

# Evidence review: Settings for addressing the social determinants of health inequities

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## **Evidence Review:**

### **Settings for addressing the social determinants of health inequities**

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## Overview

Making the everyday settings of people's lives – where they live, love, play, work and google – more supportive of healthy choices has long been recognised by health promoters as an optimum way to improve population health. The World Health Organization's (WHO's) Ottawa Charter (1986) recognises that health is created and lived by people within these settings and that policies and institutional practices shape the opportunities people have to lead healthy lives and make healthy choices. Addressing social determinants within settings is particularly relevant following three major reports which identify this as the most significant way to improve health equity. These are *Closing The Gap in a Generation: Health Equity Through Action on the Social Determinants of Health* (Commission on the Social Determinants of Health, CSDH 2008); *Fair Society, Healthy Lives (The Marmot Review): Strategic Review of Health Inequalities in England Post 2010* (Marmot 2010) and the *WHO European Review of Social Determinants of Health & the Health Divide* (Marmot et al. 2012).

This report provides an overview of the current evidence base on work in health promotion settings that addresses the social determinants of health inequities. The review identifies key aspects of 'what works' to reduce health inequities in settings through focusing on social determinants of health. It also provides recommendations for future planning, action and research. We note that while we identified much health promotion activity in settings, only a fraction of this addresses one or more social determinants of health. Furthermore, even where settings-based approaches are addressing social determinants, most work reports only on population outcomes and there is a distinct lack of studies which explicitly evaluate the impact on health equity.

## Background

### The settings approach to health promotion

The settings approach reflects the World Health Organization's health promotion philosophy as expressed in a series of statements and charters each of which build on the initial Ottawa Charter (WHO 1986). Embedding health promotion in settings is the 'ideal shape' of health promotion in the twenty-first century (Baum 2008). Settings are the place or social context in which people engage in daily activities, in which environmental, organisational and personal factors interact to affect health and wellbeing (WHO 1998). A setting is also defined as being where people use and shape the environment actively and thus create or solve problems relating to health (WHO 1998).

Settings for health are normally identified as having physical boundaries, a range of people with defined roles, and an organisational structure such as in schools, workplaces and hospitals (WHO 1998). Settings may also be geographical in nature (such as cities, villages or islands). Otherwise, they can be a physical place in space and time where people come together for a specific purpose or an arena of interaction (Green et al. 2000), such as a youth festival or one-off sporting event. Others may be hybrid settings, and these include community gardens, or virtual settings such as socially oriented web sites or services (International Union for Health Promotion & Education (IUHPE) n.d.).

Settings initiatives are supported at local, regional and national level (University of Central Lancashire (a) n.d.). The WHO supports a range of well-established and long-running programs such as Healthy Cities, Health Promoting Hospitals and Health Promoting Schools. Examples of other large-scale programs are the Well London initiative established in the UK in 2006 (Dunn 2014).

Action to promote health through different settings can take many forms but should include a focus on multiple, coordinated interventions that modify the physical, social, economic, instructional, organisational, administrative, management, recreational or other aspects of that setting (IUHPE, n.d.; WHO 1998). This implies a focus on addressing the social determinants of health or broader structures, rather than focusing solely on individual behaviour change. Settings can also be used to promote health by reaching people who work in them and through the interaction of different settings with the wider community (WHO 1998). Dooris (2006) points out that there are basic differences between settings which have goals aimed at individuals and those aimed at changing the setting per se. This has caused confusion between the concepts of doing health promoting programs aimed at modifying *individual behaviours within* a setting as opposed to multiple interventions aimed at modifying *the conditions of the setting itself*, or the factors or conditions *underlying the setting*.

### **Addressing social determinants of health equity in settings**

The Ottawa Charter (WHO 1986) suggests that settings-based health promotion should specifically make a commitment to equity. Health inequities are not just variations in health status or outcome but are unfair and remediable differences in health (Whitehead & Dahlgren 2006). Nevertheless, not all healthy settings approaches show evidence of a focus on equity, nor may they consider the ways in which they could have a greater impact on people with poorer health conditions in the setting or those at risk of poorer health (Baum 2008). Some settings approaches may focus on equity by *being undertaken in a disadvantaged area or in a setting with a known proportion of people from disadvantaged backgrounds*, such as public rental housing. Nevertheless, people who are more disadvantaged do not necessarily live in or go to settings in more disadvantaged areas (Browne-Yung et al. 2012; WHO 2013). Addressing equity also requires not just addressing groups who are most disadvantaged but also flattening the health gradient. This means that the middle groups experience health that is both closer to the top and bottom groups.

Within individual settings, such as workplaces, consideration can be given to improving the social determinants of health – such as the broader environmental conditions which affect all or most workers at different levels – so that health is likely to be improved at the same time for those with poorer health (Baum 2008). In the workplace this would mean making structural or organisational-level changes which benefit blue-collar workers at the same time as white-collar workers, or female outworkers at the same time as in-house employees. Ideally, greater supports would be provided in relation to factors affecting workers towards the end of the health gradient.

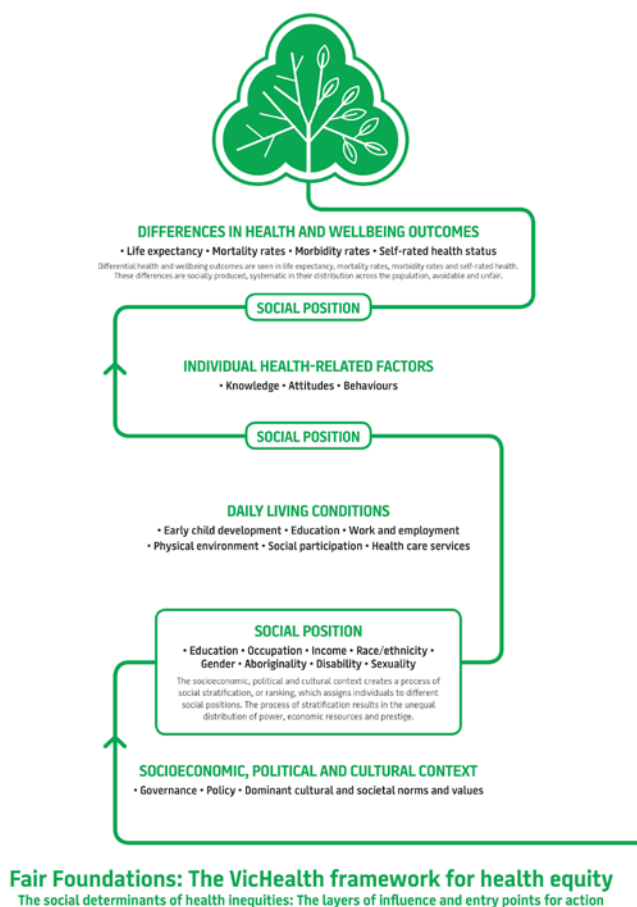
It is important to note that population-level interventions which focus on individual behaviour (such as smoking bans in workplaces) can actually exacerbate inequalities (Baum 2009). This is the case when they benefit only those with the resources to respond, whereas interventions which address structures and provide resources are more likely to reduce inequities (Lorenc et al. 2013). Settings-based initiatives may focus simply on behaviour change, such as teacher-directed physical activity programs in preschools, rather than addressing the broader determinants of health inequities, such as lack of access to large safe-play areas or local playgrounds. Lorenc and colleagues' (2013) review of systematic reviews concludes that 'upstream' preventive interventions are more likely to reduce health inequalities than 'downstream' interventions. They also recommend that future studies need to consistently report differential intervention effectiveness to help to build the evidence base on intervention-generated inequalities (IGIs).

In general, settings approaches which modify the broader determinants of health are more supportive than those which target individual behaviour change. Unhealthy behaviours are often linked to poverty and can be mechanisms for coping with poverty (Dunn 2014). Furthermore, health inequities are not reducible to unhealthy behaviours. This means that individual-focused interventions overlook issues such as the inability to afford healthy foods or recreation equipment; they also ignore the impacts of time-squeeze from working multiple jobs to earn a basic living (Dunn 2014). A focus on broader social determinants places more emphasis on health promotion, disease prevention and primary healthcare, each of which can be expected to contribute more sustainable improvements in health (Friel 2009). Hence our focus in this review is identifying what works at the two higher layers (or ‘upstream’ areas) of the Fair Foundations Framework.

## Fair Foundations: The VicHealth framework for health equity

This review is written in the context of VicHealth’s ‘Fair Foundations’ Framework, as shown in Figure 1. As such, it presents the findings in three sections relating to the broader Socioeconomic, political and cultural context; Daily living conditions; and Individual health-related factors. Since the review’s focus is on settings approaches, we mainly report on the broader contexts. VicHealth is committed to promoting fairness in opportunity for better health and, in support of this, VicHealth has developed and released ‘Fair Foundations’ (VicHealth 2013a, 2013b). This provides a planning tool for health promotion policy and practice which draws on the WHO’s conceptual framework on social determinants of health (Solar and Irwin 2010).

Figure 1. Fair Foundations: The VicHealth framework for health equity



## Report aims and objectives

This review was conducted in June-August 2014 and synthesises the peer-reviewed and grey literature which addresses:

- Evidence of *work in settings* or particular *approaches in settings* at each layer of influence that has reduced, or shows promise in reducing, health inequities;
- Settings work that has specifically *addressed the social determinants of health inequities*, including in relation to mental wellbeing, healthy eating, tobacco smoking, alcohol consumption, physical activity and related health outcomes;
- Settings work that has addressed common social determinants (that are known to contribute to inequities across more than one of the above health issues) such as *gender, education and ethnicity*;
- Policy and program work in settings; and
- Limitations and gaps in the evidence, and suggestions for future research and data collection.

## Methods and limitations

Although this review is structured according to the three layers of the Fair Foundations Framework, by definition of the aims we explicitly searched for literature addressing the two base levels of the Framework. These levels are where the social determinants of health dominate over individual behaviour change. The systematic stage of searching turned up a considerable number of settings-based initiatives which only aimed to change individual behaviour (particularly in schools, workplaces and online). However, this review reports on only a few studies at this 'Individual' level, since the review was intended to focus on identifying ways to address social determinants of health. Of course, social determinants interventions support change in individual behaviours through changing broader structures and creating the conditions for good health. This is in contrast to initiatives which directly exhort individuals to adopt 'appropriate lifestyles' to directly change their behaviour, attitudes or knowledge but which do not also include measures to provide supportive environments for these behavioural changes to occur.

This rapid review followed the rapid assessment guidelines developed by the UK Government (n.d.). These include limiting the search where the question is broad and using less developed search strings rather than conducting an extensive search of all variants. As recommended, our searching also focused on finding reviews of reviews wherever possible, using 'grey' sources and using a simple synthesis of studies.

In searching for articles which combine settings work, social determinants of health and equity, we had similar experiences to O'Mara-Eves et al. (2013), who undertook a systematic search of the literature on community engagement to reduce health inequities. They report that searching for items within broad topics such as 'healthy settings' and 'social determinants' is difficult since it cuts across many disciplines, topic areas and outcome domains. Healthy settings can include work not only in health promotion but also, for example, in injury or harm prevention, health treatment, and rehabilitation. Similarly, the social determinants are broad and can be defined either by this phrase, or as a wide range of individual determinants such as work, occupation, income, employment, housing, neighbourhood, schools, education, etc. The evidence base on the effectiveness of healthy settings in



general is also not well developed (Dooris 2006). Therefore, it is necessary to accept that when seeking articles which use a diverse terminology across several key areas, available resources only allow the location and screening of a limited number of articles to identify a much smaller amount of relevant evidence (O'Mara-Eves et al. 2013).

A recent review in developed countries from 2000 to 2007 identified 30 systematic reviews relating to health inequities but concluded that the effects of interventions were unclear (Bambra et al. 2010). The review aimed to identify the health effects of any intervention based on the wider social determinants of health (defined as: water and sanitation, agriculture and food, access to health and social care services, unemployment and welfare, working conditions, housing and living environment, education, and transport). While this review did find that certain categories of intervention may impact positively on inequities or on the health of specific groups who experience disadvantage (particularly interventions in housing and the work environment), the authors concluded that intervention studies that address health inequities are a priority area for future research (Bambra et al. 2010). There is also a need to fund evaluations of interventions within and across settings (Dooris 2006).

For this review, an additional challenge was finding evaluations of the effectiveness of healthy settings approaches which not only address the social determinants of health, but which at the same time also address health equity. From a searching perspective, we strongly agree with O'Mara et al. (2012) that lack of detail about health inequities in titles and abstracts makes it difficult to detect studies that include relevant health equity issues, as does lack of equity terms as keywords.

Another issue which emerged is the paucity of qualitative studies about the effectiveness of settings work which addresses the social determinants and health equity. However, qualitative studies have proven useful in identifying what settings do or do not work for particular groups, such as in relation to obesity prevention programs for schoolchildren. It was also difficult to find articles about some particular groups, including in the international context. For example, in the USA the African-American and Hispanic groups are two key equity groups where interventions may be showing promise for other contexts, but these do not automatically turn up in a literature search where key terms are chosen to suit the Australian context.

To identify items which addressed equity, we drew on the key search terms applied by Friel et al. (2013) and Lorenc et al. (2013). We additionally searched on a range of terms for 'equity groups' relevant to Australia (detailed in Appendix 1). Some of the items returned by the search did acknowledge health equity in their introduction and background, but then were often not designed to collect empirical data to explore the health equity impacts within the setting in question. Alternatively, authors did not always analyse data in ways which provided information about health equity impacts or other impacts on socioeconomic advantage-disadvantage, social position or the social gradient.

Other items which did identify studies in particular settings (such as sports clubs in named local government areas) did not necessarily also explain the reasoning for choosing the particular locations. For example, studies and reports did not say whether the localities were significant choices from a socioeconomic or health equity perspective, nor did they necessarily provide analysis from a social determinants and/or health equity perspective.

## Search strategy

The literature search was undertaken in three phases, as follows:

### Phase 1

- Development of predefined search strategy, with a focus on finding systematic reviews and reviews of reviews, and evaluations of programs and policies;
- Systematic searches of the published literature using two major databases – Web of Science and Scopus, with publication dates from 2004 onwards, English language only; and using preset key words, with specific searches on Equity and Equity Groups (see Appendix 1); with a focus on Australia, but also finding other evidence of ‘what works’ that could be considered;
- Sift of returned items by two researchers via the abstract, and if insufficient detail then also via the main text;
- Exclusion of non-relevant returned items:  
Items were excluded on a range of grounds, including that they were purely theoretical or conceptual papers; they were study protocols and not evaluations; focused on clinical aspects of health assessment, treatment, psychological interventions or ‘therapeutic communities’; were not about developed countries; only described population prevalence and were not settings-based; were only about settings in other terms e.g. ‘goal-setting’ or ‘priority-setting’; used the term ‘community’ in a non-settings sense (e.g. to mean ‘outside of acute care’); were only about settings as used as a location for participant recruitment; were not about health promotion (e.g. assisted reproductive technology); were about settings unrelated to health; were about professional training unrelated to health;
- Analysis of the remaining papers in scope.

### Phase 2

- Refining of keywords to conduct targeted searches of Informit, the Cochrane and Campbell Systematic Review Libraries, Google and GoogleScholar;
- Hand searching of the reference lists of returned papers and reports;
- Searching in known key journals which publish in the relevant fields.

### Phase 3

- Scan of relevant websites:  
This included the websites of Australian federal and state government departments; websites of key institutions and research centres such as VicHealth, the Australian Institute of Health and Welfare (AIHW), WHO Healthy Settings, the University of Central Lancashire’s Healthy Settings Development Unit, the IUHPE Interest Group on Healthy Settings, the McCaughey Centre, the SA Community Health Research Unit and Southgate Institute for Health Society & Equity at Flinders University, the Centre for Health Equity Research Training & Evaluation at the University of New South Wales, and University College London’s Institute for Health Equity.

## The evidence base for settings approaches to address health inequities

An overview of promising actions is provided as Appendix 2. Summaries of all the studies and articles located are provided as Appendix 3. Some articles covered issues which relate to multiple levels, such as reports on sports clubs or nightclubs which identified both policy-level and club-level

recommendations. Where this is the case, the content is either reported in both sections, or if the content mainly focused on one level then it is reported at that level (most commonly under 'Daily Living Conditions'). Similarly, we have included Healthy Cities at the Daily Conditions level as it addresses issues such as planning for neighbourhoods, but at the same time it can address issues at the higher Socioeconomic Context level such as governance and policy.

McIntyre (2007) highlights the importance of noting a distinction between two questions: '*Does it work to improve health?*' and '*Does it work to reduce health inequalities?*' She explains that an intervention which, in general, works (e.g. dental health education) might have no effect on *health inequalities* if all socioeconomic groups benefit equally. And it may actually increase health inequities if the rich benefit more, yet reduce health inequities if the poor benefit more (Lorenz et al. 2013; McIntyre 2007). For example, well-off communities are often in a better position to implement a healthy settings approach than less well-off communities (Baum 2008). Similarly, schools in affluent suburban areas are more likely to have the resources and motivation to participate in healthy schools projects, while inner city schools struggle with low achievement and high numbers of students in poverty (Baum 2008).

### **Individual health-related factors**

As this review's focus is on approaches which address the social determinants of health, the report has some focus on individual health-related factors within settings. However, the WHO (1998) argues that settings approaches should focus on the broader conditions in which we live and work, and that this is what can address health inequities. Nevertheless, we located a significant number of articles about healthy settings approaches which *only* focused on changing individual knowledge, attitudes and behaviour within settings, e.g. smoking, nutrition, physical activity and healthy eating. The literature seems to particularly focus on individual behaviour change in health promotion approaches in online settings and approaches to reduce childhood obesity in school and preschool settings.

Approaches which address behaviour change in isolation are often ineffectual in addressing health equity if they occur in isolation from higher-level changes, because individuals may not have access to sufficient resources to make the expected changes on their own (Baum 2011). This is illustrated by the case of a culturally appropriate approach which was developed through cooking classes at an Aboriginal Medical Service in Western Sydney to increase access to diabetes education for Aboriginal people (Abbott et al. 2010). The qualitative evaluation showed some improvement in participants' nutrition knowledge and cooking skills, but also showed that participants were still limited in their ability to change their diet due to social circumstances. Limiting factors included lack of family support for dietary change, a sense of social isolation being caused by dietary change, depression, the higher cost of healthier food and generational food preferences (Abbott et al. 2010).

Initiatives which address individual behaviour change can of course also be addressed as part of a broader strategy, such as in healthy hospitals initiatives which seek to introduce or improve higher-level organisational structures and environments (Johnson & Baum 2001; Baum 2009). These are reported in the following two sections on Daily Living Conditions, and Socioeconomic Context. For example, community-based walking events aimed at increasing walking rates are moderately effective in increasing physical activity, but only when they are combined with broader support such as provision of community walking maps and signage for routes, local newspaper articles and newsletters, and capacity building within local government (WHO 2009). Similarly, a 'multifaceted community intervention' to reduce stigma and improve mental health literacy for 'the Macedonian

community' in south-east Sydney (Blignault et al. 2009) was limited to providing individual and group-based education programs in the community and workplace to improve individual understanding of mental wellbeing. In contrast, this intervention could, for example, have combined the individual-based workplace approach with addressing broader organisational factors which impact on mental wellbeing in the workplace (as detailed in the section below on Workplace Settings). Preventive interventions at the two base layers are more likely to reduce health inequalities than those solely addressing individual behaviour change (Lorenc et al. 2013).

## Daily living conditions

Most of the information located about settings approaches to address the social determinants of health equity is relevant to this mid-layer of the VicHealth Fair Foundations Framework. Publications cover a wide variety of settings: cities, neighbourhoods and community; preschools, childcare, schools, and further and higher education settings; workplaces; prisons; hospitals and other healthcare settings; activity and leisure environments such as nightlife settings, sports clubs; temporary settings such as mass gatherings; churches and other faith-placed settings; green settings; and online settings.

### Healthy cities and neighbourhoods

Cities and neighbourhoods are a significant setting for living, working and playing. A wide range of evidence has existed for a number of decades on approaches in these settings which address the social determinants and health equity. This is possibly the case because, when compared with some other settings, a larger and more obvious array of broader structures make up a city or neighbourhood. A variety of healthy cities programs, including those led by the WHO, have been undertaken in locations from large metropolitan areas down to small local government areas.

Approaches which address health equity are those which take whole-of-population approaches, those which include targeted efforts for less-advantaged populations or areas (including groups such as people experiencing homelessness, or people with a disability), and those which address lifecourse groups (e.g. women, men, children, young people, older people). Some projects also address issues which improve social determinants for several groups without stigmatising one group. For example, renaming 'disability ramps' as 'access ramps' both avoids highlighting people with disabilities and at the same time can provide improved access for anyone with temporary or ongoing mobility problems. These could include parents with prams, people with vision or physical impairments, young people with sports injuries, older people with physical mobility difficulties, and people with bikes.

The Healthy Cities Program is one of the most well-known settings-based approaches to health promotion. It provides a local governance model that can be adapted worldwide to address the social determinants of health equity (CSDH 2008). One Australian healthy cities initiative introduced health interventions that could benefit the whole population. These included removing injury hazards from the community, cleaning up a local river to be safer for swimmers and engaging in community development to provide social support networks that positively impact on health (Baum et al. 2006).

Approaches which address lifecourse groups include the extension of Healthy Cities principles to address population ageing through the WHO Global Network on Age-Friendly Cities. These focus on improving health and wellbeing by way of policies and initiatives which, for example, improve environmental and community opportunities for physical activity, transport and mobility, lifelong learning, volunteering, and retention of older workers for the health benefits of paid work (Kalache

2013). This concept has also been taken up by local governments for local areas and neighbourhoods. The City of Unley in South Australia is one example of a local government developing such initiatives to improve the health, activity and social involvement specifically of its older residents (City of Unley 2011), but which could also be expected to benefit others. Actions include attention to roads and footpaths to maximise accessibility and mobility, developing new open space reserves, updating obsolete community facilities and developing libraries as hubs to support online information access.

Another lifecourse approach is UNICEF's Child-Friendly Cities. Bendigo is Australia's first such city to be recognised by UNICEF. It is a setting which has a relatively socioeconomically disadvantaged population in terms of income, education, occupation, wealth and living conditions, although disadvantage is spread unevenly across the city (St Lukes Anglicare 2011). The initiative is directing attention to developing quality infrastructure, capacity (e.g. in health and teaching workforces) and quality organisations. One step to address equity is introducing the city's first playgroup facilitated by a qualified worker, as this has been found to increase engagement with families who are vulnerable, who are experiencing disadvantage, who have recently immigrated or who are affected by disability. A related child-friendly website has been created to highlight ways to explore the city of Bendigo, explore green space and get creative (City of Bendigo 2009), although this may not be accessible to children or families who do not have Internet access. Other equity considerations could be incorporated, as achieved in Vienna, where gender-differentiated play areas were created to encourage girls to undertake more physical activity (Foran 2013; Greed 2005).

The ACT Children's Plan is a second Australian example which focuses on addressing social determinants of health through infrastructure design and planning. It aims to facilitate children's play, movement and exploration and to connect them to neighbourhood and communities. It also aims to identify ways to provide services that address the needs of children who are living in socially or financially disadvantaged, or vulnerable, circumstances (ACT Government n.d.).

Working for health equity through Healthy Cities approaches can also be addressed at the higher level of city governance and urban planning (CSDH 2008). One review identified nine key factors that support sustainability and valuing of Healthy Cities initiatives by the local community; these are: strong social health vision; inspirational leadership; a model that can adapt to local conditions; ability to juggle competing demands; recognition of Healthy Cities as a relatively neutral space in which to achieve goals; effective and sustainable links with a local university and a research focus; an outward focus open to international links, outside perspectives and WHO leadership; and, most crucial, that the initiative transitions from a project to a way of working (Baum et al. 2006).

Another planning-related city settings approach is to make broad changes which increase the health opportunities for a particular group as compared with the mainstream population. One way to assist people experiencing homelessness, for example, has been through identifying pathways out of poverty and homelessness and supporting people through embedding principles and practices of asset-based community development and health promotion into the work of relevant agencies in one region of Adelaide (Southern Regional Alliance 2013). Advocating for action in housing, urban planning and place-making can also ensure 'a home for all' and the creation of inclusive communities (Southern Regional Alliance 2013).

Gender-mainstreaming within cities settings has also been a successful social determinants strategy. In the UK, 'old-fashioned' land-use zoning with mixed land uses, higher-density housing and reduced car use was identified as having been developed predominantly by and for male ways of working (Greed

2005). Disadvantage was seen to accrue from this for women in their caring roles as mothers. It resulted in calls for women to be represented on policy teams, statistics to be collected and disaggregated by gender, and for the identification of who is likely to benefit or not from planned changes (Greed 2005).

In Vienna, a gender-mainstreaming approach has considered women's differential use of urban space. More than 60 pilot projects since the early 1990s have seen city administrators create laws, rules and regulations to redress the belief that work is undertaken only outside the home (Foran 2013). A 'Women-Work-City' apartment complex was developed to support the increased time which women spend each day on household chores and childcare compared with men (Foran 2013). Apartment buildings were built with courtyards and grassy areas for families to spend time outdoors close to home, and an onsite kindergarten, pharmacy and doctor's office were available, with nearby public transport. Other projects increased night-time safety for women through extra street lighting, wider sidewalks on narrow streets, and staircases with central ramps for strollers (and walkers/wheelchairs) near a major intersection. For young girls, parks were redesigned to create different spaces from boys' activity, which resulted in girls spending more time in public parks after the age of nine (Foran 2013). Another study in metropolitan Melbourne looked at women in their food preparation role. It investigated resilience for healthy eating and activity in over 900 women from 32 socioeconomically disadvantaged neighbourhoods. Although the women all lived within 3 km of six or more fast-food restaurants, improving the opportunities to shop for healthy foods closer to home was identified as one way to reduce the impact of their obesogenic environments (Thornton, Jeffery & Crawford 2013).

Another approach to improve health equity in cities through improved planning and infrastructure is Transit-Oriented Designs (TODs). These create compact, walkable neighbourhoods and communities around transit stations where residents have quality places to live, work and play (Boujenko et al. 2012; Department for Health & Ageing SA 2012). In Houston, Texas, a health impact assessment process examined how changes to housing, walkability, retail/mixed use development, and parks and trails would affect residents' health near a light rail station. The study made recommendations to achieve improved health outcomes, such as by promoting mixed land use and community gardens (Solitare et al. 2012). In South Australia, applying a 'health lens' over a Transit-Oriented Development Plan moved the focus beyond transport to also consider built urban design, walkability and liveability (Lawless & Hurley 2010). Another South Australian study for a major shopping centre redevelopment focused intentionally on the needs of diverse people by activating street frontages and adopting more appropriate design, materials, lighting, furniture, landscape and local public art (SA Health 2012). To maximise the benefits for health equity, future approaches to improve health in cities and neighbourhood settings could include evaluating which social determinants they address, and how these improve health across the socioeconomic spectrum. In light of the benefits of integrated approaches, initiatives could be developed such as demonstration complexes and transit-oriented developments which address social determinants in particular localities and which collect data to monitor the outcomes for health equity.

A number of tools support purposeful urban planning for health equity. Most also specifically provide for input from representatives across the social spectrum and from diverse equity groups. Health Impact Assessment is one key process (Harris-Roxas et al. 2012). Similarly, the New South Wales Healthy Urban Development Checklist for health services provides guidance for the health sector to comment on proposals relating to a range of socioeconomic determinants, including healthy food provision, open space, housing, transport, employment, safety, and social infrastructure (New South

Wales Health 2009a). Other planning checklists variously encourage a focus on equity, such as the Planning Checklist for Cycling for use in greenfields developments (Bicycle Network n.d.). Advocacy could include ensuring that all greenfields developments incorporate social determinants and equity considerations into the planning and implementation phases, while a gender-mainstreaming approach can also be advocated for.

### 'Community' settings

'The community' and neighbourhood are common settings for health promotion, with a wide range of community types included. While a large range of articles were located which included the terms 'community setting', most did not suggest broad changes to the *setting itself*. A significant proportion focused only on the outcomes of providing behaviour change health promotion *within* a particular locality or for a particular 'community group', such as the elderly. One example is an oral health program in social/ethnic club community venues for Italian and Greek Australians aged 55 and over in Melbourne (Marino et al. 2005). The study provided educational seminars, printed materials and oral care products. However, it could have expanded the inquiry into whether this group's living conditions might also need to change to support the required change in oral health behaviours, or whether there were equity issues in the degree to which different members of the group could respond to the education provided.

Other initiatives do make changes to the community setting itself or make changes to one type of place within the community. For example, Lower et al. (2010) conducted demonstration projects in three Australian rural communities to improve knowledge of hearing health and awareness of screening services among farmers. This responded to the high proportion of Australian farmers who suffer hearing loss from noise injury (60-70%, compared to 25% in the general community). The study identified agricultural retail outlets as new non-health community settings which could be used to strengthen local networks because they already supply hearing protection equipment and other information to farmers. The project resulted in 'marked' increases in utilisation rates of hearing screening and hearing services in one community. The local store is another rural community-setting for health promotion. In one remote Australian Aboriginal community, for example, changes were made to the management policy of the only local store to improve the supply of fresh fruit and vegetables. This was moderately effective in improving the nutrition levels of local residents (WHO 2009).

Other neighbourhood settings which can be created for health equity benefits are community gardens or community kitchen gardens, which promote physical and mental health as well as community cohesion and social networks (Mundel & Chapman 2010). These can be developed as an integrated part of urban planning or urban renewal, can be part of school- and prison-based health promotion, or can be built into the design of public housing (Government of South Australia 2011). While such gardens can provide improved food access, physical activity and the benefits of being in green space, they can require financial resources and support to address broader challenges such as security of land tenure (Wakefield et al. 2007).

A large range of locality-based community projects currently represent a very significant investment in obesity prevention in Australia; of these, 40% are focused on a population of over 50,000 people and another 39% are focused on school settings (Nichols et al. 2013). Nevertheless, despite their potential, there is a need for strong evaluation of what works (Nichols et al. 2013). This should include identifying how the projects address the broader determinants of obesity and their impacts on health

for more- and less-advantaged communities, for different marginalised groups within one community, or comparisons of effectiveness between different communities. The OPAL program (Obesity Prevention And Lifestyle program) is a community-based initiative aimed at reducing childhood overweight and obesity in South Australia. Its evaluation does not overtly aim to report on whether health equity is impacted, but one component will consider whether OPAL engages the Aboriginal population any better than Aboriginal Health Promotion Officers (Jones 2013). Nevertheless, a preliminary analysis shows that stakeholders in the community (including local government) saw education and parents as the primary targets and few suggested addressing 'healthy environments' (Jones 2013).

Genuine community engagement is another approach within healthy community settings that can address the social determinants of health equity and which is a key sustainability factor for initiatives (Baum et al. 2006). Successful approaches are adopting asset-based participatory community development that includes local government and non-government organisations (Southern Regional Alliance 2013). Positive impacts on health equity for Indigenous communities particularly result from settings approaches which involve communities in Indigenous-controlled organisations, or which support active involvement in program development and delivery (Gallagher et al. 2009; Osborne, Baum & Brown 2013). Benefits also derive from involvement of a reference group from equity groups of interest, and ensuring that researchers share the culture and language of the study population (Gallagher et al. 2009; Harrison & Wong 2003; Manderson & Hoban 2006; Newman et al. 2011).

Community settings approaches can also address health equity through engaging local people to work in or promote the program. Training lay women as key health promoters to other women was successful in increasing the reach of one community-based cancer screening service (Manderson & Hoban 2006). Similarly, volunteer-delivered programs in the community and/or at home in Ireland and Wales have successfully provided mothers living in socially marginalised and disadvantaged circumstances with improved parenting and child-development support. This in turn improved the nutrition and cognitive development of their children, and improved mental health and basic literacy for the mothers (Fitzpatrick, Molloy & Johnson 1997; Jensen et al. 2013). An evaluation of a Canadian inner-city preschool initiative for Vietnamese children also showed that one-to-one counselling and phone follow-ups by a lay person with similar culture and background to the target audience led to the adoption of healthy behaviours and improved child health in ethnic groups (Harrison & Wong 2003).

The literature identified in this review suggests a dire need for more projects to be evaluated, both quantitatively and qualitatively, and to demonstrate practical ways in which approaches have successfully addressed the social determinants to improve health equity. Local community engagement is a key factor in the approach of many programs and can provide a range of additional benefits, such as identifying new non-traditional settings that could be used, or identifying ways to support change in local businesses. Amending standard approaches into outreach or home-delivered versions can better support the needs of particular equity groups.

### **Educational settings**

Education is a key determinant of health because it provides literacy, numeracy, and analytical and communication skills which increase people's employability and ability to cope with a range of issues, including health (McIntyre 2007). Educational settings include childcare, preschools and kindergartens, primary and secondary schools, and higher and further education institutions. A large amount of literature covers health promotion in these settings. It particularly covers preschool and primary



stages, while embedding health promotion into the curriculum is acknowledged to be a key approach to reach all children. A considerable proportion of the literature focuses only on approaches which provide information or directly target individual behaviour. By contrast, high-quality studies show that such approaches often do not lead to the expected improvements in risk factors or behaviours.

A few studies which improve economic and physical access to healthy foods (through universal or targeted provision) have shown success in educational settings. It appears easier to reduce health risks and improve behaviours in those educational settings where the population has little option but to respond (e.g. changing menus in childcare, where children are too young to obtain alternatives). Broader approaches have successfully addressed mental wellbeing, racism and substance abuse through schools. Opportunity exists to combine approaches, such as addressing environmental sustainability in schools for its health benefits at the same as promoting healthy school settings. There is some evidence that social determinants of health equity could be better addressed by school settings being integrated with broader approaches, such as healthy communities. Most approaches address the whole school population and few studies were located which evaluate outcomes for children from different socioeconomic backgrounds in one school, or between different schools.

### **Childcare and preschool**

Childcare and preschool settings usually adopt a whole-of-population approach. Systematic reviews of health promotion in preschools and childcare often focus on programs to encourage individual behaviour change for children and/or parents related to healthy eating and physical activity (Bluford et al. 2007; Wagner et al. 2005). Furthermore, programs often focus on only one approach, i.e. either nutrition or physical activity, rather than being integrated (Wagner et al. 2005). Hesketh and Campbell (2010) found that preschool/childcare and home were the two most common settings to target young children, and half the studies they found targeted children from socioeconomically disadvantaged backgrounds or areas (e.g. the Movement & Activity Glasgow Intervention in Children – MAGIC). Despite being assessed as high-quality studies, this review found that programs focusing on individual behaviour change, providing increased outdoor free-play time, or health information for children and parents resulted in no benefits for Body Mass Index, diet or television viewing time (Hesketh & Campbell 2010).

With the growing concern about obesity, a number of systematic reviews investigate the effectiveness of early childhood obesity prevention initiatives. One review found that preschool education and physical activity interventions had little ongoing impact on preventing obesity and the authors recommended more rigorous research on social and environmental factors (Monasta et al. 2011). Modifying menus and adding nutrition into the curriculum is a common way to address the broader determinants of health equity. One example is the three-year Healthy Start Project in a preschool setting for children from socioeconomically disadvantaged backgrounds which did result in children getting a reduced percentage of their energy from fat (Hesketh & Campbell 2010). Nevertheless, such studies rarely report on equity impacts for different subgroups *within* the disadvantaged population (e.g. by ethnicity, gender, health status). Bluford and colleagues' (2007) study calls for an evaluation of childcare weight programs particularly among racial/ethnic groups to identify opportunities to address health equity. In pointing to growing social inequality in Germany, Wagner et al. (2005) argued for children from socioeconomically disadvantaged backgrounds and their relatives to be included in the concept stage of program development so that programs would be more appropriate to the target audience.

Educational settings can be supported at the base levels of the Fair Foundations Framework through improvements to federal or state regulations and qualifications standards. These can address the nutritional quality of food provided in childcare centres, the free availability of drinking water, and ensuring that childcare centre play areas meet national safety guidelines and minimum area-size requirements (Larson et al. 2011). An Australian study into policy in childcare centres as a means to broadly support improved infant nutrition showed that childcare centre staff do not see their role as promoting breastfeeding over formula (Javanparast et al. 2011). Rather, staff support parental choice for either feeding method; the authors recommended that training to support breastfeeding culture and practice be added into standard childcare worker qualifications (Javanparast et al. 2011).

## **Schools**

A range of strategies and programs have evolved in the last 20 years recognising that all aspects of the life of a school community are potentially important in promoting health, e.g. Health Promoting Schools (HPS), Comprehensive School Health, Child Friendly Schools (Birdthistle, 1999; IUHPE, n.d). The WHO defines a health promoting school as one that is 'constantly strengthening its capacity to be a healthy setting for living, learning and working; it focuses equally on lifestyle and the physical, social and psychological conditions that affect health' (WHO 1998, p. 19). The WHO HPS Framework is widely adopted and amended for local context. In Victoria it provides the basis for a joint initiative between the Department of Health and the Department of Education and Early Childhood Development which supports schools to integrate health and wellbeing into their strategic plans (VicHealth 2013c). The initiative encourages attention to broader determinants of health, such as promoting a 'healthy social environment' where respect, fairness and equality are valued; and a 'healthy physical environment' which facilitates the healthy choices and lifestyles taught in the curriculum.

School settings generally use whole-of-population approaches, such as integrating health promotion into school curriculum and policies, changing the school ethos/environment, and/or engaging with families/communities (Langford et al. 2014; Mūkoma & Fisher 2004). This should be highly effective in addressing health equity as it should theoretically reach the broadest range of children (WHO 2013). Nevertheless, children from 'at risk' groups may be missed if they do not attend school regularly (WHO 2013). Other children who live in disadvantaged circumstances but who attend schools in socioeconomically more-advantaged areas could be missed in initiatives which only target schools in disadvantaged areas (WHO 2013). Young et al. (2013) conclude that there is little research identifying effective strategies to address equity in healthy schools approaches, despite the fact that investing in children's education is itself a key strategy to address health inequities.

Whole-school approaches can also be important in creating more supportive social environments for students from less-advantaged backgrounds. For Indigenous students, long-term implications for the health of students and families can arise from the extent to which Indigenous students are culturally incorporated and socially supported in the classroom, and the extent to which schools incorporate Indigenous leadership and community development (Malin 2003). One successful example is an Aboriginal Focus Schools program which supports respectful relationships and sexual health, with the longer-term aim of reducing teen pregnancy rates, negative results for sexually transmitted infections (STI), and sexual violence (Walker, Patel & Luz 2012). The involvement of Aboriginal education workers and community education officers were vital factors in standard programs becoming culturally appropriate, culturally respectful and meeting local learning needs (Walker et al. 2012). The introduction of the broader program into 15 mainstream schools did not change the school ethos but

did result in increased confidence among students to talk to parents about sexual health and safety (Dyson & Fox 2006).

Another successful approach to address equity is targeting those from disadvantaged backgrounds for the provision of free resources. An example is increasing the affordability of healthy food by providing free fruit and vegetables in schools for children from low socioeconomic backgrounds (WHO 2009). A similar program at Aboriginal-controlled health services for low-income families in rural New South Wales combined a weekly supply of fruit and vegetables and voluntary cooking and nutrition education classes with annual health assessments (Black et al. 2013). This resulted in reduced episodes of illness and antibiotic use, and reduced use of health service and emergency department use for children. At a broader level, school breakfast and meal programs have proven effective for children from low socioeconomic and Indigenous backgrounds in improving physical and mental health and broader determinants of health, such as student concentration, social relations between students and staff, friendship between students, punctuality and attendance (Davies 2012; Kristjansson et al. 2006).

Targeted approaches can, however, lead to reluctance, shame and stigma for those who are being provided with the free or subsidised resources (Davies 2012). One UK program overcame such stigma through a universal school approach which gave free school meals and snacks to all students (i.e. those deemed 'eligible' and those deemed 'ineligible' on the basis of disadvantaged background). The program led to improvements across the social gradient in eating habits, regularity of eating, feelings of being healthy, healthier food choices outside of school, and classroom calmness and behaviour, and it reduced the number of children drinking soda for breakfast and going to bed hungry (Colquhoun et al. 2008). These authors conclude that all children in a school benefit from universal healthy eating initiatives which are not based on the need to claim free food. It is therefore imperative to evaluate the effectiveness of school meals programs and obesity prevention programs, to report results according to the socioeconomic status of the children, and to identify health equity impacts (Kristjansson et al. 2006; Waters et al. 2011). It could also be beneficial to analyse data *within* groups, for example for boys and girls from different socioeconomic backgrounds who have a disability.

Whole-of-population approaches are also being used to improve mental health and academic achievement. There is emerging evidence that integrating social and emotional learning in school curricula and attention to children's physical and cognitive/language development improves school attendance and educational attainment; these in turn potentially provide long-term health gains (CSDH 2008). Schools have been used as settings to address mental health particularly through information provision, curriculum content and increased support for school counsellors (Maloney & Walter 2005; Rones & Hoagwood 2000; Trinder, Roberts & Cavanagh 2009).

Interventions which improve adolescent resilience and mental health can also in turn successfully reduce the use of tobacco, alcohol and marijuana in high school students (Hodder et al. 2011). Other important determinants of mental health that could be more widely addressed in schools are racism and racial discrimination. Successful whole-school approaches for students, staff and parents can include addressing structural and behavioural change through changing school policies, guidelines, training and curriculum content to include, for example, multicultural and anti-racist education, 'bystander training', and violence-prevention programs (Greco, Priest & Paradies 2010).

An innovative approach would be to address mental wellbeing through combining Healthy Schools initiatives with Environmentally Sustainable Schools programs. This could provide the health benefits

of being in the natural environment whilst undertaking activities which support environmental sustainability ('combined' settings approaches are mentioned further in the 'Green settings' section below). Multiple settings approaches to support vulnerable children can combine school settings approaches within other health-related approaches which include preschool, social services, parental support, clinical health, transport access and safe stimulating environments (Young et al. 2013). The Ballymun initiative in Dublin, Ireland, for example, tackled a range of poor outcomes in more-disadvantaged communities through integrating changes in education with economic regeneration, housing development and community services (WHO 2013).

Combining different settings for one purpose can also be beneficial. For example, one study with 80 families in two disadvantaged regions of Australia found that families would see service delivery as more accessible if it were combined with non-stigmatising settings such as schools (Butler et al. 2012). However, combined approaches require careful planning and evaluation. One meta-analysis of 25 studies found only weak evidence for the effectiveness of multi-component community programs to reduce smoking uptake, including programs with young people through schools (Carson et al. 2011). Of course, settings which focus on the primary users of a space, such as students in schools, are also workplace settings for others – such as for teachers in schools – and promoting health in a settings approach can constitute a workplace stress for some people. A recent study shows that teachers in a regional health-promoting schools network in Austria experienced stress, work overload and frustration from the additional work of implementing health promotion in their school (Gugglberger, Flaschberger & Teutsch 2014). The researchers recommend that the undesirable effects could be addressed through a whole-school approach, writing health promotion into teachers' core responsibilities and undertaking organisational-level changes.

As with childcare settings, a good deal of the literature on healthy schools focuses on healthy eating and physical activity to address obesity, but does not consider equity. A recent update of the Cochrane review of childhood obesity prevention programs found that these mainly targeted 6–12-year-olds in schools and that beneficial effects accrued from programs of 12+ weeks which changed curriculum and food supply, environment and culture (Waters et al. 2011). Another paper reporting on 20 systematic reviews and one meta-analysis also found that most obesity prevention programs target children in schools but that program effectiveness is 'entirely inconclusive' and no single intervention or combination emerged as best practice (Clark et al. 2009). Neither review found interventions which directly considered equity, although some considered it in their methods and interpretation (Clark et al. 2009; Waters et al. 2011). The benefits of conducting qualitative research are demonstrated in one study in Victoria which identified that parents and children in three socioeconomically diverse schools actually find health information confusing (Hesketh et al. 2005). For example, sedentary behaviour was seen as negative but necessary for other positive school behaviours such as reading (Hesketh et al. 2005).

While some school settings studies are effective in changing health-related behaviour, they are often extremely vague in assessing the related impacts on improving health for those from poorer backgrounds or who are at risk of poorer health. For example, Veugelers and Fitzgerald (2005) surveyed 5200 students in Grade 5 at 199 Canadian schools, along with parents and principals. They assessed student height, weight, diet intake, physical and sedentary activities, and they adjusted their analysis for gender and socioeconomic characteristics of parents and neighbourhoods. Students in schools with a coordinated Health Promoting Schools program (with changes such as modified menus) had significantly lower rates of overweight and obesity, healthier diets and more physical activity than

students from schools without such programs. Whilst the authors say that the characteristics of students in schools with and without a nutrition program were similar, an analysis of the socioeconomic data could have identified the degree of advantage versus disadvantage of students' families and neighbourhoods compared with the national average. It could also have provided a finer-grained analysis into differential impacts of the Health Promoting Schools program on health equity.

### **Further and higher education**

Although the WHO has a Healthy Universities program, higher education and further education are less well developed as settings for health promotion than schools (Orme & Dooris 2010). The Australian Government's focus on encouraging more people from 'traditionally underrepresented groups' to attend university, including those from low-socioeconomic backgrounds (Commonwealth of Australia 2009), provides an opportunity for health promotion organisations to address health equity in these settings. A WHO Health Promoting Universities Network was established in 1997 when universities were acknowledged as settings where many people learn, work and socialise (Tsouros et al. 1998). England also has Healthy Further Education Programmes (Dooris & Doherty 2010) and a Healthy University Network has been established. Universities can, for example, develop systems that support healthy and sustainable food procurement and provision in the 'foodscape' for staff, students and the wider community (Doherty, Cawood & Dooris 2011).

There are some examples of whole-of-population approaches being combined with some targeted responses. For example, in South Australia, the government department responsible for further education (TAFE) has committed to a number of broad actions to support health equity (Government of South Australia 2011). These include examining the factors which impact on health for international students (who may not speak good English), providing access to active transport to or within the main campuses (e.g. provision of bike racks and access to internal stairs, and connections to public transport) and making healthy food a required part of the canteen procurement policy. A review of 'healthy universities' activity in England confirmed growing interest in the healthy universities approach. (Dooris & Doherty 2010). However, several 'real challenges' exist, including the difficulty of integrating health into a 'non-health' sector and securing sustainable cultural change (Dooris & Doherty 2010).

In summary, a range of approaches support educational settings to address the social determinants of health equity. As with other settings, despite the considerable amount of literature, there is a distinct lack of evaluation of intervention effectiveness, and particularly a lack of explicit description and analysis of ways in which programs, initiatives or policies address health equity through attention to the social determinants of health. Advocacy for policy-level change can include encouraging the development of regulations which impact positively on children from less-advantaged backgrounds and supporting policies to increase school attendance. More support is needed for cultural and social inclusion for people from marginalised groups in educational settings, including through leadership positions, and successful examples could be drawn from sports settings.

Considering the significant focus in school settings on obesity prevention through individual-level change in healthy eating and physical activity (which the evidence shows mostly has limited ongoing impact), all such programs should identify how they could also integrate with the base layers of the Fair Foundations Framework and how they can reduce health inequities. In some cases, universal approaches may be more appropriate in educational settings to improve health across the gradient. Where this is the case, it should be a stated aim and the health equity impacts should be analysed in

detail. There is also opportunity to incorporate schools settings approaches with other settings.

## Workplaces

It was difficult to identify studies about workplace settings which address the broader determinants along with health equity impacts, for example for different groups of workers (management, blue collar), or for workers from different backgrounds (by gender, disability, ethnicity). As with other settings, many studies focus on individual behaviour change, such as addressing smoking and physical activity. Nevertheless, a considerable body of work in workplace settings does also report on actions which address broader determinants such as working conditions. Approaches are mostly for whole-of-population, while a few targeted approaches were located which address the needs of particular worker groups.

As with health promotion in other settings, researchers have found limited randomised controlled trials and few rigorous evaluations of health interventions in workplace settings (Comcare 2010; Engbers et al. 2005). In addition, many studies focus on behaviour change in diet and physical activity. Systematic reviews and a national UK review show that physical activity programs dominate but there is a limited and inconclusive association with increased physical activity (Bull et al. 2008; Engbers et al. 2005). Programs include team-based events, competitions and 'come and try' sessions conducted free of charge in work time. Despite some success, structural barriers include lack of space at some sites and lack of showering and changing facilities. A range of studies report that activities to change smoking or alcohol behaviours in workplaces also meet with mixed success, particularly in the longer term (Bull et al. 2008; Orme & Dooris 2010). A systematic review by Cahill and Perera (2011) identified that incentives and competitions to address workplace smoking also achieve short-term successes but that these dissipate when the rewards cease.

There are calls for more research into broader approaches within workplace settings which address the organisational level, and the combined individual-plus-organisation level (Comcare 2010; Noblet & LaMontagne 2006). Chu and colleagues (2000), for example, identified health promotion interventions aimed at both individuals and organisational strategies, such as combining lifestyle approaches to reduce smoking with broader strategies that address occupational health and safety. Another systematic review found that successful interventions to stop smoking were those where advice from a healthcare professional was combined with individual and group counselling, and pharmacological treatment (Cahill & Lancaster 2014). Orme and Dooris (2010) argue that healthy workplace interventions should go further and incorporate the health of the environment as well as the health of workers. They advocate for a 'co-ordinated action' approach that links workplace health promotion interventions to sustainable development and climate change.

Whole-of-population approaches can address working conditions as social determinants of health that impact on health equity. However, few interventions focus on how organisational practices impact on workers' health and wellbeing, even though practices such as bullying can impact on mental health and absenteeism (Comcare 2010). There is strong evidence for supporting conditions-related interventions at both organisational and individual level, and strong evidence for interventions which increase workers' job control and autonomy (Bellow 2008). Workplace health promotion addressing stress needs to move beyond individual behaviour to address the impacts of working conditions (Noblet & LaMontagne 2006). These authors also advocate for combined individual-organisational strategies (the 'comprehensive approach'). Issues to target include role ambiguity, work relationships, person-environment fit, workers' involvement in decision-making and noise and space in the physical

work environment (Worksafe Victoria 2009). The stress of job insecurity and precarious employment conditions are other significant factors impacting negatively on health, which have been identified among manufacturing and other workers.

Structural approaches can be particularly effective for particular workforce groups. The manager of a 24-hour Australian call centre, for example, introduced health checks, relaxation classes and counselling with the aim of reducing high levels of absenteeism and sick leave; yet these were ineffective. A different strategy which included worker representatives significantly reduced absenteeism by giving mothers a 10-minute break at 4 pm to phone and check that their children had arrived home safely from school (Noblet & LaMontagne 2006). The strategy was effective through reducing worker anxiety and resulted in better mid-afternoon performance. Similarly, organisational changes made by the health department for Northern Territory hospital nurses and midwives led to significant reductions in psychological distress, emotional exhaustion and turnover, and improved job satisfaction (Rickard et al. 2012). Strategies to reduce job demand and increase resources included implementing a workload assessment tool, conducting roster audits, increasing staff numbers and increasing access to clinical supervision.

The Healthy Workplaces Achievement Program in Victoria (VicHealth, n.d) provides a planned approach to help organisations embed health and wellbeing into their culture to improve areas such as morale, safety and productivity through addressing five key imperatives of healthy eating, physical activity, mental health, smoking and alcohol. The health of older workers can also benefit from organisations providing flexible work options to accommodate caring responsibilities, along with strategies to address issues related to transport, travel and housing (Osborne et al. 2013). For example, employers can consider relocating older workers closer to home or reducing driving-related work tasks to reduce their need to drive long distances to/from work or during their work where workers' driving confidence has declined (Osborne et al. 2013).

Other workplace structural approaches can improve health equity for those with particular health conditions. For example, an Australian study found that people with low mental health, and particularly those in lower socioeconomic status positions, can especially be supported by workplace policies (MacKenzie et al. 2013). Effective policies include those which provide psychosocial protections to enable workers to make changes that benefit their workplace relationships, employment security and degree of control over hours worked, for example, being supported to make complaints without detrimental repercussions (such as vilification or job loss). Similarly, organisational and supervisory support within the workplace show promise in reducing discriminatory attitudes and perceptions towards employees with disabilities, and especially for those with non-physical disabilities (Snyder et al. 2009).

Recommendations for improving workplace settings approaches are that they should more often address the broader determinants of health, such as changes to organisational policy, work conditions and the built environment. This is particularly the case for initiatives which currently focus only on individual-level behaviour change, because the evidence suggests the outcomes are more effective where individual approaches are combined with action at other levels. In addition, rigorous evaluation of workplace settings initiatives must be supported. This should include an explicit equity focus to identify how different groups of workers can be better supported, and with the differential impacts on health equity across the socioeconomic spectrum being explicitly identified.

## Prisons

There is a small but important body of literature about addressing social determinants of health within prisons. This also addresses health equity since socially excluded members of the community disproportionately make up the prison population in Australia as well as in other countries. Such groups include young men, Indigenous Australians who experience poorer health than the general Indigenous population, and a high prevalence of people experiencing mental health issues and substance abuse (Dooris et al. 2013; Gilles et al. 2008). Successful approaches include making organisational changes, developing green environments and developing strategies to support prisoners' future employability. However, there is room for further studies which compare the impacts of social determinants approaches on the differential health outcomes of different groups within prison populations.

Health promoting prisons focus on principles of promoting an environment which is safe, secure and reforming, grounded in the concept of decency and respect for human rights, and incorporating education, catering, religious issues, physical education, specialist and peer support (Moeller et al. 2007). The Health in Prisons Project is an example of a WHO network of initiatives in countries across Europe which promotes a whole-prison approach to the care, health and wellbeing of those in custody (Moeller et al. 2007).

Whole-of-population approaches within prison settings make it possible to intervene for the better health not only of offenders but also of prison workers and visitors (Dooris et al. 2013), though these aspects of interventions were not explored directly in the papers reviewed. Dooris and colleagues' (2013) evaluation of a health trainer intervention in several prisons in the Manchester area (UK) resulted in positive outcomes in terms of prisoner behaviour change and better self-perceived health and wellbeing. A key success factor was the trainers' experience of the criminal justice system, which assisted in developing trust and motivation to change behaviours.

Prisons also hold potential to address social determinants of health equity for Indigenous people, who are disproportionately over-represented in the Australian criminal justice system. Imprisonment itself has severe negative impacts on the health, social and emotional wellbeing of Indigenous Australians, and after release Indigenous Australians also have a greater risk of death due to causes such as suicide, drug- and alcohol-related incidents, and vehicle accidents (Krieg 2006). An Aboriginal-specific inmate health survey conducted in New South Wales suggested that organisational-level changes could make a significant contribution to health gains for those in the criminal justice system and to reducing factors associated with crime. These included ensuring access to culturally competent physical and mental health services, drug and alcohol services, welfare support and improved opportunities (Indig et al. 2010). Programs have also been developed in community settings to reduce the number of young Aboriginal people entering the criminal justice system in the first place (Osborne, Baum & Brown 2013). For example, the Northern Territory's *Youth in Communities* early intervention, prevention and diversionary program engages youth in positive activities and cultural activities. It has resulted in increased school attendance or re-engagement with school, increased self-esteem and self-care, and increased resilience of peers (Osborne, Baum & Brown 2013).

Successful combined approaches to healthy settings have also been demonstrated through prisons. One UK prison study took a novel approach by linking prisoners' health with their interaction with green space in order to reduce stress, increase physical activity and improve mental health (University



of Central Lancashire (UCL) (b) (n.d.). Environmental and horticultural interventions were aimed at developing transferable skills for prisoners, providing work experience and helping prisoners to contribute to the local community. Prisoners reported increased confidence and better mental wellbeing, while relationships between offenders and prison staff also improved.

In another UK prison, offenders participated in planting vegetable gardens and flowers, developing a reflection garden and keeping bees (University of Central Lancashire (b) n.d.). This provided prisoners with the opportunity to eat what they had grown, which impacted positively on their nutritional health. In South Australia, promoting health and skills development is seen as supporting prisoners to be physically and mentally fitter for rehabilitation and community service (Government of South Australia 2011). This includes implementing structures for healthy eating in prisons, such as securing contracts with healthy food distributors, making water always available, and enabling prisoners to undertake market gardening both to gain horticulture qualifications and to participate in physical and social activity.

In summary, there are several promising avenues for addressing social determinants of health and equity, within prisons and outside, to improve the physical and mental wellbeing of people who are often from socially disadvantaged backgrounds. Recommendations to strengthen social determinants and health equity work in prisons include continuing to support access to a range of health services, expanding the provision of culturally competent staff and culturally appropriate services, and evaluating the health impacts of these for different prisoner groups (e.g. by age, gender, ethnicity, health status). Health-related activities should be designed to explicitly address the broader determinants of physical and mental health, such as improving prisoners' educational qualifications. The leverage of green space inside and outside of prisons shows considerable promise for improving both physical and mental health, and the equity impacts of this for Aboriginal and other prisoners could be evaluated in the Australian context. In particular, it is recommended that programs to address the social determinants of health should be expanded at the community level to reduce the number of young people entering the prisons system.

### Healthcare settings

There is a significant amount of literature on healthcare settings which promote the social determinants of health, although these do not always focus on equity. Structural-level whole-of-population approaches and community engagement approaches are common, while healthcare access itself is also a key social determinant of health and equity. Healthcare settings which can address broader determinants of health include health promoting hospitals and community health centres. Combining approaches with other settings is particularly successful in increasing healthcare access for marginalised groups, such as delivering health services to young men in community-based settings or sports clubs. Health Promoting Hospitals is a well-established settings approach, with the WHO's Health Promoting Hospitals Network existing since 1997.

Health promoting hospital practice has ranged from 'doing a health promotion project', to delegating health promotion to a specific department or member of staff, being a health promoting setting and also playing a part in promoting the health of the wider community (Johnson & Baum 2001). A broad approach to health is demonstrated in the 'arts in hospital' movement which aims at intermediate health gains through increasing social activity and participation, as well as projects measuring direct health effects such as blood pressure responses to music played in waiting rooms (Macnaughton,

White & Stacy 2005). Evaluations also show physical and mental health benefits for older adults from arts participation (Castora-Binkley et al. 2010).

Promotion of health equity across a whole population in hospital settings can be addressed as part of the initial construction stage or in relation to a redevelopment by conducting an Equity Focused Health Impact Assessment (EFHIA). This can determine the potential differential distributional impacts of any changes and can lessen the possibility that changes will unintentionally widen the health equity gap (New South Wales Health 2009b). At Sydney's Liverpool Hospital, which serves a relatively disadvantaged population, a wide range of recommendations were developed from an EFHIA in relation to the hospital's redevelopment. Changes included providing a shared walking/cycling route to the hospital, providing breastfeeding facilities, using designs which avoid culturally inappropriate décor and features, and holding consultations with appropriate groups about the need to provide quiet and spiritual areas (New South Wales Health 2009b).

Making changes to healthcare governance for a whole population is another equity-focused approach to addressing the social determinants of health. In Australia, improving equity of access to healthcare includes addressing key barriers to access for urban and remote Aboriginal populations, including reducing the dominance of biomedical models of health (Russell 2013). Providing Aboriginal health services is itself a strategy to reduce health inequities between Aboriginal and non-Aboriginal Australians (Freeman et al. 2011). Aboriginal Community Controlled Health Organisations (ACCHOs) are a practical expression of self-determination in Indigenous health policy and health service delivery (Russell 2013). They have successfully overcome barriers to mainstream primary care access and provide cultural safety and cultural competence (Russell 2013).

Another way to support access for particular groups is to make healthcare services friendly and welcoming, such as by having drop-in lunches (Gallagher et al. 2009). A study of primary healthcare services in South Australia and the Northern Territory concludes that Aboriginal community-controlled services and non-governmental organisations with community boards and stronger community engagement strategies appear to be doing more on health promotion, advocacy and social determinants of health (Baum et al. 2013a). Nevertheless, health reforms and the reorganisation of primary healthcare services in state-funded services are shifting the focus to chronic disease management and prevention and away from broader approaches to health promotion (Baum et al. 2013a).

In Australia, primary healthcare services are taking a more comprehensive role in responding to health inequity by taking actions to improve equitable access to services, advocating for and taking action on the social determinants of health inequities, and taking practical action to improve engagement with the communities they serve (Freeman et al. 2011). In particular, community-based health and wellbeing services which use social justice principles and work with the community (rather than services coming in as outside experts) can improve access and health equity for diverse men's groups (Bentley 2006). Such approaches are successful for those who are gay, homosexually active, culturally and linguistically diverse (CALD), middle-aged and older, fathers, young men and men who were abused in childhood (Bentley 2006). Organising outreach visits is another successful way in which access to specialist consultations and procedures has been increased for remote disadvantaged communities in Australia (Gruen et al. 2006).

The physical location of healthcare provision also plays an important role in its accessibility. People who are marginalised and experience stigma from having Hepatitis C report that approaches which use community-based healthcare settings are an effective and more accessible way for them to receive non-judgemental care and treatment (Brener et al. 2013). A review of 42 intervention studies into healthcare factors which improve young people's participation in testing for STIs found that the highest participation rates were in non-clinical healthcare settings, while the Internet also successfully provided access in some studies (Kang, Skinner & Usherwood 2010). A good example is the innovative use of sports clubs in rural Victoria to pilot a chlamydia testing program for 16–15-year-olds, which proved most acceptable to screen, treat and educate young men (Kong et al. 2009).

Integrated approaches are also called for. While provision of drug and alcohol treatment is the most effective way to reduce drug-related harm for disadvantaged populations, and is optimally provided at primary healthcare settings, a significant systems-level challenge is for primary healthcare workers and drug and alcohol workers to integrate their interventions and their interactions with clients (Allan 2010). There are also some studies looking at the role of practice nurses in health promotion within General Practice. While their role is more focused on health education and disease prevention, GP practice nurses aspire to take on expanded roles which incorporate more upstream work of partnership and collaboration (Keleher & Parker 2013).

Other integrated approaches have created safe environments for babies born into families who are experiencing disadvantage. The Healthy Steps for Young Children project, for example, evaluated a standard primary care program with an additional prenatal program (Johnston et al. 2006). Home visits by the same provider before and after birth, along with mother-initiated phone contact, provided developmental and literacy advice, and home risk assessment for smoking, depression and domestic violence. Positive outcomes included more timely use by mothers of well-child assessments, up-to-date immunisations, a higher proportion of infants breastfeeding at 6 months, limited television viewing, greater injury prevention, children having larger vocabularies at age two, and the ability to provide better supports for maternal mental wellbeing (Johnston et al. 2006). The Gudaga project in New South Wales has taken a similar comprehensive approach to improve the developmental, educational attainment, family environment and service context for a cohort of urban Aboriginal children (Centre for Primary Health Care & Equity, 2014). A systematic testing of key interventions addressing health equity recommended the reinforcement of primary care in disadvantaged areas by employing practice nurses and peer educators (Mackenbach & Stronks 2002).

The targeting of disadvantaged communities is another approach in healthcare settings. One major study brought together 12 systematic reviews of best practice to reduce racial and ethnic disparities in healthcare (Chin et al. 2012). It found that the promising interventions were those addressing health system culture and quality of care, and those which are culturally tailored to meet patients' needs, employ multidisciplinary teams of care providers and target multiple leverage points along a patient's pathway of care (Chin et al. 2012). Another study in a new paediatric refugee clinic at a children's hospital in Sydney achieved increased service attendance in a parental intervention group (compared with a control group) through an intensive health promotion campaign which used ethnic media and social networks (Sheikh & MacIntyre 2009). Social access to healthcare can also be increased by providing community-based outreach, for example through community-midwifery practices funded by state government (Community Midwifery WA 2009 n.d.). These can improve antenatal attendance for teen, low-income and single mothers and can also provide support around the broader determinants

of health through links to domestic violence, housing and welfare services (Nixon, Byrne & Church 2003).

Recommendations to increase the extent to which healthcare settings address the social determinant of health equity include hospitals expanding this focus in their health promotion initiatives to consider which socioeconomic populations (or subgroups) they successfully target, and encouraging novel approaches such as the arts-in-health movement. Healthcare professionals and health promoters can also advocate for increased representation of people from diverse ethnic, socioeconomic and demographic backgrounds within the workforce and healthcare governance structures. This would include supporting capacity building for consumers to be more widely involved in developing and implementing initiatives and policies, and their involvement as lay peer educators. Non-acute settings appear to be particularly successful in increasing healthcare access and use for people from marginalised and disadvantaged groups. EFHIA has proven to be a successful way to address social determinants and health equity in the construction and redevelopment of healthcare settings, and EFHIAs could be undertaken more widely. Other forms of evaluation for healthcare include the Program Logic Model. This is a tool which provides a framework for evaluation that allows the tracking of progress towards desired outcomes (Lawless et al. 2014). It helps identify the theory, evidence and values which underpin a particular approach, and how they are likely to lead to individual and population health outcomes and increased health equity.

### Nightlife settings

There is a small but informative literature which takes a health promoting approach to nightlife settings such as nightclubs, pubs/hotels, bars and their surrounds. However, these settings provide a way to address the 'risky' behaviours associated with such environments, including alcohol consumption and alcohol- and drug- related harm (Jones et al. 2011). Conceptualising nightclubs as potential health promoting settings (and developing a 'Healthy Nightclubs' approach) can address broader wellbeing for both patrons and those working in and around the night-time environment (Kilfoyle & Bellis 1997). Equity can be addressed through initiatives which target nightlife settings or localities within disadvantaged geographical areas, including some parts of inner cities. A whole-of-population approach within nightlife settings may address equity for those with poorer health status who are at higher risk of unhealthy behaviours.

While direct health promotion in nightlife settings has proven beneficial (such as promoting responsible drinking or fitting condom machines), the broader socioeconomic determinants have also been successfully addressed. This includes improving the availability of late-night public transport (to reduce the likelihood of assault and drink-driving), and improving patron safety through better street-lighting and access to public telephones (Kilfoyle & Bellis 1997). Other approaches include setting latest entry times for late night venues; promoting 'safe-by-design' concepts; developing 'calming initiatives' such as distributing lollipops to reduce outside noise; developing award schemes for venues providing smoke-free facilities; supporting venues in adhering to 'safer clubbing' guidelines; focusing on customer safety; providing free water (Hughes & Bellis 2003) and providing staff training in safely dealing with intoxicated customers (Abdon et al. 2011).

Most healthy nightlife reviews do not address equity per se, but this could be addressed through focusing efforts on nightlife settings in lower socioeconomic areas or on nightlife settings frequented more often by groups with higher risk factors for poorer health outcomes. Planning practices were used to address these issues in one local Primary Care Trust area of the English county of Lancashire.

This area previously suffered economic decline but is now experiencing economic growth through the 'night-time economy'. The Trust aimed to develop a safe night-time economy to reduce the negative impacts of alcohol-related crime, anti-social behaviour and health problems (Lightowlers et al. 2007). Other anticipated benefits were a reduction in hindrance to the 'daytime' economy such as litter or reduced productivity due to excessive alcohol consumption (Lightowlers et al. 2007).

Multi-component programs have been shown through a systematic review to be most effective in reducing alcohol-related harm in nightlife settings, such as assaults, traffic crashes and underage sales (Jones et al. 2011). The approach combined community mobilisation, training in responsible beverage service, house policies and stricter enforcement of licensing laws (Jones et al. 2011). As is common with settings approaches, better outcomes are obtained in promoting health in nightlife settings through partnerships between agencies, including health, licensing and enforcement agencies, transport providers, pub/club management and staff, and club-goers themselves (Hughes & Bellis 2003). This shows similarities with temporary settings approaches (covered in the next section).

In summary, nightlife settings provide a range of opportunities where the social determinants of health and equity can be addressed, and there is considerable room for further policy and program development. More novel approaches could be investigated to reduce anti-social behaviours in and around nightlife settings which benefit both patrons and local residents. Partnership approaches with industry and other groups also help address broader determinants such as safety, and staff training is an organisational-level approach which supports safety. To further address equity, studies in nightlife settings should collect and disaggregate data to enable the targeting of settings which are patronised more often by people with/at risk of poorer health. Health promoters could also consider what other leisure activity settings are popular with different socioeconomic and ethnic groups.

### Temporary settings

Health promotion approaches in temporary settings are similar to those in nightlife settings, in that they often address the whole population of patrons and local residents, and patrons are often those with higher levels of risky behaviours. A range of temporary settings have been successfully used for health promotion. Temporary settings are often bounded by ticketed zones but surrounded by unbounded spaces of the local community. They include mass gatherings, music festivals, youth events, one-off sporting events and annual religious events such as pilgrimages. However, where the studies identified take a whole-of-population approach to improve health, studies were not located which address equity per se, and this is an area for future research.

A number of studies report population-level approaches to health promotion at temporary youth mass gatherings. These address equity to the extent that the behaviours targeted are those which are often more prevalent among youth from disadvantaged backgrounds. The range of organisers involved also give incidental community-based opportunities for these young people to connect with diverse providers who can provide support for their general physical and mental wellbeing and who can on-connect them to outside services as needed. Two evaluations show that the broader determinants of health, such as safety, are issues of concern for those attending temporary gatherings. At World Youth Day in Sydney in 2008, for example, young people's health and safety concerns included getting safely to/from the event, avoiding violent behaviour, being safe in a crowd, staying hydrated and having enough to eat (Hutton, Roderick & Munt 2010).

An evaluation of the 'Leavers Live' harm-reduction intervention for 'Schoolies Festival' high-school leaving celebrations on Rottnest Island, Western Australia, in 1999 and 2000 focused on reducing excessive alcohol consumption, high-risk behaviour, underage drinking, drug consumption and disruption to the host community through anti-social behaviour (Young et al. 2001). Improvements were gained through a number of broad population level strategies that improved safety and reduced risky behaviours. These included providing extensive activities such as beach-based sports and competitions, requiring a deposit for booking all accommodation, providing discounted 'recovery breakfasts', and providing a supervised area for underage dance (sponsored by Healthway and the Office of Youth Affairs). Excessive alcohol consumption was reduced by extending trading hours for local food outlets and by the police and rangers providing a free late night sausage sizzle.

The authors of the Western Australian study recommend that free drinking water should also be provided in future as an alternative to alcohol and to support hydration. The intervention's highlight was a 'chill-out' tent, which also relieved nursing staff of dealing with minor complaints and provided compassionate support, which was seen to reduce potential harm (Young et al. 2001). The Ottawa Charter can be used as a framework to assess health and safety at mass gatherings to expand the focus from curtailing the high-risk activities of individuals to examining the impact on the wider community (Hutton & Zannettino 2011). These authors also argue that the Charter can help identify ways to proactively provide safe supportive environments for various activities, so that such festivals become a whole-of-community celebration rather than a public nuisance.

Other temporary settings include one-off sports gatherings in a particular locality. For example, the Athens 2004 Olympic Games saw 10 health promotion programs being developed through 44 agencies, despite shortage of funds (Soteriades et al. 2006). Programs variously targeted spectators, athletes, volunteers, staff, students and journalists for up to two years before the games and during the Olympic period. Initiatives included a non-smoking policy for the Olympic village, free distribution of condoms, brochures and a CD-ROM to promote the Mediterranean diet, and information about preventing heat-related disorders and healthy swimming. The authors suggest that scoring criteria against such health promotion initiatives could be incorporated into the application and evaluation process of candidate cities for future Games.

An organisational-level strategy which can cut across a wide range of settings, but which is also useful at temporary gatherings, is support for infant and young children's health and wellbeing through supporting the opportunity to be breastfed. This can be promoted by creating a breastfeeding-friendly environments, such as displaying breastfeeding-friendly posters and images, making the event smoke free, providing sufficient room for prams, arranging for an Australian Breastfeeding Association tent to be provided, and providing directions and maps to 'breastfeeding-comfortable' areas indoors and outdoors (Queensland Health n.d.). These approaches also provide broader cultural acknowledgement of mothers' and babies' rights to breastfeed and the improved health outcomes from breastfeeding (Queensland Health n.d.).

A range of recommendations can be made for temporary settings. They include conducting an environmental scan of forthcoming events to allow advance planning for ways to leverage health promotion opportunities. This would also allow time to develop partnerships with a wide range of authorities and organisations to address the broader determinants of health equity. A focus could be placed on identifying ways to address equity of access in temporary settings, such as ways to support

people with mobility issues, parents with young children and those at higher risk of 'unhealthy' behaviours.

### Sports settings

There is a good amount of literature on sports clubs and venues as healthy settings. Sport is both a context for and a 'solution' to health-damaging behaviour (Palmer 2011). Sporting organisations and locations are therefore an important setting for health promotion strategies. They can involve the development of whole-of-population approaches through policy formulation and the creation of health promoting environments to reduce risk behaviours such as smoking, alcohol consumption, sun exposure and unhealthy eating (Priest et al. 2008). Approaches which were identified through the literature include those which target particular sub-communities by providing sports and physical activities appropriate to the group. Whole-of-population approaches can also support changes to broader society and culture (such as reducing racism) which benefit particular sub-communities. Sports coaches hold potential to be trained as health promoters.

Sports settings show particular promise for targeting particular populations or communities. For example, around one-third of Indigenous Australians participate in some sporting activity (Ware & Meredith 2013). Sport is a potentially powerful vehicle to address personal and community wellbeing because traditional culture is a strong component of sport and recreation (such as hunting and traditional dance) (Ware & Meredith 2013). Program descriptions and systematic reviews show benefits from sports and recreation participation for Aboriginal and Torres Strait Islander communities in terms of improved school retention, learning attitudes, social and cognitive skills, physical and mental health, increased social inclusion and cohesion, increased validation of and connection to culture, and crime reduction (Ware & Meredith 2013). Key aspects of successful initiatives are: providing a quality long-term program which imposes minimal financial cost upon participants; and providing some activity rather than worrying about which activity. Other important findings are that linking programs to other services and opportunities such as health or counselling, jobs or education improves the uptake of these allied services; and that uptake is improved by developing the program with the target community, promoting activities as games or sports rather than 'get-fit' or 'health' initiatives, and offering them at times when people have large amounts of unsupervised time (i.e. weekends, after school, school holidays) (Ware & Meredith 2013).

Whole-of-population approaches combined with approaches which additionally target specific groups can also address broader health determinants such as discrimination. A review of a large number of sports clubs in Victoria found that individual sports clubs could take more action to be socially and culturally inclusive (Nicholson et al. 2013). Symons and colleagues' study (2010) provides support for the Australian Sports Commission Sports Integrity Program of inclusive practice and the challenging of sexism and homophobia in sport through national sporting codes. The authors recommend that proactive measures are required at club level to develop more inclusive environments in rural and urban communities to reduce hostility towards lesbian, gay, bisexual and transgender people in sport. Fostering a love of sport in all participants should become an essential element in pre-service and in-service training for physical education and sports teachers (Symons et al. 2010). It can also be included in courses for coaches and other volunteers in sporting clubs, while health-funding bodies could prioritise research into social inclusion in sport (Symons et al. 2010).

Sports clubs may be useful new settings in which to address emerging issues such as the rising levels of alcohol consumption among women in recent years. Palmer (2011, 2013) highlights drinking by

sportswomen and female spectators for pleasure and celebration as an especially under-researched area. She calls for more studies in this field, particularly because behaviours associated with male drinking (violence, assault, sexual activity) are increasingly being found among women. Some of the strategies adopted to create healthy and safe nightlife and temporary settings may be transferable to sports settings.

Sport also facilitates important social cohesion and cultural resources within specific ethnic groups, and between these groups and the wider society. Sport facilitates important social cohesion and cultural resources for Aboriginal Australians living in urban areas, although there are limitations to its ability to reduce disadvantage (Browne-Yung et al. in press). Sports settings can provide healing benefits as a space for Aboriginal and non-Aboriginal people to socialise, and in remote communities sport has been positively associated with crime-prevention and suicide-prevention strategies (Godwell, 2000; Tatz & Adair 2009; Tatz 2011). In Victoria, the not-for-profit organisation Sports Without Borders provides support for young people from 'new and emerging' communities to participate in community sport ([www.sportswithoutborders.org](http://www.sportswithoutborders.org)). Another example is a partnership of Victoria's Department of Planning & Community Development with the Department of Immigration & Citizenship and five local government associations which has trained young refugees and immigrants to develop leadership skills and organise local sporting events ([www.sportswithoutborders.org](http://www.sportswithoutborders.org)).

Promising whole-of-population approaches include investigating ways that athletic coaches can become key players in health and wellbeing promotion. Nevertheless, while coaches rate themselves highly as being health-promoting, young athletes regard coaches as largely passive in this (Kokko 2010). This may be because clubs need to provide more support and guidance to assist coaching in fulfilling roles as health promoters (Kokko et al. 2011). The research suggests there is interesting scope to incorporate coaches into health promotion in sports settings, and there may be room for health promotion organisations to provide further support to both clubs and coaches in this regard.

Recommendations for sports settings include that clubs could adopt whole-of-population approaches to more actively promote nutrition and reduce substance abuse. To address health equity, clubs and health promotion organisations could identify ways for diverse representation from local communities to contribute to the design, development and implementation of sports-related programs. Health equity through sports can also be facilitated through changes at club and code level to address discrimination, cultural respect and racism as broad determinants of health. These can include identifying ways to expand sports participation as players, coaches, umpires and spectators for people from diverse equity groups. Equity can further be addressed by considering ways to change the broader determinants of sports settings that can impact positively on non-traditional or less-studied group issues, such as women's alcohol consumption. This may include organisational-level training for professional and lay sports coaches to become active health promoters.

### **Faith-placed settings**

There is some literature which considers places of faith as health promoting settings. This particularly includes interventions which use such places as culturally appropriate locations to provide access to screening and treatment for a range of disadvantaged groups. The role of churches and other faith-placed settings for promoting health equity has been under-researched in the Australian context and more research has been undertaken in the US (Ayton, Carey & Keleher et al. 2012). Churches have a particularly long history of involvement in welfare work with marginalised groups (Ayton, Carey & Keleher et al. 2012), which is one way of addressing health equity. While faith-placed settings have



been more extensively used for health promotion initiatives in the US, American authors note that there have been few randomised and controlled studies and little in the way of rigorous evaluation (Asomugha et al. 2011; Peterson et al. 2002).

Faith-placed settings approaches target both individual behaviour change and ways to improve access to health services. They have addressed a range of health outcomes, from increased physical activity to increasing cancer screening and intervention rates and better self-management of diabetes (O'Mara-Eves et al. 2013; Parker et al. 2006; Sauaia et al. 2007; Saunders et al. 2013). Most interventions target ethnic groups with poorer health outcomes than Caucasians, such as African Americans and Latinos in the US (Lumpkins et al. 2013; Sauaia et al. 2007), and Aboriginal and older Vietnamese people in Australia (Parker et al. 2006). Faith-placed approaches have focused on providing health promotion messages in culturally relevant ways and in faith community leaders as key disseminators of health messages (Lumpkins et al. 2013).

The location of Broadband for Seniors support in some Australian faith-placed settings is an example of combining these settings with an online settings approach to provide increased access to online opportunities for health, education, employment and social connection. One study in Melbourne recruited older Vietnamese women at the Quang Minh Buddhist Temple to participate in workshops about finding diabetes self-management information online (O'Mara et al. 2012). The authors found that the women's digital competency affected their participation and that the women wanted more peer-led techniques. Some studies identify the importance of peer-led education and support over the promotion of online access to health information or printed educational materials that are designed to be culturally relevant (O'Mara et al. 2012; Sauaia et al. 2007).

Faith-placed health promotion can be important in acknowledging cultural narratives about how disease impacts on individuals' propensity to seek interventions (Aitaoto et al. 2007). It also acknowledges the importance of providing a spiritual context to health messages for certain groups (Campbell et al. 2007). Faith Community Nurses are a particular group who work with whole congregations, individuals and the wider community in an explicit health promotion capacity (Anaebare & DeLilly 2012). They particularly support mental health in relation to key life events such as family separation, planned transitions and unplanned events such as unemployment (Anaebare & DeLilly 2012). These nurses could be ready-made points of contact to expand health promotion initiatives to groups who find it difficult to access other supports. A study in Victoria shows that churches are partnering extensively with other organisations in welfare provision and health promotion (Ayton, Carey & Joss et al. 2012), and this is another promising area for future work.

In summary, the evidence shows that faith-placed settings are promising locations in which to expand health and wellbeing promotion in accessible ways. They are particularly for marginalised communities as a whole, for specific religious and ethnic communities, and for people who are experiencing disadvantage. Further support could be provided for program development and evaluation to identify the actual and potential health and equity impacts of addressing the broader social determinants in faith-placed settings. This could include identifying how different cultural and spiritual understandings of health and disease can be acknowledged and incorporated into health promotion. Faith Community Nurses are likely to be a key group to advise on this, and their knowledge and skills as 'insider' health promotion practitioners could be leveraged to expand social determinants and health equity programs in this setting. They may also be a key group who could lead multiple-

setting approaches or combined-setting approaches to address health equity through partnerships with other practitioner groups or organisations.

### Green settings

A small number of articles were located which identify and seek to leverage the health and wellbeing benefits of green space. This includes being 'in nature' or in parks, and caring for the land. These are conceptualised as 'green' settings for health promotion (Poland & Dooris 2010). They fit the definition of hybrid settings or geographical and physical places where people come together (IUHPE, n.d.).

Maller et al. (2006) argue that public health strategies could maximise the untapped resource which nature provides, including the benefits of contact with nature as an upstream population-level health promotion intervention. However, as with other settings, there is a need to analyse whether initiatives have differential health benefits or disadvantages across the socioeconomic gradient, and to demonstrate how they can be beneficial in levelling up. The main approaches are whole of population (e.g. greening cities or schools), or targeting disadvantaged populations (e.g. prisoners).

A range of health outcomes have been related to green settings, including improved sleep patterns, improved mental health, increased physical activity, and improved self-esteem and overall wellbeing. A study of over ¼ million Australians showed that living in greener neighbourhoods (with more parks and green space) is associated with reduced levels of 'short-sleep' duration, which is a correlate of obesity, chronic disease and mortality (Astell-Burt, Feng & Kolt 2013). In a similar way, 'green' school grounds which have diversity of landscaping and design features enhance the quality and quantity of physical activity among children (Dyment & Bell; 2007; Dyment et al. 2009). A small number of studies also show higher physical activity levels in children attending childcare centres which have trees, shrubbery and open play areas than in children in centres without this greenery (Larson et al. 2011).

An approach to leverage green space as a social determinant of health for a particular disadvantaged group is demonstrated in the 'Greener On The Outside For Prisons' environmental out-working project in northern England. This commenced in 2013 and led to improvements in a range of determinants of prisoner health, including the development of transferable skills, the gaining of work experience and increased feelings of being socially valued (University of Central Lancashire (b) n.d.). Prisoners undertook work such as constructing dry stone walls and footpaths and planting trees in woodlands and nature reserves. Direct health effects included feeling 'less stressed' and 'happier' after working outdoors, although whether these benefits accrued to less-advantaged as well as to more-advantaged prisoners was not examined.

In South Australia, similar actions are planned for the state's Correctional Services, where prisoners will gain vocational skills and qualifications in horticulture and spend more time in physical activity as they grow and prepare healthy food in prison and community gardens and kitchens (Government of South Australia 2011). Healthy Cities type initiatives may also include establishing new parklands as part of an overall goal to enhance quality of life and improve health equity. For example, the Playford Alive project in South Australia brings together the goals of being 'Healthy, Safe & Active' with being 'Green & Sustainable', and addresses equity by being located in a council area with a higher proportion of less-advantaged residents (City of Playford 2013).

A novel whole-of-population health approach is demonstrated by natural resource management (NRM) programs which support Australian farmers' health – a problem which conventional health interventions struggle to address (Schirmer, Berry & O'Brien 2013). NRM programs reach large

numbers of farmers and, although designed to address environmental degradation, they also act as 'non-conventional place-based wellbeing interventions' through influencing key determinants of farmer wellbeing. These include increasing social capital, self-efficacy, social identity, material wellbeing and health. Mediating factors include changes in land conditions, farmer skills and knowledge, and increased access to resources (Schirmer, Berry & O'Brien 2013). An equity perspective to this approach is seen where links between population health and landcare are addressed through 'Caring for Country' practices in Aboriginal communities. These have demonstrated significant and substantial health benefits for Aboriginal landowners in remote areas of Australia, along with environmental benefits (Burgess, Mileran & Bailie 2008). Such initiatives highlight the importance of identifying culturally relevant 'green settings' approaches.

In terms of expanding green settings work, Dooris (2004) suggests consideration of combined partnerships, for example between 'healthy schools' and 'environmentally sustainable schools' programs. The use of green settings can particularly address health equity because it appears to be an environmental change which can positively impact on all individuals without their need to respond. It is recommended that higher-level policy support be developed for certain settings (e.g. schools and communities) to combine their healthy settings initiatives with environmental sustainability initiatives for the joint wins for the health and the environment. Lower et al. (2010) particularly emphasise the importance of partnerships for successful settings-based initiatives, i.e. using and strengthening local networks and integrating initiatives with existing agencies, such as agricultural retail outlets that are trusted by 'the community'. It is also suggested that collaborative strategies around 'green settings' between researchers and primary health services, social services, urban planning and environmental management could support improved mental health for sub-populations and communities at higher risk of ill health (Maller et al. 2006).

Green settings show considerable promise as a novel approach to health promotion in both urban and rural areas. They can also improve health equity in localities with high proportions of people experiencing or at risk of different kinds of disadvantage, such as prisoners, farmers and geographically remote communities. The inclusion or expansion of 'green settings for health' (both physical and mental) could be encouraged across urban developments but with an additional focus in lower socioeconomic areas. This should include a specific evaluation component to identify the equity benefits. There is significant room to further research the health equity benefits and meaning of greens settings within and among different cultural groups, and to address the issue of whether different types of green settings are more important to different groups. Green settings can be combined with work in other settings such as schools and cities, and other sectors such as climate change. These can provide new opportunities for health promoters to work in partnership with non-health agencies for multiple wins for health.

### Online settings

While television and radio have been traditional population-level settings for health campaigns for many years, the online world is a relatively new setting for health promotion. The online world has been conceptualised as a twenty-first-century determinant of health in that it provides access to a wide range of opportunities which support health, including healthcare, education, employment and social connection (Golder et al. 2010). Most of the literature about online settings focuses on health promotion for individual behaviour change or self-management of disease.

Sixteen online health promotion approaches have been identified, falling into four main categories (Otte-Trojel 2011; EuroHealthNet n.d.): (1) *Online information resources* (e.g. health information portals/websites, shared health records); (2) *Technologies to motivate behaviour* (e.g. Smartphone applications, e-health promotion tools, online self-help tools, sports gadgets); (3) *Online health communities* (e.g. health forums, targeted social forums); and (4) *Health monitoring technologies* (e.g. online health assessment resources, personalised physical activity systems, remote physical activity monitors).

Individual behavioural approaches dominate in online initiatives, rather than attention being given to the broader conditions that support people to both get online and be healthy (e.g. Baum, Newman & Biedrzycki 2014; Hoch et al. 2012). Online settings for delivering prevention and early intervention healthcare may be best suited to those who prefer anonymous services, who live in rural and remote areas, or who have a preference for self-help methods (Bennett et al. 2010). Nevertheless, these have rarely been evaluated for their effectiveness.

Along with the scarce evidence base relevant to online health promotion, there is little consideration of the equity implications (Otte-Trojel 2011). There have been concerns for over a decade that the online world will create new social inequities (Eysenbach & Jadad 2001; Miller & West 2007). This is now particularly a concern for health because the social gradient in health is mirrored by a social gradient in the use of the Internet and digital technologies, i.e. 'a digital gradient' (Newman, Baum & Biedrzycki 2012). This means that those in greater health need are usually less able to get online.

Inequities in Internet access and use are reflected in lower Internet use among people from low-income backgrounds, migrants from non-English-speaking backgrounds, young people with disabilities and mothers living in disadvantaged circumstances (Goodall, Newman & Ward in press; Newman, Biedrzycki & Baum 2010; Newman, Patel & Barton 2012; Raghavendra et al. 2013; Wen et al. 2011). A major barrier for non-English speakers is that a significant proportion of the Internet's content that they need is in English (Greenstock et al. 2012). Such problems may be experienced by all members of a group, or by those group members who live in more disadvantaged circumstances.

Even when online initiatives are assumed to be providing for a whole population, such as with a community events website, and when they are anticipated to overcome geographical distance, they are still more successfully accessed and used by more-advantaged groups (Osborne & Patel 2013). A review by Car and colleagues (2011) identified an extreme lack of well-designed RCTs investigating the effectiveness of teaching people to use the Internet to find health interventions. They recommend that such studies should involve different participants (in terms of socioeconomic group, gender, age and disease status) and should be conducted in different settings to investigate search and appraisal skills and information use.

A successful attempt to increase equity in online settings is demonstrated in one large US hospital serving vulnerable populations, where a university librarian worked with the hospital to develop a picture-based touchscreen with audio options (and librarian assistance if needed) (Teolis 2010). This meant that patients with low text-literacy and low/no computer skills learned to access basic health information via online tutorials while waiting for medical appointments (Teolis 2010). Similarly, bilingual interactive technology kiosks have successfully improved access to health education for underserved communities in relation to HIV/AIDS, mental health and substance abuse (Bean, Davis & Valdez 2013).

Despite online settings being combined with healthcare settings, a recent study in Queensland investigating Internet use found that across socioeconomic groups the local doctor was still the most currently used, important, trusted and preferred future source of health information (Dart, Gallois & Yellowlees 2008). The Internet was only a more currently used and important source of health information in the university population, and was least preferred by the low socioeconomic group (Dart, Gallois & Yellowlees 2008). This is also the case for older migrants from Greek and Italian backgrounds in South Australia (Goodall, Newman & Ward in press).

Looking beyond health information, in New York a gender-specific, computer-mediated RCT intervention program enhanced mother-daughter communication and relationships and improved parental monitoring and rule-setting about girls' alcohol use (Schinke, Cole & Fang 2009). The girls also learned to improve their conflict management skills and alcohol-refusal skills, and demonstrated greater self-efficacy about their ability to avoid underage drinking; the girls also reported lowered alcohol consumption (Schinke, Cole & Fang 2009).

There are some novel targeted online settings approaches which incorporate action on education and employment for specific disadvantaged groups which stand to improve both equity and health equity. For example, New Zealand's *Computers In Homes* program provides school-based computer hardware and training to parents of low-income, Maori and refugee families in a large number of digitally underserved communities (2020 Communications Trust 2013). Parents eventually pay a token fee to take home the equipment, with the primary aim being for them to support their child's homework; low-budget home Internet connections are arranged through the program. However, gaining computing skills and access has also improved parents' own education and employability, and links into the KiwiSkills program promoting digital literacy training for work (2020 Communications Trust 2013).

A lifecourse approach to online settings was trialled in Melbourne through the MYBus Project. This developed a community mobile youth centre to address geographic and socioeconomic inequities by increasing access to youth-specific health and wellbeing resources (Nansen et al. 2013). At the same time, the project also improved young people's digital access and online participation skills (Nansen et al. 2013). In Adelaide, an intensive home-based intervention successfully increased Internet use, online social media use, and in turn the extent of social networks, for young people with cerebral palsy, muscular dystrophy and acquired brain injury (Raghavendra et al. 2013). For older people, successful information and communications technology (ICT) use can be increased by including them at the development stage to identify their needs (Righi et al. 2011).

With the use of stories and history being important resources for healing in Indigenous populations (Gallagher et al. 2009), online approaches have been used to address cultural identity, empowerment and healing from the impacts of colonisation. Digital storytelling has proven particularly useful (Olding & Adelson 2013). One First Nations community in Canada is commandeering the Internet and information technologies as community development tools to provide the community with more capacity for independence, resistance, and social, cultural and economic activities (Gray-McKay et al. 2014). Reflecting the use of Equity Focused Health Impact Assessment, a Digital Equity Tool is being developed that can support 'digital impact assessment' to consider the equity impacts of moving to online forms of health promotion, health services and health information provision (Newman 2012).

In summary, online health promotion initiatives should be encouraged to consider the health equity impacts of online health information, apps and self-help supports. They should also consider how to support ICT use across the socioeconomic gradient in ways that can address the social determinants of health. Innovation is required to develop approaches that increase equity in digital access that go beyond ICT skills courses and include sustainable ways to help everyone to acquire the necessary technology resources, including infrastructure and confidence in use. A range of health equity issues are being addressed in online settings that particularly support important social determinants of Indigenous health, such as cultural healing. Since online settings are assumed to be whole-of-population approaches but are not equitably accessible, the development or implementation of any online initiatives should include evaluation of extent of digital access across the social gradient, and between and within different socioeconomic groups.

### **Socioeconomic, political and cultural contexts**

Although this base layer of the Fair Foundations Framework is the one which holds the greatest promise of addressing the social determinants of health equity, a smaller amount of literature was located which explicitly addresses this layer than was found for the other two layers. Due to the nature of settings being predominantly geographically or organisationally bounded, much of the literature focuses on individual settings, such as cities and schools, which this report has covered under the 'Daily Living Conditions' layer. Nevertheless, settings-based approaches in that layer can be supported in important ways through federal, statewide or local government legislation, policies, licensing, regulation and planning, and a range of literature was located on these topics.

Some of the most obvious effective change at this level is where changes in tobacco legislation and taxation have contributed to reducing population-level smoking rates through complementing community programs and education strategies (Warner 2005). This layer also provides a broader context supportive of settings-based initiatives such as in hospitals, hotels and sports clubs. Importantly, interventions at this level which are more regulatory or structural, such as banning smoking in public places, appear to do more to reduce health inequities than information-based approaches, such as anti-smoking adverts (McIntyre 2007).

#### **Cultural context**

The main literature which was identified about cultural context focuses on ways to support people to be more accepting and respectful of diversity. However, less obvious structures such as the food system and sporting codes also emerged as important to the extent that they represent and support the advantages of the dominant population in hidden ways but are rarely acknowledged as doing this. These aspects of health go beyond the physical or geographical aspects of physically bounded 'settings' to address the structural level. They require clear leadership commitment from relevant organisations and agencies to reducing disadvantage and addressing determinants of health and wellbeing (Osborne, Baum & Brown 2013). This may include a proactive focus on developing a more culturally diverse workforce, incorporating different cultural conceptualisations of what impacts on health and how health is created, and promoting health in places which people from different cultural and socioeconomic backgrounds see as familiar to them, and as socially accessible, culturally appropriate and non-judgemental.

Alkon and Agyeman (2011) argue that higher-level systems such as the food system reproduce socioeconomic inequities and impact on health because they are designed in ways which deprive low-

income neighbourhoods and ethnic communities and because they are designed by and for the dominant population. They found that the current food system in Massachusetts (USA) often prevents access to fresh food, so that poorer groups often live in 'food deserts' where fast food is more common. The system also shapes the type of food produced and consumed, and food philosophies such as veganism (Alkon & Agyeman 2011). These issues can be addressed to some extent at policy level through action on the social determinants of health.

One Australian example is the *Food for All Tasmanians: Food Security Strategy* (Government of Tasmania 2012). This seeks to improve food access and affordability through regional development, community food solutions, and planning for local food systems to support people on lower incomes, isolated older people, children of single parents, and isolated communities. Another Australian systems-level approach for a particular locality is the *APY-Lands Food Security Strategy*. This recommends addressing financial wellbeing, freight issues and support for local stores to supply healthier foods (Aboriginal Affairs & Reconciliation Division 2012). It also aims to engage the Anangu people, their representatives and a wider range of other stakeholders in initiative design and implementation.

Respect, discrimination and racism are other key cultural determinants of health which can be addressed at the political and governance level, including in a nation's constitution and through greater political empowerment of disadvantaged groups. Such changes provide a broader cultural context in which further change can occur at the Daily Living Conditions level, such as in sports clubs and schools (Australian Human Rights Commission 2013; Gallagher et al. 2009; Greco, Priest & Paradies 2010; Kimpton 2014). A qualitative study in metropolitan Adelaide found that racism is a key determinant of health inequities for Aboriginal Australians which has heavy costs for the health sector and impacts on the achievability of close-the-gap initiatives (Gallagher et al. 2009).

Policy-level interventions can also address cultural context in different settings. The Australian Human Rights Commission (2013) has developed the national *Racism: It Stops With Me* strategy to eliminate racism in sport. The Australian Football League (AFL) is also playing a key role in promoting cultural respect and countering racism across the sporting code and in individual clubs. It holds an annual Multicultural Round and Indigenous Round, and recently launched the *AFL Reconciliation Action Plan*. Next it will develop a National Indigenous Advisory Group to provide 'year-round' recognition of Indigenous Australians and improve the participation level of Indigenous Australians as players, coaches and umpires. The AFL has also partnered with the *Recognise* campaign to support recognition of Aboriginal & Torres Strait Islanders in the Constitution (Australian Football League 2014). These are two important examples of interventions at the Sociopolitical base layer which could be evaluated for their impact as broader determinants of health equity, wellbeing and inclusion.

Recommendations to improve action at the cultural context level include providing leadership to support the evaluation of upstream initiatives which address the social determinants of health and advocating for the inclusion of different cultural conceptions of health in policy development across governments. Novel approaches include developing food security strategies with different communities to counter mainstream food systems (particularly where the latter are health-damaging). Leadership can also be provided to support initiatives which promote cultural respect and counter discrimination and racism as important social determinants of health equity. Healthy settings could work in partnership on key national strategies, including constitutional change. It is also important to

advocate for capacity building in the health workforce as a structure in which to include people from a wide range of cultural and language backgrounds.

## Governance

Governance structures, such as those which address development, planning and community change, are key to creating supportive social and physical environments for health equity and to eliminating deprived living conditions (Kjellstrom & Mercado 2008). Planning can particularly play a role at the political and broader socioeconomic level by promoting healthy and safe behaviours equitably, particularly through settings such as cities, neighbourhoods and communities (CSDH 2008). This includes focusing investment in active transport, retail planning to manage access to unhealthy foods, and good environmental design and regulatory controls (such as regulating the number of alcohol outlets in an area) (CSDH 2008). Similarly, it has been possible to create laws, rules and regulations to promote gender equality through planning (Foran 2013).

As already detailed for 'Community settings', governance structures which include the genuine involvement of lay people and key stakeholders from the relevant communities or groups can result in more effective development and implementation of health promotion activities. An example is that development can be more supportive of the health and wellbeing of women by having women represented on policy teams alongside other stakeholders (Greed 2005). Similarly, a key governance factor that supports access to healthcare for Aboriginal people is the existence of Aboriginal Community Controlled Health Organisations (ACCHOs) (Russell 2013). Evaluation of a consumer-driven mental health service in rural South Australia – The Station Inc – found that the well-developed governance arrangements, policies and administrative systems which were flexibly implemented were important in creating the nurturing and empowering processes (Taylor et al. 2010). In turn, these supported positive mental wellbeing for community members and overcame the power differential between professionals and 'patients' or 'clients' (Taylor et al. 2010).

In South Australia, one governance-level intervention is the adoption of the Health in All Policies approach through the Department of the Premier & Cabinet (Kickbusch & Buckett 2010). This gives a mandate to the health sector to lead cross-sector policy development that addresses the social determinants of health and equity (Kickbusch & Buckett 2010). One result was a Healthy Weight Project which developed policy commitments with nine non-health departments which were written into the *SA Eat Well Be Active Strategy 2011-2016* (Government of South Australia 2011). This includes actions for settings across the state which should address health equity, since the client base is disproportionately from lower-income or disadvantaged backgrounds (Newman et al. 2014). For example, actions by the department responsible for public rental housing include landscaping the front- and backyards of all new and existing housing and developing tool libraries to support tenants to garden so as to increase local access to healthy foods and physical activity.

A governance-related issue which can interfere with addressing the social determinants of health equity is the short-term nature of funding or policies. This does not always allow sufficient time for structural changes to be made, or for such changes to work through to changed behaviours. For example, a review of 156 local suicide-prevention projects across Australia (including drama workshops in juvenile detention centres, and walking groups for socially marginalised older people from CALD backgrounds) found that short-term funding limited the sustainability of most programs (Headey et al. 2006). Alternative funding sources to continue a project were sometimes available where the project had local community support and where an evaluation could demonstrate the



project's benefits (Headey et al. 2006). Similarly, a study in Perth (WA) found that Liveable Neighbourhood Guidelines had created a more supportive environment for walking but that insufficient time had elapsed for the neighbourhood to develop and have an actual impact on the amount of walking residents undertook (Christian et al. 2013). Another Australian study – The Overburden Project – found that short- to medium-term funding in the contracting processes for Indigenous health services (rather than core funding) undermined service security, trust and community expectations, and made it difficult to demonstrate outcomes (Dwyer et al. 2009).

It is recommended that supportive governance structures be advocated for more frequently as a key social determinant of health equity. Support should be ensured for genuine community involvement from a wide range of equity groups in governance structures at all levels (national, regional and local). There is also room to provide greater support to achieve health equity through collaborations between the health sector and the urban planning sector.

### Legislation, regulation and policy

A range of literature was identified in this area which addresses the social determinants of health, but not necessarily of health equity. Licensing laws, regulations/restrictions and policies at national, regional and local level can provide a broader supportive context for settings-based approaches at other levels. These in turn can contribute to changing cultural norms and cultural practices. This is obvious in the areas of tobacco and alcohol. One systematic review identified a 23% reduction in night-time single vehicle crashes three years after a statewide mandated training program for staff on the responsible serving of alcohol (Jones et al. 2011), but it is not clear whether this reduction occurred across the socioeconomic gradient.

Development of sportswide or statewide policy is another way to counter dominant cultural norms about drinking and smoking which individual clubs or organisations feel unable to change by themselves (Nicholson et al. 2013). One study in Victoria with 640 sports clubs found that health agency sponsorship encouraged many clubs to develop written policies, for example on sun protection, smoking and alcohol consumption (Dobbins, Hayman & Livingston 2006). However, the extent of development varied by sport and according to the relevance to the sport; no equity assessment was reported. In contrast, a systematic review found no rigorous studies evaluating the effectiveness of policy interventions in sporting organisations to increase healthy behaviours, attitudes and knowledge (Priest et al. 2008).

Policy-level changes can have mixed results, for health and equity impacts are not always identified. Hull et al. (2012) report that small financial grants to 20 social and community service organisations in New South Wales led to improved organisational support for smoke-free policies and staff training in supporting smoking cessation, which particularly led to smoking reduction among disadvantaged clients in mental health organisations. However, Martineau and colleagues' (2013) analysis of 52 reviews from ten policy areas addressing alcohol consumption in non-clinical settings found good evidence for policies and interventions to limit alcohol sale availability, reduce drink-driving and to increase alcohol price or taxation. There was also mixed evidence for school-based interventions and interventions in the alcohol-server settings, and weak evidence for workplace interventions; the interventions in higher education settings were totally ineffective (Martineau et al. 2013).

Johnston and Thomas' (2010) study with remote Indigenous community members and health staff also found mixed evidence. People perceived primary care interventions such as brief advice and

pharmaceutical quitting aids as important and effective strategies (when available and accessible), as were the promotion of smoke free areas. By contrast, mainstream smoking-cessation programs which were not modified for local context had questionable application in the remote Indigenous context. Taxation increases and social marketing campaigns were also mixed in their effectiveness (Johnston & Thomas 2010).

An interesting national example of a high-level policy approach is the development of Health Action Zones in England. Health Action Zones were conceived as multi-agency partnerships to develop local programs and activities to improve health and reduce inequities through addressing the determinants of health, such as employment, housing and education (Judge & Bauld 2006). In areas from large cities to relatively small rural areas, in the relatively short time frame that they existed, and with relatively modest resources and very ambitious goals, the Zones did not achieve the reduction in health inequities that they aimed for (Judge & Bauld 2006).

Lessons learned from Health Action Zones include the need for such policies to plan to measure outcomes as well as outputs to provide good indicators of public health success. For example, a project to keep older people warm in winter through grants for insulation and home improvements measured only the number of people using the scheme rather than assessing changes to quality of life (Bauld et al. 2005). The Health Action Zones were successful in three key ways: they raised the profile of health inequities in local areas and created a 'policy space' focused on health inequities; they challenged the dominant medical model by introducing a social perspective on health; and they profiled issues that would otherwise be marginalised, such as domestic violence and the needs of young people (Bauld et al. 2005; Benzeval 2003).

Many of the WHO Healthy Settings initiatives provide policy-level guidance for individual countries, states, regions or communities (as covered in previous sections). One example is the WHO/UNICEF *Baby-Friendly Hospital Initiative* (BFHI), which supports improved nutrition for infants by encouraging cultural and organisational-level changes to protect, promote and support breastfeeding (WHO & UNICEF 2009). Since 1995, the Australian College of Midwives has facilitated the initiative in Australia, with 19% of all maternity facilities across Australia now being BFHI-accredited (<http://www.babyfriendly.org.au/>). Individual governments can also formulate regulations which impact on broader determinants of children's health, such as developing and monitoring regulations about nutritional quality in childcare centres, and ensuring the implementation of national safety guidelines and minimum area-size requirements for outdoor play areas (Larson et al. 2011).

In summary, health promotion organisations can play a key role in supporting the development of legislation, regulations and policies which themselves address the social determinants of health and equity and at the same time provide a supportive base layer for change at the Daily Living Conditions level. Another important action is to identify potential changes to existing laws, regulations and policies that would provide greater support for health equity and to ensure that the potential and actual impacts are evaluated.

## **Conclusions and recommendations for future action**

This report has provided a rapid assessment of a variety of approaches for settings that can address, or show promise in addressing, the social determinants of health equity. Despite the comprehensive range of search terms relating to social determinants and to equity which were applied at the stage of systematically searching major databases, most of the literature focused only on individual behaviour

change interventions. Furthermore, a significant proportion of the literature was about trying to change behaviour and knowledge – specifically about eating and physical activity.

The evidence indicates that settings interventions which focus solely on individual behaviour change generally provide only modest or short-term improvements for health. In some instances this work actually risks increasing health inequities. A sole focus on individual behaviour change without consideration of either broader determinants or equity is particularly noticeable in health promotion in online settings, and in approaches to reduce childhood obesity in school and preschool settings. The evidence is strong in showing that initiatives which address behaviour change in isolation are often ineffectual in addressing health equity. This is because individuals may not have access to sufficient resources to make the required changes on their own, such as having the time, finances or coping skills to respond (Baum 2011; McIntyre, 2007). Initiatives which address individual behaviour change are therefore more effective if they are part of a broader strategy which also addresses higher-level organisational structures and environments (Baum 2009). This suggests that there is considerable room to replace or integrate individual approaches with settings approaches at the two broader base layers of the Fair Foundations Framework.

We note, however, that approaches which do address these more structural factors require more concerted planning based on extensive cross-sectoral collaboration. Inevitably they lead to less consensual approaches than those using behaviour change only (Baum, 2008). Thus, in the case of childhood obesity, directing interventions to increase exercise levels and improve diet by educating parents is much less threatening to the social and economic status quo than trying to prevent supermarkets from offering high-fat and high-sugar foods at the checkout. Similarly, increasing the amount of public lighting and green space to encourage exercise is more expensive for councils than developing pamphlets or establishing groups to encourage walking. These approaches also require more sophisticated evaluation frameworks. The more structural interventions will often challenge the status quo practices of powerful players and so require more planning, thought and commitment to rock the boat.

Additionally, goals to *improve population health* may sometimes conflict with goals to *reduce health inequalities*, and value judgements must be made about the relative priority (McIntyre 2007). More aggregate health gains may be produced by targeting the already-advantaged (e.g. reducing the overall prevalence of cigarette smoking) and at relatively less cost, whereas targeting the people who are experiencing disadvantage may be an explicit action to address equity which nevertheless produces less overall health gain (less decrease in overall prevalence) and at greater cost (McIntyre 2007).

Within the limitations of a rapid review, we identified a dearth of evaluations of the effectiveness of various *settings* in addressing the *social determinants of health equity*. While some settings address determinants, and others address equity, it is harder to find evaluations of settings which address both. This was particularly so at the policy and legislation level. Some settings demonstrate success in addressing social determinants of health equity for a number of groups; healthy cities initiatives, for example, can support the social determinants of health in a number of ways for people with poorer health, or people at risk of poorer health. However, even where studies identify some differential impacts by socioeconomic status (such as by income level or area of residence) it would be pleasing to see additional evaluation in terms of their ability to address the social determinants differentially across the socioeconomic spectrum as well as for equity subgroups.

A range of health promotion approaches can tackle health inequities, including locality-based initiatives, whole-of-population approaches, and targeted sub-population interventions (Boyd 2008). Strategies were also identified which cut across various settings, such as lifecourse, community engagement, leadership and governance. The table on the next page provides a summary of settings approaches which were identified in the literature review, along with examples of how each approach addresses health equity.

The various approaches can be assessed for their likely impact on health equity by applying one of several tools. These include Health Impact Assessment (HIA: Harris et al. 2007), Equity Focused Health Impact Assessment (EFHIA: Mahoney et al. 2004), the Gradient Evaluation Framework (GEF: Davies & Sherriff 2012), and the Program Logic Model (Lawless et al. 2014). These tools can determine the (potential) differential and distributional impacts of a policy, program or project on health across the population and assess whether impacts are remediable and unfair (Mahoney et al. 2004). Most include steps to make transparent and differentiate impacts, such as gathering population data; disaggregating data for analysis; and identifying who is likely to benefit or not. Best practice is to start a settings evaluation before the intervention commences, if possible. However, it is difficult to have controls in settings approaches, hence it can be difficult to know if the settings approach is what caused any observed changes (Baum 2008).

Settings approach addressing social determinants	Examples identified	Examples to address equity	Some opportunities and limitations
Whole-of-population approaches	Cities Islands Hospitals Online settings Policy, regulation, governance and cultural context	<ul style="list-style-type: none"> <li>Some whole-of-population settings address health equity because a higher proportion of the population is in less-advantaged situations than other similar settings</li> <li>Whole-of-population approaches are likely to be the most effective in developing environments which are supportive of health for all as they can take into account social, political and cultural contexts</li> </ul>	<ul style="list-style-type: none"> <li>A universal or proportionate universal approach may be less stigmatising than targeting a particular group or locality</li> <li>Those from lower socioeconomic or marginalised populations often need equitable levels of support which reflect their greater level of need</li> <li>Mainstream approaches may need modification to be relevant to local/group context or to be culturally appropriate or culturally safe</li> <li>Universal approaches for the whole population can improve health for all but can also be made more effective for groups facing disadvantage if additional measures are put in place</li> </ul>
Approaches in particular settings which cover all the people within them who will experience various levels of disadvantage	Healthcare outside of acute settings Prisons Online Nightlife settings Schools Universities Policy, regulation, governance and cultural context	<ul style="list-style-type: none"> <li>Develop quality organisations, e.g. improved health and teaching workforce, supported playgroups with qualified workers</li> <li>Develop group-specific infrastructure, programs or delivery mechanisms</li> <li>Provide free resources, e.g. healthy food, fruit and vegetables, free meals</li> <li>Support social and economic access, e.g. to get online</li> </ul>	<ul style="list-style-type: none"> <li>Providing intensive focus on people living in less-advantaged circumstances within a setting can level up the health gradient</li> <li>Focusing on an issue within a setting, rather than on a group, can both avoid stigmatising one group and also open up access to others who temporarily or permanently face this issue, e.g. providing mobility ramps (rather than ‘disability ramps’) and universal toilets (rather than ‘disabled toilets’)</li> <li>Making certain resources available only to targeted groups can be stigmatising; providing resources to everyone can benefit those who are only slightly further up the social gradient, or may benefit health for all</li> </ul>

Settings approach addressing social determinants	Examples identified	Examples to address equity	Some opportunities and limitations
Proportionate universalist approaches or gradient-levelling approaches	Provision of universal services such as Medicare, free public education	<ul style="list-style-type: none"> <li>• Very few approaches were identified which explicitly aim to take a proportionate universal approach where effort and expenditure are focused progressively across the social gradient in health and aim to level up this gradient</li> <li>• Examples come not from specific interventions but are illustrated by the universalism of Medicare (good for equity and overall population health) with the addition of targeted services such as Aboriginal Community Controlled Health Services</li> <li>• Settings may be doing this but not explicitly documenting or evaluating these aspects; for example, teacher-knowledge within schools may enable greater support for less-advantaged students within a whole-school approach.</li> </ul>	<ul style="list-style-type: none"> <li>• More practical examples are needed of how whole-of-population approaches combined with targeted approaches which address health across the social gradient and proportionately level up those who are increasingly further from the top</li> </ul>
Locality/location-based approaches	Healthy Cities UK Health Action Zones Local government areas TODs Green settings	<ul style="list-style-type: none"> <li>• Make changes to the broad infrastructure of a disadvantaged locality, or address disadvantage within a whole locality which has a socioeconomic gradient</li> <li>• Make changes for a disadvantaged group within a locality (e.g. provide group-specific services), possibly at the same time as a whole-locality approach</li> <li>• Broaden governance structures and committees with representatives from a wide range of socioeconomic and demographic groups</li> </ul>	<ul style="list-style-type: none"> <li>• Locality-based approaches only address equity if undertaken in areas with higher level of socioeconomic disadvantage, or if people in these or other areas from lower socioeconomic backgrounds can get benefit</li> <li>• May miss the more-disadvantaged or even increase inequity if the more-advantaged respond</li> <li>• May overlook more-disadvantaged minorities who live within more-advantaged areas</li> <li>• Governance and stakeholders may reflect the 'more outspoken' in an area; socioeconomic and demographic data could highlight missing representatives</li> </ul>

Settings approach addressing social determinants	Examples identified	Examples to address equity	Some opportunities and limitations
Multiple healthy settings in one locality	<p>Healthy Cities which also has embedded healthy schools, prison, events etc.</p> <p>Schools + preschools + services + community</p>	<ul style="list-style-type: none"> <li>• Can make changes in one or more related factors concurrently across a range of settings on one geographic location</li> <li>• Promote equality for different groups across the locations/settings, e.g. gender or socioeconomic equality in schools, playgrounds, towns, workplaces and healthcare</li> </ul>	<ul style="list-style-type: none"> <li>• Without explicit attention to actions to level up the social gradient, those who are less able to respond may miss out or feel unable to participate</li> <li>• Some changes may be beneficial without the need for people to respond, such as increasing green space</li> <li>• Addressing equity needs to be undertaken in a way which pays attention to socioeconomic factors and the ways they drive behaviours</li> </ul>
Healthy settings combined with other sector initiatives	<p>Healthy Schools + Environment-Friendly Schools initiatives</p> <p>Healthy Workplaces + Climate Change initiatives</p>	<ul style="list-style-type: none"> <li>• Can address one factor together to provide joint 'wins', e.g. improving the environment provides benefits for health and environmental sustainability</li> </ul>	<ul style="list-style-type: none"> <li>• Opportunities for wins for both initiatives by working together</li> </ul>
<p style="text-align: center;"><i>Cross-cutting approaches: lifecourse, community engagement, leadership, governance</i></p> <ul style="list-style-type: none"> <li>• Leadership: providing support to take on leadership opportunities for children and adults from across the social spectrum can contribute to a wider range of voices advocating for initiatives (range of disadvantaged backgrounds)</li> <li>• Governance: including representatives from across the social spectrum on committees and boards; including people experiencing higher levels of disadvantage involved in planning, developing and implementing programs; having community-controlled organisations</li> <li>• Lifecourse: planning settings approaches so they cater for people across the lifecourse</li> </ul>			

## Prompts for planning (policy, programs, services)

A summary of recommendations for future health promotion planning is provided as Prompts for Planning in Appendix 3. Most important is the need to prioritise settings-based interventions which explicitly set out to address both social determinants *and* health equity at the same time. In doing this, there is a need to find practical ways to support settings-based approaches to ‘move upstream’ from the dominant focus on individual behaviour change towards action on social determinants of health. This includes winning political and bureaucratic support for such interventions despite their ambitious aims of changing systems and organisations towards more equitable ways of operation. In many cases it is likely to be desirable to combine individual approaches with base-level approaches of the Fair Foundations Framework (Daily Living Conditions and Social Context).

The evidence shows that developing higher-level policy and regulation is crucial because they provide enabling contexts for change in settings at the lower level of Daily Conditions. An important success factor is intentional planning for meaningful, rather than tokenistic, community engagement in governance. Our review shows that very promising results can come from increasing the extent of engagement with a wide range of people from populations of interest. Successful approaches which can be used more extensively are establishing Indigenous and community-controlled organisations, and increasing the diversity of representation on planning committees and boards, and on program development and implementation working groups. Other positive impacts come from planning for settings-based projects and initiatives to include lay and peer educators who share a similar culture, language and socioeconomic background to those of the target group. There is also potential to develop capacity in, and provide ongoing support for, a wider range of people to be health promoters within settings, such as faith community nurses and sports coaches.

Despite a wide range of approaches being identified, which all have the potential to address health equity in some way, an increased focus on equity could be achieved through the proportionate universal approach (Marmot 2010). Our review did not locate any study which explicitly took this approach. This would, for example, support healthy settings initiatives statewide at the population level, such as through schools settings, at the same time as providing additional resources for settings located in disadvantaged areas. Examples are free sports equipment or gym memberships, or providing a high level of support such as a community developer to work with groups of disadvantaged people *within* settings where groups experience greater disadvantage.

Health equity may be more appropriately addressed in some settings by planning for a universal approach so that it improves health in ways which do not stigmatise particular groups because they are being targeted, but which also do not miss people living in disadvantaged circumstances or from disadvantaged backgrounds who are ‘hidden’ in average data. Universalism is an important aspect of producing healthy settings; good evidence for this is the high health status of those countries with universal provision of healthcare, welfare and education (Baum 2008 p. 277).

There is also potential to expand settings approaches in some innovative ways. Additional health benefits could be achieved by combining a healthy settings approach with an initiative from a ‘non-health’ sector, such as ‘healthy schools’ working in partnership with ‘environmentally sustainable schools’. There is also room to investigate the potential of settings which have previously had less focus, including faith-based settings, green settings, online settings and higher education.



## Recommendations for future research

The major finding of this review is identification of a significant lack of evaluation research of what works to explicitly improve *health equity* through action on the *social determinants of health* within *settings-based approaches*. It is therefore recommended that monitoring and evaluation be built in as an integral component of all initiatives and programs. These should particularly assess and clearly report on what determinants are being targeted, what actions have occurred, and the ways in which they are intended to (and actually do) address health equity and/or level up the health gradient.

Very few settings-based studies which we located explicitly detailed the impacts of initiatives on differential health outcomes across the socioeconomic spectrum. Future research should therefore include analysis and reporting on differential outcomes for health status and health outcomes across the socioeconomic spectrum, and for population groups of special interest. Retrospective evaluation of programs could also be undertaken to identify which aspects of the two base layers of the Fair Foundations Framework have been addressed and how these have differentially impacted on health.

Future research should use an equity lens in the initial study design, in the planning of which participants are recruited, in deciding what socioeconomic and demographic data will be collected, and in conducting and reporting on fine-grained and disaggregated-level data analysis to identify what works, for whom, and in what ways. The use of control or comparison groups could provide additional evidence of the effectiveness of settings approaches for health equity, although given the impact of context on program implementation it is rarely feasible in most settings to conduct a randomised or quasi-randomised design. Quantitative data has proven useful to identify patterns of inequity, while qualitative data highlights the limits of initiatives which only address individual behaviours. Qualitative research can also identify ways in which health equity is better supported.

The Gradient Evaluation Framework presents a comprehensive list which can be used to inform research design, analysis and reporting in taking a health equity approach. This includes providing data for health outcomes stratified by sex, at least two socioeconomic stratifiers (e.g. education level, income/wealth, occupational class, ethnic group/race/indigeneity or other contextually relevant social stratifiers); place of residence (rural/urban and province or other relevant geographical unit), along with the distribution of the population across the subgroups, and measures of relative and absolute health inequities (Davies & Sherriff, 2012). Additional analysis *within* particular population groups could also be informative, since groups are rarely homogenous, and this could be done by cross-analysis with other socioeconomic or demographic variables. This can identify interventions that reduce health inequities and those which inadvertently increase health inequities in some way.

Oxman et al. (2009) propose four questions for researchers to better understand the potential impact of a policy or equity in a specific setting. These are: (1) Which groups or settings are likely to be disadvantaged in relation to the option being considered? (2) Are there plausible reasons for anticipating differences in the relative effectiveness of the option for disadvantaged groups or settings? (3) Are there likely to be different baseline conditions across groups or settings such that the absolute effectiveness of the option would be different, and the problem more or less important, for disadvantaged groups or settings? (4) Are there important considerations that should be made when implementing the option in order to ensure that inequities are reduced where possible, and that they are not increased?

A number of tools can be more widely drawn upon to guide research design and evaluation in settings-based research which aims to address the social determinants of health equity (e.g. EFHIA, GEF, Program Logic). In addition, Poland, Krupa and McCall (2009) propose a full framework to specifically evaluate the effectiveness of healthy settings. This includes three key questions: (1) Should interventions be directed to those with power and privilege or to those who are relatively less advantaged? (2) What is known about the distribution of costs and benefits associated with this intervention in this setting? (3) What emphasis is put on changing individual behaviour as opposed to structural and organisational change? Program Logic builds on Pawson and colleagues' questions of 'What works for whom in what context' to evaluate complex approaches (Lawless et al. 2014). The use of such logic models can encourage program implementers to focus on the activities and mechanisms which are most likely to lead to equitable outcomes.

On the basis of many of the systematic reviews referred to in this report, we agree with Tugwell et al. (2010) that authors of systematic reviews should incorporate equity assessment into their process to increase the reviews' ability to provide a wider pool of information on 'what works' to improve health equity. In light of the difficulty of locating studies, reviews and reports relating to *settings* which address the *social determinants of health equity* should clearly explain their interpretation of the meaning of 'social determinants' and 'health equity' in study materials and outputs. These terms should also be included in abstracts and keyword lists so that the work is more easily located.

Future research could be designed to specifically evaluate the health equity impacts of combining settings-based action on social determinants at the individual and structural levels. The wide range of research occurring in obesity prevention in schools and community settings is a prime target for such expansion. An explicit social determinants approach at the two base layers of 'Daily Living Conditions' and 'Socioeconomic, Political and Cultural Context' should also continue to be advocated for in research, using the Fair Foundations Framework. Benefits are also demonstrated from including a wider range of people in research from different backgrounds, including researchers who share the culture, language and background of participants, and lay advisors from the community of interest.

There is growing recognition that it is vital to conduct more implementation research which focuses on the social determinants of health and that our national research bodies should provide more funding to increase the available evidence base (Baum et al. 2013b). When evidence is identified which shows 'what works', it should be translated for health promotion workers at the coalface to provide practical actions they can draw on. Shapiro (2009) concludes a 'Clearinghouse of What Works' would share effective practical action from the wide range of studies on childhood obesity. It would be useful to similarly establish a 'Clearinghouse of What Works in Settings to Address the Social Determinants of Health Equity'. Training and support systems for health promotion workers and managers could support the translation into practical local action.

In conclusion, we recommend a number of key points for future planning, research and initiatives funded by VicHealth. These are to design studies to explicitly investigate how settings-based work impacts on health equity through action on the social determinants of health. Studies, materials and reports should also clearly explain the logic of any approach which is intended to address health equity. Placing a higher emphasis on evaluation should provide a wider pool of evidence for action about the differential impacts of the settings approach to address social determinants of health

equity. A centralised and publicly available mechanism to collect and archive this information would be most useful, along with mechanisms to translate this knowledge into practical action.

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## Appendix 1: Search strategy

Overview: settings and what works and intervention and social determinants and equity and population

**Search #1:** (1-10) AND (11-18) AND (19-30) AND (31-64) AND (65-71) AND (88-101)

**Search #2:** As above, but with equity groups (72-87) instead of equity terms (65-71)

### Search terms

Settings	Social determinants (continued)	Equity Groups (cont'd)
<ol style="list-style-type: none"> <li>1. health-promoting setting*</li> <li>2. healthy setting*</li> <li>3. settings-based</li> <li>4. settings based</li> <li>5. healthy communit*</li> <li>6. healthy environment*</li> <li>7. supportive environment*</li> <li>8. easy choice*</li> <li>9. place-based health promotion</li> <li>10. community-based health promotion</li> </ol>	<ol style="list-style-type: none"> <li>40. poverty</li> <li>41. disadvantage</li> <li>42. infrastructur*</li> <li>43. environment</li> <li>44. housing</li> <li>45. neighb*rhood</li> <li>46. communit*</li> <li>47. workplace*</li> <li>48. work-based</li> <li>49. lab?r</li> <li>50. *employment</li> <li>51. employee*</li> <li>52. prison*</li> <li>53. sport*</li> <li>54. early child*</li> <li>55. school</li> <li>56. education</li> <li>57. child*care</li> <li>58. health*care</li> <li>59. hospital*</li> <li>60. church*</li> <li>61. faith-based communit*</li> <li>62. safety</li> <li>63. transport</li> <li>64. travel</li> </ol>	<ol style="list-style-type: none"> <li>81. CALD</li> <li>82. rural</li> <li>83. remote</li> <li>84. prisoner</li> <li>85. offender</li> <li>86. gender</li> <li>87. disability</li> </ol>
<p><b>What works?</b></p> <ol style="list-style-type: none"> <li>11. what works</li> <li>12. effective*</li> <li>13. evaluat*</li> <li>14. review</li> <li>15. impact*</li> <li>16. outcome*</li> <li>17. assess*</li> <li>18. innovat*</li> </ol>	<p><b>Equity terms</b></p> <ol style="list-style-type: none"> <li>65. equit*</li> <li>66. inequit*</li> <li>67. inequalit*</li> <li>68. equalit*</li> <li>69. disparit*</li> <li>70. affordab*</li> <li>71. access*</li> </ol>	<p><b>Population</b></p> <ol style="list-style-type: none"> <li>88. Australia</li> <li>89. Victoria*</li> <li>90. NSW</li> <li>91. New South Wales</li> <li>92. Queensland</li> <li>93. ACT</li> <li>94. Australian Capital Territory</li> <li>95. NT</li> <li>96. Northern Territory</li> <li>97. WA</li> <li>98. Western Australia</li> <li>99. Tasmania</li> <li>100.SA</li> <li>101.South Australia</li> </ol>
<p><b>Interventions at different levels</b></p> <ol style="list-style-type: none"> <li>19. legislat*</li> <li>20. regulat*</li> <li>21. law</li> <li>22. policy</li> <li>23. policies</li> <li>24. strateg*</li> <li>25. plan*</li> <li>26. program*</li> <li>27. intervention*</li> <li>28. service*</li> <li>29. initiative*</li> <li>30. project*</li> </ol>	<p><b>Or Equity groups</b></p> <ol style="list-style-type: none"> <li>72. vulnerable</li> <li>73. marginalised</li> <li>74. underserved</li> <li>75. Aboriginal</li> <li>76. Indigen*</li> <li>77. migrant*</li> <li>78. refugee*</li> <li>79. NESB</li> <li>80. non-English</li> </ol>	
<p><b>Social determinants</b></p> <ol style="list-style-type: none"> <li>31. social determinant*</li> <li>32. cultur*</li> <li>33. soci*</li> <li>34. social capital</li> <li>35. racism</li> <li>36. norm*</li> <li>37. value*</li> <li>38. economic*</li> <li>39. income</li> </ol>		



## Appendix 2: Promoting equity in settings-based health promotion: an overview

LAYERS OF INFLUENCE	EXAMPLES OF PROMISING ACTIONS AT THIS LEVEL	PROMPTS FOR PLANNING
<p><b>Socioeconomic, political and cultural context</b></p>	<p><b>Socioeconomic and cultural context</b></p> <ul style="list-style-type: none"> <li>▪ Leadership to build cultural respect, reducing discrimination and racism</li> <li>▪ Development of an Indigenous workforce can support the cultural appropriateness of healthcare and improve social access</li> <li>▪ Appreciating different cultural conceptualisations of what constitutes ‘health and wellbeing’ can help make health promotion more appropriate</li> </ul> <p><b>Governance</b></p> <ul style="list-style-type: none"> <li>• Governance structures play a key role in creating supportive social and physical environments for health equity</li> <li>• Governance structures are most successful when they include genuine involvement of lay people and key stakeholders from a wide range of groups</li> <li>• High-level governance structures help address the social determinants of health beyond the health sector</li> <li>• Urban planning plays an important role at the political and socioeconomic level by promoting health equitably through neighbourhoods and communities, good environmental design and regulatory controls, and promoting gender equity</li> </ul> <p><b>Legislation/policy</b></p> <ul style="list-style-type: none"> <li>▪ Licensing laws, regulations and adopting international policy guidelines can provide higher-level support to Daily Living settings</li> <li>▪ Legislation and policies can send clear messages about cultural norms, such as in relation to non-tolerance of racism and building cultural respect and understanding</li> </ul>	<p><b>Socioeconomic and cultural context</b></p> <ul style="list-style-type: none"> <li>▪ Provide support for the evaluation of the health equity impacts of key upstream policies which address the social determinants of health</li> <li>▪ Support research which takes a critical approach to identifying health barriers, e.g. developing food-security strategies in conjunction with communities which counter mainstream food systems</li> <li>▪ Advocate and support the inclusion of different cultural conceptualisations of health in policy development</li> <li>▪ Advocate for capacity building in the health workforce to include people from a wide range of cultural and language backgrounds</li> <li>▪ Provide leadership in supporting initiatives at upstream levels which promote cultural respect and counter discrimination and racism as important social determinants of health equity</li> <li>▪ Become a partner organisation in key national strategies, such as to reduce racism in sport and promote Indigenous recognition in the Australian constitution</li> </ul> <p><b>Governance</b></p> <ul style="list-style-type: none"> <li>• Promote the development of governance structures which include genuine community involvement from a wide range of equity groups</li> <li>• Support health equity through encouraging greater collaboration between the health sector and urban planning sector</li> </ul> <p><b>Legislation/policy</b></p> <ul style="list-style-type: none"> <li>• Play a key role in developing laws, regulations and policies which provide a supportive context to address the social determinants of health equity in settings at the Daily Living Conditions level</li> <li>• Identify laws and regulations that can be developed at national or state level to provide greater support for settings work at the Daily Living Conditions level</li> </ul>
<p><b>Daily living conditions</b></p>	<p><b>Healthy cities and neighbourhoods</b></p> <ul style="list-style-type: none"> <li>▪ Healthy Cities initiatives, Age-Friendly Cities, Child-Friendly Cities and similar initiatives have proven to be integrated ways to address the social determinants of health and equity, including for women, older people, children and those experiencing homelessness</li> <li>▪ Transit-oriented development can create healthy environments locally around transport hubs by addressing a wide range of social determinants</li> <li>▪ Strengths-based community development can support a broad range of social determinants of health equity</li> <li>▪ Improving built design can improve safety and access, e.g. better street lighting to increase safety at night, redesigning stairs and ramps to increase access for</li> </ul>	<p><b>Healthy cities and neighbourhoods</b></p> <ul style="list-style-type: none"> <li>▪ Audit the number and extent of various healthy cities initiatives at different jurisdictional levels, and evaluate their impact on addressing the social determinants of health equity</li> <li>▪ Consider developing demonstration complexes, action zones and other initiatives which provide more integrated approaches to address a range of social determinants of health equity for diverse groups</li> <li>▪ Expand support for transit-oriented development projects which address the social determinants of health and take an equity focus</li> <li>▪ Advocate for all greenfields developments to incorporate health and social determinants considerations into the planning and implementation phases</li> <li>▪ Apply a gender-mainstreaming approach to support urban planning which better integrates</li> </ul>

	<p>people with mobility requirements (parents with strollers, people in wheelchairs or mobility vehicles, young people with sports injuries)</p> <ul style="list-style-type: none"> <li>▪ Local actions, including removing injury hazards from local communities and cleaning up rivers to be safer for swimmers, creating community gardens</li> <li>▪ Health Impact Assessment methodologies are one way to assess the health impacts of any settings-based approach</li> </ul> <p><b>‘Community’ settings</b></p> <ul style="list-style-type: none"> <li>▪ Agricultural retail outlets are innovative rural community settings which have leveraged non-health access to farmers and improved hearing health</li> <li>▪ Changes to local stores have supported improved supply of fruit and vegetables in rural and remote areas</li> <li>▪ Genuine community involvement and partnership between local agencies and local government can create a more health-supporting environment; this is particularly positive on health for Indigenous Australians</li> <li>▪ Standard programs can successfully be adapted into outreach programs which are better suited to the needs of people in socially marginalised and disadvantaged communities</li> <li>▪ Several studies show that proactive home-visiting can address broader determinants of physical health and mental wellbeing for mothers, infants and young children, e.g. by supporting the creation of a healthier and safer home environment</li> </ul> <p><b>Educational settings</b></p> <ul style="list-style-type: none"> <li>▪ A wide range of schools-based health promotion already occurs and is shown to influence health to some extent, including through curriculum and policy</li> <li>▪ Childcare, preschool, further education and universities show promise as additional educational settings to address health for staff, students and the wider community</li> <li>▪ Most educational settings provide an almost universal way to address the broader determinants of health and equity, to the extent that children are not absent</li> <li>▪ Approaches to improve Aboriginal health in educational settings are more successful where Aboriginal people are involved in the design and implementation, e.g. as leaders, staff and lay advisors</li> <li>▪ A good deal of health research focuses narrowly on physical activity and healthy eating; early childhood obesity prevention interventions rarely give direct consideration to equity</li> <li>▪ School breakfast and meal programs improve health directly and through broader determinants for children from lower socioeconomic and Aboriginal backgrounds, although targeted programs can create stigma for recipients; universal schemes remove stigma and improve health for all children</li> <li>▪ Mental health can be improved through curriculum changes to provide information, to increase awareness and to improve emotional learning</li> <li>▪ Racism and social discrimination could be more widely addressed in schools through policies, guidelines, training and curriculum content</li> <li>▪ Healthy universities and healthy further education settings show considerable</li> </ul>	<p>aspects of the built environment for the needs of women and others in caring roles</p> <ul style="list-style-type: none"> <li>▪ Ensure that community development initiatives have input to the planning and implementation stages from local communities, lay people and representatives from a wide range of equity groups</li> <li>▪ Support improved urban planning for health; encourage cross-sectoral partnerships and action between health, planning and other sectors</li> <li>▪ Encourage the conduct of Health Impact Assessments during the planning phase of initiatives</li> </ul> <p><b>‘Community’ settings</b></p> <ul style="list-style-type: none"> <li>▪ Consider non-traditional settings for health promotion through discussion with local communities</li> <li>▪ Identify ways to support local businesses to change practices which both benefit them economically and support an improved health environment</li> <li>▪ Encourage wider community input to planning, development, implementation and evaluation of health promotion activities, e.g. as lay educators, researchers and committee members</li> <li>▪ Investigate ways to amend standard programs into outreach versions which better support the needs of equity groups, in particular considering the potential of home-visiting to increase social and physical access</li> <li>▪ Strongly encourage ‘community’ settings initiatives to include evaluation upfront, or to be evaluated after a period of time, in order to provide a greater pool of practical evidence of ‘what works’ to address health equity</li> </ul> <p><b>Educational settings</b></p> <ul style="list-style-type: none"> <li>▪ Encourage evaluation of the ways in which educational settings are addressing the social determinants of health equity in order to provide more information about effective strategies</li> <li>▪ Advocate for policy-level change to support improved health for all children, including from disadvantaged backgrounds, such as regulations governing nutrition and safe play in childcare centres</li> <li>▪ Support initiatives which help increase school attendance</li> <li>▪ Explore ways to support better cultural and social inclusion for Aboriginal people, including through leadership and development positions, and expand this to other groups such as new arrivals</li> <li>▪ Ensure that obesity-prevention programs identify ways to focus on the social determinants of health and equity, and that they explicitly evaluate the impact on different socioeconomic groups</li> <li>▪ Include people from target groups in conceptual stages of research and program development to identify the most relevant and appropriate ways to address health equity</li> <li>▪ Support universal eating initiatives to improve health, educational attendance and engagement for children across the social gradient</li> <li>▪ Encourage evaluation of the impact of mental wellbeing initiatives in educational settings, particularly for those experiencing or at higher risk of experiencing mental illness, and for different socioeconomic and equity groups; encourage research into how educational settings could address broader determinants of mental wellbeing</li> <li>▪ Identify ways to transfer the successes of sports-based anti-racism and cultural inclusion strategies into schools, including through school sports</li> <li>▪ Investigate ways to incorporate schools into broader area-based community development</li> </ul>
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	<p>promise for addressing a broad range of social determinants and equity</p> <p><b>Workplace settings</b></p> <ul style="list-style-type: none"> <li>▪ A large number of interventions have been undertaken; some interventions can improve diet but few improve physical activity, smoking or alcohol consumption in the longer term</li> <li>▪ Providing changing and showering facilities can support physical activity at work</li> <li>▪ Strategies which address occupational health and safety reduce absenteeism and broader strategies addressing the health of the work environment show promise</li> <li>▪ Comprehensive strategies show promise in addressing workplace stress, by improving job control, reducing role ambiguity, and improving work relationships and involvement in decision-making; workplace policies can particularly support workers with low mental health</li> </ul> <p><b>Prison settings</b></p> <ul style="list-style-type: none"> <li>▪ Prisons represent significant opportunities to address health for socially excluded people and those experiencing poorer health, as well as for prison workers; a wide range of health strategies exist</li> <li>▪ There is scope for better health screening in prisons, such as for diabetes, STIs, and improving immunisation levels</li> <li>▪ The link with green space settings shows considerable promise for improving prisoner mental health</li> <li>▪ Culturally competent physical and mental health services could provide significant health gains and reduce factors associated with crime</li> </ul> <p><b>Healthcare settings</b></p> <ul style="list-style-type: none"> <li>▪ Health Promoting Hospitals are a long-established approach which can involve multiple levels, including being a health promoting setting, doing a health promotion project and promoting health in the wider community</li> <li>▪ Arts in hospitals can address both the general environment as well as provide direct opportunities for social participation</li> <li>▪ Access to healthcare is a key determinant of health equity which can be addressed, particularly for disadvantaged groups, by providing ethno-specific health services and employing staff who share the culture and language background of clients</li> <li>▪ Healthcare settings can support broader determinants of health by providing programs tackling food security, peer education for disadvantaged groups to reduce social distance, or outreach programs to improve physical access</li> <li>▪ Equity Focused Health Impact Assessment can help programs improve the social determinants of health equity during the construction and redevelopment</li> </ul>	<p>initiatives which address a range of social determinants</p> <ul style="list-style-type: none"> <li>▪ Consider ways to work with less traditional educational settings, for example supporting the establishment of health promotion networks among further/higher education institutions</li> </ul> <p><b>Workplace settings</b></p> <ul style="list-style-type: none"> <li>▪ Encourage workplace approaches which address the broader determinants of health, including organisational and built environment changes</li> <li>▪ Support workplace approaches which combine organisational and individual-level approaches, and particularly those which can reduce workplace stress and improve mental wellbeing</li> <li>▪ Encourage rigorous evaluation of workplace settings initiatives and policies, including an explicit equity focus</li> <li>▪ Consider ways in which different groups of workers can be better supported, including by age, gender, type of work, occupational status, socioeconomic background and refugee/migrant status, and ensure that the differential impacts on health equity are identified in quantitative and qualitative evaluations</li> </ul> <p><b>Prison settings</b></p> <ul style="list-style-type: none"> <li>▪ Continue to support access to preventive health services and screening in prisons, and evaluate equity impacts through data analysis for prisoner groups from different backgrounds</li> <li>▪ Identify ways to leverage the use of green space both inside and outside prisons for improved physical and mental wellbeing, and improved relationships with staff, and evaluate whether there is any differential impact on different prisoner groups</li> <li>▪ Encourage health-related activities such as the development of gardens and involvement in healthy cooking as ways to develop skills and gain qualifications which can support employment after release</li> <li>▪ Support the development or expansion of cultural competency and culturally appropriate service provision in prisons</li> <li>▪ Support program development in communities which reduces the number of young people entering the criminal justice system, including programs which address school retention, employment etc.</li> </ul> <p><b>Healthcare settings</b></p> <ul style="list-style-type: none"> <li>▪ Support hospitals to expand their focus on addressing the social determinants of health and of considering equity in their health promotion initiatives</li> <li>▪ Encourage novel approaches to addressing health in healthcare settings, building on the arts-in-health movement</li> <li>▪ Advocate for increased representation within the health workforce of people from different ethnic and socioeconomic backgrounds</li> <li>▪ Support capacity building for consumers to be more widely involved in the development and implementation of initiatives within healthcare settings</li> <li>▪ Encourage the involvement of lay people as peer educators in programs and outreach services in healthcare settings</li> <li>▪ Advocate for the application of Equity Focused Health Impact Assessment on new and redeveloped initiatives</li> </ul>
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	<p>phases of major healthcare facilities</p> <p><b>Nightlife settings</b></p> <ul style="list-style-type: none"> <li>▪ Safety is improved by making late-night transport more available, and improving street lighting and access to public telephones</li> <li>▪ ‘Calming’ initiatives show interesting promise to reduce anti-social behaviour</li> <li>▪ Industry can develop innovations which reduce injury, such as developing non-breakable drinking glasses</li> </ul> <p><b>Sports settings</b></p> <ul style="list-style-type: none"> <li>▪ Sports clubs are underutilised settings for health promotion and show promise for promoting nutrition, racial respect, social inclusion, and reducing alcohol and substance abuse</li> <li>▪ While attention has been paid to responsible alcohol use in sports settings, little attention has been paid to women’s drinking as players and spectators</li> <li>▪ Coaches are key people who could play a greater role in health promotion, particularly to young people</li> <li>▪ Sports settings show particularly strong promise in addressing health equity, particularly for Aboriginal Australians, and improving school retention rates, learning attitudes, increased social cohesion and crime reduction</li> <li>▪ The linking of sports programs to allied services can improve uptake of healthcare</li> <li>▪ Sports-based initiatives are more successful when presented as ‘games and sports’ rather than ‘get fit’ activities, and when developed with the target community</li> </ul> <p><b>Faith-placed settings</b></p> <ul style="list-style-type: none"> <li>▪ Church- and other faith-placed settings have been under-researched in Australia</li> <li>▪ Health promotion in faith-based settings seems to focus on individual behaviour change and social marketing, e.g. to increase screening access</li> <li>▪ Faith Community Nurses provide both mental wellbeing support and ongoing health promotion in a variety of faith-based settings</li> <li>▪ Providing a spiritual context for health messages is important for some groups</li> </ul> <p><b>Temporary settings</b></p> <ul style="list-style-type: none"> <li>▪ Youth mass gatherings and temporary sports events provide important settings for protecting and promoting health, both directly and through addressing broader determinants</li> </ul>	<p><b>Nightlife settings</b></p> <ul style="list-style-type: none"> <li>▪ Develop healthy nightlife policies and programs which address the broader determinants of health</li> <li>▪ Advocate for the retention of public phone boxes in key areas to improve public safety</li> <li>▪ Investigate novel approaches to provide diversionary behaviours which reduce anti-social behaviours in and around nightlife settings</li> <li>▪ Provide staff-training programs in relation to responsible alcohol service and dealing safely with intoxicated customers</li> <li>▪ Identify ways to partner with industry and other groups to address broader determinants of safety in nightlife settings</li> <li>▪ Disaggregate nightlife settings to target those patronised more by people with or at risk of poorer health, e.g. consider leisure activities popular with different socioeconomic and ethnic groups</li> </ul> <p><b>Sports settings</b></p> <ul style="list-style-type: none"> <li>▪ Support sports clubs to play a more active role in promoting nutrition and addressing substance abuse</li> <li>▪ Develop programs to provide support sports coaches to become active health promoters to young people involved in sport</li> <li>▪ Expand investigation of the health benefits of sports settings by considering less-studied groups, such as women</li> <li>▪ Continue to work with sports settings to improve cultural understanding and respect, and to reduce racism, and help clubs and sports codes address challenges to becoming more socially and culturally inclusive</li> <li>▪ Expand ways to support active participation in sports by Indigenous Australians, those from multicultural backgrounds and those from marginalised groups as players, coaches, umpires and spectators</li> <li>▪ Support ways for local communities to be involved in the design, development and implementation of sports-related programs</li> </ul> <p><b>Faith-placed settings</b></p> <ul style="list-style-type: none"> <li>▪ Support research and evaluation of the health and equity impacts of the extent to which social determinants of health and equity are being addressed in faith-placed settings</li> <li>▪ Identify and support broader programs within faith-based settings which address the social determinants of health inequities</li> <li>▪ Develop new partnerships to provide increased support for, and new pathways via, practitioners in the faith-based settings who already have a health promotion focus</li> <li>▪ Consider ways to support faith-placed settings to combine with other settings for broader impact, e.g. to partner with and complement community-based and healthcare settings approaches</li> </ul> <p><b>Temporary settings</b></p> <ul style="list-style-type: none"> <li>▪ Identify health promotion opportunities at mass gatherings, including major youth events</li> <li>▪ Develop partnerships with a wide range of authorities and organisations to address the direct and broader determinants of health in temporary settings</li> </ul>
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	<ul style="list-style-type: none"> <li>▪ Evaluations of World Youth Day and annual Schoolies celebrations show that involving a range of partner organisations in the planning and implementation increases respect for local authorities and reduces anti-social behaviour</li> <li>▪ Expansion of food outlet trading hours, and provision of free food and free drinking water are broader strategies which reduce alcohol consumption</li> <li>▪ Mental and social wellbeing can be supported by staffed ‘chill-out’ tents</li> <li>▪ Infant nutrition is supported by creating breastfeeding-friendly environments, which also contribute a positive cultural context for breastfeeding</li> <li>▪ Major one-off sports events such as the Olympic Games can successfully promote health in a range of ways</li> </ul> <p><b>Green settings</b></p> <ul style="list-style-type: none"> <li>▪ ‘Green settings’, which provide contact with nature, including parks, reserves and farms, demonstrate physical and mental health benefits</li> <li>▪ Particular health benefits have been demonstrated through ‘green’ school grounds enhancing the quantity and quality of children’s physical activity, and natural resource management programs increasing social and economic capital for farmers and farm families</li> <li>▪ Culturally relevant ‘green settings’ practices include ‘caring for country’ practices among remote Aboriginal communities</li> </ul> <p><b>Online settings</b></p> <ul style="list-style-type: none"> <li>▪ The online world provides access to a wide range of health determinants, including education, employment, social connection and healthcare</li> <li>▪ School-based computer/Internet training and hardware for parents supports children’s education and provides parents with education and employment skills</li> <li>▪ Mobile community youth centres can provide health resources and digital access to geographically and socioeconomically disadvantaged youth, while online programs can support resilience-building and relationship programs</li> <li>▪ Online initiatives can be tailored to specific group needs to improve digital access and use, including for non-English speakers and people with disabilities</li> <li>▪ Innovative online approaches are supporting wellbeing for Indigenous communities through digital storytelling and the use of ICTs to support community development, independence and economic wellbeing</li> </ul>	<ul style="list-style-type: none"> <li>▪ Identify ways to address equity of access at mass gatherings, e.g. by identifying ways to support people with a disability, those with mobility issues, mothers and young children</li> <li>▪ Conduct an ‘environmental scan’ of forthcoming opportunities for temporary settings and mass gatherings that could be leveraged to address health and equity</li> <li>▪ Plan well ahead for major one-off events to partner with a range of organisations to incorporate direct health promotion initiatives and those which address the broader determinants of health and equity</li> </ul> <p><b>Green settings</b></p> <ul style="list-style-type: none"> <li>▪ Explore a variety of ‘green settings’ to be addressed in health promotion activities, particularly for disadvantaged groups such as prisoners and rural/remote Aboriginal communities</li> <li>▪ Identify ways to address the broader determinants of health by ‘greening’ school grounds in partnership with environmental sustainability and climate change programs</li> <li>▪ Develop collaborations between a range of organisations and agencies to work in ‘green settings’ to improve mental health for communities at higher risk of ill health, including farmers and farm families</li> <li>▪ Encourage the inclusion or expansion of green settings in urban developments, particularly in disadvantaged areas, and support evaluation of the health impacts</li> <li>▪ Support ‘caring for country’ practices as culturally relevant health promotion for rural and remote Aboriginal communities, and develop appropriate green settings programs for other cultural groups</li> </ul> <p><b>Online settings</b></p> <ul style="list-style-type: none"> <li>▪ Encourage online health promotion to be innovative in going beyond the provision of online health information, apps and self-help supports, to include consideration of how to support ICT use for broader community development that addresses the social determinants of health</li> <li>▪ Develop innovative approaches to increase equity in digital access which go beyond ICT skills courses for older people, young people, people with disabilities and people from non-English-speaking backgrounds</li> <li>▪ Investigate and encourage development of innovative ways of using online settings to support health equity for Aboriginal communities</li> <li>▪ Ensure that factors impacting on equity in digital access are considered in the development or evaluation of any online initiatives</li> </ul>
<p><b>Individual health-related behaviours</b></p>	<p><b>Knowledge, attitudes and behaviours</b></p> <ul style="list-style-type: none"> <li>▪ The World Health Organization argues that settings approaches should focus on the broader conditions in which we live, work and play, in particular if they are to address health equity</li> <li>▪ The literature suggests that where settings-based approaches focus on individual behaviour change, this should be integrated with higher-level strategies which address the social determinants of health, and the development of policies, regulations guidelines and improved governance structures</li> </ul>	<p><b>Knowledge, attitudes and behaviours</b></p> <ul style="list-style-type: none"> <li>• To improve social determinants action which addresses health equity, support settings-based health promotion to broaden beyond addressing individual-level factors to integrate with actions at the Daily Living Conditions and Socioeconomic Context levels</li> <li>• Develop practical guidelines on how settings-based approaches can go beyond individual behaviour change to address the social determinants of health equity</li> </ul>

### **Appendix 3: Summary of settings for addressing the social determinants of health inequities**

See separate document.

