



A prevention lens on the roles of an Australian Centre for Disease Control

INTRODUCTION

The Australian Prevention Partnership Centre (the Prevention Centre) is a national collaboration of researchers and policy partners working together to prevent chronic disease. It is a trusted voice on the systemic nature of chronic disease, and through science communication and its extensive networks provides evidence to inform and support policy and practice.

We commend the Australian Government's commitment to establishing an Australian Centre for Disease Control (CDC) that includes in its remit the prevention of non-communicable chronic disease. This discussion paper considers some of the important aspects of chronic disease prevention that we believe could be addressed by a CDC.

The Prevention Centre primarily works with population health research and policy partners to better understand the systems that create and perpetuate chronic disease in the Australian population, and to identify potential solutions. We believe an Australian CDC could be well placed to build on our work and provide strong national leadership to boost investment and action on chronic disease prevention.

An appropriately funded CDC could communicate the evidence on the importance and value of system-based solutions to new, broader audiences, including the public, to build social licence for effective prevention. It should also provide new, nationally coordinated mechanisms for distilling and sharing evidence, experience and learnings across jurisdictions.

Our reflections in this paper were informed by our 10 years of chronic disease prevention research, as well as discussions with policy partners from all state and territory jurisdictions, our scientific leadership executive, and selected representatives from our collaboration with NHMRC Centres of Research Excellence.

The Prevention Centre has generated valuable evidence, insights and resources that could inform and support the prevention-focused roles and functions of an Australian CDC. Our [comprehensive submission](#) to the Australian Government Department of Health and Aged Care consultation on the roles and functions of the CDC is available on our website. It also includes further suggestions about priorities for policy implementation, investment in prevention research, accountability and workforce development.

Key recommendations



Promote wider recognition of the value of prevention to reduce the burden of chronic disease

02



Champion systems thinking approaches for the prevention of chronic disease

03



Enable health and other sectors to measure and address the co-benefits of preventive action

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Support data solutions for chronic disease risk factors and outcomes

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Enhance policy implementation and focus on equity when evaluating impact

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An Australian CDC to promote wider recognition of the value of prevention

It is important the CDC is designed to be fit for purpose for inclusion of prevention given the growing burden of chronic disease in Australia.

Chronic diseases cause nine out of every 10 preventable deaths and account for 85% of years lost due to ill health or early death in our country. This is despite evidence that almost half of all known health risk factors can be redressed with known, effective preventive policies or practices.

An Australian CDC could have an enormous impact on encouraging much needed investment in prevention and the ability to expand proven interventions on a much larger scale.

The burden of chronic disease is not equal among all Australians. Lower socioeconomic groups, people living in rural or remote areas, and Aboriginal and Torres Strait Islander peoples are disproportionately affected. If we all experienced the same disease burden as the most advantaged Australians do, a fifth of the burden of chronic disease would be reduced.

Chronic diseases and their risk factors are also associated with a range of costs to government, industry and society beyond the health system. Alcohol consumption for example can lead to increased crime and violence, reduced productivity, premature retirement as well as mortality.

We have evidence of clear interactions between communicable diseases and non-communicable chronic diseases, along with the factors that make people vulnerable to the impacts of both. These common elements include complex interactions between biological and psychological factors, and the social, cultural and environmental determinants of disease risk and prevention pathways.

An Australian CDC should be able to communicate and expand what is known about the linkages between communicable and chronic diseases, and build public understanding and social licence for effective and equitable preventive policies and programs.



Example: Our evidence on the value of prevention to reduce alcohol consumption

Primary prevention strategies that target the significant problem of alcohol consumption in Australia have many health, social, economic and other benefits for governments, businesses, communities and individuals. [Prevention Centre research](#) on the health and economic burden of alcohol use and the effectiveness and cost-effectiveness of actions that can be taken to reduce this burden can help strengthen the quality of decisions made to improve healthy outcomes in the community.



Visit our website for more information about the [value of prevention](#) and the [burden of chronic disease](#).

An Australian CDC to champion systems thinking approaches for the prevention of chronic disease

The causes of chronic diseases are complex and varied. Many interconnected factors contribute to people's health, including their environment and the options available to them, as well as their background, social and economic circumstances and their behaviours. This complexity means we need new ways to tackle the problem of chronic disease.

To effectively prevent complex chronic health problems in the long term, we need to address the impact on health of social, economic and environmental factors and how these interact with health promoting behaviours. This requires a systems approach.

Current guidance on addressing the structural and economic determinants of health, making better use of public health law, and strategies to manage

unhealthy industries' influence on public policy is less well developed than the guidance on program and educational approaches to prevention.

An Australian CDC should prioritise developing guidance on systemic levers for prevention to identify what actions will have the most impact.

It should also lead new partnerships among existing agencies beyond the health sector to capitalise on opportunities to co-design initiatives and share knowledge and resources aimed at addressing shared imperatives across portfolios.



Some evidence and resources on systems thinking

The Prevention Centre has a decade of experience in developing and supporting the application of systems approaches to the prevention of chronic disease. Systems thinking helps to make sense of complex problems by exploring the causes, boundaries and interrelated parts of those problems from different perspectives.

Projects have applied systems approaches to prevention within health systems, primary care networks, community organisations, local communities and non-health sectors such as retail, urban planning and transport. We have studied food supply systems, prevention financing, monitoring and evaluation systems, and prevention regulation and legal systems.

We have also applied systems science to identify new solutions for obesity, food insecurity, diabetes, physical inactivity, alcohol consumption, urban liveability, tobacco control and chronic disease in people with mental ill health.



Visit our website for more information about [systems thinking approaches to prevention](#).

An Australian CDC to enable health and other sectors to measure and address the co-benefits of prevention

Taking a systems approach to the prevention of chronic disease also highlights the many 'co-benefits' of prevention. Co-benefits refer to the multiple benefits across different policy or program areas that can arise from a preventive health strategy or initiative.

For example, action that aims to prevent chronic disease is also likely to improve productivity, reduce absenteeism and achieve economic benefits for Australia.

In the same way, action in other portfolios also affect health. For example, promoting public transport to reduce traffic congestion will also increase levels of physical activity and reduce air pollution, benefitting health.

Many of the root causes of chronic disease – and some of the most effective strategies to prevent chronic disease – lie outside the health sector. Considering the

co-benefits of preventive health policies can also help break down silos and create opportunities for sectors to work together on addressing common risk factors.

Currently, most evaluations, reviews and syntheses of chronic disease prevention do not identify co-benefits or measure them as primary or secondary outcomes.

An Australian CDC should enable greater understanding and measurement of the co-benefits of prevention, and encourage and support their inclusion when evaluating impact. This would support government decision making and make the case for greater investment in prevention.



Example: Measuring the co-benefits of more liveable cities

Measures to create a more liveable built environment result in improved health through increased physical activity, reduced pollution and better social connection along with the potential to strengthen the economy and enhance environmental sustainability.

Prevention Centre researchers have developed a national database of indicators for the liveability domains of walkability, transport, public open spaces, food environment, alcohol environment, housing affordability and employment.



Visit our website for more information about the [co-benefits of prevention](#) as well as the [importance of healthy liveable cities](#).

An Australian CDC to support data solutions for chronic disease risk factors and outcomes

There are significant gaps in national data on chronic disease risks and outcomes which have been detrimental to Australia's efforts to act on prevention. More relevant, accurate and consistent longitudinal data are essential for understanding changes over time. This will support comparisons of potential solutions, and better support evidence-informed investment decisions.

For example, our research has identified how the lack of a national dataset and inconsistencies in measuring physical activity hamper a system-wide approach, and this issue applies across many other areas.

The Prevention Centre is a pioneer of dynamic simulation modelling of chronic disease prevention as a decision-support tool for policy makers. We help provide the 'what if' tools to help prevention agencies test the likely impact of a range of possible solutions to prevent chronic disease before implementing them in the real world.

Our models have been used by health departments to assess the effectiveness of alcohol harm reduction policies, compare strategies to reduce smoking, compare options for gestational diabetes care, and to inform strategic planning to achieve child obesity targets.

However, the current lack of consistent and reliable national data means that Australia continues to face a range of limitations in chronic disease prevention scenario modelling.

A CDC should help improve consistency in Australia's prevention databases and data registries and support the coordination and sharing of data. It should also advocate for including health economic data on the value, costs and benefits of prevention to support the business case for investment in prevention.



Example: Our evidence on scenario modelling and gaps in data

The Prevention Centre has built a national dynamic simulation model of chronic disease prevention based on trends in prevalence of nine modifiable risk factors. The GoHealth model has the potential to forecast the health burden and economic costs of preventable disease and allow policy scenario testing to understand how best to allocate investments and actions across risk factors to achieve the greatest impacts.



Visit our website for more information on [dynamic simulation modelling](#).

An Australian CDC to enhance policy implementation and focus on equity when evaluating impact

While there is much good quality evidence on what prevention policies and practices work, broad implementation of the most effective strategies remains limited. More widespread and equitable implementation of cost-effective interventions will improve health and reduce health inequity.

An Australian CDC should be in a position to support action on cross-jurisdiction priorities through national coordination, implementation science, science communication and public advocacy.

A CDC should also fill the gaps where further evidence is needed for policy agencies to fulfil their roles. For example, better sharing of lessons across agencies on what works in the implementation, adaptation and scale up of successful prevention.

A CDC should also support national action on health equity. For example, Australians who live in poorer suburbs, in rural and remote areas with limited access to services and healthy affordable food outlets, or those who themselves experience disadvantage, are at significantly greater risk of chronic disease, as well as poorer educational, professional and social outcomes.

Effective prevention should lower national rates of chronic disease, as well as reducing inequities in health.

Prevention should also address existing inequities in the social, environmental, economic, cultural and commercial areas of life that impact the health of all Australians.



Example: Our evidence on food policy implementation

Unhealthy diet is one of the leading preventable risk factors contributing to the burden of disease. Prevention Centre research developed Australia's First [Food Environment Dashboard](#) that provides the best available data on how implementing priority policy actions could be better supported. Our researchers collaborated with key stakeholders to develop, implement and evaluate specific demonstration projects to improve population diets.



Visit our website for more information on [implementation and scale up](#) and [priority actions in the food and nutrition system](#).

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