

## Scoping paper:

# Food provision policy to ensure minimum nutritional standards for foods served in government institutions



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March 2014

## 1. Intended policy impact

Children and adults spend a large portion of their day at school and at work respectively where they also consume a large portion of their daily energy intake. It is also reported that one third of the Australian food dollar is spent on food sources outside the home. Upstream measures to limit the provision of foods and drinks at schools and other government institutions to foods with a minimum nutritional standard will improve the food environment for many Australians. This will result in the consumption of healthier food and therefore prevent unhealthy weight gain. In addition to an impact on weight, healthier food environments at school/work can improve performance and productivity.

## 2. Current policy status

### a. Australia

In Australia, there are several examples of food provision initiatives aimed at different sectors, however the impact of the policies on change in food consumption or weight has not been evaluated.

- Schools
  - 2005 - NSW government primary and secondary schools - The NSW Healthy School Canteen Strategy 'Fresh Tastes @ School' (Nutrition and Physical Activity Branch 2006)  
The NSW state government was the first to mandate changes to state government school canteens through the NSW Healthy School Canteen Strategy which was implemented in 2005. To assist schools provide healthy meals, a model that features a colourful traffic light food spectrum was developed. Under this initiative, 'Red' food are limited and are to be sold no more than twice per term, 'Amber' foods should be selected carefully, and 'Green' foods should fill the menu. Other state government school food provision initiatives are based on the NSW 'Fresh Tastes @ School' strategy. An evaluation of this strategy has been undertaken however it was limited to the evaluation of the support materials for implementation and the short term impact of the strategy on school canteen operations. Changes in food consumption or weight were not reported.
  - 2007 - QLD government schools - 'Smart Choices' - Healthy Food and Drink Supply Strategy for Queensland Schools (Dick M et al. 2009) – mandated policy  
'Smart Choices' implemented in QLD primary and secondary schools aims to ensure that all food and drinks supplied in schools reflects the Dietary Guidelines for Children and Adolescents in Australia. Implementation was mandatory in all Queensland state schools from January 2007. Unlike the NSW Strategy, Smart Choices apply to all school environments including - tuckshops, vending machines, school excursions, school camps, fundraising, classroom rewards, sports days, breakfast programs, school events, class parties, sponsorship and advertising and curriculum activities. An evaluation of this initiative has been published (Dick et

- al. 2012) . The evaluation was survey based and was limited to the implementation of Smart Choices across QLD schools and did not evaluate the impact of the initiative on food consumption or health/weight outcomes.
- 2007 – VIC government schools - Victorian Department of Education and Early Childhood Development (DEECD) - Healthy Canteen Policy (Department of Education and Early Childhood Development 2013) – mandated policy
  - 2008 – WA - Healthy Food and Drink Policy (Department of Education 2008) – mandated policy
  - 2008 - SA government schools and preschools – ‘The Right Bite’ - Healthy Food and Drink Supply Strategy (South Australia Department of Education and Children’s Services & Health 2008) – mandated policy
  - 2009 – Northern Territory government schools - Canteen, Nutrition And Healthy Eating Policy (Department of Education and Training 2009) – mandated policy
  - TAS – no mandatory changes to food provision, however there are some initiatives to support schools and preschools to provide healthy eating and physical activity
  - Government institutions: Hospitals
    - 2008 QLD – A Better Choice Healthy Food and Drink Supply Strategy for Queensland Health Facilities (Queensland Health 2010) – mandated policy
 

The policy uses the traffic light system of food classification (adapted from the school system). It doesn’t ban any products but aims to increase the choice of healthy products – to at least 80% of food and drink displayed for sale. Under the policy all food outlets must:

      - Promote food and drink from the ‘Green’ category
      - Ensure ‘Green’ products are always available
      - ‘Amber’ food shouldn’t be promoted or advertised
      - ‘Red’ category food should be limited to 20% or less of the food displayed
      - ‘Red’ foods must not be advertised
      - Vending machines must not stock food and drink from the ‘Red’ category
      - Red food must not be supplied at meetings and functions
      - Red food and drink must not be used for fundraising purposes, gifts, give-aways or prizes

An evaluation of ‘A Better Choice’ was undertaken in 2009. The interview based evaluation was restricted to the extent of implementation of the strategy.
    - 2009 WA - Healthy Options WA - Food and Nutrition Policy for WA Health Services and Facilities (Department of Health 2009) – mandated policy
 

The policy is adapted from Queensland Health’s ‘A Better Choice’ strategy and the school traffic light system of food classification. The policy relates to all food outlets and vending machines, but does not apply to inpatient meals and social functions. Under the policy, all food outlets and vending machines must have

      - a minimum of 50% of food and drink displayed from the ‘Green’ category
      - a maximum of 20% of food and drink displayed from the ‘Red’ category
      - the remainder can be ‘Amber’ categorised food and beverages
      - Meetings, functions and catered training events need to meet the above standards
      - ‘Red’ category foods can’t be used for fundraising or as prizes
      - Sponsorship and ‘free meals’ from companies will only be supported if it complies with the above standards.

This initiative has not been evaluated.

- 2010 VIC, Healthy Choices: Food and Drink guidelines (Department of Health 2010). Provides a *voluntary* framework for improving the availability, display and promotion of healthier foods and drinks at retail outlets and in vending machines on hospital grounds. Alfred Health implemented these guidelines in 2011 (Nutrition Australia & Department of Health 2013). Café menus were reviewed to provide more healthy options
  - All internal catering only provides 'Green' and 'Amber' foods
  - From 2012 – all vending machines had a minimum of 50% 'Green' products and a maximum of 20% 'Red' products
  - The evaluation in 2012 showed an increase of 13% in the availability of 'Green' foods and a decrease of 15% in 'Red' foods
- Child Care: State child care regulations state that the food offered to children must be adequate, nutritious, varied and age appropriate however doesn't stipulate the actual nutritional requirements.
- Local council offices
  - Cardinia Shire Council (National Heart Foundation of Australia 2012b) – implemented the traffic light food classification system and aims to follow the guidelines of 50% 'Green' food, maximum of 30% 'Amber' food, and a maximum of 20% 'Red' foods to be available at the council. This policy includes food available in vending machines, at meetings, fundraising activities and private food vendors. An evaluation of this policy has not been undertaken.
  - City of Greater Geelong – 'Healthy choices, healthy communities' (National Heart Foundation of Australia 2012a) initiative aims to provide appropriate food choices for the council's catered meetings and forums. It also applies to five council-operated stadiums and leisure centres. Guidelines involve the provision of 40% 'Green' foods, 40% 'Amber' foods and 20% 'Red' foods.
  - City of Melbourne - Green Light Eat Right (GLER) (City of Melbourne 2010) is a program aimed at improving the range and access to nutritious food in the City of Melbourne. The program uses the traffic light system to enable consumers to make more informed food choices. The pilot program was undertaken at the QV Urban Market from May 1st 2009 – November 30th 2009 with 9 food businesses participating in the program. The participating businesses had their menus classified according to the traffic light system. The evaluation found:
    - Overall steady increase in sales of 'Green' products and a steady decrease in 'Amber' products
    - Overall increase in sales of 'Green' products by 4.5%
    - In a consumer questionnaire, 67% of people report that they understood the traffic light system
- Government initiative to encourage better food choices at non-government institutions
  - Healthier Workplaces WA (Healthier Workplace WA 2013) is part of the Healthy Workers Initiative, an initiative under the National Partnership Agreement on Preventive Health. It provides free services to help develop workplace health and wellbeing policies and strategies to help implement these policies
  - Healthy Together Achievement Program: Workplaces (Healthy Together Victoria 2013) is a Victorian state wide initiative to support the development of healthy workplaces and workforces. Organisations receive support to work towards meeting best practice benchmarks to create healthy workplaces.
- Other government sectors
  - Prisons

- QLD Corrective Services (Corrective Services Queensland 2007): standards relate to the provision of varied meals to meet individual dietary requirements and cultural beliefs. The only nutritional standard is that fruit and vegetables are provided daily
- VIC Department of Justice standards state that 'Prisoners are provided with food that is of sufficient quantity, quality, and nutritional value to maintain health and well-being, in accordance with hygiene and food handling legislation' (Department of Justice 2011)

#### b. International

- Regulations and evaluations across different countries are summarised in Table 1
- UK
  - School food provision has been on the public health agenda across the UK since 2001. Adamson et al 2013 reviewed school food standards across the UK since 2001. The following are lessons learnt from the UK experience:
    - An expert multidisciplinary stakeholder group to make recommendations to government help to ensure buy-in from all relevant stakeholders
    - The school food standards should be legislated and compulsory for all schools; apply not only to lunches provided by schools but all food and drink available at school; both promote healthy options and restrict unhealthy options. Experience from England shows that promotion of healthy food options without the restriction of unhealthy options is not effective.
    - Guidance and support for implementation is required and it is important to educate all stakeholders on the need for change and the nature of the change.
    - Evaluation should be planned in order to capture the impact of the regulation on various aspects including uptake, eating habits and wider health outcomes.
    - Effective implementation is highly dependent on funding. Adequate funds to support the development, introduction, maintenance and evaluation are essential.
    - Inspection and monitoring are key aspects and the responsibilities of each of the stakeholders needs to be clear (Office of Standards in Education 2010). It should also be clear to schools the consequences of not complying with the standards (in the UK, the consequences varied from no impact to poor marks on school inspection).
    - Linking the changes in the food environment to the curriculum where children are better educated about healthy food choices is important, however there needs to be good co-ordination between various governmental departments to ensure this is implemented and evaluated. Schools should also work with parents to encourage the transfer of knowledge on healthy eating to their everyday lives (Office of Standards in Education 2010)
  - A comparison of food provision, foods chosen and consumed by primary school children in 2009 compared to 2005 (in 2008 food based standards were made mandatory in addition to nutrient based standards) showed that children were eating significantly more fruit, fruit based desserts, vegetables and salad, water and fruit juice, and less ketchup, sauces and gravy, starchy foods cooked in fat, snacks and confectionery. In 2009 across all pupils, an average of 1.6 portions of fruit and vegetables were consumed (Haroun et al. 2011). The same cross sectional study found that lunches provided by primary schools were more likely to meet food and

nutrient based standards compared to packed lunches bought in from home (Pearce et al. 2011). Similarly, secondary schools also showed improvements in food provision and consumption in a 2011 survey compared to a similar survey in 2004 (Nicholas, Wood & Nelson 2012)

- A RCT investigated the impact of improved nutrition and dining environment on productivity in secondary school students (Storey et al. 2011). The study found that students in the intervention schools were more alert and attentive compared to students in the control schools [on task (concentrating, alert) OR=1.18 95% CI: 1.05-1.33; off task (disruptive, disengaged) OR=0.86 95% CI: 0.75-0.98)].
- An economic evaluation was undertaken to investigate the short term cost impact of implementing the school food policy, and the longer term impacts of the change in diet on cardiovascular outcomes (Vale et al. 2011). The cost-consequence analysis found that the incremental cost of providing school lunches pre and post implementation of the school food policy over the 12 years of school was between £56.53 (when only 1 meal per week provided) and £282.65 (when 5 meals per week are provided) . The long term discrete event simulation model showed very little difference in costs and QALYs between the pre and post implementation scenarios.
- A survey and inventory of secondary schools vending machines was undertaken pre and post implementation of standards on school vending (Mathews et al. 2010). The results indicate the schools are making progress towards being compliant with standards. Greater progress towards compliance is being made regarding drinks compared to food products. One of the drawbacks reported by some schools is the loss of income from vending machines since the implementation of the regulations.
- The Jamie Oliver 'Feed me Better' campaign was rolled out across Greenwich in 2004-2005. This campaign was used as a natural experiment to evaluate the impact of the changes in school food provision on academic achievement, absenteeism, and up take of school lunches provided by the school. The evaluation reports that there is some evidence of improved educational outcomes in the Greenwich schools with the percentage of students achieving a higher level in English (level 4) increasing by 4.5%. Absenteeism dropped by 15% (Belot & James 2011).
- EU
  - Other European countries also have food provision policies however the majority of these countries like the UK provide school lunches.
- USA
  - Voluntary National school lunch and breakfast standards were effective from the 2012/13 school year

### 3. Evidence of efficacy/effectiveness

#### a. Overview of evidence

There have been several programmes that have been implemented in schools across Australia and internationally to improve the nutrition of foods available in schools. However the evaluation of these initiatives don't focus on the change in food consumption or change in weight and therefore don't provide evidence on the effectiveness of these initiatives on obesity prevention. Further literature searches for data on any audits on sales of different products could help support the evidence on the effectiveness of food provision interventions at schools. Further searches also need to assess any compensatory behaviour of bringing more unhealthy foods from outside of school.

There have also been several initiatives to increase the amount of healthy choices available at certain workplaces (predominantly hospitals). However as in the case of school food provision interventions, the evaluations have not focused on change in food consumption or weight. The GLER evaluation reports changes in the sales for 'Green' and 'Red' products which could be useful to inform this evaluation.

Evaluations have been undertaken in the UK which need to be further reviewed and analysed to assess their relevance to an evaluation in the Australian context.

**Table 1 Summary of school food provision regulations**

Country	Mode of meal provision and uptake	Regulations (Nutrient and/or food based; voluntary vs. mandatory)	Method of monitoring	Results of evaluation
<b>England</b>	School lunch provided – Uptake 2011-12 in primary schools - 46.3%; secondary schools 39.8%	<p>Nutrient based standards for provided meals introduced in 2001 however no limits on unhealthy foods provided/ available.</p> <p>Nutrient and Food based standards for all food provided /available in schools – fully implemented in primary schools in 2008 and secondary schools in 2009. These standards aimed to maximize the availability of healthier items such as fruit and water, prohibit or restrict foods or drinks high in salt, sugars and fat such as confectionery, crisps and high-sugar fizzy drinks, and limit the availability of deep-fried food from being served at school.</p> <p>2007 standards introduced for non-lunch food provision including vending machines</p> <p>Deregulation to exclude academies from the mandatory standards was legislated in 2011</p>	Local Authority or the board of Governors are legally responsible for ensuring the food and nutrient standards are met	<p>National survey data: 2005 compared to 1997 - increased availability of healthy options at lunchtime had limited impact on children’s eating habits in school</p> <p>2009 (primary school); 2011 secondary schools compared to 2005 - clear improvements in foods provided and consumed by children in primary and secondary schools (specific changes in foods provided, chosen and consumed reported in (Haroun et al. 2011))</p> <p>The Public Health Research Consortium 2007: positive impact on consumption both inside and outside school in primary school children aged 4–7 years. Those with school lunches had dietary intake more in line with recommendations compared to those bringing school lunches. Minimal impact on older children.</p> <p>Compared to before vending standards a larger proportion of drinks (42% vs. 82%) and foods (14% vs. 31%) are compliant with standards</p>
<b>Wales</b>	School lunch provided – 45%	<p>2001 – Standards for promoting healthy options however didn’t restrict unhealthy items.</p> <p>2007 Appetite for life Action plan worked with a sample of schools to implementing minimal food</p>	Local Authorities are responsible for monitoring and evaluation	The Action Plan evaluation made recommendations on guidelines for implementation of standards however doesn’t provide baseline information on food

		standards across all foods provided/ available at schools. Statutory regulation to be introduced in 2013		provision  Wales Audit office investigated the cost of the school meal service in 2007-08 – it was estimated to cost over £90 million.
<b>Northern Ireland</b>	School lunch provided- 2011 – 56%	2007 – Statutory food based standards for school lunches introduced and extended to all food and drink provided/ available in schools in 2008. Initiatives funded to assist schools implement regulations. Food in Schools policy is under development and is planned to be compulsory in schools from 2012–13	The Education and Training Inspectorate employed Nutritional Associates between 2006 and 2011 to monitor the standards in schools	Evaluation focused on implementation of standards and take up of school lunches. Dietary data are not collected.
<b>Scotland</b>	School lunch provided 2010-11 – 51.9%	2007 Mandatory for all schools to meet the nutrient guidelines for all food and drink provided at school 2008 Mandatory food based standards in addition to nutrient standards and covers all food and drink available at school.	Local Authority or the board of Governors are legally responsible for ensuring the food and nutrient standards are met.  Several smaller programs were implemented and evaluated to assess the feasibility of implementation, impact of the environment outside school, and other aspects of the school curriculum which will enhance healthy eating	Central government evaluation through the Education Scotland's inspection activities and local government evaluation using Health and Nutrition inspectors. No studies published on impact of standards on children's diet
<b>USA</b>	School lunch provided	Nutrient - mandatory, however doesn't apply to competitive foods		
<b>France</b>	School lunch provided	Nutrient; voluntary Food based – voluntary		
<b>Australia</b>	Packed lunch and food available in canteen/tuck shop/vending machines	Commodity specifications		
<b>Canada</b>	Packed lunch and food	Food based – voluntary		

	available in canteen/tuck shop			
<b>Spain</b>	Go home for lunch – 80% School lunch provided – 20%			
<b>Germany</b>	Go home for lunch School lunch provided			
<b>Norway</b>	No canteens however some subsidised milk, yogurt and fruit provided – 20% of children don't eat during school day		Difficult to evaluate as there is no baseline data	
<b>Sweden</b>	School lunch provided – 85%	Nutrient – voluntary Food based - voluntary	Difficult to evaluate as there is no baseline data	
Source: (Harper & Wells 2007); (Adamson et al. 2013); (Haroun et al. 2011); (Nicholas, Wood & Nelson 2012)				

#### b. Description of potential interventions

- Food provision minimum standards across all Government schools
- Food provision minimum standards across all Government hospitals
- Food provision minimum standards across all Government organisations (needs to be clearly specified)

### 4. Stakeholders

#### a. Policy makers/regulators

- Policy makers in state health and education departments
- Policy makers in the different sectors the intervention is aimed at (e.g. Department of Corrections/Justice if prisons are included in the intervention)

#### b. Other stakeholders

- Canteen managers, school principals, food procurement officers
- School Canteens Association

#### c. Advocates – there are several in all the states, some examples include:

- Heart Foundation
- Healthy Kids Association
- The Parents' jury
- School Nutrition Action Coalition

### 5. Issues specific to this intervention

Despite a large number of policies related to food provision across different Australian government sectors, there is little quantitative evaluation data that can be used to inform the modelling of this intervention.

There have been more evaluations undertaken in the UK in the school context; however given the differences in the provision of school lunches in the UK compared to Australia, the use of the UK data in an Australian evaluation could be limited.

Another consideration in this evaluation is the eligible population – which will change considerably depending on the government sectors that are included in the policy intervention.

- Further investigate evaluations/audits of Australian food provision programs
- Further investigate the literature around the association between healthy food availability and food consumption
- Food provision program evaluations across the UK to assess whether the data available is appropriate for the Australian context

## References

Adamson, A, Spence, S, Reed, L, Conway, R, Palmer, A, Stewart, E, McBratney, J, Carter, L, Beattie, S & Nelson, M 2013, 'School food standards in the UK: implementation and evaluation', *Public Health Nutr*, vol. 16, no. 6, pp. 968-81.

Belot, M & James, J 2011, 'Healthy school meals and educational outcomes', *J Health Econ*, vol. 30, no. 3, pp. 489-504.

City of Melbourne 2010, *QV Urban Market Pilot. Results Summary*, City of Melbourne, Melbourne, Australia.

Corrective Services Queensland 2007, *Healthy Prisons Handbook. November 2007*, Queensland Government.

Department of Education 2008, *Healthy Food and Drink*, Government of Western Australia, Western Australia.

Department of Education and Early Childhood Development 2013, *Healthy Canteens*, Department of Education and Early Childhood Development,, retrieved 17/09/2013 2013, <<http://www.education.vic.gov.au/school/principals/management/Pages/canteen.aspx>>.

Department of Education and Training 2009, *Canteen, Nutrition and Healthy Eating Policy*, Northern Territory Government.

Department of Health 2009, *Healthy Options WA: Food and Nutrition Policy for WA Health Services and Facilities*, Western Australian Government, Perth, Western Australia.

Department of Health 2010, *Healthy choices: food and drink guidelines for Victorian public hospitals*, Victorian Government Department of Health, Melbourne, Victoria.

Department of Justice 2011, *Correctional Management Standards for Men's Prisons in Victoria*, State Government Victoria.

Dick M, Farquharson R, Bright M, K, T & AJ., L 2009, *Smart Choices – Healthy Food and Drink Supply Strategy for Queensland Schools: Evaluation Report*, Brisbane.

Dick, M, Lee, A, Bright, M, Turner, K, Edwards, R, Dawson, J & Miller, J 2012, 'Evaluation of implementation of a healthy food and drink supply strategy throughout the whole school environment in Queensland state schools, Australia', *Eur J Clin Nutr*, vol. 66, no. 10, pp. 1124-9.

Haroun, D, Harper, C, Wood, L & Nelson, M 2011, 'The impact of the food-based and nutrient-based standards on lunchtime food and drink provision and consumption in primary schools in England', *Public Health Nutr*, vol. 14, no. 2, pp. 209-18.

Harper, C & Wells, L 2007, *School meal provision in England and other Western countries: a review*, School Food Trust, UK.

Healthier Workplace WA 2013, *Healthier Workplace WA*, Heart Foundation, retrieved 17/09/2013 2013, <<http://www.healthierworkplacewa.com.au/>>.

Healthy Together Victoria 2013, *Achievement Program: Workplaces*, State of Victoria, retrieved 17/09/2013 2013, <<http://achievementprogram.healthytogether.vic.gov.au/workplace>>.

Mathews, A, Doll, H, Scarborough, P, Cowburn, G, Kaur, A, Kelly, P & Rayner, M 2010, *National survey of vending in secondary schools in England, 2006-2009*, School Food Trust, Sheffield.

National Heart Foundation of Australia 2012a, *Healthy choices, healthy communities. City of Greater Geelong*, National Heart Foundation of Australia, Victoria, Australia.

National Heart Foundation of Australia 2012b, *Healthy food and beverage policy. Cardinia Shire Council*, National Heart Foundation Australia, Victoria.

Nicholas, J, Wood, L & Nelson, M 2012, *Secondary school food survey 2011. 1. School lunch: provision, selection and consumption*, School Food Trust, Sheffield.

Nutrition and Physical Activity Branch 2006, *NSW Healthy School Canteen Strategy Evaluation Report 2005*, Sydney.

Nutrition Australia & Department of Health 2013, *Healthy choices case study: Alfred Health. Healthy Eating Advisory Service*, Victorian Government Department of Health, Melbourne, Victoria.

Office of Standards in Education 2010, *Food in schools. Progress in implementing the new school food standards*, Office of Standards in Education, Manchester.

Pearce, J, Harper, C, Haroun, D, Wood, L & Nelson, M 2011, 'Short communication Key differences between school lunches and packed lunches in primary schools in England in 2009', *Public Health Nutr*, vol. 14, no. 8, pp. 1507-10.

Queensland Health 2010, *A Better Choice – Healthy Food and Drink Supply Strategy for Queensland Health Facilities: Evaluation Report.*, Queensland Health, Brisbane.

South Australia Department of Education and Children's Services & Health, S 2008, *Right Bite: healthy food and drink supply strategy for South Australian schools and preschools / Department Education and Children's Services.*, South Australia.

Storey, HC, Pearce, J, Ashfield-Watt, PA, Wood, L, Baines, E & Nelson, M 2011, 'A randomized controlled trial of the effect of school food and dining room modifications on classroom behaviour in secondary school children', *Eur J Clin Nutr*, vol. 65, no. 1, pp. 32-8.

Vale, V, Adamson, A, Critchley, J, Rushton, S, Armstrong, N & Donaldson, C 2011, *Economic evaluation: evaluating the short-term impacts of the school food policy and experimental modelling of longer term impacts*, Newcastle University University of Stirling, Newcastle upon Tyne.