Reducing childhood overweight and obesity in New Zealand through setting a clear and achievable target
Stefanie Vandevijvere, Boyd Swinburn

A government target to reduce New Zealand’s very high and increasing rates of childhood overweight and obesity is timely since rates in several other OECD countries are flattening or decreasing. About one-third of New Zealand children are now overweight or obese compared to about one in four in Australia. The purpose of this analysis is to consider the plausibility of options for New Zealand to reach Australia’s current childhood prevalence rates by 2025 and, importantly, to reduce or not increase disparities in the process.

The most recent prevalence of childhood (2–14 years) overweight and obesity is 33% with it being significantly higher among Māori (44%) and Pacific (55%), than New Zealand (NZ) European (28%) and Asian (27%) children. In order to achieve the target of the current Australian prevalence (25%) over the next 10 years 2015–2025, an average reduction in childhood overweight and obesity of 0.8% points per year will be needed. If all childhood ethnic groups were to achieve the target prevalence of 25% by 2025, in practice this would mean a reduction of 0.2–0.3% points per year for NZ European and Asian children, 1.9% points per year for Māori children and 3.0% points per year for Pacific children (scenario 1, Table 1).

Although this scenario is very desirable in order to reduce (even eliminate) both absolute and relative inequalities across ethnic groups, it does not seem feasible. Community-based programs focused on environmental and capacity building interventions have shown that reductions in overweight and obesity of 1.3% points per year are possible among disadvantaged white children in Australia. However, the same approach taken with Pacific and Māori children in South Auckland showed no effect.

If the rates of obesity and overweight among NZ European and Asian children would reduce by 1.3% points per year over the next 10 years, then the yearly reductions needed in overweight and obesity rates among Māori and Pacific children in order to achieve the overall target by 2025, would be between 0.2% and 0.4% points (scenario 2a and 2b, Table 1). However in view of the importance of reducing inequalities, this would not be the preferred scenario either. Other scenarios to achieve the 2025 target, without increasing absolute inequalities (scenario 3), or slightly decreasing absolute inequalities (scenarios 4 and 5) are shown in Table 1.

In order to not increase or reduce absolute inequalities, the %-point yearly reductions in overweight and obesity prevalence among Māori/Pacific children need to be at least as high as the %-pointy early reductions among NZ European/Asian children.

The New Zealand auditor general’s 2013 report (Our future needs – is the public sector ready?) revealed a clear decline in the Government’s focus on obesity compared to the past. Improving unhealthy diets (New Zealand’s number one risk factor) or reducing childhood obesity currently do not figure as priorities in the latest Statement of Intent of the Minister for Health or as part of the New Zealand annual Health targets or 5-year public sector targets.

Internationally, a wide range of countries, even emerging economies such as Brazil and South Africa, have included targets to reduce childhood obesity as part of their non-communicable diseases (NCDs) action plans.
**Table 1. Different scenarios to achieve the overall target of a prevalence of childhood (2–14 years) overweight and obesity of 25% by 2025 in New Zealand**

<table>
<thead>
<tr>
<th>Population group</th>
<th>% overweight and obese 2013</th>
<th>% of total population of children</th>
<th>Scenario 1 % point reduction py 2025 target</th>
<th>Scenario 2a % point reduction py 2025 target</th>
<th>Scenario 2b % point reduction py 2025 target</th>
<th>Scenario 3 % point reduction py 2025 target</th>
<th>Scenario 4 % point reduction py 2025 target</th>
<th>Scenario 5 % point reduction py 2025 target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Māori</td>
<td>44.4</td>
<td>21.6</td>
<td>1.9</td>
<td>25.0</td>
<td>0.2</td>
<td>42.4</td>
<td>0.0</td>
<td>44.4</td>
</tr>
<tr>
<td>Pacific</td>
<td>55.3</td>
<td>11.1</td>
<td>3.0</td>
<td>25.0</td>
<td>0.0</td>
<td>55.3</td>
<td>0.4</td>
<td>51.3</td>
</tr>
<tr>
<td>Asian</td>
<td>27.0</td>
<td>8.4</td>
<td>0.2</td>
<td>25.0</td>
<td>1.3</td>
<td>14.0</td>
<td>1.3</td>
<td>14.0</td>
</tr>
<tr>
<td>NZ European/other</td>
<td>27.5</td>
<td>58.9</td>
<td>0.3</td>
<td>25.0</td>
<td>1.3</td>
<td>14.5</td>
<td>1.3</td>
<td>14.5</td>
</tr>
<tr>
<td><strong>All</strong></td>
<td></td>
<td></td>
<td><strong>25</strong></td>
<td><strong>25</strong></td>
<td><strong>25</strong></td>
<td><strong>24</strong></td>
<td><strong>25</strong></td>
<td><strong>25</strong></td>
</tr>
</tbody>
</table>

**Scenario 1:** All population groups reach the target of a childhood overweight and obesity prevalence of 25% by 2025 (out of the 5 scenarios the only scenario that reduces relative inequalities in overweight and obesity).

**Scenario 2:** NZ European and Asian children reduce overweight and obesity prevalence by 1.3% points per year (shown feasible in local communities in Australia), and either the childhood overweight and obesity rate among Pacific children (scenario 2a) or among Māori children (scenario 2b) is held constant.

**Scenario 3:** All population groups reduce the overweight and obesity prevalence among children by the same yearly rate in order not to increase absolute inequalities among ethnic groups. This gives an overall prevalence of overweight and obesity of 24% in 2025, which is a bit lower than the target of 25%.

**Scenario 4-5:** NZ European and Asian children reduce overweight and obesity prevalence by 0.9% points. If one of the other ethnic groups also reduces obesity and overweight prevalence by 0.9% points a year, the other group has to reduce obesity and overweight prevalence by 1.0% points a year to achieve the target.

*py = per year.*
The medical and health communities are also calling for a renewed focus on obesity. The New Zealand Medical Association’s report on Tackling Obesity\(^1\) sets out the top 10 priorities and a policy brief launched by the New Zealand Beverage Guidance Panel\(^2\) identified the priorities for reducing sugar-sweetened beverage consumption. In addition, the healthy Food Environment Policy Index (Food-EPI),\(^3\) recently launched by an international network of research groups and NGOs\(^4\) was applied first in New Zealand in April 2014.

The Food-EPI Expert Panel of 52 New Zealand based public health and medical experts, performed a detailed review of the evidence of the extent of implementation of food policies by the New Zealand Government.\(^5\) Major implementation gaps were found, clearly outweighing the good performance of the Government in some areas, such as regulation on health claims or monitoring of NCDs and their risk factors, including obesity.\(^6\) The seven priority actions recommended by the Expert Panel included the need to set a target to reduce childhood overweight and obesity.

The analyses presented in Table 1 show the enormous challenge it will be for New Zealand to reach by 2025 where Australia is now and to reduce or at least not increase inequalities across ethnic groups at the same time. This suggests two broad approaches are needed: community-based interventions which prioritise those at risk populations and broader policy/regulatory approaches. Healthy Families NZ,\(^7\) which is a systems-based approach to prevention at the community level, will be implemented in 10 high-need areas.

This will be an excellent opportunity to focus on Māori and Pacific populations and address some of the socio-cultural factors which appear to be barriers to obesity prevention.\(^8\) However, given the lack of success in previous community prevention approaches in Pacific and Māori adolescents,\(^9,10,11\) they should not be considered to be the single solution. Indeed there is a risk that educational interventions focused on information and knowledge will be more beneficial for individuals from higher socioeconomic backgrounds.\(^12\) This might apply to the Health Star Rating system, recently approved by the Government for implementation in New Zealand, as well.

On the other hand, there are several policy/regulatory interventions aimed at making food environments healthier which have been shown to be cost-effective\(^13–17\) and which are highly recommended by World Health Organization (WHO) and the New Zealand medical and public health community.

These approaches, which also have greater potential for producing equal or greater benefit among lower socioeconomic groups, are: restrictions of unhealthy foods in schools and early childhood settings, restrictions of unhealthy food marketing to children, government procurement policies which favour healthy rather than unhealthy foods, taxes on unhealthy foods, and food product reformulations. Several Australian studies\(^18,19\) have shown that there is strong public support for the implementation of healthy food policies, such as restriction of food marketing to children and the reformulation of food products.

The WHO has established a high-level Commission on Ending Childhood Obesity\(^20\) which is chaired by Professor Sir Peter Gluckman, New Zealand’s Chief Science Advisor to the Prime Minister, with former Prime Minister Helen Clark as another of the distinguished members of the Commission.

This excellent international leadership would be strengthened by a serious attempt to address childhood obesity in New Zealand. The analyses presented here show that reducing overweight and obesity among Māori and Pacific children will be the greatest challenge and that both targeted community interventions and strong policy/regulatory actions on food environments will be needed to reach even very modest targets.

**Competing interests:** Nil.
Author information: Stefanie Vandevijvere, Research Fellow; Boyd Swinburn, Professor. School of Population Health, University of Auckland

Correspondence: Stefanie Vandevijvere, School of Population Health, University of Auckland, Private Bag 92019, Auckland 1142, New Zealand. s.vandevijvere@auckland.ac.nz

References


