

Food Marketing to Children Through Toys

Response of Restaurants to the First U.S. Toy Ordinance

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Background: On August 9, 2010, Santa Clara County CA became the first U.S. jurisdiction to implement an ordinance that prohibits the distribution of toys and other incentives to children in conjunction with meals, foods, or beverages that do not meet minimal nutritional criteria. Restaurants had many different options for complying with this ordinance, such as introducing more healthful menu options, reformulating current menu items, or changing marketing or toy distribution practices.

Purpose: To assess how ordinance-affected restaurants changed their child menus, marketing, and toy distribution practices relative to non-affected restaurants.

Methods: Children's menu items and child-directed marketing and toy distribution practices were examined before and at two time points after ordinance implementation (from July through November 2010) at ordinance-affected fast-food restaurants compared with demographically matched unaffected same-chain restaurants using the Children's Menu Assessment tool.

Results: Affected restaurants showed a 2.8- to 3.4-fold improvement in Children's Menu Assessment scores from pre- to post-ordinance with minimal changes at unaffected restaurants. Response to the ordinance varied by restaurant. Improvements were seen in on-site nutritional guidance; promotion of healthy meals, beverages, and side items; and toy marketing and distribution activities.

Conclusions: The ordinance appears to have positively influenced marketing of healthful menu items and toys as well as toy distribution practices at ordinance-affected restaurants, but did not affect the number of healthful food items offered.

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Background

Food marketing to children through toys and other incentives in restaurant chains is pervasive. The Federal Trade Commission¹ estimated that, in 2006, ten restaurant chains spent \$360 million to acquire toys to distribute with children's meals and sold more

than 1.2 billion meals with toys to children aged <12 years. Research^{2–3} shows that consumption of energy-dense, nutrient-poor foods—the type at fast-food restaurants paired with toys—contributes to obesity. A 2010 analysis⁴ of children's meals at 12 of the nation's largest fast-food chain restaurants found that of 3039 possible meal combinations, only 12 met nutrition criteria for preschoolers and only 15 for older children.

Health authorities believe that the advertising and marketing of unhealthy foods and beverages via promotions, such as toy giveaways, contribute to the development of unhealthy eating patterns and behaviors that lead to obesity, particularly in children.² On August 9, 2010, Santa Clara County CA became the first U.S. jurisdiction to implement an ordinance that prohibits the distribution of toys and other incentives with meals, foods, or beverages that do not meet minimal nutritional criteria (see

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SIDEBAR**Santa Clara County Toy Ordinance:5-6****Brief description**

The Santa Clara County ordinance prohibits restaurants in the unincorporated region of the county from giving away toys and other incentives, such as games, trading cards, admission tickets, or other consumer products—whether physical or digital—with foods, beverages, or meals that exceed the following criteria:

- Calories: 120 for a beverage, 200 for a single food item, 485 for a meal
- Fat: >35% of total calories from fat for single foods, meals, beverages; and >10% of total calories from saturated fat (with some exceptions) and/or >0.5 g of trans fat for single foods and meals
- Sodium: 480 mg for a single food item or 600 mg for a meal
- Sugar: >10% of calories from added caloric sweeteners for foods, meals, and beverages
- Beverages that contain any caffeine and added non-nutritive sweeteners

It allows toys or other incentives with foods, beverages, and meals below these levels. The criteria were based on nutrient recommendations and standards for children provided by the IOM of The National Academies and the U.S. federal government's *2005 Dietary Guidelines for Americans*.

Sidebar) in the unincorporated region of the County.^{5,6} The broad intent of the ordinance is to help support consumers in making healthier food choices by preventing restaurants from using toys to make unhealthy food items appealing to children.^{5,6}

Purpose

Restaurants had different options for complying with this ordinance, such as introducing more healthful menu options, reformulating current menu items, or changing marketing or toy distribution practices. The purpose of the current study was to assess if and how ordinance-affected restaurants changed their children's menus, marketing, and toy distribution practices relative to non-affected restaurants. To achieve this, children's menus and child-directed marketing and toy distribution practices were examined before and after ordinance implementation at ordinance-affected fast-food restaurants compared with matched same-chain restaurants that were unaffected by the ordinance.

Methods

The ordinance affected only restaurants located in the unincorporated regions of Santa Clara County CA as identified by the County Public Health Department.^{5,6} In order to include socioeconomically and demographically matched unaffected control restaurants, the sample was narrowed to national fast-food chain restaurants. Unincorporated sections of the County are geographically small and thus only four individual restaurants qualified—one restaurant representing a national fast-food chain and the other three representing global fast-food chains.

Using census tract data, each ordinance-affected restaurant was characterized by population density, median household income, and percentages of incomes above and below poverty, school-aged children, and black and Hispanic residents. Four same-chain restaurants with similar characteristics that were within 4 miles of the ordinance-affected locations were chosen as control restaurants. Children's meal purchases were made at all eight locations at baseline to ensure that menu items and toy promotions/incentives were similar for the affected and matched restaurants.

The ordinance was approved by the County Board of Supervisors on April 27, 2010, and implemented on August 9, 2010.^{5,6} Pre-ordinance evaluation occurred in July to early August 2010 and post-ordinance evaluation occurred at two time points in 2010: immediately post-ordinance (August) and at 4 months post-ordinance (November).

At restaurants in the sample, toys and incentives were sold only in conjunction with children's meals and not individual food or beverage items. Thus, all possible children's meal combinations (each combination of entrée, side, and drink) were evaluated by restaurant at baseline and post-ordinance for nutritional content and whether or not they met ordinance criteria.

The primary outcome measure was the total score on the Children's Menu Assessment tool (CMA).⁷ The CMA is a 29-item standardized tool that is adapted from and expands on the children's menu subsection of the Nutrition Environment Measures Survey–Restaurant (NEMS-R) to provide a more detailed assessment of restaurant food environments available to children (<https://riskfactor.cancer.gov/mfe/instruments/krukowski-childrens-lunch-dinner-menu-assessment>).⁸ It measures availability of healthy options on children's menus and assesses toy marketing and branded advertising targeted to children.⁷

The CMA items are grouped into eight subcategories that quantify and score the following: presence and proportion of healthy (1) meals (e.g., meals meeting ordinance criteria), (2) grains, and (3) desserts (e.g., inclusion of unhealthy dessert), and the presence of (4) beverage options (e.g., availability of 100% juice or low-fat milk), (5) side dishes (e.g., availability of nonfried vegetables or sides with no added sugar), (6) nutritional guidance, (7) toy promotions, and (8) branded marketing (e.g., nutritional information for children's menu, use of branded marketing or toys for food promotion).⁷ These categories of assessment are based on the *2010 Dietary Guidelines for Americans*.⁷

The CMA has strong test–retest reliability, has been utilized in the field, and allows for objective comparison across sites.⁷ Final CMA scores range from –5 to 21, with higher scores indicating greater availability of healthy choices and nutritional guidance and less toy promotion and branded marketing.⁷ Three trained raters independently conducted CMA audits (baseline inter-rater reliability=0.998, $p<.001$). Based on the small sample size, no statis-

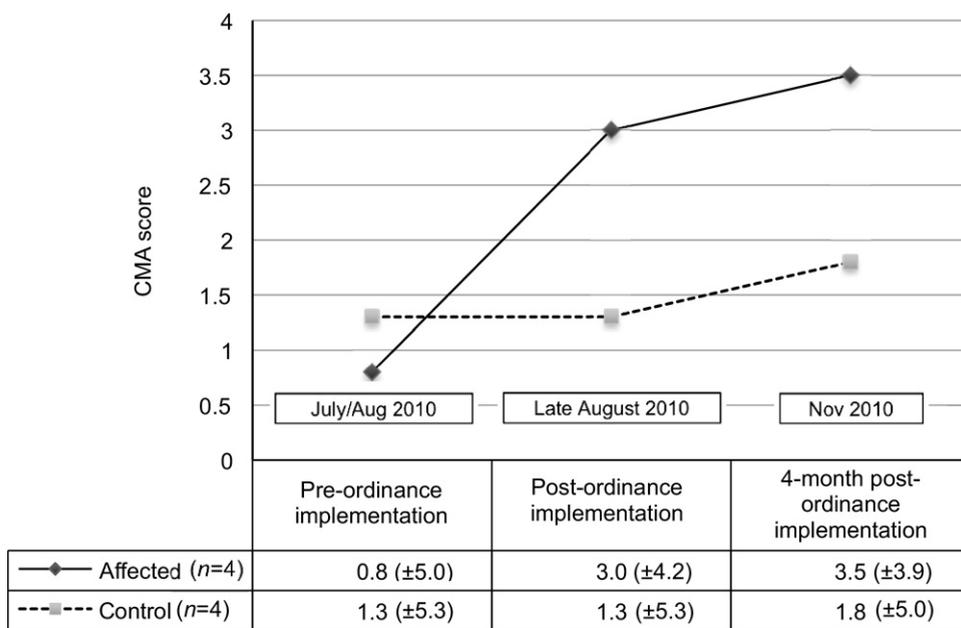


Figure 1. Change in M (\pm SD) CMA score at affected and unaffected restaurants over time
 Note: Final CMA scores range from -5 to 21 , with higher scores indicating greater availability of healthy choices and nutritional guidance, and less toy advertising and branded marketing.
 CMA, Children's Menu Assessment

tical analyses were conducted and descriptive statistics (e.g., M, SD) are reported.

Results

Figure 1 shows comparable pre-ordinance CMA scores at affected and unaffected restaurants. Mean CMA scores at affected restaurants showed a 2.8- to 3.4-fold improvement from pre- to post-ordinance (immediate and 4-month post, respectively) with minimal changes at unaffected restaurants. Three of four ordinance-affected restaurants showed improvement from pre-ordinance to the first post-ordinance time point and one of these restaurants continued to improve its score after this.

Breakdown of the overall CMA score into its subcategories revealed post-ordinance improvements in the following areas: on-site nutritional guidance; promotion of healthy meals, beverages, and side items; and toy marketing/distribution activities (Table 1).

At baseline, only five of 120 children's meal combinations (4%) met ordinance nutritional criteria. No restaurants introduced healthier meal items post-ordinance nor did they reformulate menu items to meet ordinance criteria. Pricing changes were observed from baseline to post-ordinance as shown in Table 1.

Conclusion

The ordinance appears to have positively influenced affected restaurants to promote healthy meal items and to discontinue distribution of toys with unhealthy food

items. Restaurants did not increase the number of healthful food options available, reformulate menu items, or offer toys freely in response to the ordinance over the time frame of the preliminary evaluation. However, there was considerable variability in the response to the ordinance. Notably, one global fast-food chain restaurant revised its menu board to promote meals meeting ordinance nutritional criteria and announced that toys were included automatically with only these meals, thus establishing healthier default options. Changes at other restaurants included removing toy signage and eliminating toys completely.

Limitations include a small sample size, which precluded inferential statistics. Although small, this sample represents all major franchise restaurants that were affected by this first-of-its-kind ordinance, which targeted only unincorporated areas of Santa Clara County. Further, target restaurants were global franchises that serve uniform food and toys; therefore, initial responses here may have global implications. In addition, although the CMA is reliable, the measure currently has not been tested for criterion or concurrent validity but does have strong face validity as the CMA tool does quantify healthy food items based on the 2010 Dietary Guidelines. Finally, although prior evidence²⁻⁴ suggests that a healthier food environment (i.e., one with greater promotion of healthy meals and less marketing of toy giveaways in conjunction with unhealthy meals, as observed in the current study) will support more healthful food choices, changes observed in the present study may not result in positive changes in purchasing behavior. Data currently are being collected on parent/child purchasing behavior (via surveys and receipts) at restaurants in this sample.

These results suggest that restaurants are able to respond rapidly and in positive and meaningful ways to a policy prohibiting toys/incentives with foods, beverages, and meals that fail to conform to well-accepted nutrient recommendations. Such responses did not occur in same-chain restaurants not affected by the regulation. To illustrate the significance of this finding, a similar ordi-

Table 1. Changes from pre- to post-ordinance at ordinance-affected restaurants

	Restaurant 1	Restaurant 2	Restaurant 3	Restaurant 4
On-site nutritional guidance				
Children's meals meeting ordinance criteria identified and promoted over non-ordinance meals ^a	X	—	—	—
Added new signage on nutritional information	—	—	—	X ^b
Promotion of healthy meals, beverages, and side items				
Healthy beverages promoted and included in price of meals meeting ordinance criteria (offered at no additional charge); toy included with this meal	X	—	—	—
Healthy side item promoted and included in price of meals meeting ordinance criteria (offered at no additional charge); toy included with this meal	X	—	—	—
Toy marketing and distribution				
Removed "toy included" from children's menu boards and did not offer toy with meal; toy could be requested and purchased separately	—	—	X	—
Removed toys/incentives; replaced them with reusable "environmental" lunch bag	—	X ^b	—	—
Removed toy marketing posters	X	—	—	X
Only offered toys with meals meeting ordinance criteria; indicated a toy was not included with meals not meeting criteria	X	—	—	—
Offered toys separately for additional cost	X ^c	—	X ^d	—
Notified parents of change via poster explaining the ordinance	X	—	—	—
Pricing				
Changes in prices of children's meals	X ^e	—	X ^f	—

^aThree children's meals met ordinance criteria at baseline and post-ordinance implementation at Restaurant 1. At baseline, these meals were not identified or promoted any differently from other children's meals on the menu boards. Thus, customers had no way of knowing which meals were healthier. After the ordinance went into effect, Restaurant 1 pictured these meals (but not its other children's meals), separated them from the children's menu board into a larger section, and identified them as "Positive Steps kid's meals" with a subhead stating: "Our program promoting good nutrition." Restaurant 2 also had two children's meals that met ordinance criteria at baseline and post-ordinance, but these were not identified or highlighted for the consumer at baseline or post-ordinance. The other two restaurants did not have any children's meals that met ordinance criteria at any point during observation.

^bChange occurred at both affected and unaffected, matched restaurants.

^cToys were offered separately for \$0.99 and could be purchased at this price with any order. The cost of the toy and its availability were listed on the menu boards.

^dThe menu board did not list toys as available separately or for purchase. However, customers could ask for a toy and were verbally instructed that it would be an additional \$0.99 charge to purchase it separately.

^ePrices changed from baseline to post-ordinance implementation for some but not all of the children's meals. Restaurant 1 continued to offer toys as part of the package for meals meeting ordinance criteria and price remained the same from baseline to post-ordinance implementation. For meals *not* meeting ordinance criteria, a toy was no longer included as part of the meal package and prices were reduced for these meals by \$0.50 and a toy could be purchased separately for \$0.99. If a toy was purchased with these meals, the price would be the same as a similar meal meeting ordinance criteria. For example, a hamburger, fries, and soda cost \$2.89 at baseline. At post-ordinance, the same meal without a toy cost \$2.39, and the same meal with a toy purchased separately cost \$3.39. In comparison, the cost of a similar meal meeting ordinance criteria (a hamburger, apple slices, 100% juice, and toy) cost \$3.39 at baseline and \$3.39 post-ordinance.

^fPrices of all children's meals were reduced from \$2.99 (drive-thru menu) or \$2.79 (inside menu) to \$1.99 on both menu boards (drive-thru and inside).

nance was passed in San Francisco County on November 9, 2010, and others have been proposed in Nebraska and New York City.^{9–11} The San Francisco ordinance will affect almost 100 restaurants, and improvements such as those found in the current study could be anticipated to have a broader impact.

As restaurants had only 90 days to comply with the Santa Clara County ordinance, further menu and restaurant changes may be possible and will be captured at future time points. Future work will also explore the impact of the San Francisco County toy ordinance. Overall, these initial observations suggest restaurants can change

marketing and advertising quickly when prompted, but changes to food items may require more time and/or a more pervasive ordinance such as the one being implemented in San Francisco.

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