

AUSTRALIAN HEALTH POLICY COLLABORATION

Active School Travel: Pathways to a Healthy Future

Technical paper No. 2018 - 01 January 2018

ISBN 978-0-6482621-9-0

Active Travel: Pathways to a Healthy Future

Technical paper No. 2018-01 January 2018

Duggan, M, Fetherston, H, Harris, B, Lindberg, R, Parisella, A, Shilton, T, Greenland, R & Hickman, D 2018, Active School Travel: Pathways to a Healthy Future, Australian Health Policy Collaboration, Victoria University, Melbourne.

ISBN: 978-0-6482621-9-0



Acknowledgements

We would like to acknowledge the leadership and ongoing support of the Chair of our working group on physical activity, Dr Lyn Roberts, along with all expert members of this group. The National Heart Foundation of Australia is an important partner, supporting the workshops and consultation that informed this paper and providing expert insight into its content. Finally, a range of policy, practice and research experts in physical activity provided valuable technical and strategic input. All who agreed to be named are listed below and acknowledged gratefully (in no particular order):

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About the Australian Health Policy Collaboration

The Australian Health Policy Collaboration (AHPC) at Victoria University works with and supports a collaborative network of organisations and leading chronic disease experts, bringing together Australia's leading thinkers to translate rigorous research into good policy. The national collaboration has developed health targets and indicators for 2025 that together, will reduce preventable chronic diseases and reduce the health impacts of chronic conditions.

Suggested Citation

Duggan, M, Fetherston, H, Harris, B, Lindberg, R, Parisella, A, Shilton, T, Greenland, R & Hickman, D 2018, *Active School Travel: Pathways to a Healthy Future*, Australian Health Policy Collaboration, Victoria University, Melbourne. ISBN: 978-0-6482621-9-0



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Foreword

In the short time span of the last two to three decades, Australians have become much less physically active than we once were. We have changed from playing sport to watching sport, from walking to and from school to being 'driven and dropped' by adults, from walking about in the workplace to sitting attached to a mouse and a screen for long periods, from children running around in the local neighbourhood with friends to sitting hunched over small screens – we have become not only physically inactive, we have also gained body weight, and acquired preventable chronic diseases. Australian statistics indicate [1]:

- 1 in 4 Australian adults are not meeting physical activity recommendations;
- 1 in 6 are overweight or obese;
- 1 in 3 have high cholesterol and
- A growing number of adults are living with diabetes that is associated with modifiable lifestyle risk factors (known as Type 2 diabetes).

The role of national leadership in responding to a significant threat to the health of the population is well established. Governments have invested over many decades in reducing population use of tobacco, through legislation, taxation, community awareness campaigns, services and behaviour change programs; government leadership and investment has promoted and supported health programs and healthy behaviours to reduce the risk of infectious disease transmission; governments have taken action to reduce the impact of asbestos on the health of individuals and the risk of drowning with domestic swimming pools and children. All these health risks have a strong common factor – governments acted as the evidence grew that these all contributed to preventable deaths in particular, as well as to preventable illness or injury amongst the Australian population.

Being physically inactive, overweight or developing chronic diseases as a result of these risk factors doesn't yet attract the same level of national response and this despite the concern internationally that the evidence is increasingly showing that physically inactivity, together with poor diet, is directly contributing to the growing weight of even small children as well as adults. The escalator effect is well established: poor physical activity levels, poor diet, increasing weight each contribute to increasing preventable chronic diseases such as diabetes, cardiovascular disease some cancers dementia and mental health issues, with these contributing to rising levels of health service need and costs and to earlier deaths for many.

Australia's children, most particularly those who are growing up within families and communities with limited socioeconomic resources, are increasingly recognised as likely to live lives less healthy and not as long as those of their parents and grandparents [2]. The Australian Institute of Health and Welfare has estimated that both men and women aged 20 in the lowest socioeconomic group would live 2.6 years less than those in the highest group [3].

This paper draws attention to the strategies to get children moving each day that have been effective in some Australian states and cities and internationally. It highlights the risks to the health of our children in the future if we do not build a better understanding among individual families, schools and communities about the influences contributing to physical inactivity and its impact on the health of their children and how they can respond effectively to change them. Not to take a

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national approach to this is to consider that many Australian children can be put at risk of poorer childhood and adult health by their circumstances, and that the Australian workforce and economy can bear the foreseeable and preventable consequences.

Informed by leading Australian physical activity and population health experts, this paper recommends and provides advice on a national policy framework to apply 'what works' to get all children moving daily, safely and healthily. The evidence of 'what works' makes it clear that collaboration between national, state and local governments and between government agencies involved with urban planning and management, education and health, could achieve much of what is needed. A modest, targeted, shared infrastructure pool would enable active travel to school zones to be established around each Australian school. Aiming to steadily increase the proportion of children who are physically active at healthy levels will benefit the health of these children in line with previous national health interventions that have recognised the importance of keeping children safe from preventable harm.

None of this is the 'nanny state'; all of it is positive and pro-active policy and investment, in keeping with Australia's proud tradition of leading edge policies to protect the lives and health of our population, that will improve the health and future prospects of Australia's children.



Executive Summary

We have stopped moving

Levels of physical activity in Australia have declined dramatically in the last 30 years. We have stopped moving. In the same period, there has been a significant increase in chronic diseases in the population. These two things are related. Physical activity is protective against a wide range of chronic diseases, and conversely, physical inactivity is well established as a major risk factor for diabetes, cardiovascular disease, some cancers, dementia, mental illness, and other chronic diseases.

The risks associated with physical inactivity occur across the life-course, with measureable impacts at each life stage for children, adolescents, adults and seniors. Rates of childhood obesity and conditions such as type 2 diabetes are increasing in Australia and at the same time, children and young people are becoming less active. This is an immediate problem facing the nation, requiring a robust response from governments and the community. Unless Australia can find a way of encouraging and supporting the whole population to become more physically active, the nation will face rising levels of chronic diseases, increasing hospital demand, increasing health costs and decreasing productivity.

There is a consensus amongst public health leaders and organisations in Australia that the nation would benefit from a National Physical Activity Action Plan supported with targeted investment to promote and facilitate opportunities for increasing physical activity in all domains, including active travel, as part of everyday life. This is consistent with global evidence and international policy on the importance of physical activity by all.

Active travel part or all of the way to school is one of 10 priority policy actions proposed by a national collaboration of 70 leading Australian chronic disease experts. The 10 policy actions are presented in *Getting Australia's Health on Track* (2016) highlighting how governments and others can drive change where it is needed most to improve the health of all Australians by 2025, in line with the World Health Organization's (WHO) global agenda to reduce preventable chronic diseases. This paper summarises the evidence for effective policy implementation and options that improve the physical activity levels and opportunities for all school children and proposes a national active travel to school strategy for Australia.

The recently announced National Sports Plan is an important opportunity to recognise and resource the role of sport in improving national participation in physical activity and healthy living. A robust commitment to promoting active school travel for all children would be an additional recognition of the importance of encouraging and supporting everyone to become more active.

This paper makes the case that a national active school travel strategy would add significant value to current national investment in school sports, recreational sports, preventative health, roads and transport. It will also generate measurable environmental, social and health benefits for current and future generations. Policies that increase physical activity through active transport represent a low-cost, high-value investment with additional benefits in non-health areas such as reduced motor vehicle emissions and congestion, increased productivity, and improved academic performance.



The critical importance of national leadership to create the enabling conditions for active travel for all, including children, has been demonstrated internationally. Barriers to active travel for children include the physical environment which affects everyone, social expectations of parenting responsibility and for children's safety and wellbeing, as well as individual or family factors such as financial status, attitudes or habits.

The complex reasons for low physical activity levels among children that are below the recommended levels for good health cannot be addressed through local efforts alone. Federal, state and local government collaboration as well as schools and parents will be necessary to enable active school travel for all to become the norm again and not the exception that it has become. Drawing on the latest research and with reference to the latest guidelines from the World Health Organization, a number of Australia's leading public health experts have collaborated to design a three-part policy framework to enable Australia to achieve national active school travel:

- **1.** Establishment of active environments adjacent to all schools that prioritise pedestrians and cyclists
- 2. Adoption of a national target for physical activity
- **3.** Establishment of a virtual knowledge hub for schools, communities and local governments to provide evidence and implementation information for active school travel initiatives

If implemented in full, this policy framework will begin to shift active school travel from the margins to the mainstream to benefit 3.7 million school-aged children, their families, schools and communities and Australia's future adults.



Background

Despite Australia's image as an active, outdoor and leisure-loving nation, over 70% of children, 91.5% of young people and 44.5% of adults (aged 18–64 years) are not doing enough physical activity for good health [1]. National initiatives that promote active travel to and from school can be effective (and cost-effective) in providing opportunities for carers and the 3.7 million children in school to become more active every day. To support active travel, reorientating physical environments, raising awareness and facilitating cultural changes should be supported and implemented through a National Physical Activity Action Plan that will benefit all Australians now and into the future.

Physical inactivity is a shared risk factor amongst chronic diseases such as diabetes, cardiovascular disease some cancers dementia and mental health issues. Physical activity is disappearing from daily life and the resulting levels of physical inactivity are compromising our physical, emotional and economic well-being. To achieve the health target set by leading Australian experts – a 10% reduction in physical inactivity by 2025, a national active travel policy should be the starting point for a national strategy to integrate daily physical activity back into our lives. Active travel is the easiest way to help almost everyone to reach our daily physical activity guidelines for all.

Purpose

This paper provides an implementation strategy to progress one of 10 policy priorities proposed by 70 leading chronic disease experts set out in *Getting Australia's Heath on Track* [4]. These priorities aim to get Australia on track to reach the 2025 targets for chronic disease reduction, informed by the WHO global chronic disease agenda [5]. One of the 10 priorities focuses on increased physical activity, and specifically cites active school travel as the first step towards a comprehensive/national physical activity strategy.

The paper briefly summarises the evidence of the benefits of achieving widespread participation in active school travel and maps out how the evidence can be implemented through effective national policy. An analysis of the current policy landscape in Australia identifies what is working well at the moment. Consideration is given to how existing developments and innovation might be scaled to achieve better value for public health and the public purse by broadening participation, particularly in areas of social disadvantage and ensuring co-benefits and action of policy activities.

Leading Australian experts, (informed by the latest draft WHO global action plan on physical activity) [6], have developed a three-part policy framework for active school travel policy for Australian governments and communities. Understanding the complexity of achieving social and cultural change in this area, these proposals are judged to be scalable, practical, achievable and capable of making a difference. Case studies of current active school travel programs, resources and infrastructure are highlighted throughout and several phases of implementation are recommended.

Physical Activity and Health

Health Impacts of Physical Activity

There is overwhelming evidence that physical activity helps to prevent disease along the entire lifecourse from conception to old age. It is associated with a reduction in cardiovascular risk factors such as high blood pressure, cholesterol, overweight and obesity, reduction in risk of colon and



breast cancer, and improvement in psychological and cognitive indicators such as depression, cognitive function and academic performance [7, 8].

The WHO Draft Global Action Plan for Physical Activity [6] (p 5) emphasises that physical activity can be undertaken in a variety of ways and in different settings, and provides three broad domains through which to plan and implement policy and initiatives: (i) work; (ii) active transport (including walking, cycling and use of public transport); and (iii) leisure (comprising diverse recreational activities including sport, exercise, dance and active play).

Chronic diseases now affect one in every two Australians [1]. Many of these diseases share avoidable or modifiable risk factors with physical inactivity being a significant risk factor for all. In 2013, the estimated economic costs of the diseases that result from physical inactivity in Australia are \$640 million in direct healthcare expenditure and \$165 million in lost productivity [9]. Supporting health-promoting engagement in physical activity, from an early age will significantly improve the health of Australians. In addition to contributing to good health in children, physical activity is fundamental to reaching major developmental milestones during early years and through school years [10]. Key skills such as fundamental motor skills, optimal cognitive development, healthy bones and psychosocial health are critical building blocks for life [10, 11].

Investment in improving physical activity through active travel delivers significant health benefits, is low cost, high value and has major benefits for the areas of responsibility of multiple Australian government departments. Table 1 summarises the benefits accruing to government agencies as identified by The UK Department of Transport [12].

Co-benefits framework across a range of Government departments		
Department	Main benefits	Other benefits
Education	Strong evidence that in young people, as physical activity increases academic performances improves	Impact on cognitive skills and attitudes and academic behaviour
Work and pensions	Helping people get back to work	Reducing absenteeism and cost to economy
Energy and climate change	Reduction in transport-related greenhouse-gas emissions through less motor vehicle use and increases in distances walked and cycled	Increased energy security
Environment, Food, and Rural affairs	Reduced carbon emissions from less motor vehicle use – improves air quality, reduced noise	Supporting rural economic agenda – tourism enabling better access to nature
Communities and Local	Support for high street vitality and	Low carbon approach to
Government	social cohesion	access for growth areas
Business, Innovation and Skills	Physical activity, wellbeing and performance at work	Happiness advantage of positive psychology
Culture, Media and Sport	Leaving a tangible Olympic legacy in terms of population health	Once in a generation opportunity
Treasury	'Very High' benefits to costs	Speed of implementation (e.g. within 24 months)

Table 1. Table extracted from Davis, A (2014), Claiming the Health Dividend, Department of Transport, UK Government



Greater awareness of and education about the contribution of active travel has benefits for agendas other than health, including economic and environmental sustainability. Australia is committed to the 2030 United Nations Sustainable Development Goals (active travel relates explicitly to goals 3, 11, 10 and 13) and the United Nations Framework Convention on Climate Change [13], both of which have obvious links to physical activity.

Improving Health Inequity

There is extensive evidence that several risk factors, including physical inactivity, are associated with poor health status in socio-economically disadvantaged populations. Recent Australian research reveals a strong association between low socio-economic status in early childhood and heart disease in mid-childhood [14]. It highlights the importance of, and need for, place-based initiatives that influence the physical activity level in these populations.

Identifying specific population groups with the lowest physical activity levels and poorest health outcomes allows interventions to be targeted more effectively at those with the greatest need [14]. Additionally, there is strong evidence that participation in physical activity is difficult as people grow older if these behaviours were not instilled at an early age. This is particularly the case among blue-collar workers, women, and people with initially poor perceived health [15]. Childhood is therefore an important time to encourage and support attitudes and behaviours that promote physical activity [16].

Benefits to Children's Health and Wellbeing

Physical activity is essential to children's health and wellbeing. The benefits of moderate to vigorous physical activity include positive physical, social, mental and educational impacts [17, 18]. Children and young people who are active every day are at lower risk of conditions including overweight or obesity, type 2 diabetes, metabolic syndrome and other comorbidities, and to have higher levels of aerobic fitness, bone health, mental health and academic achievement [7, 19-22].

Leading public health organisations, including the WHO, endorse active school travel interventions within comprehensive active school schemes as a highly effective way to increase children's and young people's physical activity [6, 23-25].

Global Trends in Physical Activity

Changes in lifestyles, physical environments and transport modes and systems have altered physical activity patterns across the population in recent decades. Attitudes, social norms and perceptions about the safety of active travel to school have also shifted. Active transport has declined markedly in some high-income countries such as the United States, United Kingdom (UK) and Australia, where car travel has become the dominant form of personal mobility [26].



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Australia's Children: Declining Levels of Physical Activity

The recently updated Australian Physical Activity and Sedentary Behaviour Guidelines [27] provide evidence-based recommendations for the minimum amount of physical activity and maximum amount of sedentary behaviour in which children and young people should engage to experience meaningful health benefits. A summary of the guidelines for infants, toddlers, pre-schoolers, children and young people is set out in Table 2.

	Physical Activity Guidelines
Infants Birth to 1 year	Supervised floor-based play in safe environments should be encouraged from birth. For those not yet mobile, 30 minutes of tummy time including reaching and grasping, pushing and pulling, and crawling spread throughout the day during awake periods is encouraged.
Toddlers 1 to 2 years	Should spend at least 180 minutes a day doing a variety of physical activities including energetic play such as running, jumping and twirling spread throughout the day. More is better.
Pre-schoolers 3–5 years	Should spend 180 minutes a day in a variety of physical activities, including 60 minutes of energetic play such as running, jumping, kicking and throwing, spread throughout the day. More is better.
Children 5–12 years	Accumulate at least 60 minutes of moderate to vigorous-intensity physical activity every day. Children's physical activity should include a variety of aerobic activities, including some vigorous activity. On at least three days per week, children should engage in activities that strengthen muscle and bone.
	To achieve additional health benefits, children should engage in more activity – up to several hours per day.
Young people 13–17 years	Accumulate at least 60 minutes of moderate to vigorous intensity physical activity every day. Young peoples' physical activity should include a variety of aerobic activities, including some vigorous activity. On at least three days per week, young people should engage in activities that strengthen muscle and bone. To achieve additional health benefits, young people should engage in more activity – up to several hours per day.

Table 2. Australian Physical Activity and Sedentary Behaviour Guidelines

A recent Australian organisation <u>report card</u> on levels of physical activity amongst Australia's children, based on globally agreed and evidence-based metrics, awarded the country a dismal 'D minus' for overall level of physical activity and a 'C minus' for active transport [28]. Furthermore, the report card also graphically highlights the opportunity to improve levels of active school travel (see Figure 2). Physical activity undertaken through normal daily activities, including actively travelling to and from school, can contribute significantly to overall levels of physical activity [29], but has declined in recent decades.



Over the past 30–40 years there appears to have been an accompanying worldwide decline in children's active school travel [30, 31]. There was an average decline of about 42% (based on data from New South Wales, South Australia and Victoria) in young people's use of active transport between 1971 and 2013 [32]. Forty years ago, about 75% of children walked or cycled to school, and only 25% were driven or used other means of transport. Today, more than 70% of primary school children are driven to and from school every day [33].

Data from the Longitudinal Study of Australian Children and the National Secondary Students' Diet and Activity survey tell the same story: a large proportion of Australian children do not use active transport to get to and/or from school and an alarming proportion of children of all ages do not walk at all to or from school each week (zero trips each week: 50–63% of children) [34, 35].



Figure 1. Active Healthy Kids Australia Report Card 2015

The proportion of young Australians who travel to and/or from school by car declines with age: the prevalence of secondary students using public transport and walking to and/or from school is considerably higher than that of primary students [36].

Complex barriers obstructing active school travel behaviours

Attitudes and social norms related to the perceived safety of active travel to school have changed. Parents and carers are concerned about safety and 'stranger danger' and other hazards, even though the evidence does not suggest increased risk [37, 38]. Parental concerns about road safety [39] is another important barrier that can be addressed through a combination of built environment modifications, public education and programs. There is strong evidence that parental attitudes are a primary determinant of their children's participation in this form of physical activity. Additionally, family dynamics have changed in recent decades; as most parents now juggle work responsibilities with family life, there may be less time to accompany children on active journeys to school [40].

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The evidence suggests that parental worry and concern is an important issue for active school travel. Engaging parents to discuss the barriers, benefits and opportunities for their children to travel actively to and from school can break down pre-existing beliefs and worries and shift attitudes and behaviours related to how their children travel to school. Whilst this is not an easy task, it is vital, because parents are the gatekeepers for their children. Indeed, many children prefer to walk or cycle to school, but parents' beliefs about social, safety and environmental factors influence their decisions to allow their children to be active school travellers [41].

Close proximity of home to school, reducing traffic volume, and safe footpaths and crossings are important for encouraging active travel to school [42]. One of the biggest predictors of whether a child will actively commute to and/or from school is distance. Among children, the likelihood of active travel increases as the distance from their home to school decreases [43]. However, the distances needed to travel to school have increased over time due to continuing urban sprawl and school amalgamation and closure. More parents are also choosing to send their children to schools (both government and private) outside of their designated school zones [44], decreasing children's ability to actively travel to school. If children are able to be able to benefit from active travel, innovative options to overcome these obstacles are required.

Numerous features of the physical environment can discourage physical activity as part of daily living. Plans for paths, bike lanes and other health-promoting structures must be included at the planning stage of new developments and urban redevelopment. In established towns, suburbs and cities, retrospectively altering the urban environment is possible but can be more costly and difficult with competition for limited space and a variety of regulation, zoning and varied stakeholders involved [45]. For established neighbourhoods there is strong evidence of effective programs that can be implemented and tailored to specific neighbourhoods [46].

Active travel to school is associated with active travel to other destinations [47], with measures facilitating walking or cycling to school also facilitates wider community use of active travel modes. Increasing numbers of Australian children are therefore missing out on the choice to be active not only for the school trip, but also more broadly for a range of destinations across their communities, for similar reasons. Overall, there has been a modal shift towards non-active and non-independent travel by children. The decline in active school travel has not been offset by increased participation in sport and active recreation, which has also declined in recent years [48].



The Policy Context

Widening the Focus to Active Living

The WHO asserts that *"regular physical activity throughout the life-course enables people to live better and longer lives"* [6, 49]. The emphasis on a health-in-all-policies approach remains an important driver in international strategic thinking and action on physical activity and chronic disease prevention [50].

In recent decades, policy in Australia and many other countries has focused on promoting physical activity for children by increasing participation in sport and exercise programs. However, given that Australian children and young people are increasingly not sufficiently physically active to achieve the daily recommendation, participation in sport alone has not been enough to elicit change. Indeed the length of sports participation is particularly indicative, with participation in early years and primary school years rapidly decreasing in secondary and tertiary education stages.

Modelling of physical activity patterns in Australian adults demonstrates the potential for relatively small and achievable increases in active travel to lift the proportion of Australians who are sufficiently active. If people who are currently inactive "...walked or cycled for an additional 20 minutes three times per week, the proportion of sufficiently active Australian adults would increase from 57% to 72%" [51] (p. 12). Consequently, the public health potential gain through active transport is large, even with modest amounts and frequencies of activity, and especially if inactive people begin to walk, scoot or cycle each week.

Equivalent modelling has not been conducted for children, but the results are likely to be similar to those for adults [52]. Studies in the UK report that teenage girls (a population with typically low levels of physical activity) are six to eight times more likely to meet recommended levels of physical activity if they travel actively to school [53, 54]. These, and other findings, indicate that active transport does not 'displace' other forms of physical activity and is not undertaken principally by children who are already active. Rather, increases in children's active school travel are likely to result in net gains in children's levels of overall physical activity [55].

Active school travel is one of the easiest ways to incorporate physical activity into everyday life for all children.

Australian Initiatives in Active School Travel

Australia, like many other high-income countries, must reverse declining rates of physical activity and accelerating rates of chronic disease. There is definitive evidence that promoting active living and enacting measures to enhance opportunities for active transport are effective strategies for improving population health [56]. Nevertheless, Australian policy in this area appears to be failing to achieve population-wide impacts.

Most states and territories have dedicated policies and strategies for promoting active school travel, in addition to policies for tackling chronic diseases, both incorporating guidelines and indicators for physical activity. Some also have dedicated policies and strategies for physical activity, including sport and active living. Nonetheless, there is great diversity in scale and coverage and the levels of physical inactivity in children nationally remain high and likely to remain so without a strong focus and a consistent approach across Australia.



There are multiple interventions at local, state and territory and federal levels aimed at increasing children's rates of active travel to and from school. However, there is variation in the emphasis states and territories place on this policy area, and in the scope of initiatives taking place and the resources available to support them.

Active travel programs are often successful in participating schools but are not implemented at scale. Therefore, there is little evidence of an overall mode shift to active travel to school across the country and hence, no population-level benefits. The issue is not one of evidence of effectiveness but one of scale of implementation.

There is innovation and notable practice in several places [57] and many well-developed resources [57] are publicly available to support schemes and initiatives. However, there is no national learning platform or portal to support the sharing of these resources and ideas or to showcase notable practice.

With a few exceptions, it appears to be the norm for states and councils to outsource coordination of active travel to school schemes to not-for-profit organisations, to schools directly and to local groups. Whilst this may invigorate local action, enterprise and commitment, it is difficult to understand how such an approach, in the absence of a broader strategic framework, can overcome the many barriers to active school travel or be sustained. Addressing the barriers requires government leadership and investment.

Broader infrastructure changes will facilitate and organically encourage more people to undertake active travel. However, the emphasis of national policy is predominantly on behavioural change rather than broader structural changes to reduce the multiple barriers and promote the opportunities for active school travel.

Both federal and state-funded initiatives that previously provided broad strategic support for active travel policy, including active school travel, have not been continued [58, 59]. Legacy websites and reports remain as a testimony to the solid work undertaken previously and, potentially, as a resource to underpin future policy development.

Overall, there is no coordinated, strategic national approach to active school travel and very limited evaluation of impact. The fragmentation and inconsistency of current arrangements suggests that Australia needs a more robust and sustained approach to promoting active school travel at the national level and at a scale that would reap extensive and long-term health benefits for the nation.



Scope and Complexity of Physical Activity Policy

There can be no doubt that achieving a population-level shift in levels of physical activity is a complex undertaking. To disentangle this complexity, it is important to understand the breadth of what is involved in developing comprehensive physical activity policy. The following definition of a physical activity policy is proposed as a starting point:

"A formal statement that defines physical activity as a priority area, states specific targets and provides a specific plan or framework for action. It describes the procedures of institutions in the government, non-government and private sectors to promote physical activity in the population. In addition, it should define the accountability of the involved partners". (Bull et al. 2004)

Effective policy that will deliver on improvements in physical activity levels throughout the population would require a range of strategies and that are effective for all ages. See Figure 2.



Figure 2. Adapted from WHO Global Action Plan (draft) on Physical Activity 2018-2020, p. 15

Policies supporting physical activity can be framed as single issues and implemented and funded accordingly, or incorporated in broader policy statements on physical activity or in a myriad of public health-related policies and strategies. Moreover, an active travel to school policy and strategy may 'sit' in or be shared by several departmental portfolios including transport, education, health and planning [60]. Support for active travel requires attention to enabling and disabling physical environments and infrastructure; to social, economic and cultural view and attitudes and to strategies (programs) that are effective in engaging and supporting individual and community participation.



Success Stories

An evaluation of the Victorian Ride2School program identified a package of programs and policy measures required for substantial and sustained shifts in active travel to and from school [41]:

- good walking and cycling infrastructure;
- transportation policies that address the needs of all road users and facilitate the linking of active trips with public transport use;
- policies and programs that improve the safety of pedestrians and cyclists;
- programs that promote active transport; and
- disincentives for car use, including fewer provisions for car use and parking, and lower subsidies for car purchase, operation and parking.

International evidence has emphasised the need for a collaborative approach with other supportive community-wide measures. These approaches have the potential to weaken the broad range of barriers to active school travel discussed above, although there remain limitations to what can be achieved by local communities alone in relation to redesigning physical environments and transport modalities.

Several high-income countries and cities have successfully reversed the upward trend in young people's car travel. The proportion of the total distance travelled by 10–14-year-olds using active modes is now around 14% in Switzerland and Germany, and 34% in the Netherlands [39].

Policy objectives should reach for measurable improvements in active school travel at the population level and not just in selected schools or communities. It is important to acknowledge that even slight increases in rates of physical activity at the population level achieve far more health gain than larger increases in single schools or communities, and will be more equitable. The well-documented benefits of active travel will only be realised when measurable change occurs throughout the population level.

Policy Gap

A key reason which has hindered the progression of physical activity policy in Australia and elsewhere is the failure to create optimal conditions for successful change [61]. Because of this narrowing of the policy framework, there has been a failure to develop a more complex policy lens on physical activity as a key risk and protective factor for **all** chronic disease.

In this context, the federal government's recent \$100 million investment in the Sporting Schools initiative and the recently announced and forthcoming National Sports Plan are both welcome developments in the 'leisure time' domain of physical activity. However, neither is likely to directly increase opportunities for physical activity through active transport, which is proven to have significant population-level benefit. Declining levels of active school travel can be seen as predictable outcomes of urban transportation and management policies that protect or promote car use and directly or inadvertently constrain walking and cycling opportunities and facilities that are integral to active travel and daily living.



The evidence – what has worked to enable children to actively travel to school

Globally, the proportions of children participating in active travel to and from school have declined over recent decades [62]. Active travel interventions can take multiple forms such as classroom education, campaigns, walk to school days and engineering measures. Since the focus on safe routes to school was pioneered by Denmark about 20 years ago, there is compelling evidence that securing more objectively safe routes to school through urban infrastructure and national leadership are key mechanisms to ensuring more and more children engage in active travel.

International Programs

Safe Roads to School, USA

Safe Roads to School (SRTS) program provides a comprehensive model which is demonstrating the significant role of active travel in increasing levels of physical activity amongst children, their families and communities. The US federal government established the SRTS program in 2005 to support active and safe travel for school-aged children. An investment of \$612 million of transportation funds over five years was provided to administer a federal grants scheme available for infrastructure and non-infrastructure projects. The program model is based around five critical 'E's:

- 1. Engineering
- 2. Encouragement
- 3. Education
- 4. Enforcement
- 5. Evaluation

Project scope examples:	
Infrastructure-related projects	Planning, design and construction of infrastructure- related projects that will substantially improve the ability of students to walk and bicycle to school. For example, sidewalk improvements, traffic calming and speed reduction improvements and secure bicycle parking facilities.
Non-infrastructure related projects	Student and parent education, public awareness campaigns and traffic enforcement.

Table 3. SRTS grants project scope

In addition to the national grants scheme which was administered by the State Department of Transportation, a SRTS Coordinator was funded for each State. The role of the Coordinator is to establish the programs and administer the Federal funds and these roles have been identified as critical players in the implementation effectiveness of the program given the complexity of stakeholders and programs in each State.

The SRTS program is a cross sectoral program involving multiple partnerships including engineering, traffic enforcement and safety education with schools and local and regional administrative bodies.

Active Travel: Pathways to a Healthy Future – Technical Paper



The legislative framework for the SRTS is considered to have placed the US at the forefront of global policy leadership in active travel for children, providing for multi-sectoral participation and flexible funding nationally. Various evaluation reports have signalled the success of this landmark program [63, 64] and identified key factors which contributed to its success including: stating clear goals and program guidance, establishing a clearinghouse, flexibility in infrastructure/non-infrastructure activities, limiting projects to a 2-mile (3.2km) range and establishing a taskforce [65].

The cost

Funding for SRTS was based on school enrolment with the provision that all States received a minimum of \$US1 million per year. An evaluation of the SRTS program showed that an investment of an average of just over \$US110,000 (A\$140,000) over six years to each of 1410 schools increased active travel behaviours by 10%, a statistically significant result. [64].

Active Travel Programme, Northern Ireland

The Active School Travel Programme funded by the Department of Infrastructure and the Public Health Agency in Northern Ireland has increased levels of active travel in children at participating schools by 15% over three years [66]. These figures are compared against a backdrop of declining levels of car rides to school, from 54% to 42%. This program delivered by the charity Sustrans is working with over 280 schools across Northern Ireland until 2021.

Not only has the program delivered an increase of walking and cycling to school but it has simultaneously reduced motor vehicle congestion around participating schools.

The cost

The Department of Infrastructure and the Department of Health (through the Public Health Agency) have provided £1.125 million each (A\$1.9 million) over five years to invest into the already 60,000 enrolled children and 191 schools taking part in the program. The investment of approximately £7.5/child per year for five years is described as expected "to result in health care savings and establish good physical activity and health-promoting behaviours [66]."

Active & Safe Routes to School, Ontario

The Active & Safe Routes to School (ASRTS) program is an Ontario-wide initiative led by not-forprofit organisation, Green Communities Canada. ASRTS is underpinned by the School Travel Planning (STP) model – a universal best practice model used to systematically address barriers of active travel. STP has demonstrated cost-effective benefits. Figure 3 highlights the economic, environment and health benefits produced by STP between 2014-16 [67]. These statistics show a benefit to a range of community settings – inner city, inner and outer suburbs and rural. Since the initiation of ASRTS in 1996, the program has grown from 3 schools to over 1,000 schools in all States and Provinces in Ontario.

A 2012 evaluation of the program found infrastructure improvements to be the most effective component to shift levels of active travel [68]. Safety education and special events were also identified as additional major components.

The cost

The initial pilot program for STP was costed at C\$1.3 million for 12 schools. A breakdown of these funds included: a part-time STP Facilitator to work in each province (local level), a part-time Project Manager (national level), evaluation conducted by the University of Toronto and C\$2,500 compensation for the participating pilot schools with control schools receiving C\$1,000 each. National active travel rates in children increased from 43.8% to 45.9%. In addition, 13% of parents also reported a decrease in driving as a result of the STP project [69]. The end of the pilot resulted in a C\$2.18 million grant to Green Communities Canada to expand the STP program to every province/territory – an additional 120 schools.

Currently, ASRTS is funded by the Ontario Ministry of Education which has committed C\$3.5 million (A\$3.55 million) over three years (2017-2020) to boost active travel across the province of Ontario.



Figure 3. Benefit cost analysis of the Canadian Active Travel Program

TravelWise School, New Zealand

The Auckland Regional Transport Authority (now Auckland Transport) established the TravelWise initiative in 2005. TravelWise is a collaborative program involving local councils and a steering committee comprising of a range of representatives from local councils, Auckland Transport and Land Transport NZ. In its first three years, TravelWise grew from 51 schools to 178 reaching a total of 98,000 students. By 2014, over 200,000 students were involved and 75% of students within the Auckland region attended a TravelWise school. There have been a range of benefits since the inception of Travelwise: automobile crashes involving children aged 5-13 have decreased by 58%, over 12,000 car trips have been taken off the road during morning peak period and over NZ\$20.35 million has been saved from reduced traffic congestion [70].

Active Travel: Pathways to a Healthy Future – Technical Paper



A whole of school approach is used to support TravelWise. A successful key component identified in Travelwise is the integration of cycling and pedestrian safety within the school curriculum. This integration has increased awareness of road safety and sustainability. Furthermore, strong partnerships with police have contributed to road safety. Along with cycling education programs, many schools have opted to run a 'Park and Walk' program to reduce congestion within the school zone and providing an opportunity for more children to be physically active. This has been further advocated for by multiple schools who want a school board level policy to discourage dropping children off in the school zone and in in doing so address parking lot safety.

The cost

The Auckland Regional Council, Land Transport NZ and the Ministry of Health all contribute to the funding of Travelwise – an average of NZ\$12 million per year (A\$10 million). Funding is distributed across TravelWise planners and coordinators, promotional materials and reimbursing schools for all costs relating to setting up active travel initiatives. Schools are also able to apply for grants to improve urban infrastructure to support active travel within the school community and neighbourhood.

School Travel Plan & ModeShift, United Kingdom

In 2003, the British government prioritised active and sustainable school travel and mandated each school have a school travel plan (STP). Through national government leadership, funding to local authorities enabled each school to have a STP Officer who would assist schools to develop a STP. The UK Local Authority School Travel Forum (UKLAST) was established to control, monitor and regulate the School Travel Plan Scheme. In 2007, UKLAST dissolved and ModeShift was created. ModeShift created the Sustainable Travel Accreditation and Recognition Scheme (STAR) which supports the work of STPs towards their Bronze, Silver and Gold award through a series of tasks on the online website.

The government funded interactive website provided a central source of information and a central communication hub for all stakeholders. Schools and School Travel Officers were able to share their progress, successes and failures. This website has been recognised as a cornerstone component of School Travel Plan and ModeShift. The ModeShift STARS program is in over 850 schools nationally, and has seen a reduction in car journeys of 6.2% over the 2013/14 and 2015/16 period [71]. Rates of car use have dropped in all participating ModeSHIFT schools [72].

The cost

STP: A one-off payment of £3,750 (A\$6500) was granted to each primary school plus an additional £5 per student each year. Secondary schools could access a grant of £5,000 plus the additional £5 per student.

ModeShift: The Department of Transport provided £184,000 (A\$318,000) to ModeShift to expand and support the STARS program at every school in the UK over two years. This includes employment of staff and expansion of the program into workplaces.



Australian Programs

A substantial literature review was conducted by the ACT government in 2011 to review the evidence and identify the most effective programs for active travel. The review identified strategic planning and a systems approach as key components to successful active travel programs internationally and in Australia, complemented with improvements to areas within and around schools to create supportive environments [51]. The review report identified Western Australia, South Australia and the ACT programs as providing effective models for Australia.

Your Move, Western Australia

Your Move (previously TravelSmart) is a collaboration between the WA Department of Transport and the Department of Sport and Recreation that was established in 1995. Your Move has three focus settings: workplaces, school and communities.

Your Move has four program components:

- 1) A website
- 2) Campaigns
- 3) Incentives, rewards and resources
- 4) Grants for infrastructure

The objective of Your Move is to increase the numbers of students using active travel to and from school. Various activities to effect travel behaviour change activities are facilitated with schools to shift the mode of transport. Since 2013, 130 schools have participated in the program resulting in a decrease of car trips (between 8 – 11%) and an increase in active travel (between 12-24%) [73].

A major component of the Your Move schools program is the website which addresses barriers faced by teachers—curriculum and workload impacts—through an online incentive program. This program includes a range of self-selected activities from a toolkit which, once completed, accrues points that can be redeemed through an online shop for rewards. Other activities include curriculum-linked resources and lesson plans for both primary and secondary schools. Professional development for teachers and parents is available, as well as a biennial awards event to showcase outstanding achievements [73].

The website also provides a communication platform for the Department of Transport and participating schools. Activities and issues can be recorded for monitoring and evaluation which is an important tool for continuous evaluation and improvement.

Globally and locally, coordinated and sustained policy leadership has been effective in shifting cycling behaviours and increasing physical activity [6]. The WA Premier's Physical Activity Taskforce, for example, ran between 2001 and 2012 to oversee the development and implementation of a whole-of-community physical activity strategy for WA, including urban, regional and remote communities. The Taskforce provided strategic leadership and coordination of policy and was a nexus between government and community agencies.

Members of the Taskforce included the Department of Sport and Recreation, Department of Education, Department of Health, Department of Planning, Department of Transport, Healthway, Western Australia Local Government Association, an academic representative and the Heart Foundation (the non-government representative). The coordinated approach of the Taskforce is an



example of how to achieve joint action for physical activity and active school travel through a lead agency.

The cost

An international comparison of 11 school travel behaviour change programs in Australia, New Zealand, United Kingdom and the United States found the WA TravelSmart to School program to be a very low cost program (\$6,450 per school/year) compared to other programs [74]. TravelSmart also reported good outcomes, including a 9% decrease in car trips and a 12% increase in active travel, and these mode shift outcomes were similar to those of the highest-cost international program (the Travel to Schools Initiative UK) [74].

In 2015, the TravelSmart model was estimated to cost \$200,000 per year in operations and staffing (1.5FTE staff member) with a further \$6,450 cost per year per school. The reach of this model was 31 schools. This model has strong outcomes compared to other programs which had larger budgets. For example, the Let's Go – New Zealand Plymouth District Council program cost NZ\$360,000, reaching 28 schools and cost schools almost double the amount (\$12,857) compared to the TravelSmart program.

Way2Go, South Australia

The South Australian state-wide active travel program Way2Go promotes safer, greener and more active travel for primary school students and their communities. Way2Go maximises partnerships by adopting a whole of school approach (refer to Figure 4) in addition to the partnership between local councils, school communities and the Department of Planning, Transport and Infrastructure (DPTI).

	The three identified components are:	
Ethos and Environment Parents and Community	Curriculum	A focus on student learning that is age appropriate, models leading practice and integrates into teachers' work
Curriculum	Ethos and Environment	Walking the walk – demonstrating that the school values active travel and safe traffic behaviours Includes examination of the impact that school policies and traditions have on children's active travel
	Parents and Community	Acknowledges parents role as the child's first teachers, and the decision makers about children's independent mobility Explores the impact of parent mode choice on local school traffic congestion and children's safety

Figure 4. Way2Go whole of school approach

Way2Go offers local councils the opportunity to partner with DPTI and school communities to identify, plan and implement safe and innovative improvements for local urban infrastructure near schools to support active travel. Projects must be people-focussed and align with school priorities and passions. Two key nationally supported documents: Principles for School Road Safety Education and the National Practices for Early Childhood Road Safety Education are reflected in all school road



safety education practices and curriculum. In addition, bike education is also available for students in years 5-7.

The cost

An estimated \$900,000/year is required to deliver Way2Go to 100 schools in South Australia. This includes management and delivery of the program, bike checks, resources and time from DPTI.

Ride or Walk to School, Australian Capital Territory

Ride or Walk to School (RWTS) contributes to the ACT Government's Healthy Weight Initiative and is supported by ACT Health. Implemented in schools by the Physical Activity Foundation, RTWS highlights the multitude of benefits of active travel, not only to children's physical health but to academic levels, the environment and traffic congestion around school areas.

This program provides schools with free access to biking equipment, teacher training, resources, workshops and other support with the aim to build the capacity of schools to support and encourage active travel. A recent evaluation of the RWTS found that the program has produced a range of benefits and more importantly, the results suggest that levels of active travel have increased and can be attributed to their participation with the RWTS program [75]. It is notable that whilst the rest of the ACT general school population have shown a decline in active travel, RWTS schools maintained or increased levels of participation in active travel between 2012-2015.

The cost

The 2016-17 ACT budget committed \$3.6 million (over four years) to better infrastructure for walking and cycling [76] with the RWTS program to have \$125,000 to expand the RWTS program to an additional 56 schools increasing participating schools to 108. In addition, funds of \$720,000 over four years were provided for a new Schools Transport Co-ordinator.



Key Components to a National Active Travel Strategy

Enabling Australia's children to commute actively and safely is an important component of a national effort to increase physical activity for all generations and abilities. A three-part policy framework has been developed through consultation with leading national experts. This comprises:

- 1. Establishment of active environments adjacent to all schools that prioritise pedestrians and cyclists
- 2. Adoption of a national target for physical activity
- 3. Establishment of a virtual knowledge hub for schools, communities and local governments to provide evidence and implementation information for active school travel initiatives

These policy recommendations are relevant to all levels of government and aim to reorientate physical environments, initiate and support programs and infrastructure and facilitate the necessary cultural changes to support safe active travel part or all of the way to and from all schools. Amongst existing national and international active travel programs, the two common key components that have contributed to successful programs have been particular emphasis on the built environment and national leadership.

Active Built Environment

Safer school zones, healthier communities

"Australian children are twice as likely to be killed as a car passenger than a pedestrian and more than four times as likely to be killed as a car passenger than as a cyclist" [39] (p 4).

There is strong evidence to show that the built environment (cities, communities and neighbourhoods) affects our travel choices and decisions [77]. In addition to the health benefits active travel provides, safer built environments also reduce the number of road fatalities [24]. Globally, there is agreement that improved road safety is sorely needed, as seen in the WHO Global Plan for the Decade of Action for Road Safety [78].

The recent call from the WHO to accelerate actions to improve the safety of pedestrians, cyclists and public transport passengers has been echoed by the National Heart Foundation [6, 77]. The current reduced 40 km/hr school zones in Australia are designed to help keep children who travel to and from school safe at peak hour. Expanding reduced speed zones to other areas, including local streets, will ensure greater safety for all Australians, particularly children and will support active school travel.

To ensure safe and connected walking and cycling footpaths for all, roads with high accident frequencies should be targeted to improve the safety around school areas.

Other measures to support and enable active travel include design guidelines for planners that prioritise active transport. Guidelines should cover infrastructure that reduces speeds, improves lines of sight, crossings, consistent canopy cover (i.e. tree shade) and assessments to identify both barriers and enablers to active travel. Various mapping exercises can be used to identify priority routes, on which speed limits should be reduced to <40 km/hour. The Safe Active Streets Program provides guidance for the recommended guidelines [79].



The built environments surrounding schools, including car parks, crossings, bus routes and paths, can enable or inhibit active travel. The Junee Shire Council in regional New South Wales has shown that creating links to key destinations (those used daily or more often) is a win-win. Not only has the implementation of a shared walking and cycling path network increased parental comfort about their children commuting to and from school via active transport, but the pathway has become a key community asset [80]. The shared pathway is also used as a marketing tool, with residents informing prospective residents about it. The planning of safe, well-designed and aesthetically pleasing pathways wherever this is feasible can increase active school travel and contribute to various aspects of regional and remote community life.

The infrastructure around schools, school areas and other facilities that children visit affects the decisions of families, children and the community to participate in daily incidental physical exercise through active travel. Neighbourhoods that reduce traffic speed and volume, have good street connectivity to schools, limit parking availability during school pick-up and drop-off and discourage through traffic around immediate vicinity of schools are conducive to health-promoting behaviours during weekdays and weekends [81].

Strategic National Leadership

Currently, over 70% of children and 91.5% of young people in Australia are not meeting daily physical activity guidelines [1]. Agreement on a national target for physical activity would generate public awareness, engage a wide range of community organisations and would enable progress and outcomes to be planned, delivered and evaluated.

In 2015, experts working with the AHPC proposed a national target for Australia by 2025:

A 10% relative reduction in prevalence of insufficient physical activity.

The WA program has shown that combining central and system wide leadership and coordination with ongoing measurement and reporting of outcomes is highly effective.

The social, cultural, economic and contextual factors that influence the levels of physical activity in Australia require a multi-sectoral approach. Environmental impacts, the rising burden of chronic disease and their effect on the economy represent considerable incentives for a national approach to enabling active travel for children and young people through a multi-sectoral approach [60].

At both national and state government levels, government departments of Health, Environment and Energy, Education, and Infrastructure and Regional Development, are major contributors to environmental policy and management. The Australian Sports Commission (ASC), the National Transport Commission and others are key stakeholders in national leadership on physical activity. Existing groups such as the Committee of Australian Sport and Recreation Officials Research Group and the Australian Health Ministers' Advisory Council could provide national leadership. Local governments are critical to local area management that can facilitate active travel opportunities for each school in their community.



What can Australia do

Infrastructure

Infrastructure support, through targeted funding based on need, will be important to enable schools, local governments and communities to address barriers to active travel to school. A modest, nationally coordinated and shared grants program, over a fixed period of time, would stimulate and enable local initiatives. Local government would be the most effective level of government to facilitate and oversee these initiatives. The national infrastructure grants program should allocate resources proportionally to need, concentrating initially on underserviced areas. Residential developments on the urban fringe, areas of high socio-economic disadvantage and areas where walking to school is impacted by barriers in the community such as poor infrastructure and high levels of disadvantage that do not provide a sufficient level of safety for children should also be prioritised. [64]

An impressive economic return can be expected from investment in preventive measures that help to reduce risk factors for chronic disease, increase a community's social capital and improve its physical environment. Every \$1 spent on prevention can yield \$14 [82].

The Australian Government directly contributes to local governments through reallocation of goods and services tax revenue. Programs like Roads to Recovery, which allocate funding using a formula based on population and road length, could offer a model for administration of the proposed national grant system for active school travel.

The Capital Grants program is a well-established funding system to which schools can apply for infrastructure grants and could be extended to encompass active travel programs.

Schools have a range of organisational arrangements, but experience from the WA Connecting Schools Infrastructure program shows that many schools do not have the capacity to apply for and manage grants [83]. This is further complicated by the responsibilities of local government in managing shared-path access to schools. Hence, the role of local government in collaboration with schools and relevant community organisations will be fundamental to the success of the proposed grants scheme.

The cost

Based on a figure of 9,414 schools in Australia [84] and on current Australian and international models and assuming a range of costs based on need for each school, a national grants scheme providing \$85 million over three years (using a mean of \$10,000 per school) would enable a steady program of school zone improvements to engage children in active travel where applied. Schools, together with their local government and/or communities, would be eligible for funding support based on and according to need for physical and other infrastructure to provide safe active travel zones and support.



National Leadership

Leadership through adoption of targets and indicators for physical activity is a necessary first step at all levels of government to monitor progress of active travel to and from school for Australian children.

Adoption of a national target to increase physical activity levels of children and young people by 10% by 2025 is a feasible target for Australia and would enable targeting of the national infrastructure grants programs to schools and areas with high levels of physical inactivity in their school communities.

Oversight and accountability for the implementation of the national framework, including the adoption of a national target, should be the responsibility of the national collaborative leadership strategy. The national leadership body should have responsibility for enabling and supporting collaboration amongst all relevant agencies and levels of government to ensure effective implementation of the national target and supporting strategy. Evaluation of the implementation of the national strategy through the three years would provide public accountability through annual reporting to the national leadership body against the national target and should contribute evidence of effective and innovative implementation strategies to the virtual knowledge hub.

National and state government departments of Health, Environment and Energy, Education and Infrastructure and Regional Development and local governments are key contributors to policy and management. Existing intergovernmental groups such as the Committee of Australian Sport and Recreation Officials (CASRO), Australian Health Ministers Advisory Council (AHMAC) and the Council of Australian Governments (COAG) should be utilised to progress the active travel agenda and be the nexus for school and community agencies.

The cost

Evaluation of the implementation and outcomes of the National Active Travel Infrastructure Grants Scheme is estimated to require \$1.4 million over three years.

School Support

There are a range of initiatives underway across the nation to promote active school travel and there is evidence of notable examples of effective outcomes. However, there is currently no effective mechanism for sharing the learning about and building at scale what is already working.

The evidence from existing programs shows that infrastructure and environmental initiatives need to be supported by evidence based information and practical resources for schools and their communities [85]. Building upon the existing teaching curriculum and developing resources which align with curriculum-learning areas will be important to achieve long term benefits from the national approach.

The national policy framework should support the development and provision of school resources to support schools and teachers in all jurisdictions to engage in and support active travel to school for their school community. Key components which should be considered to support schools and their communities include a national website and a clearinghouse housed by an appropriate agency.



Establishing a centralised virtual knowledge hub and clearinghouse is low cost and high impact. This website (housed by an appropriate agency) should form part of the national policy framework to support schools and teachers in all jurisdictions to support active travel to and from school.

The Australian Physical Activity Network (AusPANet) is a virtual knowledge hub that provides upto-date information, resources and publications to the physical activity workforce. Hosted by the National Heart Foundation, AusPANet is a joint collaboration between the Heart Foundation and the University of Sydney and supported by the New South Wales Department of Health and Tasmania's department of Sport and Recreation. There are a number of existing government funded and supported websites which provide examples to support implementation [86-88].

The ASC leads a Clearinghouse for Sport website to "share knowledge and insights about sport, human performance, and increasing the levels of physical activity within our communities" [89]. This centralised website for sport-related information provides an example of a similar approach that could be replicated for an active travel clearinghouse for stakeholders – government, non-government, schools, parents, communities, researchers and policy makers to access for the latest evidence, best practice and build on 'what works'.

An online knowledge hub should facilitate networking, scan current or recent programs, catalogue what is working and where, and include implementation toolkits. Data collection and evaluation is central for learning, promoting best practice and showcasing innovation. The website should enable evaluation data to be collected across systems, localities and states. There are a number of Australian government websites which could be used as models for implementation.

The principles, lessons and impact of existing active travel initiatives should substantially inform the national policy framework of active travel for all school-aged children. Lessons can be learnt from tools such as the Health Promoting Schools framework and state and territory-based initiatives.

The cost

A virtual knowledge hub based on a national website would provide a high-impact, low-cost tool as part of the national framework. A virtual knowledge hub with capacity to develop and disseminate relevant resources for active travel infrastructure and for school and community resources is estimated to require \$3.6 million over three years.



Conclusion

A national policy framework, through the collaboration of national and state governments and with local government, schools and communities, offers an effective, simple and affordable means to increase the physical activity levels of Australia's children. Based on domestic and international evidence, an effective national approach to active school travel requires three components:

- 1. National leadership
- 2. A national target for physical activity
- 3. Active environments around all schools that prioritise pedestrians and cyclists

The forthcoming National Sports Plan is a step in the right direction. It presents an opportunity for the Australian Government to lead and support a national agenda for active school travel. State governments have the experience and skills to provide effective collaboration and support for a national strategy that build on successes to date and work to ensure that local governments, community organisations and schools can collaborate to provide every child with healthy and safe active travel to school opportunities.

The AHPC and leading Australian experts have compiled this three-part policy framework to offer a solution to the worryingly rising rates of physical inactivity in school aged children.

Enabling Australia's children to commute actively and safely is an essential component of a national effort to increase physical activity and improve health for all generations, communities and individual abilities.

A national active school travel policy framework is required and should comprise:

- **1.** Establishment of active environments adjacent to all schools that prioritise pedestrians and cyclists
- 2. Adoption of a national target for physical activity
- **3.** Establishment of a virtual knowledge hub for schools, communities and local governments to provide evidence and implementation information for active school travel initiatives

An investment of \$90 million, through the National Infrastructure Investment Fund over three years, will enable a nation-wide program to improve and provide active environments for all schools and get 3.7 million Australian school children on the pathway to a healthy future.

Physical activity is a powerful, preventive course of action to get the current and future health of Australia's children on track.



Appendix I

Method

To inform this paper, a policy review was conducted with the following objectives:

- 1. to obtain an overview of current Australian and relevant international policies and initiatives supporting active school travel;
- 2. to identify best practice examples applicable nationally.

The review was limited in scope, involving:

- web searches for key federal, state and territory policy documents;
- triangulation of web searches with published and unpublished policy analysis;
- discussions with key informants; and
- identification of national and international case studies.

Numerous gaps and discrepancies in the levels and kinds of relevant information were identified. A table showing AHPC's conclusions about the agendas and policies in place at national, state and territory levels is available on request. These findings are not exhaustive but they provide indications of what is happening with respect to active school travel across the country and enable some understanding of the key characteristics of the current policy landscape and how this might be strengthened.

Two expert roundtables were conducted, at the World Congress on Public Health (April 2017) and at the Victoria University (August 2017).



References

- 1. Tolhurst, P., et al., *Australia's Health Tracker*. 2016, The Australian Health Policy Collaboration, Victoria University: Melbourne.
- 2. Blacksher, E., *On Being Poor and Feeling Poor: Low Socioeconomic Status and the Moral Self.* Theoretical Medicine and Bioethics, 2002. **23**(6): p. 455-470.
- 3. Australian Institute of Health and Welfare, *Australia's health 2016*. 2016, AIHW: Canberra.
- 4. Lindberg, R., et al., *Getting Australia's Health on Track 2016*. 2016, Australian Health Policy Collaboration, Victoria University: Melbourne.
- 5. World Health Organization, *Global action plan for the prevention and control of noncommunicable diseases 2013-2020.* 2013: Geneva, Switzerland.
- 6. World Health Organization, *Draft WHO global action plan on physical activity 2018-2030*. 2017.
- 7. Janssen, I. and LeBlanc, A., *Systematic review of the health benefits of physical activity and fitness in school-aged children and youth.* Internation Journal of Behavioural Nutrition and Physical Activity, 2010. **7**: p. 1-16.
- 8. Booth, F.W., Roberts, C.K., and Laye, M.J., *Lack of exercise is a major cause of chronic diseases.* Comprehensive Physiology, 2012. **2**(2): p. 1143-1211.
- 9. Ding, D., et al., *The economic burden of physical inactivity: a global analysis of major non-communicable diseases.* The Lancet.
- 10. Salmon J, R.N., Morgan P, et al., *Action area 9: Children and adolescents.*, in *In: Blueprint for an active Australia. 2nd edn.*. National Heart Foundation of Australia: Melbourne: .
- 11. Okely, A.D., Booth, M.L., and Chey, T., *Relationships between Body Composition and Fundamental Movement Skills among Children and Adolescents*. Research Quarterly for Exercise and Sport, 2004. **75**(3): p. 238-247.
- 12. Davis A, Claiming the Health Dividend: A summary and discussion of value for money estimates from studies of investment in walking and cycling, Department of Transport, Editor. 2014: London,.
- 13. United Nations, United Nations Framework Convention on Climate Change. 1992.
- 14. Liu, R., et al., Socioeconomic Position Is Associated With Carotid Intima–Media Thickness in Mid-Childhood: The Longitudinal Study of Australian Children. Journal of the American Heart Association, 2017. **6**(8): p. 005925.
- 15. Allender, S., Cowburn, G., and Foster, C., *Understanding participation in sport and physical activity among children and adults: a review of qualitative studies.* Health education research, 2006. **21**(6): p. 826-835.
- 16. Tammelin, R., et al., *Tracking of physical activity from early childhood through youth into adulthood.* Med Sci Sports Exerc, 2014. **46**: p. 955-962.
- 17. Biddle, S. and Asare, M., *Physical activity and mental health in children and adolescents: A review of reviews.* British Journal of Sports Medicine, 2011. **45**(886-895).
- 18. Janssen, I. and LeBlanc, A., *Systematic review of the health benefits of physical activity and fitness in school-aged children and youth*. Internation Journal of Behavioural Nutrition and Physical Activity, 2010. **7**(1-16).



- 19. Biddle, S. and Asare, M., *Physical activity and mental health in children and adolescents: a review of reviews.* British Journal of Sports Medicine, 2011. **45**: p. 886-895.
- 20. Loprinzi, P., et al., *Benefits and environmental determinants of physical activity in children and adolescents.* Obesity Facts, 2012. **5**: p. 597-610.
- 21. Okely, A., et al., A systematic review to update the australian physical activity guidelines for children and young people. 2012, Commonwealth of Australia: Canberra.
- 22. Timmons, B., et al., *Systematic review of physical activity and health in the early years (aged 0–4 years).* Applied Physiology, Nutrition and Metabolism, 2012. **37**: p. 773-792.
- 23. World Health Organization (WHO), *Report of the commission on ending childhood obesity*. 2016, WHO: Geneva.
- 24. National Heart Foundation of Australia, *Position statement The built environment and walking*. 2009.
- 25. Active Healthy Kids Australia, *The road less travelled: The 2015 Active Healthy Kids Australia progress report card on active transport for children and young people.* 2015, Active Healthy Kids Australia: Adelaide, South Australia.
- 26. Katzmarzyk, P., et al., *The International Study of Childhood Obesity, Lifestyle and the Environment (ISCOLE): design and methods.* BMC Public Health, 2013. **13**: p. 900.
- 27. Australian Government Department of Health. *Australia's Physical Activity and Sedentary Behaviour Guidelines*. 2017; Available from: <u>http://www.health.gov.au/internet/main/publishing.nsf/Content/health-pubhlth-strateg-phys-act-guidelines#apa512</u>.
- 28. Active Healthy Kids Australia (AHKA), *Physical literacy: Do our kids have all the tools? The 2016 Active Healthy Kids Australia report card on physical activity for children and young people*. 2016, AHKA: Adelaide.
- 29. Sahlqvist, S., Song, Y., and Ogilvie, D., *Is active travel associated with greater physical activity? The contribution of commuting and non-commuting active travel to total physical activity in adults().* Preventive Medicine, 2012. **55**(3): p. 206-211.
- 30. Booth, V., *Trends in physical activity among South Australian school children from 1985 to 2013.* 2013: University of South Australia: Adelaide, SA. .
- 31. Salmon, J., et al., *Trends in children's physical activity and weight status in high and low socio-economic status areas of Melbourne, Victoria, 1985- 2001.* Australian and New Zealand Journal of Public Health, 2005. **29**(4): p. 33.
- 32. Ploeg, H.v.d., et al., *Trends in Australian children travelling to school 1971-2003: Burning petrol or carbohydrates?* Preventive Medicine, 2008. **46**(1): p. 60-2.
- 33. Ridgewell, C., Sipe, N., and Buchanan, N., *School travel modes: Factors influencing parental choice in four Brisbane schools.* Urban Policy and Research, 2009. **27**(1): p. 43-57.
- 34. Cancer Council Victoria, *National Secondary Students' Diet and Activity (NaSSDA) survey. 2012-13.* 2014, Cancer Council Victoria: Carlton.
- 35. Australian Institute of Family Studies (AIFS), *Growing Up in Australia, Longitudinal Study of Australian Children (LSAC)*. AIFS: Melbourne.
- 36. Australia Bureau of Statistics. *4364.0.55.004 Australian Health Survey: Physical Activity, 2011-12* 2013; Available from: <u>http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/462FBA87B642FCA4CA257BAC0 015F3CE?opendocument</u>.



- 37. Veitch, J., et al., *What predicts children's active transport and independent mobility in disadvantaged neighborhoods?* Health Place, 2017. **44**: p. 103-109.
- 38. Zubrick, S., et al., *Nothing but fear itself: Parental fear as a determinant of child physical activity and independent mobility*. 2010, Victorian Health Promotion Foundation (VicHealth): Melbourne
- 39. Garrard, J., Active transport: children and young people. An overview of recent evidence. 2009, VicHealth.
- 40. Lorenc, T., et al., *Attitudes to walking and cycling among children, young people and parents: A systematic review.* Journal of Epidemiology & Community Health, 2008. **62**: p. 852-857.
- 41. Garrard, J. and Crawford, S., *Evaluation of the Victorian Ride2School program: impacts and insights into promoting active travel to school.* Journal of Environmental and Public Health, 2013.
- 42. Wood, G., et al., *Individual, physical-environmental and socio-cultural factors associated with walking to school in Perth primary school children.* Journal of Science and Medicine in Sport, 2009. **12**(6): p. 170.
- 43. Trapp, G., et al., *Increasing children's physical activity: Individual, social, and environmental factors associated with walking to and from school.* Health Education & Behavior, 2012. **39**(2): p. 172-182.
- 44. Carver, A., et al., *A comparison study of children's independent mobility in England and Australia.* Children's Geographies, 2013. **11**(4): p. 461-75.
- 45. Gebel, K., et al., *Position statement: The built environment and walking*. 2009, The Heart Foundation.
- 46. Heart Foundation. *Healthy Active by Design*. 2017; Available from: <u>http://www.healthyactivebydesign.com.au/</u>.
- 47. Dollman, J. and Lewis, N.R., Active transport to school as part of a broader habit of walking and cycling among South Australian youth. Pediatr Exerc Sci, 2007. **19**(4): p. 436-43.
- 48. Australia Bureau of Statistics, *Participation in Sport and Physical Recreation, Australia,* 2013-14 (Cat no. 4177.0). 2015.
- 49. World Health Organization, *Infographic: Make physical activity a part of daily life during all stages of life*. 2015, Regional office for Europe.
- 50. World Health Organization (WHO), *Montevideo roadmap 2018-2030 on NCDs as a sustainable development priority*. 2017, WHO Global Conference on NCDs: Montevideo, Uruguay, 18-20 October 2017.
- 51. Australian Capital Territory Canberra, *Active travel to school: literature review*. 2011, Health.
- 52. Garrard, J., Rissel, C, Bauman, A.,, *Health benefits of cycling*. In Pucher J, Buehler R. eds. 2012. 2012: MIT Press, Cambridge, Mass, pp. 31-54.
- 53. Smith, A., et al., The impact of additional weeekdays of active commuting on children achieving a criterion of 300+ minutes of modrate-to-vigorous physical activity, in Australasian Association for Exercise and Sports Science Conference. 2008: Melbourne, March 2008.
- 54. Voss, C. and Sandercock, G., *Aerobic fitness and mode of travel to school in English schoolchildren.* Med Sci Sports Exerc, 2010. **42**(2): p. 281-7.



- 55. Davison, K., Werder, J., and Lawson, C., *Children's active commuting to school: Current knowledge and future directions.* Preventing Chronic Disease: Public Health Research, Practice and Policy 2008. **5**(3): p. 1-11.
- 56. Kohl, H.W., Craig, C.L., Lambert, E.V., Inoue, S., Alkandari, J.R., Leetongin, G., Kahlmeier, S. and the Lancet Physical Activity Series Working Group,, *The pandemic of physical inactivity: global action for public health.* The Lancet, 2012. **380**(9838): p. 294-305.
- 57. The Government of Western Australia, *Your Move*, D.o. Transport, Editor. 2017.
- 58. Government of Western Australia, *Be Active WA Physical Activity Taskforce*. 2012.
- 59. National Preventative Health Taskforce, *Australia: The Healthiest Country by 2020 National Preventative Health Strategy the Roadmap for Action*. 2009, Department of Health: Canberra.
- 60. Giles-Corti, B., et al., *The co-benefits for health of investing in active transportation*. New South Wales Public Health Bulletin, 2010. **21**(6): p. 122-127.
- 61. Bellew, B., et al., *The rise and fall of Australian physical activity policy 1996 2006: a national review framed in an international context.* Australia and New Zealand Health Policy, 2008. **5**(1): p. 18.
- 62. Hosking, J., Ameratunga, S., and Bullen, C., *How can we best intervene in the trip to school? Pathways from transport to health.* Australian and New Zealand Journal of Public Health, 2011. **35**(2): p. 108-110.
- 63. Watson, M. and Dannenberg, A., *Investment in Safe Routes to School Projects: Public Health Benefits for the Larger Community.* Preventing Chronic Disease, 2008. **5**(3): p. A90.
- 64. Stewart, O., Moudon, A.V., and Claybrooke, C., *Multistate Evaluation of Safe Routes to School Programs.* American Journal of Health Promotion, 2014. **28**(3_suppl): p. S89-S96.
- 65. Safe Routes to School National Partnership. *Physical Activity, Obesity and Health*. n.d.; Available from: http://saferoutespartnership.org/resources/academicresearch/impact-of-physical-activity.
- 66. Sustrans. Active School Travel in Northern Ireland. n.d; Available from: <u>https://www.sustrans.org.uk/NIschools</u>.
- 67. Safe Routes to School Canada, *The Benefit Cost Ratio of School Travel Planning*. 2017.
- 68. Kennedy, J., Children's Mobility, Health and Happiness: A Canadian School Travel Planning Model. 2012.
- 69. Green Communities Canada, *Canadian School Travel Planning Pilot Test Final Report*. 2012, Green Communities Canada.
- 70. Flanagan, C. and Mitra, R., *International Best Practices in Regional Planning for School Travel*. 2016, Ryerson University: Canada.
- 71. Department of Transport, *Modeshift STARS: The National School Travel Awards Scheme*. n.d.
- 72. Department of Transport, *Modeshift STARS: The National School Travel Awards Scheme Year 1 Delivery Report*. n.d.
- 73. Government of Western Australia, *WA Your Move Schools Program Case study*, Department of Transport, Editor. 2017.
- 74. The Government of Western Australia, *TravelSmart to School program review: Strengths, Weaknesses, Opportunities and Threats (internal report).* 2015.



- 75. Healey M & Gilmour P, Evaluation Report Ride or Walk to School Program prepared for ACT Health. 2017.
- 76. Australian Capital Territory Government. *Budget 2016-2017 For Canberra*. Available from: <u>https://apps.treasury.act.gov.au/ data/assets/pdf file/0005/870926/2016-17-ACT-Budget-All-Media-Releases-5.pdf</u>.
- 77. National Heart Foundation of Australia, *Blueprint for an active Australia. 2 edn.* 2014: Melbourne: National Heart Foundation of Australia,.
- 78. World Health Organization, *Global Plan for the Decade of Action for Road Sfaety 2011-*2020. 2011.
- 79. The Government of Western Australia, *Safe Active Streets Program*, Department of Transport, Editor. 2013.
- 80. University of New South Wales. *Beyond the city heathy built environments in regional and rural localties*. City Futures Blog 2017; Available from: <u>http://blogs.unsw.edu.au/cityfutures/blog/2017/09/beyond-the-city-healthy-built-environments-in-regional-and-rural-localities/</u>.
- 81. Oliver, M., et al., Associations between the neighbourhood built environment and out of school physical activity and active travel: An examination from the Kids in the City study. Health & Place, 2015. **36**: p. 57-64.
- 82. Masters R et al, *Return on Investments of public health interventions: A systrematic review.* JECH online, 2017. March 29.
- 83. The Government of Western Australia, *WA Bicycle Network Grants*, Department of Transport, Editor. 2017.
- 84. Australian Bureau of Statistics. *4221.0 Schools, Australia 2016*. 2017; Available from: <u>http://www.abs.gov.au/ausstats/abs@.nsf/mf/4221.0</u>.
- 85. Dobbins, M., et al., *School-based physical activity programs for promoting physical activity and fitness in children and adolescents aged 6 to 18.* Cochrane database of systematic reviews (Online), 2013. **2**.
- 86. Australian Government Department of Health. *Bladderbowel.gov.au*. n.d.; Available from: <u>http://www.bladderbowel.gov.au/</u>
- 87. Australian Government Cancer Australia. *Cancer Australia*. 2018; Available from: <u>https://canceraustralia.gov.au/</u>.
- 88. Australian Government. *myagedcare*. n.d.; Available from: <u>https://www.myagedcare.gov.au/</u>.
- 89. Australian Government Australian Sports Commission. *Clearinghouse for Sport*. Available from: <u>https://www.clearinghouseforsport.gov.au/about</u>.



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