostering a range of negative stereotypes about the area's increasing material and cultural impoverishment. Vietnamese refugees and migrants commenced settlement in Brimbank.
1985	City of Sunshine received Medal (NU 20682) to commemorate Victoria sesquicentenary.
1986	Agriculture implement-manufacture at Sunshine ended, after Sunshine Harvester enterprise ceased production.
1990s	African communities commenced settlement in Brimbank.
1994	The City of Sunshine abolished, and Brimbank City formed.

The Brimbank Council has invested in its community by delivering high quality services; promoting employment, education and health opportunities; creating vibrant urban environments including the town centres, public realm and parks and gardens; and offering functional and efficient transport networks including road, public transport, cycling and pedestrian pathways.[240] All the strengths and assets of Brimbank need to be considered, not only its more challenging statistics. A selection of both is contained in Section 3.

Outline of the atlas

This atlas provides a range of information for decision-makers, planners, service providers, researchers and communities. It is hoped its production will bring a better understanding of the complex interactions between individuals and families, their environments and social structures over a lifetime, and how these factors influence the health, education and ultimately, the flourishing of current and future generations of Brimbank residents.

In order to do this, a number of indicators have been chosen to describe different aspects of the population, and, by using them, to highlight differences, especially in health and education outcomes, across the community. The indicators have also been selected to cover the lifespan; and the atlas offers a perspective on understanding inequalities across life and tracing outcomes at one stage of life, to the accumulation of experiences which occurred at earlier stages.[50]

In general, indicators are useful for:

- informing people about social issues, including use and access to services, or outcomes in education and health;
- monitoring such issues to identify change, both between groups in the population, and over time; and
- assessing progress toward set goals and targets, or achievement of policy objectives.

These purposes suggest that indicators need to:

- reflect the values and goals of those who will use and apply them;
- be accessible and reliably measured in all of the communities of interest;
- be easily understood, particularly by those who are expected to act in response to the information;
- be measures over which we have some control, individually or collectively, and are able to change; and
- move individuals, communities and governments to action.

The indicators, presented in this atlas and an associated atlas on the World Wide Web (available at http://tinyurl.com/Brimbank-atlas-Mi), have been selected because they describe the extent of inequality in health and educational access, participation and outcomes, in the context of the demographic and socioeconomic composition of Brimbank. They are also those for which available and reliable data can be mapped to show variations by area - across Brimbank, and compared with the western metropolitan region, the capital city of Melbourne, country Victoria, and Australia as a whole. However, indicators only act as sign-posts for issues warranting further investigation. The measurement and comparability of health inequalities across populations is an inexact science. Some of the challenges include the different distributions of disease; variation in the availability and quality of data; variation in the comparability of self-reported information about specific health conditions due to diagnosis bias or avoidance; the comparability of self-reported overall health or education measures; and issues in measuring ethnicity, socioeconomic status, and the mechanisms underlying inequalities, such as discrimination or acculturation.[29,30]

Therefore, while the indicators used in the atlas represent areas where considerable disparities are apparent, they can provide only a partial picture of the existing social and economic inequalities in health and education in Brimbank. However, the information contained in the atlas highlights these inequalities and their impact on different sections of the Brimbank population, and in doing so, provides a basis for further work.

Taking a place-based approach

It is increasingly recognised that there is a clear association between the health and wellbeing of individuals and communities, and where they live. Place can influence health and wellbeing, both positively and negatively, directly and indirectly.[242,243]

Place-based interventions target specific neighbourhoods or communities, and are a promising way to bring people, sectors and services together in a locality. Sectors that have applied place-based approaches include economic development, environmental sustainability, homelessness and housing strategy, poverty and social exclusion, regional development and public health.[242]

A place-based approach assumes that geographical context matters, where context is understood in terms of its social, cultural, historical and institutional characteristics.[245] The active role of local stakeholders is critical to the success of place-based approaches and requires local government, business and other bodies to shape local policy actively.[262,263] Thus, successful place-based approaches put the development of human capital and the promotion of innovation at their centre.[255]

Place-based approaches share a common set of characteristics, which contribute to their success. Such approaches:

- are designed to meet the unique needs of locations;
- engage stakeholders across all sectors in collaborative decision-making;
- seize opportunities, particularly local skills and resources;
- evolve and adapt to new learning and stakeholder interests;
- encourage collaborative action by crossing organisational borders and interests;
- pull together assets and knowledge through shared ownership; and
- encourage new behaviours and "norms" in a location.[242]

Place-based approaches impact the conditions that influence health and wellbeing in communities, and are set in the context of the broader social, political and economic factors that shape health that need to be addressed at regional, state and national levels.[242,243]

As part of a place-based approach, community development can identify the assets and strengths of communities, and the abilities and insights of local residents become resources for addressing a neighbourhood's challenges.[261-3] This does not mean that disadvantaged neighbourhoods do not need outside help, but rather that any genuinely local project can be resident-led, with agencies outside the City acting in a support role.[264]

Aims of the atlas

The Brimbank atlas aims:

- to describe a number of factors that have important influences on health and education for the Brimbank community;
- to identify significant inequalities in health and education across the Brimbank community, and to assess possible trends in such inequalities over time; and
- by mapping these indicators, to provide information in a form that will support discussion and action by communities and organisations at local, regional, state and national levels.

It is hoped that people will draw on the atlas to understand the extent of inequalities across Brimbank and identify trends over time, to develop place-based interventions that will reduce these disparities, and to track emerging issues of concern to particular communities in Brimbank. The atlas design will also offer other communities the opportunity to consider in depth the health and education outcomes within their communities, and to use the Mitchell health and education indicators to guide community and service planning and development, and specific health and education interventions, to achieve improvements for their communities.

A note about terms used in the Atlas

In the atlas, the term 'socioeconomic' refers to the social and economic aspects of a population, where 'social' includes information about the community and its level of education, welfare, housing, transport and so forth. It is not used in the context of 'social' as in 'social skills', 'social capital', 'social ability' or 'social behaviour' of community members. Therefore, an area described as having 'a high level of socioeconomic disadvantage' does not imply that the area has low cohesion or lacks strength as a community; rather, it identifies a relative lack of resources or opportunities that are available to a greater extent in more advantaged communities. Thus, this lack of resources leads inevitably to avoidable differences in health and other outcomes for disadvantaged communities.[1]

Identifying the communities whose residents are not faring as well as others may be perceived by some people as stigmatising. However, the purpose of the atlas is to highlight the extent of their disadvantage in order to provide evidence upon which community members and decision-makers can rely, and which can underpin advocacy for change. If we avoid highlighting the most disadvantaged areas, we avoid providing the evidence that society is failing those who live there. Moreover, being complacent about their plight, and not publishing the evidence, makes us complicit in their poorer life outcomes.

[1]In discussing the maps, reference is also made to 'poor health outcomes for the population of the most disadvantaged areas'. This is not to imply that the same health outcomes (e.g., a high premature death rate) apply to everyone living in the named areas: clearly, the average rate for an area is comprised of a range of rates across the area.

Section 2:

Understanding what determines our health and education

In this section …

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Introduction

Over the last four decades, there have been substantial social and economic changes in Australia, especially in the areas of wealth, work, health, education, technology, resources for families, community supports and the interplay between them.[9] These changes have been underway across Australia, and in other wealthy nations. Examples include:

- the effects of rising life expectancies, delayed childbearing, population ageing, overseas migration and increasing cultural diversity;[9,10]
- marked alterations in the nature and availability of work, and in opportunities for the employment of young people, with globalisation and technological advances placing greater demands on education and skills development;[11,12]
- rapid technological change bringing new ways of learning, communicating and interacting across communities;[12]
- increasing challenges in balancing work or the lack of it, with child-rearing and family responsibilities;[13,14,17]
- changes in the economy, especially in sectors such as manufacturing, retailing and financial services, with significant economic hardship and joblessness for many affected households;[15,16]
- pressures on affordable housing, particularly public housing;[18,19]
- the impact of climate variability on urban, rural and remote communities;[20]
- a rise in those adversely affected by alcohol, drugs, gaming and gambling, mental ill-health and various forms of interpersonal violence;[21,22]
- a greater awareness of the effects of harmful stress on children, young people and their families as a result of serious family problems and relationship breakdown;[23] and
- the persistence of significant inequalities in health and education and other outcomes across populations, especially for Aboriginal and Torres Strait Islander peoples, refugees and other disadvantaged communities.[24,25]

This has led to what has been described as 'modernity's paradox', a term which questions whether today's communities are developing in a positive and healthy way, given the rapid social and technological changes, which are without precedent in their scope and effects.[26,27] These changes have heightened the need for up-to-date skills and knowledge, especially in communities such as Brimbank with its high proportion of residents born overseas, many of whom are without secondary school completion or formal post-school qualifications.[28]

The complexities of modern society also require people to be physically and emotionally healthy – capable, open to new ideas, socially engaged and adept at doing things differently. Those who cannot anticipate, adapt to change and contribute are likely to become increasingly marginalised in social and economic life.[27] As individuals, families and communities attempt to make the transition but fall behind, inequalities in economic and social outcomes increase, with the longer term effects across generations as yet unknown.[27]

Therefore, we need to understand better the complex interactions between individuals, their families, the benefits and pressures exerted by their environments and social structures over a lifetime, and how these factors influence the health, education and, ultimately, the overall wellbeing of current and future generations of Australians, including the communities living in Brimbank. This reflects the growing awareness of the multidimensional nature of community wellbeing, which includes material resources; education and skills; culture and kinship; moral and spiritual values; community engagement; socioeconomic position; opportunities for employment; levels of health and disability; and social, community and personal assets.[36] Determining assets as well as needs gives fuller understanding of communities and helps to build resilience, increase social cohesion and develop better ways of providing effective services.[37] Furthermore, healthy and skilled communities are essential for economic growth and development.[38]

To this end, this section of the atlas examines those factors which have been identified as important in contributing to the overall wellbeing of individuals and populations, in the context of their social, cultural, economic, historical and physical environments.

The notion of flourishing

Wellbeing can be described in different ways, but most definitions incorporate the idea of 'flourishing': individuals flourish when they are functioning well in their interactions with the world, and they experience positive emotions as a result.[39] A flourishing life involves healthy relationships, autonomy, competence and a sense of purpose, as well as feelings of happiness and satisfaction.[39] Human flourishing can be understood as 'the desired and dignified good life for which we all ought to strive'.[48,49]

While the term is often applied to individuals, it can also be used to describe communities. Flourishing communities are those where everyone has someone to talk to, neighbours look out for each other, and people take pride in where they live, volunteer to help others, and feel able to influence decisions about their local area.[37] Residents of all abilities can access open green space and feel safe doing so, and there are opportunities and places to bring people together as a community.[37] A flourishing community is one in which members have high levels of wellbeing, which are sustained over time, and one which builds on its strengths and assets to maximise opportunities to increase wellbeing and social and economic development further.[39]

Community flourishing is the overall state of a community in terms of environmental sustainability, social and economic factors and the wellbeing of its residents.[39,45] It has to do with the way a community functions - indeed, with the 'healthiness' of the community as a whole.[40] The wellbeing of a community is reflected by its ability to generate and use assets and resources effectively to support the quality of life of its members as individuals, and the community as a whole, in the face of challenges and barriers within its environment.[40,44] Community flourishing also describes reciprocal relationships between people and their environment with the goal of sustainability.[41] Reciprocity and continuous interaction between people and the social, economic and physical environments that comprise their community, are essential to bring about change and to enhance the wellbeing of individuals and the community itself.[40]

As a concept, community flourishing represents not only subjective elements (for example, satisfaction with life, positive and negative emotions), but also more objective components, such as capabilities and fair allocations of resources and opportunities.[40,43,44,47] Communities provide support, order, and a framework for their members to use to help make sense of their lives. The resilience of a community is reflected in its ability to address adversity and, in doing so, extend community capacity.[42,47] A flourishing community can be thought of as continually creating, promoting and improving its physical, economic and social environments, and expanding on community skills and resources, which enable its members to be the best that they can be.[45,46]

Thus, the use of the term 'flourishing' relates to all aspects of human development, including health, learning, functioning and capability.[31,47] A capability approach 'focuses on the ability of human beings to lead lives they have reason to value and to enhance the substantive choices they have'.[47] The idea of human capabilities is a more expansive notion than human capital, because it encourages aspects that are wider than those associated with merely increasing productivity or economic growth, and underpins what makes a 'good society'.[48,53,65]

Health is regarded as a human right; and the 'capabilities approach' to eradicating inequality, social exclusion and poverty focuses on achieving positive 'freedoms', such as being able to access health care and education, enjoy recreational activities, own property, and seek employment.[47,55] These freedoms enable people to have a level of control or agency over their lives, by having the ability to freely make choices regarding their life.[47]

As freedom from poverty involves more than freedom from insufficient income, so positive health transcends mere freedom from illness.[56,57] The World Health Organization (WHO) adopted this perspective when it defined health in 1948 as "*a state of complete physical, mental, and social wellbeing and not merely the absence of disease or infirmity*".[58] This emphasised people's personal and social resources and ability to make choices in life, identify and realise aspirations, satisfy needs, acquire knowledge and skills, and change and cope with their environment, although some researchers have claimed that to achieve such a state is more ideal than realistic for most of the population.[57] The WHO's prerequisites for

health for all include equal opportunities for all, satisfaction of basic needs (adequate food and income, basic education, safe water and sanitation, decent housing, secure work, a satisfying role in society), peace and freedom from fear of war - and incorporate current perspectives on sustainability.[59]

The 1986 Ottawa Charter for Health Promotion moved beyond the original WHO definition, which regarded health as a state, towards viewing it as a dynamic process.[11] It defined health as "a means to an end which can be expressed in functional terms as a resource which permits people to lead an individually, socially and economically productive life." This definition also holds that "health is a resource for everyday life, not the object of living"; and it explicitly ties health to capabilities and positive attributes of freedom.[60]

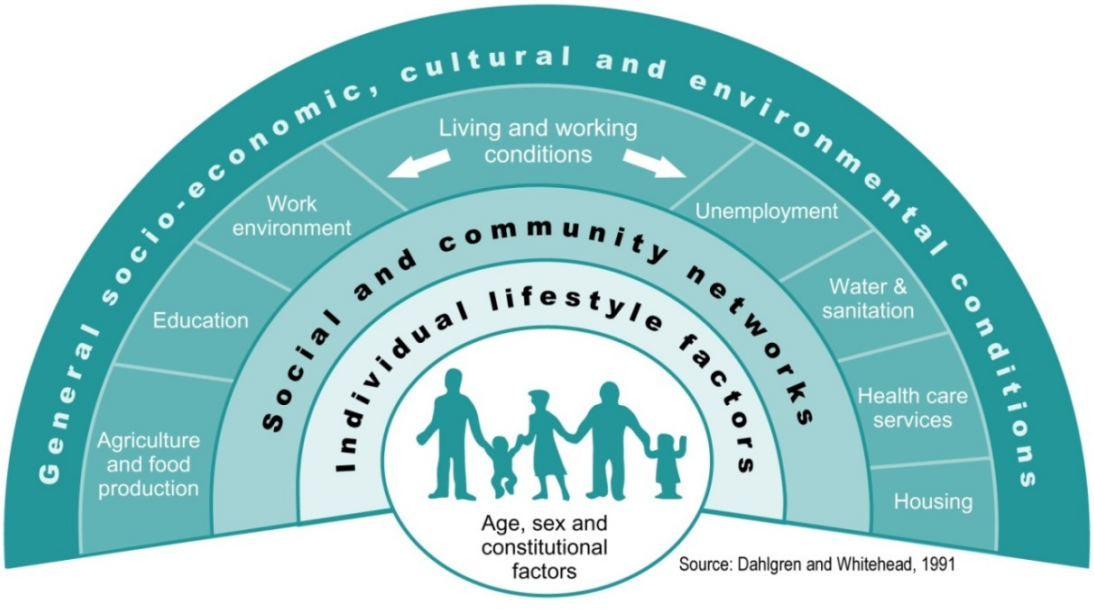
Determining health across the life span

Health is a multidimensional phenomenon, which is also described as a dynamic, emergent capacity that develops continuously over the lifespan in a complex, non-linear process of development.[11,51,52,268] There many different factors or 'determinants' which influence health across the life span, and contribute to flourishing individuals and communities.[61,62] These can be illustrated as different 'layers of influence', starting with the individual, and extending to aspects of families, kinship and cultural groups, neighbourhoods and the wider community (Figure 2).[52] This model is one of many, which link influences from various domains – including society-wide factors (e.g., socioeconomic, cultural, environmental), middle-level factors (e.g., access to health care, education and other human services) and personal factors (e.g., tobacco use, genes, age), to explain the origins of health.[51,86,267]

The 'social determinants of health' are social and economic factors that influence health: "*the circumstances, in which people are born, grow up, live, work and age, and the systems put in place to deal with illness. These circumstances are in turn shaped by a wider set of forces: economics, social policies, and politics*".[51,65,86]

Examples of the social determinants of health include income and income distribution, education, social safety networks, employment and working conditions, unemployment and job security, early childhood development, gender and identity, kinship and culture, food insecurity, housing, social exclusion, racism and discrimination, access to services, Aboriginal status, and disability.[64] Many social determinants can potentially be modified to improve individual and community health, and reduce inequalities in health development across a community.[52,62-65]

Figure 2: Key Determinants of Health[52]



As illustrated above, health results from multiple factors that operate together within genetic, biological, behavioural, social, cultural, environmental and economic contexts that have differing influences at various times over the life span, and over generations. Protective influences and risk factors have a greater impact on health development during sensitive and critical developmental periods, especially early in life when biological and behavioural regulatory systems are being programmed and implemented.[268] For example, family context has a greater effect on the wellbeing of infants and young children early in life, while peer group and neighbourhood factors and individual health-related behaviours become more important as older children move into adolescence and early adulthood.[63] The life pathways of individuals that result are the product of the interplay of cumulative risk and protective factors, along with other wider social and economic influences.[63,267]

Risk and protective factors can occur independently, or may cluster together in socially patterned ways.[63] Taking a 'life course approach' to health means looking at the long-term effects of physical, emotional and social exposures to risk and protective factors during gestation, infancy, childhood, adolescence, young adulthood and later adult life.[66-68,268] It acknowledges all the biological, behavioural and psychosocial pathways that operate over an individual's lifespan, as well as across generations, to influence the development of health.[27,69] Thus, the path that leads to any particular outcome can be very different for different individuals and communities.

The timing and sequence of biological, cognitive, psychological, emotional, cultural and historical events and experiences all influence the development of health in individuals, communities and across populations.[61,70,268] For example, populations historically subjected to long-term mass trauma can exhibit a higher prevalence of disease, even several generations after the original trauma occurred.[73,75] Thus, the life course of individuals is embedded in and shaped by historical times and the places they experience over their lifetime.[72]

The key determinants of health are described in more detail below, and are reflected in many of the indicators included in Section 3. Numerous determinants overlap, and more remains to be learned about the specific ways in which these factors influence individual and community health.

1. Wealth and socioeconomic position

These are among the most important individual-level determinants, as one's overall health tends to improve at each step up the economic and social hierarchy. Thus, people with a higher income generally enjoy better health and longer lives than people with a lower income.[76] The rich are healthier than those with mid-level incomes, who are in turn healthier than those who are poor. This is known as 'the social gradient'.[27]

In Australia, many indicators of wellbeing vary by socioeconomic position - for example, health risk behaviours (such as smoking, physical inactivity); a range of chronic diseases (such as type 2 diabetes, cardiovascular disease, some cancers); and mortality.[24] It has been suggested that socioeconomic factors have the largest impact on health and wellbeing, accounting for up to 40% of all influences compared with health behaviours (30%), clinical care (20%) and the physical environment (10%).[239]

A gradient also exists for other outcomes – from coping behaviours, to literacy and mathematical achievement.[27,77] A gradient is evident whether one looks at differences in current socioeconomic status or in that of family of origin. These effects seem to persist throughout the life course, from birth, through adulthood and into older age, and for some outcomes, to the next generation.[27,66]

For most people in Australia, this difference in wellbeing is not due primarily to the lack of money for food, clothing or shelter. Thus, the important factors in explaining differences appear to be not only material conditions, but also the social advantages and power attached to those conditions. In mature economies such as Australia, these are major influences on health and wellbeing, both for individuals and for communities.

2. Culture and kinship

The concept of culture reflects a shared identity based on factors such as common language, related values and attitudes, and similarities in beliefs, lived histories, and experiences.[129] For many people, the expression of these aspects of their culture is an enabling and protective factor for their health.[78] Culture, spirituality and kinship have overarching influences on beliefs and practices related to health,

wellbeing and healing, including concepts of wellbeing and knowledge of the causes of health and illness and their remedy.[80]

However, ethnic minority groups can face serious risks to their health and wellbeing because of conflicting values from more dominant cultures, which contribute to discrimination, loss or devaluation of language and culture, marginalisation, poor access to culturally appropriate care and services, and lack of recognition of skills and training, for the minority culture.[81] This results in avoidable and unfair inequalities in power, resources or opportunities across different cultural groups in society, with consequent adverse effects on health and wellbeing.

Racism, discrimination and social exclusion are expressed through beliefs, prejudices, media perceptions, behaviours and practices; and can be based on race, ethnicity, gender identity, sexual preference, disability, culture or religion.[82] Such phenomena have direct impacts on health, and indirect effects are mediated through various forms of social and economic inequality.[81,83] These concepts are clearly applicable to Australian society, and include the effects of racism, stigma and discrimination on Aboriginal and Torres Strait Islander peoples, people living with disability or mental health problems, refugees and recently arrived migrants, amongst other minority groups in society.[82,84,251]

3. Education and training

Education increases opportunities for choice of occupation and for income and job security, and also equips people with the skills and ability to control many aspects of their lives – key factors that influence flourishing throughout the life course.[87] Participation in schooling and/or training is also a major protective factor across a range of risk factors for young people, including substance misuse and homelessness.[85]

In Australia, evidence shows that health improves with increasing levels of educational attainment.[27,88] Educational attainment and participation are also steeply graded according to socioeconomic position.[27,88,129] The pervasive socioeconomic inequalities in adult learning outcomes (and many other markers) have their roots in socioeconomic inequalities in early child development.[27,89] That is, during the earliest years of life, differences in the extent of benefit provided by children's environments lead to differences in early developmental outcomes; and the effects of these early inequalities translate into inequalities in learning, development and wellbeing in later childhood, adolescence, and adulthood.[27,89]

Communities with large proportions of educated, skilled members have heightened health and social and economic capital, with benefits evident at three levels: individual, local community and regional.[90-92] While learning improves an individual's skills and knowledge, it also contributes to their self-efficacy and sense of control, and allows them to participate more effectively in the community as a whole.[92,93] Learning contributes to individuals' sense of belonging and better places them in a position to add to the combined resources of the community such that the shared sense of flourishing is improved.[93] In this way, education also supports economic growth and productivity, as skilled workers are better able to take up opportunities in existing and emerging industries.[93]

4. Employment and working conditions

Employment in satisfying work contributes to individual health.[94] For employed people, those who have more control over their work and fewer stress-related demands in their jobs are likely to be healthier.[94,95] Workplace hazards and injuries are significant causes of disability and related health problems.[94] Furthermore, those who do not have access to secure and fulfilling work are less likely to have an adequate income; and unemployment and under-employment are generally associated with reduced life opportunities, greater likelihood of social exclusion from the community and poorer health.[94-97]

While many of the most disadvantaged households are in Australia's remote Aboriginal communities, there are also concentrations of highly disadvantaged households within some neighbourhoods in urban and regional communities, such as Brimbank.[98] These concentrations of disadvantage are often reinforced by the uneven distribution of access to employment and other opportunities apparent in more affluent areas. Access to employment is critical to levels of labour force participation and to the flow-on effects for household income and wealth, and community flourishing.

In some communities, the changing nature of industry has left localities with fewer job opportunities.[45] Structural change is continuing to reduce job opportunities in manufacturing, and increasing job opportunities in government and the services' sector. Concentrations of different types of employment and the variation in transport connections to these jobs can leave already disadvantaged communities marginalised from such job opportunities, or make other communities vulnerable to increasing rates of unemployment – with significant consequences for the wellbeing of these communities, and their members.

5. The physical environment

Another significant determinant of health is the safety, quality and sustainability of the physical environment (which includes the natural and built environments, such as housing), that provides the basic necessities for life, such as clean air, water and food; and raw materials for clothing, shelter and industry. Features of the natural and built environments also provide different opportunities for social interaction, safe recreation and play, tourism, transportation, employment and housing. For example, a lack of access to transport or adequate housing is a risk factor for poorer wellbeing and social exclusion of people and their communities, as is pollution of the air, water or soil.[99] The effects of changes in climatic conditions, altered cycles of flooding and drought, and the disruption of ecosystems on communities pose further challenges for health and wellbeing, and are likely to affect populations unequally.[100-102]

Physical environments that undermine safety, weaken the creation of social ties, and are violent are unhealthy and socially excluding. By contrast, a healthy environment, endowed with safe public spaces and generous natural settings, provides opportunities for social integration and leisure activities, and enhances community wellbeing.[102,103]

6. Social support networks

Access to support from families, friends and communities is associated with better health.[104] Aspects of this determinant shape people's daily experiences, and include individual and neighbourhood socioeconomic characteristics, a sense of connectedness, community norms, and spiritual and cultural beliefs and practices.[104] Sources of support help people to deal with crises and difficulties as they arise, to maintain a sense of control over their lives, to enhance their resilience to life's challenges, and to feel able to contribute as members of a community.[105] Shared principles and values, meaningful consultation about significant issues, trust-building, and reciprocity and collaboration can yield positive outcomes for communities and their members.[108] Studies have consistently demonstrated people who are socially isolated or disconnected from others have between two and five times the risk of dying from all causes compared to those who maintain strong ties with family, friends and community.[106,107]

Researchers also describe the quality of the social context of everyday life ('social quality') as having four conditional factors: socioeconomic security, social cohesion, social inclusion and social empowerment.[105] These factors are underpinned by the rule of law, human rights and social justice, social recognition and respect, social responsiveness and individuals' capacities to participate as citizens within their communities.[105]

7. Early life factors

Early life is a time when individuals are particularly vulnerable to risk and protective influences.[27,88] Developmental vulnerability has its origins in a child's biological risks, and prenatal and early childhood experiences and environment, and the complex interactions between these.[267] Children who are developmentally vulnerable risk not achieving their true human capability over their life course.[267,268]

Experiences at the beginning of life are also reflected in health outcomes during the middle and end of the life span.[61,66] There is strong evidence of the effects of supportive early experiences on an individual's cognitive function, growth, the ability to learn, physical and mental health, and resilience in later life.[27,89] Exposure to neglect, trauma, violence and abuse in childhood and beyond, carries a risk of poorer physical and mental health throughout life, with adverse consequences for later learning, development, relationships and overall wellbeing.[73,75]

A life course view highlights the sequencing of events across an entire lifetime.[74,267,268] There is also evidence for intergenerational effects; for example, the socioeconomic status of a child's grandfather may predict the child's cognitive

and emotional development at 14 years of age.[69]

Research has shown that supportive, high quality early child development programs enhance the wellbeing of children, their families (particularly those who are disadvantaged and marginalised), and also their communities.[89] Such interventions can also have positive effects on the economy of a community as a whole, by raising its stock of human capability, enhancing current and future productivity and mitigating disadvantage.[27,109]

8. Individual behaviours and practices

Personal behaviours, practices, and coping mechanisms can promote or compromise health.[110] Factors such as physical inactivity, tobacco smoking, use of drugs and harmful alcohol consumption, unhealthy food habits, exposure to violence and trauma, and gambling have obvious impacts. However, many of these health behaviours reflect decisions that are patterned by an individual's and their community's economic, cultural and social circumstances.[27,110]

People on low incomes have access to fewer alternatives to help reduce stresses and cope with life's challenges. As a result, they may be more likely to take up readily available and more economically accessible choices, such as tobacco use.[111] Not surprisingly therefore, smoking behaviour is steeply graded according to socioeconomic status, resulting in those who are the most disadvantaged having the poorest smoking-related health outcomes.[111] Not only does the prevalence of smoking increase with socioeconomic disadvantage, but the average number of cigarettes smoked per week also increases with growing disadvantage.[112]

Personal attributes and risk conditions interactively shape health and wellbeing. However, people who suffer from adverse social and material living conditions can also experience higher levels of physiological and psychological stress.[113] Stressful experiences arise from coping with conditions of low income, homelessness or poor quality housing, food insecurity, unsafe communities, hazardous working conditions, unemployment or under-employment, and various forms of discrimination based on Aboriginal and Torres Strait Islander status, mental illness, disability, religion, gender, or ethnicity.[113, 114] A lack of supportive relationships, social isolation, and a mistrust of others further increases stress and poor health, at both an individual and a community level.[113,114]

9. Access to effective services

The timely use of effective services is a determinant of individual health, especially the accessibility of preventive and primary health care services and education and training, which are universally available, high quality, safe, affordable and culturally relevant.[116,117] For certain populations who are socially or culturally marginalised or geographically remote, lack of access to and availability of appropriate services continue to be important influences on their health and wellbeing.[116]

Inadequate social infrastructure, such as a lack of services, has significant long-term consequences and associated costs for new and existing communities.[118] A 'spiral of decline' can occur when there are poor quality, unresponsive or absent local services, or effective services are downgraded or relocated elsewhere, with resulting negative impacts on the health of communities and their members.[119]

10. Gender and sexual identity

While not excluding biological differences, a gendered approach considers the critical roles that social and cultural factors and power relations between men and women play in promoting and protecting or impeding health and wellbeing for individuals.[64,120] The overall goal should be to achieve equitable resource distribution, community flourishing, and social inclusion and participation by all community members.

For many gay, lesbian, bisexual, transgender and intersex Australians, poorer health and wellbeing can arise as a result of the considerable stress of experiencing discrimination, trauma and social exclusion.[121,122] Gender- and sexuality-specific health needs for individuals include the adequacy and appropriateness of health care and other support services, because the health of both males and females is shaped by the inclusiveness of communities and the fair distribution of available resources.[123]

11. Disability

Understanding the distinction between individual and social models of disability is critical to recognising disability as a key determinant of wellbeing.[124] When disability is

only thought of as a personal tragedy or a form of biological deficit, action tends to focus on medical responses of care, cure or prevention. By contrast, social model approaches focus not on presumed deficiencies of an individual, but on the social processes that cause people with perceived impairments to experience inequalities and social exclusion as a minority group in the community.[125] A social model of disability acknowledges that the causes of social disparities operate beyond the level of the individual, and both structural and cultural forces play a part in the collective experience of inequality and the social exclusion of those living with disability.[125] When the experience of disability is identified as discrimination, exclusion or injustice, policy responses are more likely to focus on human rights and the removal of barriers to inclusion.

People with disabilities experience significantly poorer health outcomes than their non-disabled peers; and these negative health outcomes extend to aspects of wellbeing unrelated to the specific health conditions associated with their disability.[126] Poorer health outcomes may also be experienced by family members who care for their disabled children, siblings or adult relatives.[127]

People with certain impairments may be more likely to die at a younger age than the average for the population, as a result of the biological impact of the impairment on the body's capacity for survival. However, less access to health care, fulfilling employment, safe and supportive communities, and welfare resources can also affect survival chances adversely.[125,128] These broader inequalities, including those linked to socioeconomic background, underlie the social patterning of the health and life experiences of people who live with disability, and their families.[126]

Communities that are disability-friendly can improve the health of all members. For example, the cultural and artistic life of a community flourishes when people with disabilities and older people are able to contribute their skills and talents both as artists and as patrons.[128] Social participation in arts and culture opportunities can also strongly influence individual health and foster a greater sense of community cohesion.[128]

12. Biologic factors and genetic inheritance

Genetic inheritance, the functioning of individual body systems and the processes of growth and ageing are also powerful determinants of health and wellbeing. A person's genetic endowment was once thought to be pre-determined and not amenable to change. However, recent evidence indicates that the ways that genes are expressed can be shaped by a person's physical, psychological and social environments; and social relationships and environments may influence the expression of DNA throughout one's lifetime.[132]

A growing body of research is revealing that external factors affect wellbeing and development not only via psychosocial mechanisms, but through epigenetics as well. 'Epigenetics' refers to regulation of the genome: the mechanisms that can change a gene's function, without altering its sequence.[130] New research has also shown that early life experiences can produce changes in the genes that affect brain development; and these changes may help explain, for example, why abuse and neglect early in life result in a high risk for suicidal behaviour many years later.[131,133]

To summarise, the factors discussed above play important roles in the health and wellbeing of populations. The health of populations is the product of the intersecting influences from these different domains, influences that are dynamic and that vary in their impact depending upon when in the life course they occur and upon the effects of preceding and subsequent factors.[134] Whether a gene is expressed can be determined by environmental exposures and also by behavioural patterns. The nature and consequences of behavioural choices are affected by socioeconomic and cultural circumstances.[134,135] Genetic predisposition, behaviour and living conditions determine the health care that will be needed, and one's socioeconomic circumstances may affect the health care one receives.[134]

Linking health and education

There is a large and persistent relationship between education and health, both of which are multi-dimensional concepts. This remains even when other important factors, such as income, are taken into account.[87,93,136,137] For example, there is a strong graded association

between educational attainment and life expectancy, although it is not clear if this is a causal relationship.[252,253,265] The causal pathway that links health and education is complex and not yet fully understood, and there is substantial variation across countries and cohorts in the extent to which education predicts better health.[270] However, there are a number of inter-related ways in which education is posited to influence health.[265]

These are:

- through healthier knowledge and behaviours - educated populations are better positioned to be health literate, to access health information and understand the implications of risky health behaviours, and available health care options, to make choices that optimise their own and their children's health, and to traverse the health care system effectively and manage illness;
- through employment and income - more educated individuals are likely to be in higher paid employment with healthier, safer working conditions. Higher incomes provide the ability to pay for out-of-pocket health expenses, private health insurance, choice of health practitioner and access to a wider range of preventive health and care options, as well as other resources, which are health-enhancing. Greater income also offers the means to move away from social environments and neighbourhoods, which can compromise health (such as those affected by high levels of pollution, stress or crime); and
- via social and psychological factors that affect health - these include one's sense of control, self-efficacy, problem-solving and mastery skills; subjective social status, and position in the social hierarchy; and social support networks. These influence health through pathways broadly related to stress, health-related behaviours, and the availability of practical and emotional support when needed.[93,133,138-141,252,253,265]

Health and education are also linked through the life course across generations.[27,93,143,144,252] Parents' educational attainment shapes their children's health and educational outcomes, both of which influence their children's health as adults, through the same pathways experienced by their parents.[27,93,142,143] For families who are disadvantaged in terms of their health, socioeconomic resources and educational attainment, this may perpetuate an intergenerational cycle of poorer health, less education and skill acquisition, fewer employment choices and reduced life chances.[145] Similarly, for those who are advantaged, the intergenerational transmission of educational success can ameliorate health, educational, economic and social inequalities.[188]

Early life is recognised as a particularly important stage, since it is the period when the foundations of future development are established.[26,27,143] Early experiences and the state of development that they produce affect health, learning and behaviour across the balance of the life course.[154] By the second decade of life, early experiences influence the risk of school failure, teen pregnancy and criminality.[154] By the third and fourth decades of life, early life influences obesity, blood pressure and depression; by the fifth and sixth decades, coronary heart disease and diabetes; and by later life, premature ageing and memory loss.[155] Social factors, from the most intimate experiences within the family to the most global, affect early human development in tangible and highly interdependent ways.[154] Taken together, these factors function like 'complex ecological systems' in nature.[54,154]

Numerous studies show that childhood circumstances have long-term effects on both adult health, learning, development and socioeconomic circumstances.[26,27] Longitudinal research following a group of people born in 1958 indicated that detrimental experiences in childhood often led to social exclusion in adulthood: social housing was more common if an individual's parents had lived in local authority housing, and those who were poor as children generally had lower incomes as adults.[146] It also revealed that parental interest in schooling was a powerful predictor of educational success. Furthermore, anxious children faced a higher risk of depression as adults, while low educational test scores correlated powerfully with, amongst other things, a doubling of the risk of depression.[146]

However, wellbeing in adulthood is not solely determined during childhood, for education, training and living and working conditions in adult life also influence health.[147] For some health outcomes, influences may accumulate across the whole life course, involving factors in childhood, adulthood and early old age.[148] For others, experiences early in life may be

important, or the relationship may be conditional, where factors from different stages in the life course have to occur sequentially before the later life effect is produced.[148] The experience of earlier or current disadvantage can influence interlinked pathways through childhood, during which resources may be accumulated or lost, and health, learning and development optimised or compromised.[265] These pathways relate to physical and emotional health, health behaviours, social identities, and cognition and learning.[145]

Differences in educational attainment have been identified as one of the main determinants of socioeconomic inequalities in health; and tackling educational inequalities remains one of the most politically acceptable policy solutions to communities.[145,149]

Supporting diverse Brimbank communities

There are a number of groups within the Brimbank community who have particular needs, are more likely to be vulnerable to adverse health and educational outcomes, and who can be considered as 'priority populations'. As they are all significantly socioeconomically disadvantaged, there is some overlap between the groups.

Socioeconomic disadvantage takes many forms. For some, it is the inability to obtain the essentials of life such as shelter and adequate food; for others, it is a matter of low income; for others, a problem of discrimination and exclusion from opportunities in society.[150] Defining disadvantage only in terms of poverty or low income minimises the importance, for example, of access to culturally appropriate services, safe environments, and the quality of housing or level of education that is available.[151] A complete definition needs to extend beyond a lack of economic resources to encompass many of the serious environmental, structural and social issues faced by individuals, their families and their communities.[152] These can include under- and unemployment, homelessness or unstable accommodation, discrimination and racism, unsupported lone parenthood, educational under-achievement, admission into state care, violence and abuse, and behavioural and mental health problems.

For many disadvantaged groups, the impact of social inequality limits their capacity to influence change, participate as citizens, and makes them more vulnerable to experience poorer health and fewer opportunities for educational achievement and secure employment. Some of these population groups include Aboriginal and Torres Strait Islander peoples; people living with disability and their families; young people with experience of the care and protection system; people caring for family members with disabilities; and migrants and refugees from a range of different cultures and ethnic backgrounds and for whom English is not their first language. Many of these may have not only interrupted learning experiences, but may also have been excluded from education, while others may be living with the impact of experiences of trauma, loss and dislocation.[153]

Triggers of vulnerability are contingent and complex, and there are no necessary or sufficient causes for people to become vulnerable.[256] The causal role of risk factors (acting singly or in combination) is still poorly understood, especially their interaction with individual (protective) and wider social factors.[256] Therefore, in order to meet the needs of priority populations in Brimbank, they must be identified as a priority and the extent and nature of their particular needs determined at a more local level.

For some of these groups, there are only population-level data available for this atlas rather than data at a small area level; for others, they may appear 'hidden' if their locations, needs and challenges are undescribed (for more information, see Section 3). A lack of quantitative and qualitative information about these priority populations can make it difficult to plan and deliver services and effective interventions which may improve their life opportunities, and their health, learning and development needs. Gathering information from local community members themselves, community elders and leaders, practitioners, service providers, non-government agencies, and local and state governments can be a useful starting point to identifying the community's diverse capacities, assets and needs, and likely resources to strengthen further these different populations in Brimbank.

Aboriginal and Torres Strait Islander peoples

While Aboriginal[2] peoples do not make up a large proportion of the community of Brimbank, the substantial social, political and economic disadvantage experienced by Australia's first inhabitants is well documented. Key social and economic indicators such as poverty, employment, housing, education, justice and health show that Aboriginal peoples, as a group, are at significantly higher risk of poorer life outcomes than non-Aboriginal Australians, and represent the most disadvantaged populations in our nation.[156]

In order to understand Aboriginal wellbeing today, the impact of colonisation, lost and stolen generations of families and social exclusion on the innumerable cultures of the peoples inhabiting Australia before 1770, needs to be recognised.[157,158] Therefore, from a social and political perspective, for there to be improvement in Aboriginal wellbeing, a process of reconciliation, that acknowledges the past in the light of the present, has to be embraced across all the sectors of society, including improvements in attitudes, practices and the sharing of power.[159,160] Brimbank is committed to reconciliation, and has developed a Reconciliation Action Plan in consultation with Aboriginal and Torres Strait Islander residents and local Aboriginal and Torres Strait Islander service providers and community groups.[170]

Most indicators of Aboriginal wellbeing, such as the ones included in this atlas, tend to reflect a 'deficit' model, highlighting problems and the extent of disadvantage experienced over a lifetime, and between generations. While it is essential to illustrate poorer outcomes and unmet need for appropriate resources and services, this approach overlooks the strengths and capabilities that the majority of Aboriginal peoples demonstrate in caring for their families, communities, their environments, and their lands; and fails to represent the holistic nature of Aboriginal cultures and histories.[161,162]

For Aboriginal peoples, the idea of wellbeing is broader and more inclusive than standard concepts of health.[11] However, neither the term "health" nor the term "wellbeing" fully captures the Aboriginal concept of living a life of value.[271] An understanding of this is drawn from the definition proposed by the National Aboriginal Health Strategy (NAHS) Working Party in 1989:

Not just the physical well-being of the individual but the social, emotional and cultural well-being of the whole community. This is the whole-of-life view and it also includes the cyclical concept of life-death-life.[163]

The NAHS definition notes that achieving wellbeing is an attribute of communities as well as the individuals within a community; and it identifies cultural wellbeing, along with physical, social, spiritual and emotional wellbeing, as equally important.[163,271] Land, culture and community identity are central to Aboriginal perceptions of wellbeing.[164] While Aboriginal cultures are numerous and diverse, they are dynamic and evolving.[164] For example, over fifty per cent of Aboriginal people in Australia identify with a cultural grouping, and at least eleven per cent speak an Aboriginal language at home.[165]

The NAHS definition emphasises a holistic approach, and highlights the importance of many of the determinants of wellbeing identified earlier in this section. Social and emotional wellbeing (and mental health) form part of this holistic view. With respect to social and emotional wellbeing, the following definition reflects Aboriginal perceptions:

This definition is about being well and being able to grow and develop within the context of family, community, culture and broader society to achieve optimal potential and balance in life. From the Aboriginal and Torres Strait Islander view, it must also incorporate a strengths approach, recognising the importance of connection to land, culture, spirituality, ancestry, family and community. Also, acknowledging the inherent resilience in surviving profound and ongoing adversity – yet retaining a sense of integrity, commitment to family, humour, compassion and respect for humanity.[208]

An understanding of Aboriginal wellbeing encompasses a far broader interpretation of 'community', which has family and kin relationships at its centre; and the family relationship or kinship system is not necessarily confined to a geographic area, and

2 Throughout this atlas, the word 'Aboriginal' is used to refer to both Aboriginal and Torres Strait Islander peoples.

the connections are not weakened by distance.[166] Thus, an Aboriginal community's social capabilities and functioning are fundamental to enhancing individual and collective knowledge and wellbeing, engaging in social and economic development, and in resolving local issues.[161] Furthermore, Aboriginal Australians experience wellbeing when they are able to determine all aspects of their life.[163,271] As Aboriginal culture is not something that can be easily understood by non-Aboriginal people, it must be respected, and acknowledged appropriately.[166]

In addition to the determinants outlined in the previous section which apply to all peoples, a number of key determinants of Aboriginal wellbeing are included here. Each is embedded in the overall social structure, in political, economic and educational systems, in diverse cultural requirements, and in local community and Aboriginal and non-Aboriginal peoples' actions.[158,167,168]

There is a strong thread of interdependence between them, and the nature of the inter-relationships is also complex. For example, post-secondary educational attainment is linked to year 10 and 12 retention and attainment.[169] These, in turn, are related to household income, parental education and employment, and so forth. However, whilst higher educational attainment is typically considered to be linked to good health, the association between schooling and Aboriginal health is less well understood. Research suggests that participation in mainstream education may have a detrimental impact because of the potential for cultural and linguistic alienation in an environment where Aboriginal people are usually in the minority.[171] It is the quality and cultural appropriateness of an education, which is relevant to the impact of education on health and social outcomes for Aboriginal Australians, not education *per se*. Further research is needed to ascertain whether higher educational attainment leads to better Aboriginal health.[172]

Key determinants for Aboriginal wellbeing include the following:

- Early life factors - these influence growth, the ability to learn, physical and mental health, and resilience in later life, and can have effects across generations. The extent of disadvantage experienced by Aboriginal communities and by individual families impacts particularly on their youngest and most vulnerable members. Factors such as low birthweight, failure to thrive and the effects of trauma can have serious consequences for children's health, learning and development.[173] Parents in communities experiencing such adversity may suffer high rates of emotional distress that also affect their children, especially when families are left without healing and resolution.[168] A 'both ways' approach to service design and delivery, which values and respects practices from both Aboriginal and non-Aboriginal cultures, is most likely to succeed;[174,175]
- Physical, social and emotional health - maternal health, nutrition, early attachment, cultural identity, and good physical and emotional health in childhood support early development, readiness to learn, social efficacy, educational attainment, and adult participation in the work force.[167] A lack of control over one's life can be replicated in biological responses to stress that can be pathways to poor physical and mental health and further disadvantage.[176,177] Health-harming levels of stress can occur as a result of the lived experiences of Aboriginal peoples in a dominant culture in which they are socially, culturally and economically disadvantaged, and where racism and discrimination are endemic.[178,179,251] This is evident in a broad range of outcomes that can result from unresolved grief and loss, trauma and abuse, interpersonal violence, removal from family, substance use, family breakdown, cultural dislocation, racism and discrimination, and social disadvantage.[209] Aboriginal peoples and communities must have control over their lives to progress self-determination, and enhance their wellbeing; but they must be supported to do so, in an environment of mutual respect;[178]
- Social support and community networks - the central importance of family and kin is a valued form of social and cultural capital in many Aboriginal families and communities; and extended family formation serves a fundamental role in wellbeing.[180] Aboriginal community networks can provide a source of support and enhance the wellbeing of their members. Dense bonding networks reinforce, and are reinforced by, Aboriginal

norms of identity, sharing and reciprocity (which may not always be beneficial).[181] However, while Aboriginal people can have strong and dense bonding networks, they may have sparse bridging and linking networks, especially to resources and expertise located in the dominant culture.[181] The repeated experience of racism and the lack of opportunities that entrenched intergenerational disadvantage brings can serve to undermine the development of trusting relationships beyond an Aboriginal community.[178]

- Housing, shelter and connections to country - in non-remote areas, Aboriginal people are more likely to access accommodation in the public rental sector, than non-Aboriginal people who are more likely to own or be purchasing their home.[165] This again reflects their greater economic disadvantage, and also highlights the presence of racial discrimination in sections of the private rental market.[182] However, there is much heterogeneity within the Aboriginal populations, and not all families use public housing;
- Income, employment and socioeconomic position - Aboriginal peoples, as a group, are widely recognised as being financially disadvantaged, and low levels of income are also a strong indicator of relative disadvantage in areas such as educational attainment, labour force participation, housing and health.[156] Employment is not only dependent on what you know (skills, knowledge, qualifications – human capital) but also on whom you know (social relations and acquaintances – social capital).[181] Furthermore, not all the people in one's immediate social network may be equally effective at providing information and facilitating employment, and some may negatively influence motivation to engage with education or seek employment opportunities.[181]
- Learning, education and training - like all students, Aboriginal students come to formal educational settings as experienced, active learners with skills and capacities, which need to be appropriately recognised and acknowledged in mainstream settings.[183,184] Factors linked to Aboriginal students' individual life experiences have a direct impact on their capacity to engage with school and learn, and these interact with each other.[185,210] These include having basic material and personal support needs met; their experience of the formal learning environment; their foundation skills such as communication, English language skills and social interaction; personal and cultural identity; Aboriginal role models; social behaviour and engagement with school; learning support needs; and life and vocational goals and aspirations.[186] Many of these are influenced by family, community, cultural and social contexts. For example, past negative experiences of school, and those of parents and other family members, may impact on pre-school and school attendance patterns.[186,187] Issues which can affect educational experience include institutional, peer and teacher-based racism in formal learning environments; ineffective racial harassment policies; ineffective grievance procedures; lack of respect and value for all cultures; poor communication processes with individuals, peers, parents and communities; confusion about the roles of Aboriginal education workers; the need for cultural awareness training of teachers and counsellors; the need for support structures such as dedicated spaces for Aboriginal students' homework and tutoring assistance; population mobility; and poverty.[189] In contrast, schools with high Aboriginal attendance levels attribute their success to well-trained, culturally sensitive teachers who can build a rapport with Aboriginal students and their families, offer additional support and develop individualised learning plans.[190,210]

None of these policy areas in isolation will achieve the improvement in health and wellbeing needed, but they have the capacity to address the existing intergenerational cycle of disadvantage, which is present for many Aboriginal peoples as a legacy of colonisation and its aftermath.[191] The poverty and inequality that they experience is a contemporary reflection of their historical treatment as peoples.[191]

Refugee and recently arrived migrant groups

Migrants to Australia have made and continue to make substantial contributions to Australia's stock of human capability, and social and produced capital.[257] The migrant presence has also substantially increased the range and viability of available cultural and recreational

activities for all Australians.[257] This is exemplified by the bridging capital between those with different cultural heritages, although some seek these opportunities more than others. With respect to bonding capital, migrants from particular ethnic groups also act as bonding agents for the next wave of migrants, assisting their cultural and economic integration in a multitude of ways that are immeasurable and hence largely invisible.[257] Migrants contribute in positive ways to the productive diversity of Australia through investment in housing, in the transformation of urban areas, the creation of new businesses, the supply of products, the provision of new and different skills, and through other types of entrepreneurial activities.[257]

While many migrants entering Australia are skilled, some are humanitarian or preferential family groups from refugee camps. Refugees are defined by the United Nations' *Convention relating to the Status of Refugees* as people who 'are outside their county of nationality or their usual country of residence and are unable or unwilling to return or to seek the protection of that country due to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion'.[203] In addition to those people who enter Australia under visa categories that identify them specifically as refugees, there are others of the same backgrounds who have been through similar experiences in those countries, and whose profile is therefore like that of a refugee.[204] They may have similar difficulties as refugees when interacting with health, education and training and other service systems.

Refugees face a range of challenges when they settle in Australia. Many current refugees are culturally and ethnically diverse and come from countries at a greatly different stage of economic development than Australia; and for them, the process of resettlement, adjustment and assimilation is often more complex and multifaceted. Unemployed refugees, those in receipt of welfare benefits, refugees with non-transferable occupational skills, older refugees whose social roles have changed (e.g., women providing income, men who cannot) and those whose standard of living is markedly lower than it was at home, form the highest risk groups.[254] On the other hand, success in the new land, and the achievement of material conditions, either higher than at home or better than one's initial expectations, tend to facilitate their adjustment.[254]

With respect to education, while many students from refugee backgrounds achieve success, there is evidence that numerous people arriving in Australia under the refugee and humanitarian program are also failing to attain a level of education that will ultimately allow for their successful integration into the Australian community.[204,266] Severe disruption to, or an absence of formal education and poor proficiency in English before arriving in Australia, along with significant emotional, developmental and physical traumas, are major barriers for many in achieving qualifications within the mainstream education and training system.[266] The impacts depend on a number of factors, such as the resilience of the individual, access to and the quality of family and community support, and the societal environment of the host country. When any of these fail, disengagement and long-term unemployment can lead to marginalisation and social exclusion, long-term welfare dependency, and ultimately, considerable difficulty in ever participating fully in the new society.[204,266]

The significant issues that new arrivals must contend with can be overwhelming, from trying to find affordable housing, enrolling children in school, looking for work and/or getting overseas qualifications recognised, finding family members and negotiating a whole new system and culture, while trying to work through any traumas they have. Both newly arrived adults and children may be coming to terms with loss of self-identity, uncertainty about the future, and loss of family and culture.[269] They are likely to have had little control over the events that forced them to leave. Research indicates that the quality of support provided in the early period of settlement and beyond has a significant bearing on how well refugees are able to face the practical and emotional challenges of re-establishing their lives in a new country.[204]

The physical and emotional health effects from refugee life experiences are likely to affect individuals' education and learning.[205] During resettlement, these experiences may lead to individuals displaying post-traumatic stress disorder (PTSD) symptoms.[206] Therefore, students from refugee backgrounds attending educational courses can be affected by the mental health-related burdens resulting from

their refugee life experiences, in addition to the consequences of disrupted or no educational histories.[266] However, while therapeutic approaches are needed, these should not be allowed to become a 'deficit-focused' basis for an individual's educational experience.[207,211]

Furthermore, teachers and other students are often unfamiliar with the historical and political circumstances of intra-national conflict and forced migration, as well as ethnic and cultural differences within national borders.[207] Even within the same country of origin, individuals from different regions may have different educational needs. Refugee status is a legal and bureaucratic category, which encompasses people from a wide range of national, cultural, linguistic, and ethnic backgrounds, with different experiences of forced migration. It is not 'refugee-ness' that determines educational success but the ways that pre- and post-settlement issues and needs are identified and addressed.[207,211] This means that one or other elements affecting the educational progress of refugee students may well be shared with other priority groups, such as migrants, new arrivals, Aboriginal students and students from low socioeconomic backgrounds.[207]

Therefore, in contrast to many learning theories that advocate for the use of past experiences, the previous experiences of students from refugee backgrounds may actively work against the process of participating in learning.[213] However, such education experiences may serve as a basis from which individuals can transform their lives through securing new capabilities to engage more productively in social and economic life.[214] Therefore, the issue of readiness to learn for people from refugee backgrounds is not simply one of possessing the capacities to participate in the experiences, but also includes both physical and psychological dissonances that the students might encounter during learning. Other barriers, including English proficiency, style of Australian education, and family obligations and expectations, may prevent younger refugees from progressing through the education system.[212,215,269]

In general, people from migrant and refugee backgrounds demonstrate high levels of strength, resilience, resourcefulness and persistence.[207,216] At the same time, they regularly experience marginalisation in relation to housing, health, education, employment and access to social and recreational opportunities as they resettle in Australia.[266] These result when community structures do not take account of their strengths and needs. This undermines the basic human rights of these people as well as their capacity as individuals to be fulfilled. This, in turn, negatively impacts on the capacity of Australian society to be the best that it can be.[192]

For refugee and migrant young people, a socially cohesive society includes a welcoming environment where they can form trusting relationships; participate fully in community activities; and feel supported by peers and family.[216] It also allows them to formulate achievable goals in their lives. They are able to retain their cultural heritage while also feeling connected to the broader society.[212] Finally, they have full and equal access to the various institutions (such as education and employment) and the benefits of society (material benefits such as housing and income, and social benefits such as decision-making, citizenship and community participation and support).[216,266]

Low income and jobless households

The material standard of living enjoyed by individuals and households depends primarily on their command of economic resources, both in the immediate and longer terms. Income varies across the life span and does not alone determine material quality of life.[192] Other factors are the extent of unfulfilled financial commitments (financial stress), and the level of accumulated wealth, which can buffer the income of an individual or household.

It has been estimated that a full-time job is needed to produce sufficient income to raise people above the poverty line in Australia.[193] Un- and underemployment continue to be major causes of poverty in Australia, and employment only provides a way out of poverty when it comes in the form of a full-time job.[194] As many of the new jobs emerging through the last two decades have been either part-time or casual, they have not been sufficient, by themselves, to protect many workers and their families from poverty.[193]

Jobless families include not only those who are unemployed but also those not participating in the paid labour market. Around two-thirds of these families are lone parents, and more than 80% of lone parents are women.[195] In Australia, jobless families are about six times more likely

to be in poverty than working families; and 70% of all poor children live in jobless households, the highest level in the OECD.[195]

Thus, households with low incomes and/or no adult in employment or education and training face disadvantage across many domains of life. There are reduced opportunities to engage in a range of activities, including formal and informal avenues of learning and education, for all members of these households. For the adults, there may be limited prospects of increasing skills and competencies; and the stress generated as a result of having low income and no employment can have adverse effects on family cohesion and wellbeing and physical and mental health.[196]

For children and young people, living in a jobless household can have many unfavourable consequences, and may lead to the intergenerational transmission of economic disadvantage. Unemployment has been linked to truancy and non-completion of schooling, family break up, spouse abuse, substance use, illness and premature death.[197] Furthermore, a child's learning and development depends on access to economic resources during the first fifteen years of life, and future income, socioeconomic position and relative economic success can suffer.[196] Children and young people also need role models to follow if they are to proceed to education and training opportunities beyond school.[197] This is made more difficult if such models are not evident in the home. The transmission of joblessness across generations undermines both equality of outcomes and equality of opportunity.[195]

Joblessness can generate tension and conflict in families, with resulting poor health, family disruption, housing instability and social exclusion, resulting from the loss of social and employment contacts in the workplace.[198] However, while poor health and disability are more prevalent among jobless families and are significant additional barriers for some households, many jobless lone parents have good health and do not experience severe disability.[195]

People who are homeless or have insecure housing

People experiencing homelessness have a diverse range of circumstances and needs, but are among Australia's most socially and economically disadvantaged.[192] They are a heterogeneous group, with complex needs requiring a wide range of service responses, in addition to the provision of shelter.[199] Aboriginal peoples are more likely to experience homelessness than other Australians, and are over-represented in all age groups.

Children, young people and adults experience adverse educational, health and social consequences as a result of being homeless. Homeless children and young people may suffer emotional and behavioural problems such as depression, low self-esteem, anger and aggression and are likely to have disrupted schooling.[200] Their parents are also at risk of depression and stress and may be unable to provide their children with the care and support they need. Relationship breakdown and family violence are also common reasons for parents with children seeking assistance from welfare and other agencies.[192]

In addition to physical and mental health problems, homeless people are also at risk of other negative life outcomes. They often live within hostile environments, and are therefore more likely to be subjected to acts of violence, crime and abuse.[201,202] Furthermore, homeless persons are highly marginalised, alienated, and stigmatised, which can lead to degraded social and other skills, and inadequate emotional or cognitive stimulation.[201]

With respect to education and learning, it has been estimated that only about a third of homeless teenagers retain some connection with school, with the rest not in any employment, education or training.[217] Indeed, the main barrier to homeless young people achieving a stable continuum in their lives is their difficulty in maintaining links to education, which is exacerbated by the financial burden of education fees, in addition to the stresses associated with being homeless.[218]

A number of recent initiatives in Australia challenge the conventional, welfare-driven approaches that have characterised many of the youth homeless responses in Australia.[219] Long-term accommodation and support are provided, in contrast to the traditionally funded short-term crisis approaches. Safe, affordable accommodation is integrated with learning, skills for independence, health and wellbeing, and family mediation, with education and the development of life skills being at the centre of the response, and

housing being simply a means to achieving that end.[219] Importantly, they provide a safe, secure environment for young people, designed to keep them away from the street and to keep the street out of their new (and often first) home.[220]

Children and young people in the care and protection system

For children with experience of the care and protection system, their health, learning and development are influenced not only by their family circumstances, and the efforts of foster and relative carers and child welfare agencies, but also by the support provided by other agencies, such as the school and health systems.[221] Education makes a significant contribution to the development and wellbeing of children and young people, and is an important gateway to future employment and life opportunities.[227] For many children and young people in the care of the state, school may be their safest and most stable environment, providing social connectedness, development of capabilities and relationships and friendship.[222,223]

Children under guardianship have ability and can succeed.[224] However, a history of interrupted school attendance due to relocation and unstable placements, in addition to disabilities, learning difficulties, disrupted relationships and attachments, emotional and behavioural problems, and poverty, can mean that the educational needs of children and young people in the care of the state are not met.[225,226] Furthermore, lost educational opportunities have a cumulative effect on children in care as they move through the various stages of learning and development.[224] These factors have consequences for their prospects for future employment and wellbeing. There is also a link between poor academic achievements and higher than average rates of homelessness, criminality, drug abuse, and unemployment amongst care leavers. Education remains a significant gateway through which young people can pass from care to adulthood, to employment and to effectively participating in community life.[225]

Currently, many students in out-of-home care have poorer learning outcomes, particularly in literacy and numeracy; suffer from educational gaps, and learning and other disabilities; have specific issues relating to development at key stages of schooling; and may exhibit a range of problematic behaviours.[227] They are less likely to continue within mainstream education beyond the period of compulsion; are more likely to be older than other children and young people in their grade level; on average attend a larger number of primary and high schools than other students; and miss substantial periods of school through changes of placement.[225] Factors underpinning non-attendance relate to instability and a lack of continuity in placements, and poor relationships within the school, with some teachers (e.g., low expectations and lack of understanding) and peers (e.g., exclusion, bullying and being older than peers).

There are systemic barriers which impact on the learning and developmental outcomes of children and young people in care, and both the child welfare and the education systems can contribute to poor educational outcomes for children in care.[229,230] Issues such as frequently changing staff, lost or incomplete records or no individual education plan, minimal monitoring of educational progress, a paucity of specialised and remedial services, lack of engagement, and frequent changes in schools all contribute, as do higher rates of being kept back a year and of absenteeism, tardiness, truancy and school dropout.[225,231] These students may also have greater needs for extra help, as the prevalence of disabilities is high. Lack of access to effective support services has a cumulative impact on children as they move through the various stages of education and development, from preschool, primary school and secondary school, through to vocational and tertiary education.

Children and young people in care have a right to participate in education and realise their potential. They must have access to a range of educational options in the public and non-government sectors that are responsive to their needs, if they are to progress successfully into vocational and higher education opportunities, and future employment.[230]

People living with disabilities and their families

Disability can take many forms – physical, intellectual, emotional, learning, sensory and so forth – and clearly has a significant impact on the health, learning and development of the individuals so affected, their siblings and families. People living with disability include those who were born with disability and those

who acquire disability through accident, ageing or illness during their life. Their carers and families can experience high rates of mental health problems, poorer physical health, employment restrictions, financial hardship and relationship breakdown.[232] Compared to Australians without disability, people with disability are more likely to live in poverty, to have fewer educational qualifications, to be out of work and to experience inequality.[233] Just under one in five people report some form of disability.[233] The prevalence of disability among Aboriginal Australians is higher than for other Australians at all ages, and rates of severe disability are at least twice as high.[156]

Australia's ratification of the *United Nations Convention on the Rights of Persons with Disabilities* in 2008 reflects the nation's commitment to promoting and supporting the equal and active participation by people with disability in economic and social life.[233] Understanding the prevalence of disability in the Australian population, and the socioeconomic characteristics and needs and unmet needs of people with disability, is important in informing policies, planning services, and removing barriers to participation.[233]

The Convention includes Article 24, which recognises the right to education and requires measures to ensure equal access to education. People with disabilities and special needs need be considered in the provision of all education programs, from preschool, childcare and early childhood education, to post-school education and employment. Most students with disabilities are able to develop and learn and should be encouraged and given the necessary support to do so. They may require assistance with or access to assistive technologies in relation to education and training, and their family members may require respite and other support services. Support is particularly critical in transitional stages of schooling, such as when a student is moving from primary school to high school or from a more supported special education setting into a mainstream school.[235]

People living with disabilities are often at risk of being stigmatised, abused, exploited, neglected or rejected by others.[234] They need educators with positive attitudes to counteract society's prejudices, and with specialised training to maximise opportunities for learning, so they are able to achieve, and are prepared for post-school life. Failing to provide an appropriate education limits their potential to lead productive, independent adult lives to the extent that this is possible. In 2012, only 36% of people with a disability aged 15 to 64 years reported having completed year 12, compared to 60% of those without a disability.[233] Post-school educational inequalities for those with disability are also present, with only 15% completing a bachelor degree or higher qualification (compared to 26% for those without a disability).[233] Furthermore, educational achievements and outcomes from VET programs are also relatively poor for students reporting a disability, although there is considerable variability between types of disability.[236] In 2003, VET students reporting a disability had generally low educational attainment levels, with almost half having only completed Year 10 or lower.[237]

The needs of people, especially children and young people, caring for family members with a disability are also important. Adequate supports for the whole family may be required, and to prevent children having to take on inappropriate caring roles. This includes recognising children who are both primary and secondary carers. Children and young people with caring roles face significant challenges maintaining school attendance, completing their schooling and further education and training, and participating in the social and sporting activities of their peers.[238] Similarly, children with a sibling with a disability can miss out on opportunities through the demands on parental time, and emotional and economic resources; and may need support to cope with the perceived stigma or attitudinal issues from their peers at school or in the community. As a result, they can feel isolated and at risk of a range of emotional, learning and physical health problems, which can continue into adulthood. Siblings are often overlooked both within their family and by agencies, even though they are likely to have the longest relationship of anyone with the person living with disability.[238]

Conclusion

While reducing inequalities in health and education outcomes are important public policy challenges, we do not yet have sufficiently robust knowledge of which

interventions are effective, in which locations and for which populations, to 'level up' the gradients in specific inequalities. Further work is needed to monitor and evaluate alternative policies and their impacts and determine if, how and why particular populations from different socioeconomic groups respond to such policies.[247] Causes of unintended, differential impacts of current and new public policies also need to be determined.[247]

However, there is a growing body of knowledge that can provide some direction for developing policies to reduce the determinants of health and education inequalities in modern societies.[244,247,248,251,258] The socioeconomic environment is a powerful and potentially modifiable factor, and public policy is a key instrument to improve this environment, particularly in areas such as education and training, early childhood development, housing, taxation and social security, work environments, urban design, pollution control, and health care.[63,251,259,260]

A focus on the social and economic contexts of life in no way implies that other factors such as genetics, behaviours or use of services do not contribute to determining health, learning and wellbeing; rather, this highlights a greater understanding in recent years of the hidden social factors that underpin differences in the likelihood of having a healthy and fulfilling life, both for individuals and for populations.

At the neighbourhood level, asset-based community development approaches offer empowering strategies for residents and community-based organisations to determine the best ways to proceed and act locally.[261,262] The asset-based approach values the capacity, skills, knowledge, and relationships in a community, rather than focusing solely on problems and needs.[261] As a result, a community can be galvanised and people can become more active agents in their own and their families' lives.[261]

Investing in a population-focused approach to addressing socioeconomic inequalities in health and education offers a number of benefits: increased prosperity, because a well-functioning, skilled and healthy population is a major contributor to a vibrant economy; reduced expenditures on health, education and social problems; and overall community stability and wellbeing for the population.

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