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Regulating the types of foods and beverages marketed to Australian children: how useful are food industry commitments?

Abstract

Aim: Any regulation of food marketing to children requires clear definitions of the types of foods considered inappropriate and subject to restrictions. The aim of this research was to examine the commitments made by signatory companies of the Australian Food and Grocery Council's Responsible Marketing to Children Initiative regarding the types of foods considered appropriate for marketing to children. **Methods:** Nutrient criteria developed by signatory food companies were examined by comparing (i) thresholds set for negative nutrients (saturated fats, added sugars and sodium) and total energy to two existing nutrient criteria: Healthy Kids Association and the National Heart Foundation Tick, and (ii) the types of foods considered appropriate for marketing to children, if applying companies' commitments or the product's nutrient profile using the Food Standards Australia and New Zealand nutrient profiling tool. **Results:** All five company-developed nutrient criteria examined specified higher thresholds for negative nutrients compared with existing criteria, and were more likely to report negative nutrients per serve rather than per 100 g. When applying company commitments, 57% more energy-dense, nutrient-poor foods and beverages were considered appropriate for marketing to children, compared with nutrient profiling. **Conclusion:** Food industry commitments regarding the types of foods considered appropriate for marketing to children do not adequately restrict the marketing for energy-dense, nutrient-poor foods. It is recommended food manufacturers who commit to restricting their marketing of unhealthy foods to children use a standardised, independent nutrient profiling tool based on per 100 g/100 mL to determine the appropriateness of foods and beverages for marketing to children.

Keywords

regulating, food, types, industry, commitments, foods, beverages, marketed, australian, children, useful

Disciplines

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INSIGHT**Regulating the types of foods and beverages marketed to Australian children: How useful are food industry commitments?**Lana HEBDEN,¹ Lesley KING,¹ Bridget KELLY,¹ Kathy CHAPMAN,² Christine INNES-HUGHES^{1,2} and Nilakshi GUNATILLAKA¹¹Prevention Research Collaboration, University of Sydney, Camperdown, and ²Cancer Council NSW, Woolloomooloo, New South Wales, Australia**Abstract**

Aim: Any regulation of food marketing to children requires clear definitions of the types of foods considered inappropriate and subject to restrictions. The aim of this research was to examine the commitments made by signatory companies of the Australian Food and Grocery Council's Responsible Marketing to Children Initiative regarding the types of foods considered appropriate for marketing to children.

Methods: Nutrient criteria developed by signatory food companies were examined by comparing (i) thresholds set for negative nutrients (saturated fats, added sugars and sodium) and total energy to two existing nutrient criteria: Healthy Kids Association and the National Heart Foundation Tick, and (ii) the types of foods considered appropriate for marketing to children, if applying companies' commitments or the product's nutrient profile using the Food Standards Australia and New Zealand nutrient profiling tool.

Results: All five company-developed nutrient criteria examined specified higher thresholds for negative nutrients compared with existing criteria, and were more likely to report negative nutrients per serve rather than per 100 g. When applying company commitments, 57% more energy-dense, nutrient-poor foods and beverages were considered appropriate for marketing to children, compared with nutrient profiling.

Conclusion: Food industry commitments regarding the types of foods considered appropriate for marketing to children do not adequately restrict the marketing for energy-dense, nutrient-poor foods. It is recommended food manufacturers who commit to restricting their marketing of unhealthy foods to children use a standardised, independent nutrient profiling tool based on per 100 g/100 mL to determine the appropriateness of foods and beverages for marketing to children.

Key words: children, food composition, food marketing, nutrient profiling, policy, self-regulation.

Introduction

Australian children continue to consume an excess amount of energy-dense, nutrient-poor (EDNP) or 'extra' foods.¹ The

heavy marketing of these foods to children is recognised as one factor contributing to this excess intake, and there is increasing research and attention on how to curb food marketing to children.^{2–6}

The term 'food marketing' includes the promotion of food products, with television advertising forming the main medium reaching children.² Any policy restrictions on the marketing of foods and beverages to children require clear definitions of the types of foods that are considered inappropriate and subject to restriction, whether these are in the form of statutory regulations, non-statutory government guidelines or industry self-regulatory policies.^{5,7–9} For example, the UK government food marketing regulations use a specific system of nutrient profiling, which categorises foods according to their nutritional composition.¹⁰ By contrast, industry self-regulatory initiatives to date have not provided such precise specifications regarding the types of foods subject to restriction.^{11–13}

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In January 2009, the Australian Food and Grocery Council (AFGC) introduced a national self-regulatory initiative on responsible marketing to children.¹¹ Food companies who become signatories of this initiative must publish an action plan detailing their commitments to restricting their advertising for less healthy foods to children. The AFGC stipulated that signatory food companies must not advertise foods to children that do not '... represent healthy dietary choices, consistent with established scientific or Australian government standards',¹¹ thus permitting companies to determine their own criteria.

The aim of this research was to examine AFGC signatory companies' commitments regarding the types of foods they consider inappropriate for advertising to children and therefore subject to food marketing restrictions.

Methods

By the end of 2009, 16 food companies had become signatories, with published action plans (Table 1). An examination of companies' interpretations of 'healthy dietary choices' found that while some companies did not include any definition for 'healthy dietary choices', others nominated existing nutrient criteria (including those developed by the Healthy Kids Association and the National Heart Foundation),^{14,15} national dietary guides or developed their own nutrient criteria. Companies that developed and published their own nutrient criteria (Cereal Partners Worldwide, Fonterra, Kellogg's, Kraft, and Nestlé) were analysed by comparing the company-specified threshold levels for energy, saturated fat, added sugars and sodium to each other, as well as to two existing sets of criteria referred to by some signatory food companies for indicative comparison: the Healthy Kids Association nutrient criteria for green and amber foods,¹⁴ and the Tick criteria developed by the National Heart Foundation.¹⁵

Food categories assessed in the present study (dairy products, breakfast cereals and snack foods) comprised those for which nutrient thresholds were available from all companies' nutrient criteria analysed for the purpose of comparison, and those contributing a substantial proportion of children's total daily energy intake.¹⁶ Where possible, nutrient thresholds set by signatory companies were further analysed for their contribution to daily nutrient reference values for children 4–13 years.¹⁷

A sample of 52 unique food and beverage products manufactured by AFGC signatory companies were then assessed for their appropriateness for marketing to children if applying companies' commitments to only advertise 'healthy dietary choices' or the product's nutrient profile using the Food Standards Australia New Zealand (FSANZ) nutrient profiling tool.¹⁸ The FSANZ tool has been proposed for use in determining the appropriateness of foods to carry health claims, and was based on a nutrient profiling tool developed for the UK Food Standards Agency, developed specifically for the purpose of regulating the types of foods marketed to children on UK television.¹⁰ The FSANZ tool differs from the UK version in allowing higher scores for energy, saturated fat

and sodium for fats, oils and cheeses to reflect the typical nutritional composition of these foods, and has been tested with over 10,000 foods from Australian and New Zealand food composition databases.

Sampled products were sourced from: (i) products marketed on children's most popular Internet websites during July 2009; and (ii) products advertised on Sydney free-to-air television during May 2009. During these advertising periods, one signatory company (Patties) did not advertise their products, thus this company was excluded from this part of the analysis. Details on the data collection and coding methods are described elsewhere.^{19,20}

Results

A summary of the nutrient criteria nominated by AFGC signatory companies to assess whether their products represent 'healthy dietary choices' is provided in Table 1. Seven companies developed their own criteria, four used existing nutrient criteria or guidelines and four companies provided no definition for 'healthy dietary choices' (Table 1). Of the seven companies that developed their own criteria, two were not publicly available for analysis. Thus five sets of company-developed nutrient criteria were analysed.

Cereal Partners Worldwide and Fonterra stated nutrient thresholds per 100 g/100 mL or as per serve, for both positive (i.e. thiamin, iron and calcium) and negative nutrients (i.e. saturated fat and sodium), while Kellogg's set thresholds for negative nutrients only and reported these per serve (Table 1). Nestlé's nutrient profiling system set thresholds for negative and positive nutrients as a proportion of a daily reference value, with daily reference values based on '... WHO and/or other worldwide recognised guidelines on nutrient intake from health authorities' reported per serve for 4–8 and 9–11 year olds.²¹ Kraft Sensible Solutions also used a daily value measure based on '... the 2005 U.S. Dietary Guidelines, as well as authoritative statements from the U.S. Food & Drug Administration, National Academy of Sciences, and other public health authorities' and only required products meet at least one criterion for negative or positive nutrients.²²

Thresholds set for energy and negative nutrients (saturated fat, added sugar and sodium) differed for company-developed and existing nutrient criteria.

Saturated fats

Figure 1 presents company-developed and Healthy Kids thresholds for saturated fat for dairy products. Fonterra's criteria were consistent with Healthy Kids saturated fat thresholds for dairy products per 100 g, apart from dairy desserts where 30% more saturated fat per 100 g was permitted. Nestlé set higher thresholds for saturated fat for dairy products and reported these per serve, where a serve varied between 70 g and 200 g.

One serve of a dairy product containing 4 g saturated fat could contribute 16–25% of the recommended limit for saturated fat for children to reduce chronic disease risk

Table 1 Summary of nutrient criteria published for use by signatory companies of the Australian Food and Grocery Council Responsible Marketing to Children Initiative

Company (main products manufactured)	Company-developed nutrient criteria or profiling system			Professionally accepted nutrient criteria
	Criteria	Nutrients for which criteria are set	Format for reporting nutrients	
Nestlé (Dairy and grain-based convenience meals, meal bases and snacks, beverage bases, chocolate and confectionery)	Nestlé Nutritional Profiling System	Energy, total fat, saturated fat, trans fat, added sugars, fructose, sodium, protein, fibre, linoleic acid (for milk-based beverages) and calcium (for cereal-based and dairy products)	Proportion of the DRV	No independent nutrient criteria nominated by food company
Kraft (Packaged foods including cheese, spreads, snack foods, salad dressings and confectionery)	Sensible Solutions	Energy, total fat, saturated fat, trans fat, cholesterol, added sugars, sodium, protein, calcium, potassium, iron, fibre, magnesium, vitamin A, vitamin C and vitamin E, fruit and vegetable and wholegrain content	Per serve or as a proportion of the DV	No independent nutrient criteria nominated by food company
Cereal Partners Worldwide (Breakfast cereals and grain-based convenience meals)	Cereal Partners Worldwide Nutrition Foundation	Energy, saturated fats, sodium, sugars, wholegrain content, thiamin, riboflavin, pantothenic acid, vitamin B-6, folate, vitamin B-12, vitamin C and minerals (iron, calcium)	Per serve, with vitamins and minerals \geq 15% RDA per 100 g	No independent nutrient criteria nominated by food company
Kellogg's (Breakfast cereals and snack foods)	Kellogg's Global Nutrient Criteria	Energy, saturated fat, trans fat, sodium and sugars	Per serve	No independent nutrient criteria nominated by food company

Fonterra (Dairy products including cheese, spreads, yoghurts and dairy desserts)	Fonterra Good Choice Guidelines.	Protein, calcium, total energy, total fat, saturated fat, total sugars, sodium and type of carbohydrate (i.e. no high fructose corn syrup).	Per 100 g/100 mL or per serve.	Gives consideration to the Australian Guide to Healthy Eating, NHMRC Dietary Guidelines, Healthy Kids (NSW SCA), and NZ Dietary Guidelines, NZ School Canteen policy and NZ Ministry of Health Policies on Nutrition and Physical Activity.	No independent nutrient criteria nominated by food company.
Sanitarium [†] (Health and vegetarian foods such as cereals, soy milks, spreads and vegetarian meals)	Sanitarium Corporate Nutrition Policy.	Unable to be obtained for analysis	—	NHMRC Dietary Guidelines, National Heart Foundation and Federation of Canteens in Schools.	No independent nutrient criteria nominated by food company.
Unilever [†] (Variety of foods including soups, flavoured rice, ice-cream, spreads, sauces, stocks)	Unilever Global Internal Nutrient Criteria.	Unable to be obtained for analysis	—	—	NSW Healthy School Canteen Strategy Fresh Tastes School criteria.
Campbell Arnott's (Baked biscuits/snacks, convenience meals, beverages)	None nominated.	—	—	—	NSW Healthy School Canteen Strategy Fresh Tastes School criteria for Green foods and Amber foods.
George Weston Foods (Grains and smallgoods including breads, crumpets and hot beverage bases)	None nominated.	—	—	—	HKA registered OR NSW Healthy School Canteen Strategy Fresh Tastes School criteria for Green and Amber foods.

Table 1 Continued

Company (main products manufactured)	Company-developed nutrient criteria or profiling system			Professionally accepted nutrient criteria
	Criteria	Nutrients for which criteria are set	Format for reporting nutrients	
Cadbury (Chocolate and sugar confectionery)	None nominated.	—	—	NHMRC Dietary Guidelines for Children and Adolescents.
Patties (Frozen foods, e.g. sweet or savoury pies)	None nominated.	—	—	National HFT Program, HKA and School Canteen Associations (Victoria and WA).
Simplot (Frozen and canned vegetables, frozen seafood, tomato paste)	None nominated.	—	—	National HFT Program.
PepsiCo (Snack foods and beverages)	None nominated.	—	—	No independent nutrient criteria nominated by food company.
Coca Cola (Range of beverages: soft drinks, energy drinks, juices, milks)	None nominated.	—	—	No independent nutrient criteria nominated by food company.
Ferrero (Confectionery and spreads)	None nominated.	—	—	No independent nutrient criteria nominated by food company.
Mars (Meal bases and snack food products)	None nominated.	—	—	No independent nutrient criteria nominated by food company.

* Companies for which nutrient criteria were not available. DRV defined by Nestlé as a . . . set of dietary references, expressed per day, based on WHO and/or other worldwide recognised guidelines on nutrient intake from health authorities; DV, a reference measure set by Kraft Foods based on . . . the 2005 U.S. Dietary Guidelines, as well as authoritative statements from the U.S. Food & Drug Administration, National Academy of Sciences and other public health authorities; FDA, Food and Drug Administration; HKA, Healthy Kids Association; N/A, Not applicable; NHMRC, National Health and Medical Research Centre; NZ, New Zealand; RDA, Recommended Daily Allowance; SCA, School Canteens Association.

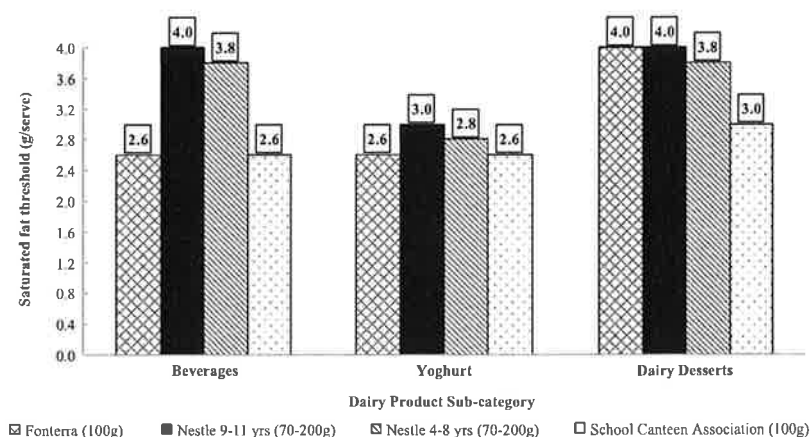


Figure 1 Comparison of saturated fat thresholds set by the NSW School Canteen Association Healthy Kids nutrient criteria and by signatory companies (Fonterra and Nestlé) for dairy foods, as grams per serve.

(16–25 g for 6–12 year olds; based on 10% of the estimated energy requirement (EER) with physical activity level (PAL) 1.6),¹⁷ assuming children are physically active and only one serving was consumed each day.

Energy

Company-developed nutrient criteria allowed higher thresholds for the energy content of snack foods per serve compared with existing criteria. While both the Healthy Kids and the Tick criteria allowed ≤ 600 kJ per serve for a snack food, AFGC signatory companies allowed up to 840 kJ per serve.

Based on the higher thresholds set by Cereal Partners Worldwide, Kellogg's and Nestlé, a single serve of snack food marketed by these companies could provide 9–14% of a physically active child's EER (based on PAL 1.6), compared with 6–10% if a ≤ 600 kJ threshold were used.¹⁷ It is worth noting that the portion size of snack foods manufactured by these companies varied from 17 to 37 g, permitting wide variability in the energy density (kJ/g weight) of these snack foods.

Sodium

The Healthy Kids nutrient criteria permit 113 mg of sodium per serve of snack food. Compared with the Healthy Kids threshold, Cereal Partners Worldwide allowed up to 77% more sodium, while Kellogg's and Nestlé allowed up to 104 and 177% more sodium, respectively.

Added sugar

The Healthy Kids and Tick criteria do not specify a threshold for the sugar content of breakfast cereals.^{14,15} Alternately, Kellogg's and Nestlé applied thresholds for added sugars of 12 g and 25 g per serve of breakfast cereal, respectively.

The Nestlé Nutritional Profiling System specified their threshold for added sugars as $\leq 25\%$ of the total energy content of the cereal per serve. According to the Nestlé

Nutritional Profiling System a serve of breakfast cereal may contribute up to 20% of the total daily energy reference value for children. This equals up to 400 kcal for children 9–13 years. Thus, per serve of breakfast cereal, up to 25 g of added sugars may be permitted (400 kcal/0.25 = 100 kcal; 100 kcal/4 = 25 g; based on 4 kcal per gram for carbohydrates).

To place these figures in context, a 30-g serve of Nestlé breakfast cereal containing 25 g of added sugar may contribute up to 4–7% of a physically active child's EER (PAL 1.6) from added sugars alone.¹⁷ Given it is recommended children consume no more than 10% of their total daily EER from added sugars,²³ one 30-g serve of breakfast cereal can provide the majority of this recommendation for physically active children. Note that no Nestlé breakfast cereals contain 100 kcal per serve and hence breakfast cereals appealing to children such as Milo Duo, Milo and Nesquik cereals all contain less than 10 grams total sugar per 30 g serve. Although, these cereals do contain more than 30% total sugar, derived largely from added sugars, and according to the Nestlé Nutritional Profiling System are eligible for marketing to children.

Assessment of product eligibility for marketing to children

Figure 2a illustrates the proportion of AFGC signatory company products assessed as appropriate for marketing to children, using the FSANZ nutrient profiling tool. Overall, 38% (20/52) of products were assessed as appropriate, with higher proportions of low sugar/high fibre breakfast cereals (80%; n = 8), dairy products (50%; n = 6) and core combined meals (e.g. frozen meals <10 g fat per serve; 100%; n = 2) assessed as appropriate. Inappropriate products mostly comprised chocolate, confectionery, cakes, muffins, sweet biscuits, pies, pastries, ice-cream and snack foods (Figure 2a).

Using company-developed nutrient criteria (Figure 2b), 83% (43/52) of products were assessed as appropriate for marketing to children, with 57% more EDNP foods assessed

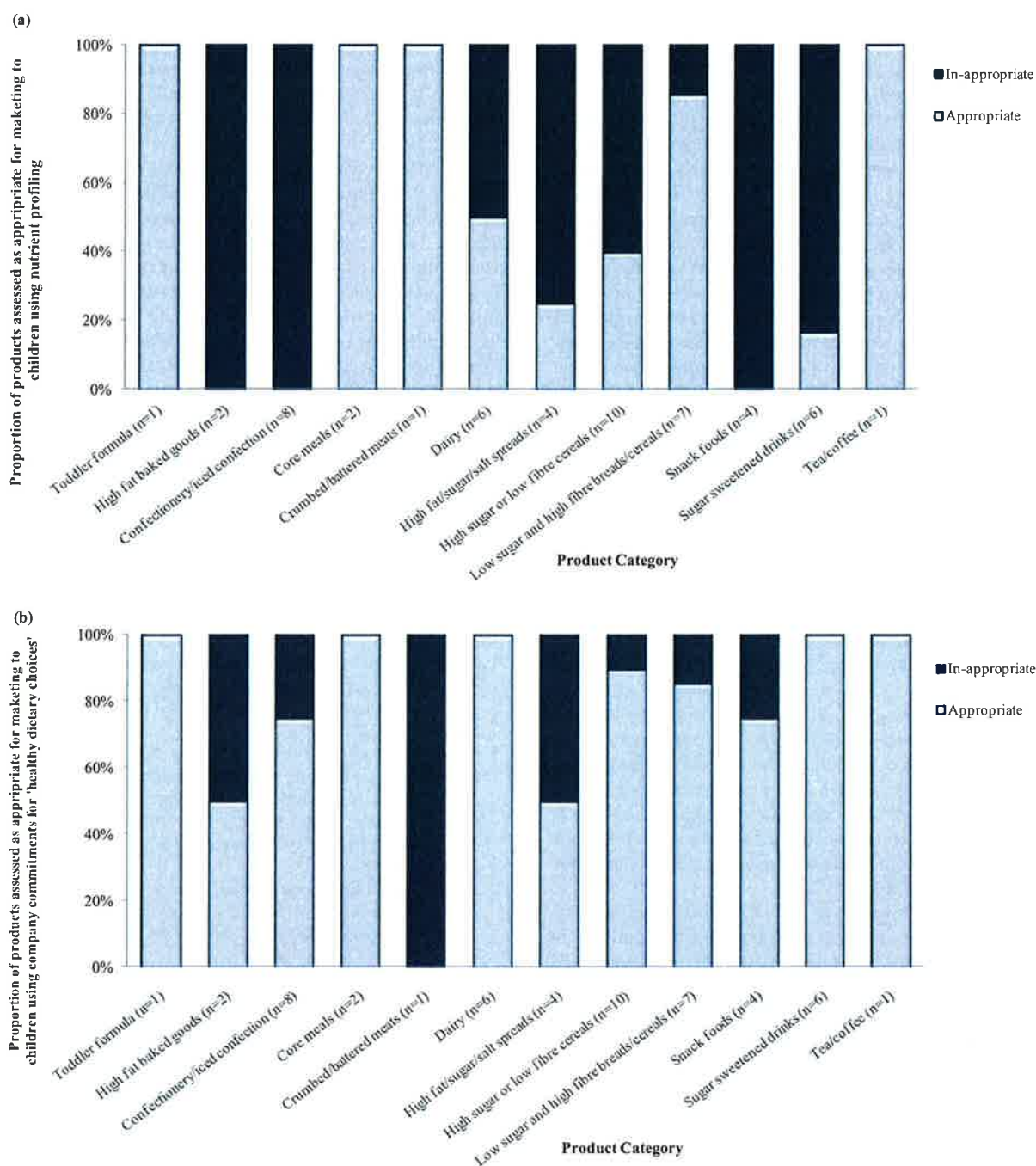


Figure 2 Proportion of the product sample* (n = 52) assessed as appropriate for marketing to children using (i) nutrient profiling and (ii) company commitments to market 'healthy dietary choices', by food category. *Sampled products advertised and manufactured by companies that did not specify criteria for determining which of their products are 'healthy dietary choices' were assessed as appropriate, as all their manufactured products would be appropriate for marketing to children where no regulatory criteria are specified.

as appropriate when compared with the FSANZ tool (77% vs 20%). Differences between company-developed criteria and the FSANZ tool, were most notable for chocolate/confectionery and ice-cream/iced confection with 86% more

products assessed as appropriate for marketing to children, compared with the FSANZ tool, followed by snack foods (75%), sugar sweetened beverages (67%) and baked goods (cakes, muffins, sweet biscuits, pies, pastries; 50%).

Discussion

The present study found that of the five AFGC signatory company-developed nutrient criteria available for analysis, all varied considerably between companies and were generally more lenient than existing nutrient criteria used by Australian government and non-government organisations for the nutritional classification of foods. This variability makes it complex to monitor each company's compliance with their specified criteria. The commitments made by AFGC signatory companies to only market 'healthy dietary choices' to children permit the majority of their products, comprising a high proportion of EDNP foods, to be marketed to children. This undermines the potential effectiveness of these self-regulatory policies and brings into question industry motivations for developing responsible marketing plans.

A further issue identified was that while many companies reported nutrient thresholds on a per serve basis, the lack of standardised serving sizes within Australia introduces wide variability in the interpretation and application of nutrient criteria and diminishes the effectiveness of such thresholds as indicators of nutritional composition. For example, if a 200-mL serve size of flavoured milk is used to report nutrients per serve, this allows three times less added sugar, saturated fat and total energy to be reported than what would be in the amount 'as consumed' from a 600-mL portion size.

Thus, in their current form, the nutrient criteria developed by food companies as the basis for regulating the types of foods marketed to children do not adequately protect children from the negative effects of advertising for EDNP foods on their dietary behaviours and intake; of which, Australian children currently exceed recommended limits for sodium and a minority meet dietary guidelines for sugar and saturated fat intake.^{16,24}

The findings suggest that any regulation of food marketing to children requires consistent nutrient criteria to determine which foods and beverages are considered inappropriate. One limitation, both for the present study as well as the AFGC Initiative itself, was that Unilever's Global Internal Nutrient Criteria and Sanitarium's Corporate Nutrition Policy were not publicly available. It is also recognised that the existing nutrient criteria used in the present study have been developed for different purposes, with the Healthy Kids criteria being designed to guide what foods may be sold to children within school canteens and the Tick criteria for guiding consumer choices towards selecting healthier food products, and not necessarily in guiding the types of foods considered appropriate for marketing to children. Alternatively, the FSANZ nutrient profiling tool potentially provides a suitable basis for identifying foods appropriate for marketing to children, being closely based on the UK nutrient profiling system developed to underpin food marketing restrictions in the UK and tested successfully in New Zealand, to identify high fat, salt or sugar foods marketed on television.^{10,25} The FSANZ tool is also consistent with the body of evidence regarding nutrient profiling

systems that recommend consideration of both negative nutrients (total energy, saturated fat, added sugar, sodium) and positive nutrients (dietary fibre, essential vitamins/minerals, fruit, vegetable and wholegrain content) and assessing these nutrients within foods/beverages per 100 g or 100 mL.^{26,27}

Thus, it is recommended a single nationally accepted nutrient profiling tool is used to clearly define the types of foods and beverages considered appropriate for marketing to children. This recommendation is consistent with recommendations of the World Health Organization recommending any policies for regulating food marketing to children provide '... clear definitions of the policy components'.⁵ This includes clear definition of the type of foods permitted for marketing to children. If food and beverage companies are unable or unwilling to conform to a single, scientifically based and professionally defensible nutrient profiling tool that effectively discriminates EDNP foods, then it remains for government to provide this component of a regulatory framework.⁵ Further research is required to evaluate the FSANZ nutrient profiling tool with a larger product sample to test its feasibility for regulating what foods are appropriate and inappropriate for marketing to children.

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