

The Economics of Preventive Care

RAPID LITERATURE SCAN

Summary: Preventive Medicine and Preventive Health make economic sense while simultaneously providing diverse benefits for individuals, communities, government and businesses. There are four common risk factors: obesity, unhealthy diet, physical inactivity and tobacco use. These contribute significantly to Australia's burden of disease, accounting for 27.5% of this. (Howse et al., 2021) A wide variety of international literature demonstrates the societal and economic benefits of preventive care.

Special commission of enquiry into healthcare funding in New South Wales:

WHAT ARE THE ECONOMIC BENEFITS OF PREVENTIVE CARE?

Approach: Rapid Literature Scan performed by Tina Vickery and Professor Jeffrey Braithwaite on behalf of Australian Institute of Health Innovation.

Method: On November 21st, 2024, a rapid literature search was conducted in PubMed. The search strategy comprised the terms "Preventive Care" OR "Preventive Medicine" AND "Economic Evaluation" OR "Cost-Benefit Analysis" in English published in the last 10 years.

Results: The search yielded 1, 947 results. The search results can be [found here](#). Table 1 summarises some key studies.

Table 1 Key studies and publications of particular note

Reference	Summary
(Bailey et al., 2022)	A decision tree model was constructed to compare lifestyle intervention effects from a novel meta-analysis. The target population was women with singleton pregnancies and births at more than 20 weeks' gestation. Physical activity interventions reduced adverse maternal events by 4.2% compared to the standard care group, and diet and physical activity reduced events by 2.9%. Incremental cost-effectiveness ratios were defined as the cost per case prevented. Diet interventions and diet and physical activity interventions were found to have an incremental cost-effectiveness ratio of AUD \$4882 and AUD \$2020, respectively.
(Taylor et al., 2023)	A scoping review of articles published between 2005 and Feb 2022 found Interventions which target adult obesity (behavioural and community interventions), Type 2 Diabetes (lifestyle interventions), smoking cessation (adult inpatient program and non-nicotine therapies), and fractures (fracture liaison service) to be cost-effective .
(Fraihat et al., 2019)	Oral Health Promotion Programs were shown to be effective at lowering the cost in 97 out of 100 oral health promotion programs (95% CI 89–99%, I ² : 99%, p = 0). A comprehensive analysis of the OHPPs confirmed a reduction effect on child decay, missing or filled teeth , hence, lowering the financial burden of dental-care treatment on health institutions.
(Gebreslassie et al., 2020)	A systematic review of public health interventions targeting physical activity and healthy diet found most public health interventions, universal or indicated showed favourable cost-effectiveness results. Interventions included promotion of physical activity through mass-media campaigns, counselling, group support, infrastructural investments and incentives such as pedometers
(Shih et al., 2017)	This study aimed to update and extend the economic credentials for skin cancer prevention in Australia. Economic evaluations were conducted in 2015 with multiple methods applied. The study suggested with an additional 16 cents per capita investment into future skin cancer prevention, 140,000 skin cancer cases could be prevented over 20 years (2011 to 2030). Return on investment was estimated to be AUD \$3.20 per dollar invested , with a net social benefit of AUD \$1.43 billion .

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Additional evidence referred to by Professor Braithwaite:

Bike Helmet legislation	
(Macpherson & Spinks, 2008)	This Cochrane Review found positive evidence that bicycle helmet legislation both increases bicycle helmet use and reduces both bicycle-related mortality and head injuries . No evidence was found to either support or counter the possibility that legislation may lead to negative societal and health impacts such as reductions in cycling participation. The review did not provide an economic or cost-benefit analysis of the legislation
Pool Fences	
(Milliner et al., 1980)	A 10-year study from Mulgrave Shire in QLD spanning 1970 to 1979 compared childhood drowning rates in Mulgrave Shire which had a rigidly policed pool fencing policy compared to Cairns which did not. The evaluation found that no child had drowned in a fenced pool in either Cairns or Mulgrave. The review did not provide an economic or cost-benefit analysis.
(Thompson & Rivara, 1998)	The Cochrane Review, published in 1998, found no trials of pool fencing. However, evidence from other studies found that pool fencing that adequately prevents children from reaching the pool unsupervised can prevent about three-quarters of all child drownings in pools. Fencing that completely encircles the pool and isolates it from the house is much more effective than methods where children can still gain access to the pool through the house. The review did not provide an economic or cost-benefit analysis of pool fencing legislation.
Community Water Fluoridation	
(Ran & Chattopadhyay, 2016)	A 2016 systematic review evaluated 10 studies published between 1995 and 2013 to determine the cost-effectiveness of Community Water Fluoridation. The review found a Benefit-Cost ratio of 1.12:1 to 135:1 . The per capita investment for communities with at least 1,000 population ranged from 11 cents to \$4.92 with the benefit ranging from \$5.49 to \$93.19 (adjusted to 2013 U.S dollars)

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