

Restrictions on price promotions of sugar-sweetened beverages

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The intervention

- Regulatory restriction on the price promotion, including temporary price discounts and multi-buy specials, of sugar sweetened beverages (SSBs) in Australia.
- SSBs included: carbonated beverages (soft drinks, soda); flavoured water; sports, energy, and fruit drinks; and cordials (concentrates) containing added sugar. Milk-based beverages and 100% fruit juices were excluded.

What we already know

- SSBs are typically high in sugar, while offering little to no nutritional value.
- Up to 40% of foods and beverages are purchased on price promotion in Australia¹. Typically, price promotions are more frequently available on less healthy options².
- The United Kingdom (UK) Government has stated an intention to ban multi-buy and buy-one-get-one-free offers on unhealthy foods and beverages in the retail and out-of-home sector through legislation.

Key elements of the modelled intervention

- A UK analysis estimated that population-level sugar consumption would be reduced by 0.8% if price promotions on SSBs were removed. In this study, we applied this level of reduction to age- and sex-specific SSB consumption data using the 2011/12 Australian Health Survey³.
- Costs included passing of legislation, assisting retailers with implementation, marketing the policy and auditing retailers for compliance. It was assumed there were no implementation costs to retailers.
- In response to this intervention, industry might lower the average 'every day' retail price of SSBs. Threshold analyses tested the proportional lowering of the retail price of SSBs that would have to occur in order for intervention net costs to be \$0.

Key findings

- The intervention was estimated to result in mean reductions in population body weight of 0.11kg.
- The intervention was estimated to cost \$17M and result in approximately \$498M in healthcare cost savings.
- The policy was predicted to result in savings of 48,336 HALYs over the lifetime of the population. Overall, the intervention was dominant.
- An 11.5% lowering of the average 'every day' retail price of SSBs as a retailer response would result in intervention net costs being approximately \$0. Currently, price promotions on SSBs are, on average, 33% lower than 'everyday' retail pricesⁱⁱ.

Conclusion

A regulatory restriction on all price promotions of SSBs in Australia is likely to be cost-effective, although the way in which industry and consumers would respond is largely unknown, and the feasibility and sustainability of implementation in the Australian context is unclear.

Scenarios description and cost-effectiveness results

Table 1 *Description of scenario modelled*

	Base case
Risk factor(s) addressed by intervention	BMI
Population targeted	Australian population, aged 2-100 years
Weighted average reduction in body weight (95% UI)	0.11kg (0.08 to 0.13)
Weighted average reduction in BMI (95% UI)	0.04kg/m ² (0.03 to 0.05)
Effect decay	100% maintenance of effect
Costs included	Costs for passing legislation; promoting, monitoring and assisting supermarkets with the intervention
Type of model used	Population model with quality of life in children
Notes: BMI: Body mass index; kg: kilogram; m: metre; UI: uncertainty interval	

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

	Base case
Total HALYs gained	48,336 (36,293 to 63,932)
Total intervention costs	\$17M (\$10M to \$26M)
Total healthcare cost savings	\$498M (\$378M to \$653M)
Total net cost *	-\$481M (-\$638M to -\$361M)
Mean ICER	Dominant (Dominant to Dominant)
Probability of being cost-effective #	100%
Overall result	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

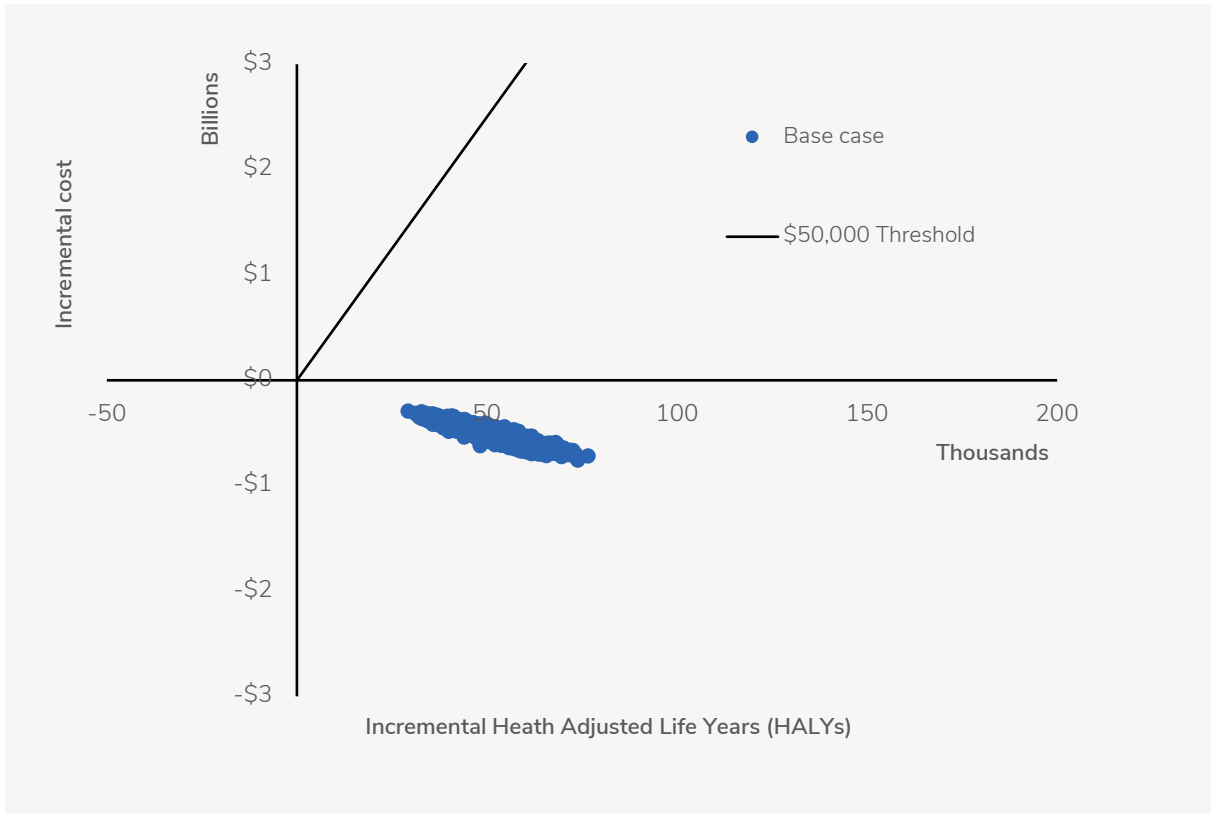


Figure 2 Costs, cost offsets and health gains over time



Implementation considerations

Consideration	Details	Assessment
Strength of evidence	Low certainty of effect on BMI / body weight outcomes due to a lack of relevant studies.	Low
	Low certainty of effect on dietary outcomes due to a lack of relevant studies.	Low
Equity	For low socioeconomic groups, expenditure on SSBs as a proportion of household expenditure would increase; however, these groups are more likely to reduce overall consumption and so experience a great health impact. Those from higher SEP groups (who are less responsive to price) are less likely to change consumption.	Negative
Acceptability	Government: The Australian government is generally opposed to additional regulations on industry and has not considered this as an obesity prevention intervention. However, there is emerging evidence from the UK and Scotland that governments are willing to consider regulation in this area.	Low
	Industry: As the regulations are likely to result in decreased purchases of SSBs, industry is unlikely to be supportive of such a policy. We have no evidence of differences in support from supermarkets and manufacturers.	Low
	Public: Consumers are likely to oppose any policy which may increase the price that they pay for SSBs. However, the public is increasingly aware of the adverse health consequences associated with SSB consumption.	Low
Feasibility	The way in which this could be implemented in Australia is unclear. Nevertheless, the UK and Scotland are currently undertaking public consultations on plans to implement such a strategy.	Low
Sustainability	If legislated, the intervention is likely to be sustainable. However there is a lack of real-world evidence of implementation and sustainability.	High
Other considerations	This intervention is predicted to result in a reduction in sugar intake, which is also likely to have a positive impact on oral health outcomes. The likely impact of this intervention on retailers and manufacturers, on the prices of other foods, and on consumer behaviour more generally is largely unknown.	
Notes: BMI: Body Mass Index; SEP: Socioeconomic Position; SSBs: sugar-sweetened beverages		

¹ Zeviani, Raone. Are we really getting value from our promotions? USA : Nielsen, 2018.

² Beth Gilham, Christina Zorbas, Tara Boelsen-Robinson, Miranda RC Blake, Anna Peeters, Adrian J Cameron, Jason HY Wu and Kathryn Backholer. The frequency and magnitude of beverage price promotions available for sale in Australian supermarkets (manuscript under review).

³ Public Health England. Sugar Reduction: The evidence for action. Annex 4: An analysis of the role of price promotions on the household purchases of food and drinks high in sugar. 2016