Childhood Obesity: An equity perspective
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1 About this paper

The incidence of childhood overweight and obesity is unevenly distributed across society, with children from low socioeconomic backgrounds at greatest risk.¹ This can have a profound and enduring impact on these children’s lives. Children who are overweight or obese are often socially marginalised.² They are at greater risk of poor health³ and perform less well as school⁴. As adults, they are more likely and to experience social, educational and financial disadvantage. And being more likely to remain overweight as adults⁵, they will be predisposed to a range of health conditions⁶. Ultimately, they will have a shorter life expectancy.⁷

The Premier has recognised that childhood obesity is an ongoing concern, making it a priority to reduce overweight and obesity rates of children in NSW by 5% over 10 years.⁸ This priority recognises that reducing childhood obesity demands whole-of-Government, whole of community solutions. Evidence suggests that it is whole of community solutions that achieve the best results for children from lower socioeconomic backgrounds.⁹

This paper examines childhood obesity through an equity lens, in order to inform discussions about the strategies needed to ensure that children from lower socioeconomic backgrounds benefit from responses to childhood obesity. To this end, the paper outlines key factors that contribute to the increased risk of obesity amongst children from low-income and vulnerable families. It then lists categories of policy options that would go towards addressing these risk factors: these are intended as a basis for further discussion.

We will host a Stakeholder Roundtable on 27 June 2016 as part of this discussion, and to help us shape a shared advocacy agenda.

We also recognise that significant work is already underway within the NSW Government to address childhood obesity, include through the NSW Healthy Eating and Active Living Strategy 2013. Our intention is to build on this work in order to best effect change for children living in poverty.

A focus on equity

It is important that responses to childhood obesity focus on those groups who are most affected. In addition to the strong relationship between socioeconomic status and obesity, we know that some vulnerable groups are at even greater risk, including:

- **Girls**: The link between socioeconomic status and overweight or obesity is stronger for girls than boys¹⁰.

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⁴ Schwimmer JB (2003), note 27.
⁷ Ibid.
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- **Aboriginal and Torres Strait Islander people:** Aboriginal and Torres Strait children are 6% more likely than other children to be overweight or obese.\(^\text{11}\)
- **Children from CALD backgrounds:** NSW Health statistics show that only 4.8% of people born in non-English speaking countries eat enough vegetables, compared to 8.9% of the population overall.\(^\text{12}\)
- **Children in rural and regional areas:** Obesity is 15% more likely in rural areas compared to major cities.\(^\text{13}\)

The unique circumstances of each of at-risk group must be taken into consideration in responses to childhood obesity. Failure to do so increases the risk that certain groups will miss out on the benefits of responses to this problem, with growing awareness that some health interventions may actually widen health inequities.\(^\text{14}\)

In order to ensure equity considerations are embedded in responses to childhood obesity, we begin by recommending that an equity sub-target be incorporated into the Premier’s Priority to reduce overweight and obesity rates of children in NSW.

**QUESTIONS**

1. In the NSW context, what kind of target would help ensure equity is embedded into responses to childhood obesity?

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\(^\text{13}\) Australian Institute of Health and Welfare (2016) "Overweight and Obesity".

2 Why are children in families with low-incomes more vulnerable to obesity?

The development of child obesity involves a complex set of interrelated factors, many of which impact more strongly on children from lower socioeconomic backgrounds.\textsuperscript{15,16,17} This report uses a simplified version of the framework developed by Davidson and Birch to highlight key factors related to childhood overweight and obesity that intersect with socioeconomic status.\textsuperscript{18} This framework takes an ecological approach that considers the context in which a person is located in order to understand how a particular characteristic, such as obesity, emerges.

We consider the following factors in more detail below:

1. **Neighbourhood characteristics**
   - Access to healthy food options
   - Access to unhealthy food options
   - Opportunities for physical activity

2. **Family characteristics**
   - Types of food available in the home
   - Parent diet and activity patterns
   - Parenting practices and child-feeding patterns

3. **Child characteristics and behaviours**
   - Dietary intake
   - Activity patterns

For each factor we point to why the experience of children from low socio-economic differs from that of their peers. For each group of factors we then present a list of policy options as an aid to further discussions. Within each list of policy options we also provide specific examples from other jurisdictions (boxed text) and where relevant point to existing initiatives in NSW (in footnotes).

**QUESTIONS**

2. Have we missed any key risk factors that impact more strongly on children from low-income and vulnerable families?

3. Is another mode of characterisation more appropriate?

\textsuperscript{15} Food Research and Action Centre (2015) *Why Low-Income and Food Insecure People are Vulnerable to Obesity.*


\textsuperscript{17} Vic Health (2004) *A review of the literature describing the link between poverty, food insecurity and obesity with specific reference to Australia.*

3 Neighbourhood Characteristics: problem outline

Children from low-income families tend to live in neighbourhoods where there are fewer opportunities for physical activity, where it is harder to access healthy food options, and where there is greater exposure to unhealthy food options.

3.1 Opportunities for physical activity

Low-income neighbourhoods often have fewer parks, green spaces, and recreational facilities than higher income neighbourhoods, making it more challenging for children and families living in these neighbourhoods to lead physically active lifestyles. Limited access to such resources is a risk factor for obesity, with recent research demonstrating that for boys in particular, the presence of neighbourhood green space is linked to increased physical activity and a reduction in television viewing.

3.2 Access to healthy food options

There is extensive research showing that low-income neighbourhoods have poorer access to healthy food, and to a wide variety of fruit and vegetables. Access to healthy food at the neighbourhood level has been shown to have a significant impact on the risk of obesity.

Barriers to accessing healthy food are compounded in very low-income households that are less likely to have and use their own vehicle for regular food shopping than more advantaged households. This means that it is harder to compensate for the lack of access to fresh fruit and vegetables nearby.

3.3 Access to unhealthy food options

While in low-income neighbourhoods it can be harder to find healthy food choices, it is also easier to access unhealthy options – a phenomenon known as ‘food deserts’.

Research from the UK shows that deprived areas are more likely to have a greater density of fast food outlets, and the same is true in Australia.
The placement of fast-food and takeaway outlets is of particular concern when it comes to influencing the health behaviours of children and young people. In areas with higher levels of disadvantage, both primary and secondary schools are more likely to be in closer proximity to fast food restaurants.\(^\text{30}\)

Figure 1: Food environments in selected areas of Western Sydney and the North Shore. Taken from Astell-Burt, T and Feng, X (2015).

QUESTIONS

4. Should we consider any other neighbourhood characteristics that contribute to childhood obesity?

\(^{30}\) Ibid.
4 Neighbourhood characteristics: policy options

Policy responses that would contribute to the development of neighbourhoods that support healthier food choices and physical activity include:

4.1 Increasing opportunities for physical activity

- Include health as an objective in planning laws
- Develop and/or promote guidelines that support healthy urban planning and infrastructure development. 31
- Develop and report on indicators relating to healthy urban planning such as walkability.
- Support the development of open/green space.
- Invest in infrastructure that supports physical activity in low socio-economic areas (including recreational facilities, transport, lighting etc).

4.2 Improving access to healthy food options

- Develop and report on indicators relating to neighbourhood access to healthy food.
- Incorporate edible green spaces in new housing and community developments, protecting a portion of fertile land for agricultural purposes.
- Introduce local transport services in low-income areas with limited access to healthy food.

4.3 Limiting access to unhealthy food options

- Prohibit or limit the development fast-food and takeaway outlets in particular locations.

QUESTIONS

5. What other policy options should we consider?
6. Where are the gaps in terms of current responses to obesity?
7. Where do you think we should focus our advocacy efforts?

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31 NSW Health published a Healthy Urban Development Checklist in 2010.
5 Family Characteristics: problem outline

5.1 Types of food available in the home

Families will little disposable income can find it very difficult to afford a healthy diet, with 6.8% of disadvantaged households with children under the age of 15 experiencing food insecurity in NSW in 2014.32 The risk of obesity is 20 to 40% higher in individuals who are food insecure.33

The inadequacy of income support allowances, together with the high cost of housing34 are two major causes of strain on many household budgets. This can impact a family’s ability to afford healthy food, with rent or housing repayments taking priority in the family budget, and groceries being one of the only ‘discretionary’ items.

On a limited budget, a healthy diet may simply be unaffordable;35 the NSW Cancer Council Healthy Food Basket Survey found that families in the lowest quintile would need to spend 56% of their average weekly income on food to afford a healthy food basket.36 Families in this situation may either skip meals, or cope by substituting cheaper, more energy dense foods such as refined grains, added sugars, and added fats for healthy food options which generally cost more.37 Healthy food can also be more expensive in remote areas38, and in some areas with low-socioeconomic status.39

There is also a time-cost associated with the purchasing and preparation of healthy food and for this reason, obesity has been termed the “disorder of convenience”.40 In many low-income families parents are time-poor. They may live further from work, work longer, less sociable hours, and be unable to afford home-help. They therefore have less time to prepare healthy meals.41

5.2 Parent diet and activity patterns

Children are strongly influenced by their parent’s dietary practices and food preferences, which are, in turn, influenced by factors including food affordability (discussed above) and nutritional knowledge and understanding.

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33 Vic Health (2004) A review of the literature describing the link between poverty, food insecurity and obesity with specific reference to Australia
41 Nogrady, B (2015) ‘Time and Money: Why we need both to be healthy’
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Meta reviews show that education is an element of socioeconomic status that is strongly related to obesity.\textsuperscript{42} Higher levels of education might provide greater access to health-related information, improved ability to handle such information and clearer perception of the risks associated with lifestyle choices.

The way in which a parent does or does not engage in physical activity also shapes a child’s view of what is normal and acceptable. Across all age ranges, people from low incomes are less likely to participate in organised physical activities, with barriers including time, cost, lack of transport, cultural differences, the environment of sporting groups and inaccessible facilities for people with disabilities.\textsuperscript{43} Differences in physical activity based on socioeconomic status are even greater for non-organised physical activity than for organised activity,\textsuperscript{44} pointing to the importance of neighbourhood characteristics discussed above.

5.3 Parenting practices and child-feeding patterns

Children born into low-income families are more likely to be exposed to feeding practices that are associated with obesity, and less likely to be exposed to protective behaviours.

For example, breastfeeding is an important protector against obesity, but NSW Health Statistics demonstrate that the percentage of infants breastfed when discharged from hospital decreases with socioeconomic status.\textsuperscript{45} In addition, infants who are formula fed, or whose mothers eat a poor quality diet, are less likely to experience a wide range of flavours and are therefore perhaps less likely to develop a taste for vegetables.\textsuperscript{46} The context in which food is consumed also influences a child’s food preferences. Overweight parents may be more likely to adopt practices – including, for example, using energy dense food as a reward, or high levels of control over dietary intake – that place their child at greater risk of being overweight. We also know that lower socio-economic families are more likely to eat meals in front of the TV, which can increase the likelihood of overeating.\textsuperscript{47,48}

There is evidence suggesting that overweight parents are less likely to perceive their overweight children as being overweight. This finding is stronger in parents from lower socioeconomic backgrounds.\textsuperscript{49} Failure to recognise a problem means that parents are less likely to assist their children with preventative action.

QUESTIONS

8. Should we consider any other family characteristics that contribute to childhood obesity?

\textsuperscript{43} Smith et al (2015) ‘Overcoming disparities in organized physical activity: findings from Australian community strategies’, Health Promotion International
\textsuperscript{44} Australian Bureau of Statistics (2014) ‘Stats & Facts: Sport And Physical Recreation - Differentials In Participation’
\textsuperscript{45} NSW Perinatal Data Collection (SAPHaRi). Centre for Epidemiology and Evidence, NSW Ministry of Health.
## 6 Family characteristics: policy options

Options that would help create family environments that support a reduction in childhood obesity include:

### 6.1 Ensuring all families can afford a healthy diet

- Subsidies on fruit and vegetables.
- Subsidies on the costs of transporting fresh food to rural and regional areas.
- Ensuring fresh food remains excluded from the GST.
- Assistance with living costs to help ensure families can better afford healthy diets.

### 6.2 Influencing parent diet and activity patterns

- Facilitate healthier food choices through the use of clear, transparent and mandatory labelling schemes such as the teaspoon labelling system.
- Encourage healthier food choices through price signals such as a sugar tax.
- Programs that aim to improve parent’s diets.
- Programs that support low-income parents to participate in physical activity.
- Advice and information.\(^{50}\)

### 6.3 Improving parenting practices and child-feeding patterns

- Nurse-led home-visiting programs\(^{51}\) including those with a focus on obesity reduction.\(^{52}\)
- Advice and information.\(^{53}\)

### QUESTIONS

9. What other policy options should we consider?

10. Where are the gaps in terms of current responses to obesity?

11. Where do you think we should focus our advocacy efforts?

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\(^{50}\) The NSW Get Healthy Information and Coaching Service provides tailored health coaching for adults with healthy weight, nutrition and/or physical activity risk factors for chronic disease.

\(^{51}\) The Sustaining NSW Families program currently operates in eight sites in NSW. Through the 1 in 7 Children in Poverty Campaign, NCOS is lobbying the NSW Government to invest an additional $25 million per year in the state-wide roll-out of a nurse-led home visiting program for vulnerable families during the first two years of a child’s life.

\(^{52}\) The Healthy Beginnings Trial tested the effectiveness of a home-based early intervention program designed to reduce family and behavioural risk factors for childhood obesity. See [http://www.healthybeginnings.net.au/publications/](http://www.healthybeginnings.net.au/publications/) for further information.

\(^{53}\) A number of telephone-based support services for parents are delivered as part of the NSW Healthy Eating Active Living Strategy.
7 Child Characteristics and Behaviours: problem outline

For all children – diet, physical activity and sedentary behaviour are associated with the development of overweight and obesity. It is important to recognise, however, that children have limited control over these factors, each of which is strongly influenced by the neighbourhood and family characteristics as outlined above.

7.1 Activity patterns

Children from low-income families may find it harder to engage in physical activities\textsuperscript{54} and are more likely to spend time in sedentary activities such as watching television\textsuperscript{55}. For organised physical activities, cost – including registration costs, uniforms and other incidentals – together with a lack of transport, are persistent barriers to participation. Participation in non-organised physical activity, including active transport, intersects with neighbourhood characteristics such as walkability and safety, and is influenced by family norms.

7.2 Dietary intake

In addition to being influenced by their parents’ dietary intake, a child’s food preferences are shaped by their exposure to food and information about food in a variety of settings.\textsuperscript{56} Children from lower socioeconomic backgrounds not only live in neighbourhoods with a higher density of unhealthy food options, they also spend more time watching television – and are more likely to have a television in their bedrooms\textsuperscript{57} - and are therefore more exposed to advertising for unhealthy food choices.

\textsuperscript{54} Australian Bureau of Statistics (2012) \textit{Australian Social Trends June 2012}
\textsuperscript{55} Bittman, M and Sipthorp, M (2012) \textit{Turned on, tuned in or dropped out? Young children’s use of television and transmission of social advantage}
8 Child characteristics and behaviours: policy options

Options that may influence children’s activity patterns and dietary intake include:

8.1 Influencing children’s activity patterns

- Ensure free or low-cost sports activities are available to children experiencing disadvantage.\(^{58}\)
- Embed opportunities for physical activity in settings such as schools, childcare and playgroups.\(^{59}\)
- Facilitate active transport (such as walking or riding to school).
- Behaviour change programs encouraging physical activity.\(^{60}\)
- Education and awareness-raising initiatives.\(^{61}\)

8.2 Influencing children’s diets

- Restrict advertising of unhealthy foods.\(^{62}\)
- Provide healthy food in settings such as schools, childcare and playgroups.\(^{63,64,65}\)
- Behaviour change programs aimed at improved diets.\(^{66}\)
- Education and awareness-raising initiatives.\(^{67}\)

QUESTIONS

12. What other policy options should we consider?
13. Where are the gaps in terms of ensuring vulnerable children benefit from current responses to obesity?
14. Where do you think we should focus our advocacy efforts?

Example: Reducing the cost of organised activities

The Canadian Child Fitness Tax Credit allows parents to claim a refundable tax credit of up to 15% of eligible fees for the enrolment of a child under the age of 16 in an eligible program of physical activity.\(^1\)

Examples: Advertising restrictions

Countries such as Sweden and Norway prohibit all advertising directed to children, while others (including the UK) aim to reduce the exposure of children to unhealthy food advertising and the marketing techniques most commonly used to target children. The UK Office of Communications estimated that UK restrictions on advertising high fat, sugar and salt foods in children’s TV programs led to a substantial reduction in high fat, sugar and salt food advertisements seen by children, without a decline in revenue for television channels.\(^1\)
9 A whole-of-community approach

While each of the policy responses outlined above would contribute to addressing childhood obesity in low-income families, we also know that no one response alone will solve the problem. There is strong evidence that whole of community approaches – that address multiple risk factors simultaneously – are most effective at reducing obesity for people from lower socioeconomic backgrounds.

While of community responses in Australia have typically focused on school communities or have been delivered at the Local Government level. In Victoria, for example, all councils are required to prepare and adopt a Municipal Public Health and Wellbeing Plan. As demonstrated by the Western Sydney Diabetes Initiative, there is also potential for Local Health Districts and Primary Health Networks to lead multi-sector approaches to obesity prevention.

In many jurisdictions, localised whole-of-community responses sit within a broader framework – examples include Healthy Together Victoria, South Australia’s Obesity Prevention and Lifestyle (OPAL) initiative, and the European EPODE-method, Together Let’s Prevent Childhood Obesity. Note that there is some evidence to suggest that school-based approaches are more effective when accompanied by initiatives that mobilise the broader community.68

QUESTIONS

In NSW, what is needed to facilitate more effective whole-of-community responses?

What are the critical elements of these responses?

Examples: School-based Intervention

The It’s Your Move! project was a community-based, multi-strategy obesity run in five Melbourne schools. It used a capacity building approach that involved the school community in strategies to improve health. Examples included:

- increasing fruit and vegetable consumption (soup days, juice days, vegetable gardens and social marketing);
- increasing healthiness of school food (traffic light system for food sold by school canteens, recipe books provided to canteens, healthy eating days, parent information canteen staff training);
- promoting active transport to/from school (riding to school programme, lunchtime and other walking groups);
- promoting acceptance of healthy body size and shape;
- building capacity of students, teachers and parents.

Follow-up after 3 years showed the project reduced the student’s weight, BMI and prevalence of obesity.1

This approach has since been adopted by New Zealand’s Health Promoting Schools Program.

Example: A whole-of-community approach

Healthy Together Victoria is a prevention platform that delivers multiple strategies, policies and initiatives at both the state and local levels. It operates across Victoria, aiming to improve people’s health where they live, learn, work and play by addressing the underlying causes of poor health. Healthy Together Victoria also resources local government to lead concentrated community-level efforts in 12 Healthy Together Communities.

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10 Next Steps

Following the June roundtable we will publish a more detailed version of this report identifying priority recommendations for which there is broadest support.

Pending feedback from key stakeholders, we will also consider developing a shared of a statement of priorities together with further joint advocacy.