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# **Reducing Breakfast Skipping by Young People in NSW**

Youth Action Policy Paper





**Prepared by Veronica O'Shaughnessy**

Contact person:

Jacqui McKenzie, Policy and Advocacy Manager  
Youth Action and Policy Association (NSW)  
Suite 403, 64-76 Kippax St, Surry Hills, NSW 2010  
Phone: (02) 8218 9815  
Website: [youthaction.org.au](http://youthaction.org.au)

## **About Youth Action**

Youth Action is the peak body for young people and youth services in NSW. We represent 1.25 million young people and the services that support them. Our work helps build the capacity of young people, youth workers and youth services, and we advocate for positive change on issues affecting these groups.

It is the role of Youth Action to:

1. Respond to social and political agendas relating to young people and the youth service sector.
2. Provide proactive leadership and advocacy to shape the agenda on issues affecting young people and youth services.
3. Collaborate on issues that affect young people and youth workers.
4. Promote a positive profile in the media and the community of young people and youth services.
5. Build capacity for young people to speak out and take action on issues that affect them.
6. Enhance the capacity of the youth services sector to provide high quality services.
7. Ensure Youth Action's organisational development, efficiency, effectiveness and good governance.

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### **Policy Paper: Reducing Breakfast Skipping in Young People in NSW**

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## Recommendations

**Recommendation 1:** That NSW High Schools implementing breakfast programs review proposed guidelines.

**Recommendation 2:** That the NSW government conduct a state-wide survey of all NSW high schools on their students' breakfast eating habits by 2018.

**Recommendation 3:** That the NSW government provide free breakfast to schools and communities who identify a significant amount of their students as breakfast skippers.

**Recommendation 4:** That the NSW government implement a state-wide Fruit Scheme whereby every NSW high school student is provided with a fresh piece of fruit every school morning.

**Recommendation 5:** That awareness-raising initiatives focusing on the consequences of breakfast skipping or the benefits of breakfast eating for adolescents and adults be implemented by 2017.

**Recommendation 6:** That education regarding healthy breakfasts is included at schools, or as part of any breakfast program to address some of the core drivers.

**Recommendation 7:** That each NSW high school is provided with information regarding breakfast skipping to include in newsletter/publication to students' parents and guardians.

**Recommendation 8:** That the NSW Department of Education provide 'start-up' funding for schools and communities of up to \$5000 for the purposes of setting up their own breakfast programs where needed.

**Recommendation 9:** That the NSW government expand their resources for



breakfast programs and match their initial contribution of \$100,000 to another 15 schools and communities in need of breakfast programs in NSW.

## Introduction

More than a quarter of young people in NSW do not eat breakfast every morning. While more than 85% of NSW children in primary school eat breakfast every day, the numbers of young people eating breakfast decreases with age. Breakfast consumption declines to around 68% among Year 6, 8 and 10 students, particularly among young women. Almost half (46%) of young women and almost a third (29%) of young men in Year 10 skip breakfast frequently.<sup>1</sup>

The rate of those not eating breakfast has also increased in the past 5 years. In 2013, an average of 14.8% of young people skipped breakfast compared to 10.8% in 2008.<sup>2</sup>

Breakfast skipping, or missing breakfast, has immense negative impacts on the health, mental health and educational outcomes for young people in NSW. It has been linked to obesity, weight gain, and other long-term detrimental health disorders such as insulin resistance and metabolic syndromes.

Drivers for breakfast skipping are complex. While as many as 1 in 7 (13.4%) young people in NSW experience poverty and deprivation,<sup>3</sup> breakfast skipping is not solely due to food insecurity or deprivation. Some young people are choosing to forgo breakfast.

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<sup>1</sup> L Hardy, L King, P Espinel, C Cosgrove, & A Bauman, *NSW Schools Physical Activity and Nutrition Survey (SPANS) 2010*, 2013, p. 88

<sup>2</sup> Australian Bureau of Statistics (ABS), *CensusAtSchool Survey*, 2014, viewed 6 November, 2014, <<http://www.abs.gov.au/censusatschool>>

<sup>3</sup> D Montoya, 'Child Disadvantage in NSW: recent findings', *NSW Parliamentary Research Service*, e-brief 07/2017, [https://www.parliament.nsw.gov.au/prod/parlment/publications.nsf/key/ChilddisadvantageinNSW:recentfindings/\\$File/Child+disadvantage+in+NSW+-+recent+findings.pdf](https://www.parliament.nsw.gov.au/prod/parlment/publications.nsf/key/ChilddisadvantageinNSW:recentfindings/$File/Child+disadvantage+in+NSW+-+recent+findings.pdf)



Breakfast programs both internationally and in Australia have been found to combat the health and educational impacts of breakfast skipping. While some schools and communities in NSW currently have breakfast programs, these programs are likely not available to every young person who would benefit, nor young people who are most in need.

Youth Action recommends a government funded, universal, free breakfast program for all high school students in NSW to tackle obesity as well as improve education results. However, understanding significant funding limitations, Youth Action has also provided recommendations for alternate options that would improve the state of breakfast consumption, and therefore mitigate consequences associated with the health and education of young people in NSW.

## The impacts of breakfast skipping

### Obesity

The association between young people who miss breakfast and obesity has been well established. Various studies make links between missing breakfast and body mass index (BMI) scores, weight gain, and snacking or increased food consumption. Studies also show the positive effects of having breakfast. These studies show:

- Obese children are more likely to skip breakfast or eat smaller breakfasts than children at a healthy weight, asserting that breakfast skipping is a possible risk factor for obesity, especially among adolescents.<sup>4</sup>
- Skipping breakfast showed tendencies to consume higher quantities of food later in the day.<sup>5</sup>
- Breakfast skipping is associated with weight gain for girls.<sup>6</sup>
- Links between high BMI scores and breakfast skipping, and lower BMI for those who have breakfast, although this was not found in younger children.<sup>7</sup>

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<sup>4</sup> SE Barlow, 'Expert committee recommendations regarding the prevention, assessment, and treatment of child and adolescent overweight and obesity: summary report', *Pediatrics*, 2007, pp.120-192.

<sup>5</sup> *ibid.*

<sup>6</sup> H Sugimori, K Yoshida, T Izuno, M Miyakawa, M Suka, M Sekine, & S Kagamimori, 'Analysis of factors that influence body mass index from ages 3 to 6 years: a study based on the Toyama cohort study' *Pediatrics International*, 2004, Vol. 46, No. 3, pp. 302-310; CS Berkey, HRH Rockett, MW Gillman, AE Field, & GA Colditz, 'Longitudinal study of skipping breakfast and weight change in adolescents' *International Journal of Obesity*, Vol. 27, No. 10, 2003, pp. 1258-1266.

<sup>7</sup> AM Siega-Riz, T Carson, B Popkin, 'Three squares or mostly snacks: what do teens really eat? A sociodemographic study of meal patterns', *Journal of Adolescent Health*, Vol. 22, No. 1, 1998, pp. 29-36; BH Lin, CL Huang, SA French, 'Factors associated with women's and children's body mass indices by income status', *International Journal of Obesity Related Metabolic Disorders*, Vol. 28, No. 4, 2004, pp. 536-542; K Boutelle, D Neumark-Sztainer, M Story, M Resnick, 'Weight control behaviors among obese, overweight, and nonoverweight adolescents', *Journal of Pediatric Psychology*, Vol.27, No. 6, 2002, pp. 531-540

- Links between breakfast skipping and a measure of obesity in children and adolescents, suggesting that breakfast skippers were more likely to have a weight higher than normal.<sup>8</sup>
- Infrequent breakfast consumption among adolescents is associated with higher body obesity and abdominal obesity.<sup>9</sup>
- Skipping breakfast in adolescence increases ghrelin, a hunger-initiating hormone which is released from the stomach as a reaction to low metabolic rate.<sup>10</sup>
- Fat intake is significantly reduced and snacking is limited after eating breakfast.<sup>11</sup>
- Quality and content of breakfast can significantly influence BMI.<sup>12</sup>

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<sup>8</sup> JT Dwyer, M Evans, EJ Stone, HA Feldman, L Lytle, D Hoelscher, & M Yang, 'Adolescents' eating patterns influence their nutrient intakes', *Journal of the American Dietetic Association*, Vol. 101, No. 7, 2001, pp. 798-802; JA O'Dea, & P Caputi, 'Association between socioeconomic status, weight, age and gender, and the body image and weight control practices of 6-to 19-year-old children and adolescents', *Health Education Research*, Vol. 16, No.5, pp. 521-532; DR, Pastore, M Fisher, & SB Friedman, 'Abnormalities in weight status, eating attitudes, and eating behaviors among urban high school students: Correlations with self-esteem and anxiety', *Journal of Adolescent Health*, Vol.18, No. 5, 1996, pp. 312-319; RM Ortega, AM Requejo, AM Lopez-Sobaler, ME Quintas, P Andres, MR Redondo, & T Rivas, 'Difference in the breakfast habits of overweight/obese and normal weight school children', *International Journal for Vitamin and Nutrition Research*, Vol. 68, No. 2, 1997, pp.125-132; WS Wolfe, CC Campbell, EA Frongillo Jr, JD Haas, & TA Melnik, 'Overweight schoolchildren in New York State: prevalence and characteristics', *American Journal of Public Health*, Vol. 84, No. 5, 1994, pp. 807-813.

<sup>9</sup> A, Nurul-Fadhilah, PS Teo, I Huybrechts & LH Foo, 'Infrequent breakfast consumption is associated with higher body adiposity and abdominal obesity in Malaysian school-aged adolescents' *PloS one*, Vol.8, No. 3, 2013.

<sup>10</sup> HYP Kim, EA Frongillo, SS Han, SY Oh, WK Kim, YA Jang, et al., 'Academic performance of Korean children is associated with dietary behaviours and physical status', *Asia Pacific Journal of Clinical Nutrition*, Vol.12, 2003, pp. 186-192.

<sup>11</sup> T Dwyer, JF Sallis, L Blizzard, R Lazarus, & K Dean, 'Relation of academic performance to physical activity and fitness in children', *Pediatric Exercise Science*, Vol. 3, No. 3, 2001, pp. 225-237.

## Metabolic syndrome and acute insulin resistance

Poor breakfast habits (including missing breakfast, only having a beverage or a sweet item) during adolescence have been associated with health syndromes that occur in adulthood.

In one longitudinal study, researchers concluded that poor breakfast habits in adolescence predicted metabolic syndromes in adulthood. Of the study participants, 27% developed metabolic syndrome by the age of 43, of which one third had poor breakfast habits at 16 years of age. Participants were also found to have high fasting blood glucose and an increase in central obesity, a health concern linked to the development of several chronic diseases.<sup>13</sup>

Moreover, skipping breakfast is considered by some to trigger acute insulin resistance and high levels of free fatty acids.<sup>14</sup> Research indicates that skipping breakfast regularly over time could lead to further metabolic issues including chronic insulin resistance and type 2 diabetes mellitus.

It is therefore arguable that having a well-balanced breakfast for young people is essential for optimum health later in life.

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<sup>12</sup> S Cho, M Dietrich, CJ Brown, CA Clark, & G Block, 'The effect of breakfast type on total daily energy intake and body mass index: results from the Third National Health and Nutrition Examination Survey (NHANES III)', *Journal of the American College of Nutrition*, Vol. 22, No. 4, 2003, pp. 296-302.

<sup>13</sup> M Wennberg, PE Gustafsson, P Wennberg, & A Hammarström, 'Poor breakfast habits in adolescence predict the metabolic syndrome in adulthood', *Public Health Nutrition*, 2014, pp. 1-8; V Mikkilä, L Räsänen, OT Raitakari, P Pietinen, & J Viikari, 'Longitudinal changes in diet from childhood into adulthood with respect to risk of cardiovascular diseases: The Cardiovascular Risk in Young Finns Study', *European Journal of Clinical Nutrition*, Vol. 58, No.7, 2004, pp. 1038-1045.

<sup>14</sup> EA Thomas, JL Bechtell, J Higgins & MA Cornier, 'Metabolic Effects of Skipping Breakfast in Obese Women', *Obesity: Physiologic Responses to Energy Balance Disruption*, 2013, pp. OR09-2

## Mental health and school performance

Young people who don't have breakfast experience significantly poorer mental health and education outcomes. Research shows the complexity of the relationship between breakfast and school outcomes, but there is generally widespread acceptance that missing breakfast has negative impacts on cognition, mood and school performance.

Those who habitually skip breakfast perform poorly at school. In one study, 605 adolescents aged 11–18 years were surveyed, and those who missed breakfast were found to have lower end-of-term grades compared to those who had breakfast. A link was found between missing breakfast and attention and alertness.<sup>15</sup>

Further studies have linked hunger to education outcomes. One study from the US shows that adolescents who experience hunger have lower mathematics scores and are more likely to repeat a grade.<sup>16</sup> Additionally, the results indicated that those teenagers experiencing hunger are more likely to have been suspended from school and have difficulty getting along with their peers.

Missing breakfast negatively impacts cognitive function and mood in young people.<sup>17</sup> Results show that young people reported higher levels of alertness but also higher levels of contentment after having breakfast, when compared with those who didn't have breakfast. When exploring mood, young people who didn't

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<sup>15</sup> A Boschloo, C Ouwehand, S Dekker, N Lee, R De Groot, L Krabbendam, & J Jolles, 'The relation between breakfast skipping and school performance in adolescents', *Mind, Brain, and Education*, Vol. 6, No 2, 2012, pp. 81-88.

<sup>16</sup> Alaimo, K., Olson, C. M., Frongillo Jr, E. A., & Briefel, R. R. (2001). Food insufficiency, family income, and health in US preschool and school-aged children. *American Journal of Public Health*, 91(5), 781.

<sup>17</sup> Defeyter, M. A., & Russo, R. (2013). The effect of breakfast cereal consumption on adolescents' cognitive performance and mood. *Frontiers in human neuroscience*, 7.

have breakfast reported feeling less satiated and were hungrier. Although most young people reported feeling less calm across the morning hours of school, those who hadn't had breakfast were not as calm as those who had breakfast.<sup>18</sup>

Furthermore, an Australian study on mood and breakfast found a nutritional breakfast was important in relation to mental health, stating 'a higher-quality breakfast, consisting of foods from multiple food groups, was significantly related to better mental health scores in adolescents'.<sup>19</sup>

These studies indicate that breakfast has a major impact on young people's health and wellbeing. Young people who don't have breakfast are subject to poorer outcomes in their physical health, mental health and education outcomes. As the research suggests, these issues can be avoided and breakfast is an important part of the solution.

## Drivers for breakfast skipping

The consequences of missing breakfast for young people are considerable. It is important to understand the drivers for missing breakfast in order to develop solutions that effectively impact on breakfast skipping rates, and prevent or address associated poor outcomes for young people.

Research shows that missing breakfast has two important causes:

- Poverty and food insecurity; and,

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<sup>18</sup> Defeyter, M. A., & Russo, R. (2013). The effect of breakfast cereal consumption on adolescents' cognitive performance and mood. *Frontiers in human neuroscience*, 7.

<sup>19</sup> O'Sullivan, T., Robinson, M., Kendall, G., Miller, M., Jacoby, P., Silburn, S., et al. (2008). A good quality breakfast is associated with better mental health in adolescence. *Public Health Nutrition*, 12(2), p. 257

- Young people choosing to skip breakfast.

## Poverty and Food Insecurity

Food insecurity, as defined by NSW Centre for Public Health Nutrition, is:

Not having sufficient food; experiencing hunger as a result of running out of food and being unable to afford more; eating a poor quality diet as a result of limited food options; anxiety about acquiring food; or having to rely on food relief.<sup>20</sup>

Around 5% of the Australian population are estimated to experience food insecurity, and the most susceptible are those who experience unemployment, single-parent households, low-income earners, rental households and young people.<sup>21</sup> Moreover, in NSW, 1 in 7 young people (aged 25 years and under), or 13.4%, experience poverty and deprivation.<sup>22</sup> Missing meals and being hungry is a common experience for young people living in poverty. In 2012, Anglicare Australia reported that '16% of emergency relief clients report that their children skipped meals, 38% were not eating enough, and 8% experienced severe food insecurity almost every week'.<sup>23</sup>

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<sup>20</sup> NSW Centre for Public Health Nutrition, *Food Security Options Paper: A planning framework and menu of options for policy and practice interventions*, NSW Department of Health: Sydney, 2003, p. iv accessed via [http://sydney.edu.au/science/molecular\\_bioscience/cphn/pdfs/food\\_security.pdf](http://sydney.edu.au/science/molecular_bioscience/cphn/pdfs/food_security.pdf)

<sup>21</sup> K Rosier, 'Food insecurity in Australia what is it, who experiences it and how can child and family services support families experiencing it?' *Journal of the Home Economics Institute of Australia*, Vol. 19, No. 1, 2012, pp. 25-30,

<http://search.informit.com.au/documentSummary;dn=020351335029685;res=IELIND>>

<sup>22</sup> D Montoya, 'Child Disadvantage in NSW: recent findings', *NSW Parliamentary Research Service*, e-brief 07/2017,

[https://www.parliament.nsw.gov.au/prod/parlament/publications.nsf/key/ChilddisadvantageinNSW:recentfindings/\\$File/Child+disadvantage+in+NSW+-+recent+findings.pdf](https://www.parliament.nsw.gov.au/prod/parlament/publications.nsf/key/ChilddisadvantageinNSW:recentfindings/$File/Child+disadvantage+in+NSW+-+recent+findings.pdf)

<sup>23</sup> As in NSW Council of Social Services (NCOSS), *1 in 7 Campaign Report*, 2015, accessed via [https://www.ncoss.org.au/sites/default/files/public/policy/1in7Campaign\\_Final%20Report.pdf](https://www.ncoss.org.au/sites/default/files/public/policy/1in7Campaign_Final%20Report.pdf)

A report from the Social Policy Research Centre detailed the link between poverty, food security and school, stating 'Some households struggled with daily necessities like food, and some children did not attend school when there was no food: "My mum struggles, she gets paid on Thursdays but struggles on the Wednesday. Me and my brother if there is no food for school, we don't go to school at all. She has never sent us to school with no food" (Billie, female, 15 years, NSW).'<sup>24</sup>

## **Bullying**

One factor influencing breakfast consumption is young people's experience of bullying. Young people are resilient and use different techniques, although not always healthy mechanisms, to cope, such as engaging in high-risk behaviours.<sup>25</sup>

One such behaviour includes breakfast skipping.<sup>26</sup>

School bullying and cyber bullying have long been associated with mental health problems, including anxiety and emotional distress,<sup>27</sup> feelings of loneliness,

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<sup>24</sup> J Skattebol, P Saunders, G Redmond, M Bedford, & B Cass, *Making a difference: Building on young people's experiences of economic adversity*, Social Policy Research Centre: Sydney: University of New South Wales, 2012, p. 41

[https://www.sprc.unsw.edu.au/media/SPRCFile/2012\\_6\\_Making\\_a\\_Difference\\_Building\\_on\\_Young\\_Peoples\\_Experiences\\_of\\_Economic\\_Adversity.pdf](https://www.sprc.unsw.edu.au/media/SPRCFile/2012_6_Making_a_Difference_Building_on_Young_Peoples_Experiences_of_Economic_Adversity.pdf)

<sup>25</sup> RS Lazarus, 'Coping theory and research: past, present, and future' *Psychosomatic Medicine*, Vol. 55, No. 3, 1993, pp. 234-247.

<sup>26</sup> H Sampasa-Kanyinga, P Roumeliotis, CV Farrow, & YF Shi, 'Breakfast skipping is associated with cyberbullying and school bullying victimization: A school-based cross-sectional study'. *Appetite*, Vol. 79, 2014, pp. 76-82.

<sup>27</sup> J Juvonen, & EF Gross, 'Extending the school grounds? Bullying at school. An indicator of adolescents at risk for mental disorders', *Journal of Adolescence*, Vol. 23, No. 6, 2008, pp. 661-674.

insecurity and humiliation,<sup>28</sup> low self-esteem, frustration and sadness, major depression, self-harm and suicide.<sup>29</sup>

Because bullying victimisation often increases depressive symptoms in young people, and depression is often linked to disordered eating behaviour, particularly missing breakfast,<sup>30</sup> research concluded that 'the increased vulnerability of victims of both cyber bullying and school based bullying may negatively impede breakfast consumption and that symptoms of depression appear to mediate these relationships.'<sup>31</sup> As the experience of bullying involves emotional distress, victims often have no appetite and therefore are prone to skipping breakfast.<sup>32</sup>

Additionally, skipping breakfast as a result of depressions caused by bullying can possibly be the first steps toward a range of poor eating behaviours and disorders.<sup>33</sup>

## **Parent and peer behaviour**

Parent and peer behaviours are understood to influence young people missing or skipping breakfast. Parents play a vital role in influencing young people's breakfast choices via managing the availability and preparation of meals as well as

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<sup>28</sup> T Breguet, *Frequently asked questions about cyberbullying*, New York: Rosen Publishing Group Inc. 2007.

<sup>29</sup> C Hay, & R Meldrum, 'Bullying victimization and adolescent self-harm. Testing hypotheses from general strain theory', *Journal of Youth and Adolescence*, Vol. 39, No. 5, 2007, pp. 446-459; JW Patchin, S & Hinduja, 'Cyberbullying and self-esteem' *The Journal of School Health*, Vol. 80. No. 12, 2010, pp. 614-621.

<sup>30</sup> L Lien, 'Is breakfast consumption related to mental distress and academic performance in adolescents?' *Public Health Nutrition*, Vol.10, No.4, 2007, pp. 422-428.

<sup>31</sup> H Sampasa-Kanyinga, op.sit.

<sup>32</sup> J Polivy, & CP Herman, 'Mental health and eating behaviours. A bi-directional relation' *Canadian Journal of Public Health*, Vol.96, No.3, 2005, pp. S43-S46.

<sup>33</sup> L. Lien, op.sit.

establishing norms around breakfast consumption.<sup>34</sup> This influence is significant, as research has shown that parental breakfast eating is the most important factor associated with adolescent breakfast eating.<sup>35</sup> Additionally, family structure (i.e. single vs. two parents), a high number of siblings, and having a working mother is highly correlated with irregular breakfast consumption.<sup>36</sup> Other research has suggested that just 15% of parents observed, monitored and encouraged their children's breakfast eating,<sup>37</sup> while the frequency of family meals has been positively linked with young peoples healthy food choices.<sup>38</sup>

There is also a wealth of research which consistently concludes that maternal modelling of eating behaviours is associated with young people's eating patterns,<sup>39</sup> especially restrictive eating behaviours such as fasting and meal skipping.<sup>40</sup>

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<sup>34</sup> B Mullan, C Wong, E Kothe, K O'Moore, K Pickles, & K Sainsbury, 'An examination of the demographic predictors of adolescent breakfast consumption, content, and context', *BMC public health*, Vol. 14, No. 1, 2014, p. 264.

<sup>35</sup> A, Keski-Rahkonen et al, op.sit. N Pearson, SJ Biddle, & T Gorely, 'Family correlates of breakfast consumption among children and adolescents: A systematic review', *Appetite*, Vol. 52, No. 1, 2009, pp. 1-7.

<sup>36</sup> PR Deshmukh-Taskar, TA Nicklas, CE O'Neil, DR Keast, JD Radcliffe, S Cho, 'The relationship of breakfast skipping and type of breakfast consumption with nutrient intake and weight status in children and adolescents: the National Health and Nutrition Examination Survey 1999-2006', *Journal of the American Dietetic Association*, Vol. 110, No. 6, 2010, pp. 869-878; A Keski-Rahkonen et al., op.sit.

<sup>37</sup> M Vanelli, B Lovane, A Bernardini, G Chiari, MK Errico, MC Gelmetti, & S Rossetti, 'Breakfast habits of 1,202 northern Italian children admitted to a summer sport school. Breakfast skipping is associated with overweight and obesity', *Acta Biomed*, Vol. 76, No. 2, 2005, pp. 79-85.

<sup>38</sup> D Neumark-Sztainer et al., 2003, op.sit.

<sup>39</sup> N. Pearson, L Williams, D Crawford, & K Ball, 'Maternal and best friends' influences on meal-skipping behaviours' *British journal of nutrition*, Vol. 108, No. 5, 2012, pp. 932-938; H Patrick & TA Nicklas, 'A review of family and social determinants of children's eating patterns and diet quality', *Journal of the American College of Nutrition*, Vol. 24, No. 2, 2005, pp. 83-92; N Pearson, 2009, et al. op.cit., T Tibbs, D Haire-Joshu, KB Schechtman, RC Brownson, MS Nanney, C Houston, & W Auslander, 'The relationship between parental modeling, eating patterns, and dietary intake among African-American parents' *Journal of the American Dietetic Association*, Vol. 101, No. 5, 2001, pp. 535-541

<sup>40</sup> EH Wertheim, V Mee, & SJ Paxton, 'Relationships among adolescent girls' eating behaviors and their parents' weight-related attitudes and behaviors' *Sex Roles*, Vol. 41, No. 3-4, 1999, pp. 169-187.

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Even as young people became more autonomous, eating behaviour is still highly influenced by maternal eating behaviours, including in environments where the mother may not always be present.<sup>41</sup> The evidence clearly shows that mothers are significant role models for their children's eating behaviours.

The influence peers have over each others' eating behaviours is well established within the literature, and research has indicated that attitudes and behaviours maintained by friends and peers can influence adolescents' eating behaviours.<sup>42</sup> For example, one study concluded that young women who perceived their best friend to be skipping meals were far more likely to skip breakfast and dinner compared to young men who held the same perceptions.<sup>43</sup>

Research has also shown Australian young people who eat with others are less likely to skip meals.<sup>44</sup>

## **Skipping meals as a weight control method**

Skipping meals is often a perceived method of weight control, especially among young women. It is argued that meal-skipping behaviour is symptomatic of a peer environment and a subculture that emphasises the importance of weight control, joint dieting and thinness.<sup>45</sup> Other Australian research has indicated that girls are more likely to pursue a thin body as ideal, participate in disordered eating and

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<sup>41</sup> AM Siega-Riz, T Carson, B Popkin, op.sit.

<sup>42</sup> LH Littleton, & T Ollendick, 'Negative body image and disordered eating behavior in children and adolescents: what places youth at risk and how can these problems be prevented?', *Clinical Child And Family Psychology Review*, Vol. 6, No. 1, 2003, pp. 51-66.

<sup>43</sup> AM Siega-Riz, T Carson, B Popkin, op.sit.

<sup>44</sup> P Lucas, 'Breakfast clubs and school fruit schemes: Promising practice. What Works for Children', Barnardos, United Kingdom, April 2003

<sup>45</sup> AM Siega-Riz, T Carson, B Popkin, op.sit.

interact with friends who share similar dieting behaviour.<sup>46</sup> Rates of young men concerned about their body image are also increasing, as are their meal skipping behaviours.<sup>47</sup> Moreover, annual surveys of Australian young people continue to assert continuing body image concerns among young people.<sup>48</sup>

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<sup>46</sup> EH Wertheim, SJ Paxton, HK Schutz, & SL Muir, 'Why do adolescent girls watch their weight? An interview study examining sociocultural pressures to be thin', *Journal of Psychosomatic Research*, Vol. 42, No. 4, 1997, pp. 345-355; SJ Paxton, KH Schutz, EH Wertheim, & SL Muir, 'Friendship clique and peer influences on body image concerns, dietary restraint, extreme weight-loss behaviors, and binge eating in adolescent girls' *Journal of Abnormal Psychology*, Vol. 108, No. 2, 1999, p. 255.

<sup>47</sup> LA Ricciardelli, MP McCabe, & S Banfield, 'Body image and body change methods in adolescent boys: Role of parents, friends and the media', *Journal of Psychosomatic Research*, Vol. 49, No. 3, 2000, pp.189-197; D Neumark-Sztainer, ME Eisenberg, JA Fulkerson, M Story, & NI Larson, 'Family meals and disordered eating in adolescents: longitudinal findings from project EAT' *Archives of Pediatrics & Adolescent Medicine*, Vol. 162, No. 1, 2008, pp. 17-22.

<sup>48</sup> L Cave, J Fildes, G Lockett, & A Wearing, *Mission Australia's 2015 Youth Survey Report*, Mission Australia, 2015.

## Identifying possible solutions

Breakfast programs have long been used as a strategy to promote healthy eating and improve educational outcomes among children and young people. Both the United States (US) and the United Kingdom (UK) have employed evaluated breakfast programs in order to improve eating behaviour and educational outcomes, amongst other positive results.

In the US, breakfast initiatives in schools report successfully changing the diets of children and young people.<sup>49</sup> Increased involvement in school breakfast programs in the US have also been shown to be associated with increased school achievement and decreased absenteeism.<sup>50</sup>

In the UK, government funded pilot breakfast and fruit programs have been carried out. The evaluations of these projects suggested that teachers saw significant improvements for the students, while participants in the programs reported that the social setting led to improved relationships between staff and pupils across all ages.<sup>51</sup> Increased self-esteem and a sense of independence were also widely reported, while parents identified the breakfast programs as a safe source of childcare, and felt that attending breakfast clubs improved their morning routines and provided children with extra choice of food items.<sup>52</sup>

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<sup>49</sup> K Franco, 'Optimizing nutritional health for children through school-based initiatives' *Journal of the American Dietetic Association*, Vol. 101, No. 8, 2001, pp. 873-874.

<sup>50</sup> AJ Hill, 'Causes and consequences of dieting and anorexia' *Proceedings of the Nutrition Society*, Vol. 52, No. 1, 1993, pp. 211-218.

<sup>51</sup> P Belderson, M Brandon, M Camina, I Harvey, P Moffatt, M Mugford, & G Schofield, *A national evaluation of school breakfast clubs. Final Report*. University of East Anglia, Norwich, 2001.

<sup>52</sup> *ibid.*

Case studies below from both international and Australian contexts highlight a range of models for breakfast programs. Following a review of various models are recommendations for further actions to mitigate the rising rates of young people missing out on breakfast.

## **Case Studies: United States (US)**

### **School Breakfast Program**

The School Breakfast Program (SBP) is a federally assisted meal program which runs in public and non-profit private schools and residential child care institutions in the US. The program began as a pilot through the Child Nutrition Act of 1966 and became permanent in 1975. This came after the success of the National School Lunch Act, which was passed by Congress in 1946.<sup>53</sup> Both programs are administered at the federal level by the US Department of Agriculture's Food and Nutrition Service, which provides grants to state education agencies to operate the program through agreements with local school food authorities in over 89,000 schools and institutions across America. More than 31 million children participate in the National School Lunch Program (NSLP) each day, and more than 12.9 million take part in the SBP every day<sup>54</sup>

All students at participating schools are able to purchase a meal through the programs. These fall into three groups:

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<sup>53</sup> J Leos-Urbel, AE Schwartz, M Weinstein, & S Corcoran, 'Not just for poor kids: The impact of universal free school breakfast on meal participation and student outcomes', *Economics of Education Review*, Vol. 36, 2013, pp. 88-107.

<sup>54</sup> United States Department of Agriculture Food and Nutrition Service, *The School Breakfast Program: Fact Sheet*, 2014, accessed 6 November, 2014, <http://www.fns.usda.gov/sbp/school-breakfast-program-sbp>

- Students from families with incomes at or below 130% of the poverty line: These students pay nothing for lunch or breakfast.
- Students from families with incomes between 130 and 185% of the poverty line: These students are eligible for subsidised meals.
- Students from families above this level: These students, who are ineligible for subsidised meals, may purchase them at 'full price' (although these are provided at less than cost).

Of the 12.9 million children participating daily in the SBP, 10.1 million received breakfast for free or reduced price. The US Department of Agriculture offers support to schools offering breakfast, usually in the form of a cash reimbursement for each breakfast served. The current basic cash reimbursement rates for non-severe need were (at 30 June 2014):

- Free breakfasts \$1.58
- Reduced-price breakfasts \$1.28
- Paid breakfasts \$0.28

Some schools qualify for 'severe needs' reimbursements if over 40% of their lunches are served free or at a reduced price. Severe need payments are up to 30 cents higher than the normal reimbursements for free and reduced-price breakfasts. Currently, approximately 77% of the breakfasts served in the SBP receive severe need payments.<sup>55</sup>

### Universal Free School Breakfast in New York City

In September 2003, New York City became one of the first large urban school

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<sup>55</sup> *ibid.*

districts to make school breakfast free for all students regardless of family income. Prior to this policy change in New York City, students could pay 25 cents per meal at 'full price' or, if eligible for reduced price breakfast, students paid 5 cents per meal. As it was established that breakfast consumption amongst students was much lower compared to lunch consumption, and in an effort to make up for lost revenue in providing free breakfast, the New York City Department of Education increased the price of 'full-price' lunches from \$1.00 to \$1.50 while the price of subsidised lunches stayed the same.

Researchers in the United States conducted an evaluation of the program in order to establish how a breakfast program can impact upon meal participation and student outcomes. The findings indicated that eliminating stigma against only 'poor kids' receiving breakfast had a significant impact upon participation in the program. Making breakfast free for all students increased participation by students from all eligibility groups, even those who were already eligible for free meals before the policy change. The introduction of free breakfast meant that previous 'reduced price eligible' students increased their participation by 20% and previous 'full price' students increased by 35%.<sup>56</sup>

### **'PATHWAYS' Program**

An evaluation of interventions to promote eating breakfast, including school breakfast programs, found the 'PATHWAYS' Program in the US as largely the most successful in preventing obesity for young people.<sup>57</sup> The 'PATHWAYS' program

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<sup>56</sup> *ibid.*

<sup>57</sup> D Hector, L King, L Hardy, A St George, L Hebden, P Espinel & CRissel, *Evidence update on obesity prevention; Across the life-course Prepared for NSW Ministry of Health*. Physical Activity Nutrition Obesity Research Group, Sydney, 2012.

consisted of a healthy breakfast at school and aimed to improve the eating habits and physical activity of school children.

The 'PATHWAYS' program was a three-year intervention that consisted of a healthy breakfast at school, and had three main aims:

- To improve the eating habits and physical activity of school children;<sup>58</sup>
- To reduce the fat content of school meals without compromising dietary quality; and,
- To keep total energy from breakfast the same.

The program was successful in reducing the following:

- Percentage of calories from total fat;
- Percentage of calories from saturated fat;
- Total grams of saturated fat consumed.

Fat content of school breakfasts was reduced in intervention schools, compared with no change in control schools. Additionally, the intervention schools provided healthier foods, such as non-fat and low-fat milk, more servings of fruit, fewer pastries and donuts, less peanut butter and fewer fats and gravies.

The program was also successful in maintain the total energy of breakfasts.

## **Case Studies: New South Wales, Australia**

### **The Daystar Foundation School Breakfast Club**

The Daystar Foundation, established in 2001, is a community-based not-for-profit organisation that aims to support children and young people in South Western

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<sup>58</sup> L Cunningham-Sabo, MP Snyder, J Anliker, J Thompson, JL Weber, O Thomas & L Nielsen, 'Impact of the Pathways food service intervention on breakfast served in American-Indian schools' *Preventive Medicine*, Vol. 37, 2003, pp. S46-S54.

Sydney. Currently, Daystar runs 'Before Lunchtime, After School Transformation (BLAST) Programs' that operate in 15 schools, 5 of which are secondary schools. These in-school programs include 'Breakfast Club', 'Literacy Buddies', 'Garden Club', 'Music Club' and 'Basic Needs Drives'. The outcomes of the breakfast club have been far-reaching and meaningful, for both primary and secondary schools, as follows:

- 'During the six years Breakfast Club has operated at Sarah Redfern High School truancy and absenteeism has fallen below the state-wide average by 1.5%.'
- '[The program] has led to a marked improvement in school attendance, chronic late arrivals are now here before school and many behaviours we experienced because children were coming to school hungry have disappeared.'
- 'Students who would otherwise be truant or absent turn up for Breakfast Club resulting in them getting to class on time. Once there, teachers tell us that the students' classroom performance and behaviour improves significantly as a direct result of their healthy food start to the day.'
- 'At Breakfast Club at Sarah Redfern High School we provide basic lunch items for students to make their own lunches in the morning, to assist them in learning about preparing and eating healthy food.'<sup>59</sup>

### The John Berne School Breakfast Club

The John Berne School is a private Catholic high school in Lewisham, Sydney, operated by the Marist Brothers for students who are unable to access mainstream education. Students are referred to The John Berne School when it is clear that mainstream schooling is not meeting their needs. The school is co-educational for

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<sup>59</sup> The Daystar Foundation, *About Us*, 2014, accessed 6 November, 2014, available from <http://www.daystar.org.au/index.php>

students aged 12-16 in years who are at risk of not completing their education due to a range of coping factors including behavioural disorders and school refusing. The school runs a breakfast club from 8am every day, with a focus on healthy eating and food education.<sup>60</sup>

Chris Langridge, who leads the school counselling program at John Berne explained:

Students turn up to school hungry because often they are missing breakfast at home, so we knew that providing breakfast is a way to help them concentrate and learn effectively at school. The students love the club and they are excited to show up to school every morning to enjoy the breakfast. We also provide recess to the students.

### **Marrickville Souths Breakfast Club**

The Marrickville Souths Fitness and Breakfast Club is run for young people aged 12-25 who are residents of the Marrickville Local Government Area. The program runs during the school term from 6.30am every Tuesday and Thursday. Young people are provided free transport to Marrickville PCYC where they engage in range of sports and fitness exercises for one hour with members of the local rugby league team. Young people are then provided breakfast by staff from Marrickville Council and local youth services. Attendees are also provided transport to their local school or workplace.<sup>61</sup>

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<sup>60</sup> The John Berne School. History. Accessed 6 November 2014. Available from [www.johnberneschool.org/about/history/](http://www.johnberneschool.org/about/history/)

<sup>61</sup> Rec Post, *Marrickville Souths Breakfast Club*, 2014, accessed 6 November, 2014. <<http://recpost.marrickville.nsw.gov.au/groups/marrickville-souths-breakfast-club>>

The program has seen decreased absentee rates among school students, and the social aspect of the club means that students are happy to wake up early for breakfast and exercise. The young people are educated about the importance of breakfast and healthy eating choices.

When discussing the club with some of the young women who attend regularly, Youth Action found that on the days the club is not running, some of the young people still skip breakfast at home because they 'can't be bothered' or 'would rather sleep in'. Consistent with research, the young people who skip breakfast when the program isn't running also admitted to snacking on unhealthy foods throughout the day and during class, where they are often punished for eating. Participants in the program expressed that they would love the program to continue and they 'don't mind eating healthy food anymore'. As successful as the program has become, it is clear that increased funding would be required for the club to run the program every day. This would further decrease absenteeism, increase healthy food consumption, reduce snacking and promote eating breakfast every day. As some young people were still skipping breakfast when the program wasn't running, the implementation of education in schools around the importance of eating breakfast is expected to encourage daily breakfast consumption among young people.

### **Breakfast Programs at Connected Communities Schools**

The Connected Communities approach is a whole-of-government reform to drive improved education outcomes for Aboriginal children and young people in 15 of the state's most complex and disadvantaged communities. The strategy was launched in May 2012 by the former Premier, Barry O'Farrell, the Minister for

Education, Adrian Piccoli, and the former Minister for Aboriginal Affairs, Victor Dominello. \$100,000 was announced for breakfast programs as part of a suite of measures aimed at creating the generational change required for students to achieve better outcomes at school and access pathways from school into further learning and employment.<sup>62</sup> An evaluation of the program will be conducted in 2018.<sup>63</sup>

### Foodbank School Breakfast Programs

To assist Foodbank in expanding the reach of their nationwide school breakfast program, Kellogg's Australia donated six million serves of cereal and a \$100,000 to Foodbank in 2014. Early findings from Foodbank's Social Return on Investment Report revealed that one in every seven children miss breakfast each day, and every kilogram of food provided to a child via a school breakfast program in Australia was equivalent to \$110 of social value in terms of improved physical health and school performance.<sup>64</sup> Annually, 20,000 students access Foodbank's School Breakfast Program and this generates \$84.5 million in social value in the form of better performance at school, as well as improved physical health.

Foodbank CEO Jason Hinks explained:

Without partners like Kellogg's Australia, we wouldn't be able to provide the 2,500 welfare agencies with staple food items such as cereal. The food industry's surplus

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<sup>62</sup> NSW Department of Education and Communities, *Connected Communities: The journey so far*, 2014, accessed 6 November 2014, <<http://www.dec.nsw.gov.au/about-the-department/our-reforms/connected-communities/about-the-strategy/the-journey-so-far>>

<sup>63</sup> H Sansom, 'Off to a good start', *Manning River Times*, 21 March 2014, viewed 31<sup>st</sup> October 2014, <<http://www.manningrivertimes.com.au/story/2165784/off-to-a-good-start/>>

<sup>64</sup> Foodbank Australia. *Social impact of Foodbank Australia's services, A Social Return on Investment (SROI) forecast*, 2014

simply isn't filling demand; while we receive significant volumes from companies with excess stock, this isn't enough. We rely on corporate partnerships and donations such as this one.<sup>65</sup>

## **An Ideal Breakfast Program in NSW**

Each of the above case studies provides some flexibility around the design of an ideal high school breakfast program for NSW. It is clear that Australian adolescents from high, middle and low socioeconomic backgrounds skip breakfast, and that skipping breakfast is not always a matter of individual choice for adolescents, but a response to a mixture of complex drivers.

A state government funded, high school breakfast program under which every public, private, independent and alternative school in NSW provided their students with breakfast every school day free of charge, regardless of family income, would help prevent significant and poor health, mental health and education outcomes for young people in NSW.

Design and packaging of a nutritious breakfast, outsourced to a private business or government department, would automatically be sent in bulk to schools each week (e.g pre-packaged cereal, a tub of yoghurt and a piece of fruit for each student).

Given the significant funding limitations of an ideal program, whereby all young people in NSW are provided breakfast every school day (an estimated \$504,300,000 per annum, although efficiencies of scale would significantly alter this figure), alternative recommendations are outlined below.

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<sup>65</sup> K Darling, S McMaster, 'True cost of Aussie kids missing breakfast revealed', Foodbank Australia, 16<sup>th</sup> July 2014, Accessed 6 November, 2014. Available from <<http://www.foodbank.org.au/2014/07/16/true-cost-aussie-kids-missing-breakfast-revealed/>>



## Recommendations for implementing breakfast programs

### Recommendation 1

Despite NSW government funding limitations, if high schools are able to determine a significant need for breakfast, the suggestions below provide an outline for various aspects to consider if implementing a program:

- Provide breakfast during school hours, not before the commencement of the school day - i.e. 8.30am – 8.50am. MBF's National Healthwatch Survey – Wave Two indicated that many adolescents attribute skipping breakfast to a lack of time in the morning, and many would prefer to sleep in rather than eat breakfast. Additionally, 'doesn't like eating breakfast', being 'too tired to eat' and 'can't be bothered' are major reasons for breakfast skipping.<sup>66</sup> While it would not solve these attitudinal barriers entirely, if breakfast is provided during school hours, these issues could be significantly reduced.
- Ensure that the food provided is meeting the 'Fresh Tastes @ School – NSW Healthy School Canteen Strategy' criteria.
- Be mindful of health and safety regulations during the program with attention to food storage, waste disposal, insurance issues and the number of support staff required to run the program.
- Provide students with autonomy during the program, i.e. allow students to prepare their own breakfast. This also allows for positive adult-young person interactions and provides educational opportunities around food choice etc.
- Emphasise why the particular breakfast foods for the program were chosen and aim to educate students about healthy food choices, portion sizes and

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<sup>66</sup> TNS Health care, *MBF Healthwatch Survey – Wave Two*, 2009.

the benefits of a healthy breakfast each morning.

- Limit the amount of breakfast per student to prevent exceeding daily energy intake. An evaluation of a US trial breakfast program indicated that although there was increased participation in the breakfast program, daily energy intakes exceeded requirements in all students.<sup>67</sup> In light of this, it is recommended that each student only receives one helping of breakfast and is educated about the recommended daily energy intake for their age group and how to monitor this.
- Ensure that students who are eating breakfast at school are not also eating breakfast at home beforehand.
- For a high school breakfast program, The Australian Red Cross recommends a variety of foods from the five food groups. Some examples include:
  - healthy cereal (e.g. Weet-Bix, muesli, or porridge) with fresh or tinned fruit and yoghurt;
  - eggs with wholegrain toast and reduced fat milk or juice;
  - pancakes with fruit and yoghurt; or,
  - wholegrain toast with either baked beans, vegetables, lean meat, peanut butter, vegemite, avocado etc.<sup>68</sup>
- Regularly evaluate the program with the input of students and determine what aspects of the program are successful and what aspects need tailoring.

## Recommendation 2

That the NSW government conduct a state-wide survey of all NSW high schools on

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<sup>67</sup> D Hector, op.sit.

<sup>68</sup> Australian Red Cross, 5. *Healthy food for school breakfast programs*, Fact Sheet, n.d., accessed 12<sup>th</sup> November, 2014, <[http://www.redcross.org.au/files/Fact\\_sheet\\_5\\_\(2\).pdf](http://www.redcross.org.au/files/Fact_sheet_5_(2).pdf)>

their students' breakfast eating habits by 2018. This survey could be modelled after the Australian Red Cross 'Determining whether your school needs a breakfast program' survey.<sup>69</sup>

### **Recommendation 3**

If a high school identifies a significant number of students are missing breakfast on a regular basis, it is recommended that the NSW government supports breakfast programs in partnership with community and schools, regardless of whether the school is government or non-government. Targeted support for young people who skip breakfast more frequently is a more feasible option. As one third of adolescents in NSW skip breakfast daily, focusing on schools with students who skip breakfast at a similar or more than the state average could assist to target program support.

### **Recommendation 4**

Fruit schemes provide an alternative option. Free or subsidised fruit provided to every secondary school student in the mornings, daily.

### **Recommendation 5**

Raise the level of awareness of both parents and young people about the importance of breakfast and family meal times with a particular focus on countering perceptions regarding weight loss methods, and school performance. Opportunities include school publications targeting parents and/or guardians, or broader health promotion channels.

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<sup>69</sup> Australian Red Cross, *Good Start Breakfast Club: Fact Sheets. Determining whether your school needs a breakfast program*, Fact Sheet, n.d., accessed 4 November, 2014, < <http://www.redcross.org.au/good-start-breakfast-club-fact-sheets.aspx>>

## **Recommendation 6**

That breakfast education is included at schools, or within breakfast programs. This could be, for example, a three week module for all students per grade, with a focus on the detrimental effects of breakfast skipping, including: obesity, metabolic syndrome, diabetes, heart disease, high BMI, poor cognition, mood and school performance.

## **Recommendation 7**

That the NSW Department of Education provide establishment funding of up to \$5000 per school for the purpose of setting up their own breakfast programs. This is modelled after the Tasmanian Department of Education's strategy of satisfying eligibility criteria where need is clearly identified. This model allows all schools to apply if they have not received Breakfast Program funding in the past from the Department of Education, but Youth Action suggests funding opportunities are extended to community groups who work in partnership with schools.<sup>70</sup>

## **Recommendation 8**

That the NSW government expand their resources for breakfast programs and provide an additional \$100,000 to another 15 disadvantaged schools in need of breakfast.

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<sup>70</sup> Tasmanian Department of Education, *Schools and Colleges: School Breakfast Programs*, 2014, accessed 31 October, 2014, < <http://www.education.tas.gov.au/Students/schools-colleges/Pages/School-Breakfast-Programs.aspx>>