

# Menu kilojoule labelling on fast food

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Publication status: manuscript in progress



## The intervention

- Mandatory regulations for all fast food outlets across Australia to display the energy content of food products on printed menus, online menus and/or menu boards, with accompanying government-sponsored consumer education campaign.

## What we already know

- Menu kilojoule labelling aims to provide consumers with information about the energy content of available food options to inform healthier food choices.
- Mandatory menu kilojoule labelling is already in place across several Australian states/territories, including the Australian Capital Territory, New South Wales (NSW), Queensland, South Australia and Victoria. The regulations are similar across jurisdictions, general applying to large supermarkets and chain food businesses with either  $\geq 20$  outlets per state, or  $> 50$  outlets nationally.
- A recent meta-analysis indicated that energy intake from fast food reduces in response to menu kilojoule labelling, resulting from both changes in consumer behaviour on the demand side and product reformulation (to reduce energy content) on the supply side.<sup>i</sup>

## Key elements of the modelled intervention

- The mean change in energy intake (kJ) from fast food resulting from mandatory menu energy labelling was obtained from a report commissioned for the NSW Government as part of an evaluation of their regulations in the area. The kJ reduction was applied to the mean energy intake from fast food at baseline (i.e., pre-implementation), obtained from the 2011-2012 National Nutrition and Physical Activity Survey (NNPAS), adjusted for the percentage of individuals who reported consuming fast food products.
- Intervention costs were extrapolated from data included in the NSW Food Authority fast food labelling review, including costs to government in each jurisdiction (passing the legislation; administering, supporting and monitoring implementation; and running consumer education campaigns) and costs to industry (implementation and compliance).
- Scenario analyses were conducted to test different assumptions around effect size and duration.

## Key findings

- The intervention was estimated to reduce mean daily energy intake by approximately 25kJ, leading to changes in mean body weight of -0.2 kg and 63,492 HALYs gained.
- Total intervention costs were estimated as \$170M, which includes initial implementation and ongoing maintenance costs for government and industry.
- The intervention was shown to be dominant (cost saving and health promoting) even if the intervention effect was reduced by 50%.

## Conclusion

Mandatory menu kilojoule labelling is likely to be a cost-effective component of a comprehensive obesity prevention strategy. It has proved highly feasible in Australia, with broad acceptance amongst key stakeholders.

## Scenarios description and cost-effectiveness results

Table 1 *Description of selected scenarios*

	Base case Mandatory menu kilojoule labelling	Scenario 1 50% reduction in the intervention effect size
Risk factor(s) addressed by intervention	BMI	
Population targeted	Australian population, aged 2-100 years	
Weighted average reduction in body weight (95% UI)	0.2kg (0.1 to 0.4)	0.1kg (0.1 to 0.2)
Weighted average reduction in BMI (95% UI)	0.08kg/m <sup>2</sup> (0.05 to 0.12)	0.04kg/m <sup>2</sup> (0.03 to 0.06)
Effect decay	100% maintenance of effect	
Costs included	Cost of state-based legislation, administration, monitoring and consumer education campaigns (government); implementation and compliance (industry)	
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	Scenario 1
Total HALYs gained	63,492 (37,540 to 107,253)	31,748 (18,127 to 53,188)
Total intervention costs	\$170M (\$131M to \$209M)	\$170M (\$131M to \$209M)
Total healthcare cost savings	\$672M (\$368M to \$1.2B)	\$335M (\$179M to \$579M)
Total net cost *	-\$502M (-\$1.0B to -\$191M)	-\$165M (-\$409M to -\$7.0M)
Mean ICER	Dominant (Dominant to Dominant)	Dominant (Dominant to Dominant)
Probability of being cost-effective #	100%	100%
Overall result	Dominant	Dominant
Notes: B: billion; 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

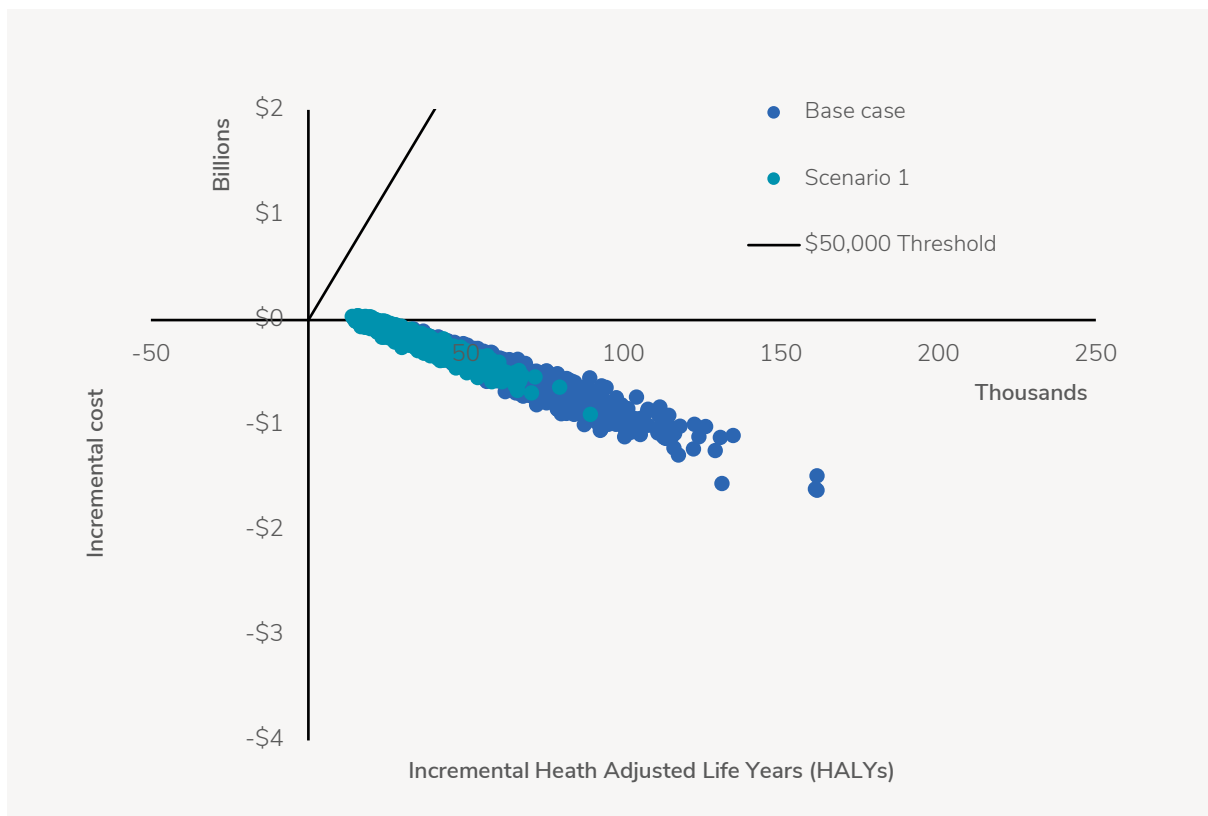
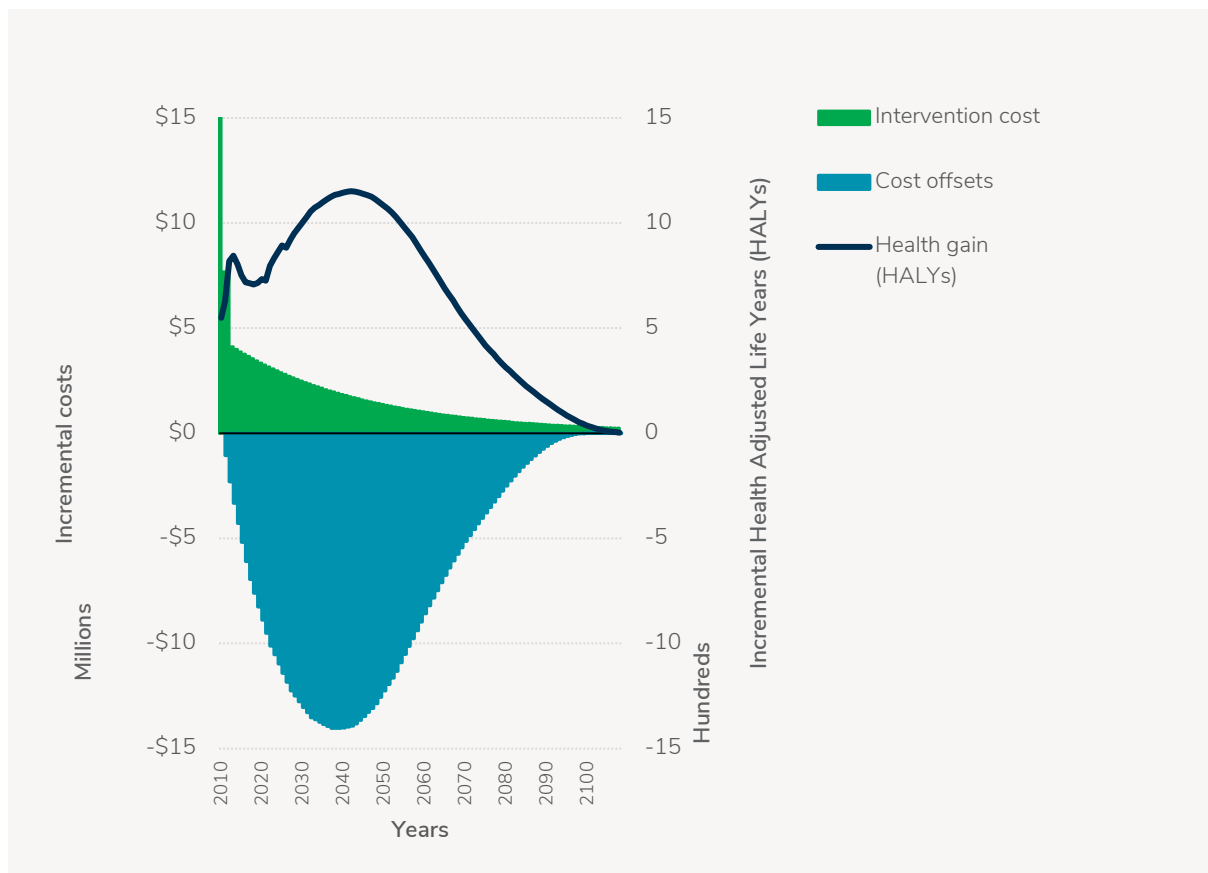


Figure 2 Costs, cost offsets and health gains over time (base case)



## Implementation considerations

Consideration	Details	Assessment
<b>Strength of evidence</b>	Low certainty of effect for BMI and weight outcomes due to lack of relevant studies.	Low
	Medium certainty of effect on dietary outcomes. The estimated mean change in energy intake from fast food resulting from mandatory menu kilojoule labelling was obtained from an Australian study, and was generally consistent with findings of a meta-analysis based predominantly on studies from the United States. Experimental studies have shown that consumers continue to consume the same quantity of foods and beverages (post-reformulation) without compensating for any changes in kJ; however, the impact on overall daily consumption is not well established.	Medium
<b>Equity</b>	Mandatory menu kilojoule labelling accompanied by an education campaign has been shown as likely to reduce the adverse impacts of the obesity gradient. <sup>ii</sup> However, the ability to interpret the labelling is likely to be lower in lower SEP groups. Reformulation to reduce energy content of fast food will benefit all groups., However, fast food consumption is higher in low SEP groups so these groups may benefit more from supply side changes.	Neutral
<b>Acceptability</b>	<b>Government:</b> Mandatory menu kilojoule labelling is currently in place in five jurisdictions in Australia (New South Wales, Queensland, Victoria, South Australia and the ACT).	High
	<b>Industry:</b> Industry bears some cost related to implementation and compliance, but acceptability has increased in response to implementation in five jurisdictions.	Medium
	<b>Public:</b> There is likely to be strong public support for this intervention.	High
<b>Feasibility</b>	This intervention has been implemented in five jurisdictions in Australia, and several internationally.	High
<b>Sustainability</b>	High sustainability due to the regulatory nature of the intervention.	High
<b>Other considerations</b>	This analysis did not take into account potential health benefits from fast food product reformulation related to salt reduction and type of fat used. The increased use of online food delivery in Australia is changing patterns of fast food consumption. These changing patterns have not been taken into account in this analysis.	
Notes: ACT: Australian Capital Territory; BMI: body mass index, kJ: kilojoule; SEP: socioeconomic position		

<sup>i</sup> Zlatevska, N, et al. (2018). Mandatory Calorie Disclosure: A Comprehensive Analysis of Its Effect on Consumers and Retailers. *Journal of Retailing* 94(1): 89-101

<sup>ii</sup> Beauchamp, A., et al. (2014). The effect of obesity prevention interventions according to socioeconomic position: a systematic review. *Obesity Reviews* 15(7): 541-554