

Seven steps to targeted policy for complex public health problems



The Australian Prevention Partnership Centre
Systems and solutions for better health

A policy analysis tool to inform effective policies for complex public health problems

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The challenge

Social, economic, cultural, interpersonal and individual-level risk factors interact in complex ways driving the epidemic of chronic disease.

This makes it challenging for policy makers trying to design effective prevention policies.

Existing priority setting tools are inadequate for complex problems.

The inability to determine the relative importance of risk factors has led to an approach that attempts to tackle all modifiable risk factors.

This approach assumes that policies that broadly address risk factors are likely to be more effective.

The comprehensive approach to tackling complex public health problems may not represent the most efficient or effective strategy.* Rather, it may simply spread finite resources less intensively over a greater number of programs and initiatives, diluting the potential impact of the investment.



A possible solution

Systems science methods have been successfully applied to engineering, defence, economics, ecology and business sectors since the mid-1950s.

Systems dynamic modelling can help map problems of complex causation and simulate policy scenarios to test their comparative impact and cost.

Such approaches could inform efficient and effective policy responses by identifying which risk factors should be targeted for the greatest impact on chronic disease burden.

*Atkinson J, Page A, Wells R, Milat A, Wilson A: A modelling tool for policy analysis to support the design of efficient and effective policy responses for complex public health problems. *Implementation Science* (in review) 2014.

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Steps to developing a policy analysis tool

The seven-step process for developing a policy analysis tool was adapted from existing models. This process integrates diverse evidence sources and guides the practical use of research findings and data to generate projections that can guide policy decisions for complex public health problems.

STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6	STEP 7
Identify from the literature the most likely causal pathways to the complex health problem	Convene stakeholder group (such as policy makers, academic and practice experts, a systems dynamic modeller, health economist, NGO and interest groups)	Collaboratively formulate a high-level map of the complex problem drawing on research evidence and expert knowledge	From the qualitative map, a sub-team develops a quantitative simulation model using context-specific data	The model is presented back to the stakeholder group for feedback, discussion, modification and consensus	The model is tested and validated, including ensuring that it can reproduce real-world historical data patterns	The model is ready for policy makers to test policy scenarios

The benefits for policy makers

- Public health policy makers can use the policy analysis tool to simulate the likely impact of a variety of possible policy responses.
- The tool provides a platform for strengthening relationships between policy makers, stakeholders and researchers.
- The tool informs policy makers of ideal targeting and necessary intensity of public health action. It can guide decisions about what can be reasonably left out of prevention strategies or where disinvestment could occur without adversely affecting population health. This could improve the efficiency, effectiveness and equity of prevention strategies.

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