

CAP Consultation: food and soft drink advertising to children

Annex 6

Overview of potential nutritional profiling models



Overview of potential nutritional profiling models

1. Introduction

This Annex provides technical detail to accompany CAP's consideration of potential nutrient profiling models that could be used to identify products high in fat, salt or sugar (HFSS) for the purposes of any new or amended rules. It should be read in conjunction with section 45 of the [main consultation document](#), which details CAP's decision to recommend the adoption of the Department of Health (DH) nutrient profiling model.

2. What is nutrient profiling?

Nutrient profiling models assess the nutrient content of a food or soft drink product against a set of criteria to determine whether it contains certain nutrients above or below particular thresholds. This can be used for a variety of purposes, such as determining whether a product can reasonably be regarded as a source of particularly beneficial nutrient such as iron or calcium. In practice, more complex nutrient profiling can be utilised to assess the healthiness or otherwise of a particular product. Rayner, Scarborough and Lobstein (2009: 1), [The UK Ofcom Nutrient Profiling Model: Defining 'healthy' and 'unhealthy' foods and drinks for TV advertising to children](#), characterised the key questions as follows:

- Which nutrients should be considered?
- Should the profiling criteria differ according to the type of food being profiled, or should all foods be assessed using the same criteria?
- What is the reference amount: for example, should foods be compared per 100g, per 100 kcal or per portion or serving?
- Should the final result be presented as a single figure or as a set of figures relating to different aspects of the nutritional quality of the food?

3. CAP's approach to identifying potential nutrient profiling models

The development of a new nutrient profiling model would be disproportionately costly and time consuming. Respondents to the pre-consultation were near unanimous on the need to select an existing model. CAP notes in particular an EU-level commitment to develop a nutrient profiling model as part of EU Regulation 1924/2006 *on Nutrition and Health Claims made on Foods* (Article 4). At the time of writing, CAP understands that the process remains on hold after nearly ten years.

There are a broad variety of nutrient profiling models in use for various purposes; food certification, health claims and research. Stockley, Rayner and Kaur (2007: 5-6), [Nutrient profiles for use in relation to food promotion and children's diet: Update of 2004 literature review](#), identified 39 different schemes including nine models – there are more now – specifically designed to facilitate restrictions on advertising and promotions.

In proposing a preferred nutrient profiling model, CAP has had regard to responses received in the pre-consultation exercise (see [Annex 3](#)) and the following criteria:

- Proportionality – Is the model suitable for the purposes of advertising regulation, balancing commercial freedoms with the need to protect health? Is the cost of implementation proportionate?
- Usability – Has the model been shown to be reasonably straightforward and easy to use?
- Credibility – Is the model scientifically robust? Is it likely to be acceptable to the majority of different stakeholder constituencies?

Against this background, CAP selected three nutrient profiling models that would be suitable for the purpose of identifying a category of food and soft drinks, to which specific advertising restrictions could apply: the EU Pledge model, the WHO Europe model and the Department of Health (DH) model, which is used to determine food and soft drink products high in fat, salt or sugar for the purpose of the UK Code of Broadcast Advertising (the BCAP Code).

4. EU Pledge Model

The [EU Pledge model](#) utilises a category-based approach “because it is better able than a universal, across-the-board approach to reflect the role that different types of foods and beverages play in the average diet. It is also better at discriminating between food products within categories and therefore appropriate to further the core aim of the EU Pledge, i.e. to limit the types of food and beverage products that are advertised to children, while incentivising competition for the development of better-for-you options, through innovation and reformulation.”

It uses nine categories of food, which in turn are further broken down into sub-categories. These are then assessed against five composition criteria with thresholds for each sub-category. The following table summarises the categories and assessment criteria:

Food categories	Assessment criteria
<ul style="list-style-type: none"> • Vegetable and animal based oils, fats and fat containing spreads & emulsion-based sauces • Fruits, vegetables and seeds, except oil • Vegetables include legumes and potatoes. Seeds include seeds, kernels, nuts. Nuts include peanuts and tree nuts. • Meat based products: all kinds of processed meat/poultry, and meat products, consisting of minimally 50g of meat per 100g finished product • Fishery products: all kinds of processed fish, crustaceans and shellfish, consisting of min. 50g of fish, crustaceans, and/or molluscs per 100g of finished product • Dairy products • Cereal based products • Soups, composite dishes, main course and filled sandwiches • Meals: The combination of items served as a meal (main dish, side item (s) and a beverage) for breakfast, lunch or dinner. • Edible ices: all kinds of edible ices (water ices and ice cream) 	<ul style="list-style-type: none"> Energy (kcal/portion*) Sodium (mg/100g or 100ml*) Saturated fats (g/100g or 100ml*) Total sugars (g/100g or 100ml*) Components to encourage

The following figure is an example of one of the categories and its assessment criteria levels:

Category 6: Cereal based products					
Sub-category A: <u>Sweet</u> biscuits, fine bakery wares and other cereal based products: cereal must be listed as the main ingredient on the ingredient declaration.					
Examples	Energy (kcal/portion*)	Sodium (mg/100g or 100ml*)	Saturated fats (g/100g or 100ml*)	Total sugars (g/100g or 100ml*)	Components to encourage
	*Energy values are per portion and nutrient values per 100g, except when specified otherwise				
All kinds of biscuits and cakes, cereal bars, flapjacks...	≤200	≤450	≤10	≤35	Fibre (≥3 g/100g) and/or whole grain (15% total ingredients) and/or 20%E from UFA and >70% UFA/total fat
Sub-category B: <u>Savoury</u> biscuits, fine bakery wares and other cereal based products, including dough-based products: cereal must be listed as the main ingredient on the ingredient declaration.					
Savoury crackers, extruded, pelleted & popcorn-based snacks, popcorn, pretzel products	≤170	≤900	≤10% kcal from SAFA	≤10	Fibre : ≥3 g/100g; and/or ≥70% UFA/total fat
Sub-category C: Breakfast Cereals including porridge					
Ready to eat breakfast cereals such as cornflakes, puffed rice, porridge	≤210	≤450	≤5	≤30	Fibre (≥3g/100g) and/or wholegrain (15% whole grain per total ingredients)
Sub-category D: Cereal and cereal products except breakfast cereals, biscuits and fine bakery wares: cereal must be listed as the main ingredient.					
Bread, rusks, rice, noodles, pasta, polenta	≤340	≤500	≤5	≤5	Fibre (≥3 g/100 g) and/or wholegrain (15% of total ingredients)

Source: EU Pledge, EU Pledge Nutrition White Paper – Updated July 2015

5. WHO Europe Model

The [WHO Europe nutrient profiling model](#) is based on two existing models; a model developed by the Norwegian government and the model developed by the Danish Forum of Responsible Food Marketing Communication. “The rationale for selecting the Danish and Norwegian models was that they are based on food categories rather than using a scoring system. Category-specific models are considered easier to adapt or modify than models based on scoring, which is an important consideration for a regional model that countries will be looking to use nationally” (WHO Europe, 2015: 2). The WHO Europe model uses 17 categories summarised in the following figure:

Food category	Included in category (examples)	Not included in category (examples)	Customs tariff code (position and/or subposition number)*	Marketing not permitted if product exceeds, per 100 g ^b							
				total fat (g)	sat. fat (g)	total sugars (g)	added sugars (g)	non-sugar sweeteners (g)	salt (g)	energy (kcal)	
1 Chocolate and sugar confectionery, energy bars, and sweet toppings and desserts	Chocolate and other products containing cocoa; white chocolate, jelly, sweets and boiled sweets; chewing gum and bubble gum; caramels; liquorice sweets; spreadable chocolate and other sweet sandwich toppings; nut spreads, including peanut butter, cereal, granola and muesli bars; marzipan	Chocolate flavoured breakfast cereals; cakes and pastries; biscuits and other baked goods covered in chocolate	17.04; 18.06; some of 19.05; 20.06; some of 20.08; some of 21.06								Not permitted
2 Cakes, sweet biscuits and pastries; other sweet bakery wares, and dry mixes for making such	Pastries, croissants; cookies/ biscuits; sponge cakes; wafers; fruit pie; sweet buns; chocolate-covered biscuits; cake mixes and batters	Bread and bread products	19.01.20; 19.05.20; 19.05.31; 19.05.32								Not permitted
3 Savoury snacks	Popcorn and maize corn; seeds; nuts and mixed nuts; savoury biscuits and pretzels; other snacks made from rice, maize, dough or potato		08.01; 08.02; 10.05; 19.04.10; 19.04.20; some of 19.05; 20.05.20; 20.08.11; 20.08.19; 20.08.99			0			0.1*		
4 Beverages											
a) Juices	100% fruit and vegetable juices; juices reconstituted from concentrate, and smoothies		20.09								Not permitted ^d
b) Milk drinks ^e	Milks and sweetened milks; almond, soya, rice and oat milks	Cream	Some of 04.01; some of 04.02; 22.02.90	2.5			0	0			
c) Energy drinks ^f			Some of 22.02								Not permitted
d) Other beverages	Cola, lemonade, orangeade; other soft drinks, sweetened beverages, mineral and/or flavoured waters (including aerated) with added sugars or sweetener	100% fruit and vegetable juices; milk drinks	22.01; some of 22.02			0	0				
5 Edible ices	Ice cream, frozen yogurt, ice lollies and sorbets		21.05								Not permitted
6 Breakfast cereals ^g	Oatmeal; cornflakes; chocolate breakfast cereals; muesli		19.04.10; 19.04.20	10		15				1.6	
7 Yoghurts, sour milk, cream and other similar foods	Yoghurt; kefir; buttermilk flavoured sour; fermented milk and drinking yoghurt; fromage frais; cheese-based and other yoghurt substitutes; yoghurt products containing additional ingredients (such as fruit, muesli); cream	Milks and sweetened milks; almond, rice and oat milks	Some of 04.02; 04.03; 04.04; some of 04.06.10; 19.01.10; 19.01.90; some of 21.06	2.5	2.0	10				0.2*	
8 Cheese	Medium-hard and hard cheeses; soft cheeses; fresh cheese (such as ricotta, mozzarella); grated or powdered cheese; cottage cheese; processed cheese spreads		04.06	20						1.3	
9 Ready-made and convenience foods and composite dishes	Pizzas; lasagne and other pasta dishes with sauces, quiches; ready meals; ready-made sandwiches; filled pastas; soups and stews (packaged or tinned); mixes and dough		Some of 16; some of 19.01.20; 19.02.19; 19.02.20; some of 19.05; some of 20.05; 21.04	10	4	10				1	225
10 Butter and other fats and oils	Butter; vegetable oils, margarine and spreads		04.05; 15		20					1.3	
11 Bread, bread products and crisp breads ^h	Ordinary bread (containing cereal, leaveners and salt); gluten-free bread; unleavened bread; crisp breads; rusks and toasted breads	Sweet biscuits; pastries; cakes	19.05.10; 19.05.40; 19.05.90	10		10				1.2	
12 Fresh or dried pasta, rice and grains		Filled pasta and pasta in sauce	10; some of 11; 19.02 excluding 19.02.20	10		10				1.2	
13 Fresh and frozen meat, poultry, fish and similar	Eggs		02 excluding 02.10; some of 03 excluding 03.05								Permitted
14 Processed meat, poultry, fish and similar	Sausage, ham, bacon; chicken nuggets; smoked and pickled fish; tinned fish in brine or oil; fish fingers and breaded/battered fish	Pepperoni pizza	02.10; some of 03; some of 16	20						1.7	
15 Fresh and frozen fruit, vegetables and legumes	Fruit and vegetables; legumes; starchy vegetables; roots and tubers	Tinned fruits, vegetables and legumes; fruit in syrup; dried fruit; frozen fruit with added sugar	07 excluding 07.10; 07.11; 07.12; 07.13; some of 08 excluding 08.01; 08.02; 08.11; 08.12; 08.13; 08.14								Permitted
16 Processed fruit, vegetables and legumes	Tinned fruit, vegetables and legumes; dried fruit ⁱ ; dried vegetables and legumes; marmalade; jams; pickled vegetables and fruit; stewed fruits; fruit peel frozen French fries; frozen fruit with added sugar	Fruit juice	07.10; 07.11; 07.12; 07.13; some of 08.03; some of 08.05; some of 08.06; 08.11; 08.12; 08.13 and 08.14; 20.01; 20.02; 20.03; 20.04; 20.05; 20.06; 20.07; 20.08.20; 20.08.30; 20.08.40; 20.08.50; 20.08.60; 20.08.70; 20.08.80; 20.08.93; 20.08.97; 20.08.99	5		10	0			1	
17 Sauces, dips and dressings	Salad dressings; tomato ketchup; mayonnaise; ready-to-use dips; soya sauce; mustard and mustard flour		21.03	10			0			1	

The composition requirements are tailored to each category, but there are some categories, including products like chocolate and sugar confectionery, energy bars, cakes, pastries, edible ices and energy drinks, where the policy requires that advertising is always prohibited.

6. DH model

The [DH model](#) applies to all food and drink products without exemption. It employs a scoring system to allocate points per 100g of product for what are termed "A" nutrients (energy, saturated fat, total sugar and sodium) and "C" nutrients (fruit, vegetables and nut content, fibre and protein). The score for "C" nutrients is then subtracted from the score for "A" nutrients to classify Foods scoring 4 or more points, and drinks scoring 1 or more points, as "less healthy".

The following figure is an example from DH's technical guidance on the model:

Nutrient Profiling Technical Guidance January 2011

Worked example 2: Calculating a score for a product where nutrient information is provided in mls rather than grams

Product: Vanilla ice-cream.

Products sold in mls should be converted to per 100g using the appropriate specific gravity (density) of the product.

- Multiply nutrition information per 100ml by 0.55* to give nutrition information in grams.
- Calculate score using per 100g information.

	Nutrition information per 100ml ice-cream	Nutrition information per 100g ice-cream**	Score
Energy (kJ)	1347	741	2
Saturated fat (g/100g)	11.1	6.1	6
Total sugar (g/100g)	34.0	18.7	4
Sodium (mg/100g)	109.1	60	0
Total A points	-	-	12
Fruit, veg, nuts (%)	0	0	0
NSP fibre (g/100g)	0	0	0
Protein (g/100g)	6.5	3.6	0***
Total C points	-	-	0
SCORE: A-C	-	-	12

* Specific gravity of ice-cream = 0.55, taken from: 'Food Portion Sizes' Third Ed

** Nutrition information from vanilla dairy ice-cream, McCance & Widdowson's The Composition of Foods, 6th Summary Ed.

*** Product not eligible to score points for protein as it scores a total of 12 'A' points

This ice-cream scores 12 and so would be subject to advertising restrictions.

7. Discussion

Brinsden and Lobstein (2013), [Comparison of nutrient profiling schemes for restricting the marketing of food and drink to children](#), includes a recent comparative analysis of the impact of different models. The study looked at five different models, two industry developed and three government endorsed: Children's Food and Beverage Advertising Initiative (CFBAI) model; EU Pledge model; US Interagency Working Group (IWG) proposals; the Danish Forum co-regulatory Code (one of the two models upon which the WHO Europe model is based); and, the DH model. The models were tested against a

list of foods CFBAI members in the US had regarded as being acceptable to advertise to children prior to the introduction of their nutrient profiling model (Brinsden and Lobstein, 2013: 326-327).

The following table summarises the findings of the study relevant to three nutrient profiling models identified by CAP (adapted from Brinsden and Lobstein, 2013: 327):

Media	Total	Total in category	EU Pledge permitted	Ofcom permitted	Danish Forum Code permitted
Savoury bakery	All savoury bakery grain based products such as crackers and bread	12	2 (17%)	3 (25%)	0 (0%)
Sweet bakery	All sweet bakery grain based products such as biscuits and cookies	21	8 (38%)	0 (0%)	0 (0%)
Breakfast cereals	All breakfast cereals, including porridge oats	26	6 (23%)	4 (15%)	2 (8%)
Dairy	All dairy products such as unflavoured milk, yogurt and cheese	13	7 (54%)	9 (69%)	4 (31%)
Composite dishes	Any product made up of multiple ingredients such as ready meals, canned spaghetti, soup,	26	15 (58%)	20 (77%)	0 (0%)
Meals	Any product made up of multiple components, e.g. main, side, drink	26	0 (0%)	13 (50%)	3 (12%)
Snacks	Any product classified as a snack such as popsicles and sweet products not categorised as a bakery item	31	17 (55%)	4 (13%)	0 (0%)
Other	Any product which did not fall into another category, includes juice, nut spreads, chewing gum, flavoured milk	23	18 (78%)	12 (52%)	4 (17%)
Totals		178	73 (41%)	63 (37%)	13 (7%)

Although the results are relevant only to the sample of products used to test the profiles, the study does provide a relative picture of the impact of different models across different types of food product. The Danish Code is notably more restrictive than the EU Pledge and DH models. The main differences are around how the models treat composite dishes, meals, snacks and products categorised as “other”. For other categories, such as breakfast cereals, there is a reasonable level of accord between the models.

8. Other considerations

Public Health England (PHE) has recently been commissioned to carry out a review of the DH nutrient profiling model. In *Sugar Reduction: The evidence for action*, PHE recommended:

The setting of a clear definition for high sugar foods to aid with actions 1 and 2 above [addressing promotions and reducing exposure to advertising – Our Addition]. Currently the only regulatory framework for doing this is via the Ofcom

nutrient profiling model, which would benefit from being reviewed and strengthened.

CAP note that this work is likely to lead to changes in the nutrient profiling scheme that will impact on the type and number of products likely to be classified as HFSS. PHE has provided CAP with a statement on the scope of the planned review:

PHE has been asked by the Department of Health to review the nutrient profile model and this review is now underway. PHE's review is due to be completed in 2017. PHE will work with regulators, industry, and health NGO's to ensure that its work is comprehensive and transparent.

The review will consider the current model from a nutritional perspective and include recommendations on how it could be changed. PHE's review will assess practical and technical nutrition science issues arising from the use of the NPM. A staged approach will be taken with aspects of activity likely to run concurrently. For example it is envisaged that in the primary stages initiation of modelling will run simultaneously with stakeholder engagement.

It is likely that in order to advise on approaches and support progress PHE will establish an expert reference group for this programme of work. Membership is currently being considered but will include representation from industry, alongside other key stakeholders.

Should CAP ultimately adopt the DH model, it will consider the impact of any changes to the model arising from the PHE review and report publicly on their potential regulatory implications; where the implications are significant CAP would very likely consult on the potential adoption of the new model for the purpose of differentiating HFSS and non-HFSS products.

Contact us

Committee of Advertising Practice
Mid City Place, 71 High Holborn
London WC1V 6QT

Telephone: 020 7492 2200

Textphone: 020 7242 8159

Email: enquiries@cap.org.uk

www.cap.org.uk

 Follow us: @CAP_UK