PROGRESS SNAPSHOT

The Australian Prevention Partnership Centre

The GoHealth model: A decision-support tool for policy makers

An interactive policy simulation tool to determine the comparative impact of prevention strategies on health outcomes, health system burden, and economic productivity.

Issue

An interdisciplinary research team has developed a dynamic simulation model to demonstrate the value of reducing risks for chronic health conditions such as respiratory conditions, cardiovascular disease, kidney disease, cancer and diabetes.

Strategy

This national system dynamics model will give Australian policy makers an understanding of the quantitative trade-offs of alternative prevention strategies over the short and long term.

Solution

The final model will help advance our understanding of what scale and combination of risk factor reduction will deliver best outcomes. This will help determine where to focus future actions and investment.

"Once completed, this model will show how strategies to address one risk factor will influence others. It will help us think more globally about different impacts of interventions over time, the interactions of strategies, rather than the volume, and the sum benefit we might be able to gain with strategic investment in prevention."

– Professor Andrew Wilson, Co-Director, the Prevention Centre

Building the GoHealth model

The national dynamic simulation model will project chronic disease occurrence, Disability Adjusted Life Years (DALYs), healthcare costs and the cost of lost productivity across eight key risk factors – tobacco, harmful alcohol consumption, physical inactivity, high BMI, low fruit and vegetable consumption, high cholesterol and high blood pressure.

The impact of these key risk factors (individually and in combination) on select chronic diseases, simulated over time, will allow the model to estimate DALYs which comprise both years of life lost due to disease and years of life lived with disability.

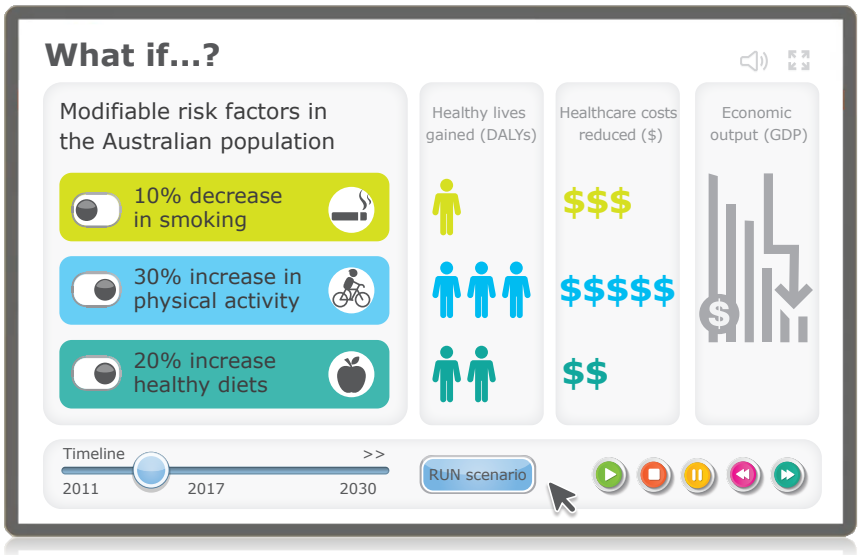
The model also adjusts for co-morbidities in the population. These individual disease trajectories are currently being finalised by the team.

The team is also confirming the economic components, including productivity measures, such as the income and productive value lost due to premature death, exiting the labour force due to severe illness, and absenteeism.

The model captures 'cost offsets', which is the reduction in future health care expenditure due to reduced chronic disease. Risk factor and disease data are robust, validated against Australian Burden of Disease and Global Burden of Disease data.

Investment strategy tool: Scenario testing

The value of this model lies in its ability to test the impact of prevention strategies of most interest to policy makers. For example, this model could be used to assess the impact of a heart disease program, shown to improve healthy behaviours, on overall disease burden and healthcare expenditure. Combinations of strategies to determine the best prevention investment choices can also be applied.



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Participatory modelling workshop, Canberra, 2018.

Project timeline

2018

Project approved

2019

Data discovery

Conceptual model development

Testing concept with stakeholders

2020

Data collation from multiple sources

Data cleaning and analysis

Model construction and validation

Initial model sharing and focus testing

2021

Release model to policy partners

Promote model to sectors outside health

Interested in testing the GoHealth model?

Towards the end of 2020, we will share the model's dashboard (online interface) with policy stakeholders. This will provide a unique opportunity for decision makers to interact with the model and for researchers to gain valuable feedback on the indicators of interest, validity of model assumptions, and scenarios of interest to policy makers. We will then refine the model before releasing it more widely.

Throughout the project, the team has taken a participatory approach that brings multidisciplinary stakeholders together to collaborate and explore policy and health service scenarios. While pandemic restrictions have limited physical stakeholder participation over the past six months, the Prevention Centre has facilitated an extension of the project to March 2021 to enable further engagement. The final dashboard will be made available to all Prevention Centre partners.

The model will provide policy makers in health and non-health sectors with a robust and interactive tool to test alternative investment strategies before implementing them in the real world. It will be well placed to support policy makers with the upcoming National Preventive Health Strategy.

Register interest in attending a preview of the GoHealth model here

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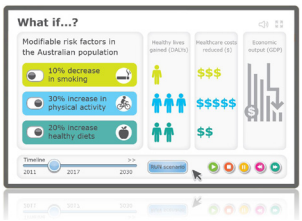

The Compelling Case for Prevention project team

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Find out more about the Compelling Case for Prevention project at: **preventioncentre.org.au**

The Australian Prevention Partnership Centre

Our Funding Partners

The Australian Prevention Partnership Centre is funded by the NHMRC, Australian Government Department of Health, ACT Health, Cancer Council Australia, NSW Ministry of Health, Wellbeing SA, Tasmanian Department of Health, and VicHealth. The Prevention Centre is hosted by the Sax Institute.

Published October 2020.

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