

Letter to the Editor

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Furthering food security surveillance in Australia

Madam

We are writing to acknowledge the valuable contribution of Lewis and Lee in their systematic literature review titled ‘Costing “healthy” food baskets in Australia – a systematic review of food price and affordability monitoring tools, protocols and methods’⁽¹⁾. This review is the first to undertake an extensive scan of published food baskets available in Australia that are designed to monitor the price and affordability of food. The review correctly noted that current approaches are varied and out of date with current dietary guidelines. We also support the call for a national approach and noted INFORMAS (International Network for Food and Obesity/Non-communicable diseases Research, Monitoring, Action and Support) is making great progress in pursuing this goal⁽²⁾.

While Lewis and Lee’s review provides a comprehensive summary of food-costing approaches in Australia, when considering the development of a nationally recognised tool, it may be advantageous to consider other tools used by other countries. The USA uses a tool referred to as a meal or food plan. The plans are separated into different income streams from ‘thrifty’ to ‘liberal’. Unlike a food basket, the Thrifty Food Plan⁽³⁾ is designed to be used as a healthy eating plan. The Thrifty Food Plan was revised in 2006 and its price regarding the average price low-income participants paid for the foods was collected⁽³⁾. The database is updated monthly by adjusting food costs to the Consumer Price Index (CPI)⁽³⁾. The Thrifty Food Plan has been used to increase public understanding about how to provide a nutritionally adequate diet on a budget. Although this provides a useful tool for educating the public, there are limitations to its development. First, the Thrifty Food Plan does not take into account regional price differences for locality analysis, as data are not stratified by location. Second, data on cost were collected from a nationally representative sample of the ACNielson Homescan™ Panel in 2001–2002 and these figures are then adjusted using the CPI for a monthly output, which is more labour intensive and has more elements for analysis error. Finally, the consumption patterns were created using National Health and Nutrition Examination Survey data from 2001–2002 and updated in 2006, which may not reflect current consumption patterns⁽⁴⁾. Similar methods have been used in Australia to extrapolate data from baskets^(5,6), as noted in Lewis and Lee’s review, to assess the affordability and nutritional adequacy of diets. A mixed method approach such as this may provide a tool not only for monitoring

food cost, but also the ability to translate into practical advice on healthy eating.

The Canadian Nutritious Food Basket provides another model where a countrywide sample of stores are selected from regions across the country. While this approach may provide intelligence for sampling, it fails to identify local price fluctuations for accurate inter-region analysis. For nationwide tools, it is recommended that results are stratified by location to assess the areas most vulnerable to food insecurity⁽²⁾, for example food costs in remote and rural areas may not be captured. In countries with variance in large populations, environmental influences and rurality, a tool that facilitates locality stratification will help assesses local sensitivity to food price fluctuations⁽⁷⁾. This is highlighted by recent Australian research. Longitudinal cross-sectional data from 2010–2014 indicate that the Queensland Healthy Food Access Basket reported a price decrease of 5.2% despite the CPI for food increasing by 6.4%⁽⁸⁾. Conversely, in Victoria, fruit and vegetables increased by 11% from 2012 to 2014, compared with a 3% increase in non-core foods such as sugar and oil⁽⁹⁾. There are two issues with these results. First, it could be erroneous to compare the two studies as they have used similar but different tools. Second, variation of Australian rurality may have contributed to the varied severity of results. A national approach that adequately reflects Australia’s diverse urban rural and remote landscape is needed to reduce differential interference from characteristics from individual surveys.

Lewis and Lee’s review identified that limited tools are designed to incorporate the current Australian dietary guidelines. However, the applicability of the available tools for different cultural dietary patterns was not discussed. Although the types of food assessed by healthy food baskets vary slightly, invariably the baskets represented in the review are characterised by Westernised eating habits. Although these baskets are not designed as a diet plan, many of the Healthy Food Baskets do not take into account the diversity of foods that may be eaten by different population subgroups. In Australia almost one-third of all residents were born overseas, with the greatest recent migration patterns from countries such as Nepal, India, Pakistan and China⁽¹⁰⁾. Despite Australia’s ethnic and culturally diverse population, there is limited inclusion of culturally diverse foods in the Australian Guide to Healthy Eating⁽¹¹⁾. Thus, the cost and affordability of non-Westernised diets are not encompassed by existing tools.

Of the tools identified in the review only one considered the sustainability of a healthy diet⁽¹³⁾. This is a particularly

important element of potential monitoring systems, because climate change and subsequent natural disasters have significant effect on the cost and affordability of the food supply⁽¹²⁾. Sustainability of the food supply has bidirectional effects on health⁽¹²⁾. Environmental and health effects of the diet are interrelated as overconsumption not only has detrimental health effects but also represents an unnecessary strain on the environment⁽¹³⁾. Furthermore, consumption of highly processed foods such as discretionary foods has high environmental and health costs⁽¹³⁾. The low cost–low impact basket from the Netherlands considers the cost environmentally and economically of a nutritionally adequate diet, showing that such a model is possible⁽¹⁴⁾. Therefore, sustainability and nutritious food should no longer be considered as separate entities, but rather as a whole. As sustainability becomes more pertinent to the consumer, policy and government, sustainability elements in monitoring systems would strengthen recommendations from data collected.

Perhaps the most important issue to acknowledge as we work towards national monitoring systems is that affordability of healthy food is only one determinant of food security, described as food access. Having enough food of sufficient nutritional quality available (availability), the ability to choose and have resources to safely prepare and store food (utilisation), and having these factors remaining stable over time, are equally important when considering food security as a public health issue⁽¹⁵⁾. In assessing the price of healthy and unhealthy baskets we must be cognisant that the findings support public policy that ensures that a healthy diet for those who are most vulnerable to food insecurity is more affordable⁽⁹⁾.

It is clear that national and international systems of food cost surveillance are needed to evaluate the cost and affordability of a nutritionally adequate diet over time. To be successful, the tool/s need/s to have published methods of development, capacity for analysis to be stratified by location, encompass current dietary guidelines, reflect quality of produce, encompass sustainability and embrace technology to decrease the time needed to conduct such monitoring. Such a tool would be a powerful public health advocacy tool for systematic political, environmental and economic change and is necessary to influence the trajectory of dietary related non-communicable diseases. INFORMAS has developed an 'optimal' approach system and points such as those raised herein should be considered alongside this approach⁽²⁾. In monitoring food cost or economic access to food, we must not lose sight of the broader determinants of food security that facilitate healthy eating.

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Christie J Bennett and Claire E Palermo

Department of Nutrition and Dietetics
Faculty of Health and Medicine
Monash University
Level 1, 268 Ferntree Gully Road,
Notting Hill, VIC 3186, Australia
Email: Christie.bennett@monash.edu

References

- Lewis M & Lee A (2016) Costing 'healthy' food baskets in Australia – a systematic review of food price and affordability monitoring tools, protocols and methods. *Public Health Nutr* **19**, 2872–2886.
- Lee A, Mhurchu CN, Sacks G *et al.* (2013) Monitoring the price and affordability of food and diets globally. *Obes Rev* **14**, Supp. 1, 82–95.
- Carlson A, Lino M, Juan W-Y *et al.* (2007) Thrifty Food Plan, 2006. http://www.cnpp.usda.gov/sites/default/files/usda_food_plans_cost_of_food/TFP2006Report.pdf (accessed February 2016).
- Kearney J (2010) Food consumption trends and drivers. *Philos Trans R Soc Lond B Biol Sci* **365**, 2793–2807.
- Kettings C, Sinclair A & Voevodin M (2009) A healthy diet consistent with Australian health recommendations is too expensive for welfare-dependent families. *Aust N Z J Public Health* **33**, 566–572.
- Government of Western Australia (2013) Food Access and Cost Survey 2013 Report. <http://www.public.health.wa.gov.au/cproot/6185/2/Food%20Access%20and%20Cost%20Survey%20Report%202013.pdf> (accessed February 2016).
- Gustafson A, Hankins S & Jilcott S (2012) Measures of the consumer food store environment: a systematic review of the evidence 2000–2011. *J Community Health* **37**, 879–911.
- Queensland Health (2014) Healthy Food Access Basket Survey. <http://www.breastscreen.qld.gov.au/research-reports/reports/food/access/overview/default.asp#method> (accessed February 2016).
- Palermo C, McCartin J, Kleve S *et al.* (2016) A longitudinal study of the cost in Victoria influenced by geography and nutritional quality. *Aust N Z J Public Health* **40**, 270–273.
- Australian Bureau of Statistics (2013) *Australia's Population by Country of Birth*. ABS Catalogue no. 3412.0. Canberra: ABS.
- National Health and Medical Research Council (2013) *Australian Guide to Healthy Eating*. Canberra: NHMRC.
- Friel S, Barosh LJ & Lawrence M (2013) Towards healthy and sustainable food consumption an Australian case study. *Public Health Nutr* **17**, 1156–1166.
- Barosh LJ, Friel S, Engelhardt K *et al.* (2014) The cost of a healthy and sustainable diet – who can afford it? *Aust N Z J Public Health* **38**, 7–12.
- van Dooren C, Tyzler M, Kramer GFH *et al.* (2015) Combining low price, low climate impact and high nutritional value in one shopping basket through diet optimization by linear programming. *Sustainability* **7**, 12837–12855.
- Ashby S, Kleve S, McKechnie R *et al.* (2016) Measurement of the dimensions of food insecurity in developed countries: a systematic literature review. *Public Health Nutr* **19**, 2887–2896.