

Advanced modelling shows a 20% sugar-sweetened beverage tax is a best buy for reducing child obesity in Australia

Key messages

- Evidence shows addressing obesity in early childhood protects people from gaining weight as adults and leads to lifelong health benefits.
- We developed the Australian Child and Adolescent Obesity Simulation model, which uses data and input from a multidisciplinary group of experts to explore likely impacts of five interventions and identify 'best buys'.
- The model showed implementing a 20% sugar-sweetened beverage (SSB) tax is a best buy for reducing child obesity in Australia as it is effective and low-cost.
- Implementing an SSB tax was projected to deliver the highest and most sustained reduction in the prevalence of obesity.
- An SSB tax maintained a significant benefit into adulthood and reached the entire population, unlike the other settings-based interventions we looked at.
- Combining the sugar sweetened beverage tax with interventions across the life course was the most effective way of reducing child and adolescent obesity.
- Overseas evidence demonstrates an SSB tax would lead to population level reductions in consumption of SSBs, encourage manufacturers to reformulate products to reduce sugar content, and generate funds to support further actions to reduce overweight and obesity.

What did we do?

The dynamic simulation model of Australian child and adolescent overweight and obesity was co-developed with child health researchers, clinicians, advocates, and policy makers.

The model incorporates expert knowledge and best evidence. It can be used to examine how changes to the underlying determinants, such as dietary behaviours and physical activity, influence the prevalence of overweight and obesity. It can also explore the likely impacts of policies and programs and best buys.

The model considered five key interventions: early childhood prevention, interventions in childcare settings, interventions in school settings, government-supported organised sport vouchers, and the implementation of a 20% sugar-sweetened beverage tax.

What did we find?

A 20% sugar-sweetened beverage tax was projected to deliver the largest reduction in the prevalence of childhood and adolescent obesity, a reduction that persisted into young adulthood.

Other settings-based scenarios we tested showed health benefits reduce as children age and leave childcare, school or organised sport. Also, the amount of time children spend in these settings can influence the success of the intervention.

Childhood interventions in childcare and school settings are effective - but children and adults need to be exposed to 'boosters' throughout the life-course to maintain benefits over time.

Early childhood and school interventions are very effective until early adulthood, but require support of an SSB tax to maintain effects over the lifespan.

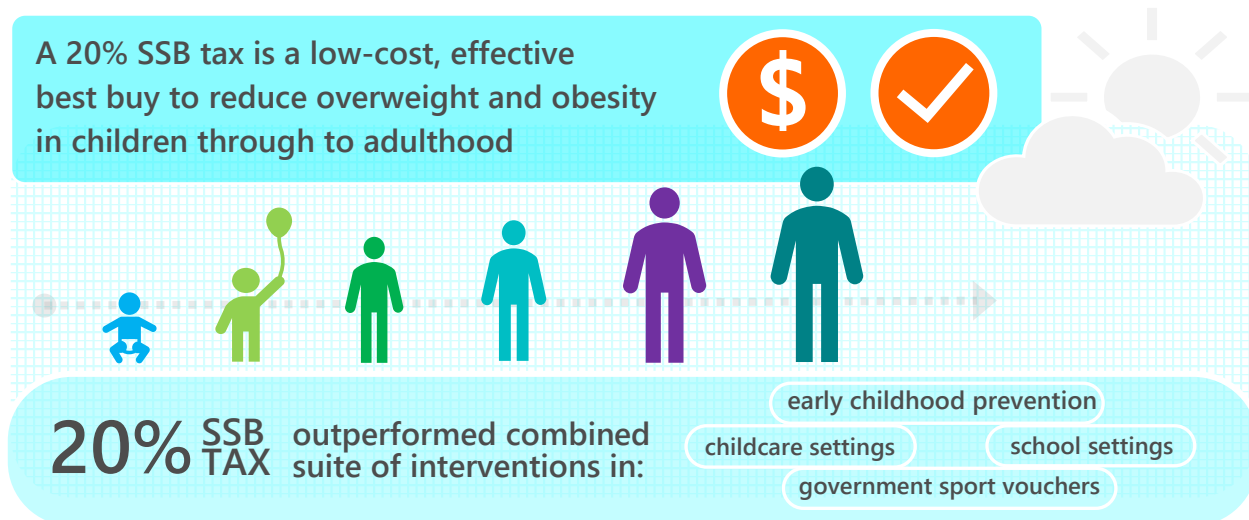
Combining the SSB tax with interventions across the life course was most effective at reducing child and adolescent obesity.

The model showed that settings-based interventions implemented together provided less than expected effects. A suite of settings-based interventions across the life course would be needed to achieve a comparable reduction in the prevalence of obesity to a 20% SSB tax alone.

The most effective way to reduce prevalence of childhood overweight and obesity was to combine the SSB tax with interventions across the life course.

Recommendation

The findings of the model support the introduction in Australia of a 20% sugar sweetened beverage tax as an effective best buy to reduce overweight and obesity in children through to early adulthood.



Next steps?

We are developing an economic component of the model that will compare the cost of implementing each intervention against the estimated health benefits.

We also plan to explore different combinations of interventions that best optimise a constrained budget.

Investigators

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