

Supplementary Material

Table S1. A summary of the company websites that were scanned for evidence of child-directed products and marketing (n=154).

Food sector	Company ^a	Websites
Packaged food	Loblaw Companies Ltd./George Weston Ltd. ^{bc}	loblaws.ca ^d
		presidentschoice.ca ^d
		nofrills.ca
		westonfoodscanada.ca
		wonderbread.ca
		ditaliano.ca
		countryharvest.com
		gadoua.qc.ca
		acebakery.com
		interbake.com
	Saputo Inc.	saputo.com
		alexisdeportneuf.com
		armstrongcheese.ca
		baxtermilk.ca
		woolwichdairy.com
Nestlé Canada Inc. ^c	dairyland.ca	
	duvillage1860.com	
	internationaldelight.ca	
Agropur Cooperative Ltd.	kingsey.com	
	milk2go.com ^d	
	morningtondairy.com	
	neilsondairy.com	
	nutrilait.ca	
	saputo.ca	
	scotsburnmilk.ca	
	madewithnestle.ca ^d	
	haagen-dazs.ca	
	agropur.com	
natrel.ca		
quebon.ca		
sealtest.ca		
schroedermilk.ca		
plaisirsetfromages.ca		
islandfarms.com ^d		
monallegro.ca		
grandcheddar.ca		
farmersdairy.ca		
ultimayog.ca ^d		
olympicdairy.com		
fromagesanco.ca		

Parmalat Canada Ltd.	<p> centraldairies.com dairytown.com northumberlanddairy.ca consumer.parmalat.ca^{de} lactantia.ca blackdiamond.ca^d cheestrings.ca^{de} beatrice.ca astro.ca^d astrokik.ca^{de} cheese.ca galbani.ca sensationalsoy.ca kraftcanada.com^d fritolay.ca^d pepsico.ca pepsi.ca brisk.ca cheetos.ca^{de} doritos.ca lays.ca smartfoodpopcorn.ca spitz.ca^d stacyssnacks.ca sunchips.ca tostitos.ca twistos.ca tropicana.ca nakedjuice.com gatorade.ca generalmills.ca lifemadedelicious.ca^d yoplait.ca^{de} sobeys.com complements.ca^d schneiders.ca^d mapleleaffoods.com mapleleaf.ca larsen.ca minahalal.com^d mapleleafprime.ca greenfieldmeat.com unilever.ca becel.ca hellmanns.ca knorr.ca </p>
Kraft Heinz Company	
Frito-Lay Canada/PepsiCo Beverages Canada ^{bc}	
General Mills Canada Corp.	
Sobeys Inc. ^b	
Schneider Corp./Maple Leaf Foods Inc. ^b	
Unilever Canada Inc.	

		liptontea.com benandjerrys.ca ^{de}
	Kellogg Canada Inc.	kelloggs.ca ^{de} clubkelloggs.ca ^{de} ricekrispies.ca ^{de}
	Canada Bread Co.	canadabread.com villaggio.ca stonemillbakehouse.com pom.ca dempsters.ca bonmatin.ca vachon.com
	Danone Canada Inc.	danone.ca ^{de} activia.ca oikos.ca
	Mondelez Canada Inc.	ca.mondelezinternational.com snackworks.ca ^{de} belvitabreakfast.com cadbury.co.uk ^{de} chipsahoy.com ^{de} oreo.com ^{de} snackworks.com ^{de} toblerone.com tridentgum.com triscuit.com wheatthins.com
	Campbell Soup Co.	campbellsoup.ca ^{de}
Beverage	Coca-Cola Ltd./Minute Maid Co. of Canada ^b	coca-cola.ca vitaminwatercanada.ca goldpeakbeverages.ca nesteas.ca peace-tea.ca minutemaids.ca powerade.ca corepower.com
	Canada Dry Motts Inc.	canadadrymotts.ca ^d canadadry.ca crushcanada.ca drpepper.ca mottsfruitsations.ca ^d schweppes.ca
	A Lassonde Inc.	lassonde.com oasis.ca ^{de} fruite.ca rougemontcanada.ca allens.ca

		gravescanada.ca
		sunlike.ca
		tropicalgrove.ca
		delmonte-canada.ca
	Aquaterra Corp.	aquaterracorp.ca
	Naya Waters Inc.	naya.com/en-ca/
	Metro Inc.	metro.ca
	Sun-Rype Products Ltd.	sunrype.ca ^d
	Ocean Spray Cranberries Inc.	oceanspray.ca
Restaurant ^f	Tim Hortons (Restaurant Brands International Inc.)	timhortons.com/ca
	McDonald's (McDonald's Corp.)	mcdonalds.com/ca ^{de}
	Subway (Doctor's Associates Inc.)	subway.com/en-ca ^d
	A&W (A&W Food Services of Canada Inc.)	web.aw.ca
	Boston Pizza (Boston Pizza International Inc.)	bostonpizza.com ^{de}
	Starbucks (Starbucks Corp.)	starbucks.ca
	Swiss Chalet (Cara Operations Ltd.)	swisschalet.com ^{de}
	KFC (Yum! Brands Inc.)	kfc.ca ^d
	St Hubert (Cara Operations Ltd.)	st-hubert.com
	Wendy's (The Wendy's Co.)	wendys.com/en-ca ^d
	Pizza Pizza (Pizza Pizza Ltd.)	pizzapizza.ca
	Pizza Hut (Yum! Brands Inc.)	pizzahut.ca
	Dairy Queen (International Dairy Queen Inc.)	dairyqueen.com/ca-en ^d

^aCompanies are listed in descending order of national market share within each industry sector, based on 2016 sales data from Euromonitor International.

^bFor companies where both the brand and national brand owner (i.e., part of the same parent company) were among the top packaged food or beverage manufacturers, the higher-ranking company was listed first, followed by the affiliated company.

^cCompanies that were among the top-selling manufacturers in both the packaged food and beverage sectors were only listed as the former.

^dWebsite included child-directed product(s).

^eWebsite included child-directed marketing content.

^fRestaurants are listed as consumer foodservice brands, with the global brand owner noted in parentheses.

Table S2. Definitions and general coding rules for each marketing technique examined on company websites with child-directed content^a.

Marketing technique	Definition
Manufacturer or brand logo	Manufacturer or brand logos were counted each time that they appeared on webpages with child-directed content. Logos on images of product packaging were not counted. Logos appearing separately from the product(s) in a promotional image, video or game were included. Logos presented in the same location on the website across multiple webpages were counted each time that they appeared on a different webpage, including individual product pages (e.g., manufacturer logo on top left corner of the homepage and product webpages were counted separately).
Product packaging ^b	Standard images of product packages listed on brand or product pages were not counted. Only product packages appearing in separate images, illustrations, graphics, videos, games or animations were included. For restaurants, this included the presence of branded containers or food packaging, drink bottles or cartons, or packaged snacks or desserts
Product as consumed	The presence of products presented out of package and in forms commonly consumed was noted; e.g. a bowl of cereal, individual cookies or crackers. For restaurants: if a children’s menu was posted on the website and the menu includes images of the child-directed food and beverages, the entire menu was counted as 1 (irrespective of how many items were offered).
Promotional items included with purchase	This refers to toys, books or other items that were complimentary with the purchase of a child-directed product or children’s menu item (e.g., McDonald’s Happy Meals). Children’s toys or books that appeared in separate images, illustrations, graphics, videos, games or animations were included. If the same item appeared multiple times within any one of these forms, each occurrence was counted separately. When toys or books were clustered together (such as in the same image or section of a webpage), they were counted as 1.
Product benefit claim ^c	Each time that a claim was made concerning a benefit associated with purchase or consumption of the product was counted. Claims pertaining to the taste, convenience or popularity of the product were common and were often made as part of product or children’s menu item descriptions; e.g., “a genuine pleasure for your taste buds”. If a product was said to be simply “nutritious”, this was counted as a product benefit claim. Claims regarding benefits of a product that were not related to a nutrient (e.g., “made with no artificial colours or flavours” or “contains whole grains”) were also classified as product benefit claims, rather than nutrient content claims.
Nutrient content claim ^c	Each time that a claim is made concerning the nutrient content of a product was counted (e.g., “source of calcium”).
Health claim ^c	Each time that a claim was made concerning a direct or indirect health benefit associated with consumption of the product was noted; e.g., “Helps build strong bones and teeth”.
Branded characters ^d	The number of times that company-owned cartoon characters (e.g., Kellogg’s “Tony the Tiger”) were featured on webpages with child-directed content was

	recorded. Branded characters featured in company logos were not counted; e.g., the cartoon girl featured in the Wendy’s logo.
Licensed characters ^d	The number of times that characters from children’s television shows/stations, movies, books, toys or music groups occurring on webpages with child-directed content was recorded; e.g., characters from the Trolls film were featured on the Danone Canada website.
Celebrities ^d	The number of times that celebrities were featured on webpages with child-directed content was noted.
Appearances of children ^d	The number of times that images of children appeared on webpages with child-directed content was recorded. The child in the image had to be interacting with a child-directed product (to avoid coding images that are not necessarily targeting children but may be more directed at parents).
Tie-ins	Tie-ins refer to two or more products that were advertised together; i.e., a child-directed product along with a children’s television show or station, movie, toy, professional sports team, etc. Tie-ins featured in images, videos, graphics or animations on child-directed webpages were included; however, tie-ins on product packaging were excluded; i.e., if the only evidence of a tie-in existed on an image of product packaging posted on the company’s website, it was not counted. Tie-ins were counted separately when they appeared on different webpages, and when they were promoting different TV shows, movies, books, sports teams, etc.
Advergames	Advergames refer to games with embedded child-targeted advertising of a child-directed product. The number of different advergames present on webpages with child-directed content was recorded. Even if a product webpage or designated children’s website (e.g., ClubKelloggs.ca) featured multiple advergames, each occurrence was counted individually.
Contests	Only contests where children were eligible to enter (based on contest age restrictions) were included. The number of <u>different</u> contests promoted on all webpages with child-directed content were recorded. If the same contest was advertised on more than one child-directed webpage, it was not counted again.
Social sharing buttons	Social sharing buttons provide the option to share webpage content to social media (e.g., Facebook, Twitter) or to share it with another person via email. The number of webpages with child-directed content featuring social sharing buttons or links to the company’s social media accounts was recorded. If icons for multiple social media platforms appeared together, they were counted as 1, rather than as each individual icon; i.e., Facebook, Twitter, and/or Instagram icons arranged side-by-side counted as 1.
Membership opportunities	Membership opportunities invite website viewers to become a member of a company’s website (e.g., Club Kellogg’s Member). Only membership opportunities that were specifically targeting children were included; e.g., memberships to collect points and track gaming scores. Frequency counts reflect the number of webpages with child-directed content that promoted a membership opportunity.
Promotional images and videos	Images on webpages with child-directed content, featuring child-directed products or menu items, or children interacting with any company products.

	Each individual image promoting a child-directed product or menu item and/or featuring children was counted. Videos included those featuring child-directed products or menu items, or children interacting with any company product. Each individual video that met one or more of these criteria and appeared on a webpage with child-directed content was counted.
Branded downloads	Colouring pages, wallpapers, screensavers or any other downloadable file or activity featuring one or more of the company's brand identifiers (e.g., company or brand logo, branded character, images of company products, etc.) were noted. Any branding that may have been featured within a branded download were not counted (e.g., branded characters, company logos, etc.). The number of different branded downloads appearing on webpages with child-directed content was recorded (i.e., downloadable colouring sheets and a screensaver would be counted separately).
Recipes	Only recipes promoting a child-directed product and targeted to children were counted; recipes that were clearly directed at parents were not included. The number of webpages featuring recipes that met these criteria was recorded.
Audio or visual techniques	This refers to music or sounds from clicking buttons, motion, pop-ups, transitions, and animations. The number of different webpages with child-directed content that included a special effect was recorded. If both music and a visual effect were used on the same webpage, they were counted separately. Sound or other special effects used in advergames were not included.
Promotion of healthy eating	Written or spoken messages, graphics, videos or games encouraging children to eat healthy foods and diets. E.g., Kellogg's® Get Your Move On website includes a section called "Good For You Food Facts" that provides basic recommendations for how children can eat healthier diets.
Promotion of physical activity	Written or spoken messages, graphics, videos or games encouraging children to be physically active. E.g., the Club Kellogg's® website features messages with ideas for fitness challenges, such as "Start in a squat then jump as high as you can. How many can you do?".

^a Website content was described as "child-directed" if it included: 1) promotional characters, contests, games, activities; or 2) lettering and graphics appealing to children (Elliott 2008; Colby et al. 2010; Potvin Kent et al. 2013).

^b Marketing techniques used on product packaging (e.g., logos, promotional characters, claims) were not counted.

^c Product benefit, nutrient content and health claims were counted each time that they appeared, even if the same claim was made multiple times on the same webpage. The number of different claims that were made for each product were also included in the frequency counts.

^d Occurrences of characters, celebrities or children in images, videos or games were included but were only counted once per webpage; e.g., a group of characters, celebrities or children clustered together in an image was counted as one occurrence.

Table S3. Summary of companies with child-directed marketing on their websites (1 = ‘yes’; 0 = ‘no’).

Food sector	Company ^a	Policies		Website with child-directed marketing	
		National ^b	Global	Brand	URL
Packaged food	Parmalat Canada Inc.	1	0	Astro Kik	astrokik.ca
				Cheestrings	cheestrings.ca
	Frito-Lay Canada	1	1	Frito-Lay Cheetos	cheetos.ca
	General Mills Canada Corp.	1	1	Yoplait Minigo	yoplait.ca/en/products/minigo
				Yoplait Tubes	yoplait.ca/en/products/tubes
	Unilever Canada Inc.	1	1	Ben & Jerry's	benandjerrys.ca
	Kellogg Canada Inc.	1	1	Eggo	kelloggs.ca/en_CA/eggo-consumer-brand.html
				Froot Loops	kelloggs.ca/en_CA/froot-loops-consumer-brand.html
				Frosted Flakes	kelloggs.ca/en_CA/kellogg-s-frosted-flakes-consumer-brand.html
				Krave	kelloggs.ca/en_CA/krave-consumer-brand.html
				Mini Wheats	kelloggs.ca/en_CA/kellogg-s-mini-wheats-consumer-brand.html
				Pop-Tarts	kelloggs.ca/en_CA/pop-tarts-consumer-brand.html
				Rice Krispies	http://www.kelloggs.ca/en_CA/rice-krispies-consumer-brand.html ricekrispies.ca
				Multiple brands	clubkelloggs.ca
	Danone Canada Inc.	1	1	Danino	danone.ca/en/products/danino
Danone Creamy				danone.ca/en/products/danonecreamy	
Mondelez Canada Inc.	1	1	YoCrunch	danone.ca/en/products/yocrunch	
			Cadbury	cadbury.co.uk snackworks.ca/en/products/cadbury	
			Chip's Ahoy	chipsahoy.com	

					snackworks.ca/en/products/ChipsAhoy.aspx
				Mr. Christie's	snackworks.ca/en/products/mrchristiessnakpaks
				Oreo	oreo.com snackworks.ca/en/products/oreo.aspx
	Campbell Soup Co.	1	1	Goldfish	campbellsoup.ca/en-ca/products/goldfish
Beverage	A Lassonde Inc.	0	0	Oasis Fruitzo	oasis.ca/en/
Restaurant	McDonald's Corp.	1	1	McDonald's	mcdonalds.ca/ca/en/happy_meal.html
	Boston Pizza International Inc.	0	0	Boston Pizza	bostonpizza.com/en/kids/
	Cara Operations Ltd.	0	0	Swiss Chalet	swisschalet.com/menu/kids-korner

^a Companies are listed in descending order of national market share within each industry sector, based on 2016 sales data from Euromonitor International.

^bThe only national-level policies identified were Canadian Children's Food and Beverage Advertising Initiative (CAI) commitments.

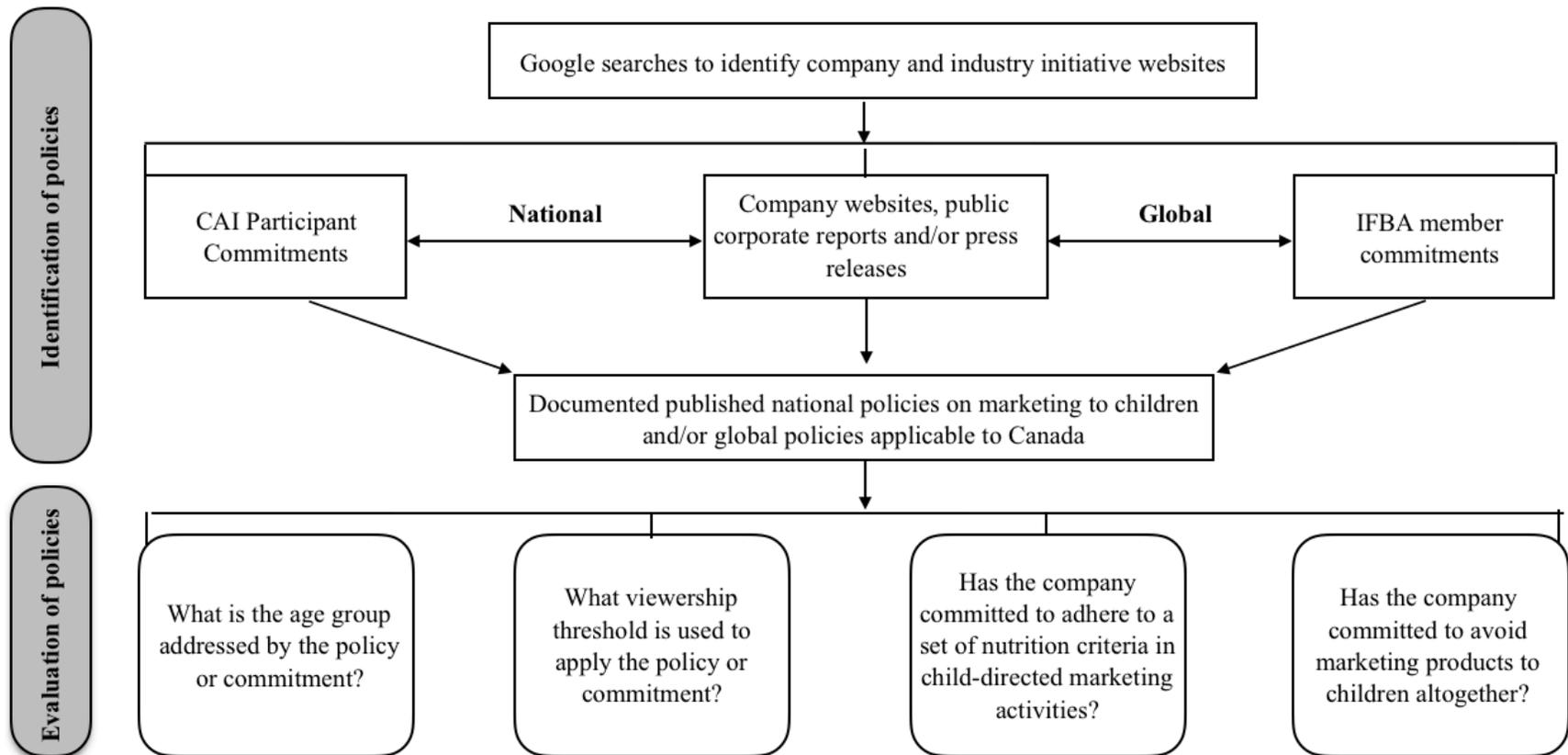


Figure S1. A summary of the policy scan and criteria that were used to identify and evaluate national and global company policies and commitments concerning marketing to children. Policies were sourced from websites and public corporate documents, and evaluated in terms of: their definitions of child-directed marketing (i.e., target age group and viewership threshold); whether a set of nutrition criteria were used to determine the eligibility of products for marketing to children; or whether they included a commitment to avoid marketing any products to children. CAI, Canadian Children’s Food and Beverage Advertising Initiative; IFBA, International Food and Beverage Alliance.

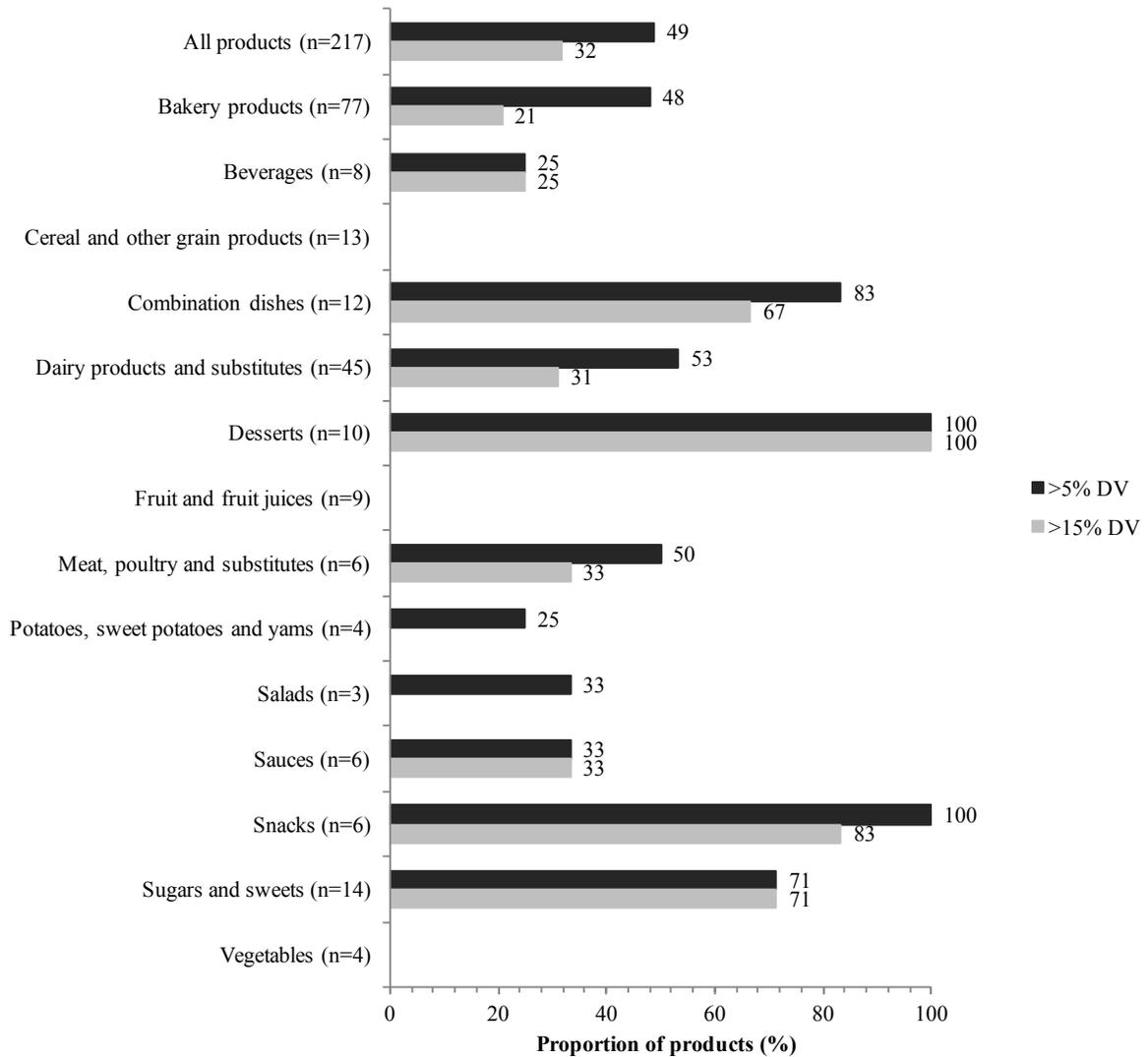


Figure S2. The proportion of products marketed to children on websites (n=217) that exceed ~5% or 15% of the daily value for saturated fat among all products and by product category. Percent DVs were determined according to Health Canada’s proposed nutrient profile model for restricting marketing of unhealthy foods to children.

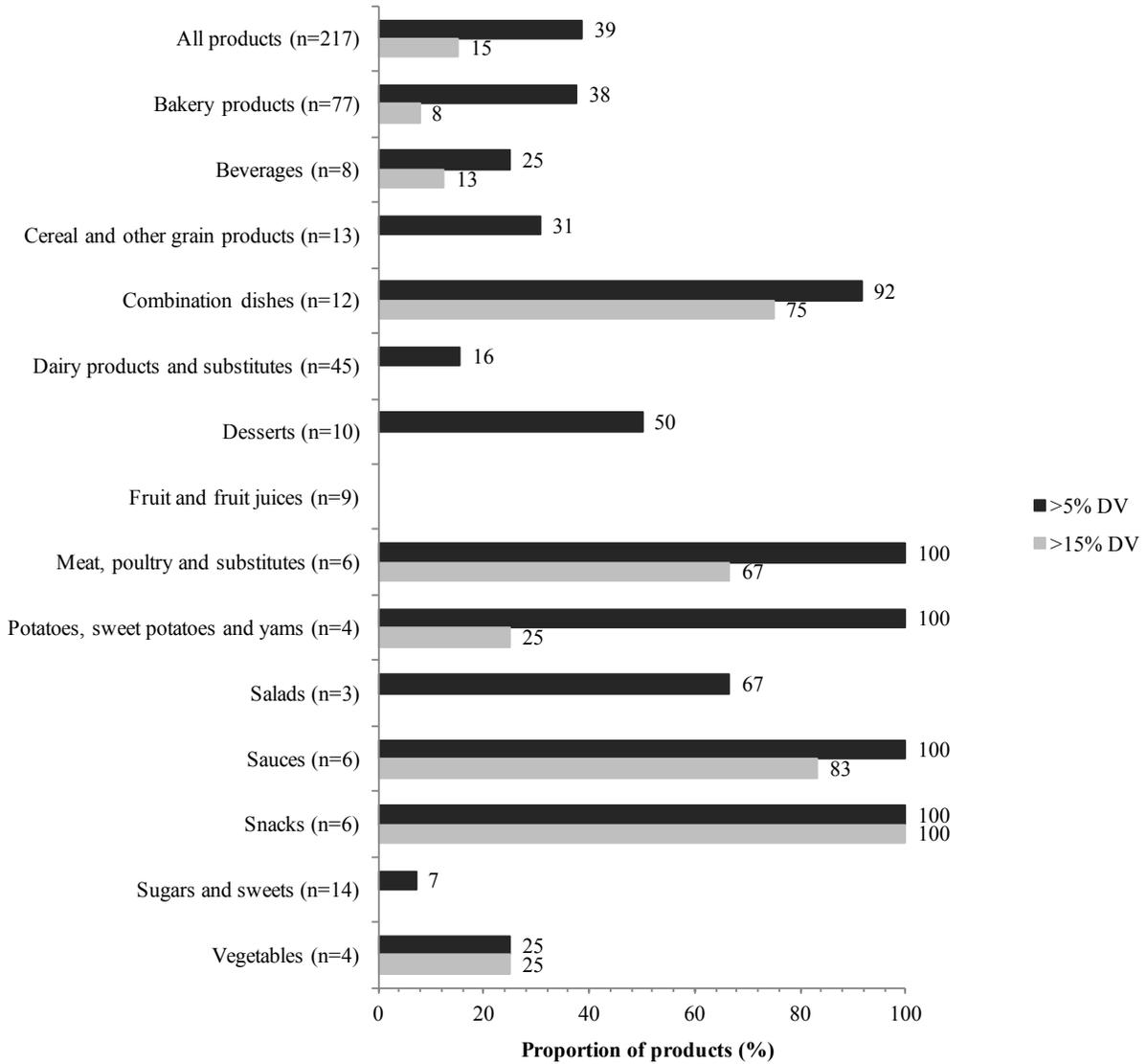


Figure S3. The proportion of products marketed to children on websites (n=217) that exceed ~5% or 15% of the daily value (DV) for sodium among all products and by product category. Percent DVs were determined according to Health Canada’s proposed nutrient profile model for restricting marketing of unhealthy foods to children.

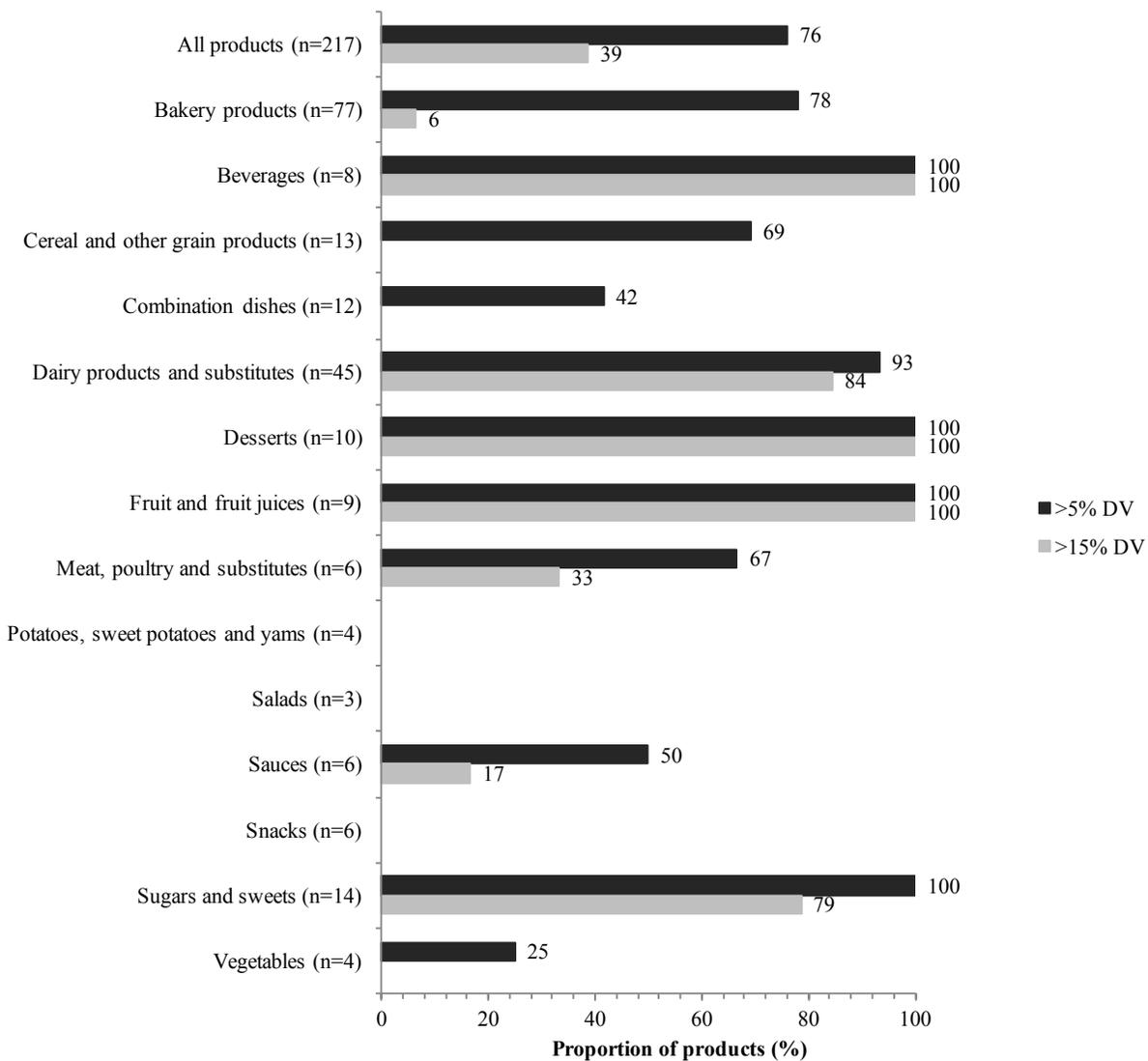


Figure S4. The proportion of products marketed to children on websites (n=217) that exceed ~5% or 15% of the daily value (DV) for total sugars among all products and by product category. Percent DVs were determined according to Health Canada’s proposed nutrient profile model for restricting marketing of unhealthy foods to children.