

National mass media campaign related to sugar-sweetened beverages

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The intervention

- A Federally-funded three-year, national, public education mass media campaign (run as 12 six-week bursts) to reduce sugar-sweetened beverage (SSB) consumption and associated longer term sequelae.
- The campaign highlighted the link between SSBs and toxic fat, encouraging individuals to cut back on SSBs and included metro, regional and national TV, cinema, radio and online and social media advertising.

What we already know

- Evidence from systematic reviews suggests increased SSB consumption is associated with higher body weight and the prevalence of overweight or obese children and adults.
- Public education mass media campaigns have the potential to be effective means of disseminating population-wide messages about SSB consumption and have been shown to influence knowledge, attitudes, and behaviours in this context.

Key elements of the modelled intervention

- The effectiveness of a three-year national campaign at reducing SSB consumption in adults was estimated using self-reported data from a pre-post, controlled cohort study of the Victorian SSB public education mass media campaign which ran for six weeks in October 2015.
- The estimated reduction in SSB consumption was converted to a change in energy intake, leading to a change in body weight of Australian adults.
- The average cost of the campaign per head of Victorian population aged ≥ 18 years was calculated and multiplied by the adult Australian population to estimate the total cost of a national campaign.

Key findings

- On average, the campaign was estimated to reduce consumption of SSBs by 14.8%, reducing mean weighted population body weight by 0.38kg.
- The intervention was estimated to be dominant (i.e., cost-saving and health promoting) resulting in 13,958 HALYs gained and healthcare cost savings of \$157 million when implemented over 3 years.
- The intervention costs were estimated to be \$30.5M over the 3 year intervention period.

Conclusion

A national SSB public education mass media campaign is likely to be cost-effective, improving the health of the population and producing substantial savings to government expenditure in the long term. Evaluation of longer campaigns with multiple exposure is needed to determine sustainability and the optimal duration and number of campaigns.

Scenarios description and cost-effectiveness results

Table 1 Description of selected scenarios

	Base case 3 years campaign	Scenario 1 1 year campaign	Scenario 2 Including intervention development costs
Risk factor(s) addressed by intervention	BMI		
Population targeted	Australian population 2010, aged 18-100 years		
Weighted average reduction in body weight (95% UI)	0.38kg (0.36 to 0.40)		
Weighted average reduction in BMI (95% UI)	0.16kg/m ² (0.14 to 0.17)		
Effect decay	100% maintenance of effect for 3 years		
Costs included	Metro, regional and national TV, cinema, radio, online and social media advertising and MAMS fee		Also includes cost of development of 'LiveLighter' campaign
Type of model used	Population model with quality of life in children		
Notes: BMI: Body mass index; MAMS fee: Master Agency Media Services; UI: uncertainty interval			

Table 2 Cost-effectiveness results, mean (95% UI)

	Base case	Scenario 1	Scenario 2
Total HALYs gained	13,958 (11,946 to 16,319)	4,823 (4,165 to 5,598)	14,016 (12,135 to 16,186)
Total intervention costs	\$31M (\$28M to \$33M)	\$10M (\$10M to \$11M)	\$37M (\$34M to \$40M)
Total healthcare cost offsets	\$157M (\$137M to \$178M)	\$54M (\$48M to \$61M)	\$158M (\$138M to \$178M)
Total net cost *	-\$127M (-\$148M to -\$106M)	-\$44M (-\$51M to -\$37M)	-\$121M (-\$101M to -\$141M)
Mean ICER	Dominant (Dominant to Dominant)	Dominant (Dominant to Dominant)	Dominant (Dominant to Dominant)
Probability of being cost-effective #	100%	100%	100%
Overall result*	Dominant	Dominant	Dominant
Notes: Dominant: the intervention is both cost-saving and improves health; HALY: health adjusted life year; ICER: incremental cost effectiveness ratio; M: million; \$: 2010 Australian dollars; * Negative total net costs equate to cost savings; # The willingness-to-pay threshold for this analysis is \$50,000 per HALY.			

Figure 1 Cost-effectiveness plane

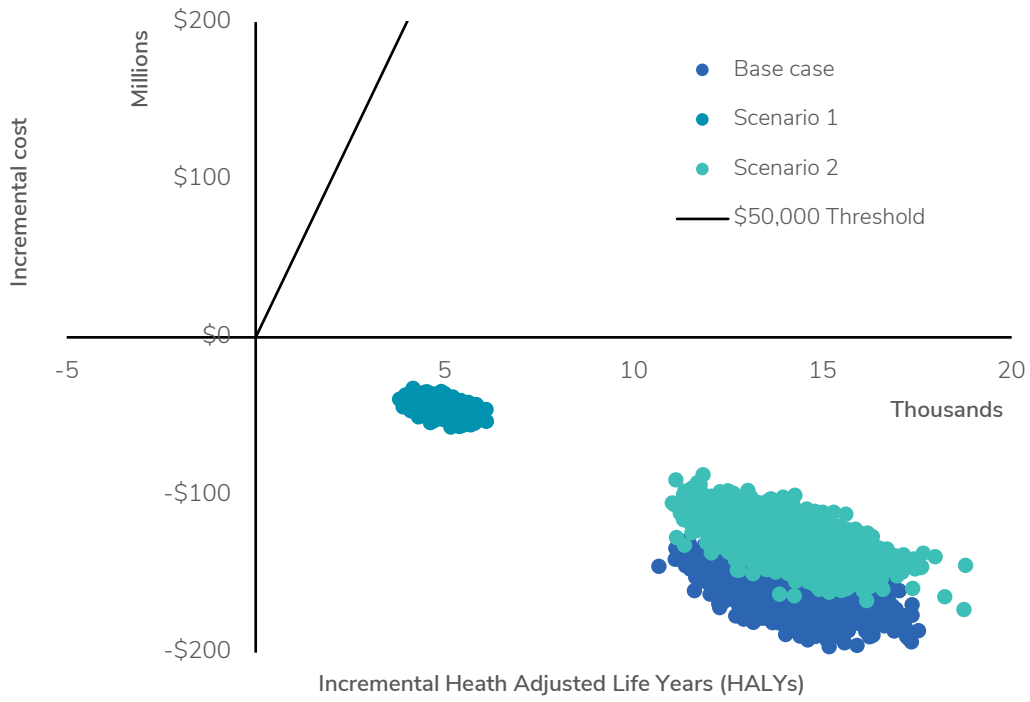
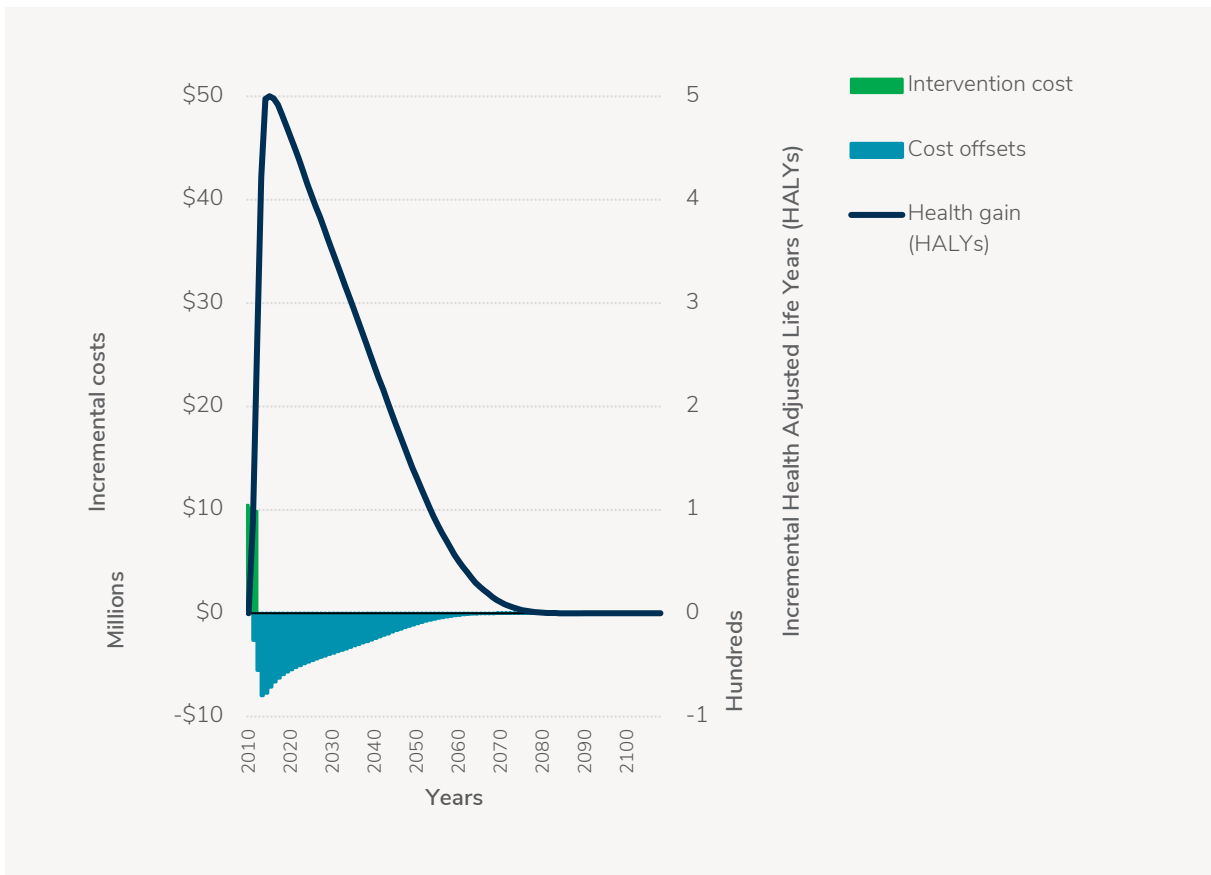


Figure 2 Costs, cost offsets and health gains over time



Implementation considerations

Consideration	Details	Assessment
Strength of evidence	Low certainty of the effect on body weight outcomes due to absence of relevant studies.	Low
	Low certainty of the effect on diet. The effect size for this intervention was based on a short-term (6-week) controlled cohort study in an exposed (Victoria) versus unexposed (South Australia) adult population, using self-reported data.	
Equity	Consistent with evaluation of an earlier campaign phase, the findings from the 6-week controlled cohort study indicate a SSB public education mass media campaign does not promote negative social stereotypes of overweight individuals. Campaign awareness also showed no evidence of significant differentiation by socioeconomic position. Therefore, such campaigns are unlikely to widen socioeconomic inequalities.	Neutral
Acceptability	Government: Public education mass media campaigns have been supported, funded and delivered by State and Federal governments. There may be some reluctance to support the hard-hitting nature of the campaign materials.	Medium
	Industry: Local industry's willingness to accept a SSB public education mass media campaign may be challenging as the campaign could impact revenues.	Medium
	Public: The level of public engagement with SSB public education mass media campaigns suggests generally strong support for this intervention. However, there may be some concerns from groups concerned about body image issues.	Medium
Feasibility	The campaign is highly feasible to implement on a national scale and requires a relatively modest investment from State and Federal governments.	High
Sustainability	There is little evidence available on the durability of public education mass media campaigns to reduce SSB consumption. Sufficient, ongoing funding support by State and Federal governments is likely required for a sustained effect. Campaign materials are likely to need frequent updates.	Medium
Other considerations	<p>Positive side effects: Broader positive impact on healthy behaviours, improved nutritional quality of readily available drinks, changes to social norms.</p> <p>Negative side effects: Potential for fat shaming and obesity stigma.</p>	
Note: SSB: sugar-sweetened beverage		