Strategic prevention: Insights from our policy-focused research projects

Wednesday, 22 November 2023

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The Australian Prevention Partnership Centre acknowledges Aboriginal and Torres Strait Islander peoples as the First Australians and Traditional Custodians of the lands where we live, learn, and work.

Strategic prevention: Insights from our policy-focused research projects

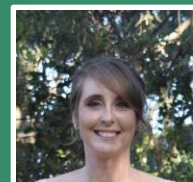Professor
Lennert Verman

Dr Ashleigh Haynes
Professor Sarah Durkin

Sherridan Cluff
Dr Shaan Naughton

Associate Professor
Serene Yoong
Dr Amy Anderson

Dr Caitlin Fehily

The cost-effectiveness of alcohol policy interventions*

*Note: results presented for this project are preliminary only

The Australian Prevention Partnership Centre

Strategic Projects Research Webinar
22 Nov 2023

LENNERT VEERMAN
Professor of Public Health, Griffith University

The burden of alcohol in Australia

- In 2021, it was estimated that 5,219 deaths in Australia were attributable to alcohol (AIHW, 2022)

- In 2015, alcohol was the fifth-highest risk factor contributing to disease burden in Australia, responsible for 4.5% of the total burden of disease and injury (AIHW, 2022)

- The tangible and intangible costs of alcohol use in Australia equate to $66.8 billion per year, including costs associated with hospital, emergency department and other health costs related to acute and chronic disease, road traffic accidents, domestic, family and intimate partner violence, child protection and abuse, workplace injury and absenteeism, and crime (Whetton et al., 2021)

Policy-level action is required

- There is a growing evidence base on interventions that can reduce the incidence and harm associated with alcohol use in Australia

- Even small changes in population-wide risk factors for chronic disease can lead to significant reductions in the burden for individuals and the health system, and reduce economic and societal costs

- To inform prioritisation of investment, evidence must be available to policy and decision makers about best practice, cost-effective alcohol interventions

Modelling the impact of alcohol
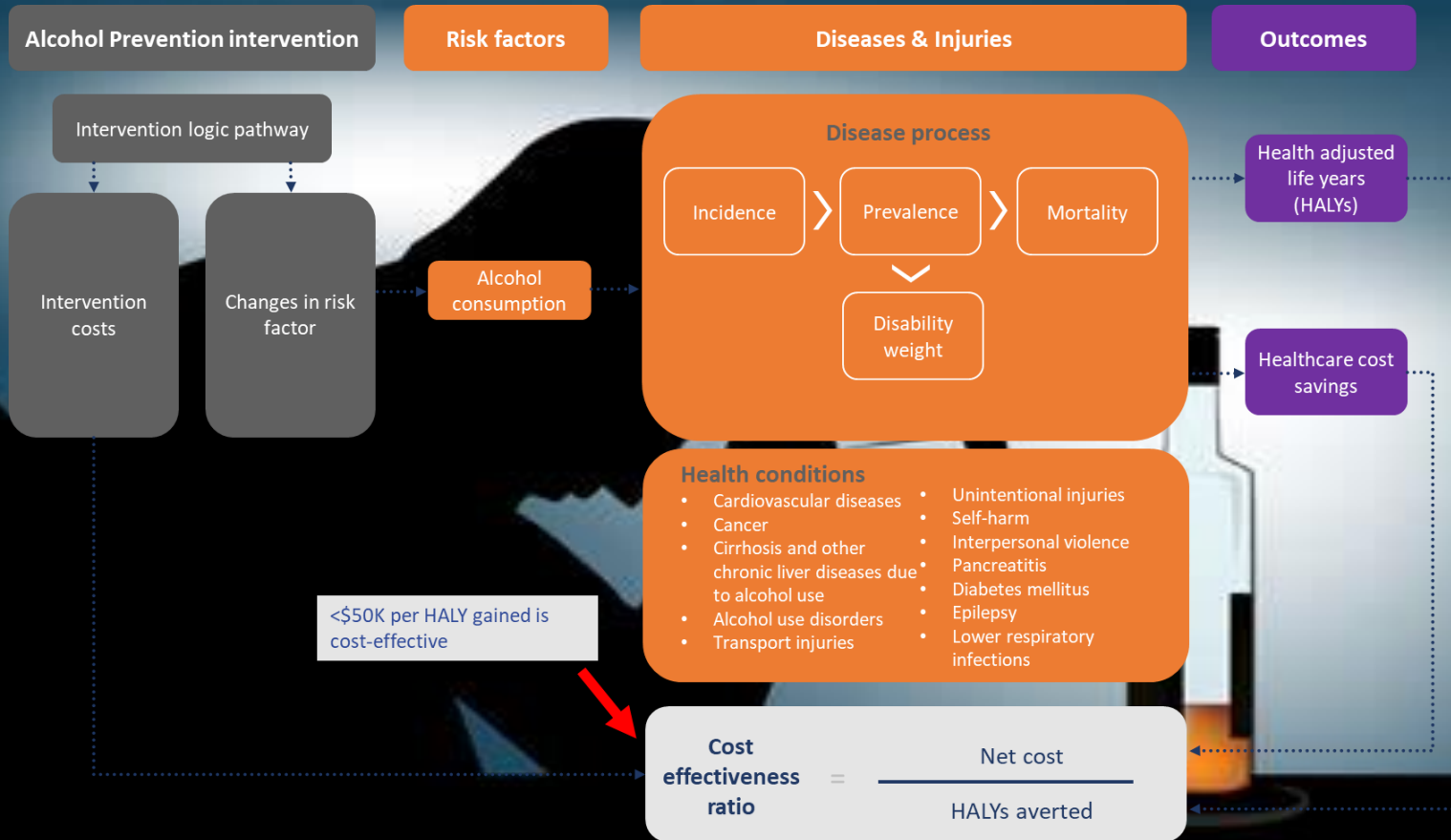
Policy interventions

Model settings:

Open cohort, 20 years intervention effects & cost, 100-year follow-up consequences, 5% discount rate

1. Restrictions on alcohol advertising

2. Reduced trading hours for licensed premises in late night entertainment precincts

3. Restrictions to limit alcohol outlet density

4. Minimum unit price legislation

5. Volumetric alcohol tax
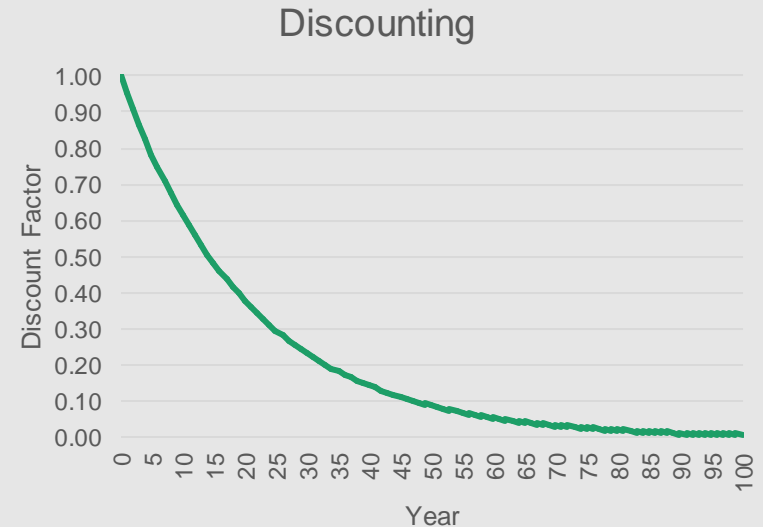
Discounting

Findings 1: Restrictions on alcohol advertising

- The intervention: a complete ban of alcohol advertising across all media

- Population impacted: Australian adults aged 18 to 45 years (informed by the effectiveness evidence)

	Discounted	Undiscounted
Health gain (HALYs)	104,000 (29,800 to 181,000)	338,000 (97,500 to 581,000)
Intervention costs (AUD2020 million)	1,570 (1,360 to 1,820)	2,460 (2,140 to 2,810)
Health care costs (AUD2020 million)	-1,160 (-2,070 to -327)	938 (-4.86 to 2,360)
Net costs (AUD2020 million)	409 (-542 to 1,290)	3,390 (2,360 to 4,860)
Cost-effectiveness ratio (AUD2020/HALY)	3,920 (Dominant to 44,500)	10,200 (5,740 to 28,600)

Note: Values are mean and 95% uncertainty interval.
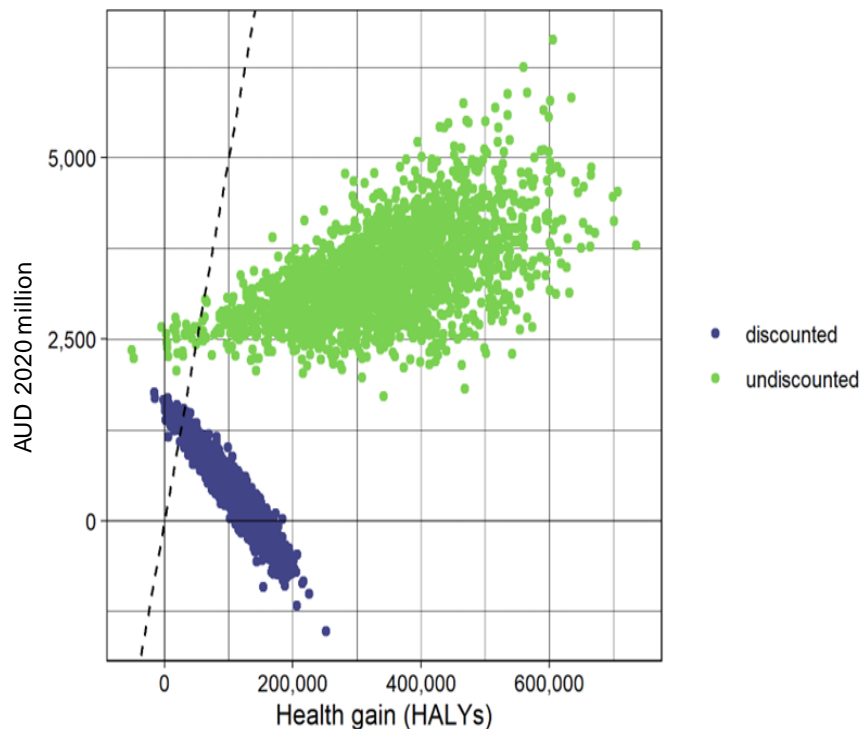
Findings 2: Reduced trading hours

- The intervention: State regulation to reduce 2hrs of trading hours & reduced number of permits for extended trading hour by 33% (from the current practice) in metropolitan areas across Australia

- Population impacted: Australian aged 15 to 100 years

|	Discounted	Undiscounted
Health gain (HALYs)	25,700 (-28,500 to 80,400)	68,900 (-68,100 to 205,000)
Intervention costs (AUD2020 million)	347 (281 to 427)	546 (444 to 666)
Health care costs (AUD2020 million)	-212 (-605 to 164)	97 (-302 to 668)
Net costs (AUD2020 million)	135 (-261 to 508)	643 (237 to 1,240)
Cost-effectiveness ratio (AUD2020/HALY)	1,700 (Dominant to dominated)	7,520 (63,200 to dominated)
Note: Values are mean and 95% uncertainty interval.		
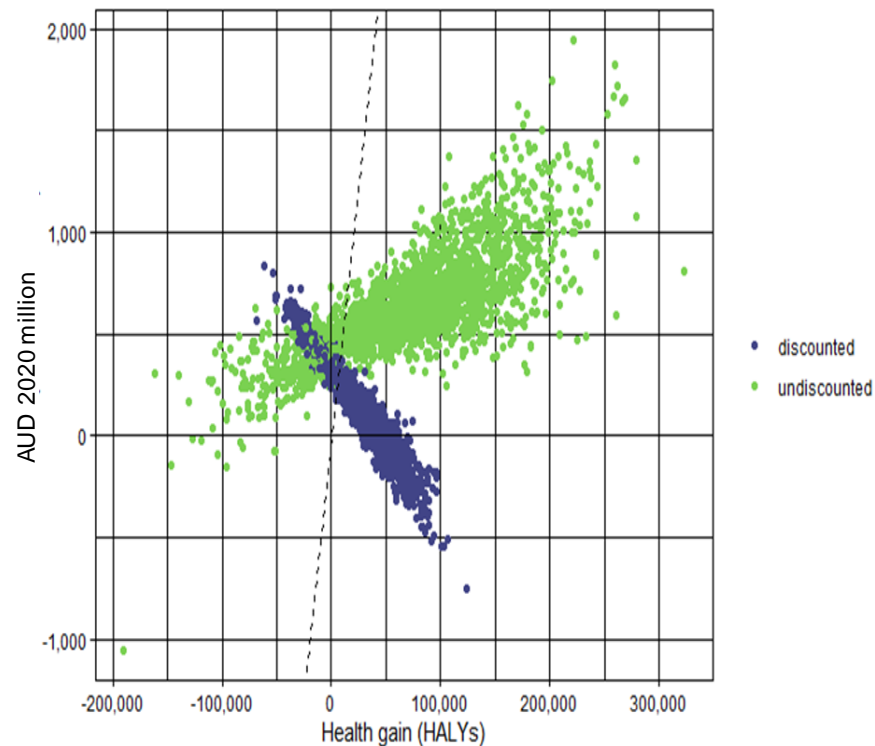
Findings 3: Restrictions to limit alcohol outlet density (NSW)

- The intervention: Maintaining the current density of alcohol outlets (both on- and off-premises) in metropolitan areas in Sydney

- Population impacted: Australians aged 15 to 100 years living in NSW metropolitan areas

	Discounted	Undiscounted
Health gain (HALYs)	11,400 (4,310 to 19,400)	35,100 (13,300 to 60,000)
Intervention costs (AUD2020 million)	12 (12 to 13)	20 (18 to 22)
Health care costs (AUD2020 million)	-89 (-164 to -31)	96 (-0.892 to 249)
Net costs (AUD2020 million)	-76.8 (-151 to -19)	116 (19 to 270)
Cost-effectiveness ratio (AUD2020/HALY)	Dominant (Dominant to dominant)	3,350 (524 to 6,890)

Note: Values are mean and 95% uncertainty interval.
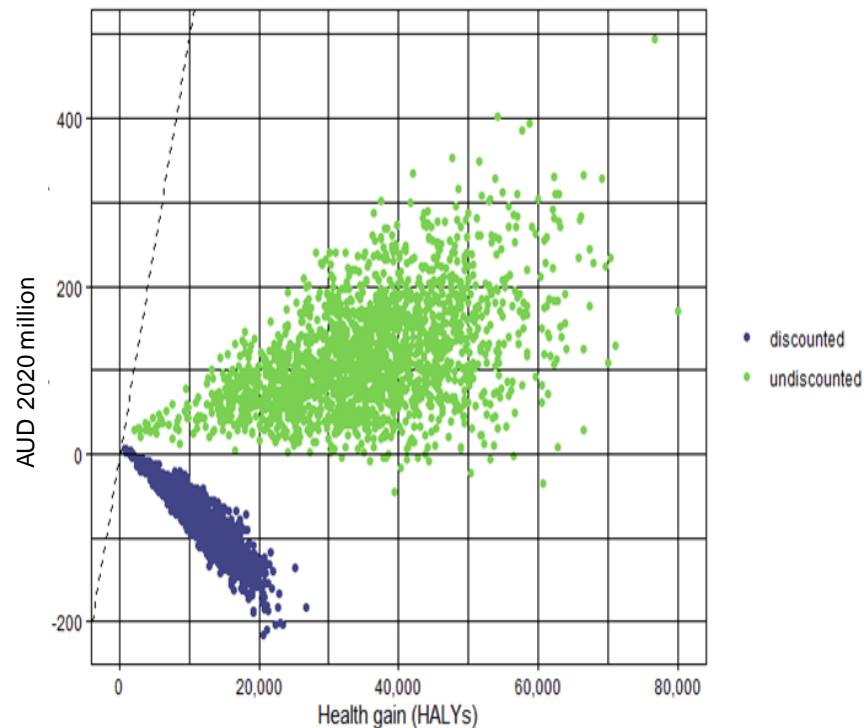
Findings 3: Restrictions to limit alcohol outlet density (VIC)

- The intervention: Maintaining the current density of alcohol outlets (both on- and off-premises) in metropolitan areas in Melbourne.

- Population impacted: Australians aged 15 to 100 years living in VIC metropolitan areas.

	Discounted	Undiscounted
Health gain (HALYs)	3,040 (175 to 5,960)	9,950 (267 to 19,900)
Intervention costs (AUD2020 million)	7 (6 to 9)	12 (10 to 15)
Health care costs (AUD2020 million)	-24 (-50 to -2)	29 (-3 to 82)
Net costs (AUD2020 million)	-16 (-42 to 6)	41 (10 to 94)
Cost-effectiveness ratio (AUD2020/HALY)	Dominant (Dominant to 6,481)	4,290 (746 to 11,900)

Note: Values are mean and 95% uncertainty interval.
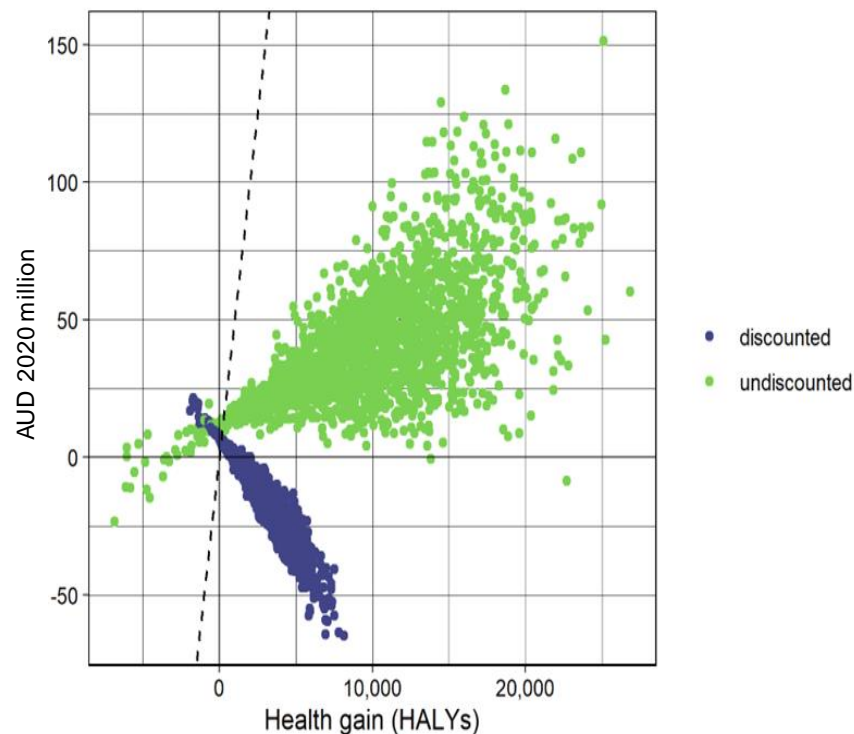
Findings 4: Minimum unit price legislation

- The intervention: Introduce a minimum unit price (MUP) on alcohol of A$1.75 per standard drink

- Population impacted: Australian drinking age population, aged 15-100 years

	Discounted	Undiscounted
Health gain (HALYs)	211,000 (165,000 to 262,000)	569,000 (456,000 to 696,000)
Intervention costs (AUD2020 million)	26 (22 to 30)	28 (24 to 32)
Health care costs (AUD2020 million)	-1,570 (-2,260 to -924)	1,420 (-83 to 3,080)
Net costs (AUD2020 million)	-1,540 (-2,240 to -897)	1,450 (-58 to 3,110)
Cost-effectiveness ratio (AUD2020/HALY)	Dominant (Dominant to dominant)	2,500 (Dominant to 5,660)

Note: Values are mean and 95% uncertainty interval.
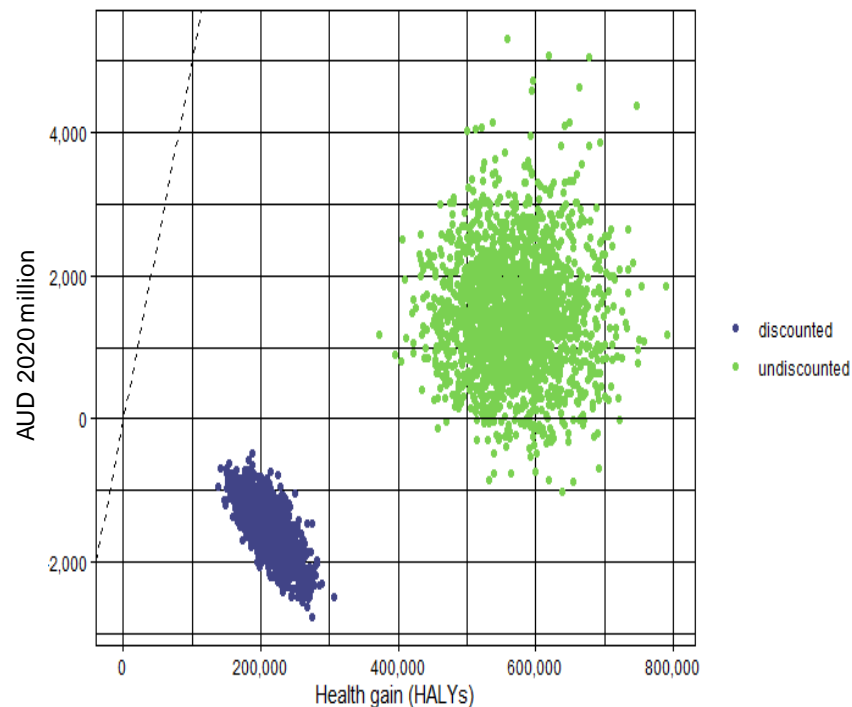
Findings 5: Volumetric alcohol tax

- The intervention: Replace the current taxation system on alcohol with a uniform volumetric tax equal to a 10% increase (A$1.20 per standard drink) in the tax rate of off-trade spirits, applied across all alcohol products

- Population impacted: Australian drinking age population, aged 15-100 years

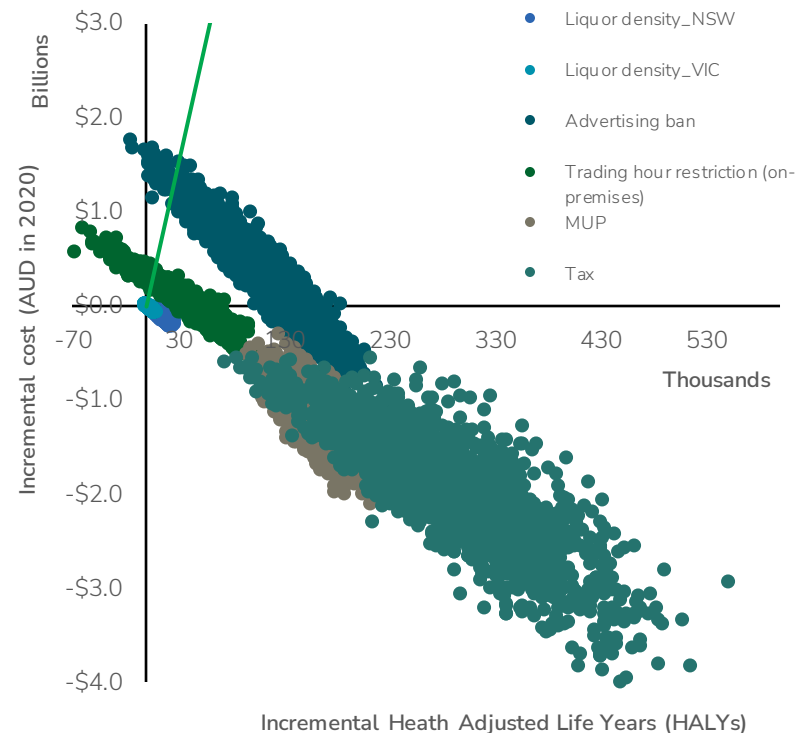|	Discounted	Undiscounted
Health gain (HALYs)	286,000 (142,000 to 440,000)	779,000 (391,000 to 1,190,000)
Intervention costs (AUD2020 million)	9 (6 to 15)	9 (6 to 15)
Health care costs (AUD2020 million)	-1,950 (-3,300 to -896)	2,570 (361 to 5,720)
Net costs (AUD2020 million)	-1,940 (-3,290 to -862)	2,580 (369 to 5,730)
Cost-effectiveness ratio (AUD2020/HALY)	Dominant (Dominant to dominant)	3,220 (526 to 6,570)

Note: Values are mean and 95% uncertainty interval.
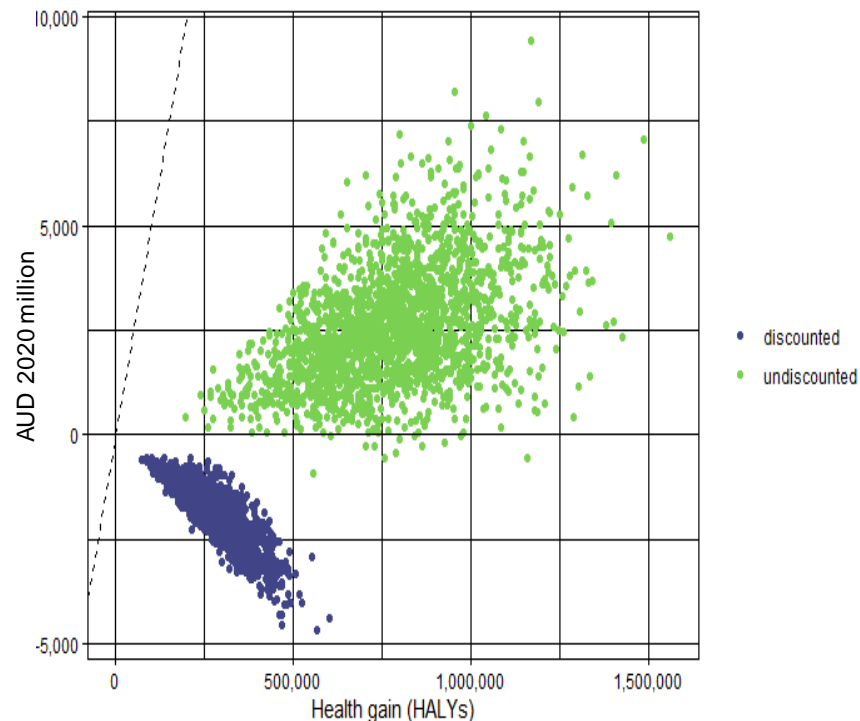
Policy implications

All selected policy interventions are highly likely to lead to health gains and health care cost savings, except (perhaps) the trading hours restrictions.

Policy Intervention	Cost Saving	Cost-effective <$50,000/HALY	Probability of being cost saving
Volumetric Alcohol Tax	100%	100%	100%
Minimum Unit Price	100%	100%	100%
Liquor density NSW	100%	100%	100%
Liquor density VIC	91%	98%	98%
Advertising ban	17%	98%	98%
Trading hour restriction (on-premises)	23%	78%	78%

Legend:
- Liquor density_NSW
- Liquor density_VIC
- Advertising ban
- Trading hour restriction (on-premises)
- MUP
- Tax

Y-axis: Incremental cost (AUD in 2020), Billions: $3.0, $2.0, $1.0, $0.0, -$1.0, -$2.0, -$3.0, -$4.0

X-axis: Incremental Heath Adjusted Life Years (HALYs), Thousands: -70, 30, 130, 230, 330, 430, 530

Public communication about tobacco product regulation: Policy relevant findings and implications

The Australian Prevention Partnership Centre

Combined Research Webinar
22 November 2023

Dr Ashleigh Haynes and Professor Sarah Durkin
Centre for Behavioural Research in Cancer, Cancer Council Victoria

Background

- The National Tobacco Strategy proposes several actions to reduce the attractiveness and addictiveness of smoking via restrictions on the way tobacco products can be designed and manufactured
  - ➤ e.g., proposed ban on menthol and other flavours and filters with flavour capsules

- How can we <u>maximise</u> the public health impact of such tobacco product bans and <u>minimise</u> potential unintended consequences?
  - ➤ Increase intentions to try to quit
  - ➤ Reduce harmfulness misperceptions
  - ➤ Promote accurate perceptions about the reasons for the bans

Product ban study arms

Menthol / Flavoured Crushball

Announced by Dept of Health and Aged Care Nov 2022

Filter Ventilation

Regular Nicotine Content

Hypothetical for Australia

Study 1 – Study design and key findings

Online *cross-sectional survey* among people who smoke (N=934)

- What do people who smoke **think they would do** in response to the tobacco product ban…

Menthol / Flavoured Crushball arm	Filter Ventilation arm	Regular Nicotine Content arm
• **13% try to quit** • **51% use available non-menthol cigarettes (tailor-made or RYO)** • **23% use e-cigarettes/vapes**	• **26% try to quit** • **34% use available cigarettes (unventilated cigarettes or RYO)** • **15% use e-cigarettes/vapes**	• **19% try to quit** • **37% use new Very Low Nicotine cigarettes (tailor-made or RYO)** • **12% use e-cigarettes/vapes**

Online *experiment* among people who smoke (N=1,514)

- Which messages…
  - ➢ Encourage intentions to quit rather than to use a product still available for sale?
  - ➢ Reduce harm misperceptions about the products still available for sale?
  - ➢ Promote accurate perceptions about the reasons for the ban?

Message conditions

Condition A *(least detail)*

- Introduce ban & rationale + encourage quitting

Condition B

- Introduce ban & rationale + inform about harmfulness of available products + encourage quitting

Condition C *(most detail)*

- Introduce ban & rationale + inform about harmfulness of available products + inform about negative attributes of available products + encourage quitting

Co-creating tools to support transformation of the food retail environment

22nd of November 2023

Sherridan Cluff and Dr Shaan Naughton

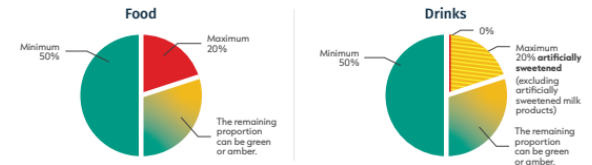Contacts: sherridan.cluff@hw.qld.gov.au shaan.naughton@deakin.edu.au

Partnership

- Health and Wellbeing Queensland, a statutory body of the Qld Government, are driving the implementation of *A Better Choice*
- Initial focus is on healthcare facilities with a view for expansion
- Approached Deakin for advice and support on implementation approaches and resources
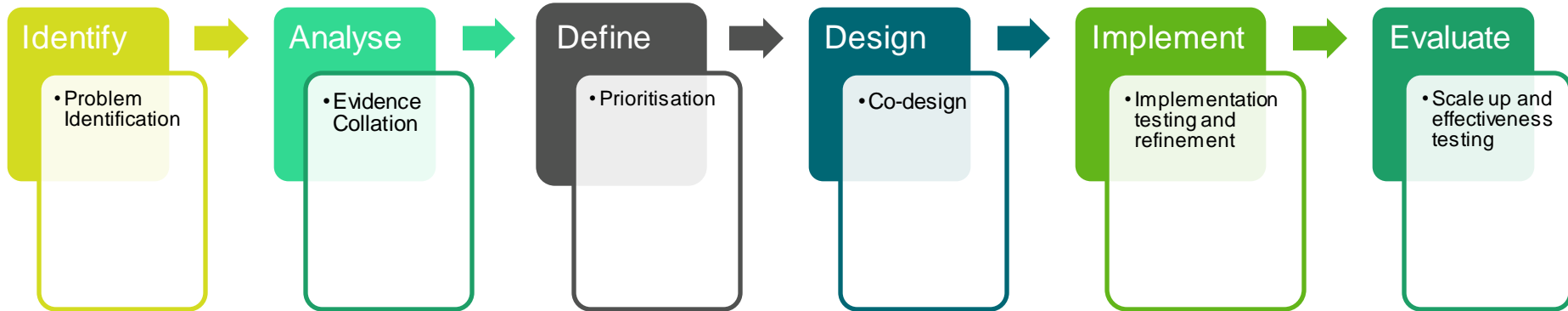- Opportunity to test implementation support tools as an intervention

Co-creation process for tool development

Identify
- Problem Identification

Analyse
- Evidence Collation

Define
- Prioritisation

Design
- Co-design

Implement
- Implementation testing and refinement

Evaluate
- Scale up and effectiveness testing

Co-creation, co-design and co-production for public health: a perspective on definitions and distinctions

Carmen Vargas[a,d], Jill Whelan[b], Julie Brimblecombe[c] and Steven Allender[a]

[a] Institute of Health Transformation, Global Obesity Centre, School of Health and Social Development, Deakin University, Geelong, VIC, Australia
[b] Institute of Health Transformation, Global Obesity Centre, School of Medicine, Deakin University, Geelong, VIC, Australia
[c] Department of Nutrition, Dietetics and Food, School of Clinical Sciences, Monash University, Melbourne, VIC, Australia
[d] Corresponding author. carmen.vargas@deakin.edu.au

Why we used a co-creation approach

Co-creation refers to a collaborative approach of problem solving between diverse stakeholders at all project stages*

Stakeholders in this context can be health promotion practitioners, retailers, or any other stakeholders involved in implementation of healthy food retail

Co-creating implementation tools directly with stakeholders will ensure they are **practical, acceptable and effective at creating change**

*Vargas et al, Co-creation, co-design, co-production for public health - a perspective on definition and distinctions. Public Health Research and Practice, 2022, https://pubmed.ncbi.nlm.nih.gov/35702744/

The CREATE study: Co-created implementation support tools

The CREATE study: Overview

- A 6-month pilot RCT in 5 QLD HHS
- Surveys and environmental audits at baseline and 6 months
  - Change to number of 'red' food and drinks available (primary outcome)
  - Sales of 'red' food and drinks (secondary outcome)
  - Toolkit and training acceptability and feasibility (implementation outcome)

Policy relevant findings

- Current Hospital and Health Service governance processes limit the ability to perform rapid applied research

- Challenges in navigating health system's internal processes when external to the organisations

- Ability to recruit Health Promotion Practitioner participants influenced by internal health service resourcing for strategy implementation

- Program awareness is beneficial

- Contractual measures in health service directives to strengthen requirements.

What next?

- Complete the pilot RCT

- Further explore co-designed implementation support tools as part of the new Centre of Research Excellence in Food Retail Environments for Health: Next Generation (RE-FRESHING) beginning in 2024

- Currently exploring other opportunities to partner on projects

Acknowledgements

Retailer Toolkit

Design and testing
- Nourish Network Healthy Retail Resources Action Team
- Dr Tara Boelsen-Robinson, Dr Miranda Blake, Dr Tari Bowling, Dr Adyya Gupta, Victoria Hobbs

Funding for testing
- Victorian Department of Health

CREATE study

Staff of the 5 participating Hospital and Health Services and Statewide Food Services (QLD)

Research Team
- Dr Miranda Blake, Dr Tara Boelsen-Robinson, Kripi Khanna, A/Prof Kate Huggins, Dr Tari Bowling, Victoria Hobbs, Dr Helena Romaniuk, Carmen Vargas, Dr Courtney Barnes, Prof Anna Peeters

Funding
- The Australian Prevention Partnership Centre
- Faculty of Health, Deakin University
- The Centre of Research Excellence in Food Retail Environments for Health (RE-FRESH)

The problem – suboptimal implementation

Recommended healthy eating and physical activity programs for childcare
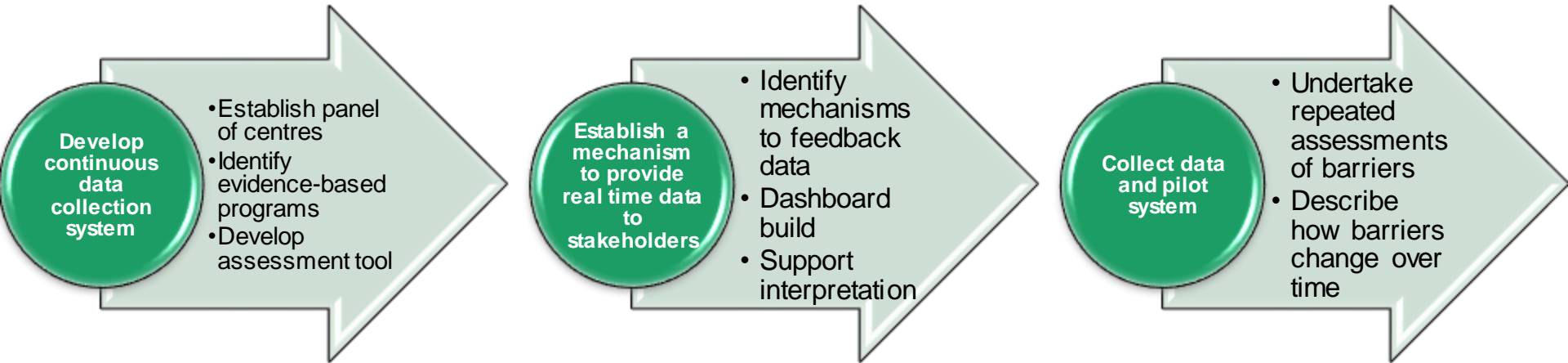
- Evidence-based prevention programs are not being routinely translated into childcare centres

- Strategies to support implementation into childcare often have limited impact

- Better understanding and tracking of how barriers change over time can help with tailoring strategies

A learning health systems process as a way forward

The proposed solution – develop a dynamic barriers assessment and feedback system

Develop continuous data collection system
- Establish panel of centres
- Identify evidence-based programs
- Develop assessment tool

Establish a mechanism to provide real time data to stakeholders
- Identify mechanisms to feedback data
- Dashboard build
- Support interpretation

Collect data and pilot system
- Undertake repeated assessments of barriers
- Describe how barriers change over time

Conclusions

- Routine collection and use of barriers to tailor implementation strategie

- Modifying current surveillance systems to collect routine data on barriers to implementation, and using an interactive data dashboard like this one to address barriers as they arise and evolve are beneficial from both a health service and public health perspective.

- Using this approach can increase implementation effectiveness and efficiency, support better resource allocation and assist users to better embed strategies to support program delivery

Acknowledgements

Co-Investigators

- A/Prof Serene Yoong, Ms Melanie Lum, Dr Alice Grady, Dr Rebecca Hodder, Dr Chris Oldmeadow, Ms Christine Innes-Hughes, A/Prof Hayley Christian, Prof Gary Sacks, Ms Karen Gillham, Prof John Wiggers, Prof Luke Wolfenden

Project team

- Dr Amy Anderson, Ms Maria Romiti, Ms Kerrin Palazzi, Dr Rebecca Lorch, Dr Madeleine Hinwood

Participants

- Nominated supervisors of Australian childcare centres

Research partners

- Deakin University, The University of Newcastle, The University of Western Australia, National Centre of Implementation Science, Hunter New England Population Health, Hunter Medical Research Institute, Centre for Population Health, NSW Ministry of Health

Integrating mental and physical health care

The Australian Prevention Partnership Centre

Perspectives of organisational leaders and mental health clinicians

Caitlin Fehily
University of Newcastle

THE UNIVERSITY OF NEWCASTLE AUSTRALIA

NSW GOVERNMENT Health
Central Coast Local Health District

NSW GOVERNMENT Health
Hunter New England Local Health District

NSW GOVERNMENT Health
Mid North Coast Local Health District

Project team:

Jenny Bowman, Belinda Jackson, Libby Campbell,
Vibeke Hansen, Simone Lodge, Tegan Stettaford, Emma McKeon

Mental health and physical health

- Reduced life expectancy: average 12-16 years

- Modifiable lifestyle behaviours
  - **S**moking
  - Poor **n**utrition
  - Harmful **a**lcohol consumption
  - **P**hysical inactivity

- Preventive care to support behaviour change
  - Mental health services

Ask + Advise + Refer

Our team's research

- People living with a mental health condition
  - Are interested and motivated to improve lifestyle behaviours
  - Want and expect preventive care from mental health services

- Despite policies & guidelines, preventive care is infrequently provided
  - Mental health clinicians recognise preventive care as important & part of their role
  - Barriers: confidence, inadequate time, perceived lack of referral options
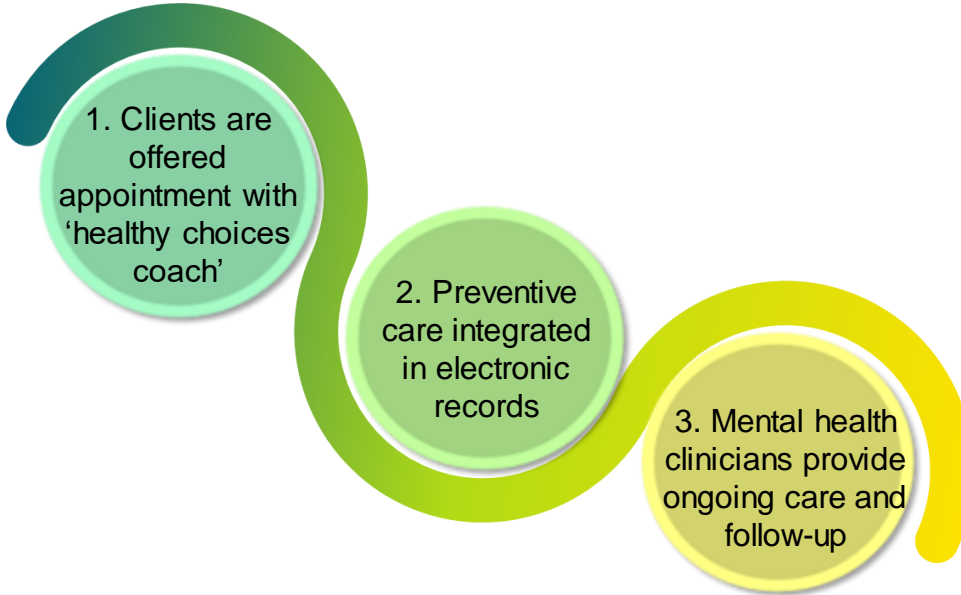
Health SNAP trial

Health SNAP trial

- Cluster-RCT, funded by MRFF (CI Jenny Bowman)

- 12 community mental health services, across the Central Coast, Hunter New England, and Mid North Coast Local Health Districts
    - 6 sites intervention
    - 6 sites control / usual care

- 9-month intervention to build capacity to provide preventive care

Health SNAP trial

Model of care

1. Clients are offered appointment with 'healthy choices coach'

2. Preventive care integrated in electronic records

3. Mental health clinicians provide ongoing care and follow-up

Implementation strategies

1 New roles – healthy choices coach & implementation support officers

2 Clinician training

3 Integrating into existing systems

4 Audit & feedback

5 Leadership

6 Consumer resources

The present study

- Qualitative data collection alongside the health SNAP trial
  - during the intervention (focus groups x 3)
  - after the intervention (interviews x 17)

| Managers | Mental health clinicians | Healthy choices coaches | Consumers |

To understand:
- Perspectives of the intervention: acceptability, feasibility, appropriateness
- Barriers and facilitators
- Recommendations to adapt/improve

Key findings

The model of providing preventive care is acceptable

*this project was really, really good about **normalising** the idea that physical health should be within people's scope of practice*

*..she has gone on independently to **cut down** on her **caffeine** intake, to cut down **soft drink** intake and increase water intake. Which is **phenomenal**. We've been trying to work on that for ages*

*it was really a substantial benefit to have **somebody who was really focused on doing that**... and there was quite a **passionate uptake** from the clients*

Challenges/barriers to implementation

- Contextual/external factors:
    - COVID
    - Bushfires
    - High staff turnover/short staffing

- Project-related factors:
    - Communication to clinicians: some not aware of e.g., training/resources
    - Promoting the appointment to *all* clients
    - Clinician follow-up

Recommendations

Boosting leadership strategy ✓

Improving coach-clinician communications ✓

Additional resources for consumers ✓

Longer intervention period

Opportunity for f/up with the coach

Briefer training

Outcomes and next steps

- Improved understanding of views towards the intervention and how it was implemented

- Adaptations during intervention period

- Trial effectiveness / outcome analysis
  - These results will be interpreted alongside that – to understand *how* and *why* the intervention was or was not effective

The Australian Prevention Partnership Centre
Systems and solutions for better health