

8 September 2025

To: Productivity Commission

From: Professor Tony Blakely¹ and Scalable Health Intervention Evaluation program (SHINE) team ²,
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Dear Sir/Madam,

Submission on Chapter 3 (*A National framework to support Government investment in prevention*) of the *Delivering Quality Care More Efficiently* report

Our submission is structured in three parts:

1. Declaration of Blakely's and SHINE team's expertise and interests.
2. Response to specific consultation questions.
3. General comments and suggestions regarding how SHINE and similar infrastructure could assist.

Declaration of our own expertise and interests

Blakely is a public health medicine specialist and epidemiologist – who, over a 30-year research career, has also developed considerable experience in economics, data science, and engaging with policy. He has broad knowledge across public health.

Since 2019, Blakely has been a full time research professor at the University of Melbourne, focusing mainly on building research infrastructure to allow the rapid assessment of public health interventions onto health gain, health inequality reduction, future changes in health system expenditure and income gain ([Scalable Health Intervention Evaluation \(SHINE\)](#)).

Examples of our research include:

- Evaluation of 'Tobacco Endgame' policies for the NZ Government [1, 2]. This work demonstrated that large health gains, very large health inequality reductions, substantial health care cost savings, and gains in workforce income would result from the package of policies be implemented. Our work contributed to the NZ Government legislating the endgame package on 12 Dec 2022 (but it was repealed by the incoming Government).

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² Driss Ait Ouakrim (epidemiologist; expertise in colorectal cancer and tobacco), Tim Wilson (mathematician; expertise in software and data system builds, and simulation modelling), Stephanie Khuu (biomechanics and data science; expertise in data visualisation), Bibha Dhungel (epidemiologist; expertise in tobacco and multiple other risk factors for health), Emily Kay (research manager) and Samantha Howe (tobacco and simulation modelling).

- Modelling a reduction in sodium across the Australian food system (publication in press, report here https://mispgh.unimelb.edu.au/_data/assets/pdf_file/0004/4783405/The-Health-and-Cost-Impacts-of-Sodium-Reduction-Interventions-in-Australia.pdf). This analysis demonstrated the triple wins of food reformulation in Australia to include less sodium: health gain; health inequality reduction (modest), cost saving from multiple system and funder perspectives (see Figure 2 on page 52 of the report).
- Modelling of the health and economic impacts of a "Tobacco Free Generation" legislation for the South Australian Government, including the long-term effects of the policy on specific population sub-groups by socio-economic status, remoteness and Indigenous status.
- Multiple other papers analysing a variety of health risk factors (e.g. obesity, cold housing; see [Scalable Health Intervention Evaluation \(SHINE\)](#)).

On August 13, 2025, we launched the Health Intervention Impact Calculator (HIIC; www.shine-hiic.com), a world first, free to use online tool for evaluating and comparing the health and economic impacts of public health interventions. HIIC enables users to specify an intervention in terms of:

- **Its target**, whether the intervention changes disease rates directly (e.g., a new treatment for diabetes), or an upstream risk factor that then flows on to effect disease incidence rates (e.g., public health campaigns targeting tobacco use or alcohol consumption)
- **Its cost**, including start-up and ongoing program expenses

The HIIC tool then **visualises outputs or impacts** of an intervention (as shown below) for:

- **Future health gains**, expressed as health-adjusted life years (HALYs), which captures both *morbidity* (how healthy people are while they are alive) and *mortality* (length of life)
- **Changes in health system expenditure**, showing how health system expenditure may initially fall but rise over the long-term as people live longer and develop other conditions – a critical consideration for an ageing population.
- Future **changes in income** among 25-64 year olds, due to a healthier and larger working age population.
- **Cost-effectiveness**, measured as cost per HALYs gained (when intervention costs are specified).

These outputs are calculated in a highly standardised manner, allowing direct or 'like-for-like' comparison across any intervention, be it through diseases or risk factors, and therefore supporting better prioritisation of interventions in the context of constrained capability, resources and healthcare budgets.



A view of the HIIC tool

HIIC is a significant achievement and directly aligns with the type of infrastructure the Productivity Commission is envisaging. It provides the capacity needed by the *Prevention Framework Advisory Board* to assess public health prevention initiatives. The tool goes beyond cost effectiveness, capturing a wider set of health and economic outcomes to support multi-criteria decision making. Currently, HIIC operates for Australia, covering almost 300 diseases, and several key risk factors. Over the next 12 months, we will expand HIIC to include more risk factors, and other countries.

Response to specific consultation questions

When prioritising different proposals, how should factors such as overall net benefits, net fiscal effects, cost-effectiveness, equity, ease of implementation, timescale and the value of future benefits and costs be weighted? Are there existing frameworks that do this well?

A dashboard approach is needed. Public health policy cannot rely on a single incremental cost-effectiveness ratio. Decision making requires consideration of multiple criteria [3-6], including:

- magnitude of health gain (population wide, within targeted group, and per capita), and the timeframe over which those health gains accrue
- reduction in health inequalities and the magnitude of that reduction
- upfront intervention costs
- downstream savings (if any) in health system expenditure from changes in disease prevalence or severity
- social impacts, such as workforce productivity and carer costs.
- public and political preferences, and broader social values.

Determining how to weigh-up for these criteria is challenging. At a minimum, they should be made explicit and available for deliberation in a decision-making process. Our approach in SHINE and through the HIIC tool is to present each component separately and allow the user to combine or weigh them as appropriate. This method is well established in public health: e.g., in ACE Prevention, this was called 'second stage filters' [7, 8], while in more recent ACE-Obesity work they were described as 'implementation considerations'. [9, 10]

This approach, more formally Multi-Criteria Decision Analysis (MCDA), is a framework that is particularly relevant for prevention and public health. MCDA is a well-established approach and structured method to assess competing interventions across diverse and often conflicting criteria. [3-6]

The HIIC tool can operationalise MCDA principles by delivering a dynamic dashboard that presents multiple intervention criteria – health gains, equity, costs, fiscal impact, social outcomes, and timelines – simultaneously. Users can weigh these criteria (and others) given the context and values for the intervention of focus.

Should there be minimum cost-effectiveness and/or cost-benefit ratios and how should they be set?

No. There are two main reasons:

1. Decisions must consider multiple criteria (above), not cost-effectiveness alone.
2. Minimum thresholds are unnecessary. They might also oversimplify complex contexts and risk distorting prevention choices.

The *Delivering Quality Care More Efficiently* report appears to assume that programs with distinct upfront costs will be considered. Yet, some of the most effective prevention policies have little implementation cost but require political and institutional commitment – for example, taxes on soft drinks or regulations to reduce sodium in processed foods. The Report should recognize this distinction.

Relatedly, Figure 3.1 insufficiently addresses primordial prevention, which tackles broader social determinants across health, education and justice domains. This omission narrows the understanding of prevention.

How should decision makers balance the need to assess early effectiveness of programs with the need to maintain consistent long-term funding for programs with long-term benefits?

Several mechanisms can be deployed:

- Have a portfolio of interventions recommended, across many axes of diversity (cost, target population, etc) including short- versus-long-term duration until impacts gained.
- Use careful scenario modelling at the outset, with robust sensitivity analyses about time lags, attrition, etc.
- Generate interim outcomes that the program can be monitored against (e.g. smoking prevalence change, that precedes by years changes in disease rates).

How could a diversification strategy be designed to ensure that prevention programs from different sectors and with benefits across different timeframes are funded?

We propose at least a ring-fencing of a budget for preventive interventions, accompanied by a diversity matrix over which proposals are considered each year.

How should a National Prevention Investment Framework be implemented? What is the best way to incentivise Australian, state and territory governments to invest in prevention to improve future outcomes and avoid future costs?

Regarding incentivisation, one suggestion is to focus on population ageing. From a health perspective at least, prioritising prevention that reduces pressure on health systems – and increases workforce productivity – should/could be attractive to both sides of politics, and Federal and State Governments if it can reduce health service demand.

Should alternative approaches be considered for governance of the framework, including institutional setting, processes for arriving at co-funding arrangements, decisions and evidence requirements?

The location of the *Board* will be critical. Will it sit in (or just beside) the Department of Prime Minister and Cabinet, Treasury, or elsewhere? Our SHINE team is not expert in these matters (and we therefore largely defer to other submitters). But Blakely has recent parallel experience on this matter that lends two potential lessons here:

- For national risk management (in particular pandemics) in his role as Chair of the NZ Royal Commission on COVID-19 Lessons Learned, deliberating on how to recommend governance was critical. A strategic decision is required by The Productivity Commission whether to recommend structures, form and where governance and management sits – or focus more on function and allow the recipients of the Report to decide on structures.
- Bipartisan political support is critical. An institution such as a Prevention Framework Advisory Board is vulnerable to disestablishment by an incoming Government. For example, the abolishment of the Australian National Preventative Health Agency in Australia in 2014, and the abolishment of the Public Health Commission in NZ in 1996. One pathway to bipartisan support is to balance the gains across political agendas. For example, the reinvigorated Social Investment Agency in NZ has strong appeal to the right of politics, and is not too removed from the objectives of the left of politics. A structure (or Board here) needs very careful establishment to allow multiple political perspectives to see it as being able to fulfill their objectives – and the possibility that the work program does vary somewhat with the political cycle (whilst still retaining long term goals and programs and policies).

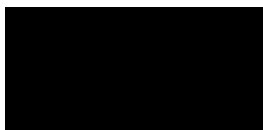
General comments and suggestions regarding how SHINE and similar infrastructure could assist

An investment in, and easy access, to linked datasets is critical to success (e.g. PLIDA). We note that Social Investment Agency in NZ is heavily reliant on Statistics NZ Integrated Data Infrastructure (equivalent to PLIDA). We also note from our own experience how challenging it is to link health (including State-level hospitalisation data) and tax and welfare data in Australia to estimate income and welfare changes with disease – an extremely useful

departure point for estimating income productivity gains from preventing disease, that was relatively easily achieved in the Statistics NZ IDI.[11] Data linkage in Australia continues to improve – but there is much more to be done to improve the productivity of research and analyses to inform policy.

SHINE is one aspect of infrastructure that could be used for scenario planning and modelling; we are happy to discuss further if requested.

Sincerely



Professor Tony Blakely and the SHINE team.

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